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Preliminary Ecological Appraisal and Roost Assessment

Survey site:

Barn at Lodge Farm Gidding Road Sawtry PE28 5UJ

Client:

Mr James Close

Survey date:

9th July 2025

Project:

This report is prepared to inform a planning application with the Huntingdonshire District Council. The proposal is described as: Conversion of barn to self build dwelling including extension.

PEA survey methodology and legislation can be found in the Arbtech Supplement: PEA Methodology and Legislation - 2024.

PRA survey methodology and legislation can be found in the Arbtech Supplement: PRA Methodology and Legislation - 2024.

The site survey was undertaken by [redacted] BSc (Hons), MSc, Consultant (Accredited Agent on Natural England Bat Licence Number: 2018-33540-CLS-CLS)					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
09/07/2025	27	49	10	6	None

Executive summary

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.

Limitations

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

The survey was completed outside of the optimal survey period (April to October) limiting the identification of ground flora species.

Ecological Survey Factor **Conclusion, Impact or Recommendations**	**Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.**
Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, photos in appendix 3 and proposal plan in appendix 4). **Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).**	
Summary of Survey Findings	**Site description**

(*UKHab codes used)*	The site is centred on National Grid Reference TL 14777 84203 and covers approximately 0.08 hectares. It comprises a barn, an access road, and a small area of amenity grassland. The site is immediately surrounded by extensive arable land, with the village of Sawtry located approximately 1.3 km to the southeast. The wider landscape is similarly dominated by arable fields, interspersed with occasional farmhouses and small woodland pockets. Due to the prevalence of arable farming in the area, the site is bordered by a network of field drains, with the nearest located approximately 80 metres west of the site. **Buildings (u1b5)** The site has a single barn that has been evaluated for its habitat value for bats within a later section. The barn will be impacted by the proposed development. **Developed land, sealed surface (u1b)** The site has areas of hardstanding, including a long access road from the main road to the south. This access road will be retained post development. **Modified grassland (g4)** An area of grassland is present to the north and west of the barns. The sward is dominated by common species associated with agriculturally improved or semi-improved grassland and appears to be regularly managed. Species recorded within this area are listed below using the DAFOR scale: • Dominant: Perennial ryegrass • Abundant: Downy buttercup • Frequent: Ribwort plantain, barley, field thistle

- Occasional: Smooth meadow grass, bristly oxtongue, white clover, meadow foxtail, oxeye daisy, yarrow, common hogweed, silver plantain, common nettle
- Rare: Morning glory, broad-leaved dock, hawkbit, common teasel, golden ragwort

Modified grassland is due to the dominance of perennial ryegrass, the presence of white clover, and a mixture of nutrient-loving and ruderal species typical of improved or disturbed soils. The diversity of the sward is moderate, but it lacks the indicator species associated with more species-rich, semi-natural grasslands.

Habitat	Condition assessment		
Modified grassland	A	There are 6-8 vascular plant species per m2 present, including at least 2 forbs. Note - this criterion is essential for achieving Moderate or Good condition.	Yes
	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.	No
	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).	Yes
	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.	No
	E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	No
	F	Cover of bracken Pteridium aquilinum is less than 20%.	Yes
	G	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA).	Yes
		Total	Moderate – 4/7

	Surrounding priority habitat Within a 2 km radius of the site, the only recorded priority habitat is an area of deciduous woodland, located approximately 350 metres to the northeast. No other priority habitats are present within the 2 km search area. The site itself is not connected to any priority habitat, as it is surrounded by intensively managed arable fields, which act as a barrier to ecological connectivity.
Foreseen Impacts	**Onsite habitat** The proposed development will result in the loss of modified grassland. This could result in a net loss in biodiversity at the site. **Surrounding priority habitat** No impacts to any notable habitats are anticipated due to the small scale and distance of the proposed development from such habitats as well as the urban location of the site with surrounding physical barriers.
Recommendations	**Onsite habitat** The proposed development falls under the self-build exemption, as defined by current planning policy. As such, the site is not subject to the mandatory Biodiversity Net Gain (BNG) requirements outlined under the Environment Act 2021. While BNG is not required in this instance, the ecological appraisal has still considered opportunities to enhance the site's ecological value in line with national and local planning guidance. **Surrounding priority habitat** No further recommendations.
Locality and Designated Sites	

Summary of Survey Findings	**Onsite designation** The site is not subject to any designations. **Surrounding designation** There are no designations within 2km of the site. However, the site is within the impact zone for Aversely Wood Site of Special Scientific Interest (SSSI), which is located ~2.2km southeast of the site. Aversley Wood is of the ash-maple woodland type which occurs on the heavy clay soils of lowland England. The site is of ancient origin, much of it having been under woodland since before the Middle Ages. As such the plant and animal communities it supports are well established and much richer than in more recent woodlands. Of additional interest is the presence of ancient earthworks. Part of the site has developed over ground which was probably cultivated until around 1350. This area, which still shows ridge-and-furrow, lacks some of the ancient woodland plants found in adjacent original woodland.
Foreseen Impacts	**Onsite designations** There are no foreseen impacts. **Surrounding designations** The site lies within the impact risk zone for Aversely Wood SSSI. The proposed development type is not listed as a possible high risk for this designation.
Recommendations	**Onsite designations** No further recommendations. **Surrounding designations** No further recommendations.

Invasive / Non-native species	
Summary of Survey Findings	No problematic invasive and non-native species recorded on site.
Foreseen Impacts	N/A
Recommendations	No further surveys but remain vigilant.
Invertebrates	
Summary of Survey Findings	Modified grassland can still provide some ecological value for invertebrates, particularly generalist species. The presence of flowering plants such as buttercup, white clover, oxeye daisy, and yarrow offers limited nectar and pollen resources for pollinators such as bees, hoverflies, and butterflies during the summer months. Bare ground patches and tussocky areas, if present, may offer habitat for ground-dwelling invertebrates such as beetles, ants, and spiders. However, the overall value of the grassland to invertebrates is considered low to moderate due to its limited structural diversity, frequent management, and dominance by a small number of competitive species like perennial ryegrass.
Foreseen Impacts	Modified grassland 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.
Recommendations	No further surveys.
Bats	
Summary of Survey Findings	**EPSL applications** There are no EPSL applications for bats within 2km of the site. **Foraging and commuting** Habitats recorded on site are assessed to provide foraging and commuting opportunities for bats in the form of grassland. These habitats are likely to provide micro-climatic conditions that support invertebrates that will in turn provide foraging opportunities for local bat populations.

	Roosting habitat Building B1 is a large, single-storey agricultural barn located centrally within the site. It is constructed on a brick base with asbestos sheet cladding forming both the walls and roof. The barn is supported by a visible timber frame, with timber doors providing access at ground level. Several roof skylights are present, allowing some natural light into the structure; however, there are no traditional windows, and the building is otherwise enclosed. The barn is of single-skin construction, meaning it lacks any form of internal lining or insulation. This construction method results in the interior being directly exposed to external environmental conditions, with little buffering against fluctuations in temperature, humidity, or light levels. These unstable internal conditions significantly limit the building's potential to support bat species that require stable microclimates for roosting, such as during maternity periods or hibernation. The asbestos material used for the walls and roof does not form crevices, gaps, or cavities that bats typically use for roosting. Additionally, the smooth, dense nature of asbestos sheets makes them unsuitable for bat entry, anchoring, or shelter. A single small slit located in the southwest corner of the building was noted as a potential access point; however, this is largely obscured by overlapping external cladding, significantly limiting its functionality as an access route for bats. No other clear entry points or features suitable for crevice-dwelling species were observed externally. Internally, the barn is brightly lit due to the skylights and contains no enclosed loft spaces, roof voids, or secluded areas typically favoured by void-dwelling species such as brown long-eared bats. The exposed structure, fluctuating conditions, and limited shelter reduce the barn's suitability even further. While the timber frame could theoretically offer minor features, no significant cracks, splits, or cavities were observed that would support bat roosting. Based on the construction type, lack of suitable roost features, and internal conditions, Building B1 is assessed as having negligible to low potential for supporting roosting bats.

	There are no trees within the site that would provide habitat value for roosting bats.
Foreseen Impacts	**Foraging and commuting habitat** The proposed development will result in the loss of modified grassland but given their low value and the presence of more extensive areas of foraging and commuting habitat in the locality, this is likely to be inconsequential for bats. **Roosting habitat** Bats are very unlikely to be roosting within B1 and as such, there are not anticipated to be any impacts on bats in this location as a result of the proposed development.
Recommendations	**Foraging and commuting habitat** A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting. **Roosting habitat** In the unlikely event that a bat or evidence of bats is discovered during the development all work must stop and a bat licensed ecologist contacted for further advice **Suggested biodiversity enhancements** The installation of one bat boxes at the site will provide additional roosting habitat for bats. The bat boxes will be incorporated into the fabric of the new dwelling. They will be suitable for pipistrelles (which have been identified locally through EPSL data). Suitable bat boxes include Habibat Bat Box, Ibstock Enclosed Bat Box or similar alternative brand.

	Bat boxes should be positioned 3-5m above ground level facing in a south or south-westerly direction with a clear flight path to and from the entrance, away from artificial light.
Birds	
Summary of Survey Findings	No evidence of nesting birds was identified within or on Building B1 during the site survey. The building is considered to offer negligible habitat value for nesting birds, due to the absence of suitable ledges, cavities, or sheltered areas, and a general lack of access points that would allow birds to enter or establish nests. The single-skin construction and open internal layout, combined with regular human activity and exposure to the elements, further reduce the building's suitability. The vegetation across the site, including areas of amenity and modified grassland, does not provide significant nesting habitat due to its limited structural diversity, low height, and regular maintenance, which prevents the development of scrub, tall herbs, or tussocky features typically favoured by nesting birds. While modified grassland can occasionally support ground-nesting species such as skylark or meadow pipit, particularly in more extensive and undisturbed rural settings, the current structure and scale of the grassland, combined with the surrounding intensively managed arable land and ongoing site management, make it unlikely that the area is being actively used by ground-nesting birds.
Foreseen Impacts	The proposed development could result in the disturbance and subsequent abandonment of active bird nests.
Recommendations	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.
Reptiles	
Summary of Survey Findings	**EPSL applications**

	There are no EPSL applications within 2km of the site for reptiles. **Onsite habitat** There is no suitable habitat for reptiles present within the site boundary. The site is predominantly composed of managed amenity and modified grassland, a barn, and hardstanding, with no areas of scrub, rough grassland, or unmanaged vegetation that could provide the necessary refuge, basking opportunities, or foraging resources required by reptile species. Reptiles typically favour structurally diverse habitats that offer both shelter and warmth, such as south-facing banks, tussocky grassland, bramble patches, log piles, or rubble, none of which are present on site. In addition, the site is entirely surrounded by intensively managed arable fields, which are generally considered unsuitable and inhospitable for reptiles due to frequent disturbance, lack of cover, and poor structural diversity. These surrounding land uses also act as a barrier to dispersal, significantly reducing the likelihood that reptiles could migrate onto the site from more suitable habitat located further afield. Given the lack of on-site habitat suitability, the isolated nature of the site within an agricultural landscape, and the absence of habitat connectivity, it is considered highly unlikely that reptiles are present within the development footprint.
Foreseen Impacts	No foreseen impacts as a result of the proposed development.
Recommendations	In the unlikely event that a reptile is identified, works must cease and advise must be sought from a suitably qualified ecologist.
Amphibians	
Summary of Survey Findings	**EPSL applications and survey data**

A review of the MAGIC database identified two European Protected Species Licence (EPSL) locations within a 2 km radius of the site, both relating to great crested newt (GCN). The first location is situated approximately 1,570 metres southeast of the site and includes four separate EPSL applications, with issue dates ranging from 08 September 2016 to 30 September 2020. These licences permitted the damage and destruction of GCN resting places, indicating confirmed GCN presence in that area during those timeframes.

In addition to the EPSL records, pond survey data accessed through the same database identified confirmed presence of GCN at two further locations: one pond approximately 1,350 metres southwest and another approximately 1,880 metres southwest of the site. These records are based on surveys carried out in 2014 and 2016, respectively.

Onsite habitat

Great crested newts (GCN) exist in metapopulations, typically occupying networks of ponds and the surrounding terrestrial habitat throughout their life cycle. They are known to disperse across the landscape and may utilise terrestrial habitats up to 500 metres from a breeding pond for foraging, shelter, and hibernation (Langton et al., 2001). Therefore, suitable habitat within this distance of a known or potential breeding pond is considered relevant to GCN assessments.

During the site visit, one pond within close proximity to the site was identified and was accessible for assessment. This pond was evaluated using the Habitat Suitability Index (HSI), which is a standardised method for assessing the potential of a pond to support breeding GCN. The HSI assessment provides an indication of the pond's suitability for supporting GCN and contributes to the evaluation of potential impacts from the proposed development. The HSI result is summarised below:

HSI Index	HSI Score
1 – Location	1.00

2 – Pond Area	1.00
3 – Pond Drying	0.90
4 – Water Quality	0.33
5 – Shade	0.60
6 – Waterfowl	1.00
7 – Fish	1.00
8 – waterbody count in wider landscape within 500m with suitable terrestrial connectivity	0.20
9 – Terrestrial Habitat	0.67
10 – Macrophytes	0.60
TOTAL	**0.65**
CATEGORY	**Average**

Analysis of aerial imagery indicates that the pond has historically been isolated within the landscape, surrounded predominantly by intensive arable fields. This longstanding landscape configuration suggests that the pond has remained ecologically disconnected from other suitable habitats, limiting opportunities for species such as great crested newts (GCN) to disperse through the area. The extensive arable land surrounding the pond presents a hostile environment with limited cover, resources, and safe commuting routes for amphibians. Consequently, this isolation significantly reduces the likelihood that GCN would be able to traverse the surrounding habitat to access the pond for breeding, foraging, or resting purposes. This landscape context further supports the conclusion that the site and its immediate surroundings offer low suitability and connectivity for GCN populations.

In addition to the pond assessed on site, there are two further ponds located within 500 metres of the site boundary. Pond 2 (P2) is situated approximately 420 metres to the southwest, and Pond 3 (P3) is located around 450 metres to the northwest of the site. While these ponds fall within the maximum dispersal range typically associated with great crested newts (GCN), their ecological connectivity to the site is significantly constrained by the surrounding landscape.

	Both P2 and P3 are separated from the development site by expanses of intensively managed arable land, which present suboptimal and potentially hazardous conditions for commuting or foraging newts. Arable fields generally offer little to no cover, lack suitable foraging resources, and are subject to regular disturbance through ploughing, pesticide application, and harvesting activities, all of which can result in increased mortality risk for amphibians moving across the landscape. These areas also tend to lack linear features such as hedgerows, field margins, or ditches that GCN may otherwise use as dispersal corridors. Additionally, the site provides limited suitable terrestrial habitat for amphibians given the lack of optimal habitat (i.e. scrub, rank grassland). The areas of hard standing and amenity grass offer sub-optimal habitat for terrestrial amphibians. Given this limited habitat connectivity and the absence of high-quality terrestrial habitat between the site and the ponds, it is considered unlikely that GCN would successfully commute from either P2 or P3 to the development site or pond 1. As such, while these ponds are within the theoretical dispersal distance, the functional ecological separation imposed by the surrounding land use means that the likelihood of GCN presence within the site remains low.
Foreseen Impacts	The proposed development is anticipated to result in the disturbance of 0.03ha of frequently mown modified grassland only. This habitat removal is small in extent and the grassland does not retain any refuge value and thus will not represent a GCN/ amphibian resting place. The risks associated with the development are therefore very low, being limited to individual newts that may cross the sites for transient periods only during construction.
Recommendations	Owing to the nature of the proposed development and the low potential for impacts to great crested newts, further surveys are considered to be disproportionate. A precautionary working method will be implemented for common amphibians during construction, including the following measures: • Vegetation will remain cut short (under 5cm). • Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets or removed from the site to prevent amphibians from utilising these areas.

	• Best practice pollution prevention measures will be implemented to minimise impacts to nearby aquatic habitats that amphibians could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any common amphibians are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. In the unlikely event that a great crested newt is identified, works must cease and advise must be sought from a suitably qualified ecologist.
Badger	
Summary of Survey Findings	No evidence of badger setts was recorded on site or within a 30-metre radius during the survey. The site is considered unsuitable for sett creation due to the absence of suitable soil conditions and ground structure, such as free-draining sandy soils or sloped banks, which are typically favoured by badgers for excavation. However, there is limited suitable foraging habitat within the small areas of modified grassland on site, which may support some invertebrates and occasional food resources for badgers. While the foraging value of the site itself is relatively low, the surrounding landscape is dominated by arable fields, which offer a more extensive and higher-quality foraging resource for badgers, particularly where field margins, hedgerows, or beetle banks are present. Given the extent of suitable habitat in the wider landscape, it is possible that badgers may occasionally enter the site to forage, particularly if they are active in the surrounding area. Although no direct evidence was found during the survey, the site's proximity to optimal foraging habitat increases the likelihood of occasional badger activity.
Foreseen Impacts	No works will be undertaken within 30m of a badger sett. Modified grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger populations owing to their low value and the

	presence of more extensive habitat locally. However, construction activities could result in the death or injury of badgers, if present.
Recommendations	Basic precautionary mitigation during works is recommended: • 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 habitats which badgers could use. South and west boundaries. • 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 within 30m, works must cease and advise must be sought from a suitably qualified ecologist.
Riparian animals	
Summary of Survey Findings	**EPSL applications** There are no EPSL applications within 2km of the site for riparian animals. **Onsite habitat** There are no watercourses on or connected to the site.
Foreseen Impacts	No impacts are anticipated on riparian animals as a result of the proposed development.
Recommendations	N/A
Hazel dormouse	
Summary of Survey Findings	**EPSL applications** There are no EPSL applications within 2km of the site for riparian animals.

	Onsite habitat 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.
Foreseen Impacts	No impacts are anticipated on hazel dormice as a result of the proposed development.
Recommendations	None.
Other e.g. hedgehog	
Summary of Survey Findings	The areas of modified 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. The proximity of tree cover habitat adjacent to the site further enhances the overall habitat value for hedgehogs by increasing habitat connectivity and providing additional foraging and nesting resources. The woodland edges and understorey layers are likely to support diverse invertebrate communities and offer safe cover for hedgehogs during their nocturnal movements. Collectively, these habitat components contribute to a suitable environment for hedgehogs to forage, nest, and commute, highlighting the importance of maintaining habitat connectivity and refuge features within and around the site to support this declining species.
Foreseen Impacts	Modified grassland will be removed during construction. The loss of such habitats is likely to be inconsequential to local hedgehog populations owing to their low value and the presence of more extensive habitat locally. However, construction activities could result in the death or injury of hedgehogs, if present.

Recommendations	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. **Suggested biodiversity enhancements** 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 1a: Survey/Habitat map



Appendix 1b: wider habitat



Appendix 2: Location map



Appendix 3: Proposed plan

None available at the time of writing.

Appendix 4: Photos



Figure 1: south and east elevation of B1.



Figure 2: north and west elevation of B1.



Figure 3: internal space of B1.



Figure 4: the access road



Figure 5: Pond 1.



Figure 6: modified grassland.

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