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Preliminary Ecological Appraisal and Roost Assessment

Survey site:

Slack Farm, Higher Calderbrook Road, Littleborough, Rochdale, OL15 9NH

Client:

Derrick Cullen

Survey date:

3rd July 2024

Project:

This report is prepared to inform a planning application with the Rochdale Metropolitan District Council. The proposal is described as: the conversion of current building from two homes to five.

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 Kayleigh Davies BSc, MSc, (Accredited on Natural England Bat Licence Number: 2022-10404-CL18-BAT.)					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
03/07/2024	16	75	70	20	Light
Survey limitations	One of the four loft voids within B1 were inaccessible. This results in the inability to discount the presence of evidence of roosting bats (such as live bats, droppings, staining or foraging remains) from within the building interior. However, as the building is assessed to provide high habitat suitability for roosting bats, this is not deemed a significant limitation as the structure is already recommended the greatest number of surveys based on the features present on the exterior.				

Ecological Survey Factor	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.
Conclusion, Impact or Recommendations	
Habitats and plants (see habitat map in appendix 1, roost assessment map in appendix 2 location plan in appendix 3, photos in appendix 4 and proposal plan 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)	The survey site is centred on National Grid Reference SD 94144 18657and has an area of approximately 0.19ha. The site consists of two semi-detached houses surrounded by sparsely vegetated land to the northern site boundary and other neutral grassland and modified grassland to the southern boundary. There are several scattered trees to the southern and eastern site boundary and grazing fields to the northern and southern site boundaries. The site is set within a rural low-density area with a network of hedge lined grazing fields to the north, west and south. There is a pocket of dense woodland located ~270m to the east, though this is fragmented from the site by open grassland and

	paved roads. There is a fishing pond, Pennine trout fly fishing, located ~450m to the southwest and the summit of Rochdale Canal is situated ~1.4km to the northeast. <u>Developed, sealed surface (buildings) [u1b5]</u> There is one permanent building on site, designated as B1 which is a two-storey, rendered cottage with slate tiles on a pitched roof (Fig. 1). <u>Sparsely vegetated urban land [u1f]</u> Surrounding the building is a section of sparsely vegetated urban land in the form of a concrete pathway as part of the associated garden (Fig. 2). Ruderal herb species growing here include bitter dock (A), nettle (D), cleavers (F), willow herb (D), creeping buttercup (F), foxglove (O), forget-me-not (R), thistle (D), and bramble (D). <u>Modified grassland [g4]</u> To the southeast of the building there is a patch of heavily managed modified grassland (Fig. 1). This is subject to regular mowing. Despite this there were no patches of bare ground or damage caused by the management. Sward height was consistent and below 7cm. Species here include white clover (A), perennial rye grass (D) and common vetch (D). <u>Other neutral grassland [g3c]</u> To the immediate southwest of the building and within several areas of the site towards the southern and western site boundaries there are patches of other neutral grassland (Fig. 3). These areas were not subject to any management
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	evident by the tall sward height. Species within this habitat include Yorkshire fog (D), meadow grass (D), ladies mantle (F), nettle (A), wood rush (D), foxglove (R) and herb Robert (D). <u>Mixed scrub [h3h]</u> Scrub areas are found along the northwestern and eastern boundaries, dominated by bramble, nettle and thistle (Fig. 4). No condition score is associated with the habitat. <u>Scattered tees [32]</u> There are several mature scattered trees on site including ~4 silver birch, ~1 cypress species, ~2 goats willow and ~2 <i>picea</i> species (Fig. 5). There was no damage or deadwood evident. No bat roosting features were identified on any of these trees. <u>Local notable habitats</u> There are no notable habitats onsite. However, there are several priority habitats within 2km of the site boundary. These are as follows: - There is an area of Good Quality Semi-Improved Grassland located ~250m to the north of the site boundary. - There are several patches of Upland Heathland within 2km of the site. The closest is situated ~260m to south of the site boundary. - There is an area of Lowland Fens located ~570m to the south of the site boundary. - There are several patches of Deciduous Woodland within 2km of the site. The closest is situated ~570m to the east of the site boundary.
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	- There are several areas of Blanket Bog within 2km of the site boundary. The closest is situated ~680m to the west of the site boundary. - There are two areas of Ancient Woodland within 2km of the site boundary. The closest is situated ~1.2km to the south of the site boundary. - There are two areas of Upland Flushes, Fens and Swamps within 2km of the site boundary. The closest is situated ~1.6km to the west of the site boundary.
<i>Foreseen Impacts</i>	The habitats on site are widespread and not notable. The boundary scrub, and scattered trees are expected to be retained based on the proposed plan. A large portion of the grassland is expected to be removed and/or impacted by the proposed development. No impact on adjacent or nearby habitats off site is foreseen.
<i>Recommendations</i>	Best practice measures to minimise the possibility of pollution affecting the nearby Good Quality Semi-Improved Grassland must be implemented during construction. A biodiversity net gain (BNG) report is unlikely to be required for the proposal, as less than 25m² of habitat is affected by the proposal (one of the exemptions). The southern modified grass and northern and western scrub habitats can all be retained unaffected.
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	The site is not situated within, or immediately adjacent to any designation. <u>Statutory designated sites (2km)</u> There is one designated site within 2km of the site boundary. This is as follows: - South Pennine Moors Site of Special Scientific Interest (SSSI) Special Area of Conservation (SAC) Special Protected Area (SPA) is situated ~730m to the east of the site boundary. This site is designated by Natural

	England for being “the largest area of unenclosed moorland within West Yorkshire and containing the most diverse and extensive examples of upland plant communities in the county. Extensive areas of blanket bog occur on the upland plateaux and are punctuated by species rich acidic flushes and mires. There are also wet and dry heaths and acid grasslands. Three habitat types which occur on the site are rare enough within Europe to be listed on Annex 1 of the EC habitats and Species Directive (92/43) EEC. These communities are typical of and represent the full range of upland vegetation classes found in the South Pennines. This mosaic of habitats supports a moorland breeding bird assemblage which, because of the range of species and number of breeding birds it contains, is of regional and national importance. The large numbers of breeding merlin <i>Falco columbarius</i>, golden plover <i>Pluvialis apricaria</i> and twite <i>Carduelis flavirostris</i> are of international importance.” As such, the site falls within the SSSI risk impact zone for South Pennine Moors SSSI. The proposed development is not considered to pose a significant risk to this designation. <u>European designated sites (10km)</u> There are five European designated sites within 10km of the site boundary. The closest being South Pennine Moors (SAC) situated ~730m to the east of the site boundary.
<i>Foreseen Impacts</i>	Recreational impacts on the designated sites are unlikely to occur from the proposed development.
<i>Recommendations</i>	None.
Invasive / Non-native species	
<i>Summary of Survey Findings</i>	Cotoneaster was identified on the site, which is listed as an invasive, non-native species under Schedule 9 of the Wildlife and Countryside Act 1981.
<i>Foreseen Impacts</i>	Construction could result in the spread of invasive species.

<i>Recommendations</i>	No further surveys but remain vigilant. Invasive species should be dug up, including roots, and disposed of in line with appropriate controlled waste measures.
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.
Bats	
<i>Summary of Survey Findings</i>	EPSL: A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. No EPSLs are present within a 2km radius of the site. The local area is of good bat habitat with several hedge lined fields nearby which create linear commuting routes and other foraging areas B1, the house has a high habitat value due to suitable crevice-dwelling roosting features such as loose field and ridge tiles, and missing mortar along the eaves enabling access into the building. Additionally, there is considerable damage to the chimney stack which has created gaps between the render and the brick enabling access into the loft void suitable as ingress points for crevice and void dwelling bats. It is not a confirmed roost at this stage as no evidence was found in the internal inspection such as droppings, staining or foraging remains– although this would

	not necessarily be present if bats were only roosting under external features. Below details the potential roosting features identified during the inspection. Exterior: B1 ➤ There are numerous slipped/lifted field tiles on the southern pitched roof structure (Fig. 6). ➤ There is an area of missing mortar along the western elevation of the porch extension at the southeastern side of B1 (Fig. 7). ➤ There is missing mortar and damaged fascia board on the southern elevation (Fig. 8). ➤ There is considerable damage to the chimney stack on all elevations, particularly at the northern elevation (Fig. 9). Additionally, the lead flashing at the base is lifted enabling access into the loft void for roosting bats. ➤ There is a crack in the mortar at the eaves of B1 along the western elevation (Fig. 10). ➤ There are several gaps where the ridge tiles are lifted along the ridge line of B1. ➤ There is significant mortar damage to the rendering of B1 along the southern elevation (Fig. 1). Interior: B1 has five separate loft voids, four of which were accessible. <i>Interior 1</i> The first loft void is over the single storey porch roof structure to the southeast of B1. This void is constructed with timber beams and lined with permeable membrane and mineral wool insulation (Fig. 11). The membrane lining was in good condition with no evidence of sagging or rips (Fig. 12). The wooden beams were laid in a crossbeam structure
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	which reduces the potential flight space for void dwelling bats such as brown long-eared bats in this loft space (Fig. 13). There was significant number of rat and mice droppings found in this void. Additionally, there was daylight permitting into the void which corresponded with potential roosting features identified on the roof structure on the southern elevation during the exterior inspection (Fig. 13). The loft dimensions measured 10m x 5m with the following internal conditions recorded; temperature 22.1 °C, humidity 53.9% and 0mph wind speed. <i>Interior 2</i> The second loft void comprises a section of the eastern side of the two-storey roof space of B1. It has a very low roof structure which creates limited flight space, supported by timber beams (Fig. 14). The floor is boarded with vermiculite insulation, and the roof is lined with bitumen felt (Fig. 15). There was considerable damage to the bitumen felt in several areas which created large areas exposing the roof tiles. This would allow access into the loft void and between the lining and the tiles for roosting bats. The loft dimensions measured approximately 6m x 6m with the following internal conditions were recorded; temperature 20.8 °C, humidity 57.1% and 0mph wind speed. <i>Interior 3</i> The third loft void comprises the opposite section of the eastern side of the two-storey roof space of B1. It has a very low roof structure which creates limited flight space which is further reduced by the presence of several suspended pipes and wires. The roof is supported by timber beams and a single wooden log as the ridge support. The floor has mineral wool insulation, and the roof is lined with bitumen felt which appears to be in good condition. There was a significant number of intact cobwebs and spider webs which would indicate that the void has not been utilised as flying space for roost bats recently. The loft dimensions measured 6m x 4m with the following internal conditions were recorded; temperature 20 °C, humidity 57.1% and 0mph wind speed.
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	<i>Internal 4</i> The fourth internal void is linked to the previous loft space, evident by the same timber log acting as the ridge structural support (Fig. 16). Visibility towards the western side of the loft space was limited by the presence of a stone wall immediately in front of the loft hatch. This section had mineral wool insulation and bitumen felt lining which appeared to be in good condition. It was not possible to assess the dimension of this loft void due to the inaccessibility. The following internal conditions were recorded; temperature 20 °C, humidity 57.1% and 0mph wind speed.
<i>Foreseen Impacts</i>	As the proposals include the conversion of building to five residential dwellings, this will likely impact the roof structure of B1, and will likely cause disturbance and any bat roosts within the building will be destroyed. This could also result in death or injury of bats if present. 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>	Three bat emergence/re-entry surveys are required on B1 during the active bat season (May – September) to confirm presence/likely-absence of bats roosting in or on the building. These survey visits should be completed during the optimal survey period mid-May to August inclusive. The survey visits should be at least three weeks apart. Sub-optimal: early May and September. Would require greater justification of timing e.g., weather conditions, known local bat activity.

	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. Lighting mitigation may be required based on the outcome of the night bat survey(s). If any bat roosts are confirmed from this survey schedule, a bat licence 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. 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 Enhancements are dependent on the outcome of further surveys
Birds	
<i>Summary of Survey Findings</i>	No evidence of nesting birds was found on site during the surveys; however, birds could use scattered trees and scrub for nesting. 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 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.
Reptiles	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site. Habitats recorded in the immediately surrounding area of the site are assessed to provide suitable foraging, commuting, and refuge opportunities for reptiles in the form of the dry-stone wall to the north of B1 (Fig. 2) and the grassland with variable sward height in the neighbouring fields. Although, it is noted that these fields utilised for horse grazing are subject to frequent disturbance and includes the coverage of bare ground. Despite this, the fields are likely to retain narrow unmanaged field margins interconnected by hedgerows that may provide foraging and commuting opportunities for a limited number of reptiles. Although potential connectivity to the site for reptiles is limited in extent, the presence of a small population of common reptiles cannot be fully discounted, albeit limited to peripheral vegetation. Isolated individuals may still be present at the time of survey in the site interior, particularly around the northern dry stone wall area which would be more suitable for basking.
<i>Foreseen Impacts</i>	Although no areas of suitable habitat is being 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. These could be injured or killed without mitigation.

<i>Recommendations</i>	A precautionary working method will be implemented for widespread reptiles during construction, including the following measures: • Vegetation will be maintained at a short sward (5cm) to discourage reptiles. • 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. 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>	EPSL and survey data A review of the MAGIC database returned no granted EPSL records for great crested newts within 2km of the site. Further, no positive class survey licence returns or DLL historic survey data (2017 – 2019) were present within 2km of the site. No ponds are present on site or within 500m of the site. The site provides limited suitable terrestrial habitat for amphibians given the presence of suboptimal habitat (i.e. scrub). The areas of hard standing and amenity grass offer sub-optimal habitat for terrestrial amphibians. The hedgerows may offer refuge for these species. Therefore, protected amphibians are likely be absent from the interior of the survey site year-round.

<i>Foreseen Impacts</i>	Given the lack of suitably connected breeding ponds within 500m of the site, the presence of GCN on-site is considered unlikely and therefore impacts to protected amphibians as a result of the proposed development are deemed to be acceptably low. However, the presence of the presence of common amphibian species onsite cannot be discounted. They could become disturbed, injured or killed if onsite during the development.
<i>Recommendations</i>	No further surveys are required. A precautionary working method will be implemented for common amphibians during construction, including the following measures: • A staged approach will be adopted for vegetation clearance, whereby the vegetation will be strimmed to 15cm and left overnight to allow any amphibians 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 amphibians from the working area. • Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent amphibians from utilising these areas. • Best practice pollution prevention measures will be implemented to minimise impacts to nearby aquatic habitats that amphibians 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 common amphibians 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 great crested newt is identified, works must cease and advice must be sought from a suitably qualified ecologist.
Badger	

<i>Summary of Survey Findings</i>	No badger setts were noted on site or within a 30m radius of the site. Further, no evidence of badgers was noted within the development area such as latrines, footprints or snuffle holes. However, the surrounding area of the site provides high value habitat for badgers which will likely result in commuting badgers on site.
<i>Foreseen Impacts</i>	The proposed development could result in the harm to commuting badgers if no mitigation place.
<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.
Riparian animals	
<i>Summary of Survey Findings</i>	There are no watercourses on or connected to the site. Off-site ditches are found to the east along the road and north beyond the tree line.
<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>	The site lies outside of the known current range for hazel dormice and there are no suitable habitats within the development area. As such it is considered likely that hazel dormice are absent from site. Additionally, Dormice typically utilise a three-dimensional habitat structure as to commute between feeding and breeding sites whilst

	avoiding predation. As such habitats on site are considered unsuitable for hazel dormice and therefore the likelihood of this species being present on site is considered acceptably low.
<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 ruderal herb and variable grassland sward heights onsite provides foraging and commuting opportunities for hedgehogs, with woodland habitat nearby.
<i>Foreseen Impacts</i>	The scrub will be retained during construction. However, construction activities could result in the death or injury of hedgehogs, if present.
<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 sensitive lighting design will be implemented to avoid light spill on to 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.

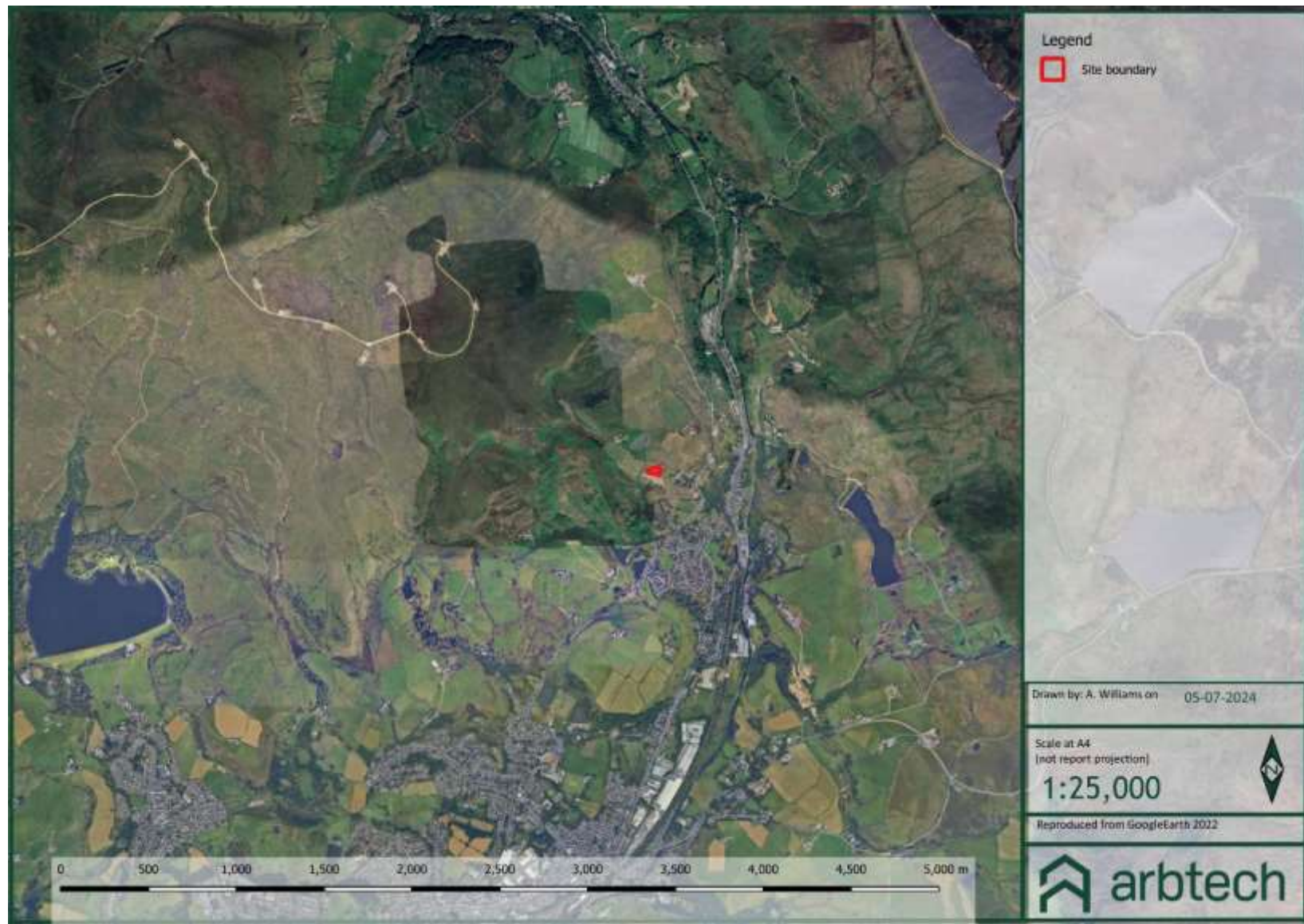
Appendix 1: Habitat map



Appendix 2: PRA map



Appendix 3: Location map



Appendix 4: Proposed plan



Appendix 5: Photos

Photo	Photo Description
	Figure 1: Showing B1 and modified grassland.
	Figure 2: Showing sparsely vegetated land and the dry-stone wall to the north of B1.



Figure 3: Showing unmanaged other neutral grassland to the south of B1.



Figure 4: An example of the mixed scrub on site.



Figure 5: An example of the scattered trees on site.



Figure 6: Showing the lifted field tiles and missing/damaged mortar to the chimney stack of B1.



Figure 7: Missing mortar under field tiles on the porch extension located on the southern elevation of B1.



Figure 8: Damaged fascia boards on the southern elevation.



Figure 9: Damaged mortar on the chimney stack visible from the northern elevation of B1. Also visible are lifted lead flashing at the base of the chimney stack.



Figure 10: Damage to the soffit on the western elevation of B1.



Figure 11: Showing interior 1. Highlighted are the numerous rat droppings. Also visible is the mineral wool insulation and permeable membrane.



Figure 12: Showing permeable membrane in good condition in internal void 1.



Figure 13: Showing cross laid timber structure in internal void 1 and daylight permitting into the void through the southern elevation.



Figure 14: Showing the limited flight space within internal void 2.



Figure 15: Showing the damage to bitumen felt lining within internal void 2.



Figure 16: Showing the log timber ridge structure present in loft interior 3 and 4.

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