

Preliminary Ecological Appraisal and Roost Assessment

Survey site:

Land West of Oakleigh Acres, Draycot Cerne, Chippenham, Wiltshire SN15 5LH

Client:

Mr Daren Barnsley

Survey date:

25th September 2024

Project:

This report is prepared to inform a planning application with the Wiltshire Council. The proposal is described as:
The construction of a new premises for transport business, comprising new building and associated hardstanding.

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.](#)

Site Location and Context					
The survey site is centred on National Grid Reference ST 92277 79395 and has an area of approximately 1.7ha. The site comprises a section of a fallow agricultural field which has not been in rotation for several years, though appears to be regularly managed to control the growth. No significant field margins are present. Aerial imagery shows the local landscape to consist of a mix of commercial warehousing to the west and mixed rural habitats to the southeast and north with a Truckstop to the east beyond the neighbouring field.					
Survey Details					
The site survey was undertaken by Hayley Roberts, Senior Ecologist (Natural England licenced for bats (Level 2), great crested newts <i>Triturus cristatus</i> and barn owl <i>Tyto alba</i>. Hayley holds a FISC Level 4 qualification and is accredited for River Condition Assessment (RCA).					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
02/10/2024	19	83	100	5	n/a
Executive Summary					
The development proposals have minimal impacts on biodiversity, with no significant impacts on protected species expected provided sensitive lighting is implemented. The affected area exceeds 25m² therefore proposals will require a Biodiversity Net Gain (BNG) assessment to be undertaken. No further impacts are expected.					
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, and the known distribution of species as recovered during the searches of historical biological records.					

Ecological Survey Factor	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.
Conclusion, Impact or	
Recommendations	

Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, proposal plan in appendix 3 and photos in appendix 4). Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).	
Summary of Survey Findings (UKHab codes used)	The site does not contain any habitats listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). However, the site contains seven scattered trees which are of good quality and could be of value to local wildlife populations (as detailed in subsequent sections of this table). Other habitats within the site comprise [g3c] other neutral grassland and introduced shrub. Full descriptions are detailed below. On-site habitat descriptions [h2] – hedgerows [c1] (605) – fallow agricultural field [h3] (10) Scattered scrub [c1] (604) Fallow agricultural field The main body of the field was a former arable field which appears to have been left fallow for some time and regularly topped to control vegetation regrowth. Vegetation cover was superficial with bare ground visible throughout and little grass cover was present in the field with arable weeds dominating. Where present, grasses comprised, creeping bent <i>Agrostis stolonifera</i> (R), perennial rye <i>Lolium perenne</i> (R) and Yorkshire fog <i>Holcus lanatus</i> (R). The field was dominated by forbs including black medick <i>Medicago lupulina</i> (A) with white clover <i>Trifolium repens</i> (F), red clover <i>Trifolium pratense</i> (O), knotgrass <i>Polygonum</i> sp. (F), creeping buttercup <i>Ranunculus repens</i> (O), common ragwort <i>Jacobaea vulgaris</i> (O), broadleaved plantain <i>Plantago major</i> (O), hemlock <i>Conium maculatum</i> (R), scarlet pimpernel <i>Anagallis arvensis</i> (R), field pansy <i>Viola arvensis</i> (R), spear mint <i>Mentha spicata</i> (R), hoary mullein <i>Verbascum pulverulentum</i> (R) and imperforate St. John's wort <i>Hypericum maculatum</i> (R). The agricultural field does support a range of common and widespread species, however given the nature of the site as a former arable field (now fallow), the area is heavily enriched and transient in nature, therefore it is of limited intrinsic ecological value. No species of conservation concern were observed. [h2] hedgerows The western boundary of the site is marked by a poor-quality hedgerow (H1) with little cover by woody species and higher coverage of ruderals. The average height of the hedgerow was 1-1.5m and comprised spindle <i>Euonymus europaeus</i>, elder <i>Sambucus nigra</i>, snowberry <i>Symphoricarpos albus</i>, blackthorn <i>Prunus spinosa</i> and privet <i>Ligustrum vulgare</i> with bindweed <i>Calystegia sepium</i>, black bryony <i>Dioscorea communis</i> and woody nightshade <i>Solanum dulcamara</i> relatively abundant at the base. Two mature oak <i>Quercus robur</i> trees were present within the hedgerow, both of which supported numerous areas of deadwood. The northernmost tree appeared to have been subject to pruning by the neighbouring development which has reduced the canopy notably. H1 was assessed as being in poor condition (Appendix 5).

	The southern boundary of the site was marked by an unmanaged hedgerow (H2). H2 appeared to be lacking recent management, and as a result lacks dense growth low down the plants, with tall leggy growth characterising the hedgerow. H2 stood at approximately 3m high. Species present included one ash tree <i>Fraxinus excelsior</i>, wild clematis <i>Clematis vitalba</i>, field maple <i>Acer campestre</i>, hawthorn <i>Crataegus monogyna</i>, dog rose <i>Rosa canina</i>, and wych elm <i>Ulmus glabra</i>. H2 was assessed as being in moderate condition (Appendix 5) <u>[h3] (10) Scattered scrub (offsite)</u> A small area in the far southwestern corner of the site supports an area not managed within the former agricultural rotation. This area is not species rich but supports early-developed privet over an unmanaged section of the arable field typically comprising cocksfoot at the ground level. This has been categorised as scattered scrub however does not form a mosaic as is typically expected with this habitat type. Local notable habitats There are four habitats of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006) as well as one notable habitat within 2km of the site. The site itself does not contain any of the habitats listed in the table below. <table><tr><th>Habitat type</th><th>Designation</th><th>Distance and direction from site (km)</th></tr><tr><td>Ancient semi natural woodlands</td><td>NERC BAP</td><td>1.5 E</td></tr><tr><td>Deciduous Woodland</td><td>NERC</td><td>0.86 NE</td></tr><tr><td>Woodpasture and Parkland</td><td>NERC</td><td>0.98 E</td></tr></table> Patches of lowland mixed deciduous woodland (LMDW) are present in close proximity to the site. The closest is located ~0.11km to the northwest, with a second patch of LMDW ~0.14km to the southeast. The trees on-site likely have no functional connectivity to these patches of woodland. LMDW is classed as a priority habitat under Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006. Further priority habitats are present within 2km of the site, including floodplain grazing marsh and good quality semi-improved grassland, though these are sufficiently separated that onsite works will not adversely affect these habitats. An offsite woodland is situated immediately to the southwest of the site. This woodland block primarily comprises Huntingdon elm <i>Ulmus x Hollandia</i> of a single age class with very occasional bramble <i>Rubus fruticosus</i> agg and ash. This woodland will be protected in accordance with an approved Tree Protection Plan.	Habitat type	Designation	Distance and direction from site (km)	Ancient semi natural woodlands	NERC BAP	1.5 E	Deciduous Woodland	NERC	0.86 NE	Woodpasture and Parkland	NERC	0.98 E
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Foreseen Impacts	On-site habitats The habitats on-site are widespread and not notable; however the proposed development will result in the loss of ~30m² (0.003ha) sparsely vegetated land and introduced shrub. This is likely to have a minimal impact on biodiversity due to the low ecological value of these habitats.												

	Notable habitats No impacts to any notable habitats are anticipated provided a suitable Tree Protection Plan is implemented.															
<i>Recommendations</i>	On-site habitats Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012). Biodiversity net gain The Environment Act (2021) requires all developments (excluding exemptions) to deliver a 10% net gain in biodiversity. This is mandatory all developments with are not subject to an exemption. Therefore, the planning application must be accompanied by a landscaping/habitat creation and enhancement strategy, biodiversity net gain calculations and a habitat management and monitoring plan to ensure the proposed development delivers a 10% net gain.															
Locality and Designated Sites																
<i>Summary of Survey Findings</i>	On-site designations The site is not subject to any designation. Statutory designated sites (within 2km) There is one statutory site within 2km of the site, as detailed below: <table><tr><th>Designated site name and Ref</th><th>Reason for notification</th><th>Distance and direction from site (km)</th></tr><tr><td>Stanton St Quinton Quarry and Motorway Cutting (SSSI) Ref:1000868</td><td>Designated for geological purposes</td><td>0.3km East</td></tr></table> Non statutory sites within 2km of the site are detailed in the table below: <table><tr><th>Designated site name and Ref</th><th>Reason for notification</th><th>Distance and direction from site (km)</th></tr><tr><td>Manor Farm Brook Fields</td><td>Three small pastures in a shallow valley on oolitic limestone separated by a brook and scrub woodland. Supports areas of unimproved calcareous grassland on steeper slopes.</td><td>1.9km southwest</td></tr><tr><td>Kington Meadows</td><td>A small field with damp neutral grassland communities, now subdivided and partially within a garden.</td><td>2km south</td></tr></table>	Designated site name and Ref	Reason for notification	Distance and direction from site (km)	Stanton St Quinton Quarry and Motorway Cutting (SSSI) Ref:1000868	Designated for geological purposes	0.3km East	Designated site name and Ref	Reason for notification	Distance and direction from site (km)	Manor Farm Brook Fields	Three small pastures in a shallow valley on oolitic limestone separated by a brook and scrub woodland. Supports areas of unimproved calcareous grassland on steeper slopes.	1.9km southwest	Kington Meadows	A small field with damp neutral grassland communities, now subdivided and partially within a garden.	2km south
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		The shrubbery	A small ancient replanted woodland set in parkland with a stream running along the southern boundary.	1.8km southeast	
		North Draycot Park	Old parkland - a high concentration of very old oak trees (many pollards) in semi-improved grassland.	1.65km east	
		Swinley Meadow	Small, single semi-improved field with patches of richer grassland.	1.8km southwest	
		Seagry Wood and Oak Hill	Mixed conifer and Sweet Chestnut plantation on an ancient woodland site. Located on gently sloping land on clay and greensand with a rich ground flora including abundant Bluebells.	1.8km northeast	
		Ell Wood	Mostly semi-natural ancient woodland on Kellaways sands and clay.	1.7km northeast	
Non-statutory designated sites The non-statutory sites are sufficiently spaced from the site that no impacts are anticipated to occur as a result of works associated with the development proposals, nor during its operational phase.					
<i>Foreseen Impacts</i>		Statutory and non-statutory designated sites No impacts to designated sites are anticipated due to the distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers.			
<i>Recommendations</i>		Statutory and non-statutory designated sites None required.			
Invasive / Non-native species					
<i>Summary of Survey Findings</i>		No Schedule 9 species were identified on the site, though snowberry was noted at the western boundary. This is not listed on Schedule 9 of the Wildlife and Countryside Act (1981) but can spread vigorously to neighbouring habitats if not controlled.			
<i>Foreseen Impacts</i>		None anticipated with respect to Schedule 9 listed species, however snowberry could continue to spread.			
<i>Recommendations</i>		No specific recommendations, however, control of snowberry spread in the long term is advisable.			
Invertebrates					
<i>Summary of Survey Findings</i>		No invertebrate records within 2km of the site were returned in the data search carried out by WSBRC. This is likely a result of a lack of survey in the area rather than their absence. Despite this, the habitats present on-site, including the arable weeds and trees, likely provide common invertebrates with opportunities to forage and shelter. The site contains no further notable habitats which may provide niches for specialised or protected invertebrates.			

<i>Foreseen Impacts</i>	Removal of much of the arable field is expected to facilitate the new building and hardstanding. 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, including a wider rural setting.
<i>Recommendations</i>	No further surveys.
Bats	
<i>Summary of Survey Findings</i>	EPSL data A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. There is no EPSL's granted within a 2km radius of site. The data search returned records of common pipistrelle (roosts and audio calls), soprano pipistrelle (audio calls), noctule (audio call), serotine (roost), Natterer's bats (roost), greater horseshoe bat (audio recording) and lesser horseshoe bat. Due to the sensitive nature of roost locations, these have been withheld, however the data search demonstrates the presence of a diverse mix of bat species within 2km of the site, some of which are noted to be light sensitive. Foraging and commuting habitat Habitats recorded on site are assessed as providing minor foraging and commuting opportunities for bats in the form of the boundary hedgerows. These habitats are likely to provide micro-climatic conditions that support invertebrates that will in turn provide minor foraging opportunities for local bat populations. Roosting habitat Details of the roosting features supported by the buildings and trees are detailed below.
T1 (H1)	Photographs

T1 is a mature oak within the western boundary of the site. No specific features capable of supporting roosting bats were observed, however it should be noted that the tree was in full leaf at the time of the survey, therefore features higher in the canopy could be present, but obscured from view. Pruning was evident which could form roosting features in future.

This tree is scheduled to be retained.



T2 is a second mature oak within the western boundary. No specific features capable of supporting roosting bats were observed, however it should be noted that the tree was in full leaf at the time of the survey, therefore features higher in the canopy could be present, but obscured from view.

This tree is also scheduled to be retained.



<i>Foreseen Impacts</i>	Roosting habitat [Trees] The proposed development will not affect any of the features that could be used by roosting bats, as all trees and hedgerow boundaries are scheduled to be retained, and therefore any roosts associated with these features will likewise be retained. No impacts to bat roosts are anticipated.
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	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. However, the proposed development may include the use of lighting which could spill on to bat roosting, foraging or commuting habitat and deter bats from using these areas. Artificial lighting The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb or displace commuting and foraging bats.
<i>Recommendations</i>	Roosting habitat [Trees] Given that the onsite trees are unaffected by the development proposals, and no features capable of supporting roosting bats were observed on any of the trees, no impacts are anticipated and no further survey is required. Foraging and commuting habitat No further surveys are required. Artificial lighting In the event that additional external lighting is required, 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-2 but as a minimum must: • Have a warm white colour temperature (<2700K) with a peak wavelength of at least 550nm • No UV wavelengths will be used • LED luminaires only will be used for external lighting due to their sharp cut off and dimming capability. • Luminaires will be installed horizontally to ensure no upward light tilt. • Security lights will be on motion sensor set to be triggered at large objects only. • Hedgerows and trees are to be kept in darkness.
Birds	
<i>Summary of Survey Findings</i>	Hedgerow Boundaries The WSBRC returned numerous records of birds in the wider area. Of those returned, those which are of relevance to the habitats observed onsite included red wing, song thrush, fieldfare, dunnoek, sparrow, mistle thrush, wren starling, bullfinch, marsh warbler, linnet and yellowhammer, greenfinch and lesser redpoll. These species are typically associated with rural areas which are partly supported by the site, however given the very close proximity of significant new warehousing, it is highly likely that more sensitive birds in the area have been displaced.

	Few species of bird were observed on the site during the survey, with single individuals of each species observed. Those which were present were common and widespread, and comprised blackbird <i>Turdus merula</i>, woodpigeon <i>Columba palumbus</i>, pied wagtail <i>Motacilla alba</i> and carrion crow <i>Corvus corone</i>. No evidence of nesting birds was identified onsite at the time of the survey, however given the survey was undertaken outside of the main nesting season and the cryptic nature of many nest designs, this does not indicate absence of nesting onsite. The existing hedgerows and trees are considered suitable for a range of bird species to nest. Habitats as they currently exist are not suitable for ground nesting species, though could become suitable if vegetation is not managed going forwards. It is considered highly likely that nesting occurs during the main nesting season (March to August inclusive) within the hedgerow boundaries. Barn owls The site does not provide any suitable nesting sites for barn owls given the lack of buildings onsite and lack of trees with sufficiently sized cavities to support a nest of this species. The wider field is of suboptimal structure to support field voles and mice which are the primary prey for barn owls. The wider field is considered to be suboptimal with respect to foraging barn owls. Overwintering birds Due to the small size of the site and the extent and type of the habitats recorded, the site not considered suitable to support a significant assemblage of protected and/or notable birds.
Foreseen Impacts	Nesting The existing hedgerows are anticipated to be retained, therefore habitat capable of supporting nesting are anticipated to be retained indefinitely. No habitat currently suitable for ground nesting species is currently present, though could develop if the main field is allowed to grow which could result in ground nests being destroyed once works commence onsite. Increased disturbance in the area will be expected upon completion of the works, which may displace some more sensitive species. Despite this, habitats in the wider area are suitable for these species with the wider semi-rural character of the area being retained. Given this the wider area is considered to be a suitable 'sink' to accommodate any displaced individuals, therefore adverse effects are non-significant. During the works increased noise and machinery may change the ambient soundscape of the site and affect the ability of birds to hold a breeding territory. This may result in an adverse effect at a site level. Barn owls None foreseen. Overwintering birds None foreseen.

<i>Recommendations</i>	Buildings/trees The sward of the arable field must be managed at a low height to avoid increasing its suitability for ground nesting species in the intermediate time before works start onsite. This will prevent the destruction of any nests when works commence. If not kept managed and works cannot be undertaken outside of the main nesting period (March to August inclusive), the site may require nesting surveys to determine whether ground nesting species are using the site. Other onsite vegetation is scheduled to be retained, however in the event this changes or vegetation requires management, works must be done outside of the main nesting period to avoid disturbing, damaging or destroying nests. If this cannot be achieved a nesting bird check by a suitably experienced ecologist must be undertaken immediately before work begins. Any nests identified must be retained with a suitable buffer (to be determined by the ecologist) until the young have fledged. 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. The site compound during works must be situated away from the existing hedgerow boundaries to prevent noise exceeding levels which might displace nesting birds. Barn owls None required. Overwintering birds None required.
Reptiles	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site, with only historic records of grass snake and slow worm returned in the data search. Habitat suitability There is currently only one small section of the site capable of supporting common species of reptiles, comprising the area of scattered scrub in the southwestern corner of the site. This area is not currently expected to be removed and supported low density privet scrub surrounded by ruderals.
<i>Foreseen Impacts</i>	No impacts are anticipated on reptiles as a result of the proposed development.
<i>Recommendations</i>	None required.
Amphibians	

<i>Summary of Survey Findings</i>	EPSL and survey data A review of the MAGIC database returned one granted EPSL record for great crested newts within 2km of the site. This was situated approximately 1km from the nearest site boundary, though it is unclear whether this is from the north or south of the M4 corridor. Numerous records of great crested newts were returned in the data search with WSBRC. These typically, but not exclusively originated from the north of the M4 corridor. Great crested newts exist in metapopulations and are known to utilise ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton <i>et al.</i> 2001), though the M4 acts as a significant barrier to dispersal to the north. Aquatic habitat suitability (including ponds within 500m) A search of aerial imagery and OS maps found two recorded ponds within 500m of the site. These ponds are both associated with the newly built warehouses to the west as part the drainage requirement. As such these ponds are recently instated and are not intended to hold water at the surface for extended periods, and at the time of the survey, whilst supporting species of damp soils such as bulrush, no standing water was present in either pond. The offsite ponds are suboptimal for breeding newts given they hold water infrequently, and they are relatively new, and are therefore unlikely to have been colonised to a significant degree. Given this, its high unlikely these ponds are capable of supporting a metapopulation of great crested newts, with no further ponds present within 500m. On this basis it is highly unlikely that the area immediately surrounding the site forms a significant resource for great crested newts. Terrestrial habitat suitability The site provides limited suitable terrestrial habitat for amphibians given the lack of optimal habitat (i.e. scrub, rank grassland) and notable patchiness of the existing vegetation. A small area of scattered scrub provides greater opportunities however this is expected to be retained indefinitely. The remainder of the site is unsuitable and does not support sheltering opportunities for great crested newt od widespread species of amphibian.
<i>Foreseen Impacts</i>	Given the lack of suitably connected breeding ponds within 500m of the site, the presence of GCN on-site is considered unlikely and moreover the only onsite habitat expected to be affected by the development is low-density arable weeds, which provide no sheltering/refuge value to great crested newts. Impacts on great crested newts as a result of the proposed development are considered to be negligible.
<i>Recommendations</i>	It is recommended that the vegetation across the site is maintained at its currently length to avoid it becoming more suitable for great crested newts ahead of work starting. Provided this is undertaken no further measures are considered necessary and no impacts on great crested newts are anticipated.
Badger	
<i>Summary of Survey Findings</i>	The data search returned a significant record base for badgers in the area around the site, with records consistently appearing since the 1980's. Given this badgers are assumed present in the wider area.

	No badger <i>Meles meles</i> setts were noted on site or within a 30m radius of the site, though a disused mammal tunnel was noted within the southern boundary. This tunnel could not be confidently attributed to any particular species, however was smaller than typically expected for badger excavations and was also filled with leaf litter at the time of the survey indicating that it has not been recently occupied. No worn paths, no badger hair and no additional tunnels or spoil were present nearby. Based on this, it is highly likely that the tunnel is disused. No further evidence of badger activity was noted onsite, with no latrines, badger hair, worn paths, or push-throughs observed at any time.
<i>Foreseen Impacts</i>	No impacts are anticipated on badgers as a result of the proposed development, however given that badgers are active overnight and can travel significant distances they may enter the site occasionally. To account for this a precautionary working method must be applied to safeguard any individuals which may pass the site during the construction phase.
<i>Recommendations</i>	As a precaution an updated site visit must be undertaken within three months of works commencing. This is intended to update the baseline ahead of works to account for the highly active and mobile nature of badgers. This will ensure any new evidence of badgers or sett excavation is accounted for fully ahead of works starting. If a new sett is identified, or the existing tunnel looks to have been occupied, these will require monitoring before work can start. If badgers are found to be present at this time a Natural England Licence will be required for works to proceed lawfully. A precautionary working method will also be implemented during construction to protect any individual badgers which might pass through the site. This will include 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 badger could use. • Any temporarily exposed pipes must be capped when not in use. • Any spoil piles must be checked each morning for the presence of new mammal tunnels as badger will readily adopt such habitats to excavate new setts. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. If any badgers 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.
Riparian animals	
<i>Summary of Survey Findings</i>	A review of the MAGIC database returned no granted EPSL records for otters or water voles within 2km of the site though a record of otter was returned in the data search. However, there are no water courses on or connected to the site. There are also no riparian habitats present on site or within an influencing distance.
<i>Foreseen Impacts</i>	No impacts are anticipated on riparian animals as a result of the proposed development.

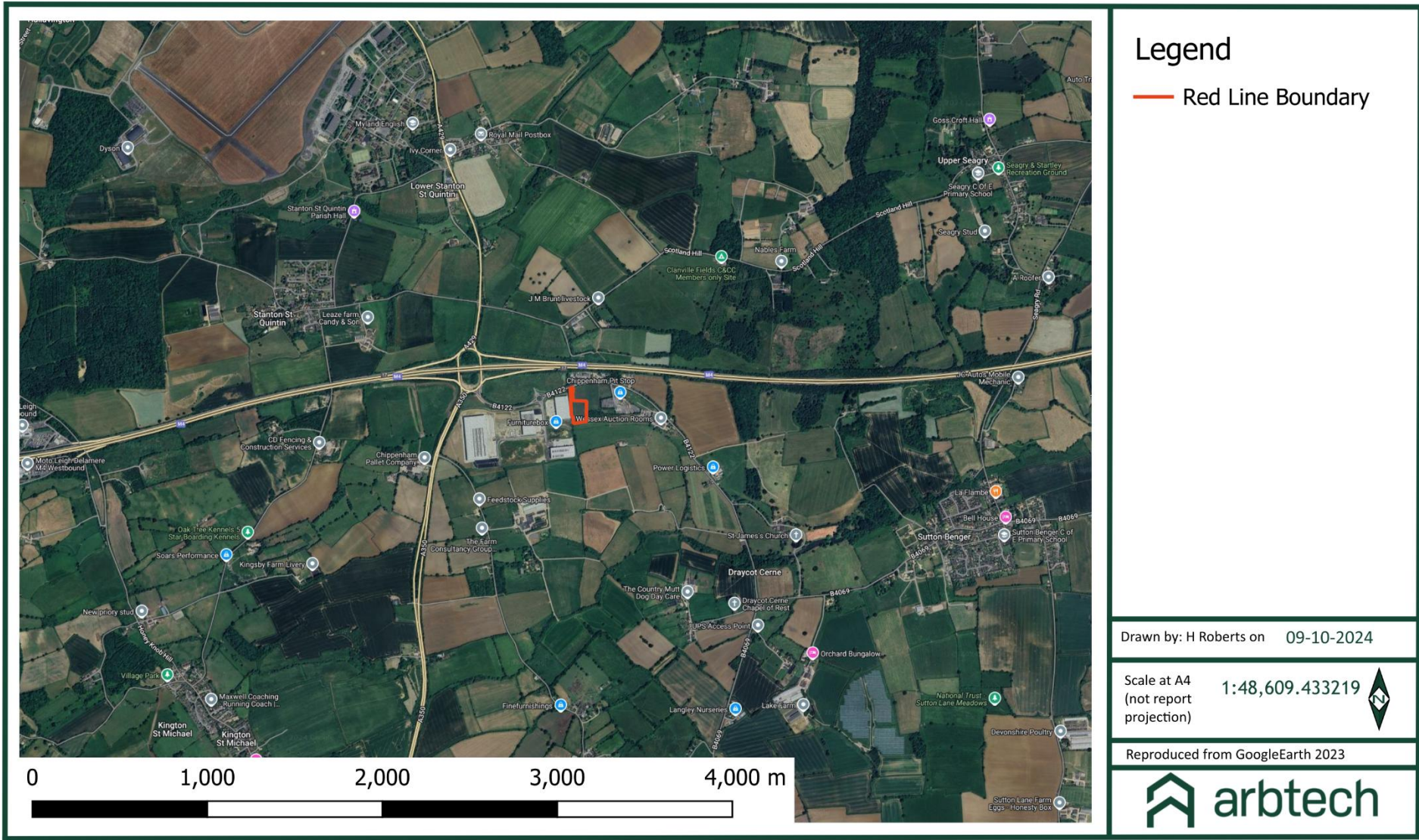
<i>Recommendations</i>	No further action required.
Hazel dormouse	
<i>Summary of Survey Findings</i>	EPSL data A review of the MAGIC database returned no granted EPSL records for hazel dormice <i>Muscardinus avellanarius</i> within 2km of the site. Habitat suitability Dormice typically utilise a three-dimensional habitat structure as to commute between feeding and breeding sites whilst avoiding predation. As such suitable habitats on site are limited to the boundary hedgerows. The hedgerows themselves are fairly species- poor but may provide a minor foraging resource. Despite this, all hedgerows onsite are scheduled to be retained therefore if present, dormice will be unaffected by the development proposals.
<i>Foreseen Impacts</i>	No impacts are anticipated on hazel dormice as a result of the proposed development.
<i>Recommendations</i>	No further action required.
Other e.g. hedgehog	
<i>Summary of Survey Findings</i>	The hedgerows onsite provide limited foraging and commuting opportunities for hedgehogs <i>Erinaceus europaeus</i> , with woodland habitat nearby offsite also capable of supporting hedgehogs.
<i>Foreseen Impacts</i>	A small amount (3-5m ²) of introduced shrub 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.
<i>Recommendations</i>	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.
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Appendix 1: Survey/Habitat map



Appendix 2: Location map



Appendix 3: Proposed plan



Appendix 4: Habitat Photos

Buildings	
Photograph	Description
	Figure 1: Main field across the site managed through regular topping



Figure 3: T1 within the western hedgerow. Evidence of pruning can be seen.



Figure 4: T2 within the western hedgerow



Figure 5: Area of scattered scrub within ruderals in the far south west of the site.



Figure 6: The southern hedgerow – note the leggy growth and lack of density



Figure 7: The offsite woodland dominated by Huntingdon elm.



Figure 8: Mammal tunnel within the southern boundary – this is disused and was filled with leaf litter



Figure 9: The offsite ponds were dry

Appendix 5: Condition Assessments

Hedgerow favourable condition attributes														
Attributes and functional groupings (A, B, C, D and E)	Criteria - the minimum requirements for 'favourable condition'	Criteria description	Habitat parcel reference											
			H1 Poor	H2 Mod										
			Grid reference											
Core groups - applicable to all hedgerow types				Criterion passed (Yes or No)										Notes (such as justification)
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).											
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn <i>Prunus spinosa</i> suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).											
B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).											

C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: - Measured from outer edge of hedgerow; and - Is present on one side of the hedgerow (at least).	(excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	No	Yes													
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles <i>Urtica</i> spp., cleavers <i>Galium aparine</i> and docks <i>Rumex</i> spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	No	No													
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA ⁵) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website ⁴ , as well as the BSBI website ⁶ where the 'Online Atlas of the British and Irish Flora' ⁸ contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website ⁷ .	No	Yes													
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).	No	No													
Additional group - applicable to hedgerows with trees only																		
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient ⁸), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	No	No													
E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	Yes	Yes													

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