

## Preliminary Ecological Appraisal

**Survey site:**

Quarry Site adjacent to Household Recycling Centre, Bibgy Road, Barnetby Le Wold, North Lincolnshire, DN38 6EB

**Client:**

Sandstop Quarries Ltd

**Survey date:**

30<sup>th</sup> April 2025

**Project:**

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

‘The erection of a porta cabin with associated vehicle parking and storage’

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.*

<b>Site Location and Context</b>					
<p>The survey site is centred on National Grid Reference TA 06597 09959 and has an area of approximately 1.2ha.</p> <p>The site comprises sparsely vegetated land, other neutral grassland, bramble scrub, and scattered trees. The habitats extend further into the ownership boundary which also contains a native hedgerow with trees along the eastern boundary. It is situated adjacent to a recycling centre in the town of Barnetby le Wold, Melton Ross. The site was historically used as a quarry site but is now disused with vegetation beginning to colonise the area. Patches of grassland have begun to establish along the perimeter of the site. Soils within the site comprise of freely draining lime-rich loamy soils on a Ferriby Chalk Formation. The native hedgerow within ownership boundary, extends into the local landscape in all directions. Imagery shows the local landscape to have a rural character, with arable fields adjacent to the site in all directions. The A18 is located ~0.37km north, and a large quarry site is located ~1.2km northeast. Water bodies can be found nearby, such as Skegger Beck located ~0.42km north. The wider landscape comprises extensive arable fields.</p>					
<b>Survey Details</b>					
The site survey was undertaken by Katie Whitfield BSc (Hons) MSc, Graduate Ecologist					
<b>Date of survey</b>	<b>Temperature (°C)</b>	<b>Humidity (%)</b>	<b>Cloud Cover (%)</b>	<b>Wind (km/h)</b>	<b>Rain</b>
30/04/2025	18	55	15	3	None
<b>Executive Summary</b>					
<ul style="list-style-type: none"> <li>• A Biodiversity Net Gain Report (BNG) will be required to demonstrate a net gain for biodiversity on site.</li> <li>• The Local Planning Authority (LPA) may be required to consult with Natural England regarding potential impacts to Wrawby Moor.</li> <li>• Precautionary working methods will be required for birds, badgers, hedgehogs and rabbits, including a pre-commencement check for signs of badger activity if works don't commence within 3 months.</li> <li>• Enhancements are outlined in the relevant tables below.</li> </ul>					
<b>Survey limitations</b>					
<p>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.</p> <p>A biological records data search has not been undertaken. This should be obtained and added at a later date.</p> <p>Since 2020, this area of land has undergone degradation, resulting in sparsely vegetated ground. Within the parcel, areas of other neutral grassland and 17 scattered trees were identified. Based on historical aerial imagery, street view data, and consistency with vegetation elsewhere on site, the trees are considered to be small common hawthorns.</p>					

A detailed condition assessment of the trees is not possible; therefore, for the purposes of this assessment, they are assumed to be in good condition as a precautionary worst-case scenario. The areas of other neutral grassland are considered to be in poor condition, consistent with retained grassland sections elsewhere on the site.

<b>Ecological Survey Factor</b>	<b>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.</b>
<b>Conclusion, Impact or Recommendations</b>	
<b>Habitats and plants (see habitat map in appendix 1a/1b, 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).</b>	
<p><i>Summary of Survey Findings</i></p> <p><i>(UKHab codes used)</i></p>	<p>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). Habitats within the site are common and widespread and have low ecological value however a native hedgerow with trees is found within the ownership boundary which is of good quality and could be of value to local wildlife populations (as detailed in subsequent sections of the table). Notable habitats are present within 2km.</p> <p><b>On-site habitat descriptions</b></p> <p><b><u>u1b</u> – Developed land/sealed surface</b> Concrete surfaces are found to the northeast of the site. Condition assessment N/A.</p> <p><b><u>u1e</u> – Built linear features</b> Corrugated steel fencing is found to the northeast of the site. The site is open to the north, east and south allowing access onto site for terrestrial species. Condition assessment N/A.</p> <p><b><u>u1f</u> – Sparsely vegetated urban land [Ruderal 81, disused quarry 838]</b> The majority of the site comprises sparsely vegetated land with ~40% vegetation cover and ruderal species within. The habitat parcel is found on a disused quarry with permeable exposed chalk/limestone. Exposed areas of chalk/limestone are interspersed within due to recent digging, with piles of chalk/limestone adjacent. Species assemblage includes <b>abundant</b> weld <i>Reseda luteola</i>, creeping thistle <i>Cirsium arvense</i>, <b>frequent</b> common ragwort <i>Jacobaea vulgaris</i>, rosebay willowherb <i>Chamaenerion angustifolium</i>, common nettles <i>Urtica dioica</i>, <b>occasional</b> dandelion <i>Taraxacum officinale</i> agg, hairy willowherb <i>Epilobium hirsutum</i>, ground ivy <i>Glechoma hederacea</i>, oxeye daisy <i>Leucanthemum vulgare</i>, bramble sp., <i>Rubus fruticosus</i> and</p>

	<p><b>rare</b> scarlet pimpernel <i>Anagallis arvensis</i>. Common hawthorn <i>Crataegus monogyna</i> saplings are interspersed within the habitat parcel. The habitat parcel extends further to the south within the ownership boundary. Condition assessment is as follows:</p> <p>A. Appearance and composition of the vegetation closely matches its UKHab description.  B. Cover of bracken, scrub and trees is &lt;25%.  C. There is an absence of invasive non-native plant species. Species indicative of suboptimal condition make up ~40% of habitat parcel.  D. Vegetation cover is ~40%.  Habitat condition assessment as <b>MODERATE</b>.</p> <p><b>g3c – Other neutral grassland [Scattered trees 32]</b>  A strip of unmanaged grassland is found to the west of the site comprising <b>abundant</b> creeping bent, perennial rye grass, <b>frequent</b> common tansy <i>Tanacetum vulgare</i>, <b>occasional</b> hairy willowherb, common nettle, dandelion agg., ribwort plantain <i>Plantago lanceolata</i> and <b>rare</b> coltsfoot <i>Tussilago farfara</i>. Sward height is &gt;7cm for ~70% and &gt;12cm for ~30% of habitat. There are 3no. scattered trees within the habitat parcel including common hawthorn and common hawthorn saplings within. Areas of bare ground are evident where gravel is observed. Condition assessment is as follows:</p> <p>A. Parcel is not a good example of its habitat type.  B. Sward height is varied.  C. Cover of bare ground is ~10%.  D. Cover of bracken is &lt;20% and cover of scrub is &lt;5%.  E. No physical damage or invasive non-native plant species evident.  F. There are ~5 vascular plant species per m<sup>2</sup>.  Habitat condition assessed as <b>POOR</b>.</p> <p><b>h3d – Bramble scrub [Scattered trees 32]</b>  Patches of bramble scrub is found to the south of the site dominated by dense bramble sp. Within this habitat parcel is 1no scattered trees comprising of common elder <i>Sambucus nigra</i>. Condition assessment N/A.</p> <p><u>Scattered trees 32</u>  There are 4no scattered trees found to the west of the site. Common hawthorn is found within the other neutral grassland and common elder is found within the bramble scrub. These comprise of a semi-mature elder of DBH ~9cm (T1) found within bramble scrub and a semi-mature common hawthorn of DBH ~9cm (T2) found within other neutral grassland. Condition assessment is as follows:</p> <p><b>Condition Assessment</b> (assessed using the 'Individual Trees' habitat type condition assessment sheet):</p>
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- A. The tree is a native species.
- B. Predominately continuous tree canopy, with gaps in canopy cover making up <10% of total area and no individual gap >5m wide; individual trees automatically pass this criterion.
- C. The tree is considered mature.
- D. There is little or no evidence of adverse anthropogenic impact on tree health so that trees retain >75% of expected canopy for their age range and height.
- E. Natural ecological niches for vertebrates and invertebrates are present.
- F. More than 20% of the tree canopy area is oversailing vegetation beneath.

Criterion	T1	T2	T3	T4
A	✓	✓	✓	✓
B	✓	✓	✓	✓
C				
D	✓	✓	✓	✓
E				
F	✓	✓	✓	✓
<b>Total</b>	<b>4</b>	<b>4</b>		
<b>Condition</b>	<b>Moderate: 4/6 criteria</b>			

**Local notable habitats**

Patches of lowland mixed deciduous woodland (LMDW) are present in close proximity to the site. The closest is located ~0.33km to the southwest, with a second patch of LMDW ~0.38km to the northwest. The hedgerow with trees on-site likely acts as an ecological stepping stone to these patches of woodland, given the presence of hedgerows extending off-site within the local landscape. Ancient woodland is also present ~0.86km northwest. Ancient woodland and LMDW are classed as a priority habitats under Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006. Further priority habitats are present within 2km of the site, including mosaic habitat ~1.1km west and traditional orchards ~1.8km west.

*Foreseen Impacts*

**On-site habitats**

The proposed development will result in the loss of sparsely vegetated land. This could result in a net loss in biodiversity at the site.

**Notable habitats**

No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats.

<i>Recommendations</i>	<p><b>On-site habitats</b> 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).</p> <p>To compensate for the proposed habitat losses at the site, the following habitat creation measures should be incorporated:</p> <ul style="list-style-type: none"> <li>• Planting of native trees and shrubs</li> <li>• Reseeding of land with native wildflowers or wildflower turf</li> </ul> <p><b>Notable habitats</b> None required.</p> <p><b>Biodiversity net gain</b> The Environment Act (2021) requires all developments (excluding exemptions) to deliver a 10% net gain in biodiversity., the planning application must be accompanied by biodiversity net gain calculations to ensure the proposed development delivers a 10% net gain.</p>
<b>Locality and Designated Sites</b>	
<i>Summary of Survey Findings</i>	<p><b>On-site designations</b> The site is not subject to any designation.</p> <p><b>Statutory designated sites (within 2km)</b> There are no known statutory sites within 2km of the site.</p> <p>The site lies within the impact risk zone for Wrawby Moor, Site of Special Scientific Interest (SSSI).</p> <p><b>Non-statutory designated sites</b> The presence of non-statutory designated sites within 2km of the site cannot be established without data from Lincolnshire Environmental Records Centre.</p>
<i>Foreseen Impacts</i>	<p><b>On-site designations</b> No impacts foreseen.</p> <p><b>Statutory and non-statutory designated sites</b> The site lies within the impact risk zone for Wrawby Moor. The proposed development type is listed as a possible high risk for this designation.</p>
<i>Recommendations</i>	<p><b>On-site designations</b> None required.</p> <p><b>Statutory and non-statutory designated sites</b></p>

	The Local Planning Authority (LPA) may be required to consult with Natural England regarding potential impacts to Wrawby Moor.
<b>Invasive / Non-native species</b>	
<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.
<b>Invertebrates</b>	
<i>Summary of Survey Findings</i>	The habitats present on-site, including sparsely vegetated land, other neutral grassland, bramble scrub, and scattered trees 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>	Sparsely vegetated land will be removed during construction. The loss of such habitats is likely to be inconsequential to local invertebrate populations owing to their low value and the presence of more extensive habitat locally.
<i>Recommendations</i>	No further surveys.  <b>Suggested biodiversity enhancements</b> The site could be enhanced via the provision of native wildflowers or wildflower turf, which would provide foraging opportunities for invertebrates. Further, an invertebrate hotel could be installed adjacent to the proposed wildflowers to increase habitat suitability.
<b>Bats</b>	
<i>Summary of Survey Findings</i>	<b>EPSL data</b> 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.  There are no Special Areas of Conservation designated for bats within 10km of the site.  <b>Foraging and commuting habitat</b> Habitats recorded on site are assessed to provide foraging and commuting opportunities for bats in the form of sparsely vegetated land, other neutral grassland, bramble scrub, and scattered trees along with native hedgerow with trees within the ownership boundary. These habitats are likely to provide micro-climatic conditions that support invertebrates that will in turn provide foraging opportunities for local bat populations. Most notably, the hedgerows within the ownership boundary extend

	<p>beyond the site adding to the continuity of vegetated linear features present in the wider landscape. Bats are well known to utilise linear features to aid navigation whilst travelling between foraging resources and roost sites.</p> <p><b>Roosting habitat</b> No evidence of roosting bats was identified on or within any of the surveyed trees on-site.</p>
<i>Foreseen Impacts</i>	<p><b>Roosting habitat [Trees]</b> T1 – T2 will be retained and therefore no impacts to roosting bats are anticipated.</p> <p><b>Foraging and commuting habitat</b> The proposed development will result in the loss of areas of 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.</p> <p><b>Artificial lighting</b> The proposed development may lead to an increase in the amount of current lighting of surrounding habitats without mitigation. This may disturb commuting bats.</p>
<i>Recommendations</i>	<p><b>Roosting habitat [Trees]</b> None required.</p> <p><b>Foraging and commuting habitat</b> No further surveys are required.</p> <p><b>Artificial lighting</b> 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: <a href="https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting">https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting</a></p> <p><b>Suggested biodiversity enhancements</b> No suitable habitat on site for enhancements due to the mature trees within the hedgerow being surrounded by dense vegetation limiting access to the trees.</p>
<b>Birds</b>	
<i>Summary of Survey Findings</i>	<p><b>Nesting birds</b> No bird nests were identified within the native hedgerow in the ownership boundary, however this habitat offers nesting opportunities and nest-building resources for birds.</p> <p><b>Barn owls</b> The site does not appear to provide any suitable nesting sites for barn owls.</p>

	<p><b>Overwintering birds</b> The site is found adjacent to arable land which provides foraging opportunities for overwintering birds due to land being turned for new crops. As such small populations of overwintering birds may be present in close proximity to the site.</p>
<i>Foreseen Impacts</i>	<p><b>Nesting birds</b> The proposed development could result in the disturbance and subsequent abandonment of active bird nests.</p> <p><b>Barn owls</b> None foreseen.</p> <p><b>Overwintering birds</b> The development area is small and therefore, unlikely to significantly impact overwintering birds.</p>
<i>Recommendations</i>	<p><b>Nesting birds</b> 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.</p> <p><b>Barn owls</b> None required.</p> <p><b>Overwintering birds</b> None required.</p> <p><b>Suggested biodiversity enhancements</b> The installation of a minimum of one bird box on mature trees within the hedgerow will provide additional nesting habitat for birds e.g.</p> <ul style="list-style-type: none"> <li>• Schwegler 1B Nest Boxes (trees)</li> <li>• Schwegler 2H Robin Boxes (trees)</li> <li>• Woodstone Nest Box (buildings or trees)</li> </ul> <p>Or a similar alternative brand.</p> <p>Tree boxes should be positioned approximately 3m above ground level where they will be sheltered from prevailing wind, rain and strong sunlight. Small-hole boxes are best placed approximately 1-3m above ground on an area of the tree trunk where foliage will not obscure the entrance hole.</p> <p>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.</p>
<b>Reptiles</b>	

<p><i>Summary of Survey Findings</i></p>	<p><b>EPSL data</b> A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site.</p> <p><b>Habitat suitability</b> Habitats recorded on site are assessed to provide foraging, commuting, basking and refuge opportunities for reptiles. The scrub on site, and native hedgerow with trees within the ownership boundary provide elevated value for reptiles as these habitats provide a suitable structure for refuge, whilst also providing foraging and commuting opportunities. However, it is important to note that the site is dominated by sparsely vegetated land of limited value to reptiles. This habitat is suboptimal due to an absence of notable habitat structure and diversity, which significantly limits refuge, foraging, and commuting opportunities, albeit they do provide some basking opportunities when located adjacent to potential refugia. The site has limited connectivity to further suitable reptile habitat due to arable lands found adjacent to the site in all directions which provide no refuge opportunities. Therefore, it is unlikely that reptiles will leave more suitable habitat to access the site.</p>																				
<p><i>Foreseen Impacts</i></p>	<p>No impacts are anticipated on reptiles as a result of the proposed development.</p>																				
<p><i>Recommendations</i></p>	<p>None required.</p>																				
<p><b>Amphibians</b></p>																					
<p><i>Summary of Survey Findings</i></p>	<p><b>EPSL and survey data</b> A review of the MAGIC database returned four granted EPSL records for great crested newts within 2km of the site. These include:</p> <table border="1" data-bbox="533 842 2033 1042"> <thead> <tr> <th>EPSL reference</th> <th>Bat species affected</th> <th>Distance from site</th> <th>Impacts allowed by licence</th> </tr> </thead> <tbody> <tr> <td>2017-30833-EPS-MIT</td> <td>Great crested newt</td> <td>~0.76km northeast</td> <td>Destruction of a resting place</td> </tr> <tr> <td>2017-32383-EPS-MIT</td> <td>Great crested newt</td> <td>~0.76km northeast</td> <td>Destruction of a resting place</td> </tr> <tr> <td>2018-34225-EPS-MIT</td> <td>Great crested newt</td> <td>~0.76km northeast</td> <td>Destruction of a resting place</td> </tr> <tr> <td>2019-43430-EPS-MIT</td> <td>Great crested newt</td> <td>~0.76km northeast</td> <td>Damage to resting place</td> </tr> </tbody> </table> <p>The MAGIC database returns evidence indicating the presence of great crested newts resulting from historic pond surveys undertaken in 2017. These records are located ~1.7km northeast. Great crested newts 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 <i>et al.</i> 2001). As such, the great crested newt metapopulation known to be present 1.7km northeast are not suitably connected to the site.</p> <p><b>Aquatic habitat suitability (including ponds within 500m)</b> No ponds are present on site or within 500m of the site.</p>	EPSL reference	Bat species affected	Distance from site	Impacts allowed by licence	2017-30833-EPS-MIT	Great crested newt	~0.76km northeast	Destruction of a resting place	2017-32383-EPS-MIT	Great crested newt	~0.76km northeast	Destruction of a resting place	2018-34225-EPS-MIT	Great crested newt	~0.76km northeast	Destruction of a resting place	2019-43430-EPS-MIT	Great crested newt	~0.76km northeast	Damage to resting place
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	<p><b>Terrestrial habitat suitability</b></p> <p>Habitats recorded on site are assessed to provide foraging, commuting, basking and refuge opportunities for amphibians. The scrub on site and native hedgerow with trees within the ownership boundary provide elevated value for reptiles as these habitats provide a suitable structure for refuge, whilst also providing foraging and commuting opportunities. However, it is important to note that the site is dominated by sparsely vegetated land of limited value to amphibians. This habitat is suboptimal due to an absence of notable habitat structure and diversity, which significantly limits refuge, foraging, and commuting opportunities, albeit they do provide some basking opportunities when located adjacent to potential refugia. The site has limited connectivity to further suitable terrestrial habitat due to arable lands found adjacent to the site in all directions which provide no refuge opportunities. Therefore, it is unlikely that amphibians will migrate on to the site.</p>
<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.
<b>Badger</b>	
<i>Summary of Survey Findings</i>	<p>Several mammal holes were noted on site. Seven mammal holes are found in close proximity to one another to the east (TA 06640 09980) and a further eight found to the west within the ownership boundary (TA 06571 09971). Sizes of the mammal holes within TA 06640 09980 included 15cm x 20cm (M1), 10cm x 17cm (M2), 14cm x 26cm (M3), 12cm x 12cm (M4), 11cm x 9cm (M5), 14cm x 13cm (M6) 11cm x 13cm (M7). Mammal holes found within TA 06571 09971 (M8-M15) did not have a size larger than 9cm x 9cm. The mammal holes were surrounded by numerous rabbit droppings with two rabbit sightings during the survey. Further, none of the mammal holes were deemed large enough for badgers to access and no latrines, caught hair, or scratching posts were observed.</p> <p>The site has foraging opportunities in the form of scrub as well as suitable sett excavation areas/ground within the native hedgerow in the ownership boundary. The surrounding area comprises arable fields which are not of high value to badgers, however badgers could utilise the hedges lining the fields to access the site. It cannot be discounted that badgers may foraging and commute through the site.</p>
<i>Foreseen Impacts</i>	No works will be undertaken within 30m of a badger sett. Sparsely vegetated land will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger populations owing to their low value. However, construction activities could result in the death or injury of badgers, if present.

<i>Recommendations</i>	<p>Owing to the nature of the proposed development, further badger surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures:</p> <ul style="list-style-type: none"> <li>• A pre-commencement inspection of the site will be undertaken for any new badger activity if works do not commence within three months.</li> <li>• Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape.</li> <li>• 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.</li> <li>• Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.</li> </ul> <p>In the unlikely event that a badger sett is identified, works must cease and advice must be sought from a suitably qualified ecologist.</p> <p><b>Suggested biodiversity enhancements</b> Planting fruit bearing trees and species-rich grassland to increase foraging opportunities for badgers.</p>
<b>Riparian animals</b>	
<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.
<b>Hazel dormouse</b>	
<i>Summary of Survey Findings</i>	<p><b>EPSL data</b> A review of the MAGIC database returned no granted EPSL records for hazel dormice within 2km of the site.</p> <p><b>Habitat suitability</b> 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.</p>
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	None foreseen.
<b>Other e.g. hedgehog, rabbits</b>	
<i>Summary of Survey Findings</i>	The sparsely vegetated land, other neutral grassland, bramble scrub, scattered trees on site and the native hedgerow with trees within the ownership boundary, provide suitable foraging, commuting and refuge opportunities for hedgehogs. Further, the site is surrounded by hedge-lined arable fields which hedgehogs could utilise to access the site. The site is also found

	<p>within a rural area with limited artificial lighting which reduces disruption to hedgehogs. It is likely that hedgehogs will utilise the site.</p>
<i>Foreseen Impacts</i>	<p>Sparsely vegetated land 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.</p> <p>Numerous mammal holes were found within the site (M1-M15), with rabbit droppings adjacent. Further, there were two rabbit sightings during the survey, which indicates frequent use of the site by this species. Rabbits are protected from unnecessary suffering under the Wild Mammals Protection Act (1996) and as such must not be deliberately or intentionally caused to suffer via injury, entombment or the estrangement of dependant young. Without mitigation in place unnecessary suffering could be caused to rabbits.</p>
<i>Recommendations</i>	<p><b>Small mammals</b></p> <p>Similar to the badgers, a precautionary working method will be implemented during construction for hedgehogs and other small mammals, including the following measures:</p> <ul style="list-style-type: none"> <li>• Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape.</li> <li>• 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.</li> <li>• Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations.</li> </ul> <p>If any hedgehogs or any other small mammal 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.</p> <p><b>Rabbits</b></p> <p>A precautionary working method will be implemented during prior to any construction works or excavation work on the site, including the following measures:</p> <ul style="list-style-type: none"> <li>• Any area of warren that must be removed to facilitate the development must be evacuated and closed prior to works as supervised by a specialist pest controller. As the aim is to avoid injury and entombment rather than to control the population, this will be undertaken using non-lethal means.</li> <li>• This will be undertaken at a time of year when kits are least likely to be present, such as winter, however it must be noted that rabbits may breed all year round.</li> <li>• To ensure all reasonable efforts have been taken to avoid the entombment/suffering of dependant young, destruction of any warren will take place using initially shovels in the intent of flushing out any remaining mobile rabbits or locating any abandoned dependant litters, which will be humanely despatched by the pest controller.</li> <li>• The warren will be immediately destroyed via ripping by digger bucket to prevent re-occupation.</li> <li>• Should an evening elapse between evacuation and ripping out, the process must be repeated as rabbits may return.</li> </ul> <p><b>Suggested biodiversity enhancements</b></p>

	<p>The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for small mammals:</p> <ul style="list-style-type: none"><li>• Planting fruit bearing trees and species-rich grassland to increase foraging opportunities.</li><li>• Creation of brash piles in shady areas.</li></ul>
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Appendix 1a: Survey/Habitat map before degradation



Appendix 1b Survey/Habitat map before degradation



**Appendix 2: Location map**



Appendix 3: Proposed plan



**Appendix 4: Habitat Photos**


Sparsely vegetated urban land	
Photograph	Description
	<p>Figure 4: Sparsely vegetated land on a disused quarry.</p>
Other neutral grassland	
Photograph	Description



Figure 5: Other neutral grassland to the west of site.

**Bramble scrub  
Photograph**

**Description**



Figure 6: Bramble scrub to the west of site.

Scattered trees Photograph	Description
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Figure 7: Common hawthorn to west of site.

**Native hedgerow with trees (ownership boundary)**

**Photograph**

**Description**



Figure 8: Native hedgerow with trees to east of site.

<i>Target notes (TN)</i>	
Photograph	Description



Figure 9: Mammal hole (M1) found to east of site (circled in red) with rabbit droppings adjacent (circled in blue).



Figure 10: M1 measuring 15cm x 20cm.



Figure 11: Overview of mammal holes (M1-M7).



Figure 12: Fresh rabbit droppings adjacent to M1-M7.



Figure 13: Overview of mammal holes (M8-M15).



Figure 14: Numerous rabbit droppings surrounding mammal holes.

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