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# Preliminary Ecological Appraisal and Roost Assessment

**Survey site**: Westwood Nursing Home, 8 Polygon Road, Manchester M8 5DD

**Client**: T & A Textiles and Hosiery Ltd

**Survey date**: 24th April 2024

**Project**:
This report is prepared to inform a planning application with Manchester City Council. The proposal is described as:
Part demolition of the existing building and the conversion of the remaining building into residential use, in addition to the construction of a new residential building and associated car parking and bin storage.

PEA survey methodology and legislation can be found in the Arbtech Supplement: PEA Methodology and Legislation - 2024.
PRA survey methodology and legislation can be found in the Arbtech Supplement: PRA Methodology and Legislation - 2024.

| The site survey was undertaken by Sally Hall BSc (Hons), Consultant Ecologist, (accredited on Natural England Class 2 Bat Licence 2022-10404-CL18-BAT, Great Crested Newt Natural England Class 1 license holder: Number: 2024-12025-CL08-GCN | | | | | |
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| Date of survey | Temperature (°C) | Humidity (%) | Cloud Cover (%) | Wind (km/h) | Rain |
| 16/05/2024 | 18 | 68 | 100 | 10 | None |

## Executive summary

*B1 has low value for roosting bats, and therefore needs a bat emergence survey (BES) to determine presence or absence of bats within the building, prior to commencement of works.*

*Biodiversity Net Gain will be required to calculate the loss and potential net gain of habitat on site.*

*Protective measures are recommended for retained and nearby habitats, and precautionary methods for vegetation clearance should be followed, including tree protection for the boundary trees in close proximity. Additionally, precautionary working methods described to mitigate risk to protected species during construction are below specifically for birds and terrestrial mammals. Light pollution mitigation is outlined below for bats.*

*Enhancements are outlined in the relevant tables below.*

| Ecological Survey Factor<br><br>Conclusion, Impact or Recommendations | Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice. |
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| Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, proposal plan in appendix 3 and photos in appendix 4).<br>**Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).** | |
| *Historical survey results* | Arbtech Consulting Ltd was commissioned in April 2021 to carry out a Preliminary Ecological Appraisal and Roost Assessment for the same site, and found that the building had a low suitability for roosting bats. The bat emergence and re-entry surveys (BERS) were carried out by Arbtech in June 2021, and found no bats roosting within the building.<br><br>These surveys are now three years old, and in this time the roof has caved in in more areas where bats could have moved into the building, while it has been left vacant for the last three years. An updated preliminary survey is required to outline the most up to date habitats on site to best inform the biodiversity net gain assessment as the site has been unmanaged and so the grassland and ruderal vegetation has changed significantly, alongside establishing if bats have moved into the building between 2021 and 2024. |
| *Summary of Survey Findings*<br><br>**(***UKHab codes used)* | The rectangular survey site is centred on National Grid Reference SD 83762 02386 and has an area of approximately 0.2ha. |

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| | The site sits on slowly permeable seasonally wet acid loamy and clayey soils according to Soilscapes. The site consists of one disused building that was previously used as a nursing home, grassland, scrub and lines of trees forming the site boundaries. The surrounding landscape comprises of mainly urban residential dwellings with associated roads, with small pockets of amenity parklands. The site is situated ~4.3km to the north of Manchester City Centre, with King David High School located ~145m to the south and Crumpsall train station located ~360m to the east.<br><br>**Local notable habitats**<br><br>There are several priority habitats listed within 2km of the site boundary. These are as follows:<br>• There are several pockets of deciduous woodland, the closest is ~370m to the southeast.<br>• There is an area of priority woodland pasture and parkland located ~1.2km to the northwest.<br>• An area of lowland fen located ~1.6km to the southwest.<br>• Several pockets open mosaic habitat, with the closest located 430m north.<br><br>**Habitats present on site**<br><br><u>Buildings – u1b5 (see figure 1)</u><br>There is one building that was previously used as a care home, and is now disused and abandoned. The building is further described in the "Bats" table.<br><br><u>Developed land, sealed surface with ruderal vegetation – u1b, 81 (see figure 2)</u> |

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| | There is a large area of tarmac in the centre of the site that has been covered in ruderal vegetation as the building has been left untouched for the last few years, since the previous PRA/PEA in 2021.<br>Bramble is abundant around the western elevation of B1, alongside creeping thistle (F) willowherb sp. (F), lady's mantle (O) and willow sp. saplings (O).<br><br><u>Other neutral grassland with introduced shrubs – g3c, 847 (see figures 3 & 4)</u><br>There is a large area of unmanaged grassland to the north of the site with a varying sward between 10cm and 50cm in height, where some grassland has been trampled, and some has been left to grow in particular underneath the tree boundary to the north. The grassland comprises of perennial ryegrass (A), sweet vernal grass (A), red fescue (F), Yorkshire fog (F), creeping buttercup (F), dandelion agg. (F), Spanish bluebell (F), common columbine (O), sorrel sp. (O), wood avens (F), herb Robert (F), spanish bluebell (F), cleavers (F), common ragwort (O), wild strawberry (O), common vetch (O), meadow buttercup (O) and cuckoo flower (O). *Pseudoscleropodium purum* is also present within the grassland which spreads onto the tarmac to the south. Around 40% of the grassland is covered in bramble and bracken, in particular to the east of the grassland near to B1. No invasive species were identified within the grassland.<br><br>There is ornamental planting around the northern boundary of the site including rhododendron, boxleaf honeysuckle and leatherleaf mahonia.<br><br><u>Bramble scrub – h3d (see figure 5)</u><br>There is a section of bramble scrub located to the east of B1 that has encroached onto what was previously hardstanding. The scrub is dominated by bramble, with some buddleia (A) and sycamore saplings present. |

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| | The scrub does not have mature plants present as the scrub appears to have grown when the building was left vacant. There are no glades in the scrub and the scrub does not have a clear edge as some of it has encroached further onto the hardstanding to the south.<br><br><u>Line of trees – 33 (see figures 6 & 7)</u><br>There is a line of trees along the northern and western boundaries, consisting of native species including small-leaved lime (A), rowan (F), cherry sp. (O), holly (O), beech (O), ash (O) and a turkey oak which is not native. The trees appear in healthy condition with minimal damage from vandalism or browsing, however there are some cracks in the bark that would provide a niche for invertebrates. This would not be considered a veteran feature.<br>The canopy is predominantly continuous apart from one large gap between the canopy where the entrance to the site is located along the western boundary. The trees are located along the site boundary which is adjacent to tarmac pavements and main roads, and is adjacent to grassland and introduced shrubs on site. |
| *Foreseen Impacts* | The trees and grassland on site would provide a range of habitat for some species such as birds, invertebrates and terrestrial mammals. The remaining habitats on site are widespread and not notable, however indirect impacts from the construction or operation of the development if left unmitigated, could cause damage to the retained grassland and trees around the boundary, (dust, litter, surface run off etc).<br><br>There will be a loss of grassland, scrub and four mature trees on site. |
| *Recommendations* | Best practice measures to minimise the possibility of pollution or tree damage must be implemented during construction to protect the boundary trees. |

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| | A biodiversity net gain (BNG) report will be required to calculate the loss of vegetated habitats on site, as the grassland, scrub and four mature trees are being removed during the development.<br><br>**Enhancements**<br>• Planting of native trees, shrubs and hedgerows where possible. |

| **Locality and Designated Sites** | |
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| *Summary of Survey Findings* | The site itself is not subject to any designation and does not lie within any impact risk zones.<br><br>There are three designated sites located within 2km of the site boundary. These are as follows:<br>• Blackley Forest Local Nature Reserve (LNR) is located ~840m to the north of the site. This site is described by Manchester City Council as *"a site of biological importance and a fine example of one of the country's first Community Woodlands".*<br><br>• The Cliff/Kersal Dale (LNR) is located ~1.4km to the southwest of the site. This site is described by The Woodland Trust as *"The area is rich in wildlife; Tawny Owls and Great Spotted Woodpeckers breed here, and good paths can be followed down to the river, with Ash, Black Poplar, Silver Birch and Willow amongst the variety of broad leaved trees."*<br><br>• Kersal Moor (LNR) is located ~1.8km to the west of the site. This site is described by Natural England as *"The moor is a mosaic of grassland and scattered trees which provide a great place to see unusual plants and animals."* |

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| *Foreseen Impacts* | No direct or indirect impacts are anticipated from the work due to the distance between the site and the designated sites, and due to the small scale of the development. |
| *Recommendations* | None required. |

| Invasive / Non-native species | |
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| Summary of Survey Findings | Pontic rhododendron (rhododendron ponticum) is a non-native invasive plant species (as listed under Schedule 9 of the Wildlife and Countryside Act 1981) and was identified on site, (see figure 4). The rhododendron is located along the boundary to the north, within the line of trees. |
| Foreseen Impacts | Pontic rhododendron is unlikely to be impacted by construction works, as it is located along the northern boundary which is proposed to be undisturbed. |
| Recommendations | No further surveys but remain vigilant. |

| Invertebrates | |
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| *Summary of Survey Findings* | The grassland, trees and ruderal vegetation would provide habitat for a range of invertebrates as the grassland has remained unmanaged for several years, and the varying sward height would create niches within the grassland for different invertebrates. Several of the trees have small cracks in the bark which could provide habitat for invertebrates. |
| *Foreseen Impacts* | Some of the grassland to the south, scrub and ruderal vegetation is proposed to be removed as part of the development, alongside the felling of four trees along the western boundary. This is unlikely to significantly impact the local invertebrate population owing to the small size of the site. Most of the trees around the |

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| | boundary are to be retained, and although the site is within an urban area, there are large pockets of urban trees and greenspaces which could provide habitat for invertebrates. |
| *Recommendations* | No further surveys required.<br><br>**Enhancements**<br>The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for invertebrates:<br>• Management of the grassland to the north post development to support invertebrate species, such as leaving wildflower buffers around the boundaries of the site close to the trees where possible<br>• Planting of a seed mix conforming to a locally appropriate NVC community where possible<br>• Installing a bug hotel close to these wildflowers to increase habitat availability |

| Bats | |
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| *Summary of Survey Findings* | **European Protected Species License (EPSL) data**<br>There are two returns of EPSL licences relating to bats within 2km of the site boundary. These are as follows:<br>• (2014-1562-EPS-BDX) This licence was granted for a site located ~1.2km to the northeast of the site and allowed for the destruction of a resting place and breeding site for common pipistrelle bats.<br>• (2014-1364-EPS-BDX) This licence was granted for a site located ~1.3km to the northeast of the site, and is for the unknown impacts to common pipistrelle.<br><br>**Foraging and commuting bats** |

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| | The trees around the boundaries of the site could be used by foraging bats. The site is located within an urban area of Manchester, however there are small pockets of scattered trees and lines of trees in the area which could be used by bats as a commuting route. The streetlights are likely to cause some disturbance to bats in the area and therefore the number of bats are likely to be smaller numbers.<br><br>**Roosting bats**<br>*Exterior (see figures 8 – 17)*<br>B1 is a two-storey detached, disused nursing home that has been abandoned for several years, as the building is in overall poor condition, and evidence of people inhabiting the building was present. B1 has a multi-pitched roof including pitch and gable structures, hipped structures with decorative spires, and flat roof structures to the east and west of B1. The northern section of B1 is all clad in slate tiles, whereas the southern section is clad in concrete tiles. The soffits are constructed of wood. The walls are constructed of brick and mortar. The doors and windows are constructed of a combination of wood and uPVC, and most of the windows are boarded up with timber boards.<br><br>The slate roof appears in poor condition as multiple roof tiles have slipped and come away on the eastern, northern and western elevations, creating access points into the building, (see figure 12 & 13). The concrete roof appears in good condition as there are no gaps under the tiles for bats to roost. There is a permanently open window on the roof which could allow bats to enter the building (see figure 16).<br><br>The soffits for the most part appear in fair condition, however there is a panel that has come away creating a gap that crevice dwelling bats could roost in, (see figure 17). |

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| | The walls appear in fair condition with no cracks or crevices for bats to roost in.<br><br>Most of the windows are boarded up to prevent access into the building, however there is one window on the western elevation that is not boarded which could allow bats to access the interior, (see figure 11). One door on the western elevation is broken which allows access into the interior, the remaining doors are boarded and appear well sealed with no gaps or crevices for bats to roost in.<br><br>*Interior (see figures 18 – 23)*<br>The interior has no loft void and consists of several rooms that are all adjoined as there are no internal doors. The approximate internal dimensions of B1 are: 30m (L) x 15m (W) x 6m (H) [Height is measured to the highest point of the internal space].<br><br>As the roof is in poor condition and has collapsed in several places and the interior roof is not lined, there are no crevices in the northern area for bats to roost in. The concrete roof tiles to the south are lined with bitumen lining which appears in good condition with no tears or gaps present (see figure 22). The area that is lined with breathable membrane appears in poor condition as there were several tears in the lining that bats could access, however bats would likely on this lining due to the material used, (see figure 23).<br><br>The beams are constructed of a combination of old timber and modern timber beams, and appear in fair condition as there appears to be no cracks for bats to roost in. It is unlikely bats would use the beams as a day roost as the building is brightly lit internally due to the extensive damage to the roof, allowing in consistent |

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| | daylight, (see figures 19 & 20). Bats may use the southern section of B1 as a roost as it is much darker in this area. The brightly lit nature of the interior is unlikely to be suitable for void dwelling bats to roost here.<br><br>The floor was searched for evidence of bats, however the floor is heavily cluttered with debris from the building collapsing and from people inhabiting the interior, and due to the ingress of rain into the building, this could have washed away any evidence of bats such as droppings.<br><br>**Suitability assessment**<br>B1 is deemed low value for roosting bats in line with the Good Practice Guidelines, (Collins, J. (ed) 2023). Although more damage has occurred to the roof since the original PEA/PRA in 2021, the assessment remains the same as the interior is in a similar state, still with no features for larger numbers of bats to roost.<br><br>The roof of B1 is not lined and there are no areas where large numbers of bats could roost within B1. The roof lining in the southern section is unlikely to be used by bats as the roof appears in good condition and there would be no access to this lining. There is limited roosting habitat for crevice dwelling bats between the beams as the daylight enters into most areas of the building, limiting habitat availability. The building is unlikely to be suitable for hibernation roosts or for void dwelling bats to roost, as consistent daylight enters the building from all elevations, and bats would be regularly exposed to draughty conditions and fluctuating temperatures.<br><br>The habitat surrounding the site includes scattered trees and small areas of greenspace, but is predominantly surrounded by urban areas with residential dwellings and heavily trafficked roads. The |

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| | scattered trees in the surrounding area could support small numbers of foraging and commuting bats if roosting within the building.<br><br>**Roosting bats (trees)**<br>There are four mature, small-leaved lime trees in close proximity (SD 83743 02383) proposed to be felled as part of the development, (see figure 28). All four trees do not have any suitable roosting features present including ivy, knot holes, cracked bark or any other features that could be used by bats. Knot holes are present on two of the trees, however neither of these appear to lead anywhere that would be suitable for bats to use. These four trees are deemed negligible for roosting bats.<br>No roosting features on the trees were identified in the PEA/PRA report from 2021. |
| *Foreseen Impacts* | **Foraging and commuting bats**<br>The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats that could be using the trees surrounding the site.<br><br>**Roosting bats**<br>As the proposed development includes the part demolition of B1, and the renovation of B1 into residential dwellings, this would destroy any gaps under the roof tiles or access points into the building that bats could use to roost. This could result in destruction of any bat roosts (if present) and could cause disturbance, death or injury to bats if present. |
| *Recommendations* | **Foraging and commuting bats** |

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| | A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting<br><br>**Roosting bats**<br>T1 – T4 have negligible habitat value for roosting bats. No impacts are foreseen as a result of the felling of these trees.<br><br>B1 has low habitat value for roosting bats.<br>One bat emergence/re-entry survey is required on B1 during the active bat season (May – September) to confirm presence/likely-absence of bats roosting in or on the building<br>This survey visit should be completed during the optimal survey period mid-May to August inclusive. The survey visits should be at least three weeks apart.<br>The survey could be a dawn re-entry survey, or all three can be at dusk if supported by night vision aids (NVA). Four surveyors are required to provide full coverage of the building's elevations to look for emerging/re-entering bats. An infrared camera should also be employed as part of the survey to see where any specific roost locations are located.<br>Lighting mitigation may be required based on the outcome of the night bat survey.<br><br>If bats are found to be roosting within the building, a further two surveys will be required to inform the license with Natural England. |

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| | If any bat roosts are confirmed from this survey schedule, a bat license would be required to demolish the buildings as it would involve the destruction of roosts. This is applied for with the help of a class 2 licensed bat ecologist after planning permission is granted, but before commencement of works. |

| Birds | |
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| *Summary of Survey Findings* | Two individual pigeons were observed nesting within separate areas inside the building, (see figure 24). A blackbird was also observed flying within the building which could be nesting somewhere inside that is inaccessible.<br>No birds' nests were observed in the trees, scrub or within the grassland on site. The site is unsuitable for overwintering, wading and ground nesting birds as the land is not wet or regularly turned, and the vegetation is not dense enough for ground nesting birds to nest here.<br>The grassland would provide foraging opportunities for birds and the trees would be suitable for nesting birds.<br>There are some broken windows on the upper floors which could allow owls to enter and perch, however no evidence of owls was observed internally and there are no suitable areas for owls to nest. |
| *Foreseen Impacts* | The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests, as the building is proposed to be partly demolished and renovated, and the grassland, scrub and four trees are proposed to be impacted. |
| *Recommendations* | The demolition and conversion of B1, and any tree felling or vegetation removal should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. |

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| | Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged.<br><br>**Enhancements**<br>The installation of two bird boxes at the site will provide additional nesting habitat for birds.<br>The bird boxes will be installed on the building once renovated, using brands such as:<br>• Vivara Pro Estella House Sparrow Nest Box (buildings)<br>• Vivara Pro Madrid Swift Nest Box (buildings)<br>• Woodstone Nest Box (buildings or trees)<br>Or a similar alternative brand.<br>General purpose bird boxes should be positioned 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight.<br><br>The sparrow or swift nest boxes should be positioned close together (0.6-1.0m between boxes) as swifts prefer to nest gregariously. The boxes should be placed at least 5m above ground level under the eaves of a building, on a north or east elevation, where they will be sheltered from prevailing wind, rain and strong sunlight. To be suitable for swifts, the boxes require an open aspect with no trees or large shrubs potentially obstructing the birds' flight path up to 5m from the box.<br>Species-specific bird boxes should be installed in line with manufacturers specifications. |

| Reptiles | |
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| *Summary of Survey Findings* | The grassland on site has a varied sward height which could be suitable for reptiles to forage and shelter. The dense tree canopy of the boundary trees could also provide shelter from predation. There is limited connectivity to the site as most of the boundary is walled or fenced, however there are some gaps under the fencing along the western boundary to access the site.<br>Despite the suitable habitat on site, as the site is situated within a dense residential area near to Manchester City Centre, the site is surrounded by heavily trafficked tarmac roads which would prevent reptiles commuting to the site. Although the tree lines on site could be suitable for reptiles, the site is quite isolated from other suitable habitat as the site is located within an industrial estate with vegetated habitats being isolated by heavily trafficked tarmac roads that are kerbed. There is no hibernation habitat on site for reptiles. |
| *Foreseen Impacts* | The grassland, four trees and scrub are proposed to be removed as part of the development. Due to the isolated nature of the site, it is unlikely that reptiles would be present as the only commuting routes would be across heavily trafficked roads, which are unsuitable for reptiles. |
| *Recommendations* | None.<br><br>**In the unlikely event that a reptile is identified, works must cease and advise must be sought from a suitably qualified ecologist.** |

| Amphibians | |
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| *Summary of Survey Findings* | There are no returns of EPSL licences relating to amphibians, class license returns or pond survey data present within 2km of the site boundary. |

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| | There are no ponds within 500m of the site boundary.<br><br>The boundaries are for the most part, walled and fenced which limits accessibility to the site. However, there are some gaps under the fencing along the eastern boundary where amphibians could enter the site. The grassland and scrub could be used for foraging due to the taller sward, however due to the boundaries being surrounded by walls and fencing it would not be a suitable commuting route. The habitats surrounding the site are also heavily urbanised and has no connectivity to suitable habitats including ponds or woodland, as amphibians would have to commute across heavily trafficked, kerbed roads in all directions to reach the site. |
| *Foreseen Impacts* | As there are no ponds that are connected to the site and the site is isolated by heavily trafficked tarmac, kerbed roads, the risk of amphibians being present on site is greatly reduced, and therefore no impacts are foreseen to amphibians as a result of the development. |
| *Recommendations* | None.<br><br>**In the unlikely event that a great crested newt is identified, works must cease and advise must be sought from a suitably qualified ecologist.** |

| Badger | |
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| *Summary of Survey Findings* | The topography of the site is predominantly flat and there is limited suitable habitat for sett excavation as most of the site consists of hardstanding and a building, localised within an urban area. The surrounding habitat consists of residential dwellings, tarmac roads and industrial buildings. There are pockets of greenspace and scattered trees along the roadsides, however this is still limited for badgers to use. |

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| | The site is fenced and walled around the boundaries, however the wall is quite low on the northern boundary and badgers could commute over the wall to reach the site.<br>Badgers could forage within the grassland, however the site is located within an urban area of Manchester where commuting is limited as the site is surrounded by main roads. This would not prevent badgers commuting to the site, but is likely to reduce the likelihood of badgers using the site as a commuting route.<br>Several mammal paths were seen within the grassland, however this could be from urban foxes, cats etc. and there are no signs to indicate these are from badgers.<br>No evidence of badgers was found on or within 30m of the site. |
| *Foreseen Impacts* | No evidence of badgers was found within 30m of the site, however the construction, in addition to the removal of the grassland, scrub and felling of trees could cause harm or death to badgers if commuting through the site or commuting to the site to forage. |
| *Recommendations* | Precautionary mitigation during works is recommended:<br>• Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape.<br>• The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to habitats which badgers could use. South and west boundaries.<br>• Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.<br>**In the unlikely event that a badger sett is identified within 30m, works must cease and advise must be sought from a suitably qualified ecologist.** |

| Riparian animals | |
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| *Summary of Survey Findings* | There are no watercourses on or connected to the site, therefore, the likelihood of these species being present on site is greatly reduced. |
| *Foreseen Impacts* | No impacts are anticipated on riparian animals as a result of the proposed development. |
| *Recommendations* | None. |

| Hazel dormouse | |
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| *Summary of Survey Findings* | Greater Manchester is outside of the natural range for hazel dormice, and therefore the risk of this species being present on site is greatly reduced. The site is not connected to any extensive pockets of woodland or hedgerow networks that would be suitable for hazel dormice. |
| *Foreseen Impacts* | No impacts are anticipated on hazel dormice as a result of the proposed development. |
| *Recommendations* | None. |

| Other e.g. hedgehog | |
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| *Summary of Survey Findings* | Hedgehogs are known to forage and commute within urban areas, and therefore are likely to be present. There is limited commuting for hedgehogs as most of the boundaries are walled or fenced, however there are gaps under the fencing along the western boundary where hedgehogs could commute underneath. The grassland has a varying sward height which would allow hedgehogs to shelter and forage. There is coverage underneath the line of trees around the boundary where hedgehogs could shelter, however it is unlikely to be dense enough for hedgehogs to hibernate here. The scrub to the east may provide hibernation as the vegetation is more dense here. As the site is surrounded by main roads and densely situated residential |

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| | dwellings, it is unlikely that hedgehogs would commute through the site, but could still be present to forage in the area.<br>There is a small brash pile in the centre of the site (see figure 27 and appendix 1) where hedgehogs could shelter). |
| *Foreseen Impacts* | The scrub, some grassland four trees will be removed during construction. The loss of such habitat is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present. |
| *Recommendations* | A precautionary working method will be implemented during construction, including the following measures:<br>• The scrub clearance to the east will be undertaken outside of the hedgehog hibernation season (November to March) insofar as is possible.<br>• The dismantling of the brash pile must be done by hand.<br>• A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 30cm and left overnight to allow any hedgehogs to disperse. The vegetation can then be cleared to ground level and must be maintained at this level for the duration of construction to deter hedgehogs from the working area.<br>• Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape.<br>• The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use.<br>• Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. |

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| | If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.<br><br>**Enhancements**<br>• The planting of native shrubs to provide shelter<br>• The addition of a raised hedgehog house on site will provide additional shelter for hedgehogs<br>• If new fencing is proposed to be installed, creating "hedgehog highways" or purpose built gaps for hedgehogs to commute would allow local hedgehogs to access the site. |

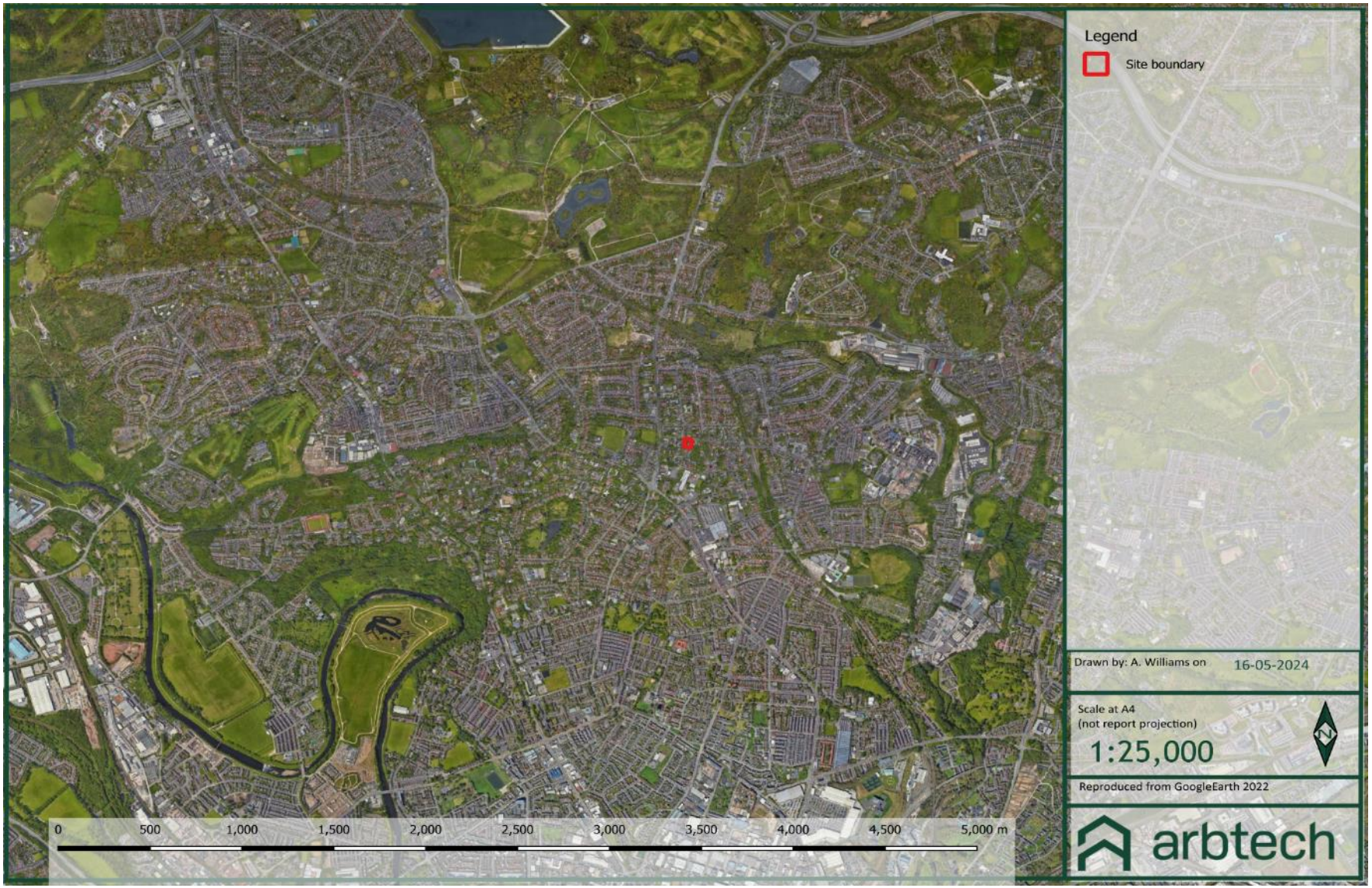
## Appendix 1a: Habitat map



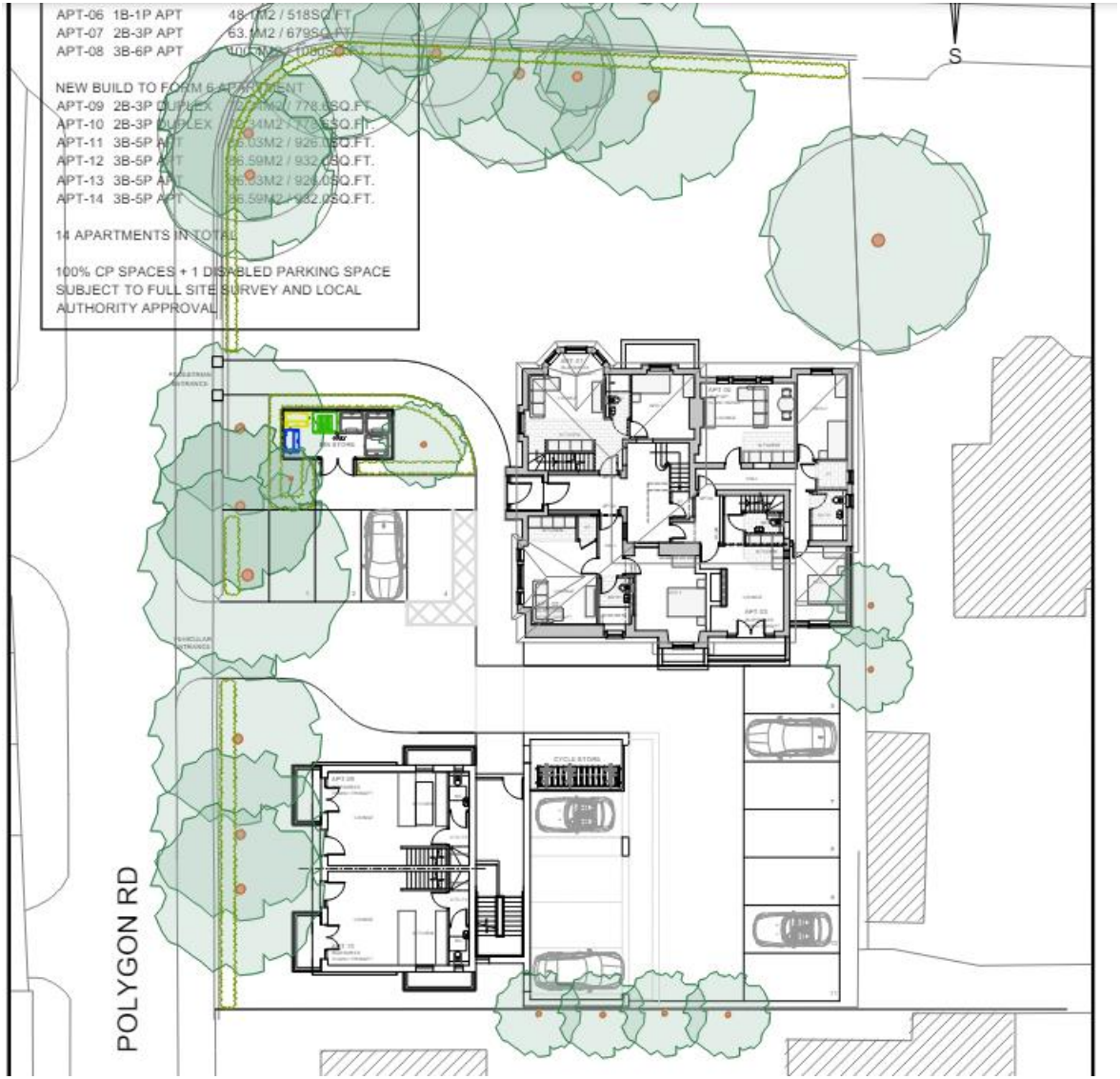
## Appendix 1b: PRA and BERS map



## Appendix 2: Location map

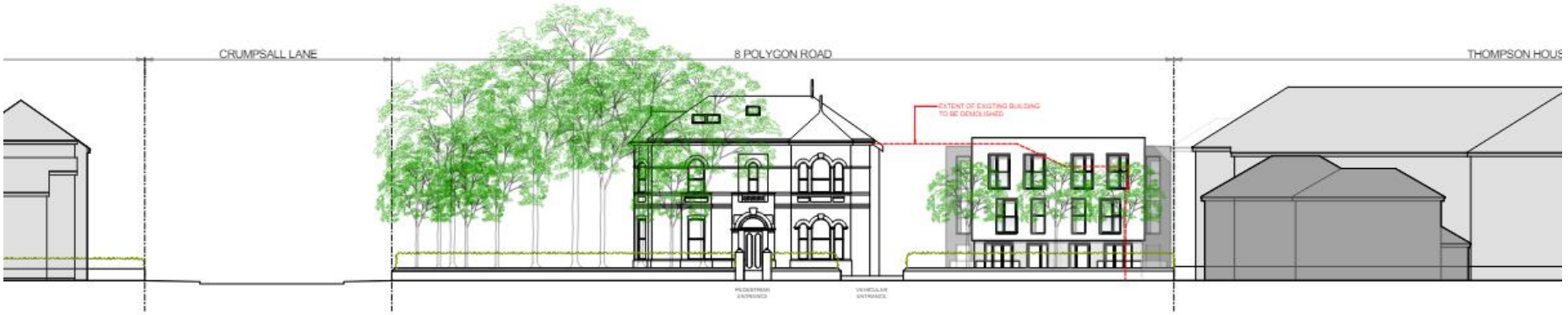


## Appendix 3: Proposed plan






CRUMPSALL LANE STREET SCENE (NORTH)




POLYGON ROAD STREET SCENE (WEST)

## Appendix 4: Photos



Figure 1 – photo of the building and hardstanding from the entrance to the site.



Figure 2 – hardstanding with ruderal vegetation located to the west of the site, taken from the north.



Figure 3 – grassland to the north of the site densely covered in bramble.



Figure 4 – Rhododendron located along the northern boundary.



Figure 5 – the scrub located to the east of the site.



Figure 6 – line of trees along the northern boundary.



Figure 7 – line of trees along the western boundary.



Figure 8 – northern elevation of B1.



Figure 9 – northern and eastern elevations of B1 taken from Crumpsall Lane along the northern boundary.



Figure 10 – western elevation of B1.



Figure 11 – missing window on the western elevation of B1.



Figure 12 – missing tiles on the roof on the northern elevation of B1.



Figure 13 – missing tiles and roof structure of western and southern elevations of B1.



Figure 14 – southern elevation of B1.



Figure 15 – eastern elevation of B1.



Figure 16 – southern roof structure of B1 with open window and missing tiles, viewed from the eastern elevation.



Figure 17 – damaged soffit on the eastern elevation of B1.



Figure 18 – interior of B1.



Figure 19 – interior of B1.



Figure 20 – interior of B1.



Figure 21 – central internal roof structure of B1, no roof lining.



Figure 22 – southern internal roof structure of B1, lined with bitumen felt lining.



Figure 23 – northern internal roof structure of B1, lined with breathable roof membrane.



Figure 24 – pigeon nesting inside of B1.



Figure 25 – disused nest inside of B1.



Figure 26 – subtle mammal path through the grass towards the northern boundary.



Figure 27 – small brash pile in the centre of the site.

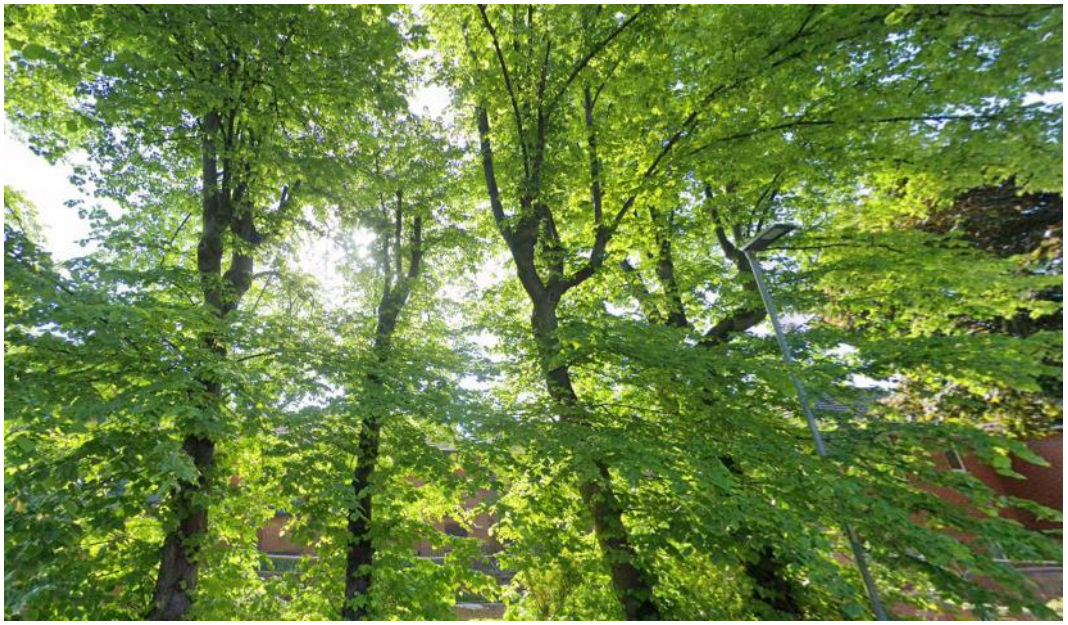


Figure 28 – the four small-leaved lime trees to be felled as part of the development.

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