

Preliminary Ecological Appraisal

Survey site:

Land at Broad Street, Leek Street, Leek , Staffordshire, ST13 5NS

Client:

Thistlewood Properties

Survey date:

7th August 2025

Project:

This report is prepared to inform a planning application with Staffordshire Moorlands District Council. The proposal is described as:
Construction of drive-thru unit.

PEA survey methodology and legislation can be found in the Arbtech Supplement: [PEA Methodology and Legislation - 2024.](#)

The survey results and recommendations contained within this report are valid for 18 months. An updated site visit may be required if the report is to be used any longer than 18 months after completion.

Site Location and Context					
The survey site is centred on National Grid Reference SJ 98299 56312 and has an area of approximately 0.16ha. The site comprises an area of derelict land, located within the centre of the town of Leek, Staffordshire. The site is bound by Broad Street to the south, a commercial unit to the west and dwellings to the north and east. The wider landscape is dominated by extensive areas of urban development, associated with the town of Leek. The underlying geology for the site comprises Chester Formation - Sandstone, pebbly (gravelly), while the underlying soil type comprises slowly permeable seasonally wet acid loamy and clayey soils.					
Survey Details					
The site survey was undertaken by Gareth Hey BSc (Hons), MSc, ACIEEM (Natural England Protected Species Licence Numbers: [Bats] (2021-51195-CLS-CLS) [Great Crested Newts] (2017-30374-CLS-CLS) (Natural Resource Wales Protected Species Licence Number: [Bats] (S094455/1)					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (mph)	Rain
07/08/2025	16	85	100	4	None
Survey limitations					
It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records. A biological records data search has not been undertaken. However, given the location of the site, the nature of the habitats presents and the assessed suitability of the site for protected or notable species, it is not anticipated that the purchase of biological records data will add any significant weight or alter the conclusions and recommendations outlined in this report.					

Ecological Survey Factor 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.
Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, proposal plan in appendix 3 and photos in appendix 4). 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 site does not contain any habitats listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Overall, the habitats within the site are common and widespread and have low ecological value. Notable habitats are present within 2km. On-site habitat descriptions <u>u1b5 – Buildings</u> There is one building present within the site. It comprises a derelict structure that is in a significant state of disrepair and has suffered from vandalism. The building is not to be impacted by the proposals and as such, was not subject to a detailed assessment for its value to support roosting bats. <u>u1b6 – Other developed land</u> In the western and northern sections of the site are areas of hardstanding, that previously formed access to the site, and the building in the northern section of the site. There is no associated vegetation, and these areas are of minimal ecological value <u>u1c - Artificial unvegetated, unsealed surface</u> Within the central section of the site is an area of unsealed surface. This area is currently utilised by adjacent commercial for parking purposes and is composed of a gravel surface. There is no associated vegetation, and the area is of minimal ecological value. <u>u1f – Sparsely vegetated urban land</u>

	Also present within the central areas of site, between the area of unsealed surface and mixed scrub is an area of sparsely vegetated land, where areas of vegetation has occurred over areas of unsealed surface. Species present largely comprises opportunistic broadleaved perennial herbs, with species present including purple toadflax, ragwort, mugwort, creeping buttercup and willowherb. Some grass species are also present, with perennial rye-grass, Yorkshire fog and red fescue also present. All of the species present occur occasionally, with no species dominating. The vegetation structure is not varied and there is an absence of non-native invasive Schedule 9 species. BNG Condition Assessment – Moderate <u>h3h – Mixed scrub</u> Located on the boundaries of the site is an area of dense mixed scrub. The scrub comprises a dense, woody shrub layer, with some self-set immature trees also present, which form a canopy layer, under 5m. The shrub layer of the scrub is not dominated by one species, with buddleja, ivy and bramble all present. The canopy layer of the shrub once again is not dominated by one species, with willow and field maple, co-dominating. There is an absence of non-native invasive Schedule 9 species. The shrub does not have a well-developed edge, directly abutting the adjacent habitats and urban land and the scrub is dense and as such, has no clearings present within the habitat. There are two trees present in the northern section of the site, both with a DBH of approximately 15cm. Both of the trees are maple trees, with a height of approximately 8m. BNG Condition Assessment – Moderate Local notable habitats There are limited areas of priority habitat, as designated under Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006 within close proximity to the site. The closest habitat is an area of deciduous woodland, located 300m north of the site.
<i>Foreseen Impacts</i>	On-site habitats The proposed development will result in the loss of the majority of the mixed scrub and sparsely vegetated land. This could result in a net loss in biodiversity at the site. Notable habitats

	No direct impacts to any notable habitats will occur as a result of the proposed development, due to the small scale of the proposals and distance from such habitats, where present.
<i>Recommendations</i>	On-site habitats To compensate for the proposed habitat losses at the site, the following habitat creation measures should be incorporated: • Creation of species rich grassland; and • Planting of native trees and shrubs throughout the site. Notable habitats None required. Biodiversity net gain The Environment Act (2021) requires all developments (excluding exemptions) to deliver a 10% net gain in biodiversity. Therefore, the planning application must be accompanied by a landscaping/habitat creation and enhancement strategy, biodiversity net gain calculations and a habitat management and monitoring plan to ensure the proposed development delivers a 10% net gain.
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	On-site designations The site is not subject to any designation. Statutory designated sites (within 2km) There are two statutory sites within 2km of the site, as detailed below: • Brough Park Fields Local Nature Reserve (LNR) – 820m north. The grassland areas are of such quality that together they are designated as a County Site of Biological Interest. The grassland is particularly striking when in flower in spring and summer. The woodland contains mixed deciduous and coniferous trees. Beech dominates the heart of the woodland with Oak, Horse Chestnut, Norway Maple, Poplar, Sycamore within the canopy layer. The grassland, hedgerow and woodlands are used by resident and migrant birds for shelter, feeding and nesting. Look out for Chaffinch, Dunnock, Bullfinch, Whitethroat, Wren, Willow Warbler, Long-

	tailed Tit and Tree Creeper. There are many pollinating insects using the meadows in summer. Look out for Orange Tip, Painted Lady, Small Copper, Small Tortoiseshell and Speckled Wood butterflies. Ladderedge Country Park LNR – 1.5km south-west. Unimproved grassland meadows dominated by Red Fescue with abundant Yorkshire Fog, Common Ben and Sweet Vernal grass. Other species such as Meadow Buttercup, Bird's Foot Trefoil, Common Sorrel, Field Wood rush and Germander speedwell are also dominant. The Marsh supports a variety of habitats and vegetation communities. The woodland is at the southern limit of Lonsdon Wood, one of a series of woods which extends about 2km along the Churnet Valley to the north. The site includes mature oak, birch and sycamore with hazel, hawthorn and holly understory. Honeysuckle, bramble and bracken dominate the ground layer. Bluebells are also prolific over wide areas. A breeding population of great crested newts have been located in one of the ponds at Ladderedge Country Park. The site lies within the impact risk zone for Combes Valley SSSI and Thorncliffe Meadows SSSI. Statutory designated sites (within 10km) No national network sites (SAC, SPA, Ramsar) are located within 5km. Non-statutory designated sites The presence of non-statutory designated sites within 2km of the site cannot be established without data from the local records centre.
<i>Foreseen Impacts</i>	On-site designations No impacts foreseen. Statutory and non-statutory designated sites No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers.

	The site lies within the impact risk zone for Combes Valley SSSI and Thorncliffe Meadows SSSI. The proposed development is not listed as a possible high risk for this designation.
<i>Recommendations</i>	On-site designations None required. Statutory and non-statutory designated sites None required.
Invasive / Non-native species	
<i>Summary of Survey Findings</i>	No problematic invasive and non-native species recorded on site.
<i>Foreseen Impacts</i>	N/A
<i>Recommendations</i>	No further surveys but remain vigilant.
Invertebrates	
<i>Summary of Survey Findings</i>	The habitats present on-site, including mixed scrub and sparsely vegetated land likely provide common invertebrates with opportunities to forage and shelter. The site contains no further notable habitats which may provide niches for specialised or protected invertebrates.
<i>Foreseen Impacts</i>	None foreseen.
<i>Recommendations</i>	No further surveys.
Bats	
<i>Summary of Survey Findings</i>	EPSL data 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. There are four EPSLs within a 2km radius of site. The closest of these (2019-40869-EPS-MIT) is located 600m north-west of the site and relates to the destruction of a resting place for common pipistrelle and noctule.

	Foraging and commuting habitat Habitats recorded on site are assessed to provide foraging and commuting opportunities for bats in the form of mixed scrub. This habitat are likely to provide micro-climatic conditions that support invertebrates that will in turn provide foraging opportunities for local bat populations. However, there are limited commuting corridors present adjacent to the site and within the immediate landscape that could provide value for commuting bats. Furthermore, the site is located within a heavily urbanised and highly lit environment, which is likely to deter bats from commuting to the site. Roosting habitat The building at the site is to be retained by the proposals and as such, was not assessed for its suitability to support roosting bats. There are no trees within the scrub that are considered mature enough to develop features associated with roosting bats, being they all are largely mature shrub species, or immature trees. As such, these were also not subject to a detailed assessment to determine their value for roosting bats.
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<i>Foreseen Impacts</i>	Foraging and commuting habitat The proposed development will result in the loss of small areas of mixed scrub and sparsely vegetated land, but given their low value and the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. Artificial lighting The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained buildings adjacent to the site without mitigation. This may disturb foraging and commuting bats.
<i>Recommendations</i>	Artificial lighting 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
Birds	
<i>Summary of Survey Findings</i>	Buildings No evidence of nesting birds was identified on or within B1, however the building is considered suitable for nesting for species such as wren, house sparrow and pigeons. Vegetation No bird nests were identified within the vegetation on-site, however they all offer nesting opportunities and nest-building resources for birds. Barn owls The site does not appear to provide any suitable nesting sites for barn owls.

	Overwintering birds Due to the small size of the site and the extent and type of the habitats recorded, the site not considered suitable to support a significant assemblage of protected and/or notable birds.
<i>Foreseen Impacts</i>	Vegetation The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests. Barn owls None foreseen. Overwintering birds None foreseen.
<i>Recommendations</i>	Vegetation 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. Barn owls None required. Overwintering birds None required.

	Suggested biodiversity enhancements The installation of a minimum of two bird boxes on the new building will provide additional nesting habitat for birds e.g. Schwegler No 17 Swift Nest Box Schwegler 1SP Sparrow Terrace Or a similar alternative brand. Swift and sparrow boxes should be positioned at the eaves of a building and can be incorporated into the fabric of the building during construction.
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. Habitat suitability There is no suitable habitat present on site for reptiles due to a lack of habitats which would offer refuge for these species. Further, the site is surrounded by urban development (i.e. roads and buildings) which is considered sub-optimal for reptile migration and therefore reptiles are considered unlikely to migrate from any nearby suitable habitats to the development site. As such it is likely that reptiles are absent from the development site.
<i>Foreseen Impacts</i>	No impacts are anticipated on reptiles as a result of the proposed development.
<i>Recommendations</i>	None required.
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 return or DLL historic survey data (2017 – 2019) were present within 2km of the site. Aquatic habitat suitability (including ponds within 500m)

	Great crested newts (GCN) exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). No ponds are present on site or within 500m of the site. Terrestrial habitat suitability The site provides limited suitable terrestrial habitat for amphibians given the lack of optimal habitat. The areas of built form that dominate the site offer sub-optimal habitat for terrestrial amphibians. The scrub may offer refuge for these species, however given the urban nature of the surrounding landscape (i.e. dominated by roads and hard standing which are sub-optimal for amphibians) it is unlikely that amphibians will migrate on to site. Further, there is limited suitable terrestrial habitat across the wider landscape reducing the likelihood of amphibians being present on site and across the surrounding areas.
<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 amphibians as a result of the proposed development are deemed to be acceptably low.
<i>Recommendations</i>	None required.
Badger	
<i>Summary of Survey Findings</i>	No badger setts were noted on site or within a 30m radius of the site. The site is considered unsuitable for badgers given the lack of suitable sett excavation areas/ground. Further, there is limited suitable badger foraging habitat on site given the lack of fruiting trees/scrub. The site is also surrounded by urban development (i.e. roads and buildings), which is sub-optimal habitat therefore reducing the likelihood of badgers being present within the surrounding area of the site.
<i>Foreseen Impacts</i>	No impacts are anticipated on badgers as a result of the proposed development.
<i>Recommendations</i>	None required.
Riparian animals	
<i>Summary of Survey Findings</i>	A review of the MAGIC database returned no granted EPSL records for otters or water voles within 2km of the site. There are no water courses on or connected to the site. There are also no riparian habitats present on site or within an influencing distance.

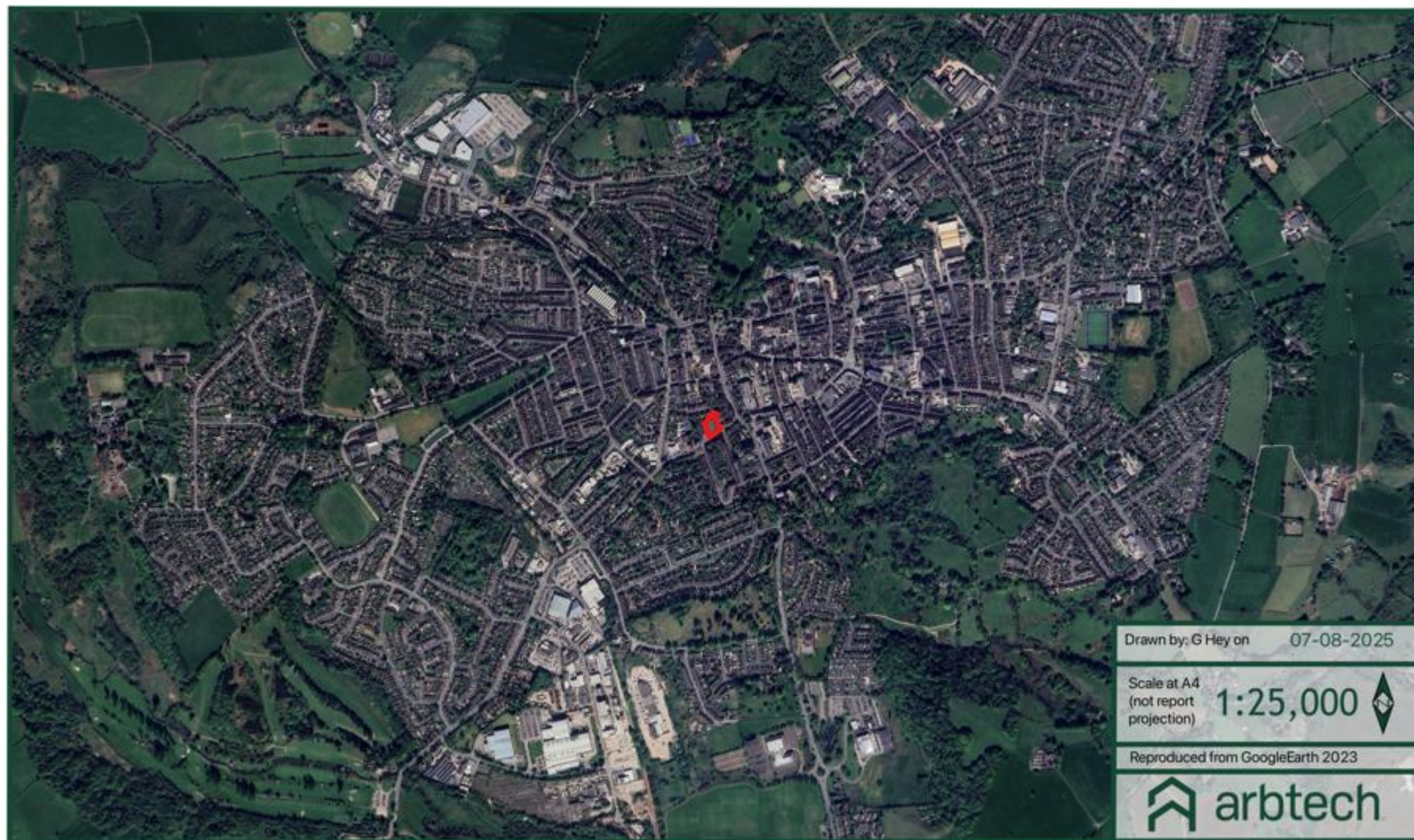
<i>Foreseen Impacts</i>	No impacts are anticipated on riparian animals as a result of the proposed development.
<i>Recommendations</i>	None required.
Hazel dormouse	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records for hazel dormice within 2km of the site. Habitat suitability The site lies outside of the know 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.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	None foreseen.
Other e.g. hedgehog	
<i>Summary of Survey Findings</i>	The scrub present within the site provides value for refuge seeking, foraging and commuting hedgehogs. However, the site is located within a heavily urbanised environment, with areas of built form present on all boundaries of the site, which is likely to deter hedgehogs from commuting to the site, due to the presence of these dispersal barriers.
<i>Foreseen Impacts</i>	Small areas of scrub will be removed during construction. The loss of such habitats 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.
<i>Recommendations</i>	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.

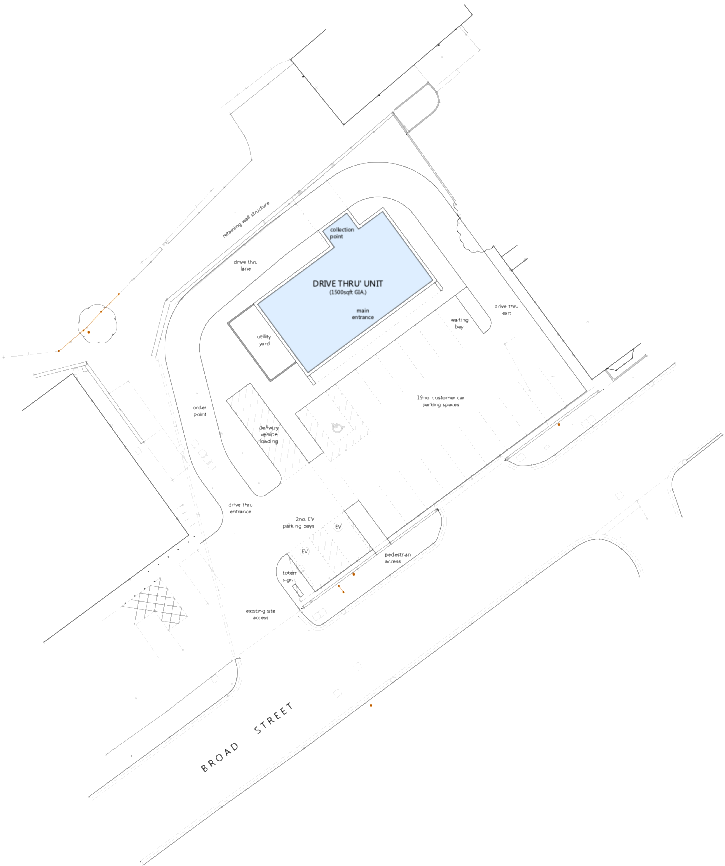
	If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance.
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Appendix 1: Survey/Habitat map



Appendix 2: Location map





THISTLEWOOD PROPERTIES

LAND AT BROAD STREET, LEEK

PROPOSED SITE PLAN

DRAFT

1:2000@A1	PJH	CHH
06/06/2025	Planning	
0535(P)103		

studioPH
architecture

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Appendix 4: Habitat Photos

Artificial unvegetated unsealed surface	
Photograph	Description
	Figure 1: Southern section of the site.
Mixed scrub	
Photograph	Description
	Figure 2: Scrub present on the western boundary of the site.

Building	
Photograph	Description
	Figure 3: Building in the northern section of the site.
Other developed land	
Photograph	Description
	Figure 4: Existing hardstanding in the western section of the site.

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Draft	0.1	Gareth Hey BSc (Hons) MSc ACIEEM, Ecological Consultant	07/08/2025
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