

Preliminary Ecological Appraisal

Survey site:

Woodhead Road, Milton, Stoke-on-Trent, ST2 7NH

Client:

Ben Beech

Survey date:

22/07/2026

Project:

This report is prepared to inform a planning application with Staffordshire Moorlands District Council. Change of use from agricultural land to a secure dog walking field with associated fencing, gates and parking area.

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 January 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 habitats on site are of no specific conservation value but have value at the local level. These are to be partially altered. Loss or damage will contribute to net losses of biodiversity locally. There are no specific concerns relating to protected or otherwise Important Species or assemblages of a scale warranting further investigation. ▪ 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.

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 on the proposed development.

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](#).

Survey Details

The site survey was undertaken on 22/07/2026 by Rebecca Kay MSc, Consultant Ecologist an ecologist with 2.75 years of experience].

Table 2: The weather conditions during the survey.

Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
17.6	71.0	100	11.3	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 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.

2. SITE LOCATION AND LANDSCAPE CONTEXT

2.1 Summary of Survey Findings

Site Location & Context

The site is centred at National Grid reference SJ 91567 49465 and has an area of approximately 1ha. The site comprises modified grassland.

The site is enclosed by an off-site hedgerow along the northern and western boundaries, which provides a degree of physical separation and screening from the surrounding land. The eastern and southern boundaries are open to the wider field, with no clearly defined boundary features separating the site from the surrounding grassland.

The site is located within a rural setting and is immediately surrounded by agricultural land, giving the site an open and predominantly rural character. The wider landscape is more semi-urbanised, comprising a mixture of residential development, agricultural fields and areas of public open space. Residential properties are generally associated with small gardens, which are often sparsely vegetated and provide limited connectivity with the surrounding countryside. This combination of rural and built-up land uses creates a transitional landscape between the surrounding countryside and nearby residential development.

A review of historic maps indicates the landscape has remained largely unchanged since the late 1800s.

No ponds or watercourses are located on, or adjacent to the site.

Priority Habitats

There are nine types of priority habitats within 2km of the site. These comprise ancient & semi-natural woodland, deciduous woodland, open mosaic habitats on previously developed land, traditional orchard, lowland heathland, lowland meadows, lowland fens, lowland dry acid grassland, and coastal and floodplain grazing marsh. The closest of each habitats are listed below:

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

Designation	Distance from Site
Ancient & Semi-Natural Woodland	<100 m SE

Deciduous Woodland	<100 m SE
Open Mosaic Habitats on Previously Developed Land	~295 m S
Traditional Orchard	~595 m S
Lowland Heathland	~775 m SE
Lowland Meadows	~830 m SE
Lowland Fens	~1020 m W
Lowland Dry Acid Grassland	~1235 m SE
Coastal And Floodplain Grazing Marsh	~1650 m NW

The site is well-connected to nearby habitats via the hedgerows and field margins at the north and west boundaries.

Designated Sites

Statutory Designations within 2km

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

Table 4: The statutory designated sites within 2km of the site boundary.

Designation	Distance from Site
Wetley Moor Site of Special Scientific Interest (SSSI)	~770m SE
Bagnall Road Wood Local Nature Reserve (LNR)	~465m NW
Holden Lane Pools Local Nature Reserve (LNR)	~1640m W

SSSI Risk Zone

The site does fall within four impact risk zones for Wetley Moor SSSI however, the proposed development type is not listed as possible high risk with regard to this designation.

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, due to the small scale and low overall impact of the development from such sites (where known), alongside additional factors such as distance in combination with connectivity disrupting barriers.

2.3 Recommendations

No recommendations.

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

Grassland - Modified grassland (g4)

The site is covered with grassland comprised of a low variety of common grassland species. This grassland is actively managed via regular mowing, resulting in a short sward of ~5cm. No signs of compaction or damage are present, resulting in areas of bare ground totalling <10% of the site. The species composition is poor, with less than 8 vascular plant species present per m².

Table 5a: Species abundance for modified grassland.

Abundance	Species
Dominant	Cock's-foot (<i>Dactylis glomerata</i>)
Abundant	Timothy (<i>Phleum pratense</i>), Annual Meadow-grass (<i>Poa annua</i>)
Frequent	-
Occasional	Ribwort Plantain (<i>Plantago lanceolata</i>)
Rare	Creeping Buttercup (<i>Ranunculus repens</i>), Common Sorrel (<i>Rumex acetosa</i>), Stinking Hawk's-beard (<i>Crepis foetida</i>), Bramble (<i>Rubus fruticosus</i>), Rosebay Willowherb (<i>Chamaenerion angustifolium</i>), Greater Plantain (<i>Plantago major</i>)

In accordance with the Statutory Biodiversity Metric Condition Assessment Sheets, the modified grassland was assessed to have a poor condition value. The full condition assessment is provided in Appendix 5.

3.2 Foreseen Impacts

No direct impacts to any notable habitats will occur as a result of the proposed development. However, indirect effects such as pollution or habitat damage could occur during construction, whilst encroachment on the grassland areas by contractors and machinery could result in plants and biodiversity value being dug up or trampled on. 0.02ha of grassland will be removed to be replaced with artificial unvegetated, unsealed surface and therefore 0.98ha will be retained.

3.3 Recommendations

Best practice measures to minimise the possibility of pollution must be implemented during construction. This should include the following measures:

- Remove only the minimum of habitat required to facilitate the development
- Use of Heras or other appropriate fencing to prevent encroachment by contractors onto retained habitats.
- Protect retained turf and soil resource from destruction and compaction using plastic matting and wooden boarding. Do not store skips and

other heavy materials on retained turf.

- Grasscrete, cell web or any other porous surface treatment facilitating recovery of vegetation is preferred to hard standing.

The proposed development will require a Biodiversity Net Gain assessment, to calculate the value of habitats on site and ensure the delivery of a minimum of 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 European Protected Species Licence (EPSL) applications 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 6: EPSL survey returns for bats within a 2km radius.

EPSL Reference	Bat Species Affected	Distance from Site <i>(EPSL records are accurate to 100m)</i>	Impacts Allowed by Licence
2014-3034-EPS-MIT	Brown Long-Eared, Common Pipistrelle, Whiskered	~1730m north-east	Destruction of a resting 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, and offsite within 2km including ancient & semi-natural woodland, deciduous woodland, open mosaic habitats on previously developed land, traditional orchard, lowland heathland, lowland meadows, lowland fens, lowland dry acid grassland, coastal and floodplain grazing marsh and purple moor grass and rush pastures. 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 or trees on the site to provide suitable roosting habitat.

5.2 Foreseen Impacts

Roosting habitat [Buildings]

There are no buildings on site, therefore no impacts are foreseen.

Roosting habitat [Trees]

There are no trees on site, therefore no impacts are foreseen.

Foraging and commuting habitat

The proposed development will not result in the removal of any habitats which could be used by foraging or commuting bats.

Artificial lighting

No new lighting will be installed as a result of the proposed development.

5.3 Recommendations

Roosting habitat [Buildings]

None.

Roosting habitat [Trees]

None.

Foraging and commuting habitat

No further surveys are required.

Artificial lighting

None required.

Suggested biodiversity enhancements

There are no proposed features that can be utilised to install additional bat boxes on site. Therefore, no biodiversity enhancements have been recommended.

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

No bird nests were identified within the vegetation on-site, however modified grassland offers foraging opportunities, and native hedgerow offers both nesting and foraging opportunities.

Due to the small size of the site and the extent and type of the habitats recorded, the site is not considered suitable to support a significant assemblage of protected and/or notable birds.

Barn Owls

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

6.2 Foreseen Impacts

Buildings / trees

No impacts are anticipated on nesting birds as a result of the proposed development.

Trees and vegetation

None foreseen.

Barn Owls

None foreseen.

6.3 Recommendations

Buildings / trees

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

No additional surveys required.

Barn Owls

No further barn owl surveys required.

Suggested biodiversity enhancements

There are no proposed features that can be utilised to install additional bird boxes on site. Therefore, no biodiversity enhancements have been recommended.

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 provides 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 frequently managed grassland of limited value to reptiles. These habitats are 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 good connectivity to further suitable reptile habitat in the wider landscape via woodland. The presence of reptiles on site cannot be discounted, albeit likely limited to low numbers within peripheral scrub.

Wider landscape

The adjacent sections of the woodland are of elevated ecological value within the wider landscape and may represent important resources for local reptile populations. These adjacent habitats provide optimal foraging, commuting, and refuge opportunities for reptiles and are well connected to further suitable habitat in the wider landscape. The presence of reptiles utilising these adjacent habitats cannot be discounted.

7.2 Foreseen Impacts

No impacts are anticipated on reptiles as a result of the proposed development.

7.3 Recommendations

No further reptile surveys required.

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 ~1575m north-west 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 ~1575m north-west are not suitably connected to the site.

Table 7: Great crested newt search results.

Record type	Distance from Site
GCN class survey licence return	~1575m north-west

The site location falls within a white Risk Zone under the Natural England GCN District Level Licensing Scheme and therefore would not qualify under the scheme.

Aquatic habitat suitability (including ponds within 500m)

There are no ponds on the site, but a review of aerial imagery (MAGIC and OS Maps) indicates the presence of one pond within 500m. The closest pond is located ~450m south however this pond is located at Moorside Fisheries, Abbey Hulton confirming that fish are present and therefore, unlikely to support breeding great crested newt populations.

A pond map showing approximate pond locations is provided in Appendix 6.

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 offer sub-optimal habitat for terrestrial amphibians however, the hedgerows may offer refuge for these species. 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.

8.2 Foreseen Impacts

When georeferencing the proposed development plans over scaled mapping of the site, it is noted that the development area is not likely to result in the loss or significant disturbance of modified grassland and hedgerow. If great crested newts are present within the P1, when completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces a green risk score, which states: Offence unlikely.

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

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.

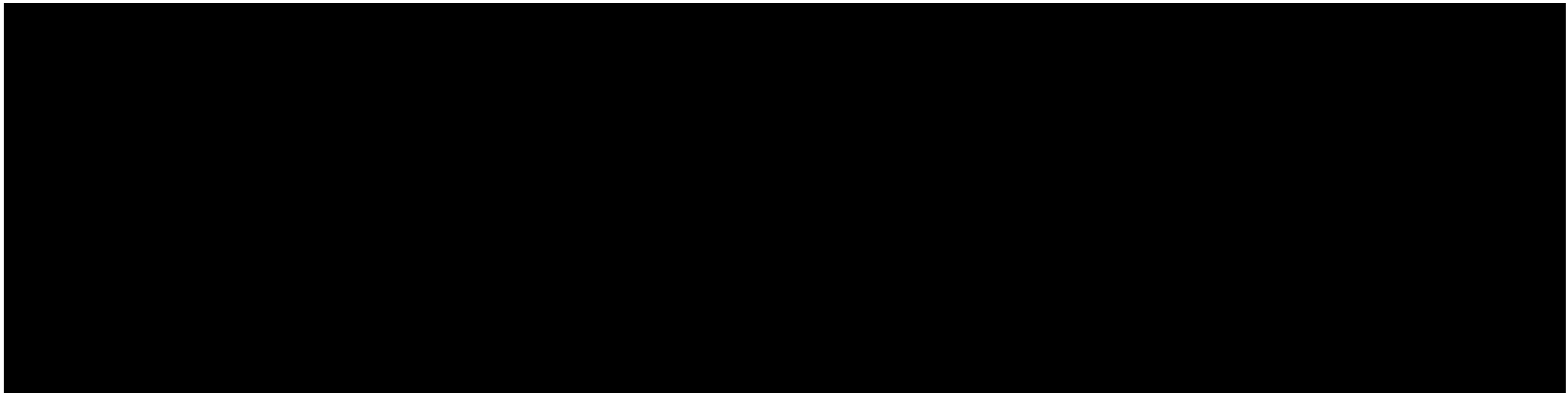
Dormice typically utilise a three-dimensional habitat structure as to commute between feeding and breeding sites whilst avoiding predation. As such habitats on site are considered unsuitable for hazel dormice and therefore the likelihood of this species being present on site is considered acceptably low.

10.2 Foreseen Impacts

No impacts are anticipated on hazel dormice as a result of the proposed development.

10.3 Recommendations

No further hazel dormouse surveys required.



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 habitats present on-site, including the grassland and hedgerow, 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.

12.2 Foreseen Impacts

None foreseen.

12.3 Recommendations

No further surveys.

Suggested biodiversity enhancements

The incorporation of insect hotels (e.g. Green & Blue Bee Post, Corsica Bee & Insect Hotel or similar alternative brands) into the retained hedgerow providing additional sheltering opportunities for pollinators. These should be installed 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 grassland and hedgerow onsite provides foraging and commuting opportunities for hedgehogs, with woodland habitat nearby.

13.2 Foreseen Impacts

Hedgehogs

No impacts are anticipated on hedgehogs as a result of the proposed development.

13.3 Recommendations

Hedgehogs

None.

13.4 Suggested Biodiversity Enhancements

Hedgehogs

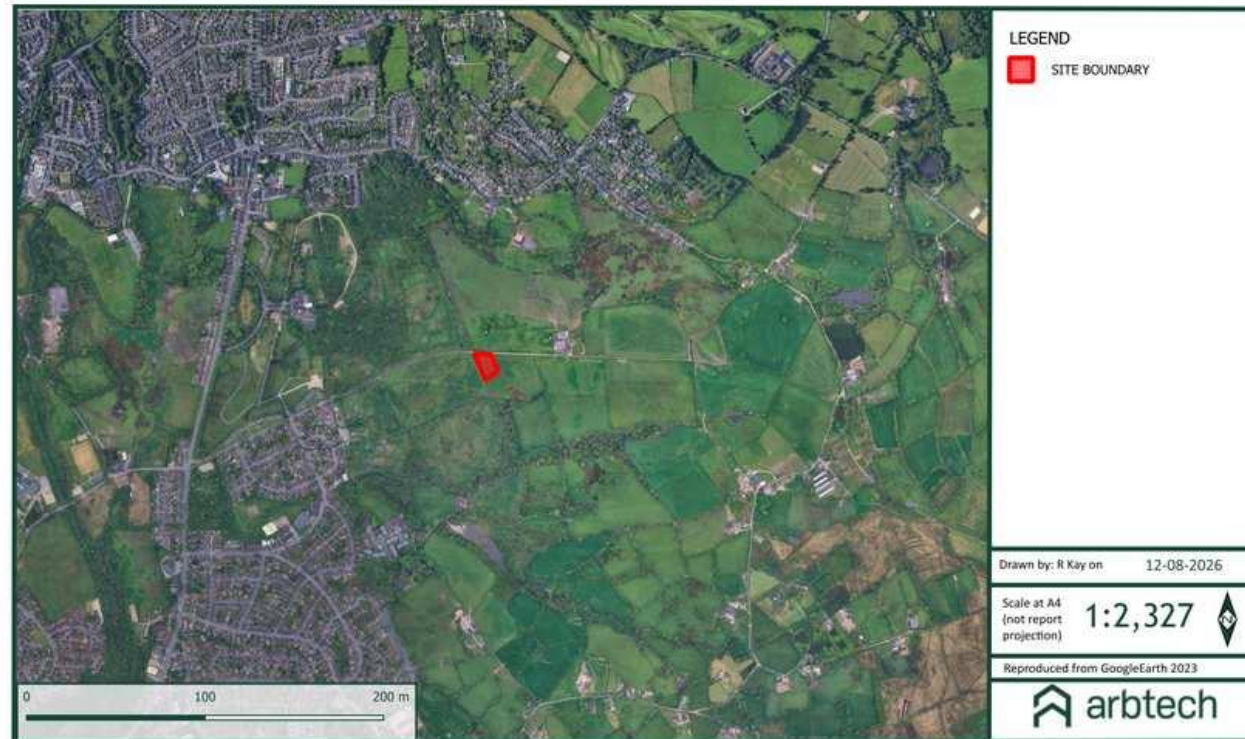
The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs:

- Planting fruit bearing trees and species-rich grassland to increase foraging opportunities.
- Creation of brash piles or installation of hedgehog houses in shady areas.

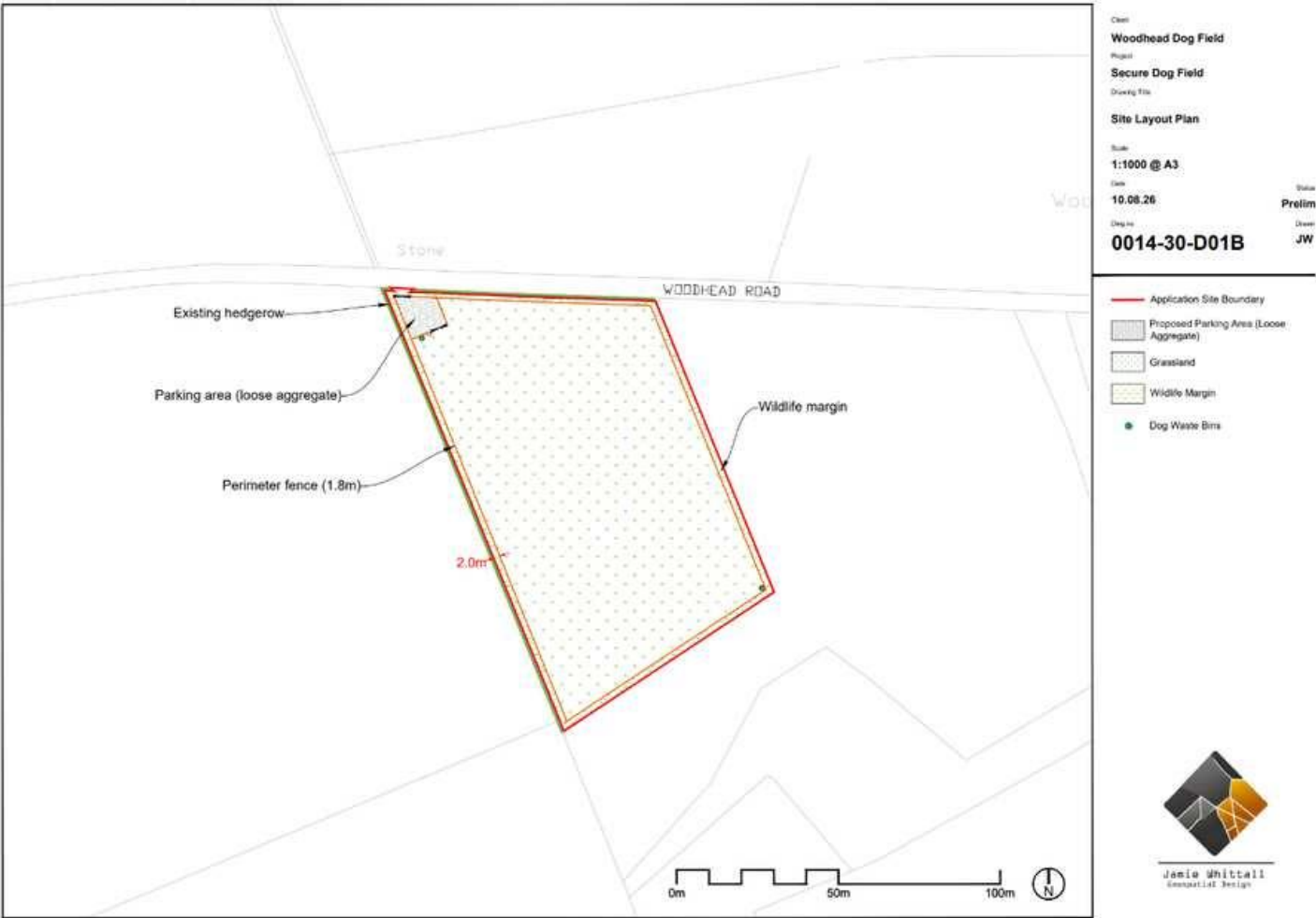
APPENDIX 1: SURVEY/HABITAT MAP



APPENDIX 2: LOCATION MAP



APPENDIX 3: PROPOSED PLAN



APPENDIX 4: HABITAT IMAGES



Modified grassland



Modified grassland



Modified grassland

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 <i>Cirsium arvense</i> , spear thistle <i>Cirsium vulgare</i> , curled dock <i>Rumex crispus</i> , broad-leaved dock <i>Rumex obtusifolius</i> , common nettle <i>Urtica dioica</i> , creeping buttercup <i>Ranunculus repens</i> , greater plantain <i>Plantago major</i> , white clover <i>Trifolium repens</i> and cow parsley <i>Anthriscus sylvestris</i>). 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.	N
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> 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 <i>Pteridium aquilinum</i> 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 5/7
	Condition poor due to passing 5 of 7 criteria. Essential criteria (A) not met; condition capped at poor.	

APPENDIX 6: PONDS

Pond Map



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VERSION CONTROL

Status	Issue	Name	Date
Draft	0.1	Rebecca Kay MSc, Consultant Ecologist	12/08/2026
Review	0.2	Jeremy Grout BSc (Hons) MRSB, Principal Consultant Ecologist	18/08/2026
Final	0.3	Rebecca Kay MSc, Consultant Ecologist	20/08/2026