

Preliminary Ecological Appraisal and Roost Assessment

Survey site:

Hey Bottom Farm, Calderbrook Road, Littleborough. OL15 9NR

Client:

Antony Gumbley

Survey date:

3rd October 2025

Project:

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

Conversion of semi-detached barn to dwelling.

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 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 SD 93717 17780 and has an area of approximately 0.04ha. The site comprises an abandoned barn structure, along with a strip of grassland, that forms part of a wider pasture field. It is located within the village of Calderbrook, 1.3km north of the centre of Littleborough town. The site is bound by a dwelling to the west, agricultural land to the north and east, and Calderbrook Road to the south. The wider landscape comprises a mosaic of agricultural land and areas of built form. The South Pennine Moors SSSI, SAC and SPA lies 1.57km north-east of the site, which comprises an area of moorland (further details provided below), while the Rochdale Canal SSSI and SAC lies 1.6km south of the site. The underlying geology for the site comprises mudstone, siltstone and sandstone (Pennine Lower Coal Measures Formation), with superficial deposits of diamicton (Devensian Till). The soil type for the site comprises naturally wet very acid sandy and loamy soils, typical habitats of which includes mixed dry and wet lowland heath communities.					
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) [Barn Owl] (CL29/00097) (Natural Resource Wales Protected Species Licence Number: [Bats] (S094455/1)					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (mph)	Rain
03/10/2025	17	85	100	22	Light and intermitent
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 present 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.					

Due to seasonal limitations, further survey within the optimal season for surveying vegetation would normally be required to obtain accurate habitat classification and condition assessment data. However, in the case of this site, the delays involved would likely be disproportionate to the predicted likely value of the habitat due to the only habitats identified on-site as modified grassland, with the grassland being in poor condition

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, 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</u> – Buildings There is one building present within the site. It comprises a derelict barn structure that is in a significant state of disrepair. The buildings suitability for roosting bats and nesting birds is discussed further in this report. BNG Condition – N/A (pre-determined by the metric) <u>g4</u> – Modified grassland The southern section of the site is dominated by an area of intensively grazed grassland, where at the time of survey, the sward height was relatively short, being approximately 6cm in height, in places. Species composition was low, and included: (Dominant): perennial rye grass (<i>Lolium perenne</i>). (Abundant): white clover (<i>Trifolium repens</i>). (Frequent): rush (<i>Juncus</i> spp.). (Occasional): creeping buttercup (<i>Ranunculus</i>

	<i>repens</i>), broad-leaved dock (<i>Rumex obtusifolius</i>), common nettle (<i>Urtica dioica</i>). Approximately 3 vascular plant species per square metre on average. The sward height is consistently short across the parcel ranging from 4 cm–8 cm, less than 20% is more than 7 cm. No scrub or bracken (<i>Pteridium aquilinum</i>) is present in the parcels. Physical damage across the grassland parcel is less than 5% of the total grassland area. The total cover of bare ground does not exceed 10%. No invasive Schedule 9 plant species were noted. BNG Condition – Poor Local notable habitats There are limited areas of priority habitat under Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006 within close proximity to the site. The closest is an area of deciduous woodland, which is also designated as ancient woodland, 450m south of the site.
<i>Foreseen Impacts</i>	On-site habitats The proposed development will result in the loss of small areas of modified grassland. 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.
<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. The proposed development is likely to be exempt from mandatory biodiversity net gain as it falls into either the householder or self-build exemption category.
Locality and Designated Sites	
Summary of Survey Findings	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: • South Pennine Moors Site of Special Scientific Interest (SSSI) Special Area of Conservation (SAC) and Special Protection Area (SPA) – 1.5km north-east: ○ SSSI – This site forms part of the Southern Pennines lying between Ilkley in the north and the Peak District National Park boundary in the south. The majority of the site is within West Yorkshire but it also covers areas of Lancashire, Greater Manchester and North Yorkshire. The largest moorland blocks are Ilkley Moor, the Haworth Moors, Rishworth Moor and Moss Moor. ○ SAC – Annex I habitats that are a primary reason for selection of this site: European dry heaths, blanket bog and old sessile oak woods. ○ SPA – The site is of European importance for several upland breeding species of bird, including birds of prey and waders. Habitats around the moorland provide key feeding areas for some key moorland-breeding species in particular both Merlin <i>Falco columbarius</i> and Golden Plover <i>Pluvialis apricaria</i>. The northern end of the South Pennine Moors SPA is within 10 km of the North Pennine Moors SPA which supports a similar assemblage of upland breeding species. The South Pennine Moors Phase 2 SPA contains the only UK breeding sites for the Twite (also known locally as the ‘Pennine Finch’). Nesting in long heather and bracken beds, this species breeds in colonies and returns to the same location year on year. The food source for this species is solely seeds and the functionally linked meadow land on the in-by (usually within 2.5km of a breeding colony) is critical to the future success of this species.

	• Rochdale Canal Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC) – 1.6km south: ○ SSSI – The Rochdale Canal contains important habitats for submerged aquatic plants and emergent vegetation, including extensive colonies of the nationally scarce SAC species floating water-plantain <i>Luronium natans</i>. The site also supports a diverse assemblage of aquatic flora, notably its assemblage of pondweeds, <i>Potamogeton</i> spp; the nine species of which found in the canal represent a balanced community which reflects the quality of water. ○ SAC – Rochdale Canal supports a significant population of floating water-plantain <i>Luronium natans</i> in a botanically diverse waterplant community which also holds a wide range of pondweeds <i>Potamogeton</i> spp. The canal has predominantly mesotrophic water. This population of <i>Luronium</i> is representative of the formerly more widespread canal populations of north-west England. The site lies within the impact risk zone for the South Pennine Moors SSSI and Rochdale Canal SSSI. 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 South Pennine Moors SSSI and Rochdale Canal SSSI. The proposed development is not listed as a possible high risk for these designations.
<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 modified grassland on site likely provides 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. No EPSLs are present within a 2km radius of the site. Foraging and commuting habitat The modified grassland within the site is of minimal value for foraging and commuting bats. Furthermore, there is an absence of suitable habitats within the wider landscape which would also provide value for foraging and commuting, given the expanse of agricultural fields with an absence of hedgerows, and presence of areas of built form.

	Roosting habitat Buildings to be impacted by the proposed development are assessed for their suitability to support roosting bats below. No evidence of roosting bats was identified on or within B1.
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B1 Building description	Photographs
<i>Summary</i> Building B1 is a two-storey, brick-built barn structure with a stone façade. Two lean-to extensions are present on the northern and eastern elevations. The roof is of pitched construction and covered with stone roof tiles, with a section of corrugated metal sheeting on the eastern lean-to extension. The main two-storey roof was re-roofed approximately 18 months ago to prevent water ingress. As a result, this section is in excellent structural condition, with no gaps, cracks, or missing tiles that could feasibly provide access or roosting opportunities for bats. A small gap is present at the apex of the gable end, which could potentially act as an entry point into the roof void. However, internal inspection confirmed the presence of a barn owl (<i>Tyto alba</i>) within the building, along with high internal light levels caused by a roof-mounted skylight. The combination of these factors renders the internal area unsuitable for roosting bats. Barn owls are known to cause disturbance to other species occupying the same roost sites through both physical activity and predatory behaviour^{1, 2}. Additionally, elevated light levels are recognised as a deterrent to many bat species, which typically select darker, thermally stable environments for roosting. Both lean-to extensions on the northern and eastern elevations are in a poor state of repair and exhibit signs of structural instability and deterioration. The degraded roof coverings and walls allow significant light penetration and water ingress, creating fluctuating microclimatic conditions. Such instability reduces the thermal and humidity stability necessary for bat roosting. Therefore, these areas are also considered unsuitable for roosting bats.	 Southern elevation of B1  Eastern elevation of B1

¹ Bunn, D.S., Warburton, A.B. & Wilson, R.D.S. (1982). *The Barn Owl*. T & AD Poyser Ltd, London.

² Shawyer, C.R. (1998). *The Barn Owl*. Arlequin Press, Chelmsford.

Given all of the above, building B1 is determined to be of **negligible value** to roosting bats.



Northern elevation of B1



Internal area of B1

<i>Foreseen Impacts</i>	Roosting habitat [Buildings] 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 the proposed development. Foraging and commuting habitat The proposed development will result in the loss of small areas of modified grassland, 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 without mitigation. This may disturb commuting bats.
<i>Recommendations</i>	Roosting habitat [Buildings] 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. 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. Suggested biodiversity enhancements The installation of one bat box at the site will provide additional roosting habitat for bats. The bat boxes will be positioned on the southern elevation of the building. Suitable bat boxes include Beaumaris Woodstone Bat Box or similar alternative brand. 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.

Birds	
<i>Summary of Survey Findings</i>	Buildings During the internal inspection of the building, approximately 50 Barn owl pellets were identified on the second floor of the barn. Anecdotal evidence from the landowner indicates that a single barn owl has been utilising the barn for a number of years. It does not, however breed within the barn, and it is possible that a male has been utilising it for roosting purposes. Following the re-roofing of the barn within the past 18 months, a barn owl box and perch was erected within the clients wider land ownership, but was not currently utilised by them. It is thought that a single barn owl is accessing the building through a ventilation gap preset on the eastern gable end of the building. No barn owl was identified within the barn at the time of the survey Due to the pellets identified it is likely that a barn owl has been utilising the building for roosting purposes, but not for breeding purposes. However, if the single barn owl utilising the barn was to find a mate, it is possible that it could be utilised for nesting purposes. Vegetation The grassland at the site does not provide suitability for nesting birds. 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. Given the intensively grazed nature of the site, occupied by sheep and horse, it is unlikely that the site provides value for the bird species listed as the qualifying criteria for the South Pennines SPA.
<i>Foreseen Impacts</i>	Building Works to the barn could result in the destruction of an active barn owl nest. Furthermore, the proposed works to the building could result in the permanent loss of a barn owl nesting site.

	Overwintering birds None foreseen.
<i>Recommendations</i>	Building In order to determine if barn owls are actively breeding and nesting in the building, a Barn Owl Nest Verification Survey will need to be undertaken at the site, in line with best practice guidelines (Shawyer 2011). This consists of a close examination of the Potential Nest Site, e.g. using a ladder, and includes searching for the presence of adult barn owls, moulted feathers, pellets, eggs, eggshells, chicks or down. This type of close examination must be conducted with the necessary disturbance licence from Natural England, with any disturbance kept to a minimum. It should be timed during mid-June, July and early August, as this is the time when nests can be detected most easily, and the risk of nest abandonment is lowest. If the verification survey is inconclusive, then observational surveys to detect the arrival of adults with food and thereby confirm or deny breeding may be conducted at dawn or dusk. Fledglings will also emit food-begging calls at this time which are often audible from up to 100m away. It is recommended that the bat emergence and re-entry surveys proposed to be undertaken at the site will act as observational surveys, as surveyors will be required to observe bats emerging or re-entering the building during these timeframes, which will subsequently potentially be able to identify barn owls also emerging from the building, and observing nesting behaviour. Following on from the completion of the survey, recommendations for appropriate mitigation, compensatory and enhancement measures will be proposed. Overwintering birds None required.
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 such as scrub and rank grassland which would offer refuge for these species. Further, the site is surrounded by urban development (i.e. roads and buildings) and intensively grazed agricultural land, 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. There are three large waterbodies present within a 500m radius, however, these comprise two reservoirs to the north and a large fishing lake to the south and as such, provide no value for great crested newts or any other amphibians. Terrestrial habitat suitability The site provides limited suitable terrestrial habitat for amphibians given the lack of optimal habitat (i.e. scrub, rank grassland). The areas of modified grassland and building offer sub-optimal habitat for terrestrial amphibians. 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>	Owing to the nature of the proposed development and the low potential for impacts to great crested newts, further surveys are considered to be disproportionate. 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 foraging badgers was noted within the development area. However, the site was considered suitable for badger sett excavation, commuting and foraging habitat.
<i>Foreseen Impacts</i>	No works will be undertaken within 30m of a badger sett. Small areas of grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger 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 badgers, if present.

<i>Recommendations</i>	Owing to the nature of the proposed development and the low potential for impacts to badgers, further badger surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures: • A pre-commencement inspection of the site will be undertaken for any new badger activity if works do not commence within three months. • 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 badgers could use. • 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, works must cease and advice must be sought from a suitably qualified ecologist. Suggested biodiversity enhancements Planting fruit bearing trees and species-rich grassland to increase foraging opportunities for badgers.
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

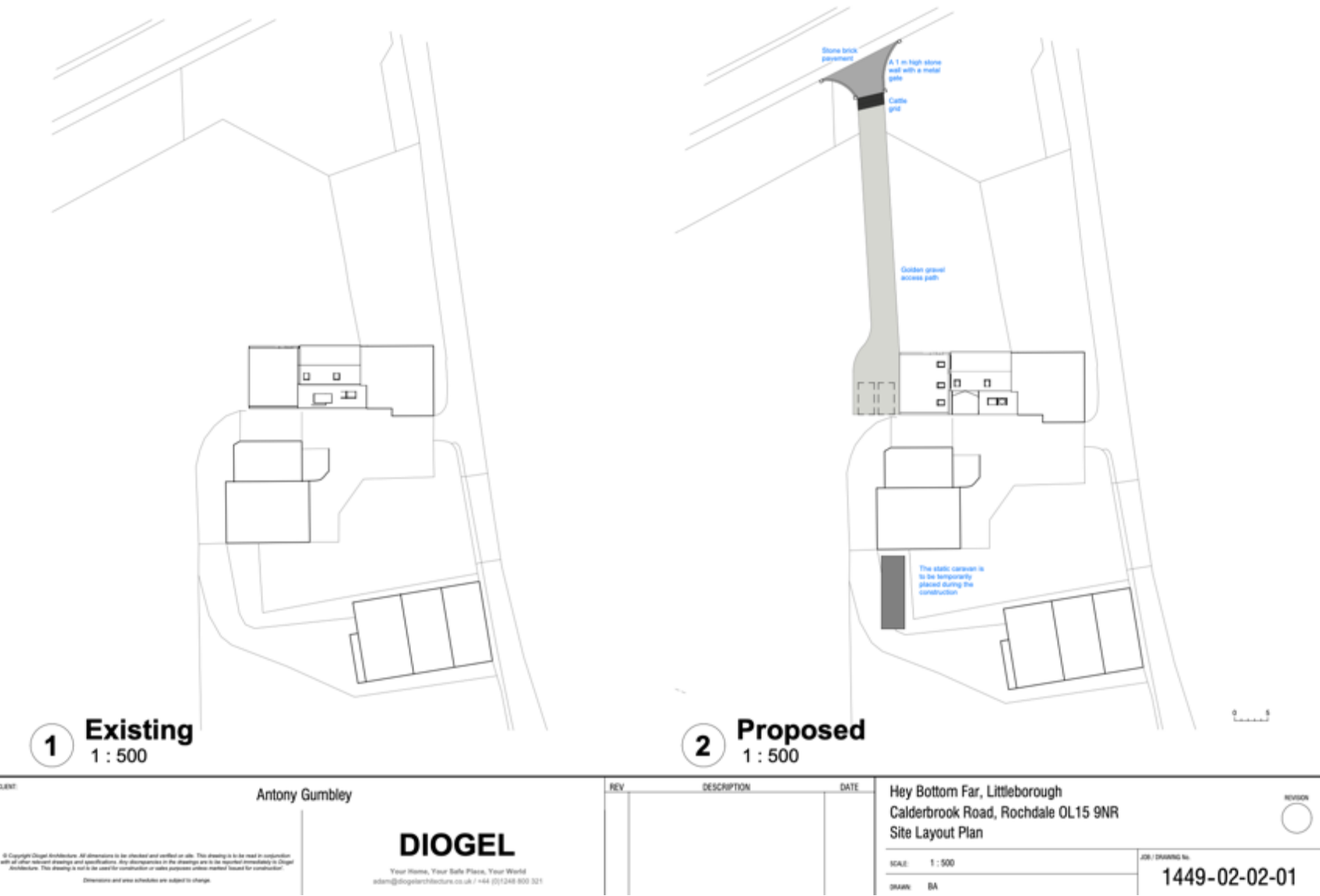
	The site lies outside of the know current range for hazel dormice and there are no suitable habitats within the development area. As such it is considered likely that hazel dormice are absent from site.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	None foreseen.
Other e.g. hedgehog	
<i>Summary of Survey Findings</i>	The grassland on site provides some suitability for foraging and commuting hedgehog. However, the site is surrounded by intensively grazed fields and roads, all of which is likely to present a significant barrier to dispersal.
<i>Foreseen Impacts</i>	Small areas of grassland 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.

Appendix 1: Survey/Habitat map



Appendix 2: Location map





Appendix 4: Habitat Photos

Buildings	
Photograph	Description
	Figure 1: Barn present within the site.
Modified grassland	
Photograph	Description
	Figure 2: Area of pasture (modified grassland) within the southern section of the site.

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