



PRELIMINARY ECOLOGICAL APPRAISAL REPORT

SITE LOCATION

Hopwood Hall College,
Rochdale Road
Middleton
Manchester
M24 6XH

ISSUE DATE

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SEED REF

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Seven Architecture

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DOCUMENT CONTROL

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EXECUTIVE SUMMARY

Site Address	Hopwood Hall College, Rochdale Road, Middleton, Manchester, M24 6XH
Grid Reference	SJ 54972 80747
Approximate Site Area	2800m ²
Current Site Use	The Chapel is located on an active college campus, the Chapel is currently used as a large storage area and is a grade II listed building.
Designated Sites within Zone of Influence	The site falls within the impact risk zone of Rochdale Canal Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC).
Notable Habitat Features	Broadleaved woodland habitat within and directly connected to the site.
Notable species applicable to this assessment	• Bats (potentially roosting, foraging and commuting) • Breeding birds • Great crested newt and common amphibians • Reptiles • Badger • Hedgehog • Brown hare
Mitigation Recommendations	• A nesting bird check should be undertaken prior to any works commencing in relation to the building and vegetation removal. • A sensitive lighting strategy should be adopted. • Reasonable avoidance measures reptiles, amphibians, bats, badgers and hedgehog.
Recommended further surveys	The Chapel was assessed as having low bat roosting potential. As such, it is recommended that further Nocturnal Bat Surveys are undertaken following guidance set out in Collins (2023). A minimum of one further survey is required, and should be carried out between May-August, inclusive.
Recommended Ecological Enhancements	A Biodiversity Net Gain Report (1697B-BNG-V1-A) is to be produced alongside the Preliminary Ecological Appraisal.

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1. Introduction

Scope & Purpose

- 1.1.1. Seed Arboriculture Ltd were commissioned by Seven Architecture to undertake a Preliminary Ecological Appraisal (PEA) at Hopwood Hall College, Rochdale Road, Middleton, Manchester, M24 6XH. This report has been prepared to inform a planning application at the site relating to the renovation of the chapel for a change of use to teaching accommodation.
- 1.1.2. The author of this report is Katie Brewer BSc (Hons), Ecological Project Manager. This report has been overseen by Katie Bird MEnvSci, ACIEEM Associate Director. Katie is highly experienced managing schemes and has produced many ecological reports to inform planning management plans

Location

- 1.1.3. Please refer to Figure 1.1 for the site location.



Figure 1 - Site Location Plan

Objectives

- 1.1.4. 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 or notable species or habitats.
 - Identify any mitigation required and opportunities for strategic wildlife enhancements.

2. Methodology

Desk Study

- 2.1.1. An initial desk-based assessment of the site was undertaken to collate baseline data. The desk study included:
- A 1km local data search of notable flora and fauna, and locally designated sites obtained from Greater Manchester Ecology Unit (GMEU) and retrieved on 04/01/24.
 - Review of Magic.gov.uk website for details of any designated sites, notable habitats and presence of European Protected Species Licences.
 - Review of aerial and OS maps for habitat information, as well as determining locations of potential waterbodies to be considered in the assessment.
 - Review of potential habitat links on and off site, to determine the potential zone of influence of the proposed development.
 - On site consultation with the landowner which provided valuable information regarding historic land use and known species and habitats present within the site.

Vegetation & Habitat Assessment

- 2.1.2. An Ecological Appraisal of the site was undertaken by Katie Bird, Associate Director and Katie Brewer BSc (Hons) Ecological Project Manager. The survey was undertaken on the 12th January 2024. The weather was clear (0/8 oktas), with no precipitation, 0 wind speed and 5°C.
- 2.1.3. The walkover survey was undertaken broadly in line with standard UK HAB Methodology (2023). The assessment is undertaken with consideration of methodology as per “Preliminary Ecological Appraisal” (CIEEM, 2018).
- 2.1.4. A UKHAB Plan has been produced and is presented in the Appendix of this report. Standard methodology has been used, though adjustments have been made based on judgement to demonstrate habitats in a clearer manner, or where standard guidance does not fit the conditions found on site.

Protected & Notable Species Assessment

- 2.1.5. A search for signs of protected and notable species of fauna was undertaken during the site walkover. This included both field signs of species, as well as potential for species to be present based on habitat availability.
- 2.1.6. The searches broadly included the following:
- Assessment of waterbodies on site and within 250m of the site boundary, and terrestrial habitats for suitability to support notable amphibians.
 - Searches for field signs of, and habitat suitability for bats.
 - Suitability of habitats to support reptiles, and searches for incidental field signs.
 - Searches for field signs of badger (*Meles meles*), including setts, mammal paths, snuffle holes, badger hair and latrines to indicate activity.

- Assessment of the suitability of the site to support notable bird species and recording any field sightings of birds during the walkover.
- Assessment of the sites ability to support notable invertebrates and flora.
- Searches for non-native invasive species.

Preliminary Roost Assessment

- 2.1.7. A Preliminary Bat Roost Assessment (PRA) and Ground Level Tree Assessment (GLTA) of the site was undertaken by Katie Brewer and Katie Bird who holds a Class 2 Bat Survey Licence from Natural England (Reference 2020-48950-CLS-CLS).
- 2.1.8. The survey was undertaken following guidance set out in Collins (2023). This includes undertaking a detailed internal and external inspection of any features to compile information on potential and actual bat entry/ exit points, roosting locations and evidence of bats.
- 2.1.9. The commuting and foraging assessment methodology is based on information contained within the Bat Conservation Trust guidelines 4th edition (Collins 2023).
- 2.1.10. The GLTA and Potential flightpaths and foraging habitats were assessed as per categories listed in Table 4.1, 4.2 and 6.2, demonstrated below (Collins 2023).

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Potential suitability	Description	
	Roosting habitats in structures	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible ^a	No obvious habitat features on site 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.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
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 ^b and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats ^c).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^b and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
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 ^b and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Assessment Criteria for Bat Roosting Potential

Table 4.2. Guidelines for assessing the suitability of trees on proposed development sites for bats, to be applied using professional judgement.

Suitability	Description
NONE	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

Table 6.2. Guidelines for categorising the potential suitability of PRFs on a proposed development site for bats, to be applied using professional judgement.

Suitability	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.

Figure 2 – Collins, 2023

Habitat Suitability Assessment

- 2.1.11. There were two ponds located within 250m of the site boundary (P1 and P2). The ponds were to undergo a Habitat Suitability Index (HSI) assessment following the methodology set out in ARG UK Advice Notice 5. (Oldham et al., 2010).



Figure 3 - Offsite ponds in relation to the site

Survey Limitations

- 2.1.12. This survey does not constitute a full botanical survey. Key species for each habitat type have been identified to give a broad representation of habitats present within the site.
- 2.1.13. It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation of the natural environment. This survey does not constitute a full botanical survey. Plant species may have been under-recorded, unidentifiable or not visible due to a number of factors including the time of year the survey was carried out.

- 2.1.14. The protected species assessment provides a preliminary view of the likelihood of protected species occurring on the site. This is based on the suitability of the habitat, known distribution of the species in the local area (provided by data searches) and any direct evidence within the survey area.
- 2.1.15. The findings of this report represent the professional opinion of qualified ecologists and do not constitute professional legal advice. The client may wish to seek professional legal interpretation of the relevant wildlife legislation cited within this document.
- 2.1.16. January is a suboptimal time for carrying out a Habitat Survey due to being outside of the optimal plant growing season. Therefore, it is likely that some plants are present on the site but were not evident at the time of the survey and were not recorded. This is not considered to be a significant constraint with regards to the general Habitat Survey results due to the size and location of the site and limited extent of the habitats, it is considered very unlikely that any rare or priority plant species were missed.

3. Survey Results

Site Context

- 3.1.1. The site was located approximately 2.7km northwest from Middleton town centre and consisted of an active college campus. The site was connected to surrounding woodland and grassland habitats with Trub Brook running through the surrounding habitats of the site. These surrounding habitats are anticipated to support local flora and fauna populations by providing suitable habitats and food resources. The site is generally well connected to surrounding habitats.

Designated Sites

- 3.1.2. One Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC) was located within 5km of the site boundary based on consultation with magic.gov.uk. Rochdale Canal SSSI and SAC is located approximately 720m east from the site (at nearest point). The Rochdale Canal contains important habitats for submerged aquatic plants and emergent vegetation, including extensive colonies of the nationally scarce SAC species floating water plantain (*Luronium natans*). The site also supports a diverse assemblage of aquatic flora, notably its assemblage of pondweeds, (*Potamogeton spp*); the nine species of which found in the canal represent a balanced community which reflects the quality of water. The canal also provides habitat for a number of waterside bird species. Coot (*Fulica atra*), moorhen (*Gallinula chloropus*) and mallard (*Anas platyrhynchos*) breed along the length of the canal, whilst grey wagtail (*Motacilla cinerea*) also breeds in smaller numbers and kingfisher (*Alcedo atthis*) regularly use the canal for feeding. The flora of the canal is very diverse, partly because mesotrophic water (which has a pH between 5.5 and 6.5, rarely up to 7) supports a continuum of species within a wide pH range. Thus, there are species which tolerate acid to moderately acid water (pH 4.5- pH 6.0) and a different group of species tolerant of moderately acid to alkaline conditions (pH 6.0 to pH 9.0).
- 3.1.3. The following Local Nature Reserves (LNRs) were located within 5km of the site boundary based on consultation with magic.gov.uk:
- Hopwood Woodlands LNR runs adjacent to and within the campus of Hopwood Hall College, located adjacent to the site boundary on the south western aspect. The woodland is known to support a number of bird species and common toad.
 - Alkrington Woods LNR is located 2.6km southwest from the site boundary. This woodland consists of woodland, grassland, marsh, standing water and amenity areas.
- 3.1.4. **There were no further designated sites located within 5km of the site boundary based on consultation with magic.gov.uk.**
- 3.1.5. The data search returned records of the following Sites of Biological Importance (SBI) within 1km of the site boundary:
- Glade and Oaken Bank Woods SBI located at SD872084 and is located approximately 50m west of the site. The site consists of areas of semi-natural woodland, the majority of which has been identified as ancient woodland (in the Ancient Woodland Inventory, Natural England 2020). The site also supports a number of ponds some of which are also UK Biodiversity Priority Habitats. Oaken Bank Wood is divided into two by a trackway, Oaken Bank Road. South of the track the woodland is an even aged oak-birch woodland. A number of ponds occur in the south, which are surrounded by willows (*Salix sp.*). Bottle sedge (*Carex rostrata*) and common duckweed (*Lemna minor*) have been

recorded here. North of the track, Oaken Bank Wood supports similar oak-birch woodland although sycamore (*Acer pseudoplatanus*) is more frequent. A stream runs through the wood. Ponds occur in the east of Glade Wood and are surrounded by willows and have marginal vegetation. Common toad (*Bufo bufo*) and great crested newts (*Triturus cristatus*) have both been recorded in these ponds. Biodiversity Priority bird species have been recorded within the site which includes linnet (*Carduelis Cannabina*), bullfinch (*Pyrrhula pyrrhula*) and reed bunting (*Emberiza Schoeniclus*). 88 species of fungi have been recorded from Glade Wood with 109 species recorded in Oaken Bank Wood. Mammals recorded include red fox (*Vulpes vulpes*), brown hare (*Lepus europaeus*) (UK Biodiversity Priority Species), rabbit (*Oryctolagus cuniculus*), weasel (*Mustela nivalis*) and grey squirrel. Butterflies recorded include red admiral, speckled wood, small copper, orange tip, large white and green-veined white.

- Hopwood Clough SBI is located at SD877078 and is located approximately 70m east of the site. This site forms part of Hopwood Clough Nature Reserve with Glade and Oaken Bank Woods SBI and Lords Wood SBI. The site consists of woodland which is identified as ancient woodland (in the Ancient Woodland Inventory). It has been substantially interplanted with non-native trees and shrubs. Additional habitats include a small reservoir within the site boundary. The site's fungi have been well recorded by a local naturalist with a total of 79 species. Two species (*Pleurotus cornucopias* and *Resurpinatus rhacodium*) are locally scarce. Butterflies recorded from the site include orange tip (*Anthocharis cardamines*), large skipper (*Ochlodes sylvanus*), meadow brown (*Ochlodes sylvanus*), red admiral (*Vanessa Atalanta*), comma (*Polygonia c-album*) and green-veined white (*Pieris napi*). The site provides habitat for many woodland birds which includes (not limited to) breeding blue tit (*Cyanistes caeruleus*) and great tit (*Parus major*), wren (*Troglodytes troglodytes*), blackcap (*Sylvia atricapilla*), great spotted woodpecker (*Sylvia atricapilla*), sparrow hawk (*Accipiter nisus*), nuthatch (*Sitta*) and song thrush (*Accipiter nisus*). There are unconfirmed records of kingfisher nesting in the stream. Woodcock (*Scolopax rusticola*) is often flushed in the winter.
- Higher Boarshaw Clough SBI located approximately 360m south of the site. No citation was provided by GMEU.
- Lords Wood SBI is located approximately 370m east of the site. No citation was provided by GMEU.

Priority Habitats

- 3.1.6. Consultation with magic.gov.uk highlighted the presence of Priority habitats within and within the surrounding area of the site, demonstrated on Figure 4. Priority habitats onsite include Deciduous Woodland on the north eastern aspect of the site.

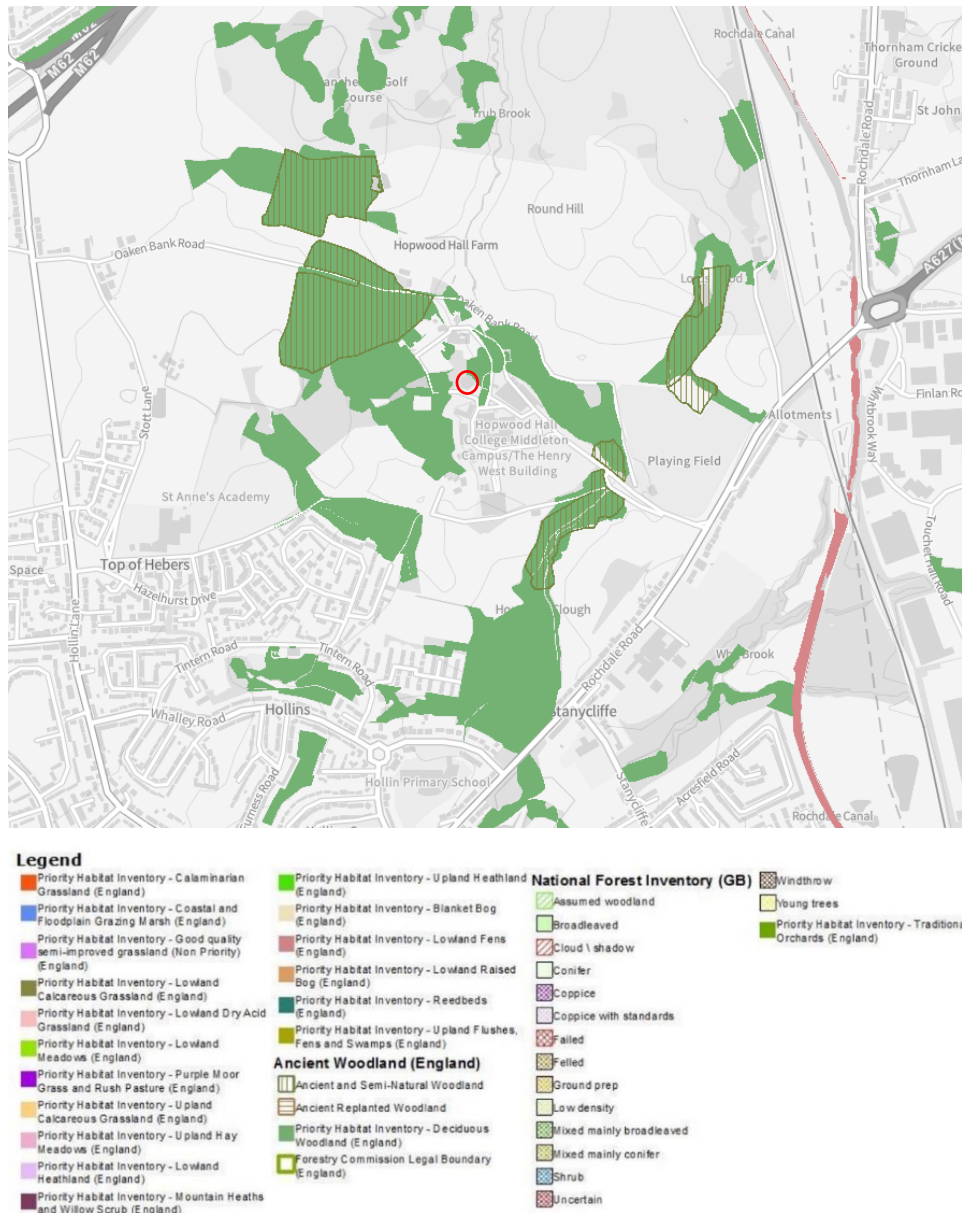


Figure 4 – Priority Habitats (Magic.gov.uk, 2024)

Habitats

- 3.1.7. Please refer to **Appendix 2** for the UK HAB Map for the site, and photographs are located within **Appendix 1**. The survey included all habitats within the red line boundary on the Map, however, the development relates to the renovation of the barn only.

Developed Land; Sealed Surface

- 3.1.8. One building was located within the site boundary and are detailed as part of the PRA, and parcels of hardstanding present, making up developed land; sealed surface.

Modified Grassland

- 3.1.9. Two parcels of modified grassland were present within the surveyed area.
- 3.1.10. The south eastern parcel was well managed and cut to a short sward height. Mosses were recorded abundantly with the addition of ribwort plantain (*Plantago lanceolata*), common daisy (*Bellis perennis*), common mouse-ear (*Cerastium fontanum*), creeping buttercup (*Ranunculus repens*), hard rush (*Juncus inflexus*), rough meadow grass (*Poa trivialis*), fescue (*Festuca* sp.), common dandelion (*Taraxacum agg.*), ragwort (*Jacobaea vulgaris*) and germander speedwell (*Veronica chamaedrys*).
- 3.1.11. The western parcel was situated between the building and woodland habitats. It was less managed and tussocky. Additional grassland species included cock's foot (*Dactylis glomerata*), Yorkshire fog (*Holcus lanatus*), common nettle (*Urtica dioica*) and broad-leaved dock (*Rumex obtusifolius*). Grasses dominated this grassland parcel.

Broadleaved Woodland

- 3.1.12. Broadleaved woodland (partially mapped as Priority Deciduous Woodland) surrounds the site and extends offsite.
- 3.1.13. Mature species of trees recorded included; common beech (*Fagus sylvatica*), pedunculate oak (*Quercus robur*), common lime (*Tilia x europaea*), horse chestnut (*Aesculus hippocastanum*), sycamore (*Acer pseudoplatanus*) and silver birch (*Betula pendula*). The understorey and ground flora on the north eastern portion was mainly bare due to extensive leaf litter. Species recorded included; beech saplings, rhododendron (*Rhododendron ponticum*), holly (*Ilex aquifolium*), bramble (*Rubus fruticosus agg.*), yew (*Taxus baccata*), hawthorn (*Crataegus monogyna*), wood avens (*Geum urbanum*), common ivy (*Hedera helix*) and hard rush.
- 3.1.14. The understorey became more dense on the western aspect with rhododendron dominating, with the addition of Japanese knotweed (*Reynoutria japonica*) (grid reference: SD 87469 08185).

Individual Trees

- 3.1.15. Individual trees were located within the well-managed modified grassland habitat, all of which were mature. Tree species included common beech, sycamore, pedunculate oak and common lime.

Species

Flora

- 3.1.16. The data search returned no records of notable flora within 1km of the site boundary. However, they are known to be within the surrounding designated sites, this does not confirm their absence.
- 3.1.17. The majority of the site consisted of modified grassland and developed land which had limited floristic diversity. There were no notable flora species identified within the site, however as the survey was undertaken in January, it is anticipated that additional flowering species within the grassland could be present, and woodland could be present.
- 3.1.18. The previous management and the lack of notable flora it is considered unlikely that notable plant species will be present onsite. As such, notable flora is not considered further within the assessment.

Invertebrates

- 3.1.19. The data search returned no records of notable invertebrates within 1km of the site boundary.
- 3.1.20. The site consisted of habitats which are anticipated to support local invertebrate populations. The grassland and woodland habitats are anticipated to be of value for invertebrate lifecycles as the flowering species within these habitats are anticipated to provide suitable food resources.
- 3.1.21. The site is directly connected to surrounding woodland habitats and connected to other potential habitats of importance including ponds and Trub Book.
- 3.1.22. Overall, it is anticipated that notable invertebrates could be present onsite, but the site is not considered to be of significant value.

Amphibians

- 3.1.23. The data search returned records of great crested newt within the surrounding areas, this includes male, female and juvenile newts. Common toads, frog (*Rana temporaria*) and palmate newts (*Lissotriton helveticus*) were also recorded within 1km of the site boundary.
- 3.1.24. One Granted European Protected Species Licence was located within 5km of the site boundary for great crested newt based on consultation with magic.gov.uk. **Licence reference 2017-31535-EPS-MIT** – located approximately 1km northwest from the site boundary which allowed for the destruction of a resting place and breeding site for great crested newt between 31/10/2017 – 31/12/2017.
- 3.1.25. One great crested newt pond survey return was located approximately 0.7km northwest from the site boundary based on consultation with magic.gov.uk which found great crested newt to be present on 06/05/2014.
- 3.1.26. No ponds were located onsite. Based on OS mapping, two ponds were located within 250m of the site boundary. As great crested newts' upper dispersal limit is generally considered to be up to 250m from a waterbody (though occurrence of greater distances does exist). Please refer to Figure 3 for the location of the ponds and Table 2 for the HSI summary for the two ponds.

Table 1 – Priority Habitats (Magic.gov.uk, 2024)

Pond ref.	P1	P2
Grid Reference	SD 87398 08191	SD 87767 08153
SI1 – Location	0.5	0.5
SI2 – Pond Area	0.9	0.9
SI3 – Pond Drying	0.9	0.5
SI4 – Water Quality	0.33	0.67
SI5 – Shade	1	1
SI6 – Fowl	0.1	1
SI7 – Fish	0.67	0.67
SI8 – Ponds	1	1
SI9 – Terr'I Habitat	0.33	1
SI10 - Macrophytes	0.3	1
HSI Score	0.50	0.80
Pond Suitability	Below average	Excellent

3.1.27. P1 has been assessed as having “Below Average” suitability for great crested newts. The following qualities contributed towards this score:

- Location is marginal.
- Pond area is approximately 1550m².
- Never dries.
- Low invertebrate diversity (e.g. species such as midge and mosquito larvae). Few submerged plants.
- Approximately 60% shaded.
- Severe impact of waterfowl. Little or no evidence of submerged plants, water turbid, pond banks showing patches where vegetation removed, evidence of provisioning waterfowl.
- No evidence of fish, but local conditions suggest that they may be present.
- Five ponds located within 1km.
- Habitat with poor structure (e.g. amenity grassland, improved pasture and arable) that offers limited opportunities (less than 25% of available area) for foraging and shelter.
- 0% Macrophyte cover.

3.1.28. It should be noted that P1 is currently used to house the flamingos that are present within the college campus and is not treated as a wildlife pond. No aquatic habitat within or on the bankside of the habitat was recorded due to the extensive poaching of the flamingos. As such, based on the use of P1 and the poor scoring, great crested newts are deemed likely absent from this pond and not considered further within the assessment.

3.1.29. P2 was assessed as providing “Excellent” suitability for great crested newts. The following contributed towards this score:

- Location is marginal.
- Pond area is approximately 1500m².
- Dries between three years in ten to most years (sometimes dries).
- Moderate invertebrate diversity.
- Approximately 40% shaded.
- No evidence of waterfowl impact (moorhens may be present).
- No evidence of fish but local conditions suggest that they may be present.
- Five ponds within 1km.
- Habitat that offers good opportunities for foraging and shelter covers more than 75% of available area.
- 80% macrophytes cover.

3.1.30. It is possible P2 could support great crested newts based on the known records of the species within the local area and the HSI scoring.

- 3.1.31. The surrounding habitats of the chapel includes woodland and grassland. The less managed grassland and woodland may provide suitable cover and foraging resources for great crested newts in the terrestrial phase.
- 3.1.32. Other common amphibians such as common toad are anticipated to utilise these habitats and are known to be present within the Hopwood Woodlands LNR located near to the site.

Reptiles

- 3.1.33. The data search returned no records of reptile species within the local area.
- 3.1.34. The grassland and woodland habitats could be of value for local reptile populations. The unmanaged woodland habitats provide cover and foraging opportunities for local reptile populations. Trub Brook is located within the eastern woodland habitat which provides suitable commuting opportunities for grass snake (*Natrix helvetica*). It is anticipated that reptiles could be present within the adjacent woodland habitats.

Birds

- 3.1.35. The data search returned records of birds within 1km of the site. Species identified includes bullfinch, curlew (*Turdus philomelos*), dunnoek (*Prunella modularis*), herring gull (*Turdus philomelos*), house sparrow (*Passer domesticus*), lapwing (*Vanellus Vanellus*), lesser redpoll (*Carduelis Cabaret*), linnet, song thrush (*Turdus philomelos*) and starling (*Sturnus Vulgaris*).
- 3.1.36. The site provides potential breeding habitats for bird in association to the woodland habitat and individual trees within the surrounding areas of the Chapel building. Notable bird species obtained from the data search could utilise these surrounding habitats for breeding and foraging purposes, which are associated with woodland habitats.
- 3.1.37. Feral pigeon (*Columba livia domestica*) was confirmed within the Chapel building but no historic nests were identified.
- 3.1.38. Ground nesting birds are deemed likely absent from the site due to the frequent disturbance within the site will deter ground nesting birds from the campus.

Bats

- 3.1.39. The data search returned records of bats within the 1km of the site, species includes common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), unidentified pipistrelle (*Pipistrelle sp.*), brown long-eared bat (*Plecotus auritus*), natterers bat (*Myotis nattereri*), daubenton's bat (*Myotis daubentonii*) and noctule bat (*Nyctalus noctula*).
- 3.1.40. The data search also returned records of bat roosts within 1km of the site. Bat roosts were identified within the buildings on the wider Hopwood Hall Campus:
- One roost located within the Chapel building onsite in 2008 which consisted of one common pipistrelle emergence (Grid Reference: SD875082). It is understood that there have been no roost further locations identified and no works have been completed on the Chapel. No further detail of the roost was provided.
 - A previous maternity roost was located within the campus (Grid Reference: SD 87600 08100) in the Rochdale building which was identified as a maternity roost for common pipistrelle in 2010. The building is situated approximately 100m southeast of the site. It is understood based on consultation

with magic.gov.uk that a licence for this roost was obtained in 2011 which allowed for the damage and destruction of the breeding and resting place (EPSM2010-2397).

- Located within a large residential dwelling which is currently vacant (Grid Reference: SD87490830), located approximately 60m north of the site. It is not owned by the colleague campus but is situated within the centre of the campus grounds. This was identified in 2022 as a satellite roost and day roost for common pipistrelle, brown long-eared bat and unidentified myotis species. Bat droppings, emergences and re-entries have been recorded on the building. It is understood that there have been no licences obtained for this roost location on site.

3.1.41. A review of EPSLs for bats within 5km of the site was completed utilising Magic.gov.uk, as detailed in Table 2.

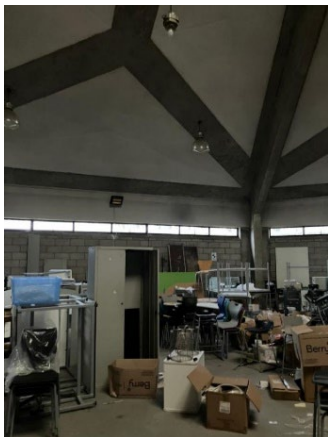
Table 2 – Bat licences within 5km based on consultation with magic.gov.uk, C-PIP = Common Pipistrelle.

Case reference of granted application	Species on the licence*	Distance from site (KM)	Licence Start Date	Licence End Date	Does the Licence				
					impact on a breeding site?	allow damage of breeding site?	allow damage of a resting place?	allow destruction of breeding site?	allow destruction of a resting place?
2015-8774-EPS-MIT	C-PIP	1.4	13/04/2015	01/06/2020	Y	N	N	Y	Y
2016-20262-EPS-MIT	C-PIP	3.4	01/03/2016	28/02/2021	N	N	N	N	Y
EPSM2010-2397	C-PIP	0	10/01/2011	31/10/2013	Y	-	-	Y	Y
2018-36862-EPS-MIT	C-PIP	3.7	01/09/2018	31/10/2019	N	N	N	N	Y
2018-38254-EPS-MIT	C-PIP	4.4	18/12/2018	09/12/2023	Y	N	N	Y	Y
2019-42233-EPS-MIT	C-PIP	4.9	06/09/2019	31/01/2020	N	N	N	N	Y
2019-42984-EPS-MIT	C-PIP	4.4	09/10/2019	30/09/2023	Y	N	N	Y	Y
2019-42233-EPS-MIT-1	C-PIP	4.9	05/02/2020	31/03/2020	N	N	N	N	Y
2020-48009-EPS-MIT	C-PIP	2.5	08/09/2020	30/11/2020	N	N	N	N	Y
2015-16228-EPS-MIT	C-PIP	4.3	12/11/2015	31/12/2015	N	N	N	N	Y
EPSM2012-5119	C-PIP	3.4	13/11/2012	30/11/2013	N	-	-	N	Y
EPSM2010-2617	C-PIP	4.5	10/01/2011	31/12/2012	N	-	-	N	Y
2014-2836-EPS-BDX	C-PIP	3.8	25/08/2014	25/09/2014	Y	Y	N	Y	N

3.1.42. The chapel was subject to a PRA and are detailed in Table 3.

Table 3 – Preliminary Roost Assessment Results

Building Ref	Description	Photograph
Chapel External	The chapel consisted of well-sealed breezeblock walls with small rectangular windows located at the top of the brickwork. The remainder of the wall then consisted of concrete which connected to the copper roof, this was well sealed with no PRF's identified along any external walls. One of the small windows on the northwestern aspect was smashed however, this had been covered with a wooden board and did not provide internal access or a PRF. A double wooden door was located on the northwestern aspect which also had smashed glass windows, this was not covered and was identified as an access point. The internal aspect of this area was inspected which showed this was a small fire exit. This consisted of a well-sealed concrete walls and connecting roof with no PRF's inside. This was not identified as a feature that could support roosting bats. The roof consisted of the original copper roof throughout from when the chapel was built. There were small gaps identified along the roof however from the internal inspection it is understood that these gaps will only lead to a concrete roof and not a cavity. The small pockets within the copper were identified as PRFs. It should be noted that this feature was identified as suboptimal to support roosts of higher conservation as copper is a good conductor of heat. This means it absorbs heat quickly and holds it for a long period of time. This makes the pockets in the copper suboptimal as the roof will fluctuate in temperature depending on the external weather conditions, this is anticipated to deter bats from roosting on the roof. The features are likely to support transitional or day roosts of crevice dwelling bats. A tall glass spire was located on the centre of the roof which connected to a copper roof at the top. There were smashed windows along the spire which were identified as potential access points. The copper roof at the top was well sealed and there were no PRF's identified.	  

Chapel Internal	Internally, the building had one main hall with smaller associated rooms. The main room of the chapel consisted of breeze block walls with small rectangular windows along the top of the breeze block as seen externally. The wall above the small windows was well sealed rendered walls. These walls connected to a well-sealed rendered roof with no gaps or crevices throughout. A glass church spire was in the centre of the roof which was made up of glass windows with supporting concrete beams. The concrete along the spire looked well sealed throughout however, it should be noted that this was tall and small gaps could have been missed during the inspection. The glass was not found to be in good condition with multiple smashed windows identified along the spire. Pigeons were located within this aspect which confirms that these gaps provide access points which could be used by bats. It was considered however that the internal aspect of the building did not provide gaps or crevices that could support bats and they are unlikely to utilise this feature. A small room was located on the western aspect which consisted of breezeblock walls and built in cupboards throughout. This was all well sealed with no roosting features identified. A small loft space was located above this room which consisted of a concrete sealed roof with breeze block walls. The floorboards were wooden, some of the floorboards were missing on the western aspect. The inspection was completed from the loft hatch as it was deemed unsafe to access the loft. It was completely well-sealed with no access point observed to the loft. An entrance hallway was located on the eastern aspect of the chapel with two wooden access doors located on either side. The doors were all sealed and boarded with no access points for bats identified. The room was well-sealed with rendered walls. Notice boards were located on the eastern wall, one of these was missing during the survey which allowed an inspection of the breeze block walls behind. These were all well sealed with no gaps or crevices identified. There were no PRF's identified.	   
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	There were no bat droppings or feeding remains identified throughout.	
Result	A previous nocturnal bat survey of the chapel was undertaken in 2008 which identified one common pipistrelle emergence. It is understood that the chapel has remained untouched, and no features have changed along the building since the previous survey. It is noted that two other bat roost located were located within Hopwood Hall College (see points 3.1.39 – 3.1.40), confirming the area being used frequently by roosting bats. The copper roof provides sub-optimal roosting features for roosts of higher conservation, that could be used however, they are not anticipated to be utilized due to the fluctuating temperatures. The chapel was assessed as providing Low Bat Roosting Potential.	

- 3.1.43. The habitats around the chapel consisted of broadleaved woodland which connected directly to Glade & Oaken Bank Woods SBI. There were numerous bat boxes located on trees throughout the woodland and may relate to compensatory roost measures of the nearby EPSLs obtained on the Campus grounds. The bat boxes were identified on trees at the approximate grid references: SD 87490 08241 and SD 87533 08232. Additional bat boxes may be present within the wider woodland.
- 3.1.44. All trees with bat boxes are assessed as having ‘moderate bat roosting potential’ due to the presence of the boxes. No boxes were identified to be large enough to support a maternity roost.
- 3.1.45. An additional tree (T1) was identified as having ‘low bat roosting potential’ at the following grid reference: SD87531 08198). A minor pruning wound was identified 4m from ground level and on the northern aspect.
- 3.1.46. The boundary features of the site including the woodland provide linear features that could be utilised by commuting and foraging bats. These features are connected to further habitats within the Campus and nearby designated sites which could support commuting, foraging and possibly roosting bats.
- 3.1.47. Overall, the site and surrounding habitats have the potential to support roosting, foraging and commuting bats.

Badger

- 3.1.48. The data search returned records of badger and an active badger sett within 1km of the site boundary, their location is to remain confidential.
- 3.1.49. There were no signs of badger presence recorded within the site. The connecting woodland habitat provides suitable conditions for sett building for local badger populations. It is anticipated that due to the setts within the local area, badgers will use the site for commuting and foraging purposes.

Other Terrestrial Mammals

- 3.1.50. The data search returned records of ten European hedgehog (*Erinaceus europaeus*) within the 1km of the site boundary. Given the habitats present within the site including grassland and woodland, it is anticipated that hedgehog could be present within the site.

Non-Native Invasive Species

- 3.1.51. The data search returned no records of non-native invasive species within 1km of the site boundary.

- 3.1.52. Japanese knotweed and rhododendron were identified within the western portion of the broadleaved woodland habitat.

Species Discounted from Assessment

- 3.1.53. Water vole, otter and white-clawed crayfish have been discounted from assessment. Trub Brook runs within the woodland habitats, situated approximately 80m east of the site and may support these species. The aquatic habitat is deemed a sufficient distance away from the development and nearby aquatic habitats.
- 3.1.54. Hazel Dormouse (*Muscardinus avellanarius*) mainly occur in southern counties, especially in Devon, Somerset, Sussex and Kent. There are few recorded localities north of the Midlands, though they are present in parts of the Lake District and in scattered Welsh localities (Matthews et al, 2018). There are no records of the species within the local area, the surrounding woodland could provide suitable habitat however the college campus does not provide habitat to support this species.
- 3.1.55. Red squirrel has been discounted from the assessment. Red squirrel populations are limited to small areas of northern England and no previous records returned in the data search. It is anticipated that high abundances of grey squirrel are present within this region (Shuttleworth/RSST n.d.). This species will displace red squirrel through competition as well as cause increased red squirrel mortality through the spread of squirrel pox (The Mammal Society, 2020).

4. Mitigation Recommendations

Designated Sites

- 4.1.1. The site is located within the impact risk zone for the Rochdale Canal SSSI and SAC which is located 720m east from the site (at nearest point). The Rochdale Canal contains important habitats for submerged aquatic plants and emergent vegetation. The proposed works are not anticipated to directly impact the designated site due to the works relating to the refurbishment of an existing building. Whilst the works relate to commercial use and will not cause an increase of visitors to the site. As such, no further assessments are deemed necessary in relation to this designated site.
- 4.1.2. There are numerous LNRs and SBIs within the surrounding area of the site based on consultation with magic.gov.uk and the local data search. The closest of which related to Hopwood Woodlands LNR site located adjacent to the site. The proposed mainly relate to the refurbishment of the building and the extent of habitat loss is unknown.
- 4.1.3. It is recommended that a minimum 5-10m buffer is to be maintained between the LNR site and the proposed development throughout the construction and operational phase in order to reduce impacts during this phase. The buffer should be appropriately signed and fenced, and all contractors inducted as to their working limits. If any works are required within the buffer, they should be undertaken under the supervision of a suitably experienced ecologist (and dependent of further species surveys).
- 4.1.4. It is recommended that a detailed Construction and Environment Management Plan (CEMP) specific to the proposed development is created (and adhered to throughout the course of construction works) to avoid, minimise and mitigate for negative impacts resulting from construction practices on all habitats surrounding the site.
- 4.1.5. This plan will detail measures to avoid, minimise or mitigate any potential negative effects caused by construction practices on the environment on and surrounding the site including:
- The control of run-off from areas of arisings to prevent any pollutants/contaminants entering nearby waterbodies.
 - Appropriate measures to suppress dust during hot, dry and/or windy conditions.
 - Excavations should be sealed overnight or should have at least one shallow-sloping side to allow any animals that may fall in to escape.
 - An ecologist should be contacted for advice should any protected species be discovered during construction.

Priority Habitats

Deciduous Woodland

- 4.1.6. The extent of proposed works mainly relates to the building; however, the extent of habitat loss is unknown and whether the Priority habitats will be impacted. It is recommended that the development aims to retain this habitat and maintain its quality. The protection measures are to be detailed within the Arboricultural Impact Assessment (AIA) to be produced by Seed Arboriculture Ltd.

- 4.1.7. Generally, the protection measures of retained trees will be through use of temporary protective demarcation fencing to protect the trees and shrubs. 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. Please refer to the AIA report for the tree protective fencing specification.

Species

Amphibians

- 4.1.8. Great crested newts are known to be within the local area based on the 1km data search. The offsite pond (P2) underwent a HSI assessment which found the pond to provide “Excellent” habitat suitability for great crested newts. The proposed development is the refurbishment of the Chapel and the extent of habitat loss is unknown but should seek to retain as much of the terrestrial habitat as feasibly possible.
- 4.1.9. It is recommended that Reasonable Avoidance Measures (RAMS) are followed to minimise any negative impact to great crested newts and other amphibians:
- All site contractors are to be inducted through a Toolbox Talk hosted by a suitably qualified ecologist on the presence of great crested newts and their legal protection. All contractors are to sign the Toolbox Talk and agree to the proposed RAMs.
 - A designated working area will be maintained to minimise total working area, which will be marked out by the ecologist (where necessary). A fence and/or sign will be situated to mark the working areas to ensure no contractors and vehicles do not enter areas which have not been checked for great crested newts (and other common amphibians).
 - Any vegetation on site to be cleared should first be strimmed to approximately 15 cm and left overnight, allowing any animals the chance to naturally disperse from site. A fingertip search of any vegetated areas should then be undertaken to check for the presence of great crested newts (and other common amphibians).
 - Once the ecologist has declared all areas of potential for great crested newts have been checked, the proposed works can continue unsupervised.
 - Storage of materials is to be on pallets i.e. raised off the ground and on areas of hard standing or tarmac. No materials to be stored on vegetation.
 - All working areas are to be maintained as bare ground or hardstanding throughout the construction phase.
 - All open pits and pipes are to be covered during the night, with a check for presence of amphibians conducted prior to covering.
 - If excavations are exposed and/or created, a slope will be positioned within the excavation to allow amphibians and mammals to escape should they fall in.
 - Under no circumstances should site contractors attempt to handle great crested newt, but contractors are able to move other common amphibian species such as common toads from outside of the working area.
 - Ecologist to undertake a site visit upon completion of works to confirm that the works have been undertaken using the above risk avoidance measures and that habitats have been restored.

Reptiles

- 4.1.10. The proposed development is to be mainly restricted to the building footprint, but the extent of habitat loss is unknown.. Due to the potential presence of reptiles, it is recommended that RAMS recommended for great crested newt are also to consider the presence of reptiles to minimise the likelihood of killing, injuring or disturbing any reptiles present on site during the construction phase.
- 4.1.11. The precautionary destructive search work will be undertaken during the summer at a time of year when reptiles are active. The ecologist will be present during the strimming works. Any reptiles found during the destructive search will be relocated to the nearby woodland habitats.

Breeding Birds

- 4.1.12. Pigeons were identified within the chapel building; this species are known to nest all year round. A nesting bird check of the chapel should be undertaken before any works commence onsite. This should be taken no more than 48 hours prior to removal. If nesting activity is observed, the nest(s) should be left in situ until the young have fledged. A suitable buffer will be maintained and determined by the ecologist.
- 4.1.13. It is also recommended that a nesting bird check, as detailed under paragraph 4.1.12 to be carried out should vegetation removal be completed during the nesting bird season (March to August, inclusive).
- 4.1.14. It is recommended that the habitats are to be retained where feasibly possible to maintain suitable breeding bird habitats onsite.

Bats

- 4.1.15. The Chapel was assessed as providing Low Bat Roosting Potential. This is defined as:
“A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/ or suitable surrounding habitats to be used on a regular basis by larger numbers of bats”. (Collins, 2023).”
- 4.1.16. As such, further surveys are recommended and detailed in Section 5.
- 4.1.17. The trees identified with bat boxes should be retained and protected. It is possible that these boxes relate to compensatory roosts for the previous bat licence obtained on the campus. If the trees require removal, consultation with the licenced ecologist for the previous bat licence will be required and further nocturnal bat surveys will be required to assess current uptake by roosting bats.
- 4.1.18. T1 was assessed as having low bat roosting potential. If the tree requires removal, it should undergo reasonable avoidance measures. This would involve being inspected by a licensed bat worker with an endoscope before felling or utilising a soft felling technique (which involves practises like removing limbs separately and lowering them to the ground and then leaving for 24 hours before clearing).
- 4.1.19. The site provides value for local bat populations with known roosts present within the Hopwood Hall Campus and the site provides suitable foraging and commuting habitats. As stated, the development should seek to retain the habitats surrounding the building as feasibly possible to maintain the sites value for bat activity. If habitat loss is required, proposed landscaping should include locally native and species rich habitats to compensate for the loss.

- 4.1.20. Slow-flying species such as brown long-eared, which are known to be in the local area, are sensitive to lighting and may be impacted by the proposed development, should no mitigation for lighting be considered.
- 4.1.21. The following measures should be implemented in the final produced lighting strategy, following guidance outlined in the Institute for Lighting Engineers document “Guidance for the Reduction of Obstructive Lighting” (2005) and BCT’s “Bats and Artificial Lighting at Night” (2023):
- Keep site lighting to minimum levels.
 - LED lighting with a warm white light to be used over cool white light (>2700Kelvin).
 - Lighting should feature peak wavelengths greater than 550nm.
 - Light placement should be downward facing to prevent excess horizontal or vertical light spill.
 - Avoid illuminating habitats of value (i.e. surrounding woodland and bat boxes).
 - Use of timed security lights should be set on motion-sensors and using short, 1-minute timers, to minimise light use.

Badgers

- 4.1.22. There were no badger setts identified during the surrounding areas of the site. It is anticipated that they will be present within the connecting woodland and may use the site for commuting and foraging purposes. The following Precautionary Working Methods (PWMs) will be adhered to during the construction phase to ensure no badgers are impacted by the proposed development (Badger Trust, 2023):
- A pre-commencement of work badger survey should be conducted by a suitably qualified ecologist to ensure the current badger situation is known and that the recommendations are correct.
 - All site personnel should be fully briefed concerning the method statement, the presence of badgers, the mitigation measures to be followed, the relevant legislation, the penalties imposed and who to contact should they need to.
 - Ensure excavations or trenches left overnight are covered or have an escape route such as a shallow gradient at one or both ends.
 - Ensure excavations or trenches are inspected each morning and evening to ensure no badgers have become trapped.
 - Open pipework with a diameter of more than 120mm should be properly covered or capped at the end of the working day to prevent badgers from entering and becoming trapped.
 - During the work, the storage of any chemicals should be contained in such a way that they cannot be accessed or knocked over by any roaming badgers.
 - The storage of topsoil or other “soft” building materials within the site should be given careful consideration. Badgers will readily adopt such mounds and dig setts which would then be afforded the same protection as established setts. To avoid the adoption of such mounds, they should be subject to daily inspections before work commences or alternative measures put in place, such as being fenced off for higher-risk areas.

- Litter tools and potentially dangerous materials on site should be cleared at the end of the working day. Care should be taken that there are no sharp metal objects or pointed protrusions on the ground which could seriously injure a badger due to their poor eyesight.
 - Ensure no dogs are brought to the work site.
 - Fires should be lit only in secure compounds away from areas of badger activity and should be fully extinguished at the end of the working day.
- 4.1.23. Adherence to these measures should be confirmed to planners at regular intervals by the project ecologist.

Terrestrial Mammals

- 4.1.24. European Hedgehog are anticipated to be present within the site and are a Species of Principal Importance. During habitat removal, any areas of dense vegetation should first be carefully hand searched to check for the species. If identified during management, should be relocated carefully by hand to a location away from the working area. If any injured either species are located, they should be taken to a local vet.

Non-Native Invasive Species

- 4.1.25. Rhododendron and Japanese knotweed were identified within the site. As the survey was completed in January, it is possible specimens may have been missed. It is recommended that an updated walkover is completed by a competent non-native invasive species contractor and the production of a Method Statement to include measures for the eradication of non-native invasive species is completed.

5. Further Surveys & Conclusion

Nocturnal Bat Survey

- 5.1.1. The Chapel was assessed as having low bat roosting potential, and therefore, in accordance with Best Practice guidance (Collins, 2023) further nocturnal emergence/ re- entry surveys should be undertaken to determine usage by roosting bats (depending on the extent of development works). A minimum of one survey should be undertaken between May–August.
- 5.1.2. The results of the further surveys will determine if any mitigation is required for roosting bats. If roosting bats are located within any of the building, a Natural England Mitigation Licence may be required for development to proceed. The Licence can only be obtained once planning permission has been granted and all wildlife conditions discharged. However, the bat emergence surveys must be undertaken prior to planning permission being applied for as they are a material consideration.
- 5.1.3. Please note, bat emergence surveys are typically valid for 12 months. If a Mitigation Licence is required, survey results from the most recent bat survey season are required.

Conclusion

- 5.1.4. The site consisted of a chapel with surrounding grassland and woodland. The Chapel was found to have potential to support roosting bats as the data search found previous records of roosting bats within the building. The surrounding habitats of the chapel are anticipated to provide habitats for notable flora and fauna populations, bat boxes were also identified within the woodland.
- 5.1.5. Specific enhancement recommendations for the site include the following:
 - Bat and bird boxes could be placed on the retained trees. A plan to show the locations of these boxes and the specifications should be produced by a suitably qualified ecologist once the layout is finalised.

6. Bibliography

- Bat Conservation Trust and Institute of Lighting Professionals (2018). Bats and artificial lighting in the UK – Bats and the Built Environment Series.
- British Hedgehog Preservation Society / People's Trust for Endangered Species (2019). Hedgehogs and Development. BHPS / PTES.
- Chanin P (2003). Ecology of the European Otter. Conserving Natura 2000
- CIEEM (2019). Advice Note on the Lifespan of Ecological Reports and Surveys. CIEEM.
- CIEEM (2019). Guidelines for Preliminary Ecological Appraisal. CIEEM.
- Collins (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (Third Edition). The Bat Conservation Trust, London.
- Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108, 708–746. Available online at britishbirds.co.uk/wp-content/uploads/2014/07/BoCC4.pdf
- IEA (1995). Guidelines for Baseline Ecological Assessment. E & F Spon.
- English Nature (2004). Bat Mitigation Guidelines. English Nature, Peterborough.
- Froglife (1999) Reptile Survey: An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation. Froglife Advice Sheet 10. Froglife, Halesworth.
- Gent, A.H & Gibson, S.D. (2003) Herpetofauna Workers' Manual. Joint Nature Conservation Committee, Peterborough.
- Harris S., Cresswell P., Jefferies D. (1989). Surveying Badgers. The Mammal Society.
- IEA (1995). Guidelines for Baseline Ecological Assessment. E & F Spon.
- JNCC (2004). Bat Workers Manual. JNCC, Peterborough.
- JNCC (2010). Handbook for Phase One Habitat Survey – 2010 Edition. England Field Unit, Nature Conservancy Council. Reprinted JNCC.
- Liles, G. (2003). Otter Breeding Sites. Conservation and Management. Conserving Natura 2000 Rivers Conservation Techniques Series No. 5. English Nature, Peterborough.
- Maddock, A. (2008). UK biodiversity action plan; priority habitat descriptions. UK Biodiversity Action Plan.
- Mathews, F., Kubasiewicz, L.M., Gurnell, J., Harrower, C.A., McDonald, R.A., and Shore, R.F. (2018). A review of the population and conservation status of British mammals.
- Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), Great crested newt conservation handbook, Froglife, Halesworth.
- Oldham, R.S., Keeble, J., Swan, M.J.S., and Jeffcote, M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetology Journal 10 (4), 143-155.

Appendix 1 – Site Photographs

Feature	Photograph
Trees with bat boxes situated on	
T1 – Low bat roosting potential	
Modified grassland – south eastern parcel	
Modified grassland – western parcel	

Broadleaved woodland – eastern section	
Broadleaved woodland – western section	
Individual trees	
Developed land; sealed surface	
Japanese knotweed and rhododendron	

Pond P1			
Pond P2			

Appendix 2 – Habitat Map





Hopwood Hall College - Chapel
Works
Date: 17.01.24

-  Broadleaved Woodland
-  Modified grassland
-  Developed land,
Sealed Surface
-  Red line

Scale: 1:1000

Drawn By: CW

Checked By: KB

Approved By: KB



Client: Seven Architecture

Site: Hopwood Hall College, Rochdale Road,
Middleton, Manchester, M24 6XH

Project Number: 1697B

Rev: 1.0

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