

Preliminary Ecological Appraisal and Roost Assessment

Survey site:

Rainshore House, Over Town Lane, Norden, Rochdale, Greater Manchester OL12 7TQ

Client:

Mr. Malcolm Percy

Survey date:

18th April 2024

Project:

This report is prepared to inform a planning application with the Rochdale Borough Council. The proposal is described as:

The provision of a specialist SEN educational facility at the site with minor internal remodelling to the main house and annexe, demolition of the garage building and the construction of single-storey demountable accommodation, as well as further fencing within the grounds and addition of new parking areas and a MUGA court.

[Unsubmitted]

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 Jessica Sibley BSc (Hons) MSc, Consultant Ecologist (Accredited Agent on Natural England Bat Licence Number: 2022-10404-CL18-BAT).					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
18/04/2024	7	93	90	5	None

Ecological Survey Factor	Detailed using desk study and site survey (carried out under reasonable 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.
Conclusion, Impact or Recommendations	
Habitats and plants (see habitat map in appendix 1, PRA map in appendix 2, location map in appendix 3, proposal plan in appendix 4, and photos in appendix 5).	
Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).	
Summary of Survey Findings (UKHab codes used) Primary Codes: - Buildings [u1b5] - Other developed land [u1b6]	The survey site is centred on National Grid Reference: SD 85286 15075 and has an area of approximately ~0.431ha. The site comprises a dwelling, access parking, outbuildings, artificial unvegetated surfaces, grassland, tree lines, scattered trees, and ornamental non-native hedgerow, in Norden, Rochdale. The underlying geology of the site is sandstone (rough rock), with superficial deposits of diamicton (Devensian Till), overlain by freely draining slightly acid loamy soils with low fertility. Typical habitats of this soil type include neutral and acid pastures and deciduous woodlands; with acid communities such as bracken and gorse in the uplands.

• Artificial unvegetated - unsealed surface [u1c] • Ornamental non-native hedgerow [h2b] • Other neutral grassland [g3c] Secondary Codes • Gravel beds [310] • Line of trees [33] • Scattered trees [32] • Introduced shrub [847] • Ground level planters [845]	Adjacent to the west of the site is Over Town Lane, adjacent to the north and south is grassland, and adjacent to the east is woodland. Within a 4km radius of the site is scattered 'Priority Deciduous Woodland' (the closest being ~0.037km east), as well as ancient woodland. Other habitats include 'Grass Moorland' (non-priority), and 'Open Mosaic Habitat', designed under MAGIC. The closest watercourse to the site is Naden Brook, located ~0.335km east of the site boundary. The wider landscape comprises rural areas with small, scattered settlements, with the large settlement of Manchester to the south of the site. Survey Limitations: • No Biological Records Data (BRD) was available at the time of writing this report and this should be obtained, and the report updated to enable a robust ecological impact assessment to be completed. These limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation. <u>Buildings [u1b5]</u> There are three on-site buildings (B1 – the main dwelling, B2 – an annexe, and B3 – a garge). The on-site buildings are considered in relation to roosting bats, later in this report (see 'bats'). <u>Other developed land [u1b6]</u> Some sections of the site include sealed surfaces such as a patio and a driveway and car parking area.
---	---

	<u>Artificial unvegetated unsealed surface [u1c] with gravel beds [310]</u> Some sections of the site include bare soil substrate overlain with gravel beds. <u>Ornamental non-native hedgerow [h2b]</u> Sections of privet <i>Ligustrum ovalifolium</i> dominated hedgerow were recorded within the site. The understory of the hedgerow included the following species: O: Cleavers <i>Galium aparine</i>, willowherb <i>Epilobium sp.</i>, and herb-robert <i>Geranium robertianum</i>. R: Creeping buttercup <i>Ranunculus repens</i>, common nettle <i>Urtica dioica</i>, cranesbill <i>Geraniaceae sp.</i>, lesser celandine <i>Ficaria verna</i>, and dandelion <i>Taraxacum officinale agg.</i> <u>Other neutral grassland [g3c]</u> The majority of the garden area of the site is grassland which best represents 'other neutral grassland'. The sward height is homogenously short at ~5-10cm. Species richness among the sward is ~6-8 species per m². There is >20% cover of broadleaved herbs and sedges. Species include: D: <i>Poaceae sp.</i> A: Yorkshire fog <i>Holcus lanatus</i>, and springy turf moss <i>Rhytidiadelphus squarrosus</i>. O: Creeping buttercup, daisy <i>Bellis perennis</i>, creeping thistle <i>Cirsium arvense</i>, pointed spear moss <i>Calliergonella cuspidate</i>, common ragwort <i>Jacobaea vulgaris</i>, and field wood-rush <i>Luzula campestris</i>. R: Soft rush, broad-leaved dock <i>Rumex obtusifolius</i>, willowherb, <i>Asteraceae sp.</i>, meadow buttercup <i>Ranunculus acris</i>, mouse-ear chickweed <i>Cerastium fontanum</i>, speedwell <i>Veronica sp.</i>, and fireweed. Grassland – condition indication:
--	---

	The sward height across the grassland parcel is homogenously short, without microclimates for vertebrates and invertebrates. Cover of bare ground is between 1-5%, including localised areas. No bracken <i>Pteridium aquilinum</i> was recorded, and the cover of scrub is <5%. Creeping thistle and creeping buttercup combined likely account for >5% coverage of the grassland parcel. No non-native invasive species were recorded, associated with the parcel, but based on the time of year this survey was undertaken, it is possible they would not yet be visible. There are at most ~8 species present per m². <u>Line of trees [33]</u> Along the northern, eastern, and southern boundaries of the site is a line of trees (treeline 1), and a second line of trees is located along the western boundary (treeline 2). Both are abundant with horse chestnut <i>Aesculus hippocastanum</i>, and occasional with ash <i>Fraxinus excelsior</i> and beech <i>Fagaceae sp.</i>, and treeline 1 also has a rare (abundance) of conifer <i>Pinophyta sp.</i>, hawthorn <i>Crataegus monogyna</i>, and holly <i>Ilex aquifolium</i>. The majority of the trees associated with the treelines look to be mature with an average circumference of ~80-90cm. Treeline 1 – condition indication: >70% of the trees are native species. The tree canopy is continuous with gaps in canopy cover making up <10% and no gaps being >5m wide. Some of the trees contain natural ecological niches (i.e., cavities and loose bark). There is an undisturbed naturally vegetated strip of at least 6m along both sides of the treeline. The majority of the trees look to be in healthy condition. Treeline 2 – condition indication:
--	--

	>70% of the trees are native species. The tree canopy is continuous with gaps in canopy cover making up <10% and no gaps being >5m wide. Some of the trees have natural ecological niches present (i.e., cavities and loose bark). There is an undisturbed naturally vegetated strip of at least 6m along one side of the treeline, only. The majority of the trees look to be in healthy condition. <u>Scattered trees [32]</u> Other scattered trees around the site include young and semi-mature: O: Magnolia <i>Magnoliaceae</i> sp., goat willow <i>Salix caprea</i>, cherry <i>Prunus</i> sp., hawthorn <i>Crataegus monogyna</i>, <i>Rosaceae</i> sp. Individual trees – condition indication: The tree canopy is discontinuous with gaps making up >10% of total area, and with gaps >5m wide. There is no evidence of an adverse impact on tree health by human activities, however, there is likely a current pruning regime associated with some of the trees. The majority of the trees retain >75% of their expected canopy for their age range and height. No natural ecological niches are present, based on the age of the trees. The trees oversail grassland vegetation beneath (i.e., >20%). <u>Introduced shrub [847]</u> The site includes a section of introduced shrub with other herbaceous vegetation: O: <i>Hydrangea</i> sp., buddleia <i>Buddleja</i> sp., <i>Berberidaceae</i> sp., bramble <i>Rubus fruticosus</i> agg., common nettle <i>Urtica dioica</i>, periwinkle <i>Vinca</i> sp., fireweed <i>Onagraceae</i> sp. R: Lesser celandine <i>Ficaria verna</i>, maple <i>Aceraceae</i> sp., daffodil <i>Narcissus</i> sp., and soft rush <i>Juncus effusus</i>.
--	---

	Other small stands of shrubs (e.g. <i>Camellia sp.</i>), are also scattered across the site. <u>Ground level planters [845]</u> The site also has six ground-level planters with herbaceous vegetation currently present.
<i>Foreseen Impacts</i>	The habitats on-site are generally widespread and not notable. However, a moderate area of grassland will be removed/impacted, as part of the proposed works. Slight impacts are foreseen on the adjacent habitats from the operation of the development if left unmitigated (dust, litter, surface run off etc).
<i>Recommendations</i>	A Biodiversity Net Gain (BNG) assessment is being undertaken for the site. Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). For the adjacent woodland it is recommended that a minimum of 15m between it and the development. However, with an Arboricultural report indicating the Root Protection Zones (RPZs) and the correct pollution prevention measures, this could be reduced. Best practice measures to minimise the possibility of pollution affecting adjacent habitats must be implemented during construction. A Construction Environment Management Plan (CEMP) may be required for this.
Locality and Designated Sites	

<i>Summary of Survey Findings</i>	There is one statutory designated site within a 4km radius of the site: • Healey Dell Local Nature Reserve (LNR) – ~2.447km east – (woodland and waterfalls). The site is not subject to any designation.
<i>Foreseen Impacts</i>	No impacts foreseen, given the distance of the proposed development, from statutory designated sites.
<i>Recommendations</i>	None required.
Invasive / Non-native species	
<i>Summary of Survey Findings</i>	Common rhododendron <i>Rhododendron ponticum</i> was recorded in a few locations across the site. Large stands were located across the northern, eastern and southern boundaries (approximate grid references (central point of stands): SD 85308 15098, SD 85320 15060, and SD 85312 15044), with two separate bushes across the site (approximate grid references: SD 85251 15042, and SD 85301 15072). This species is listed as a Schedule 9 species on the Wildlife and Countryside Act, 1981. No other problematic invasive non-native species were recorded on-site.
<i>Foreseen Impacts</i>	Construction could result in the spread of common rhododendron.
<i>Recommendations</i>	Rhododendron present on-site will be sensitively removed prior to the commencement of works to prevent the spread of a non-native, invasive species listed on Schedule 9 of the Wildlife and Countryside Act, 1981. The rhododendron will be removed using hand tools only. The most effective method of removal is through hand pulling, which results in minimal soil disturbance. Hand-pulling young shrubs will typically result in the full removal of the shrub and associated root network, which will prevent the re-establishment. Mature shrubs are likely to have a deeper and more established root network unlikely to be removed in full by hand pulling alone. Where there are mature shrubs, removal should be aided using hand tools to expose the root network in full so the entire shrub and associated roots

	can be removed. The rhododendron should then be disposed of in line with appropriate controlled waste measures. Development works will not commence until rhododendron has been successfully removed from the site.
Invertebrates	
<i>Summary of Survey Findings</i>	No habitat for protected or notable invertebrates is found on-site.
<i>Foreseen Impacts</i>	None foreseen.
<i>Recommendations</i>	No further surveys. <u>Suggested biodiversity enhancements:</u> The site could be further enhanced via the provision of native wildflowers, which would provide foraging opportunities for invertebrates.
Bats	
<i>Summary of Survey Findings</i>	A review of the MAGIC database returned no European Protected Species Licences (EPSLs) for bats within a 4km radius of the site. <u>Roosting bats:</u> B1 (on-site dwelling): ➤ <u>Exterior:</u> B1 is a three-storey brick-built building with a pitched roof clad in slate roof tiles. The supporting walls were found to be intact without missing mortar or crevices, however, vents are present around the building which may support bat ingress. The roof tiles also have multiple gaps and there are sections of lifted lead flashing associated with the roof tiles, which provides suitable features. No external evidence of roosting bats was recorded along the exterior of the building (i.e., oil stains, droppings along ground-level windowsills/doorframes).

	➤ <u>Interior:</u> There are four accessible loft voids within the building, accessible hatches, the rest of the ceilings are vaulted. The roof structures internally look to be tightly clad internally, with wooden sarking. One of the loft voids (the main void) has a window which spills light into the void, likely suboptimal for void-dwelling species. The floor of the voids is covered in fibre wool membrane with boarding in places. No bat evidence was found internally of the loft voids (i.e., droppings, urine stains, feeding remains). ▪ (Main loft void) - Approximate internal dimensions: 5m long x 7m wide x 2m high (floor to ridge height). ▪ (Main loft void) - Internal conditions: temperature 9.0°C, humidity 58.2%. ▪ (Smaller loft voids) - Approximate internal dimensions: 2m long x 1m wide x 1.5m high (floor to ridge height). ▪ (Smaller loft voids) - Internal conditions: temperature 7.4°C, humidity 62.3%. ➤ <u>Suitability Assessment:</u> B1 has moderate value for roosting bats. The gaps between the roof tiles are likely to support crevice-dwelling species of bats, possibly for transient periods, but possibly more frequently, and for larger numbers, given the number of gaps. The internal loft voids look to be tightly sealed, but bat presence within cannot be entirely discounted at this stage. B2 (on-site annexe): ➤ <u>Exterior:</u> B2 is a brick-built annexe building with a pitched roof clad in slate roof tiles. The supporting walls were found to be intact without missing mortar or crevices, however, vents are present along the eastern and western elevations of the building which may support bat ingress. The majority of the roof tiles lie flush, however, a two very small and shallow gaps were recorded between the roof tiles, which are likely to be suboptimal due to their shallow depth creating poor thermal qualities, with them subject to inclement
--	---

	weather. No other suitable bat roost features were recorded externally. No external evidence of roosting bats was recorded along the exterior of the building (i.e., oil stains, droppings along ground-level windowsills/doorframes). ➤ <u>Interior:</u> There are no loft spaces within B2, the roof structure is exposed within the void. The wooden sarking internally of the void looks to be tightly sealed, without ingress opportunities. Furthermore, the void is filled with daylight spill due to the windows and glass doors. No bat evidence was found internally of B2 (i.e., droppings, urine stains, feeding remains). ▪ Approximate internal dimensions: 14m long x 8m wide x 4m high (floor to ridge height). ▪ Internal conditions: temperature 8.6°C, humidity 55.2%. ➤ <u>Suitability Assessment:</u> B1 has low value for roosting bats. The sparse gaps between a few of the tiles look to be shallow and suboptimal, subject to inclement weather and thermal fluctuations, suboptimal for roosting bats other than for transient periods. There are also a few vents, but these are likely to be subject to daylight internally. B3 (on-site garage): ➤ <u>Exterior:</u> B3 is wooden-built garage building, with a pitched and gabled roof clad in cement roof tiles. The wooden supporting walls and cladding were found to be intact and without features. The roof tiles were found to lie flush, without gaps large enough to support crevice-dwelling species, or void-dwelling entry. No suitable bat roost features were recorded externally. No external evidence of roosting bats was recorded along the exterior of the building.
--	---

	➤ <u>Interior:</u> There are no loft spaces within B3, the roof structure is exposed within the void. The roof is lined with breathable membrane which is intact. The structure looks to be tightly sealed. Furthermore, the void is filled with daylight spill in a section due to an open section of elevation. ▪ Approximate internal dimensions: 10m long x 6m wide x 3m high (floor to ridge height). ➤ <u>Suitability Assessment:</u> B3 has negligible value for roosting bats, based on a lack of suitable roost features and evidence in or around B3. Trees: ➤ Given the number of on-site trees, the trees were not subject to a separate Ground Level Tree Assessment (GLTA). <u>Foraging and commuting bats:</u> On-site habitats include a vegetated garden, which is of low value for local foraging and commuting bats. However, this habitat could be used by bats dispersing from nearby roosts.
<i>Foreseen Impacts</i>	<u>Roosting bats:</u> B1: The proposed development will not result in any works to the roof, loft spaces, or supporting walls of B1 (on-site dwelling), and will only include a change of use with some minor internal remodelling. B2: The proposed development will not result in any works to the roof or supporting walls of B2 (on-site annexe), and will only include a change of use with some minor internal remodelling.

	B3: Bats are very unlikely to be roosting within this building and as such, there are not anticipated to be any impacts on bats in this location as a result of its removal. Trees: Some of the site trees contain potential roost features. <u>Foraging and commuting bats:</u> The proposed development will result in the loss of a moderate area of grassland but given the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. The proposed development may lead to an increase in the amount of current lighting of surrounding habitats. This may disturb commuting bats.
<i>Recommendations</i>	<u>Roosting bats:</u> B1 and B2: In the event of any structural works to these buildings (i.e., works to the roof, loft voids, supporting walls), Bat Emergence Re-entry Surveys (BERS), will be required and this report should be updated. B3: In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat-licensed ecologist contacted for further advice. In the event of any tree pruning/felling, a separate GLTA should be undertaken for the site trees, due to be impacted. <u>Foraging and commuting bats:</u>

	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-2 <u>Suggested biodiversity enhancements:</u> The installation of four bat boxes onto retained buildings or mature site trees at the site would provide additional roosting habitat for bats. Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light. The bat boxes should be a specification suitable for crevice/void-dwelling species of bat such as: • Habibat Bat Box (buildings) • Beaumaris Bat Box (buildings) • NHBS Improved Cavity Bat Box (trees or buildings) • Vivara Pro Woodstone Bat Box (trees or buildings) • Eco bat box (trees or buildings) The site could also be enhanced for foraging and commuting bats, by planting additional native trees and shrubs, and planting of native hedgerow across the site (i.e., hawthorn or blackthorn).
Birds	
<i>Summary of Survey Findings</i>	Evidence of nesting birds was found during the survey. One bird's nest and one bird box were recorded in the tree line along the north of the site and a second bird box was recorded in the western tree line. No habitat for schedule 1 birds was observed.

<i>Foreseen Impacts</i>	The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.
<i>Recommendations</i>	Any building 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. 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. <u>Suggested biodiversity enhancements:</u> The site could be enhanced for nesting birds by attaching four additional bird boxes to mature site trees or incorporating them across the new building, such as: • Vivara Pro WoodStone Swift Nest Box (buildings) • House Sparrow Terrace FSC Nest Box (buildings) • Swallow Nest Bowl (buildings) • Vivara Pro Seville 32mm WoodStone Nest Box (trees) • Vivara Pro Barcelona WoodStone Open Nest Box (trees) General purpose bird boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain, and strong sunlight.

	Swift and sparrow boxes should be positioned in the eaves and can be incorporated into the plans, during the design stages.
Reptiles	
<i>Summary of Survey Findings</i>	A review of the MAGIC database returned no EPSLs for protected reptiles within a 4km radius of the site. The site contains some terrestrial habitat suitable for reptiles for foraging (e.g., grassland). However, the grassland is retained to a short sward (i.e., ~5-10cm) across the site, suiting reptiles for only transient periods. The nearby patch of woodland is suitable for reptiles for refuge and hibernation. There is a rubble pile and there is hedgerow on-site suitable for reptiles for refuge and hibernation. Reptile presence across the site cannot be wholly discounted, albeit mainly for transient periods when commuting, or within the refugia.
<i>Foreseen Impacts</i>	Although sections of grassland will be removed as part of the development, there is a low risk that a low number of reptiles could be present in the vicinity of the works given the short sward. These could be injured or killed without mitigation. The on-site rubble pile will likely be retained and the hedgerow within the site will be retained.
<i>Recommendations</i>	A precautionary working method will be implemented for widespread reptiles during construction, including the following measures: • The grassland will be maintained at a short sward (5cm) to discourage reptiles from the working area. • The rubble pile, if removed, should be dismantled by hand. • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby habitats. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.

	If any reptiles 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. In the unlikely event that a reptile is identified, works must cease and advice must be sought from a suitably qualified ecologist. <u>Suggested biodiversity enhancements:</u> The site could be enhanced for reptiles post development with the inclusion of log piles and a compost heap.
Amphibians	
<i>Summary of Survey Findings</i>	A review of the MAGIC database returned no granted EPSL records for Great Crested Newts (GCN) within 500m of the site. There are also no class licence returns and there is no pond survey data for GCN within a 500m radius of the site. There are no ponds within the site, and a review of aerial imagery highlights there are nine 'waterbodies' (drains, ponds, and reservoirs – named here as ~W(no.)) within a 500m radius of the site. The closest is located ~38m northeast of the site (W1), and the furthest is located ~476m southwest (W9). The four waterbodies located southwest of the site, look to be disconnected from the site by road barriers with curbs (W6:W9), which are considered to represent a significant barrier to dispersal. The other waterbodies (W1:W5) are located northwest, northeast, east, and southeast of the site and look to be better connected by woodland and grassland vegetation. W1 is a man-made dry drain, with concrete vertical sides, devoid of any aquatic vegetation and water, closest to the site, and is subject to a Habitat Suitability Index (HSI), in Table 1a below.

Table 1a: HSI calculation of ponds.

SI Description	SI Value W1 (Grid reference: SD 85358 15127)
Geographic location	0.50
Pond Area	0.40
Pond Permanence	0.10
Water Quality	0.01
Shade	1.00
Waterfowl Effect	1.00
Fish Presence	1.00
Pond Density	0.65
Terrestrial Habitat	0.67
Macrophyte Cover	0.30
HSI Score	0.35
HSI Category	Poor

The site contains grassland, hedgerow, and a rubble pile which provide good terrestrial opportunities for GCN and other more common amphibians for foraging, refuge, and hibernation. The presence of GCN within the site for transient periods in the grassland and utilising the hedgerow and refugia is possible, given the suitable on-site habitats, and proximity of possible GCN breeding waterbodies (ponds and reservoirs). Common amphibian presence across the site is also possible, given the presence of suitable habitat on the site and proximity of waterbodies.

<i>Foreseen Impacts</i>	When georeferencing the proposed development plans over scaled mapping of the site, it is noted that the development area is likely to result in the loss or significant disturbance of ~0.25ha of grassland. If GCN are present within the pond ~147m to the east of the site, when completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces a Green risk score , which states: Offence Highly Unlikely . W1 the dry drain is considered negligible for GCN and is discounted from inclusion as a waterbody, given the lack of water, aquatic vegetation, and vertical man-made concrete sides.
<i>Recommendations</i>	The precautionary working method adopted for reptiles, will also benefit common amphibians as part of the proposed works. <u>Suggested biodiversity enhancements:</u> The site could be enhanced for amphibians post-development with the inclusion of native hedgerow and tussocky grassland areas.
Badger	
<i>Summary of Survey Findings</i>	A mammal path was recorded on-site which may be evidence of badgers commuting across the site. No badger setts were recorded within the site or are suspected in the immediate 30m vicinity.
<i>Foreseen Impacts</i>	None foreseen.
<i>Recommendations</i>	Basic precautionary mitigation during works is recommended: - Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. - 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.

	Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. In the unlikely event that a badger sett is identified within 30m, works must cease and advice must be sought from a suitably qualified ecologist. <u>Suggested biodiversity enhancements:</u> The site could be enhanced for badgers by planting small scrub areas on-site including bramble and damson <i>Prunus domestica subsp. insititia</i>, as well as planting fruit-bearing trees to increase foraging opportunities for badgers.
Riparian animals	
<i>Summary of Survey Findings</i>	There are no watercourses on or connected to the site.
<i>Foreseen Impacts</i>	No impacts are anticipated on riparian animals as a result of the proposed development.
<i>Recommendations</i>	N/A
Hazel dormouse	
<i>Summary of Survey Findings</i>	A review of the MAGIC database returned no granted EPSL records for hazel dormice within 4km of the site. The site lies outside of the known geographic range for hazel dormouse (either natural or reintroduced). Furthermore, the site does not comprise the habitat required to support hazel dormouse (i.e., woodland, connected hedgerow networks). Hazel dormouse presence across the site is unlikely.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	None.
Other e.g. hedgehog	

<i>Summary of Survey Findings</i>	The grassland and shrubs on-site provide some foraging, commuting, a refuge opportunities for hedgehogs, with woodland habitat nearby.
<i>Foreseen Impacts</i>	A moderate area of grassland habitat will be removed during construction. The loss of such habitat is likely to be inconsequential to local hedgehog populations owing to the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present. The hedgerow within the site will be retained.
<i>Recommendations</i>	Similar to the badgers, a precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or a sensitive lighting design will be implemented to avoid light spill onto retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. 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. <u>Suggested biodiversity enhancements:</u> The site could be enhanced for hedgehogs post-development with the inclusion of hedgehog houses close to shaded vegetated areas and fence gaps into any fences installed.

Appendix 1: Habitat map



Appendix 2: PRA map



Appendix 3: Location map



Preliminary Ecological Appraisal and Roost Assessment



Appendix 5: Photos



Photo 1: B1 – facing the eastern elevation.



Photo 2: B1 – gaps between roof tiles – northern elevation.

Mr. Malcolm Percy

Rainshore House, OL12 7TQ



Photo 3: B1 – vents – northern elevation.



Photo 4: B1 – main loft void.



Photo 5: B1 - smaller loft void.



Photo 6: B2 – southern and western elevations.



Photo 7: B2 – gap between tile along western elevation.



Photo 9: B2 – interior.



Photo 8: B2 – northern elevation vent.



Photo 10: B3 – southern elevation.



Photo 11: B3 – interior.



Photo 12: Hardstanding driveway within the site.



Photo 13: Gravel bed within the site.



Photo 14: Privet hedgerow within the site.



Photo 15: On-site grassland.



Photo 17: Common rhododendron within the site.



Photo 16: Line of trees along the western boundary.



Photo 18: Rubble pile.



Photo 19: W1 - drain ~38m northeast of the site boundary.

Limitations and CopyrightLegal

Arbtech Consulting Limited has prepared this report for the sole use of the above-named client or their agents in accordance with our General Terms and Conditions, under which our services are performed. It is expressly stated that no other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us. This report may not be relied upon by any other party without the prior and express written agreement of Arbtech Consulting Limited. The conclusions and recommendations contained in this report are based upon information provided by third parties. Information obtained from third parties has not been independently verified by Arbtech Consulting Limited.

© This report is the copyright of Arbtech Consulting Limited. Any unauthorised reproduction or usage by any person other than the addressee is strictly prohibited.

Version control			
Status	Issue	Name	Date
Final	1.0	Jessica Sibley BSc (Hons) MSc, Consultant Ecologist	23/04/2024
Updated	2.0	Jessica Sibley BSc (Hons) MSc, Consultant Ecologist	01/05/2024