Millie Holland BSc (Hons), MSc
Consultant Ecologist
Email: [redacted]
Arbtech Consulting Ltd
arbtech.co.uk

Preliminary Ecological Appraisal & Roost Assessment

Survey site:
Land North of Mill Lane, Sawston, Cambridgeshire, CB223BY

Client:
NorthWest Biotheraputics

Survey date:
25/08/2026

Project:
This report is prepared to inform a promotion of the site pursuant to the Great Cambridge Local Plan Regulation 19 Consultation (2026). This proposal can be described as "Residential development of up to approximately 200 dwellings".

On the assumption that site conditions and habitats remain unchanged, the results of this assessment will remain valid for 18 months from the date of this survey i.e. until February 2028, in accordance with CIEEM guidance in the lifespan of Ecological Reports and Surveys. This survey and report should be updated if a planning application has not been submitted within this timeframe.

EXECUTIVE SUMMARY

The following is work you will need to commission to obtain planning permission and to comply with legislation. Further information, along with opportunities for biodiversity enhancement, are outlined in the proceeding sections of this report.

Table 1: Summary of key findings arising from this survey.

Key Findings
▪ The Proposed works will result in a net loss of biodiversity on site. As the site does not meet one of the exemptions, a Biodiversity Net Gain (BNG) assessment will be required to ensure the site delivers the net gain required by the local council. ▪ A low impact lighting strategy will be adopted for the site during and post-development, which will be designed to incorporate the measures laid out in the latest (2023) bat lighting guide Guidance Note 8 Bats and Artificial Lighting[1]. ▪ Further reptile scoping surveys will be required to determine the sites value to reptiles and any potential impacts. ▪ Breeding bird surveys/Wintering bird surveys will be required to determine the sites value for breeding birds/wintering birds. ▪ Various precautionary working methods have been recommended which have been fully detailed within the fauna section of this report.

1. INTRODUCTION

The aim of the PEA was to obtain data on existing ecological conditions, and to conduct a preliminary assessment of the likely significance of ecological impacts incurred by the Proposed Development. The aim of the PRA was to determine the presence or evaluate the likelihood of the presence of roosting bats, and to gain an understanding of how bats could use the site for roosting, foraging or commuting.

No previous ecology reports have been produced for this site by Arbtech Consulting Ltd or, to the author's knowledge, by any other consultancy.

Methodology

PEA survey methodology and legislation can be found in the Arbtech Supplement: PEA Methodology and Legislation - 2025.
PRA survey methodology and legislation can be found in the Arbtech Supplement: PRA Methodology and Legislation - 2025.

Survey Details

The site survey was undertaken on 25/08/2026 by Millie Holland BSc (Hons), MSc, Consultant Ecologist.

Table 2: The weather conditions during the survey.

Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
22.3	55.0	2	14.8	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.

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.

There are no written plans at the time of writing this report. Therefore, it is assumed that all of the onsite habitats will be impacted by the Proposed Development.

2. SITE LOCATION AND LANDSCAPE CONTEXT

2.1 Summary of Survey Findings

Site Location & Context

The site is centred at National Grid reference TL 47709 49711 and has an area of approximately 6.7ha. The site comprises other woodland; mixed, cereal crops, ruderal/ephemeral, native hedgerow with trees, line of trees, modified grassland and scattered trees. The site is immediately surrounded by residential dwellings to the south, Sawston Village College to the east, and arable land. The wider landscape consists of a similar mosaic of habitats, with large areas of arable land, and urban infrastructure. The closest watercourse is the River Granta located ~230m southwest of the site. Also of note is a train line which is located ~90m west of the site.

Priority Habitats

There are six priority habitats within 2km of the site. These comprise deciduous woodland, traditional orchard, coastal and floodplain grazing marsh, wood pasture and parkland, purple moor grass and rush pastures and lowland meadows. The closest priority habitat comprises deciduous woodland, located 105m SW from the site.

Due to the site surroundings being densely urbanised, the site is not considered to be well connected to any priority, important, or otherwise more extensive, habitats in the immediate vicinity.

Designated Sites

Statutory Designations within 2km

There are two statutory designations within 2km of the site, as detailed below:

Table 3: The statutory designated sites within 2km of the site boundary.

Designation	Reason	Distance from Site
Dernford Fen Site of Special Scientific Interest (SSSI)	This site represents a relic of a much larger area of rough fen and carr. These habitat types are now rare in the county and in eastern England as a whole. The vegetation ranges from dry grassland and scrub to relic fen, reedbed and alder carr.	405m NW
Sawston Hall Meadows Site of Special Scientific Interest (SSSI)	This area of meadows overlying spring-fed peat over chalk is a relic of a once common type of wet pasture land found at the margins of the East Anglian Fenland. The plant and animal communities which it supports are generally scarce and poorly represented in Cambridgeshire.	1180m SE

Statutory Designations within 10km

No national network sites (SAC, SPA, Ramsar) are located within 10km.

SSSI Risk Zone

The site falls within five impact risk zones for Dernford Fen SSSI. The Proposed works include residential development of up to approximately 200 dwellings.

Non-Designated Sites

The presence of non-statutory designated sites within 2km of the site cannot be established without data from the local records centre. Whilst some habitats in the wider landscape may host designations, the immediate environs of the site do not host habitats likely to be of designable quality.

2.2 Foreseen Impacts

No direct impacts to any designated sites will occur as a result of the Proposed Development. However, due to the proximity of the site to , and the possible presence of non-statutory designations in the vicinity, indirect effects such as pollution during construction, or increased recreational pressure, could occur.

2.3 Recommendations

Best practice measures to minimise the possibility of pollution, damage to adjacent habitats must be implemented during construction. A Construction Environmental Management Plan (CEMP) may be requested by the LPA via condition. This should include the following measures:

- Retained trees adjacent to the site will 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).
- Appropriate buffering between the development zone and retained habitats (e.g. 15m for ancient woodland)
- Use of Heras or other appropriate fencing to prevent encroachment by contractors onto adjacent habitats.

3. ONSITE HABITATS

This section 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.

3.1 Summary of Survey Findings

Cropland - Cereal crops (c1c)
The site is dominated by arable land currently in use.

In accordance with the Statutory Biodiversity Metric, this habitat is not subject to a condition assessment.

Grassland - Modified grassland (g4) with Ruderal or ephemeral (81)
The areas of grassland to the north that is under the native hedgerow. The area is covered in a low variety of grassland species. The areas is not actively managed, resulting in an average sword over over 7cm.

Table 4a: Species abundance for modified grassland.

Abundance	Species

Dominant	Perennial Rye-grass *(Lolium perenne)*
Abundant	White Mustard *(Sinapis alba)*, Common Nettle *(Urtica dioica)*, Barren Brome *(Anisantha sterilis)*
Frequent	False Oat-grass *(Arrhenatherum elatius)*, Cock's-foot *(Dactylis glomerata)*, Common Knapweed *(Centaurea nigra)*, White Clover *(Trifolium repens)*
Occasional	Six-rowed Barley *(Hordeum vulgare)*
Rare	-

In accordance with the Statutory Biodiversity Metric Condition Assessment Sheets, the modified grassland was assessed to have a poor condition value.

Woodland and forest - Other woodland; mixed (w1h)

Splitting the site is an area of woodland. The canopy is dominated by sycamore trees, with deadwood throughout. The shading has resulted in minimal ground layer species, except for ivy. Shrub layer is dominated by hawthorn, with areas of garden privet.

Species present within this habitat include sycamore *(Acer pseudoplatanus)*, beech *(Fagus sylvatica)*, hawthorn *(Crataegus monogyna)*, elder *(Sambucus nigra)*, garden privet *(Ligustrum ovalifolium)*, dog roses *(Rosa canina)*, cherry laurel *(Prunus laurocerasus)*, wild cherry *(Prunus avium)*, holly *(Ilex aquifolium)*, persian ivy *(Hedera colchica)*, hogweed *(Heracleum sphondylium)*, wall barley *(Hordeum murinum)* and norway spruce *(Picea abies)*.

In accordance with the Statutory Biodiversity Metric Condition Assessment Sheets, the other woodland; mixed was assessed to have a poor condition value.

Hedgerows and lines of trees - Native hedgerow (h2a)

The hedgerow stretches along the northern boundary of the site, with a break in for access to both sides of the fields. The hedgerow appears to be regularly managed and connected to other offsite hedgerows in the wider landscape.

Species present within this habitat include dog roses *(Rosa canina)*, blackthorn *(Prunus spinosa)*, sycamore *(Acer pseudoplatanus)*, wild privet *(Ligustrum vulgare)*, hawthorn *(Crataegus monogyna)*, black walnut *(Juglans nigra)*, walnut *(Juglans regia)*, ash *(Fraxinus excelsior)* and field maple *(Acer campestre)*.

In accordance with the Statutory Biodiversity Metric Condition Assessment Sheets, the native hedgerow was assessed to have a moderate condition value. The hedgerow is not considered a habitat of principal importance under the NERC Act 2006 as it is not free of gaps longer than 20 m.

Cropland - Temporary grass and clover leys (c1b)

There is an area within the southeast corner of the site that is dominated by temporary grasses and herbs. The area is not actively managed, resulting in an average sward height of over 7cm. Part of the southern boundary is being slowly taken over by succession, with an area of bramble and dog rose taking over the boundary. Within the habitat, there are also areas of buddleia.

Table 4b: Species abundance for temporary grass and clover leys.

Abundance	Species
Dominant	Spear Thistle *(Cirsium vulgare)*, Cock's-foot *(Dactylis glomerata)*
Abundant	Purple Milk-vetch *(Astragalus danicus)*, Prickly Sow-thistle *(Sonchus asper)*, False Oat-grass *(Arrhenatherum elatius)*, Wild-oat *(Avena fatua)*
Frequent	Yarrow *(Achillea millefolium)*, Carrots *(Daucus carota)*, Hairy St John's-wort *(Hypericum hirsutum)*, Common Nettle *(Urtica dioica)*, Ribwort Plantain *(Plantago lanceolata)*, White Mustard *(Sinapis alba)*, Prickly Lettuce *(Lactuca serriola)*
Occasional	Common Bird's-foot-trefoil *(Lotus corniculatus)*, Dandelion *(Taraxacum)*, Field Bindweed *(Convolvulus arvensis)*, Hogweed *(Heracleum sphondylium)*, Zigzag Clover *(Trifolium medium)*, Timothy *(Phleum pratense)*, Common Fleabane *(Pulicaria dysenterica)*
Rare	Buddleja *(Buddleja davidii)*, Dock sp. *(Rumex sp.)*, Bramble *(Rubus fruticosus)*, Dog roses *(Rosa canina)*

In accordance with the Statutory Biodiversity Metric, this habitat is not subject to a condition assessment.

3.2 Foreseen Impacts

The woodland, and hedgerows are of greater ecological value, while the arable land and modified grassland are common and widespread habitats of relatively low ecological value. At the time of writing, the development proposals are unknown, however it is likely that the proposals will result in losses to arable land, and modified grassland habitats.

In the absence of mitigation, there is potential for indirect effects to the onsite woodland and hedgerows such as pollution or tree/root damage that could occur during construction.

3.3 Recommendations

It is recommended that any loss of habitats should be offset through planting of high distinctiveness grasslands and shrub habitats. It is recommended that any new SuDS basins are designed to hold permanent levels of water, with native marginal planting to diversify habitats within the site. It is recommended that any losses to hedgerows are offset through new species-rich hedgerow planting of a greater length to that lost. Retained hedgerows could be enhanced through bolster planting of a mixture of native species and the implementation of a more relaxed management regime to improve their species content and structure. New tree and hedgerow planting should comprise a mixture of native species or those of benefit to wildlife, such as fruit/berry-bearing species.

Best practice measures to minimise the possibility of pollution and damage affecting retained woodlands, and hedgerows must be implemented during construction. A Construction Environment Management Plan (CEMP) will likely be required for this. The Proposed Development may also be required to provide a minimum 10% measurable biodiversity net gain.

4. INVASIVE SPECIES

This section 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.

4.1 Summary of Survey Findings

No non-native invasive or otherwise problematic plants were recorded on site or are considered likely to be on site, but, given seasonal limitations and the sites wider context, may be visible at other times of year.

4.2 Foreseen Impacts

None.

4.3 Recommendations

No further surveys but remain vigilant.

5. FAUNA: BATS

This section 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.

5.1 Summary of Survey Findings

EPSL data and local records

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 is 1 EPSL within a 2km radius of the site, as detailed below:

Table 5: EPSL survey returns for bats within a 2km radius.

EPSL Reference	Bat Species Affected	Distance from Site *(EPSL records are accurate to 100m)*	Impacts Allowed by Licence
2017-32728-EPS-MIT	Brown long-eared bat	~1990m southwest	Destruction of a resting

	(*Plecotus auritus*)		place

The site is not within the zone of influence of a bat-designated SAC.

Foraging and commuting habitat
Habitats recorded on site are assessed to provide foraging and commuting opportunities for bats in the form of modified grassland, other woodland; mixed, native hedgerow and temporary grass and clover leys, and offsite within 2km including deciduous woodland, traditional orchard, coastal and floodplain grazing marsh, wood pasture and parkland, purple moor grass and rush pastures and lowland meadows. 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 on site are mature and extend 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.

Roosting habitat
There are no buildings on the site to provide suitable roosting habitat.

Trees within the woodland were not assessed for their suitability for bats, as it is outside the scope of this report.

5.2 Foreseen Impacts

Roosting habitat [Buildings]
There are no buildings on site, therefore no impacts are foreseen.

Roosting habitat [Trees]
Unknown foreseen impacts, due to the lack of ground level tree assessment for bats.

Foraging and commuting habitat
The Proposed Development will result in the loss of woodland, cropland, modified grassland and native hedgerows. This could reduce the availability of foraging or commuting resources in the locality and could also disrupt dispersal corridors for bats leaving or returning to roosts in the wider area.

Artificial lighting

The Proposed Development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats.

5.3 Recommendations

Roosting habitat [Buildings]
None.

Roosting habitat [Trees]
Upon confirmation on the trees being impacted by the Proposed Development a ground level tree assessment for bats should be conducted on each tree to ensure no impact to bats.

Foraging and commuting habitat
Bat activity surveys, comprising walked transects and static monitoring, will be required to determine the usage of the site by foraging and commuting bats as well as to identify the likely presence or absence of any bat roosts in the vicinity, particularly those of high conservation value including maternity roosts. Due to the value of the habitats present on the site a total of three visits, one per season between spring and autumn or seven visits, one per month between April and October, will be required to gather sufficient information to enable a full assessment to be made.

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/news/2023/08/bats-and-artificial-lighting-at-night-ilp-guidance-note-update-released

Suggested biodiversity enhancements
Enhancements are dependent on the outcome of further surveys.

6. FAUNA: BIRDS

This section 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.

6.1 Summary of Survey Findings

Buildings
There are no buildings on site.

Trees and vegetation
While no active bird nests were found during the survey, the site's mixture of habitats provides high-quality nesting and foraging opportunities for a variety of farmland and woodland species. The cereal crops and temporary grass or clover fields offer ideal ground-nesting cover for skylarks, grey partridges, and corn buntings, while supplying vital seeds and insects throughout the year. The long, unmanaged grassland provides dense cover and tussocks suitable for nesting meadow pipits, skylarks, and small mammals, while acting as a valuable hunting ground for barn owls, kestrels, starlings, swallows, and green woodpeckers feeding on small rodents and soil invertebrates. Additionally, the native hedgerows and mixed woodland create dense, sheltered cover for tree and shrub nesting species such as yellowhammers, linnets, song thrushes, tits, robins, and woodpeckers alongside a rich supply of berries, nuts, and caterpillars.

During the winter months, the site's crops, clover leys, long grassland, hedgerows, and mixed woodland provide vital foraging and shelter for overwintering birds. Seed-bearing crops and dense grass tussocks offer key winter feeding grounds for seed-eating farmland species, waders, and hunting raptors like kestrels and barn owls. Meanwhile, the berry-rich hedgerows and woodland provide critical roosting cover and food for visiting winter thrushes, such as fieldfares and redwings, alongside resident songbirds.

Barn Owls
The site does not appear to provide any suitable nesting sites for barn owls.

6.2 Foreseen Impacts

Buildings / trees
The Proposed Development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.

Trees and vegetation
Cropland, grassland, woodland and native hedgerows will be removed during construction. The loss of such habitats could result in a reduction in nesting/breeding/foraging/overwintering habitat. Furthermore, the Proposed Development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.

Barn Owls

None foreseen.

6.3 Recommendations

Buildings / trees
Any building or vegetation removal should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged or an ecologist has confirmed the nesting attempt has concluded.

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 or an ecologist has confirmed the nesting attempt has concluded.

Precautions should be taken with machinery and noise levels when working close to any retained habitats so as not to disturb any nearby nesting birds during construction works.

Trees and vegetation
Breeding bird surveys will be required to establish the value of the site for breeding birds. This will comprise six visits between late-March and early-July to record breeding activity.

Wintering and migratory bird surveys will be required to establish the value of the site for wintering birds. This will comprise six visits between October and March to record usage of the site by overwintering and migratory birds.

Barn Owls
No further barn owl surveys required.

Suggested biodiversity enhancements
The installation of integrated bird boxes on each of the new buildings will provide additional nesting habitat for birds e.g. Schwegler No 17 Swift Nest Box, Schwegler 1SP Sparrow Terrace, Schwegler 1B Nest Boxes, Schwegler 2H Robin Boxes, Woodstone Nest Box or a similar alternative brand.

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.

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.

7. FAUNA: REPTILES

This section 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.

7.1 Summary of Survey Findings

EPSL data and local records
A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site.

Habitat suitability
Habitats recorded on site are assessed to provide foraging, commuting, basking and refuge opportunities for reptiles. The hedgerow, woodland, and Temporary grass and clover leys provide elevated value for reptiles as these habitats provide a suitable structure for refuge, whilst also providing foraging and commuting opportunities. The site is also dominated by cropland, which although does not provide suitable habitat for long-term populations, does provide suitable foraging, commuting and basking habitat. These habitats are suboptimal for sustained populations due to an absence of notable habitat structure and diversity, which significantly limits refuge opportunities.

Wider landscape
The site does have further connections in the wider landscape including further hedgerows, woodlands and croplands. These adjacent habitats provide optimal foraging, commuting and some refuge opportunities for reptiles. The presences of reptiles utilising these adjacent habitats cannot be discounted.

7.2 Foreseen Impacts

Temporary grass and clover leys will be removed during construction. The loss of such habitats could result in a reduction in reptile habitat and could result in the fragmentation of the local landscape. Furthermore, site clearance could result in the death or injury of reptiles, if present.

7.3 Recommendations

Reptile surveys will be required to determine presence or likely absence of reptiles on the site. This will comprise the deployment and monitoring of artificial refugia over seven visits and such surveys must be undertaken between April and September, targeting optimal surveying months of April, May and September where possible, in accordance with current survey guidelines (Gent & Gibson, 2003).

The surveys are likely to be required before planning permission can be granted.

8. FAUNA: AMPHIBIANS

This section 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.

8.1 Summary of Survey Findings

EPSL and survey data

A review of the MAGIC database returned no granted EPSL records for amphibians within 2km of the site.

The MAGIC database returned evidence indicating the presence of great crested newts (GCN) resulting from historic pond surveys undertaken in 2017. The closest of these records is located ~1300m southwest from the site. 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 et al. 2001). As such, the great crested newt metapopulation known to be present ~1300m southwest are not suitably connected to the site.

Table 6: Great crested newt search results.

Record type	Distance from Site
GCN class survey licence return	~1300m southwest
GCN class survey licence return	~1330m southwest

The site location falls within a Green Risk Zone under the Natural England GCN District Level Licensing Scheme.

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 have been identified within 500m of the site.

Terrestrial habitat suitability
The site provides some suitable habitat for terrestrial amphibians, such as the Temporary grass and clover leys, modified grassland, hedgerows and woodland, which all would provide optimal refuge habitat, as well as commuting and foraging. However, given the lack of ponds within 500m of the site, it is unlikely that amphibains will migrate on to site.

8.2 Foreseen Impacts

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.

8.3 Recommendations

No further surveys required for amphibians.

9. FAUNA: RIPARIAN ANIMALS

This section 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.

9.1 Summary of Survey Findings

A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed for riparian animals (otters and water voles). No EPSLs relating to riparian animals are present within a 2km radius of the site.

Habitat suitability

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.

9.2 Foreseen Impacts

No impacts are anticipated on riparian animals as a result of the Proposed Development.

9.3 Recommendations

No further surveys for riparian animals required.

10. FAUNA: HAZEL DORMOUSE

This section 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.

10.1 Summary of Survey Findings

EPSL data and local records

A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed for hazel dormouse. No EPSLs relating to hazel dormouse are present within a 2km radius of the site.

Habitat suitability
Hazel dormice typically utilise a three-dimensional habitat structure to commute between foraging and breeding sites while avoiding predation. High-value structural features, such as woodland and native hedgerows, are present within the site boundaries. However, research indicates that a minimum of 20 ha of contiguous woodland habitat is required to maintain a viable dormouse population (Bright et al., 1994). The on-site woodland measures approximately 0.7 ha, which is insufficient to support a self-sustaining population independently.

Furthermore, spatial fragmentation limits the site's suitability. The native hedgerows on site are isolated from the woodland; while one hedgerow extends off-site, it does not connect to any broader woodland network in the local area. Given this structural isolation, combined with the surrounding urban infrastructure and residential development, ecological connectivity to optimal off-site habitat is severely restricted. Consequently, the presence of hazel dormice on site is considered highly unlikely.

10.2 Foreseen Impacts

Woodland and hedgerows will be removed during construction. The loss of such habitats is likely to be inconsequential to local dormouse populations owing to the lack of connection to optimal habitat in the wider landscape. However, site clearance could result in the death or injury of dormice if present.

10.3 Recommendations

Owing to the nature of the Proposed Development and the low potential for impacts to dormice, further dormouse surveys are considered to be disproportionate. A precautionary working method will be implemented during construction, including the following measures:

- Site clearance will be undertaken outside of the dormouse hibernation season (November to March) insofar as is possible.
- A toolbox talk will be given to contractors regarding the possible presence of dormice at the site.
- Heras fencing will be erected around the working area to prevent encroachment into retained habitats where dormice could be present.
- A pre-commencement inspection of the site will be undertaken for dormice.

In the unlikely event that a dormouse or evidence of dormouse is identified, works must cease and advice must be sought from a suitably qualified ecologist.

11. FAUNA: BADGERS

This section 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.

11.1 Summary of Survey Findings

No evidence of badger (*Meles meles*) setts was recorded within the site or the accessible 30-metre buffer zone. The site is considered to have potential for sett construction due to the presence of optimal habitat such as woodland, native hedgerows, modified grassland, and Temporary grass and clover leys, which are relatively undisturbed. Further, the site is well-connected to further arable land, with associated native hedgerows high typically favoured by badgers.

Further the areas onsite provide suitable habitat for potential foraging and commuting opportunities for badgers. These habitats may support a variety of invertebrates, small mammals, and seasonal plant species that form part of a badger's diet. Therefore the presences of transient badgers on the site cannot be discounted.

11.2 Foreseen Impacts

No works will be undertaken within 30m of a badger sett. Modified grassland, woodland, native hedgerows and Temporary grass and clover leys 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.

11.3 Recommendations

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 toolbox talk will be given to contractors regarding the possible presence of badgers at the site.

- A pre-commencement inspection of the site will be undertaken for any new badger activity if works do not commence within three months.
- Heras fencing will be erected around the working area to prevent encroachment into retained habitats where badger setts could be present.
- 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.

12. FAUNA: INVERTEBRATES

This section 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.

12.1 Summary of Survey Findings

The grassland provides ecological value for invertebrates, particularly generalist species. The presence of flowering plants offers some nectar and pollen resources for pollinators such as bees, hoverflies, and butterflies during the summer months. Furthermore, features like bare ground patches may offer habitat for ground-dwelling invertebrates such as beetles, ants, and spiders. The presence of the woodland on-site, enhances the invertebrate habitat value. These trees provide a three-dimensional structure, offering a greater diversity of niches. They provide resources such as leaf litter for detritivores, shelter from weather, pollen and sap for specialist species, and vertical stratification for flying insects. The trees, particularly those with rough bark or dead wood, also support specialised invertebrate communities, increasing the overall structural and resource diversity available across the site.

12.2 Foreseen Impacts

Grassland and woodland 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.

12.3 Recommendations

No further surveys.

Suggested biodiversity enhancements
The incorporation of bee bricks (e.g. Ibstock BeeHabitat or similar alternative brand) into the fabric of the new buildings would provide sheltering opportunities for pollinators. These should be installed 0.5m above ground level on a south-facing elevation with no obscuring vegetation. The site could be further enhanced via the provision of native wildflowers or wildflower turf, which would provide foraging opportunities for invertebrates.

13. FAUNA: OTHER NOTABLE SPECIES

This section 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.

13.1 Summary of Survey Findings

Hedgehogs
The areas of woodland, native hedgerows and grassland offer suitable foraging opportunities, supporting abundant invertebrate prey such as beetles, earthworms, and caterpillars. These habitat features also provide important commuting corridors and shelter, allowing hedgehogs to move safely across the site while avoiding predation and disturbance.

Deer
Deer are likely making active use of the varied landscape, which includes woodland, grassland, native hedgerows, and cropland. The site's woodland offers essential cover, shelter, and resting areas, while the adjoining grasslands and agricultural crops provide valuable foraging grounds throughout the year. Additionally, the network of established native hedgerows onsite and in the wider landscape, creates natural corridors for commuting. Together, these interconnected features form an ideal environment that fully supports the deer population's feeding, shelter, and movement requirements across the site.

Rabbits
During the survey, evidence of rabbits was found within the boundaries of the crop field. The woodland, grassland and native hedgerow provide suitable habitat for foraging rabbits, due to the cover and refuge. During the inspection, the site was not found to have any active burrows.

13.2 Foreseen Impacts

Hedgehogs
Grassland, woodland, and native hedgerows 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.

Deer
Grassland, woodland, and native hedgerows will be removed during construction. The loss of such habitats is likely to be inconsequential to local deer 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 deer, if present.

Rabbits
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.

13.3 Recommendations

Hedgehogs
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.

Deer

A precautionary working method will be implemented during prior to any construction works or excavation work on the site, 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 deer 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.

Rabbits
A precautionary working method will be implemented during prior to any construction works or excavation work on the site, including the following measures:

- Conduct a thorough visual inspection of grasslands, embankments, scrub areas, and hedgerow bases to identify any active rabbit warrens or burrows prior to placing heavy plant machinery on-site.
- Maintain short grass cover across Proposed construction footprints prior to breaking ground to reduce the area's attractiveness for burrowing.
- If an active warren is breached or an animal is discovered trapped within an excavation, pause work in the immediate area. Allow the animal to exit safely via a ramp, or seek guidance from an ecological clerk of works (ECoW) if extensive subterranean burrow networks are compromised.

13.4 Suggested Biodiversity Enhancements

Hedgehogs
The following habitat creation and enhancement opportunities could be incorporated into the Proposed Development which would be beneficial for hedgehogs:

- Planting fruit bearing trees and species-rich grassland to increase foraging opportunities.
- Creation of brash piles or installation of hedgehog houses in shady areas.
- Installation of gaps under boundary fencing to enable hedgehogs to move freely through the site.

APPENDIX 1: SURVEY/HABITAT MAP



APPENDIX 2: LOCATION MAP



APPENDIX 3: PROPOSED PLAN

No plans available.

APPENDIX 4: HABITAT IMAGES



Cereal crops



Cereal crops



Modified grassland



Modified grassland



Other woodland; mixed



Other woodland; mixed



Other woodland; mixed



Native hedgerow



Temporary grass and clover leys



Temporary grass and clover leys

APPENDIX 5: BASELINE CONDITION SCORE TABLES

Modified grassland (g4) condition assessment.

	Criteria Description	Criteria Passed?
A	There are 6-8 vascular plant species per m2 present, including at least 2 forbs (these may include Creeping thistle Cirsium arvense, spear thistle Cirsium vulgare, curled dock Rumex crispus, broad-leaved dock Rumex obtusifolius, common nettle Urtica dioica, creeping buttercup Ranunculus repens, greater plantain Plantago major, white clover Trifolium repens and cow parsley Anthriscus sylvestris).Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m2 (excluding those listed in the previous sentence), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland.	N
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	Y
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble Rubus fruticosus agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Y
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens). For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.	Y
F	Cover of bracken Pteridium aquilinum is less than 20%.	Y
G	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA).	Y
		Total 6/7
	Condition **poor** due to passing 6 of 7 criteria. Essential criteria (A) not met; condition capped at poor.	

Other woodland; mixed (w1h) condition assessment.

Category	Good (3 points)	Moderate (2 points)	Poor (1 point)	Score
A. Age distribution of trees	Three age-classes present.	Two age-classes present.	One age-class present.	**2**
B. Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland.	Evidence of significant browsing pressure is present in less than 40% of whole woodland.	Evidence of significant browsing pressure is present in 40% or more of whole woodland.	**3**
C. Invasive plant species	No invasive species present in woodland.	Rhododendron Rhododendron ponticum or cherry laurel Prunus laurocerasus not present, and other invasive species <10% cover.	Rhododendron or cherry laurel present, or other invasive species ≥10% cover.	**2**
D. Number of native tree species	Five or more native tree or shrub species found across woodland parcel.	Three to four native tree or shrub species found across woodland parcel.	Two or less native tree or shrub species across woodland parcel.	**2**
E. Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native.	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native.	<50% of canopy trees and <50% of understory shrubs are native.	**2**
F. Open space within woodland	10 - 20% of woodland has areas of temporary open space. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted (given the increased ratio of edge habitat to woodland where the woodland is <10ha).	21 - 40% of woodland has areas of temporary open space.	<10% or >40% of woodland has areas of temporary open space. But if woodland <10ha has <10% temporary open space, please see Good category7.	**2**
G. Woodland regeneration	All three classes present in woodland; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland.	No classes or coppice regrowth present in woodland.	**2**
H. Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback.	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present.	Greater than 25% tree mortality and or any high-risk pest or disease present.	**2**

I. Vegetation and ground flora	Recognisable NVC plant community at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community at ground layer present.	No recognisable woodland NVC plant community at ground layer present.	**1**
J. Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland.	Two storeys across all survey plots.	One or less storey across all survey plots.	**2**
K. Veteran trees	Two or more veteran trees per hectare.	One veteran tree per hectare.	No veteran trees present in woodland.	**1**
L. Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities.	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities.	**2**
M. Woodland disturbance	No nutrient enrichment or damaged ground evident.	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground.	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground.	**1**
				Total 24/39
	Condition **poor** due to scoring 24 of 39 points.			

Native hedgerow (h2a) condition assessment.

	Criteria Description	Criteria Passed?
A	Height >1.5 m average along length. (The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).)	Y
A	Width >1.5 m average along length. (The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn Prunus spinosa suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).)	Y
B	Gap between ground and base of canopy <0.5 m for >90% of length. (This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).)	N
B	Gaps make up <10% of total length; and No canopy gaps >5 m. (This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).)	N
C	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: Measured from outer edge of hedgerow; and Is present on one side of the hedgerow (at least). (This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.)	N
C	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground. (The indicator species used are nettles Urtica spp., cleavers Galium aparine and docks Rumex spp. Their presence, either singly or together, does not exceed the 20% cover threshold.)	Y
D	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA) and recently introduced species. (Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website, as well as the BSBI website where the 'Online Atlas of the British and Irish Flora' contains an up-to-date list of the status of species. For information	Y

	on invasive non-native species see the GB Non-Native Secretariat website.)	
D	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities. (This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).)	**Y**
		Total 5/8
	Condition **moderate** due to passing 5 of 8 criteria.	

LIMITATION AND COPYRIGHT

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

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

VERSION CONTROL

Status	Issue	Name	Date
Draft	0.1	Millie Holland BSc (Hons), MSc, Consultant Ecologist	27/08/26
Final	1.0	Millie Holland BSc (Hons), MSc, Consultant Ecologist	31/08/26
Updated	2.0	Millie Holland BSc (Hons), MSc, Consultant Ecologist	24/09/26