



FUTURESECOLOGY

Connah Construction

Ashbrow Road, Huddersfield

Supplementary Ecology Information

Report Reference Number: FE198/SEI01

July 2022

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Figure 1: Wildlife Habitat Network (WHN) Plan

Figure 2: Phase 1 Habitat

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1.0 INTRODUCTION

- 1.1 The following report has been prepared by Futures Ecology Ltd. on behalf of Connah Construction. This report seeks to address the points raised in the Ecology Response dated 17th March 2022 regarding application 2022/90852 at 41, Ashbrow Road, Fartown, Huddersfield, HD2 1DX.

- 1.2 The Ecology Response stated;

“The applicant should engage with a suitably qualified ecologist to undertake a bat scoping survey of the trees on the site. The survey should be undertaken in accordance with methods outlined by the Bat Conservation Trust (BCT) and Bat Roosts in Trees (Bat Tree Habitat Key (BTHK), 2018). The report of the above should cover whether there are potential impacts to roosting, commuting and foraging bats during and post-development i.e. as a result of new lighting provisions, due to the location of the site as a potential commuting route for bats.

The trees on site that are due to be removed are likely to provide suitability for nesting birds. It is recommended that these trees are inspected by a suitably qualified ecologist, prior to their removal.

The applicant should also demonstrate how negative impacts to the Kirklees Wildlife Habitat Network are to be avoided and a how a biodiversity net gain is to be achieved post-development. This is fundamental in order to determine if the proposals can be brought forward in line within Local Plan Policy LP30.

The application should not be determined until the necessary assessments have been received and a Biodiversity Net Gain demonstrated.”

- 1.3 A site visit was undertaken on 9th June 2022 to inform the baseline condition of the site and undertake a bat scoping survey of the buildings and trees.
- 1.4 From verbal communication with the Local Planning Authority, it is understood that, as the site is a Minor Development, net gain for biodiversity will not need to be quantified using a Biodiversity Metric. Recommendations for habitat enhancements have been included in Section 5 of this report to achieve biodiversity net gain.

SITE LOCATION AND CONTEXT

- 1.5 The Site was 0.57ha in extent and located to the south of Ashbrow Road, comprising a mosaic of ornamental planting, scrub, grassland, scattered scrub, mature trees and hardstanding. Shrub hedgerows bordered the site to the north, east and south. The Site backed onto residential properties to the east, south and west, with Ashbrow Road bordering the northern site boundary.
- 1.6 The majority of the Site is mapped as Kirklees Wildlife Habitat Network (WHN) as shown in Figure 1.

DEVELOPMENT PROPOSALS

- 1.7 The proposals include the erection of mixed-use development of retreat building and 5 supported living units with integral garages.

2.0 METHODOLOGY

PERSONNEL

- 2.1 The extended Phase 1 habitat survey and preliminary protected species survey was undertaken by J. Wheeldon who has 20 years of experience undertaking these surveys. J Wheeldon is a Full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and holds licences for bats (WML-CL18, Ref: 2015-12340-CLS-CLS), great crested newt *Triturus cristatus* (WML-CL08, Ref: 2015-12340-CLS-CLS) and white clawed crayfish *Austropotamobius pallipes* (WML-CL11, Ref: 2016-20902-CLS-CLS).

FIELD SURVEY – HABITATS

Extended Phase 1 Survey

- 2.2 The survey was undertaken on 9th June 2022, during weather conditions that were bright and sunny. Survey methodology followed guidance from Joint Nature Conservation Committee (JNCC) 2016¹ comprising a walkover of the survey area mapping (using JNCC standard habitat codes) and broadly describing and classifying the principal habitat types and other features of interest. The frequencies at which plant species occurred were noted using the DAFOR method. Whilst the plant species lists obtained should not be regarded as exhaustive, sufficient information was obtained to determine broad habitat types.
- 2.3 The distribution and extent of any invasive species listed on Schedule 9, Section 14 of the Wildlife and Countryside Act 1981 (*as amended*) were also noted during the survey.

UK Hab

- 2.4 A summary of the habitats present on site is provided within the report including UK Hab equivalent habitats (from the UK Habitats Classification methodology²) for the purpose of the Biodiversity Impact Assessment (BIA).

Hedgerows

- 2.5 Any hedgerows present within the application survey area were assessed against the Wildlife and Landscape criteria contained within the Statutory Instrument No: 1160 – The Hedgerow Regulations 1997³ to determine whether they qualified as an ‘Important Hedgerow’ under the regulations. It should be noted that hedgerows may also qualify as ‘Important Hedgerows’ under the Archaeology and History criteria of this Act, which is outside the scope of this assessment.
- 2.6 In addition, any hedgerows present are also surveyed using the Hedgerow Evaluation and Grading System (HEGS)⁴. This method assesses the hedgerows by recording canopy species composition, ground flora and climber species. Measurements are taken regarding, the structure of the hedgerows, which include height, width and gaps present,

¹ JNCC (2016) *Handbook for Phase1 Habitat Survey – a technique for environmental audit*. ISBN 0 86139 636 7

² [ukhab – UK Habitat Classification](#)

³ DEFRA (1997) *The Hedgerow Regulations 1997: A Guide to the Law and Good Practice*, London HMSO.

⁴ Clements, D.K. & Tofts, R.J. (1992) *Hedgerow Evaluation and Grading System (HEGS): A methodology for the ecological survey evaluation and grading of hedgerows*.

as well as associated features such as the number and species of tree standards, banks, ditches and grass verges.

- 2.7 Each hedgerow is given a grade using the HEGS system with the suffixes '+' and '-', which represent the upper and lower limit of each grade. The grade represents a continuum on a scale from 1+ (the highest score and also hedges of the greatest nature conservation priority) as follows:

Table 1: Nature Conservation Value of Hedgerows

Grade	Value of Hedgerow
-1, 1, 1+	High to Very High
-2, 2, 2+	Moderately High to High
-3, 3, 3+	Moderate
-4, 4, 4+	Low

- 2.8 All hedgerows consisting predominantly (i.e., 80% or more cover) of at least one woody UK native species are a Habitat of Principal Importance (HPI) in England under Section 41 of the NERC Act 2006. Therefore, the percentage abundance of woody species contained within the hedgerows was recorded.

FIELD SURVEY – FAUNA

Bats

- 2.9 Bat surveys were undertaken on the 9th June 2022 and undertaken by an ecologist a Natural England level 2 class licence to survey for bats ref (2015-12340-CLS-CLS).

Roost Habitat – Buildings & Trees

Internal & External Building Visual Inspection

- 2.10 All buildings to be impacted by the proposals were assessed for their potential to support roosting bats using statutory guidance (Natural England⁵) and best practice survey methodology⁶.
- 2.11 The buildings were inspected externally using close focussing binoculars, a high-powered torch and endoscope where appropriate. Features such as small gaps around or under barge/soffit/fascia boards, windows, lintels, flashing, external pipework and or raised or missing roof/ridge tiles or gaps at gable ends, which have the potential for use as access points, were noted. Evidence that bats actively used such features included: staining within and around the gaps or bat droppings / urine staining under gaps. The presence of cobwebs and or general detritus within and around potential access points was used as an indicator that bats had not recently used the area to access the building.
- 2.12 Where accessible and safe to do so, the interiors of the building including roof voids and cellars were assessed for evidence of bat activity and for the potential to be used by

⁵ <https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects> (accessed March 2020)

⁶ Collis, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London.

roosting bats. Evidence of a roost would be determined by the presence of live or dead bat(s), concentrated piles or scattered bat droppings, feeding remains such as insect wing fragments as well as scratch marks and or staining from mammalian fur oil/ urine.

- 2.13 An assessment was made on the level of bat roosting potential offered by the structures, based on the presence of the features detailed above. Table 2 below broadly classifies the potential categories and discusses the relevance of such features, where present.

Ground Based Tree Assessment

- 2.14 All trees within the site boundary were assessed for their potential to support roosting bats using statutory guidance (Natural England, 2019)⁷ and best practice survey methodology (Collins, 2016⁸, AEcol 2020⁹, BTHK (2018)¹⁰ and Mitchell-Jones, A.J. and McLeish, A.P. (eds), 2004)¹¹.
- 2.15 The trees were inspected from the ground using close focussing binoculars, a high-powered torch, and an endoscope where appropriate. Potential Roosting Features (PRF) for bats such, holes / cavities, loose bark, cracks / splits, occluded bark, and gaps behind ivy stems (please note that this list is not exhaustive) were sought (Based on P16, *British Standard 8596:2015*¹² and features as described in the BTHK (2020)). Other factors such as orientation of the feature, its height from the ground, the direct surroundings and its location in respect to other features may enhance or reduce the potential value of the PRF. Signs indicating possible use by bats were also recorded such as bat droppings, odour, scratches, staining and audible sounds.
- 2.16 An assessment was made on the level of bat roosting potential offered by the trees, based on the presence of the features detailed above. Table 2 below broadly classifies the potential categories and discusses the relevance of such features, where present. The British Standard Document¹⁴ groups trees with moderate and high potential, within Table 2 below these have been separated.

Table 2: Bat Roost Potential Classification Buildings & Trees - Based on Table 4.1 and Table 7.3 of *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016).

Classification / Suitability	Description of Roosting Habitat within either buildings or trees	Likely Further Survey Work
Negligible	Negligible or no habitat features likely to be used by roosting bats.	None.
Low	A structure with one or more potential roost sites or features (PRF) that could be used opportunistically by small numbers or individual bats. These features do not provide enough space, shelter, suitable conditions and or surrounding suitable habitat to be used on	Buildings Nocturnal presence / absence surveys are likely to be required to give confidence in a negative result. At least one dusk emergence or dawn re-entry survey during the appropriate survey period.

⁷ Bats: surveys and mitigation for development projects: <https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects> (accessed 12/11/2019)

⁸ Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1

⁹ BTHK 2020. Bat Tree Habitat Key – 4th Edition. AEcol, Bridgwater

¹⁰ Bat Roosts In Trees (2018), Bat Tree Habitat Key (BTHK)

¹¹ Mitchell-Jones, A.J. and McLeish, A.P. (eds) (2004) *Bat Workers' Manual* (3rd edn). JNCC, Peterborough.

¹² British Standard (2015) BS 8596:2015 *Surveying for bats in trees and woodland – Guide*, October 2015.

Classification / Suitability	Description of Roosting Habitat within either buildings or trees	Likely Further Survey Work
	a more regular basis or by larger numbers of bats. The feature is unlikely to be suitable for hibernation or maternity roosts. Examples on include (but are not limited to); loose/lifted bark, shallow splits exposed to elements, upward facing holes, small gaps beneath a soffit board.	Further roost characterisation surveys would be required should a roost be confirmed that will be affected by development proposals. Trees No further survey required but a precautionary working method statement may be appropriate. Further nocturnal surveys may be required should there be a significant lapse in time between the initial surveys and proposed works.
Moderate	A structure with one or more potential roost sites or features that could be used by bats due their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (in respect to roost type only and not species conservation status).	Buildings At least two nocturnal presence / absence required to give confidence in a negative result. One dusk emergence and a separate dawn re-entry survey during the appropriate period. Should a roost be confirmed further roost characterisation surveys be required. Surveys should be evenly spread throughout the season with a minimum of at least 2 weeks apart. Trees An aerial assessment by roped access bat workers and / or nocturnal surveys (as above). Following an aerial assessment, a tree may be upgraded or downgraded based on findings. If roost sites are confirmed and the roost is affected by proposals a licence from Natural England will be required. After completion of survey work and presence of roost discounted a precautionary working method statement may still be appropriate.
High	A structure with one or more potential roost sites that are obviously suitable for use by large numbers or bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Buildings At least three nocturnal presence / absence surveys required to give confidence in a negative result. At least one dusk emergence and a separate dawn re-entry survey. The third survey could be either a dusk or dawn nocturnal survey. Trees

Classification / Suitability	Description of Roosting Habitat within either buildings or trees	Likely Further Survey Work
		An aerial assessment by roped access bat workers (if appropriate) and / or nocturnal surveys (as above). Following an aerial assessment, a tree may be upgraded or downgraded based on findings. If roost sites are confirmed and the roost is affected by proposals a licence from Natural England will be required. After completion of surveys work and presence of roost discounted a precautionary working method statement may still be appropriate.
Confirmed Roost	Evidence of roosting bats in the form of live or dead bats, droppings, urine staining, mammalian fur oil staining etc.	At least three nocturnal surveys to ascertain the status of the roost during appropriate survey period. At least one dusk emergence and a separate dawn re-entry survey. The third survey could be either a dusk or dawn nocturnal survey. Trees An aerial assessment by roped access bat workers (if appropriate) and / or nocturnal surveys (as above). A Natural England licence application will be required if the roost site will be affected by the proposed works. A precautionary good practice method statement may still be required if the roost is unaffected directly by the proposed works.

Building Nocturnal Survey

- 2.17 A nocturnal survey was undertaken on 11th July 2022 upon the garage building B1 in line with the current industry guidance (Collins, 2016¹³).
- 2.18 Surveyors were positioned around the building to ensure all aspects of the building could be observed. Wildlife Acoustics Inc. Echo Meter Touch Pro2[®] bat detectors in conjunction with the Echo Meter Touch[®] app for the Apple Inc iPad[®] and the Samsung Galaxy Tab S6 Lite[®] were used during the surveys.
- 2.19 The dusk emergence survey was undertaken approximately 15 minutes prior to sunset and for a duration of between 90-120 minutes. Data collected, namely recorded bat calls,

¹³ Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London. ISBN-13-978-1-872745-96-1.

were analysed, where necessary, using Kaleidoscope© version 12 (Wildlife Acoustics Inc) software package, by taking measurements of the peak frequency, inter-pulse interval, call duration and end frequency. This method was used to confirm the species of bat recorded during the survey.

- 2.20 An infra-red camera, Canon XA11 with two Knightfox XB5 / XC5 IR (5W, 850nm) illuminators were used to aid the nocturnal survey.
- 2.21 The survey was undertaken during suitable weather conditions, when the ambient air temperature (at the start of the survey) was at least 10°C and there was little to no rain or wind (Beaufort 3 or 5). Table 3 below provides a summary of the survey date, weather conditions.

Table 3: Bat Nocturnal Emergence Survey Weather Conditions

Date	Sunset	Temperature °C	Rain (0-5)	Wind (0-5)	Cloud %
11/07/2022 dusk	21:34	23	0	0	5

Foraging / Commuting Habitat

- 2.22 The potential for the site and immediate surrounds to support foraging and commuting bats was also assessed, with particular regard being given to the presence of continuous treelines providing good connectivity in the landscape, and the presence of varied habitat such as scrub, woodland, grassland and open water in the vicinity.

Other

- 2.23 Any sightings, evidence of or suitable habitats for other protected fauna, local Biodiversity Action Plan (BAP) species or otherwise notable species was recorded during the survey.

Survey Limitations

- 2.24 At the time of survey there was no access to the main retreat building and the garden area to rear of this building, which was fenced off from the application area. A view of the area on google earth showed vegetated garden, lawns and planting. This area is to be retained as is and therefore no constraint is expected.

3.0 RESULTS

HABITATS

- 3.1 Site consisted of a mosaic of neglected garden habitats including ornamental planting, merging into continuous scrub with remnant pockets of grassland having been colonised by scattered scrub. Lines of mature trees were present along site boundaries, through the centre of Site and around a hardstanding car park area. Introduced shrub hedgerows were present along the northern, eastern and part of the southern boundaries.
- 3.2 Brief descriptions are provided below and full species lists are provided in Appendix A.

Buildings and hardstanding

- 3.3 Two buildings were present within the Site; the existing retreat and a garage (B1). A further detailed description of B1 can be found in the Bat section below. Hardstanding was present in association with the buildings.

Species poor semi-improved grassland

- 3.4 There were three areas of species poor semi-improved grassland within the Site in terms of species composition. An area in the north (TN1, Photograph 1) was a neglected lawn area, which was not currently managed and was starting to be colonised by scattered scrub from the introduced shrub and trees in the surrounding beds. Anthills were present in this area. Grass species included locally dominant red fescue *Festuca rubra*, locally abundant sweet vernal grass *Anthoxanthum odoratum* and occasional Yorkshire fog *Holcus lanatus*. Dog violet *Viola riviniana* and fox and cubs *Pilosella aurantiaca* were locally abundant, with dandelion *Taraxacum officinale* agg. and common ragwort *Senecio jacobaea* recorded occasionally. Saplings of common oak *Quercus robur*, rowan *Sorbus aucuparia* and horse chestnut *Aesculus hippocastanum* were recorded as rarities.
- 3.5 The second area to the east of Site (TN5, Photograph 2) had a denser sward, which was dominated by more vigorous grasses, including cock's-foot *Dactylis glomerata* with fewer herbs present. Occasionally occurring species included bramble *Rubus fruticosus* agg., cleavers *Galium aparine*, common vetch *Vicia sativa* and creeping buttercup *Ranunculus repens*. Common nettle *Urtica dioica* was recorded, but rarely.
- 3.6 The third area to the west of Site (TN8) had a similar species composition as the other areas, with a few additional species including locally abundant common bent *Agrostis capillaris*, frequent common sorrel *Rumex acetosa* and occasional broadleaved dock *Rumex obtusifolius*.



Photograph 1: Species poor semi-improved grassland in the north of Site (09.06.2022).



Photograph 2: Species poor semi-improved grassland in the east of Site (09.06.2022).

Ornamental planting

- 3.7 Extensive borders planted with introduced scrub were generally present around boundary walls and fences. Some shrubs were quite large given lack of recent management. This area also included some self-set native species and some non-native invasive species, such as *Rhododendron Rhododendron sp.* (TN4, Photograph 3) & snowberry *Symphoricarpos sp.* (TN11).

Tall Ruderal Vegetation

- 3.8 Small, localised areas of tall ruderal vegetation were present, usually adjacent to hedges, ornamental planting or buildings. A larger area was present in the northwest of the Site (Photograph 4).



Photograph 3: Rhododendron within ornamental shrub (09.06.2022).



Photograph 4: Tall ruderal vegetation in the northwest of Site (09.06.2022).

Trees & Scrub

- 3.9 Lines of mature trees were present and generally associated with site boundaries, particularly along the northern and southern boundaries. Saplings and semi-mature trees/bushes were within or adjacent to areas of ornamental planting, or invading areas of unmanaged grassland. There was also a large area of continuous scrub along

boundaries adjacent to trees and extending into former grassland areas where it has become the dominant habitat, particularly in western section of site. These areas largely comprised native species but also had some ornamental conifers, associated with ornamental planting.

Hedgerows

- 3.10 Introduced hedgerows were present along the northern, eastern and part of the southern boundaries. All were regularly cut and consisted almost entirely of non-native garden privet *Ligustrum ovalifolium*.

Target Notes

- 3.11 A summary of the target notes is provided in Table 4 below.

Table 4: Summary of Target Notes

Ref	Notes
TN1	Short grassland, former lawn/amenity but unmanaged and dry conditions led to creation of anthills. Different species composition to rest of grassland on site.
TN2	Line of trees along north boundary including sycamore, lime, holly
TN3	Poplar saplings
TN4	<i>Rhododendron</i>
TN5	Grassland – different structure and species composition to TN1
TN6	Former rockery/garden border under trees. Spanish bluebells and wild garlic
TN7	Poplar saplings and regrowth. 2x trees felled in this area
TN8	Additional grassland species in addition to grassland at TN5
TN9	Scrub with localised pockets of remnant grassland
TN10	TR dominated by cow parsley
TN11	Stand of snowberry
TN12	Trees covered with dense ivy possibly obscuring PRFs or providing low potential for bats but all being retained

FAUNA

Bats

Roosts – Trees

- 3.12 During the ground level assessment of onsite trees, no suitable Potential Roosting Features (PRFs) were noted. Some of the trees along the western boundary in the northwest corner and in southwest corner were covered with dense ivy (TN12), which could in itself provide Low bat roosting potential. All these trees are to be retained within the proposals.
- 3.13 It is acknowledged that tree features including minor deadwood (tree groups G14 and G25), significant deadwood / crown dieback (tree T20), a decay cavity (T26) were noted in the Arboricultural Implications Assessment (JCA 2022). However, none of these features were considered suitable for use by bats as Potential Roost Features (PRF's).

Roosts – Buildings

- 3.14 The existing retreat building is being retained so this was not surveyed.
- 3.15 A garage building was present in the north-east corner of the Site (B1). It was originally a timber construction which had subsequently been clad in metal sheeting (Photograph 5). The pitched roof had slate roof tiles covered in moss and clay ridge tiles. The roof was very cluttered along the east facing pitch, due to overhanging tree branches (Photograph 6). Large wooden doors were present on the northern aspect and timber barge boards on the northern and southern gables.



Photograph 5: Building B1, northern aspect (09.06.2022).



Photograph 6: Eastern roof pitch of Building B1 (07.07.2022).

- 3.16 Some minor gaps were noted beneath the roof tiles and ridge tiles (Photograph 7). Some minor gaps were also present under timbers which were on top of roof tiles at the gable end (Photograph 7) and behind barge boards on the south facing gable, although this was mostly heavily cobwebbed.
- 3.17 Internally the building was timber clad (Photograph 8). No evidence of roosting bats was found during the inspection; however, the building was considered to offer low potential for use by roosting bats.



Photograph 7: Small gaps at roof tiles and beneath timber (07.07.2022).



Photograph 8: Interior of Building B1 (07.07.2022).

Nocturnal survey

- 3.18 One nocturnal survey was recommended to ascertain the presence / likely absence of a roost within building B1 following the internal and external building inspection and in accordance with BCT guidance (Collins, 2016).
- 3.19 The surveyor and camera positions, as well as bat contacts are illustrated on Figure 3.

Dusk 11.07.2022

- 3.20 The survey started at 21:17 and ended at 23:05 (sunset 21:34). During the survey noctule *Nyctalus noctula* were recorded commuting near to the site (no visual confirmation) d common pipistrelle *Pipistrellus pipistrellus* were noted foraging around the onsite trees and garden habitats. No bats were observed emerging from B1. This was corroborated by the infra-red camera footage.

Foraging and Commuting

- 3.21 The presence of mature boundary trees and scrub within the site would provide some suitable commuting routes and foraging habitat. Within the proposals boundary trees and associated habitats will be retained, and providing any development lighting scheme is designed sympathetically, impacts should be able to be minimised.

Birds

- 3.22 No active nests were noted during the Phase 1 Survey; however, the mature trees, scrub and garden habitats have the potential to support nesting garden bird species.

4.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS**PROPOSALS**

- 4.1 The proposals include the erection of mixed-use development of retreat building and 5 supported living units with integral garages. The boundary habitats, including existing hedgerows, treelines, mature trees, introduced shrub and mixed scrub will be largely retained.

WILDLIFE HABITAT NETWORK

- 4.2 The Kirklees Wildlife Habitat Network (WHN) aims to meet the requirements of the National Planning Policy Framework for Conserving and enhancing the natural environment.
- 4.3 The Kirklees Wildlife Habitat Network '*connects designated sites of biodiversity and geological importance and notable habitat links within the district, such as woodlands, watercourses, natural and semi-natural areas. The identification of the Wildlife Habitat Network is intended to protect and strengthen ecological links within the district. The purpose of the network is to enable species populations to be sustained by protecting and enhancing the ecological corridors and linkages within the wider environment, including*

*links to adjoining districts. Development within the Wildlife Habitat Network will not necessarily be prevented but the council will seek to ensure that development proposals maintain the integrity and continuity of the network and protect the nature conservation value of the land affected. The Wildlife Habitat Network forms the basis for increasing the robustness and inter-connectivity of ecological corridors. As such, development proposals within and adjacent to the Wildlife Habitat Network should be considered as opportunities to enhance and expand its functionality.'*¹⁴

- 4.4 The majority of the Site is mapped within the WHN (Figure 1).
- 4.5 With the retention of the boundary treelines and habitats associated with the existing retreat building (tree lines, scrub, mature garden habitats) this will maintain corridors of movement for wildlife through the Site. Therefore, the proposals will not impact the overall integrity and continuity of the Kirklees WHN.

HABITATS

- 4.6 Habitats receive consideration through the planning system by:
- their inclusion in specific National planning policy: such as consideration in the National Planning Policy Framework (2021)¹⁵ for veteran trees, ancient woodland, non-statutory sites, and ecological networks.
 - classification as a Habitat of Principal Importance (HPI) for the conservation of biodiversity under the Natural Environment and Rural Communities (NERC) Act 2006, from which are also derived Priority Habitats under local Biodiversity Action Plan (LBAP) and Priority Habitat for England under Biodiversity 2020¹⁶,
 - their inclusion in specific local policy.
- 4.7 The main habitat types within the application site comprised ornamental shrub, poor semi-improved grassland and mixed scrub. These were generally of low botanical diversity at the time of the survey.
- 4.8 The broadleaved trees and associated scrub within the site are of intrinsic value to wildlife, creating connectivity around the perimeter of the site into the wider landscape. Habitats such as these provide semi-natural habitat for wildlife such as birds, invertebrates and small mammals.
- 4.9 The current proposals show that the majority of the boundary habitats (trees with associated scrub and shrub) will be retained and will maintain the green corridor around the boundary of the Site. Retained trees will be protected from adverse impacts from the constructional phase of development in accordance with BS5837 Trees in relation to construction (British Standard, 2005)¹⁷ as per the Arboricultural Method Statement (JCA, 2022 Report Ref: 17829-C/AJB).

¹⁴ Kirklees Council (2019) 'Kirklees Local Plan – Strategies and policies - 13.1 Biodiversity & geodiversity: 13.14 <https://www.kirklees.gov.uk/beta/planning-policy/local-plan.aspx> (Accessed June 2022)

¹⁵ Ministry of Housing, Communities and Local Government (2021) National Planning Policy Framework 2021. © Crown Copyright

¹⁶ Biodiversity 2020: A strategy for England's wildlife and ecosystem services, August 2011, Department for Environment, Food and Rural Affairs.

¹⁷ British Standard (2005) Trees in Relation to Construction <https://www.rbkc.gov.uk/idoxWAM/doc/Other-1592559.pdf?extension=.pdf&id=1592559&location=Volume2&contentType=application/pdf&pageCount=1>

- 4.10 Minor habitat losses under the footprint of the development will be required, although these are generally of low ecological value and do not in themselves represent a constraint to the proposals.

BATS

- 4.11 All species of UK bats and their roosts are listed on the Conservation of Habitats and Species Regulations 2017 (*as amended*) making it illegal to deliberately disturb any such animal or damage / destroy a breeding site or roosting place of any such animal. Bats are also afforded full legal protection under Schedule 5 of the Wildlife and Countryside Act 1981 (*as amended*). Under this legislation it is illegal to recklessly or intentionally kill, injure or take a species of bat or recklessly or intentionally damage or obstruct access to or destroy any place of shelter or protection or disturb any animal whilst they are occupying such a place of shelter or protection. Seven bat species, including brown long-eared, noctule and soprano pipistrelle are Species of Principal Importance under the NERC Act 2006.
- 4.12 During the ground level assessment of onsite trees, no suitable Potential Roosting Features (PRFs) noted. Some of the trees along the western boundary in the northwest corner and in the southwest corner were covered with dense ivy (TN12), which could in itself provide Low bat roosting potential. As per the current industry guidance (Collins, 2016¹⁸) no further surveys are recommended. These trees are to be retained within the proposals.
- 4.13 The existing retreat building is being retained so this was not surveyed. The garage building present in the north-east corner of the Site (B1) was found to provide Low bat roosting potential following the internal and external building assessment.
- 4.14 One nocturnal survey was undertaken to ascertain the presence / likely absence of a roost within building B1 on 11th July 2022, as per the current industry guidance (Collins, 2016¹⁹). No bats were observed emerging from B1 and therefore this poses no constraint to the proposals.
- 4.15 The level of bat activity recorded during this mid-summer nocturnal survey can also be used to assess the levels of bat activity within the site within the peak foraging season. The activity level was considered to be low considering the habitats present within the Site. During the nocturnal survey noctule *Nyctalus noctula* were recorded commuting near to the site but not over the site and common pipistrelle *Pipistrellus pipistrellus* were noted foraging around the onsite trees and garden habitats and in offsite gardens. Due to the retention of the majority of suitable foraging and commuting habitat (treelines and associated habitats) the impacts upon foraging and commuting bats are expected to be negligible.
- 4.16 To ensure no indirect impacts occur to retained trees and associated habitats, a sensitive lighting strategy should be adopted during both the construction and operational phases of the development, in line with the recommendations set out in the Bat Conservation

¹⁸ Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London. ISBN-13-978-1-872745-96-1.

¹⁹ Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London. ISBN-13-978-1-872745-96-1.

Trust and the Institute of Lighting Professionals in 2018, 'Bats and Artificial Lighting in the UK'²⁰ to ensure there will be no light spill onto retained habitats.

NESTING BIRDS

- 4.17 All wild bird species are protected while nesting by the Wildlife and Countryside Act 1981 (as amended). This legislation protects wild birds, their nests and eggs from intentional harm, and makes it illegal to intentionally kill, injure or take any wild birds; take, damage or destroy the nest of a wild bird while the nest is in use or being built or take / destroy an egg of a wild bird.
- 4.18 To comply with relevant legislation, any removal of vegetation should be timed to avoid the nesting season where possible (March to August inclusive, although dates do vary depending on the species and weather conditions). Where it is not feasible, affected areas should be checked for nests in advance by an experienced ecologist. Any active nests identified should be left with a minimum buffer of 5m to be identified by the ecologist, until such time as all birds have fledged.

5.0 BIODIVERSITY ENHANCEMENTS

- 5.1 In accordance with NPPF (2021) it is specified that a proposed development scheme should seek a net gain in value for wildlife by incorporating ecological enhancements to be included within the design proposals.
- 5.2 Ecological enhancements which could be incorporated into the design are outlined below for consideration:
- New landscape planting including trees and shrubs to use native species which bear fruit and nectar.
 - Any formal lawn areas should where possible be seeded with a species rich flowering lawn mix such as EL1 – Flowering Lawn Mix, Emorsgate Seeds.
 - Replacement of introduced shrub species with native species.
 - Implementation of a Management Plan for controlling non-native invasive species, including Rhododendron and snowberry.
 - Installation of a variety of bird and bat boxes upon retained mature trees and/or new dwellings, which should be secured through a planning condition.
 - Inclusion of hedgehog gaps on any boundary treatments to allow for continued dispersal through the site.
- 5.3 It is considered that with the implementation of some of the above points would provide an overall net gain for biodiversity.

²⁰ <https://cdn.bats.org.uk/pdf/Resources/ilp-guidance-note-8-bats-and-artificial-lighting-compressed.pdf?mtime=20181113114229>

APPENDIX A: BOTANICAL SPECIES LIST

The habitat types were mapped within the site and a representative species list for each habitat type recorded. Species lists are not exhaustive of all flora present in each habitat type.

Common Name	Scientific Name	DAFOR
Species poor semi-improved grassland – Target Note 1		
Bryophytes - mosses		LA
Bramble	<i>Rubus fruticosus agg.</i>	R
Common oak (saplings)	<i>Quercus robur</i>	R
Common ragwort	<i>Senecio jacobaea</i>	O
Common vetch	<i>Vicia sativa</i>	LF
Dandelion	<i>Taraxacum officinale agg.</i>	O
Dog violet	<i>Viola riviniana</i>	LA
Field woodrush	<i>Luzula campestris</i>	O
Fox and cubs	<i>Pilosella aurantiaca</i>	LA
Horse chestnut (saplings)	<i>Aesculus hippocastanum</i>	R
Red fescue	<i>Festuca rubra</i>	LD
Rosebay willowherb	<i>Chamaenerion angustifolium</i>	R
Rowan (saplings)	<i>Sorbus aucuparia</i>	R
Sweet vernal grass	<i>Anthoxanthum odoratum</i>	LA
Yorkshire fog	<i>Holcus lanatus</i>	O
Species poor semi-improved grassland – Target Note 5		
Bramble	<i>Rubus fruticosus agg.</i>	O
Cleavers	<i>Galium aparine</i>	O
Cock's-foot	<i>Dactylis glomerata</i>	O
Common nettle	<i>Urtica dioica</i>	R
Common oak (saplings)	<i>Quercus robur</i>	O
Common vetch	<i>Vicia sativa</i>	O
Creeping buttercup	<i>Ranunculus repens</i>	O
Dandelion	<i>Taraxacum officinale</i>	F
Dog violet	<i>Viola riviniana</i>	O
False oatgrass	<i>Arrhenatherum elatius</i>	LA
Timothy	<i>Phleum pratense</i>	LA
Wood avens	<i>Geum urbanum</i>	O
Species poor semi-improved grassland – Target Note 8		
Broadleaved dock	<i>Rumex obtusifolius</i>	O
Common bent	<i>Agrostis capillaris</i>	LA
Common sorrel	<i>Rumex acetosa</i>	F
Daffodils	<i>Narcissus sp</i>	LA
Yorkshire fog	<i>Holcus lanatus</i>	LA
Ornamental planting		
Barberry	<i>Berberis sp.</i>	O
Butterfly bush	<i>Buddleia sp.</i>	O
Elder	<i>Sambucus nigra</i>	O
Castor oil plant	<i>Fatsia sp.</i>	R
Cherry laurel	<i>Prunus laurocerasus</i>	LA
Fuchsia	<i>Fuchsia sp</i>	O
Garden privet	<i>Ligustrum sp.</i>	LD
Hydrangea	<i>Hydrangea sp.</i>	R
Rhododendron (TN4)	<i>Rhododendron sp.</i>	LA
Small leaved cotoneaster	<i>Cotoneaster sp.</i>	R

Snowberry (TN11)	<i>Symphoricarpos sp.</i>	R
Spanish bluebells (TN6)	<i>Hyacinthoides hispanica</i>	LA
Tall ruderal vegetation		
Bramble	<i>Rubus fruticosus agg.</i>	R
Cock's-foot	<i>Dactylis glomerata</i>	LA
Cleavers	<i>Galium aparine</i>	F
Common nettle	<i>Urtica dioica</i>	LA
Cow parsley	<i>Anthriscus sylvatica</i>	LF
False oatgrass	<i>Arrhenatherum elatius</i>	F
Wood avens	<i>Geum urbanum</i>	O
Creeping thistle	<i>Cirsium arvense</i>	LD (at rear of B1)
Trees and scrub		
Bramble	<i>Rubus fruticosus agg.</i>	F
Ash	<i>Fraxinus excelsior</i>	R
Beech	<i>Fagus sylvatica</i>	R
Common lime	<i>Tilia x europaea</i>	F
Hawthorn	<i>Crataegus monogyna</i>	R
Holly	<i>Ilex aquilinum</i>	O
Horse chestnut	<i>Aesculus hippocastanum</i>	O
Poplar possibly hybrid black poplar (saplings and regrowth from felled tree in southern section to east of H3) TN3	<i>Populus sp.</i>	LA
Rowan	<i>Sorbus aucuparia</i>	R
Sycamore	<i>Acer pseudoplatanus</i>	A

DAFOR, D=dominant, A=abundant, F=frequent, O=occasional, R=Rare, L=Locally



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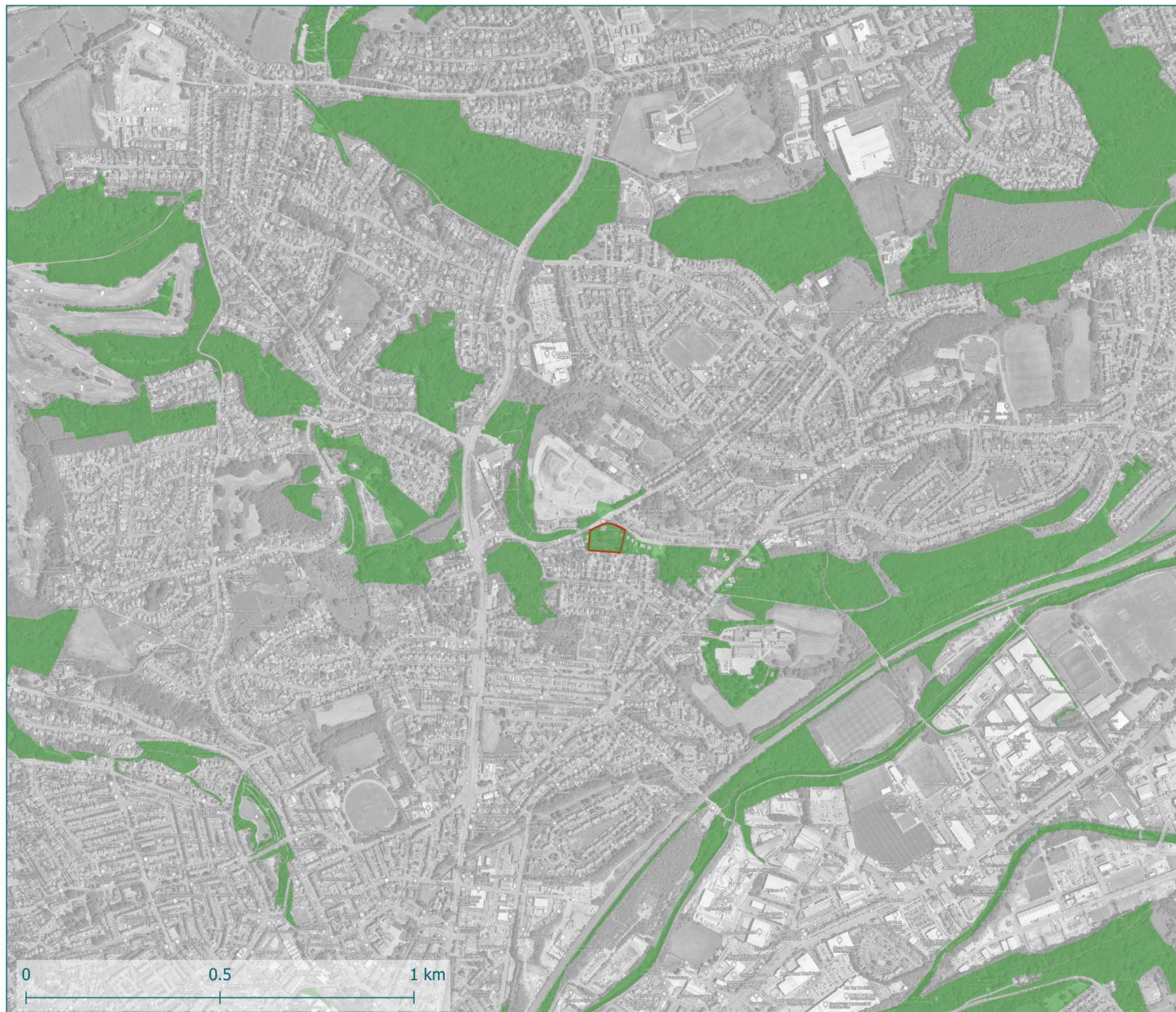
Key



Site Boundary



West Yorkshire Wildlife Habitat Network (WHN)



Client: Connah Construction

Project: Ashbrow Road, Huddersfield

Title: Figure 1 - Wildlife Habitat Network (WHN) Plan

Plan Reference: FE198_01

Project Reference: FE198

Report Reference: FE198/SEI01

Author: KEH

Date: 5/7/2022

Scale: 1:10000



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Key

- Site Boundary
- Not accessed land
- Buildings - retained
- Buildings - low bat roost potential
- Built Environment: Buildings/hardstanding
- Introduced shrub
- Poor semi-improved grassland
- Other tall herb and fern - ruderal
- Scrub - dense/continuous
- Hedges: Introduced shrub
- Fence
- Broadleaved tree
- Coniferous tree
- Scrub - scattered
- Target note



Client: Connah Construction
Project: Ashbrow Road, Huddersfield
Title: Figure 2 - Phase 1 Habitat Plan

Plan Reference: FE198_02
Project Reference: FE198
Report Reference: FE198/SEI01

Author: JW / KEH
Date: 5/7/2022
Scale: 1:350

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Key

— Roof lines

► Roof direction

Surveyor locations

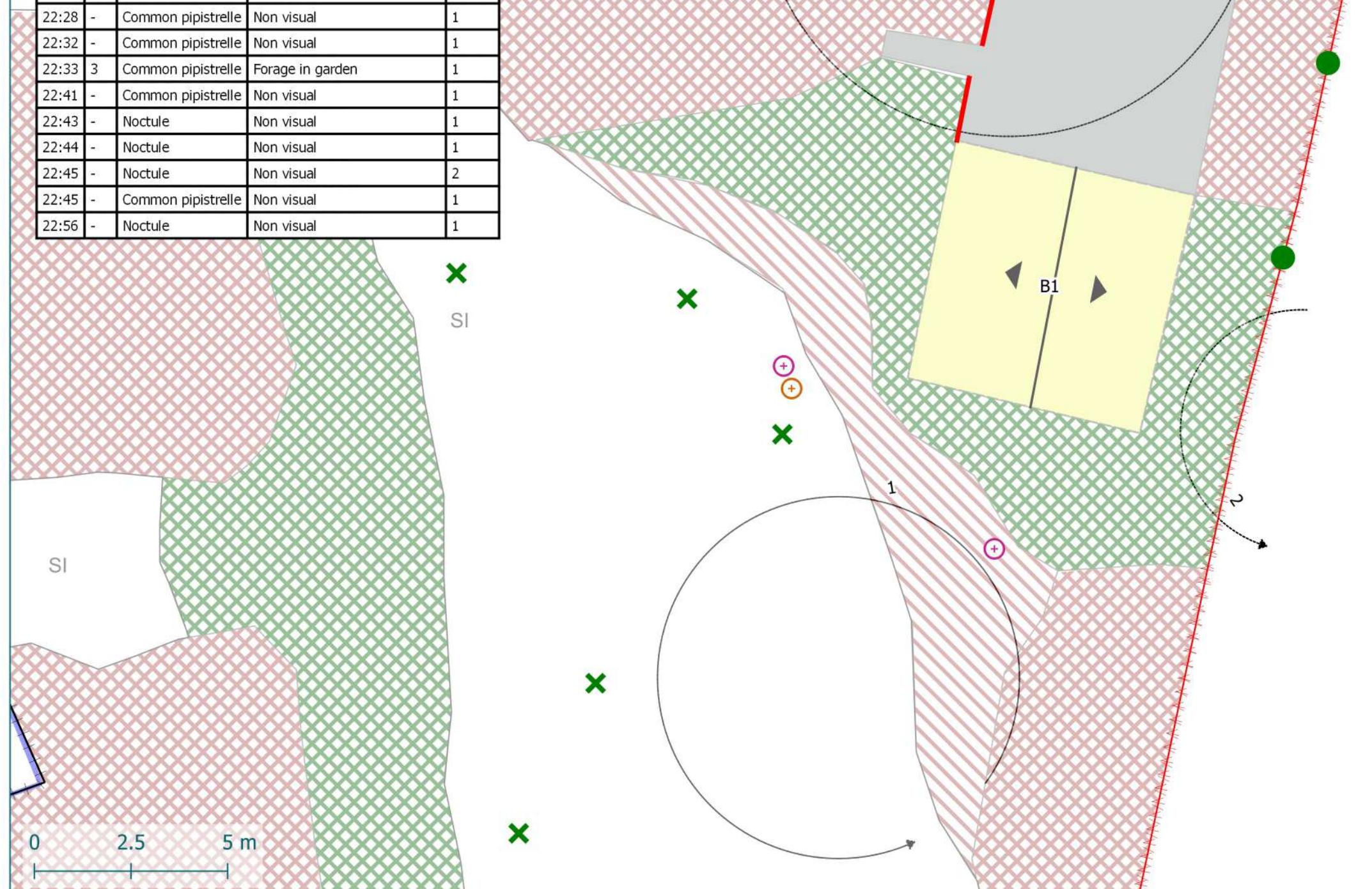
⊕ Surveyor

⊕ Infra-red camera

Bat contacts

→ Flight lines

Time	Ref	Species	Behaviour	Passes
21:37	-	Noctule	Non visual, commute over site	1
21:49	-	Common pipistrelle	Non visual, distant	1
21:56	1	Common pipistrelle	Forage	3
21:57	1	Common pipistrelle	Forage	3
21:58	1	Common pipistrelle	Forage	2
21:59	2	Common pipistrelle	Forage in next door garden	2
22:01	3	Common pipistrelle	Forage in tree canopy	1
22:04	3	Common pipistrelle	Forage in tree canopy	2
22:05	3	Common pipistrelle	Forage in tree canopy	1
22:07	-	Common pipistrelle	Non visual	1
22:12	-	Common pipistrelle	Non visual	1
22:26	-	Common pipistrelle	Non visual	2
22:28	-	Common pipistrelle	Non visual	1
22:32	-	Common pipistrelle	Non visual	1
22:33	3	Common pipistrelle	Forage in garden	1
22:41	-	Common pipistrelle	Non visual	1
22:43	-	Noctule	Non visual	1
22:44	-	Noctule	Non visual	1
22:45	-	Noctule	Non visual	2
22:45	-	Common pipistrelle	Non visual	1
22:56	-	Noctule	Non visual	1



Client: Connah Construction
Project: Ashbrow Road, Huddersfield
Title: Figure 3 - Bat Emergence Survey Plan (11.07.2022)

Plan Reference: FE198_03
Project Reference: FE198
Report Reference: FE198/SEI01

Author: KEH
Date: 12/7/2022
Scale: NTS@A3

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