



Project: 24_PEA_04_65
Site: Extra Baldock Services, A1(M), 10, Radwell, Baldock, SG7 5TR
Client: Poise Group Ltd



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Project Number:	24_PEA_04_65
Report Type:	Preliminary Ecological Appraisal Report (PEAR)
Site Address:	Extra Baldock Services, A1(M), 10, Radwell, Baldock, SG7 5TR

Role:	Name:	Position:	Date:
Surveyor	Peter Haine	Lead Surveyor	02/05/2024
Author	Max Shaw	Ecological Consultant	30/04/2024

Revision History		
Date:	Version number:	Summary of changes:
17/5/2024	1.0	First Draft
17/5/2024	1.0	First Issue

Summary:	
Site Surveyed	Land at Extra Baldock Services, A1(M), 10, Radwell, Baldock, SG7 5TR National Grid Reference: TL 2344 3653
Purpose & Brief	Preliminary ecological appraisal commissioned by Poise Group Ltd
Development Proposals	The proposed development is the construction of Ionity Electric Vehicle charging ports, power cabinets, new parking spaces which require alteration to surrounding hard and soft landscaping.
Methods	Desk Study UK Habitat Classification (UKHab) survey of the site. Assessment of likely significant effects as far as can be reasonably and proportionally known
Confirmed Ecological Constraints	None
Potential Ecological Constraints	Nesting birds
Recommendations For Further Survey Works	Production of wildlife sensitive lighting scheme
Opportunities For Ecological Enhancements	Native species planting

With the assumption that the existing conditions on-site remain unchanged. The results of this report are likely to remain valid for 12-months inline with the guidance published by CIEEM and the Bat Conservation Trust.

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Appendix 1: Site Location and Assessment Boundary

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Acknowledgements:

Data referred to within this report was sourced from Natural England Department for Environment, Food and Rural Affairs Multi-Agency Geographic Information for the Countryside (DEFRA MAGIC).

Client Documents:

This report has been completed on assumption that the plans provided by the client at the time of issue of this report remain the same. A list of the documents provided by the client can be found in the table below.

Table: Documents provided by the client as of April 2024.

Plans provided by client as of April 2024
Baldock_Layout.

1 Introduction

- 1.1 ROAVR Group were commissioned to undertake a Preliminary Ecological Appraisal Report (PEAR) at Extra Baldock Services, A1(M), 10, Radwell, Baldock, SG7 5TR.
- 1.2 The survey was comprised of a desktop study, which was undertaken in April 2024 and a site survey, which was carried out by Peter Haine on 02/05/2024.
- 1.3 The methodology and results are outlined within the report. Where applicable, recommendations for suitable mitigation and ecological enhancements are provided.
- 1.4 The report is to be submitted to support a planning application. Full details of the proposals can be found on the planning portal.
- 1.5 The information and recommendations within this report have been prepared and provided in accordance with CIEEM's Code of Professional Conduct (CIEEM, 2022).

SITE DESCRIPTION

- 1.6 The survey site covers an area of approximately 2,588.2 sq metres and is centred on grid reference 'TL 2344 3653'.
- 1.7 The site is situated in a rural area in the North Hertfordshire District Council control area. The site is located on the northeast side of the village of Radwell and is accessed via public access road and car park.
- 1.8 The site is currently a car park with areas of associated hard and soft landscaping.

DEVELOPMENT PROPOSALS

- 1.9 The site is to be redeveloped with the construction of Ionity Electric Vehicle charging ports, power cabinets, new parking spaces which require alteration to surrounding hard and soft landscaping.

SCOPE OF WORKS

- 1.10 The aims of this assessment were to:
 - identify the likely ecological constraints associated with the proposed development;
 - identify suitable mitigation measures (if required);
 - determine whether further surveys are necessary;
 - identify opportunities for ecological enhancement;

2 Methodology

DESKTOP STUDY

- 2.1 Site-specific information in relation to land designations, protected species and protected habitats within a 2km search area was sourced from DEFRA MAGIC.
- 2.2 In order to ensure that ecological data searches were up to date, species data was screened and all data records pre-2012 was omitted from the results.
- 2.3 Results of the desktop study should be considered to be indicative only.

UKHAB SURVEY

- 2.4 A Preliminary Ecological Appraisal, comprised of a site walkover and mapping was undertaken by Peter Haine on the 02/05/2024. The PEA was undertaken in line with CIEEM's 'Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017). Peter has been completing preliminary ecological appraisals for over five years and regularly undertakes surveys of this scale. He has received professional training in all aspects covered in this report.
- 2.5 The survey was conducted from the ground. Habitats and features of importance were mapped using a GPS enabled handset.
- 2.6 A Site Habitat Map was produced in accordance with the UK Habitat Classification Manual (Butcher et al., 2020). (Appendix 3).

PRELIMINARY BAT ROOST ASSESSMENT (PRA)

- 2.7 A Preliminary Roost Assessment, comprised of a preliminary ground level roost assessment was undertaken during the site survey on 02/05/2024. The PRA was undertaken in line with the Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Best Practice Guidelines' (Collins, 2023).
- 2.8 The survey included an active search for bats, evidence of bats (such as droppings, feeding remains, urine splatters, oil staining, bat fur and/or scratch marks) and potential roosting features (PRFs). PRFs of trees are listed in Table 2.8.2. PRFs of built structures are listed in Table 2.8.1. The lists are not exhaustive but show examples of the most commonly used roosting features of built structures and trees.

Table 2.8.1: Potential roosting features (PRFs) in built structures listed in Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Best Practice Guidelines' (Collins, 2023).

Potential roosting features (PRFs) in built structures	
External	Internal
- Access/egress through windowsills, window panes and walls; - Behind peeling paintwork or lifted rendering; - Behind hanging tiles; - Weatherboarding; - Eaves; - Soffit boxes; - Fascias; - Lead flashing; - Gaps under felt (even including those of flats roofs); - Under tiles/slates; - Existing bat boxes; - Gaps in brickwork or stonework which provide access/egress to cavity or rubble-filled walls	- Behind wooden panelling; - In lintels above doors and windows; - Behind window shutters and curtains; - Behind pictures, posters, furniture, peeling paintwork, peeling wallpaper, lifted plaster and boarded windows; - Inside cupboards and in chimneys accessible from fireplaces; - Within attic roof voids; - The top of gable end or dividing walls; - The top of chimney breasts; - Ridge and hip beams and other roof beams; - Mortise and tenon joints; - All beams; - The junction of roof timbers, especially where ridge and hip beams meet; - Behind purlins; - Between tiles and the roof lining; - Under flat felt roofs

GROUND LEVEL TREE ASSESSMENT (GLTA)

2.9 A Preliminary Bat Roost Assessment, comprised of a preliminary ground level roost assessment was undertaken by Peter Haine during the site survey on 02/05/2024. The GLTA was undertaken in line with the Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Best Practice Guidelines' (Collins, 2023).

2.10 The survey included an active search for bats, evidence of bats (such as droppings, feeding remains, urine splatters, oil staining, bat fur and/or scratch marks) and potential roosting features (PRFs). PRFs of trees are listed in Table 2.10.1. The lists are not exhaustive but show examples of the most commonly used roosting features of trees.

Table 2.10.1: Potential roosting features (PRFs) in trees listed in Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Best Practice Guidelines' (Collins, 2023) Table 6.6.

Table 2.10.1. PRF types that can be exploited by bats and how they form (adapted from Bat Roosts in Trees, BTHK, 2018) reproduced from Table 6.6. (Collins, 2023.)		
PRFs formed by disease and decay	PRFs formed by damage	PRFs formed by association
• Woodpecker holes • Squirrel holes • Knot holes • Pruning cuts • Tear outs • Wounds • Cankers • Compression forks • Butt rots	• Lighting strikes • Hazard beams • Subsidence • Cracks • Shearing cracks • Transverse snaps • Welds • Lifting bark • Desiccation • Fissures • Frost cracks	• Fluting • Ivy

Table 2.10.2. Guidelines for assessing the suitability of trees on proposed development sites for bats, to be applied using professional judgement.reproduced from Table 6.6. (Collins, 2023.)

Suitability	Description
NONE	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

2.11 A Site PRF Map was produced to show the location of built structures, trees and potential roosting features (PRFs). Habitats and features of importance were mapped using a GPS enabled handset.

SUITABILITY ASSESSMENT

2.12 The likelihood of occurrence of protected ecological features and species was ranked in accordance with the criteria listed in Tables 2.10.1 and 2.10.2. Likelihood of occurrence was assessed using data collected during the desk study and after evaluation of the habitats on-site (during the site survey) as to their likelihood to provide suitability for protected species (i.e. presence of breeding, nesting, roosting, foraging, commuting and/or refuge habitat for example).

Table 2.12.1: Criteria used to assess the likelihood of occurrence for protected ecological features and species on-site (excl. bats).

Likelihood of occurrence	Criteria
Present	Confirmed as present during the site survey or by confirmed historical records.
High	Species are known to be present within close proximity to the site (records present). Habitats on-site are of high quality for the species and/or likely to support a large population. The site is well connected to good quality habitat within the local area.
Moderate	Species are known to be present within the local area (records present). Habitats on-site are of moderate quality for the species and/or likely to support a moderate population. The site and connected habitats provide all of the ecological requirements of the species. Suitability of habitats on-site may be limited due to disconnectivity to the wider landscape, poor to moderate habitat available within the wider locality, and/or due to the presence of only a small area of suitable habitat.
Low	Few or no records of the species within the local area. Habitats on-site are of poor quality for the species and/or likely to support just a few individuals. The suitability of habitats may be limited due to disturbance, isolation and/or poor quality habitat available within the wider locality. However, species presence cannot be discounted due to the national distribution of the species or the nature of on-site and surrounding habitats (if all required ecological requirements for the species are present).
Negligible	While presence cannot be absolutely discounted, the site includes very limited or poor quality habitat for a particular species. Connected habitats do not fulfil the ecological requirements of the species. There are no local records and/or the site is outside the known national range of the species.

Table 2.12.2: Criteria used to assess the likelihood of occurrence (site's suitability) for bats, from Bat Conservation Trust's 'Bat Surveys for Professional Ecologists: Best Practice Guidelines' (Collins, 2023) (Table 4.1.)

Potential suitability	Description	
	Roosting bats	Potential flight-paths and foraging habitats
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e a complete absence of crevices / suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available for foraging bats).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats but isolated (i.e. not very well connected to the surrounding landscape by other habitat). Suitable, but isolated habitat that could be used by small numbers of bats for foraging such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, appropriate conditions and/or suitable surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only - with respect to roost type only).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees or linked back gardens. Habitat that is connected to the wider landscape that could be used for bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitats. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation sites.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats. Site is close to and connected to known roosts.

ECOLOGICAL CONSTRAINTS AND MITIGATION

- 2.13 An evaluation of the potential ecological constraints to the proposed development and appropriate mitigation strategies was made following CIEEM's 'Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018).

LIMITATIONS

- 2.14 Only one site visit was undertaken, therefore, a full evaluation of species present throughout the year could not be made. Therefore, there were seasonal constraints to species identification. However, the data collected during the site survey was sufficient to make an appropriate assessment of the site.
- 2.15 The site maps shown in Appendix 3 were produced from an Ordnance Survey Tile purchased from our mapping supplier. A site walkover with a GPS enabled handset was used to inform the location and extent of existing habitats shown on the appended mapping and is as accurate as possible but some error must be allowed for without a full topographical survey.

3 Policy and Legislative Context

- 3.1 This section includes the legislative context of those protected species or other notable species that are recorded on-site, or have the potential to be present on-site. Details on specific legislation for other protected or notable species that have not been identified as being present, or having the potential to be present, are not included below.

NATIONAL PLANNING POLICY

- 3.2 The introduction of the National Planning Policy Framework (NPPF) in March 2012 sets out the Government's planning policies for England and how these are expected to be applied in the presumption in favour of sustainable development. It sets out the Government's requirements for the planning system, only to the extent that it is relevant, proportionate and necessary to do so and is a material consideration for local planning authorities in determining applications.
- 3.3 Planning Practise Guidance is relevant covering the Natural Environment alongside the NPPF. Therefore features of ecological value should be considered in the context of conserving and enhancing the natural environment.
- 3.4 The Government's objectives for planning are to promote sustainable development, to conserve, enhance and restore the diversity of England's wildlife and geology and to contribute to rural renewal and urban renaissance.

LOCAL PLANNING POLICY

- 3.5 This report has been commissioned in order to comply with policies upheld in the North Hertfordshire Local Plan 2011-2031, especially the following:
- Policy NE4: Biodiversity and geological sites
 - Policy NE5: Protecting open space

<https://www.north-herts.gov.uk/sites/default/files/2022-12/North%20Hertfordshire%20Local%20Plan%202011-2031.pdf>

NATIONAL AND INTERNATIONAL LEGISLATION

- 3.6 Bern Convention on the Conservation of European Wildlife and Natural Habitats (1982)
- 3.7 Convention on the Conservation of Migratory Species of Wild Animals (1983)
- 3.8 Countryside and Rights of Way Act (2000)
- 3.9 National Parks and Access to the Countryside Act (1949)
- 3.10 Natural Environment and Rural Communities Act (2006)
- 3.11 Protection of Badgers Act (1992)
- 3.12 The Conservation of Habitats and Species Regulations (2017)
- 3.13 The Convention of International Trade in Endangered Species of Wild Fauna and Flora (1975)
- 3.14 The Hedgerows Regulations (1997)
- 3.15 UK Biodiversity Action Plan (1994)
- 3.16 Wildlife and Countryside Act (1981)
- 3.17 Wild Mammals (Protection) Act (1996)

4 Desktop Study

SITE DESIGNATIONS

4.1 There are no designated sites within the 2km search area.

Table 4.1.1: Designate sites recorded within a 2km radius of the survey site.

Site Name	Grid Reference	Area (ha)	Approx. Closest Distance from Site (km)	Notes
SSSI Impact Risk Zones	TL 2344 3653	NA	0 km	The site falls within SSSI Impact Risk Zones

*Data from DEFRA MAGIC

Table 4.1.2: Local wildlife sites recorded within a 2km radius of the survey site.

Site Name	Grid Reference	Area (ha)	Approx. Closest Distance from Site (km)	Notes
Stotfold Mill Meadows LNR	TL 2247 3662	3.36	1.1 km	Wildflower meadows with wetlands of interconnected ponds and a small woodland. The site has waterfowl, frogs, toads and newts.
Ivel Springs LNR	TL 2400 3469	14.71	1.9 km	The springs, which are the source of the River Ivel, provide a diverse area for wildlife including woodland, wetland and pasture. The site was used as a household rubbish dump until the 1950s when it reverted to rough woodland.

*Data from DEFRA MAGIC

LOCAL HABITAT

- 4.2 There were more than 15 priority habitats that were formerly mapped within the 2km search area.

Table 4.2.1: Priority habitats formerly mapped within a 2km radius of the survey site.

Habitat	Approx. Closest Distance from Site (km)
Good quality semi-improved grassland	1.3 km
Lowland Meadows	1.9 km
Deciduous Woodland	0.05 km
Traditional Orchards	0.6 km

*Data from DEFRA MAGIC

- 4.3 There was one water body situated within a 500m radius of the survey site. A pond is located within 10 metres south east of the site, bordering the car park. The water body had good connectivity to the site.

HISTORICAL SPECIES RECORDS

- 4.4 Protected species records relating to the site and 2km search area were obtained from the DEFRA as part of the desktop study.
- 4.5 A full list of identified species recorded within the 2km search area can be requested from LERC.
- 4.6 The absence of identified records does not discount the presence of a species. An absence of identified records is primarily a result of a lack of survey or the non-submission of records. Furthermore, historical records of species do not confirm their current presence within an area.
- 4.7 A record search of NBN Atlas was conducted on 30/04/2024 to highlight the protected species found within 2 km of the site location. The following species were found: West European Hedgehog (*Erinaceus europaeus*), Wood Mouse (*Apodemus sylvaticus*), Eurasian Badger (*Meles meles*), Common Pipistrelle (*Pipistrellus pipistrellus*), Daubenton's Bat (*Myotis daubentonii*), Serotine (*Eptesicus serotinus*), European Mole (*Talpa europaea*), Noctule Bat (*Nyctalus noctula*), Brown Long-eared Bat (*Plecotus auritus*), Eurasian Common Shrew (*Sorex araneus*), Brown Hare (*Lepus europaeus*), Harvest Mouse (*Micromys minutus*), Field Vole (*Microtus agrestis*), Stoat (*Mustela erminea*), Bank Vole (*Myodes glareolus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Eurasian Pygmy Shrew (*Sorex minutus*).

5 Site Survey

5.1 The site survey was undertaken on 02/05/2024. The weather conditions were considered to be appropriate to survey (Table 5.1.1).

Table 5.1.1: Weather conditions at the time of survey.

Date of site survey: 02/05/2024	
Temperature	12 c
Wind	Light winds
Precipitation	0%

*Data from BBC Weather.

PHASE 1 HABITAT SURVEY

5.2 The habitats presented consist of the following UKHAB Habitat categories:

- U1b6 Other developed land
- G4 Modified Grassland
- H2 Hedgerows

5.3 A description of habitat present along with target notes is shown in Table 5.3.1. The location of habitats is shown in the Site Habitat Map, Appendix 3.

Table 5.3.1: Description of habitats present on-site (please also see the Site Habitat Map, Appendix 3).

Habitats and Target Notes	Description	Supporting Photo
U1b6 Other developed land	U1b6 Other developed land The majority of the site is made up of other developed land, in the form of tarmac parking spaces. This area is to be developed with the Ionity electric parking spaces and associated power banks etc. The survey site is located just south of the Extra Baldock Service Station main building. Habitat condition assessments are not completed for this type of habitat.	 Image 1

		 Image 2
G4 Modified Grassland	G4 Modified Grassland To the south, south west, west and south east of the developed land is a thin strip of improved, modified grassland adjacent to the tarmacked area. The area is made up of very few perennial grass species and has a sward height of 5-10 cm. This habitat is in an overall poor condition.	 Image 3



Image 4

H2 Hedgerows	H2 Hedgerows In the south, south west and west direction, adjacent to the tarmacked parking area and modified grassland, there is an area of lapsed hedgerow. This area is overgrown and provides a buffer to the steep slope behind the hedge running down to the road running adjacent to the survey area. The species seen in the mixed hedgerow included field maple (<i>Acer campestre</i>), dog rose (<i>Rosa canina</i>), hawthorn (<i>Crataegus</i>) and dogwood (<i>Cornus sanguinea</i>).	 Image 5
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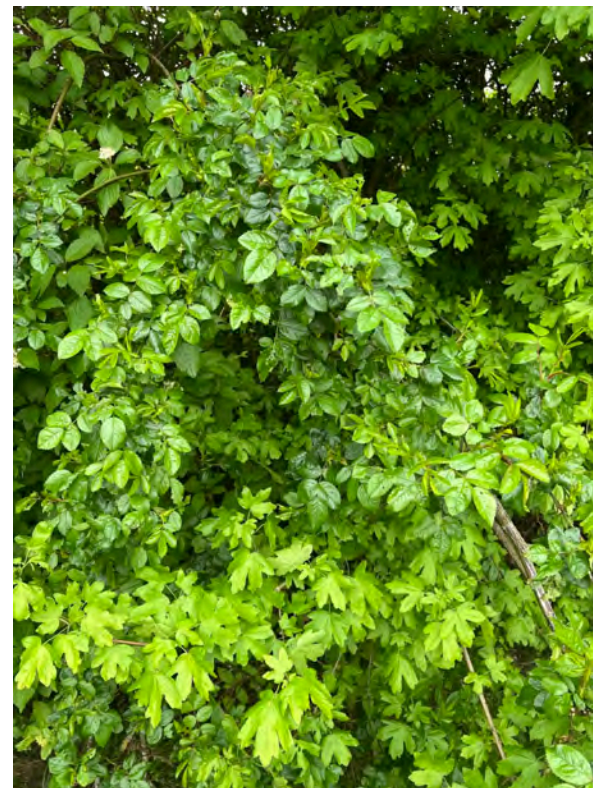


Image 6



Image 7



Image 8



Image 9

PRELIMINARY BAT ROOST ASSESSMENT (PRA)

- 5.4 There were no built structures on site capable of supporting roosting bats.
- 5.5 There were no trees seen on site capable of supporting roosting bat species. Therefore the site was assessed as holding **negligible potential for roosting bat species.**

6 Evaluation and Assessment

- 6.1 Results from the desktop study and site survey were evaluated to assess the likelihood of occurrence for protected ecological features and species potential (as per Table 2.10.1). An evaluation of the potential impacts due to the proposed development and recommendations for appropriate mitigation measures are provided in Table 6.1.1.

Table 6.1.1: Likelihood of occurrence of protected ecological features and species on-site, potential impacts due to the proposed development and recommendations for appropriate mitigation measures.

Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
Protected sites	Negligible.	The site is not situated within, or adjacent to, any known protected sites. The site is not considered to be well connected to any known protected sites.	None.	None required.
Protected habitats	Low.	Deciduous woodland has been formerly mapped adjacent to the site. The presence of this habitat was confirmed during the site survey.	Due to the proximity to the development area, the local protected habitats could be subject to disturbance or pollution. However, due to the extent of the proposed development, this has been highlighted as unlikely.	Protective barriers (in the form of HERAS fencing) must be placed around the construction zone and any access/egress in order to minimise the area of disturbance. The fencing must be signed appropriately and outlined within the tool box talk.
Protected plant species	Low.	There are no known records of protected plant species within 2km of the site. No protected plant species were observed during the site survey. Habitats on-site are not considered to be unique or of high quality to support protected plant species. However, their presence cannot be entirely discounted.	The site does not appear to support protected plant species, thus, the proposed development is unlikely to impact upon protected plant species.	None required.

Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
Amphibians (incl. Great Crested Newts)	Negligible.	There are no known records of amphibians within 2km of the site. The large pond area to the north east of the site has also dried up, and does so annually, this was confirmed during the site visit. Although there are suitable terrestrial habitats for protected amphibian species, there are no connecting water sources in the local area.	None.	None.
Bats (Chiroptera)	Roosting bats			
	Negligible.	There were records of bat species within 2km of the site. However, there were no built structures on site, and none of the trees inspected during the site walkover were seen to have any potential roosting features. Therefore bat roosts are unlikely to be affected by the planned development proposal.	The proposed development will not result in any disturbance to suitable roosting habitats.	A new bat roost must be created on-site to promote bat species in the local area.

Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
	Foraging/Commuting bats			
	Moderate.	Amenity grassland and hedgerow habitats on-site were considered to be suitable for foraging/commuting bats. Furthermore, the site has good connectivity to high quality habitats within the wider locality, including deciduous woodland.	Mitigation measures must be put in place to ensure that disturbance does not increase during and/or post-development. The proposed development will not result in any substantial habitat loss that will impact upon local populations long-term.	Construction works should be limited to daylight hours (excl. dawn and dusk) in order to prevent disturbance to nighttime foraging activity. Post-construction, the use of artificial lighting should be limited where possible. Motion sensors on outside lighting will prevent prolonged disturbance. It is recommended that outside lighting be set on short-timers (1 minute) and that the sensitivity is set to large moving objects only.
Birds	Moderate.	Neither breeding birds, or nesting birds were present during the site walkover. However, the thick area of hedgerow could be being used by nesting bird species, and this cannot be ruled out, therefore mitigation measures need to be put in place so the level of disturbance to local species is minimal.	The proposed development will not result in any loss to suitable habitat for breeding birds. The proposed development required the removal of several trees, which have potential to support breeding birds.	The trees should be protected from site with HERAS fencing before any works commence on-site. The fencing must be signed appropriately and outlined within the tool box talk. Tree works (if required) should take place outside the breeding season (typically March-October).
Invertebrates	Low.	There were no known records of protected invertebrate species within the 2km search radius. No	The site does not appear to support protected invertebrate species, thus, the proposed development is unlikely to	None required.

Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
		protected invertebrate species were identified during the site survey. Habitats on-site are not considered to be unique or of high quality to support protected invertebrate species. However, are likely to support a range of common and widespread species associated with grassland and hedgerow habitats.	impact upon protected invertebrate species. The proposed development will not result in any substantial habitat loss that will impact upon local populations long-term.	
Reptiles	Low.	There are no known records of reptiles within 2km of the site. No reptiles, or evidence of reptiles, was found during the site survey. The site was well connected to suitable habitats within the wider locality, including open grassland, hedgerows and woodland. Amenity grassland and hedgerow. habitats on-site were considered to be suitable to support a small population of common and widespread reptile species (such as Slow Worm).	The proposed development requires the removal of a small area of ground-level vegetation on-site. Vegetation removals have the potential to disturb, injure and/or kill reptiles (if present). Thus, a precautionary approach is required. The proposed development will not result in any substantial habitat loss that will impact upon local populations long-term.	The grassland should continue to be maintained and kept short through mowing and management up until the point of any construction works commencing on-site to prevent the habitat from becoming more favourable to reptiles.

Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
Other terrestrial mammals (excl. bats).	Badgers (<i>Meles meles</i>)			
	Low.	There are known records of Badgers within 2km of the site. No Badger setts were identified during the site visit and no evidence of Badgers was found. However, amenity grassland habitat is considered to be somewhat suitable for sett building and foraging/commuting.	If a Badger sett was present at the time of construction, the construction works could disturb, injure and/or kill Badgers. As Badgers are highly mobile and often seek new opportunities for sett building further checks will be required immediately prior to any construction works taking place on-site. The proposed development will not result in any substantial habitat loss to impact upon local populations long-term.	Construction works should be limited to daylight hours in order to prevent disturbance to nighttime foraging activity. Any trenches or other excavations left open overnight should be well covered to deter Badgers from entering.
	Dormice (<i>Gliridae</i>)			
	Negligible.	There are no known records of Dormice within 2km of the site.	None.	None required.

Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
	Hedgehogs (<i>Erinaceus europaeus</i>)			
	Low.	There are records of Hedgehogs within 2km of the site. Also amenity grassland and hedgerow habitats on-site were considered to be suitable for the species. However, the site was not well connected to suitable suburban habitats and there were no ample access/egress points to adjacent gardens, as the site survey is surrounded by the A1 motorway and agricultural farmland making it hard to commute.	Mitigation measures must be put in place to ensure that disturbance does not increase during and/or post-development. The proposed development will not result in any substantial habitat loss that will impact upon local populations long-term.	Construction works should be limited to daylight hours (excl. dawn and dusk) in order to prevent disturbance to nighttime foraging activity. During hibernation season (October to March), piles of leaf litter and logs should be retained to ensure hibernating hedgehogs are not harmed. If removal is unavoidable, the piles must be carefully checked before burning. Any trenches or other excavations left open overnight should either be well covered or provided with an escape ramp (comprised of a sloped side or wooden plank reaching up to ground level or slightly above), to allow any Hedgehogs that fall into escape.

Protected feature / species	Likelihood of occurrence / suitability	Comments / Justification	Impact due to Proposed Development	Required Mitigation Measures
	Common and widespread mammals			
	Moderate.	There was no evidence of mammals on-site.	The proposed development will not result in a substantial loss that will impact upon local populations long-term. Mitigation measures must be put in place to minimise disturbance during the construction phase.	Any necessary excavation of animal burrows should be done carefully to avoid unnecessary suffering (such as crushing or asphyxiation). Construction works should be limited to daylight hours in order to prevent disturbance to nighttime foraging activity. Any trenches or other excavations left open overnight should either be well covered or provided with an escape ramp (comprised of a sloped side or wooden plank reaching up to ground level or slightly above), to allow any wildlife that falls to escape.
Invasive plant species	Low.	No invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were found during the survey. As there were seasonal constraints to plant identification, it is possible that invasive plant species are present and have yet to be identified.	Invasive plant species have the potential to impact protected species and habitats	If invasive plant species are found, it is recommended to consider appropriate methods of removal.

7 Biodiversity Net Gain

- 7.1 In 2018, the global count of electric vehicles reached 5.1 million, marking an increase of 2 million from the previous year, with projections suggesting a rise to 125 million by 2030. The expansion of electric vehicle infrastructure, including the installation of charging stations in existing car parks across the UK, is essential to support this growth.
- 7.2 The installation process typically requires minor modifications to the peripheries of existing car park bays, often involving the removal of small areas of modified grassland and non-native shrubs. These areas generally cover less than 50m² and do not involve or affect any priority habitats as defined under the UK's Post-2010 Biodiversity Framework and the Natural Environment and Rural Communities Act 2006.
- 7.3 According to the guidelines provided by the Department for Environment, Food & Rural Affairs (DEFRA) on biodiversity net gain, the DEFRA Metric for assessing biodiversity is primarily designed for larger developments that have a more significant impact on natural habitats. Applying a full biodiversity net gain assessment to these minor infrastructure modifications is not practical due to the limited scale of habitat alteration and the operational constraints of car park areas, such as access, safety requirements, and high light levels.
- 7.4 Current planning policies, including those outlined in the National Planning Policy Framework (NPPF), emphasises that ecological considerations should be proportional to the size of the development and the associated risks to biodiversity. For small-scale interventions like those described, where the scope of habitat disruption is minimal and temporary, a full BNG assessment is neither reasonable nor feasible. Instead, practical and actionable environmental enhancements, which provide real benefits to biodiversity within the constraints of the development site, are proposed and will be implemented.

TERRESTRIAL MAMMALS

- 7.5 It is recommended to plant native species-rich hedgerows on-site, which will enhance connectivity and provide refuge for small mammals. Suitable species would include Common Beech (*Fagus sylvatica*), Common Hawthorn (*Crataegus monogyna*), Rowan (*Sorbus aucuparia*) and Crab Apple (*Malus sylvestris*) for example.

TREES

- 7.6 New tree planting would be a welcomed addition to development. New tree planting should be considered carefully, with consideration to species, location and future management. New trees should be robust and of high quality. Where possible, native species should be used. However, considerations should be given to climate change and potential pathogens.

8 Conclusions

- 8.1 The site at Extra Baldock Services, A1(M), 10, Radwell, Baldock, SG7 5TR is to be redeveloped with the construction of Ionity Electric Vehicle charging ports, power cabinets, new parking spaces which require alteration to surrounding hard and soft landscaping.
- 8.2 The development will result in the redevelopment of developed land, as well as the loss of modified grassland and hedgerows.

ECOLOGICAL CONSTRAINTS

- 8.3 Development proposals must have regard for protected species identified as potentially occurring on, or near to, the site (e.g., amphibians, birds, terrestrial mammals, and reptiles). Mitigation measures to protect these species have been produced within this report to ensure that the proposed works comply with relevant UK legislation.
- 8.4 Further mitigation measures have been outlined within the report to ensure that protected species are not impacted by the development.

MITIGATION STRATEGIES

- 8.5 The existing amenity grassland should be retained at a short sward prior to any demolition/construction works commencing on-site in order to ensure that the habitat does not become more favourable to amphibians and/or reptiles.
- 8.6 Tree works (if required) should take place outside the breeding season (typically March-October) or once a suitability qualified ecologist has inspected the trees for breeding birds and confirmed that there are no active nests.
- 8.7 Construction works should be limited to daylight hours (excl. dawn and dusk) in order to prevent disturbance to nighttime foraging activity.
- 8.8 Any trenches or other excavations left open overnight should be well covered to deter Badgers from entering. If this is not possible, any trenches or other excavations left open overnight should either be provided with an escape ramp (comprised of a sloped side or wooden plank reaching up to ground level or slightly above), to allow any wildlife that falls in to escape.
- 8.9 Any necessary excavation of animal burrows should be done carefully to avoid unnecessary suffering (such as crushing or asphyxiation).

- 8.10 During hibernation season (October to March), piles of leaf litter and logs should be retained to ensure hibernating hedgehogs are not harmed. If removal is unavoidable, the piles must be carefully checked before burning.
- 8.11 Post-construction, the use of artificial lighting should be limited where possible. Motion sensors on outside lighting will prevent prolonged disturbance. It is recommended that outside lighting be set on short-timers (1 minute) and that the sensitivity is set to large moving objects only.

BIODIVERSITY NET GAIN

- 8.12 The project is to be used as an opportunity for biodiversity net gain by creating new opportunities for wildlife. New habitat creation is to be implemented on-site and should be included within the final project design.

SUMMARY

- 8.13 Subject to the implementation of the recommended mitigation measures, the proposed development is unlikely to have a significant ecological impact.

9 References and Bibliography

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Max Shaw
Ecological Consultant

Max Shaw



Prepared by: Max Shaw BSc QCIEEM
Checked by: Matt Harmsworth BSc

Appendix 1: Site Location and Assessment Boundary

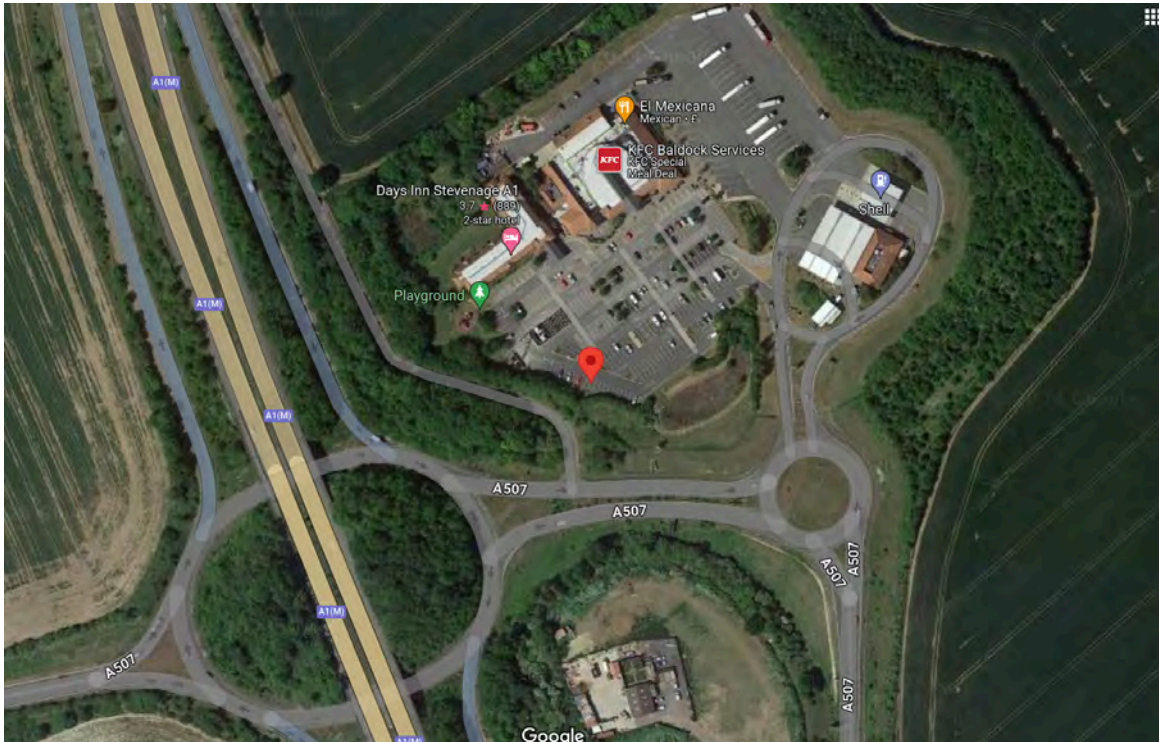


Figure A1.1: Extract from Google Maps showing the site location. (Google, 2024).

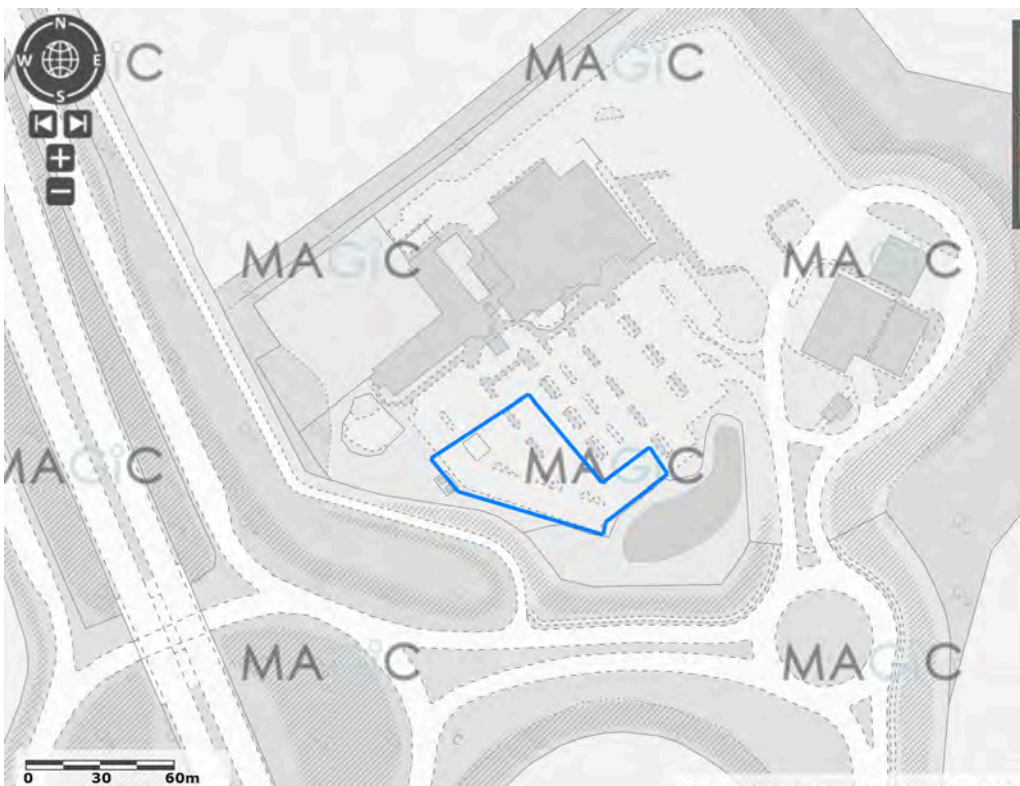


Figure A1.2: Extract from DEFRA MAGIC showing the assessment boundary (MAGIC, 2024).

Appendix 2: Desktop Study

*Data from DEFRA.

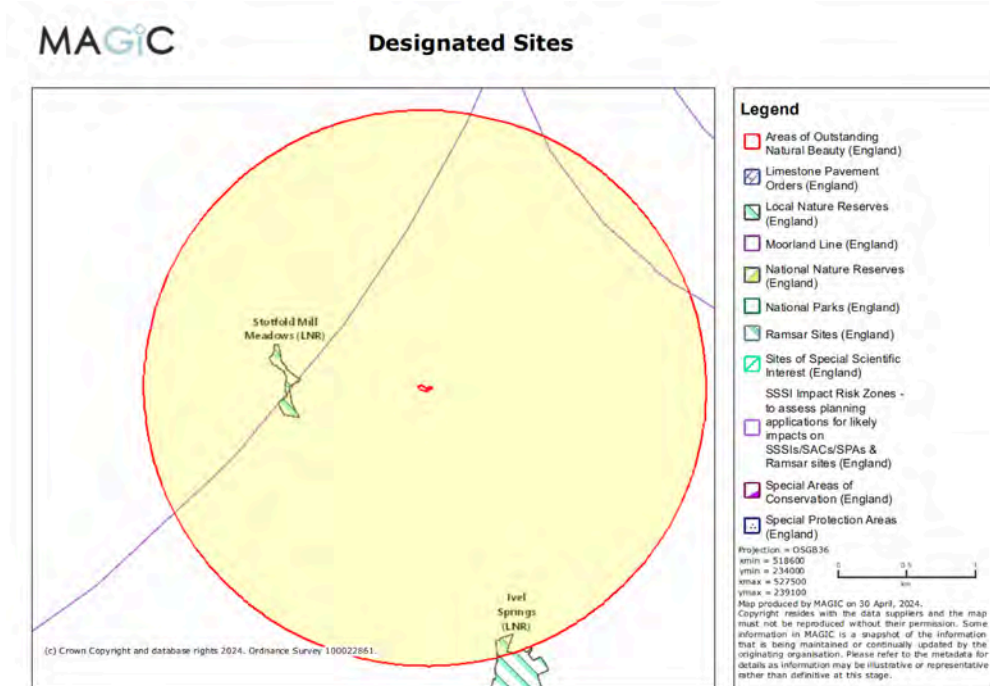


Figure A2.1: Location of Designated Sites situated within a 2km search radius of the site.

*Data from DEFRA.

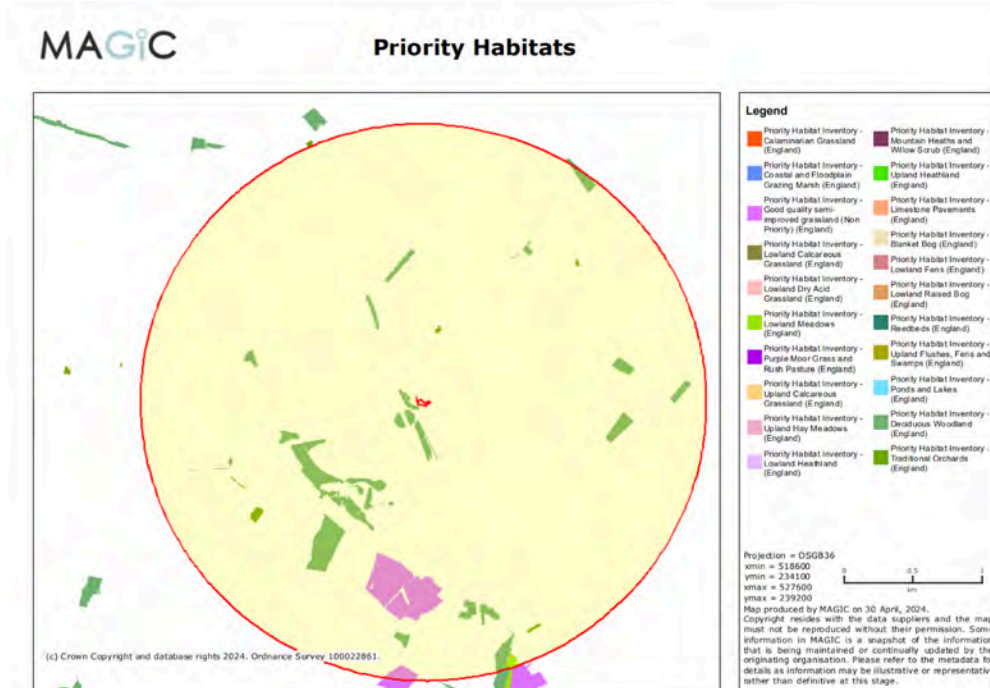


Figure A2.2: Priority habitats formerly mapped within a 2km search radius of the site..

*Data from Bing Maps

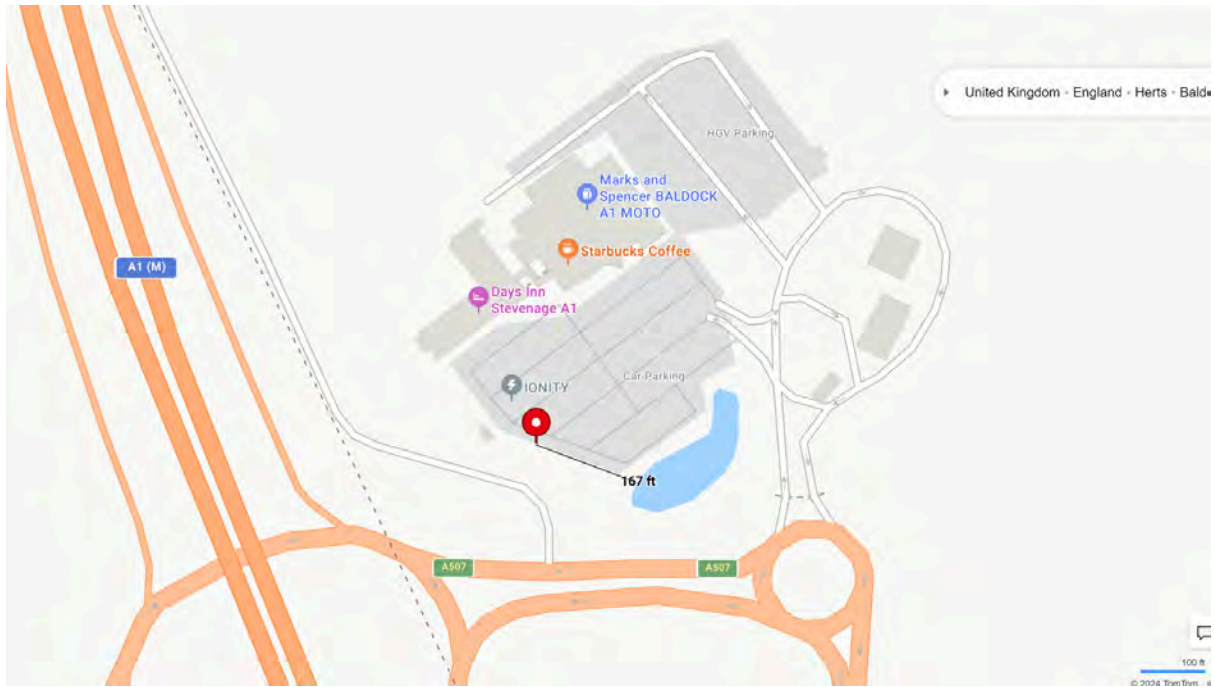


Figure A2.3: Standing water bodies formerly mapped within a 500m search radius of the site.

Appendix 3: Site Maps

A3.1 The Site Habitat Map was produced in accordance with the UK Habitat Classification Manual (Butcher et al., 2020).

