

Preliminary Ecological Appraisal

Survey site address:

Market Bosworth School, Station Road, Near Nuneaton, Warwickshire CV13 0JT

Site Location

The site is centred at National Grid Reference SK 40219 03235 and has a size of approximately 0.65ha.

Client:

David Hemstock

Survey date:

Wednesday 15th May 2024

Project:

This report is prepared to inform a planning application with the Hinckley & Bosworth Council. The proposal is described as:
The construction of astroturf, MUGA and pitch renovation with associated parking.

Survey methodology and legislation can be found in the Arbtech Supplement: [PEA Methodology and Legislation - 2024.](#)

Executive Summary

The following is a summary of baseline ecological conditions identified at the time of survey and work you will need to commission to obtain planning permission and/or comply with legislation and other policy.

The site is located adjacent to a priority habitat (deciduous woodland), and there is a risk that the site and wildlife associated with this could be harmed during development. This risk is low enough to be managed via standard precautionary approaches to vegetation clearance and construction methodology. As such, no further surveys are required but a CEMP is likely to be requested as a condition of planning consent. If vegetation is planned to be cleared before 31st August, a nesting bird check will be required.

Protective measures are recommended for retained habitats and precautionary methods of vegetation clearance/building demolition/tree felling and construction site management are detailed for reptiles, amphibians and terrestrial mammals.

Further information including conclusions, justifications, precautionary measures and opportunities for biodiversity enhancement, is provided within the body of the report.

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Version control			
Status	Issue	Name	Date
Draft	1.0	Nicholas Smith Ecological Surveyor	21/05/2024
Review	1.1	Fay Brotherhood (Hons) MSc, Habitats Specialist	29/05/2024
Final	2.0	Nicholas Smith Ecological Surveyor	29/05/2024

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate. This approach is enshrined in Government planning guidance, for example, paragraph 185 of the National Planning Policy Framework for England. The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary. (BS 42020, 2013)

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1.0 Introduction

Arbtech Consulting Limited was instructed to undertake a Preliminary Ecological Appraisal (PEA). Project, site and client details are named on the title page. A plan of the proposal will be provided in Appendix 1 (when available if not included).

No previous ecological or reports have been produced for the site to the author’s knowledge.

Information regarding aims, scope, methodology and legislation is contained the Appendices.

Surveyor Experience and Qualifications					
The site survey was undertaken by Nicholas Smith Ecological Surveyor.					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
01/05/2024	17	72	85	2	None
Limitations					
Whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report is a preliminary assessment and does not provide a complete characterisation of the site. Nor does it represent a full botanical assessment. It assesses the likelihood of protected, notable and important habitats and species being present, based on a site, landscape and habitat value-based risk assessment. This is based upon the ecology, biology and known distribution of species as currently understood. Ambiguities should trigger further survey (with respect to proportionality) and the precautionary principle must be invoked where unacceptable levels of ambiguity remain.					
Specific limitations comprised the following;					
BRD					
Whilst planning policy and professional standards usually call for the inclusion of biological records data (BRD), its purchase is considered disproportionate to the scale and impacts of the development as the site is small and likely presence of/impacts on likely ecological receptors can be predicted on a precautionary basis. As such, their inclusion is not anticipated to add significant weight to or alter the conclusions within.					
BRD WILL BE REQUIRED SHOULD THIS OR ANY SUBSEQUENT SURVEY REVEAL ANY REQUIREMENT FOR EUROPEAN PROTECTED SPECIES LICENCING AND MAY BE REQUIRED TO INFORM ANY RECOMMENDED PHASE 2 SURVEYS.					
Non-Statutory Designated Sites: Where BRD not obtained and there is no publicly available site data, no assessment of non-statutory sites could be made. A precautionary assessment of the likelihood of presence in the surrounding area was made.					

- Data gleaned from the desk study is based upon information provided by third parties. This has not been independently verified by Arbtech Consulting Limited. Publicly data from British Geological Society and the Landis Soilscales App is of low resolution and ground truthing may be required to inform any required habitat creation works. Data on Magic cannot be relied upon to capture all Important Habitats, especially where they occur at the small and fragmentary scale.

All limitations have been taken into account during the evaluation of the site and requirement for further surveys and mitigation.

2.0 Desk Study Results, Conclusions and Recommendations

Site Context and Landscape Assessment

Using Magic, Google Satellite/Bing Satellite/Historic Google Earth, historic ordnance survey, the British Geological Society Map Viewer, Landis Soils app and Non-Statutory Designated Site data within any purchased Biological Records Data (BRD) (if obtained), an assessment is made of the sites landscape context, broad wildlife value and connectivity to/context with local designated sites and habitats. A 2km zone of influence has been determined but information from farther afield is included where relevant.

Location plan in appendix 2

Landscape Assessment

Landscape Assessment

The development site is made up of an area of amenity lawn used as a sports field within a school ground with a line of trees on the southern boundary and an earth bank on the east of the development area. The site is bordered by metal fencing on all perimeters. A woodland is present adjacent to the site existing behind the fencing on the northern boundary. The geology of the site is predominantly mudstone with the soil composition consisting of base-rich loamy and clayey soils. The drainage of the site consists of slowly permeable seasonally wet slightly acidic soils. The landscape surrounding the site consists of Market Bosworth town to the south and east with pasture, arable land and intervening pockets of woodland to the north and west.

Priority habitats located within 2km of the site consist of lowland fens (located ~760m northeast), wood pasture and parkland BAP (located ~400m east) and deciduous woodland (located ~130m northwest). Designations located within 2km of the site comprise Ashby Canal Site of Special Scientific Interest (SSSI) (located 1,800m northwest). There is one pond located within 500m of the site, approximately 160m west. There is poor connectivity to the pond due to intensely managed agricultural fields located between the site and pond and the site being fenced on all perimeters.

The nearest Important Plant Area is located 35km west of the site and is named Midland Meres and Mosses Important Plant Area. This is unlikely to be contextually relevant to the site due to the distance between the sites.

Designated Sites Impact Assessment

This below summarises the presence of and likely impacts upon any designated sites or within 2km and includes any further work you will need to commission to obtain planning permission or comply with legislation for other consent. Offsite Important Habitats are addressed in Section 3.0.

Summary

Local Sites

The site is not subject to any statutory or known non-statutory designation.

	The presence of non-statutory designated sites within 2km of the site cannot be established without data from the local Biological Records Centre, however the habitats in the immediate environs of the site are not deemed likely to host designations. <i>National Network Sites</i> The nearest National Network Site/International importance (SAC, SPA, Ramsar), is River Mease SAC which lies 4km east of the site. <i>Connectivity & Functional Linkages</i> There is no direct connectivity between any statutory sites due to distance and the presence of connectivity disrupting barriers.
<i>Foreseen Impacts</i>	<i>Local Sites</i> No impacts to designated sites are anticipated due to the small scale and distance from the development. In addition to the general lack of connectivity between the site and designated sites.
<i>Recommendations</i>	<i>Local Sites</i> None required. As the site lies within the Impact Risk Zone for Ashby Canal SSSI., the Local Planning Authority (LPA) may be required to consult with Natural England regarding potential impacts.

3.0 Plants and Habitats – Survey Results, Conclusions and Recommendations.

The habitats and present within and adjacent to the site are listed below and described with photographic illustration in the following table. They are illustrated in Appendix 3.

Onsite Habitats and plants (see habitat map in Appendix 1, and proposal plan in Appendix 3).	
Habitats on site are described and pictured below, following the UKHabs V 2.0 coding system (UK Habitat Classification Working Group, 2023)	
Vegetative communities are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).	
UKHabs code and description	Photograph
g4 33 modified grassland with a line of trees The proposed development site comprised an area of modified grassland used as a sports field. Over much of its extent this is species poor, dominated by meadow foxtail <i>Alopecurus pratensis</i>, with abundant meadow grass <i>Poa annua</i>, frequent daisy <i>Bellis perennis</i> and creeping buttercup <i>Ranunculus repens</i>. Overall, there 4 species , with a sp/m² of 2-3. The sward was dense and well developed with no signs of disturbance. The site was intensely managed, being mowed a number of times a year, resulting in a short sward length of ~5cm in height. A gappy line of trees was present along the southern border of the site. Species comprised three semi-mature silver maple <i>Acer saccharinum</i> and three semi-mature ash <i>Fraxinus excelsior</i>.	

	
g3c 112 other neutral grassland, earth bank An earth bank was present in the southeast of the site. Species on the bank was dominated by daisy and meadow grass, with frequent mouse-eared chickweed <i>Stellaria media</i>, yarrow <i>Achillea millefolium</i>, germander speedwell <i>Veronica chamaedrys</i>, occasional wood avens <i>Geum urbanum</i>, Herb-robert <i>Geranium robertianum</i>, bracken <i>Pteridium aquilinum</i>, hedge woundwort <i>Stachys sylvatica</i> and rarely present ribwort plantain <i>Plantago lanceolata</i> and holly sapling <i>Ilex aquifolium</i>. A singular young oak tree <i>Quercus robur</i> is located on the earth bank.	

u1b Developed land, sealed surface A tarmac path was present in the east of the site.	
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Results, Conclusions and Recommendations	
Plants and Habitats	
Summary of Survey Findings	The site is not located within an Important Plant Area. Nor is it reasonably close to/contextually related to one. The site is evaluated for the presence of important on or offsite habitats (e.g Local Biodiversity Action Plan/list habitats-Habitats of Principal Importance (e.g. those under S.41 NERC Act) -Annex 1 Habitats Directive habitats (International importance) -Irreplaceable habitats, which once lost cannot be recreated (Technical note T3 of CIEEM et al, 2019, National Planning Policy Framework 2023, Irreplaceable Habitat Regulations 2024¹) and other notable habitats such as waxcap grasslands)). It is also evaluated for the presence of important plants, (e.g Schedule 8 Protected Species and Schedule 5 Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019), Species of Principal Importance s.41 NERC Act 2006 (England), locally or nationally endemic, red listed, nationally rare/scarc species, species at the edge of their range, species on local biodiversity lists, species representing first local or UK records and common species present on sites containing a large proportion of the species local or regional population).

¹ The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024. <https://www.legislation.gov.uk/uksi/2024/48/contents/made>

	This is achieved via assessment for the presence of features indicative of important habitats and species; e.g. old hedges, old walls, low nutrient soils, coastal areas, wetlands, watercourses and ponds, exposed rock faces, previously developed and post-industrial land, sites with potential INNS issues, semi or unimproved grassland, woodland, old lawns and verges, positive indicator species for important habitats (axiophytes). Offsite Important habitats are present within 2km of the site, the closest being deciduous woodland. The development will not sever connectivity between it and any offsite habitats. Onsite All habitats on site common and ubiquitous. No notable or otherwise important habitats are likely to be present on site, however those present do provide habitat value to local wildlife. Important Species The site is unlikely to contain any “Important” plant, fungi or bryophyte species or assemblage.
Foreseen Impacts	Offsite The proposed development is not anticipated to cause any impacts to offsite habitats due to the small scale and low overall impact of the development, alongside additional factors such as distance in combination with connectivity disrupting barriers. Due to the proximity of the site to a priority habitat (deciduous woodland), direct and indirect impacts resulting from dust, pollution of ground water, excessive noise or damage to offsite habitats and trees could occur during construction. The proposed development will not sever/damage intervening habitat linkages between offsite habitats and the site. Onsite No impacts foreseen affecting important onsite habitats. Common and ubiquitous habitats will be lost from the site. This is unlikely to be of particular conservation concern but will incur a Biodiversity Net Loss. Plants No impacts foreseen on Important Plants.
	Further Surveys No further surveys required, because the habitats were confidently identified as the survey was taken out within optimal season.
Recommendations	Habitat and Connectivity Retention

Site design must aim to retain existing green infrastructure and encapsulate existing trees, hedgerows, turf, and other habitats within the development wherever possible to ensure no net losses of biodiversity and the maintenance of landscape level ecological functionality. It must avoid the severance/destruction or long-term degradation of any green infrastructure likely to provide dispersal routes, direct connectivity or stepping stone habitat between the site and habitats/designated sites within the wider landscape.

Where destruction or damage is unavoidable, the loss must be compensated/damage mitigated via remediation or new habitat creation.

Habitat Protection

Best practice precautionary measures to minimise the possibility of ground and surface water pollution, dust deposition and direct or indirect damage to retained and adjacent habitats must be implemented during construction. A Construction Environment Management Plan (CEMP) may be required as a condition of consent. Strategies detailed within are likely to include;

- 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).
- Grasscrete, cell web or any other porous surface treatment facilitating recovery of vegetation is preferred to hard standing.
- 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.
- Use of plastic matting, ply, cellweb or a similar appropriate product to protect retained turf.
- Remove only the minimum of habitat required to facilitate the development.
- Adherence to COSHH.
- Industry standard guidelines for dust and noise suppression.

Biodiversity Net Gain (BNG) and BNG Management Plan/Ecological Enhancement Plan.

LPA may request an Ecological Management and Enhancement Plan (or some variant thereof) to ensure the site achieves gains in biodiversity in line with its duties under the NPFF (2023). This will include compensation of habitats lost, the incorporation of integrated bat, bird and bee boxes, native and wildflower friendly plantings and the installation of new habitats such as wildflower turf. This is likely to be requested via condition and will detail both the inclusion and specifications of integrated bat and bird boxes and other taxa specific features.

BNG Qualifying

The development will be required to demonstrate a minimum 10% biodiversity net gain through use of the Defra Biodiversity Metric as detailed within [Schedule 7A of the Town and Country Planning Act 1990 \(as inserted by Schedule 14 of the Environment Act 2021\)](#) as the removal of neutral grassland will decrease the biodiversity value of the site in terms of a loss of habitat units.

	This will be informed by a 30-year Biodiversity Net Gain Management Plan. The responsibilities associated with this will be set out in a legal agreement ² .
Invasive / Non-native species (INNS)	
<i>Summary of Survey Findings (Invasive Species Risk).</i>	Non-native and invasive species refer to those listed on Schedule 9 of the Wildlife and Countryside Act (1981). Other species are not listed as such but are problematic species in certain circumstances and are addressed case by case. The survey was carried out in the optimal period for surveying vegetation and no non-native invasive or otherwise problematic plants were recorded on site.
<i>Foreseen Impacts</i>	No invasive species issues foreseen.
<i>Recommendations</i>	No further surveys but remain vigilant. When designing the planting scheme for the new garden areas, the planting of any Schedule 9 invasive species, or any other non-native woodland plants likely to escape into any semi natural habitats on site or adjacent must be avoided.

² <https://www.gov.uk/guidance/understanding-biodiversity-net-gain#measuring-biodiversity->

4.0 Conclusions, Impacts and Recommendations - Fauna

Results, Conclusions and Recommendations -	
Ecological Survey Factor	The below evaluates the results of the survey. table includes any further work you will need to commission to obtain planning permission or comply with legislation for other consent. Enhancements are listed at the end of the report.
Trees	
Summary (Trees)	None/ negligible There is a lack of suitable decay or damage features with roosting habitat value or low likelihood of there being any.
Foreseen Impacts	There is an acceptably low likelihood that bats are roosting within all trees and as such, there are not anticipated to be any impacts on bats as a result of the proposed development.
Recommendations (Trees)	None.
Foraging & Commuting Bats	
Summary	Habitats on site provide habitat value for foraging and commuting bats but are unlikely to be of particular importance to the integrity of roosts beyond the site due to the presence of extensive similar surrounding habitat.
Foreseen Impacts	The loss of habitats on site is likely to be inconsequential to local bat populations due to the presence of similar local habitat of sufficient acreage to continue supporting foraging and nesting birds. Any new lighting could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas.
Recommendations	None. 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 ³ .
Birds	

³Bat Conservation Trust/Institute of Lighting Professionals (2023). Guidance Note 8 Bats and Artificial Lighting. <https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

Summary	No evidence of nesting birds was found during the survey, however birds could use the vegetation on site for nesting and foraging.
Foreseen Impacts	Active nests could be destroyed during the development, leading to their abandonment. The loss of habitats on site is likely to be inconsequential to local bird populations due to the presence of similar local habitat of sufficient acreage to continue supporting foraging and nesting birds. However, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.
Recommendations	Works should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the trees will be undertaken immediately prior to the commencement of works. All active nests will need to be retained until the young have fledged.
Invertebrates	
Summary of Survey Findings	The PEA assesses the sites habitat value for protected and otherwise Important Species of invertebrate. These include; Schedule 8 Protected Species Wildlife & Countryside Act, 1981 (as amended) and Schedule 5 Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019), Species of Principal Importance s.41 NERC Act 2006 (England), endemic, red listed, nationally rare/scarce species, species at the edge of their range, species on local biodiversity and rare lists and common species present on sites containing a large proportion of the species local or regional population. The site is not located within a Buglife Important Invertebrate Area⁴ Nor is it reasonable close to/contextually related to one. Informed by Natural England (2006/7) guidelines⁵, the site is assigned the following preliminary value for invertebrates. Low Invertebrate Interest The site contains features of value for invertebrates. However, these are limited in their value by poor management and isolated habitat and are deemed likely to support a commonplace and ubiquitous assemblage. The habitats on site are unlikely to support Important Species and specialist assemblages, or a large proportion of a commonplace species local or regional population because the site is intensely managed.
Impacts	No/Minor Habitat Loss – Retained/Created habitat likely to be managed appropriately over 30 years The development will result in an insignificant loss of invertebrate habitat. Sufficient habitat of invertebrate value will be retained to maintain the sites current populations. Long-term management, which includes a relaxed mowing regime is anticipated to retain and enhance the invertebrate value of the site. The

⁴ Buglife. Important Invertebrate Areas. <https://www.buglife.org.uk/our-work/important-invertebrate-areas/>

⁵ Drake et al., (2007). Natural England Research Report NERR005 Surveying terrestrial and freshwater invertebrates for conservation evaluation

	development is anticipated to have negligible impact upon invertebrates. Future management/habitat creation is likely to result in net gains for invertebrate biodiversity.
Recommendations	No further survey work recommended.
Amphibians	
Summary of Survey Findings	Great crested newts exist in metapopulations and persistence within a landscape requires free, unimpeded movement between breeding ponds and intervening, invertebrate and refugia rich terrestrial habitat with good connecting linkage habitat (e.g. hedgerows) during the migratory parts of their life cycle. Most adults are thought not to range far beyond 250m from their breeding ponds but scattered, transient individuals may occur up to 500m from breeding ponds (Langton <i>et al.</i> 2001).⁶ Section 41 Species of Principal Importance the common toad exhibits similar landscape requirements in terms of its migration between breeding ponds, although its waterbody requirements are more cosmopolitan⁷ Adult amphibians spend a significant proportion of their life cycles on land, with most of their time in water comprising the breeding season. Their terrestrial requirements must provide abundant ground ranging invertebrate food items and sufficient cover to avoid predation and dessication. The site is considered sub-optimal for GCN because there is a lack of ponds surrounding the site, however common amphibians may be present as occasional. Ponds One pond is present within 250m, which means any population present is likely to comprise transient individuals at low density and scattered distribution. Landscape Connectivity The local landscape exhibits high levels of complexity and there is good connectivity to the wider landscape. Dispersal routes around the landscape are relatively unimpeded by major barriers such as principal roads, large gaps between hedgerow sections and major/fast flowing watercourses, thus enabling migratory amphibians such as GCN and common toad to migrate without obstruction. Other amphibians The site has no meaningful connectivity to any habitats in the locale known to host populations of the European Protected Species natterjack toad, nor does the site provide for their specialist habitat requirements (shallow, usually temporary ponds within sparsely vegetated terrestrial habitat such as heathland that may be too arid for other species). In addition their populations are scattered and their dispersal abilities low. It is therefore considered highly unlikely that they would be present on site.

⁶ Langton *et al* (2007). Great Crested Newt Conservation handbook. https://www.froglife.org/wp-content/uploads/2013/06/GCN-Conservation-Handbook_compressed.pdf

⁷ Baker, J., Beebee T., Buckley, J., Gent, A. and Orchard, D. (2011). Amphibian Habitat Management Handbook.

Amphibian and Reptile Conservation, Bournemouth. <https://content.freshwaterhabitats.org.uk/2018/06/amphibian-habitat-management-handbook-full.pdf?>

Foreseen Impacts	Grassland will be removed during construction. The loss of such habitats is unlikely to have adverse effects on local amphibian populations owing to the presence of similar well-connected habitat of a size capable of supporting a viable population. However, site clearance could result in the death or injury of common amphibians and GCN if present.
Recommendations	Given the size and limited likely impacts of the proposed development, further surveys are considered disproportionate. Instead, a precautionary working method during construction is considered appropriate to ensure no amphibians (or other herptiles) are unduly harmed and no offence is caused. This will include the following measures: • The vegetation within the work zone will be maintained at a low level (~5cm) to make it inhospitable to amphibians. • Any rubble piles will be dismantled by hand and debris and brash will be stored on pallets away from site boundaries or retained vegetation or removed from the site to prevent amphibians from utilising these areas. • Best practice pollution and habitat damage prevention measures will be implemented to minimise impacts to retained habitats that amphibians could use. • Any chemicals or pollutants used or created by the development must be stored and disposed of correctly according to COSHH regulations. • All trenches will be closed at the end of the day or left with a ramp to enable amphibians to escape. They will be checked prior to closing. • If any common amphibians are found in the working area these should be encouraged to move away of their own volition. If for any reason they are unable to do so, they will be moved by gloved hand to a bucket or other suitable container and transported to vegetated area away from disturbance. In the unlikely event that a great crested newt or other protected amphibian is identified, works must cease and advice must be sought from a suitably qualified ecologist.
Reptiles	
Summary	The site contains features of value to reptiles in the form of grassland and is well connected to other suitable habitats within the landscape, including woodland connected to the site via tree lined fields. The site has no habitat value for, or connectivity to any sites known to host the protected smooth snake or sand lizard.
Foreseen Impacts	The loss of habitats on site is likely to be inconsequential to local reptile populations owing to the retention of surrounding habitat containing similar features of an extent sufficient to support the continued functioning of the population. However, site clearance could result in the death or injury of reptiles, if present on site during construction.
Recommendations	Precautionary Measures The precautionary working method detailed for amphibians will protect reptiles during construction.

Badger	
Summary of Survey Findings	Suitable foraging habitat for badgers found on site. No badger setts found on site or within 30m of the proposed development.
Foreseen Impacts	No works will be undertaken within 30m of a badger sett. Sandy bare ground will be removed during construction. The loss of such habitats is likely to be inconsequential to local badger populations owing to the presence of more extensive habitat locally. However, construction activities could result in the death or injury of badgers, if present.
Recommendations	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. - In the unlikely event that a badger becomes trapped within the construction zone, it should be encouraged to move away of its own volition. If it is unable to do so or is injured, a specialist wildlife carer should be contacted to remove the animal as a trapped badger may exhibit fear-based aggression. - 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 new badger sett is identified, works must cease and advice must be sought from a suitably qualified ecologist.
Hazel dormouse	
Summary of Survey Findings	Dormice typically require a three-dimensional habitat structure permitting them to move around the landscape without coming to ground or crossing open space. Flower, berry and nut producing vegetation is required to provide foraging opportunities. Typical suitable habitats include dense, tall, wide well-connected native hedgerows, dense bramble stands, mixed scrub and woodland with a dense understory of bramble/recent coppice. They will however come to ground to hibernate in leaf litter and amongst cavities associated with tree buttresses. For isolated habitats in the UK, research indicates that dormice require at least 20ha of woodland habitat to support a viable population (Bright <i>et al.</i> 1994). They can also thrive in landscapes where woodland is small but plentiful and commutes between blocks are reasonably short and unfragmented. Generally treeless landscapes, such as intensive arable landscapes, which are characterised by closely flailed, low, post enclosures act hedgerows are generally sub-optimal. The site provides no suitable habitat for dormice and whilst it does have some connectivity to the wider landscape, they are unlikely to be present on site. No dormouse EPSL's have been granted within 4km and as such no displaced dormice from failed mitigation works are likely to have found harbourage on site (This must not be interpreted as evidence of absence).
Foreseen Impacts	The proposed development is anticipated to have no impact on hazel dormice.
Recommendations	None.

Other e.g. hedgehog, hare, small mustelids, harvest mouse.	
Summary of Survey Findings	There is suitable habitat onsite for terrestrial Section 41 Species of Principal Importance under the NERC Act (2007) terrestrial mammals such as hedgehog .
Foreseen Impacts	There will be no significant loss of small terrestrial mammal habitat during construction, however construction activities could result in the death or unnecessary suffering of small mammals if present, the latter of which constitutes an offence under the Wild Mammals (Protection) act 1996.
Recommendations	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 vegetation within the work zone will be maintained at a low level (~5cm) to make it inhospitable to mammalian fauna. - Where extensive areas of vegetation must be cleared, a two phased cutting methodology will be employed in which vegetation is cleared from the middle of the site outward, to permit escape and avoid trapping wildlife in the centre. vegetation is cut to approximately 30cm and is left to allow animals to disperse. Following this, it will be cut to ground level and maintained at 5cm for the duration of development. - The site will be checked for trapped hedgehogs and other small mammals prior to development and each morning before the commencement of work. - If any hedgehogs or other small mammals are found in the working area these should be encouraged to disperse of their own accord or, if at immediate risk, should be moved by gloved hand to a sheltered, vegetated area away from disturbance. NOTE: Unless it has become trapped within the development site during the previous night, a hedgehog seen out during the day (particularly in winter) is exhibiting abnormal behaviour and may be in need of specialist care, even if it appears well. Please contain the animal in a box and contact a local hedgehog carer for advice. - 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 and other nocturnal fauna could use. - Any chemicals or pollutants used or created by the development must be stored and disposed of correctly according to COSHH regulations.

5.0 Enhancements

Biodiversity Enhancements

The Local Planning Authority has a duty to ask for enhancements under the NPPF (2023) and the biodiversity policies outlined within any local or regional plan.

Plants and Habitats

- Native tree, hedgerow, shrub planting.

Invertebrates and Herptiles

- Use of larval food plants
- Creation of refugia and hibernacula using debris and brash from site clearance.
- Planting of bramble in areas receiving full sun.

Bats

- Planting moth food and nectar plants such as night flowering catchfly, honeysuckle and Jasmine.

Hedgehogs and other Mammals

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

- Planting fruit and nut bearing trees and species-rich grassland to increase foraging opportunities.
- Creation of brash piles or installation of hedgehog houses in shady areas.
- Installation of 13 x 13cm (square) gaps under boundary fencing to enable hedgehogs to move freely through the site.

5.0 Bibliography

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Appendix 1: Proposed Development Plan



Appendix 2: Site Location Plan



Appendix 3: Habitat Survey Plan

