

Growing Baldock

Environmental Statement Volume 2: Figures & Appendices

Chapter 11: Ecology

Appendix 11.1 Preliminary Ecological Appraisal



LAND TO THE EAST AND SOUTH OF BALDOCK

PRELIMINARY ECOLOGICAL ASSESSMENT

BMD.21.0045.RPE/P1.801.A.-.Ecology

DATE: AUGUST 2025

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Declaration of compliance with professional code of ethics or conduct

The information which we have prepared and provided is true and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bonafide opinions.

All reasonable efforts have been made to comply with current legislation and best practice, including BS 42020:2013, the Environment Act 2021 (Schedule 7A: Biodiversity Gain), the National Planning Policy Framework (2025), CIEEM EcIA Guidelines (2018, updated 2022), and relevant Natural England guidance.

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EXECUTIVE SUMMARY

Client	Urban&Civic plc
Consultant.....	Bradley Murphy Design Ltd.

SITE

Location	Land to the east and south of Baldock, Hertfordshire
National Grid Reference.....	Approx. centre: TL 25319 34539
Over-view.....	The Site is approximately 220 ha in total however is largely dissected by a railway running east west through the middle of the Site effectively creating a northern and southern portion of the Site. Two small sections of the railway, however, fall within the northern section of the Site, partially connecting it to the southern area at two locations. The northern area comprises approximately 144 ha. The southern area comprises approximately 76 ha. The northern area of the Site is composed of land parcels to the north and south of Bygrave Road/Ashwell Road in Baldock, Hertfordshire, centred at Ordnance Survey National Grid Reference TL 25369 34942. The northern section is bound to the south by the railway, with two small sections of the railway line falling within the Site boundary. It comprises a combination of arable fields and grazed pasture, with a mixture of residential and farm buildings located along Bygrave Road. North and east of the Site is dominated by farmland, with the town of Baldock located to the south-west. To the west, beyond North Road, is Ivel Springs LNR, Blackhorse Farm Meadow LWS and Ivel Springs, Norton Road LWS. The southern section of the Site is located to the east of the town of Baldock in Hertfordshire and is centred at Ordnance Survey National Grid Reference TL 25643 33923. The Site comprises arable fields with occasional boundary hedgerows, with a mixture of residential and farm buildings. It is largely bound by a railway line to the north, the A505 to the south and east with the residential areas of Clothall Common and Baldock to the west.
Landscape context	The Site is situated on the eastern extent of the town of Baldock. As such, the Site sits within a transitional landscape, with an agricultural field matrix to the north, and an urbanised area characterised by residential developments with occasional industrial use to the south and southwest.

DEVELOPMENT & PLANNING BACKGROUND

Proposed works	Outline planning application with all matters reserved except for means of highway access into the development from the A505, North Road, Royston Road, Clothall Road and Wallington Road, for up to 3,200 homes, up to 16ha of employment, waste and leisure infrastructure, mixed use local centre, up to 1 secondary school, up to 2 x primary schools, up to 1 SEND school, health hub, green infrastructure (including parks, formal sports provision, play, habitat areas, informal open space and structural planting), internal street network, access junctions and railway crossing, public transport infrastructure, pedestrian/cycle network (including PRow diversions, active travel routes, mobility hubs and crossing of the railway), utilities and drainage infrastructure (including diversions of existing and provision of new infrastructure, pumping stations, sustainable drainage, primary substations, rising main/strategic sewer and renewable energy infrastructure), ground remodelling/earthworks and any necessary demolitions.
Planning stage	Outline Planning Application

ECOLOGICAL BACKGROUND

General	An ecological appraisal was undertaken at the site in 2015 (Ecus, 2016). WYG carried out a suite of breeding bird surveys in 2017 (WYG, 2017a). Subsequently, an ES was prepared and an outline planning permission submitted in January 2018. In 2019 the ecological appraisal was updated along with a series of species-specific assessments including corn bunting and reptile reports which were produced between 2019-2020. No other ecological assessments are known to have been undertaken in the study area.
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SURVEY

Objectives	1. To provide an ecological baseline, including nature conservation value, of the Site with a focus on habitats and potential for protected and notable species. 2. To identify the need and level of more detailed species-specific surveys for a planning application, with particular reference to great crested newt and reptiles. 3. To guide the initial stages of master planning and indicative mitigation required to ensure net biodiversity gain is achieved and favourable conservation status of species utilising the site as a result of the proposed development. 4. To provide specialist advice and make appropriate recommendations to ensure compliance with wildlife law and recognised best practice.
Approach	Desk based assessment using online resources, including the MAGIC database, and data from the Local Biological Record Centres (Hertfordshire Environmental Records Centre and Bedfordshire & Luton Biodiversity Recording & Monitoring Centre). Habitat assessment – based on JNCC Phase 1 Habitat Survey. Evaluation of habitat condition based on the Biodiversity Metric 4.0.
Date	17 th /18 th March 2022 and 7 th July 2022.
Results.....	The Site comprises a 220 ha parcel of land dominated by a complex of agricultural fields, notably arable and associated hedgerows. There are also areas of neutral grassland, poor semi-improved grassland and buildings associated with agricultural holdings. The Site has the potential to support the following Protected and Notable Species: • Amphibians (excluding great crested newt); • Badger;

- Bats;
- Hedgehog;
- Nesting birds (including schedule 1 birds);
- Reptiles; and
- Invasive plants.

Conclusions Given the current early stage of the master-planning this report does not attempt to assess detailed ecological impacts or detailed appropriate mitigation and compensation measures associated with the potential development.
A detailed assessment will be completed in the later stages of the project development assessment, either as an Ecological Assessment Report or as an Ecological Impact Assessment (EclA) Chapter forming part of an Environmental Statement.
The main aim of this report is to provide an initial assessment of the ecological interest of the site and to recommend the scope of detailed Phase II ecological surveys that are required to provide a full assessment of the site's ecological value.

RECOMMENDATIONS

Further species surveys are considered necessary to better inform the proposals and potential impacts.
Key habitat of elevated ecological value should be retained, protected and enhanced where possible.
Initial opportunities for enhancement and creation which may result in a biodiversity net gain are provided.

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1. INTRODUCTION

1.1 Background Information

- 1.1.1 Bradley Murphy Design Ltd. (BMD) was commissioned by Urban&Civic plc in March 2022 to undertake an Preliminary Ecological Assessment of their site: Land to the east and south of Baldock, Hertfordshire —hereafter referred to as ‘the Site’. The Site is approximately centred on national grid reference: TL 25319 34539. A plan depicting the Site’s location is provided in the Appendix.
- 1.1.2 The following assessments were completed in March/April 2022, as well as an updated desk study undertaken in August 2025:
- Desk based assessment; and
 - Habitat survey.
- 1.1.3 This report presents the approach, results and evaluation of the assessments and survey undertaken at the Site in order to determine the ecological baseline and nature conservation value of the Site. The data will:
- Enable the identification of the need for and level of more detailed species-specific surveys where required for a successful determination of the planning application;
 - Enable potential ecological constraints to the proposed development to be identified; and
 - Further guide the scheme proposals to ensure that net biodiversity gain is met (an obligation of the NPPF, 2025 and the emerging requirements of the Environment Act 2021) through design and mitigation hierarchy (avoid, mitigate, compensate).

1.2 Proposed Development

- 1.2.1 Outline planning application with all matters reserved except for means of highway access into the development from the A505, North Road, Royston Road, Clothall Road and Wallington Road, for up to 3,200 homes, up to 16ha of employment, waste and leisure infrastructure, mixed use local centre, up to 1 secondary school, up to 2 x primary schools, up to 1 SEND school, health hub, green infrastructure (including parks, formal sports provision, play, habitat areas, informal open space and structural planting), internal street network, access junctions and railway crossing, public transport infrastructure, pedestrian/cycle network (including PRow diversions, active travel routes, mobility hubs and crossing of the railway), utilities and drainage infrastructure (including diversions of existing and provision of new infrastructure, pumping stations, sustainable drainage, primary substations, rising main/strategic sewer and renewable energy infrastructure), ground remodelling/earthworks and any necessary demolitions.

1.3 Site Context

Historic Context

- 1.3.1 Readily available historic aerial imagery and maps indicate that the Site has largely remained in its current state of arable land with the surrounding landscape largely being used for agricultural purposes since at least the late 18th century. The surrounding landscape has also

remained largely unchanged from its 19th century landscape character, with the exception of localised urban expansion of inhabited areas surrounding the Site; most notably the town of Baldock and city of Letchworth to the southwest, the town of Stotfold to the northwest. The surrounding habitats have also seen changes with the removal of woodland parcels for further agricultural land occurring throughout the 19th century.

Present Context

- 1.3.2 The Site is approximately 220 ha in total however is largely dissected by a railway running east west through the middle of the Site effectively creating a northern and southern portion of the Site. The northern area comprises approximately 144 ha. The southern area comprises approximately 76 ha.
- 1.3.3 The northern area of the Site is located within the north of Hertfordshire, approximately 7.6 km north of the borough of Stevenage, at the north-eastern extent of the market town of Baldock. The Site is dissected by the Cambridge Train Line which splits the Site into a northern and southern area. Two small sections of the railway line, however, fall within the northern section of the Site, partially connecting to the southern area of the Site.
- 1.3.4 The train line running through the centre of the Site borders the northern area of the Site to the south, with two small sections of the railway line falling within the northern section of the Site; North Road to the west and chiefly agricultural land to the north and east. Several residential avenues, pathways, gardens and homes are also present within the vicinity of the Site boundaries, particularly along the southwest border of the Site.
- 1.3.5 The Bygrave Road runs southwest-northeast within the centre of the northern area of the Site, dividing arable farmland. Multiple footpaths run within the north Site's boundaries, connecting to North Road, Bygrave Road and multiple residential pathways. There are also some urban features within the Site, such as the roundabout connecting the B656 and A505 to the northeast of the Site. The surrounding landscape, with the exception of the town of Baldock to the southwest, has a commensurate character to that within the Site: agricultural land, chiefly arable, interspersed by residential pockets, roads and hedgerows. The residential areas surrounding the Site are all primarily associated to the town of Baldock situated to the southwest of the Site and the village of Bygrave approximately 1 km northeast of the Site.
- 1.3.6 In the southern area of the Site the A505 (Royston Road) borders the Site from the south to the northeast; the Cambridge Train Line to the north; Wallington Road to the west and the Ashville Trading estate at the northwest border—several residential avenues, gardens and homes are also present within the vicinity of the Site boundaries.
- 1.3.7 The A507 (Clothall Road) runs southwest-southeast along the southern section of the Site, dividing arable farmland within the Site. Multiple footpaths run within the southern areas boundaries, connecting to the B656, Wallington Road and multiple residential areas. There are also some urban features within the Site, such as the roundabout connecting the B656 and A505 to the northeast of the southern area. The surrounding landscape, with the exception of the town of Baldock to the southwest, has a commensurate character to that within the Site: agricultural land, chiefly arable, interspersed by residential pockets, roads and hedgerows. The residential areas surrounding the Site are all primarily associated to the town of Baldock

situated to the southwest of the Site and the village of Bygrave approximately 1.3km northeast of the Site.

- 1.3.8 Considering the outlined above contextual features regarding the Site and its surrounding landscape, while there is some overland connectivity of the Site to its adjacent habitats, particularly from the north, the presence of multiple dispersal barriers within the vicinity, including highways and rail lines, is deemed to leave dispersal capacity of terrestrial fauna to/from the Site as moderate. It is further estimated that more mobile species, such as bats, birds, and insects, would be more readily able to commute to the Site from surrounding habitats.

1.4 Ecological Context

- 1.4.1 An ecological appraisal was undertaken at the Site in 2015 (Ecus, 2016), which included a badger survey, great crested newt assessment and reptile survey. The principal habitats recorded were arable, improved grassland, hedgerows, scattered trees, scrub, semi-improved grassland, tall ruderal, amenity grassland, buildings and hardstanding. The survey identified the potential for the following protected species/species groups: great crested newt, badger, bats, breeding birds, common reptiles. However, no reptiles were recorded during the surveys.
- 1.4.2 WYG carried out a suite of breeding bird surveys in 2017 (WYG, 2017a). The Site was found to support a population of corn bunting considered to be of County importance. Other farmland birds were also recorded and this assemblage was also considered to be of County level importance.
- 1.4.3 In 2019 the ecological appraisal was updated along with a series of species-specific assessments including corn bunting and reptile reports which were produced between 2019-2020. These reports are as follows:
- Baldock North - Updated Ecological Appraisal (2019a);
 - Baldock Southeast - Updated Ecological Appraisal (2019b);
 - Baldock Reptile Survey Report (2019c);
 - Baldock Southeast - Bat Activity Report (2020a); and
 - Baldock North and Southeast - Corn Bunting Report (2020b).
- 1.4.4 No further previous ecological surveys or assessments are known for the Site or adjacent land.

1.5 Compliance with Policy, Guidance and Legislation

- 1.5.1 A summary of national planning policy and wildlife legislation relating to development projects in England is provided in Appendix A. The protocols, evaluations and recommendations contained within this report were made in accordance with these policies and legislation.

Local Policy

Hertfordshire Local Nature Recovery Strategy (LNRS)

- 1.5.2 The draft Local Nature Recovery Strategy for Hertfordshire has been completed and is out for public consultation until September 2025, alongside a LNRS mapping viewer which identifies strategic priorities for nature across the county including priority habitats, core LNRS focus areas, species with targeted actions and public greenspace.
- 1.5.3 The draft LNRS has been reviewed in relation to the proposed development at the Site and is referenced to throughout this report to ensure post-development biodiversity enhancements align with strategic priorities highlighted within and adjacent to the Site by the LNRS.

North Hertfordshire Local Plan (2011–2031)

- 1.5.4 The Site lies within the administrative boundary of North Herts Council, and the adopted North Hertfordshire Local Plan 2011–2031 (adopted in November 2022) forms the primary local policy framework. Key policies relevant to ecology include:
- 1.5.5 Policy NE1 – Landscape: Seeks to conserve and enhance the character of the district’s varied landscapes, particularly in areas of high sensitivity. Development proposals must demonstrate respect for local landscape character, including natural features and habitats.
- 1.5.6 Policy NE2 – Green Infrastructure: Requires the protection and enhancement of existing green infrastructure assets and the provision of new green infrastructure in line with the district’s Green Infrastructure Strategy. Proposals should support ecological connectivity and multifunctionality.
- 1.5.7 Policy NE3 – Biodiversity: Requires development proposals to protect, enhance and manage biodiversity, including through measurable net gain. Proposals must conserve existing ecological assets and deliver enhancements in accordance with the mitigation hierarchy. The policy also supports the use of up-to-date ecological information and monitoring.
- 1.5.8 Policy NE4 – Protecting Public Rights of Way: Encourages development to maintain or enhance the local footpath network, which can support wildlife corridors and public access to nature.

2. APPROACH

2.1 Introduction

2.1.1 This report has been produced with reference to current guidelines for ecological assessments (e.g. CIEEM, 2017 and 2017a) although adapted to be appropriate for the conditions on Site. Reference was also made to BS42020:2013: Biodiversity – Code of Practice for Planning and Development. The assessment comprised the following:

- Desk study; and,
- Extended Phase 1 Habitat Survey.

2.1.2 Table 2.1 summarises the geographical extent of the study.

Table 2.1 Geographical extent of study

Element	Study area
Desk study	1 – 5 km. See Table 2.2 for specific details
Detailed Extended Phase 1 Habitat Survey	Site boundary
Local site context (broad habitat types)	Approx. 50 m from Site boundary (identified from within Site only)

2.1.3 Full survey methodologies are provided in Appendix B and summarised below. Details of dates, surveyors, weather conditions and a review of survey limitations are provided in Appendix C. Definitions of technical terms used in this report are provided in the Glossary in Section 8. Common names of species are used throughout the report with scientific names provided in Section 8.2.

2.2 Desk Study

2.2.1 The desk study involved gathering and analysing existing ecological focused data within the Site boundary and extending to 5 km. The results of the desk study aid in the interpretation of the survey results. Table 2.2 provides a summary of the data and their sources reviewed in the desk study.

2.3 Extended Phase 1 Habitat Survey

2.3.1 An Extended Phase 1 Habitat Survey was undertaken at the Site in accordance with industry standards (JNCC, 2010) and best practice guidance although adapted to be appropriate to the Site. The conditions and assessors of the survey are provided in the Appendix. The methodologies of the survey techniques are provided in the Appendix.

Habitats

2.3.2 The vegetation and broad habitat types within the Site were noted during the survey in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (JNCC, 2010). Dominant plant species were recorded for each habitat present using nomenclature according to Stace (2019). The Site was also appraised for its suitability to support notable flora, with regard to the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017).

- 2.3.3 In line with the emerging requirements of Biodiversity Net Gain Assessment, the condition of the habitats was also assessed against the habitat condition criteria relevant to the Biodiversity Metric 4.0

Protected and Notable Species

- 2.3.4 The Site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the Schedule 2 of the Habitat Regulations, Schedule 5 of the W&CA, the CRow Act, those given extra protection under the NERC Act, and species included in the Hertfordshire BAP.

Table 2.2 Desk study data sources

Data ¹	Search area	Source ²	Justification of search area
Species			
Protected & Notable Species	1 km	A, B, E	The Site is anticipated to have some ecological value associated with the woodland blocks, hedgerows and the LWS within the centre of the Site. The majority of the Site and its habitats are common and widespread throughout Britain. In peripheral areas or selected habitat areas, the Site may have limited potential to support protected and notable species such as nesting birds, reptiles, and badger.
European Protected Species Licence Applications (excl. bats)	1 km	B	The Site is largely arable and is likely to have limited ecological value, however it may hold potential to provide terrestrial habitat for great crested newts. Impacts on newt populations/meta populations can be cumulative arising from other developments off the Site. A review of licence applications within the local area can provide indicative implications if great crested newt habitat is confirmed on the Site. It also helps in reviewing the conservation status of the species in the area.
European Protected Species Licence Applications (bats)	5 km	B	There is some potential that the Site supports features that may be used by bat species and that may be lost through the works. Bats can travel a number of kilometres from their roosts in a single night to forage. A wider search area provides an indication of the potential value that the Site may have for foraging bats based on known roosts that have been affected by other development in the area.
Non-native Invasive Species	1 km	A	There is low potential for non-native invasive species.
Habitats			
UK Priority Habitats	1 km	B, D	The Site is anticipated to have limited ecological value given that it largely comprises of an agricultural landscape and is unlikely to provide high value linkages through the wider landscape in its current state. Linear features and boundaries such as roadside verges and hedgerows may have some elevated value.
Ancient Woodland	1 km	B	
Other notable habitats	1 km	A, B	
Change over time/landscape context	1 km	C	To provide an indication of ecosystem connectivity into the wider landscape and subsequent movement of protected and notable species.
Sites			
Statutory Protected Sites – Impact Risk Zones	Site	B	To assess whether any SSSI/SACs are likely to be impacted upon by the works.
Non-statutory Protected Sites (e.g. LWS)	1 km	A	To assess whether any LWSs are likely to be impacted upon by the works.

Data ¹	Search area	Source ²	Justification of search area
Statutory Protected Sites	2 km (5 km for bats)	B	These sites may have been designated for their populations of European Protected Species (EPS). As the Site has potential to support EPS a wider consideration of statutory protected sites is required.
Notes ¹ See glossary for definitions and species and habitats considered. ² A. Local Biological Records Centres: Herefordshire Biological Record Centre B. MAG/C (Multi-Agency Geographic Information for the Countryside) [accessed 07/08/2025]. C. Readily available aerial images and current/historic map sources. D. Woodland Trust Ancient Tree Inventory [accessed: 07/08/2025]. E. PTES The Big Hedgehog Map [accessed: 07/08/2025].			

2.4 Limitations

- 2.4.1 Full considerations of limitations are provided in Appendix C; in brief, it is considered that none of the limitations identified were sufficient to negatively affect the overall outcome of the assessment.

2.5 Evaluation and Review

- 2.5.1 Upon completion of the desk study and field surveys the evaluation and review will consider each of the following -
- Habitats:
 - reviewed in relation to S41 Priority Habitats descriptions;
 - reviewed in relation to Local Biodiversity Plans;
 - condition assessed using criteria used in the Biodiversity Metric 4.0; and
 - potential to support protected and notable species.
 - Species – focusing on protected and notable species including Priority (s41) species:
 - evidence on Site;
 - potential to occur on Site based on habitats, connectivity and known records;
 - Potential constraints to development (legal and policy implications relating to wildlife); and
 - Potential for biodiversity enhancement.
- 2.5.2 The majority of impacts associated with development relate to species, including through habitat loss, fragmentation and deterioration, as well as direct harm and indirect effects. Therefore, until any necessary species-specific surveys, based on the outcome of this habitat focused ecological assessment, are completed, it is not feasible to identify specific impacts in relation to developing the Site.

3. RESULTS

3.1 Desk Study

3.1.1 Full documentation of the data considered as part of this Ecological Assessment is provided in Appendix D. This section presents the key findings of significance to development at the Site. Species records are considered within the last 10 years (from date of desk study). The exception to this is species that are typically under recorded and/or have low dispersal rates, such as dormouse and white clawed crayfish. Other exceptions would be species likely to have strong associations with the habitats onsite, such as black redstarts and derelict buildings and structures on urban sites.

3.1.2 An updated data search on *MAGIC* was completed on 7th August 2025.

Statutory Designated Sites of Nature Conservation Importance

3.1.3 There are no statutory designated sites of nature conservation importance located within the Site itself.

3.1.4 The Site lies within 2 km of two statutory designated sites of nature conservation importance. These sites are summarised in Table 3.1.

Table 3.1 Statutory designated sites of nature conservation importance within 2 km of the site

Site	Designation ¹ & area	Proximity (distance/direction) & connectivity to Site	Summary description ²
Weston Hill Ref: 1481548	LNR & LWS 17 ha	Borders the Site at the south east boundary.	This site is designated for its calcareous grassland habitat, beech and ash woodland and wildflower grassland that are managed for conservation purposes. Numerous notable and protected species are present within the site such as slow worms, yellow meadow ants and turtle doves.
Ivel Springs Ref: 1475816	LNR & LWS 14.71 ha	Borders the Site at the northwest boundary.	This site is designated for its mosaic of habitats including wildflower meadows, glades, chalk grassland, wetland and springs that are a key source for the river Ivel.
Notes ^{1,2} Provided by MAGIC (15/04/2022)			

3.1.5 The Site does not lie within the Impact Risk Zone (IRZ) of any statutory designated sites of nature conservation.

Non-Statutory Designated Sites of Nature Conservation Importance

3.1.6 The Site lies within 1 km of ten non-statutory designated sites of nature importance, as provided by the Hertfordshire Environmental Records Centre (HERC), returned 1st of August 2025. These sites are summarised in Table 3.2.

Table 3.2 Non-statutory designated sites of nature conservation importance within 1 km of the Site

Site	Designation ¹	Proximity (distance/direction) & connectivity to Site	Summary description ²
Bygrave Road Verge TL256349	LWS 0.06 ha	Located within the Site to the centre along Bygrave Road.	Adjacent narrow roadside banks with good calcareous grassland habitat containing high flora diversity such as lady's bedstraw and great pignut.
Blackhorse Farm Meadow TL240348	LWS 3.2 ha	~90 m northwest Good connectivity via watercourses, drains and associated riparian corridors.	A series of meadows situated on the alluvial deposits of the River Ivel which support unimproved marshy grassland, rivers, ditches, wetland and hedgerows. The large amount of grassland indicators present on the site gives rise to its designation.
River Ivel, Nortonbury TL235352	LWS	~90 m northwest Good connectivity via watercourses, drains and associated riparian corridors.	The River Ivel watercourse and associated riparian corridor with scrub, mature trees and marginal vegetation. The river flows north as a tributary to the River Great Ouse and is extremely important as a wildlife corridor and for protected species such as water vole and kingfisher.
Wallington Road Verge by Clothall Common TL264342	LWS 0.41 ha	~100 m east Good connectivity of the Site via arable landscape and grassland.	A series of roadside verges on calcareous soil which holds a variety of calcareous flora and important arable weed species, such as prickly poppy and rough poppy along the field edges.
Blackhorse Farm Storm Drain TL239349	LWS 1.21 ha	~320 m northwest Good connectivity via the River Ivel watercourses, drains, woodland and associated riparian corridors.	A storm drain constructed to receive water from the A1(M) which has subsequently been surrounded by embankments with planted trees, scrub and wetland. Multiple fen and swamp flora indicators are present within the site.
Newfield Hill, Weston Hills TL256323	LWS 6.91 ha	~670 m southeast Good connectivity to the Site via woodland parcels, agricultural landscape and grassland.	A site consisting of chalk grassland banks, scrub, plantations, old hedgerows and ancient woodland remnants which contain a variety of flora species such as hairy violet and bulbous buttercup.
Icknield Way Railway Bank TL233335	LWS 1.74 ha	~870 m west Good connectivity via railway corridors, woodland parcels, watercourses and arable landscape.	A disused railway track that is utilised as a wildlife corridor for many notable and protected species.
St Margaret's Churchyard, Bygrave TL266361	LWS	~930 m northeast Some connectivity via grassland, arable landscape, residential pathways and woodland parcels.	A churchyard building and associated landscape that is seen as high value for protected species.
Radwell Meadows Northwestern Field	LWS (Local Wildlife Site) 7.53 ha	~1 km northwest Good connectivity via the River Ivel riparian corridor, watercourses, woodland and arable	A mosaic of habitats including neutral grassland, calcareous grassland, streams, meadows, the River Ivel and its riparian corridors. The large amount of grassland indicators present on the site gives rise to its designation.

Site	Designation ¹	Proximity (distance/direction) & connectivity to Site	Summary description ²
TL231352		landscape.	
Ashanger Hill Green Lane TL267316	LWS 1.65 ha	~1 km southeast Some connectivity via roadside verges, arable landscape and grassland habitat.	A green lane that runs of Clothall road forming a Parish boundary, consists of a hedge bank, mature trees, grassland and scrub. Traditional management methods such as coppicing and pollarding are present on this site.
Notes ^{1,2} Provided by Hertfordshire Environmental Records Centre (HERC)			

Priority Habitats

3.1.7 Priority habitats returned by the desk study are listed in Appendix D. In summary, the following UK Priority Habitats occur (as depicted on *MAGIC*) within 1 km of the Site:

- **Good quality semi-improved grassland:** 3 blocks of 6 parcels, the closest of which lies approximately 10 m from the Site across North Road to the northwest of the Site.
- **Lowland calcareous grassland:** 4 parcels, the closest of which lies adjacent the Site to the south associated with Weston Hills LNR.
- **Lowland meadow:** 5 blocks of 8 parcels, the closest of which is located approximately 100 m northwest of the Site associated with landscape around the River Ivel corridor.
- **Traditional orchard:** 2 blocks of 4 parcels, the closest of which is located approximately 280 m southwest of the Site.
- **Deciduous woodland:** 20 blocks of 46 parcels, the closest of which is located adjacent the Site at the southern boundary to Weston Hills LNR.
- **No main habitat but additional habitats present:** 1 block of 2 parcels which is located approximately 380 m northwest of the Site.

Notable Habitats (including irreplaceable habitat and Priority habitat)

3.1.8 Notable habitats returned by the desk study are listed in Appendix D. In summary, the following UK Notable Habitats occur (as depicted on *MAGIC*) within 1 km of the Site:

- **Semi-natural ancient woodland:** 3 parcels associated with Weston Hills LNR, these parcels are located approximately 640 m southeast of the Site.
- **Replanted ancient woodland:** 1 parcel associated with Weston Hills LNR, this parcel is located approximately 980 m southeast of the Site.

3.1.9 A review of the Woodland Trust Ancient Tree Inventory (Woodland Trust, 2025) as of 07/08/2025 highlighted no known ancient, veteran or notable trees on the Site or within 1 km.

National Habitat Networks Map

3.1.10 The following UK National Habitat Networks occur (as depicted on *MAGIC*) within the Site:

- **Fragmentation Action Zone:** A small area of grassland within the Site to the far west associated with the LWS within Enhancement Zone 1 that connects existing patches of

primary and associated habitats which are currently highly fragmented and where fragmentation could be reduced by habitat creation.

- **Network Expansion Zone:** An area of grassland and arable to the south of the Site lies within the expansion zone. These are areas of land beyond the Network Enhancement Zones with potential for expanding, linking/joining networks across the landscape.
- **Network Enhancement Zone 1:** A small area of grassland to the south of the Site lies within Enhancement Zone 1. These are areas of land connecting existing patches of primary and associated habitats which is likely to be suitable for creation of the primary habitat.
- **Network Enhancement Zone 2:** An area west of the Site associated with the Fragmentation Action Zone is within Enhancement Zone 2. These are areas of land connecting existing patches of primary and associated habitats which is less likely to be suitable for creation of the primary habitat 2 areas.

Hertfordshire Ecological Networks Map

3.1.11 There are areas of habitat within the Site that occur within the Hertfordshire Ecological Networks Map:

- **Existing S41 NERC Act Habitat:** A number of small areas of existing S41 NERC habitats occur on Site. These include areas of chalk grassland within Clothall Common and Ivel Springs.
- **Existing Habitat not currently qualifying under S41 NERC Act:** A number of small areas of existing habitats not currently qualifying under S41 NERC occur on Site. These include areas of calcareous and neutral grassland within Clothall Common and Ivel Springs.
- **No Habitats Mapped (high priority for habitat creation):** Small areas of this category are shown within the Site. These are extensions of existing S41 NERC habitats, including target areas of chalk grassland.
- **No Habitats Mapped (medium priority for habitat creation):** The majority of the Site falls under this category dominated by arable land, residential, grassland and current development.
- **No Habitats Mapped (lower priority for habitat creation):** A small area of the Site within the north falls under this category. Habitats within this area are primarily arable.

Hertfordshire Local Nature Recovery Strategy (LNRS)

3.1.12 The draft Hertfordshire LNRS identifies various strategic priorities relating to habitat that fall within the Site:

- **Areas of Particular Importance for Biodiversity (APIBs):** Two APIBs fall within the Site, Clothall Common and arable margins north and south of the western extent of Bygrave Road that runs through the Site, the latter forming part of Bygrave Road LWS.
- **LNRS Core Focus Areas:** A large proportion of the Site falls within the 'Herts Chalk Focus Area' where the priority is to deliver new chalk grassland habitats, with calcareous grassland to be prioritised over other habitat types. Remaining areas of the Site fall within the 'Grass and Heath Focus Area', including Clothall Common and land adjacent to

Bygrave Road. The objective of this area is to manage existing grassland and heathland to maintain the biodiversity of good quality habitats already present onsite and to enhance poor quality sites.

LNR GREENSPACE ACTION PLANS

- 3.1.13 Greenspace action plans (2020-2025) exist for both statutory designated sites of nature conservation importance within 2km of the Site. Both sites are summarised below, however a more detailed evaluation can be found in BMD.21.0045.RPE-TN.806.EcoHeadlines.

Ivel Springs Greenspace Action Plan

- 3.1.14 Ivel Springs LNR is situated to the north western boundary of the Site. Ivel Springs Local Nature Reserve is a 15 hectare open space just north of Baldock which is owned by North Herts Council and managed in partnership with the Countryside and Rights of Way Service (CRoW) and Friends of Baldock Green Spaces (FoBGS).
- 3.1.15 The site was designated a Local Wildlife Site in 2007 and over time a diverse mosaic of habitats has developed, including wildflower meadows, hedgerows, reedbeds, wetlands and woodland. Chalk springs on the site give rise to the River Ivel which flows north into Bedfordshire to join the Great Ouse River.
- 3.1.16 The meadow contains a wide range of wildflowers including common knapweed, cowslip, yellow rattle and common birds-foot trefoil, along with more unusual species such as pyramidal orchid and common broomrape. The woodland contains a variety of tree species including alder and a range of willow trees, as well as a number of fruit trees. The mosaic of habitats hosts a broad range of bird species, and evidence of water vole has been recorded in the wetland areas.

Weston Hills Greenspace Action Plan

- 3.1.17 Weston Hills is a mixture of broadleaved woodland, ancient species-rich grassland and scrub-grassland mosaic, covering a north-west facing chalk slope overlooking the western edge of Baldock, North Hertfordshire. The 17-hectare site is listed as both a Local Nature Reserve (LNR) and a Local Wildlife Site (LWS) in recognition of its importance for biodiversity.
- 3.1.18 Weston Hills supports ancient chalk grassland, with a diverse plant community which is important for invertebrates including butterflies. Other habitats noted in the LWS citation are secondary chalk grassland, beech plantation transitioning to secondary woodland, and open and closed scrub.

Protected Species

Bats:

- 3.1.19 The Site does not lie within 5 km of a statutory designated site of nature conservation importance designated for bats.

- 3.1.20 A search on *MAGIC* returned ten bat development licence applications within 5 km of the Site. The details of these applications are listed below in Table 3.3.

Table 3.3 Development bat license applications within 5 km of the Site identified during the data search

Species	Date	Proximity (distance/direction) & connectivity to Site	Licenced activity
Brown long-eared and soprano pipistrelle bat	01/03/2016-31/03/2021	~ 4 km southeast Some connectivity to the Site via arable landscape, woodland parcels/edges and hedgerows.	Destruction of a resting place
Brown long-eared and soprano pipistrelle bat	19/04/2016-31/03/2021	~ 4 km southeast Some connectivity to the Site via arable landscape, woodland parcels/edges and hedgerows.	Destruction of a resting place
Common pipistrelle	18/03/2014-30/09/2016	~ 600 m west Good connectivity to the Site via arable landscape, residential pathways and urban features.	Damage to a resting place Destruction of a resting place
Brown long eared and common pipistrelle bat	24/11/2017-31/01/2022	~3.6 km south Some connectivity to the Site via residential pathways, arable landscape and woodland parcels/edges.	Destruction of a resting place
Brown long eared and common pipistrelle bat	17/01/2017-17/01/2017	~3.6 km south Some connectivity to the Site via residential pathways, arable landscape and woodland parcels/edges.	Destruction of a resting place
Brown long eared bat	07/04/2016-30/04/2021	~3.5 km northwest Some connectivity to the Site via watercourses, woodland parcels and arable landscape.	Destruction of a resting place

Great Crested Newt:

- 3.1.21 No waterbodies are present within the Site other than dry ditch courses. However, a number of waterbodies are present within 500 m of the Site, this includes: an agricultural drain that runs along the western boundary of the Site; the River Ivel watercourse that runs south-northwest adjacent North Road approximately 60 m northwest of the Site. However, considering that these are not standing water, it is considered that generally the site lacks suitable breeding habitat for great crested newt.
- 3.1.22 A review of *MAGIC* returned no great crested newt licence returns within 1 km of the Site.
- 3.1.23 No European protected species applications for great crested newt were granted within 1 km of the Site.

Other Protected Species:

- 3.1.24 No other European Protected Species development licence applications were identified within 1 km of the Site, as depicted on *MAGIC*.

3.1.25 Table 3.4 summarises the protected species records, by the Hertfordshire Ecological Records Centre (HERC), returned 01/08/2025 and Bedfordshire & Luton Biodiversity Recording Monitoring Centre (BRMC), returned 05/08/2025, that occur within 1 km (2 km for bats) of the Site within the last 10 years.

Table 3.4 Protected species recorded within 1 km (2 km for bats) of the Site (as provided by HERC, 01/08/2025 and BRMC, 05/08/2025)

Species	Level of protection ¹	Summary of records ²		
		N ^o ., distribution & connectivity	Distance, direction & date	
Amphibians & Reptiles				
Common lizard	UK (En)	2 records, both with good connectivity to the Site via grassland, woodland edges and scrub.	Adjacent to the Site, within the centre, along Yeomanry Drive 21/04/2018	Adjacent to the Site, within the centre, along Yeomanry Drive 21/04/2018
Bats				
Brown long-eared bat	EU & UK (En.)	4 records, all with some connectivity to the Site via urban pathways, hedgerows, woodland and the River Ivel.	~440 m west 12/08/2022	~440 m west 12/08/2022
Common pipistrelle	EU & UK (En.)	7 records, all with good connectivity to the Site via urban/residential pathways, river corridors, woodland and hedgerows.	~300 m west 03/08/2018	~440 m southwest 12/08/2022
Long-eared bat species	EU & UK (En.)	1 record with some connectivity to the Site via urban/residential pathways, river corridors, woodland and hedgerows.	~1.8 km southeast 12/06/2017	~1.8 km southeast 12/06/2017
<i>Myotis</i> species	EU & UK (En.)	1 record with some connectivity to the Site via hedgerows, woodland parcels and arable landscape.	~1.9 km southeast 12/06/2017	~1.9 km southeast 12/06/2017
Noctule bat	EU & UK (En.)	2 record with some connectivity to the Site via urban/residential pathways, river corridors, woodland and hedgerows.	~1 km northwest 21/07/2016	~1 km northwest 21/07/2016
Pipistrelle bat species	EU & UK (En.)	3 records in 2 locations, all of which have some connectivity to the Site via arable landscape, woodland parcels, residential/urban features and hedgerows.	~1.4 km northwest 10/10/2017	~2 km southeast 30/04/2021
Serotine	EU & UK (En.)	4 records with some connectivity to the Site via hedgerows, woodland parcels and watercourses.	~1 km northwest 06/07/2016	~1.4 km northwest 10/10/2017
Soprano pipistrelle	EU & UK (En.)	1 record with some connectivity to the Site via watercourses, arable landscape, woodland parcels, residential/urban features and hedgerows.	~1 km northwest 12/07/2017	~1 km northwest 12/07/2017

Species	Level of protection ¹	Summary of records ²		
		N ^o , distribution & connectivity	Distance, direction & date	
Birds				
Black redstart	UK (En.)	2 records, both with some connectivity to the Site via residential/urban features and arable landscape.	~1km northwest 18/03/2017	~1km northwest 18/03/2017
Brambling	UK	10 record with good connectivity to the Site via residential/urban features, arable landscape and hedgerows.	~610 m west 28/03/2018	~610 m west 28/03/2018
Firecrest	UK (En.)	1 record with good connectivity to the Site via woodland parcels, edges and hedgerows.	~620 m south 15/05/2016	~620 m south 15/05/2016
Fieldfare	UK	87 records in scattered locations, with the vast majority having good connectivity to the Site via arable landscape, grassland, field margins and hedgerows.	Onsite (along the western boundary adjacent Clothall Common) 01/12/2018	~1km south 25/11/2019
Hen harrier	UK (En)	3 records in 3 locations, all with good connectivity to the Site via arable landscape, grassland and woodland.	~600 m east 14/01/2019	~60 m east 07/07/2015
Hobby	UK (En)	5 records in 4 locations, with the vast majority having good connectivity to the Site via arable landscape, grassland and woodland.	~700m northeast 09/05/2016	~1 km northwest 09/05/2016
Merlin	UK (En)	9 records all of which have good connectivity to the Site via arable landscape, grassland, field margins and hedgerows.	~470 m east 10/11/2019	~470 m east 10/11/2019
Peregrine falcon	EU & UK (En.)	10 records all of which have good connectivity to the Site via grassland, urban features and arable landscape.	~400 m west 08/12/2019	~400 m west 08/12/2019
Quail	UK (En)	26 records all of which have good connectivity to the Site via grassland and arable landscape.	~400 m east 22/07/2019	~400 m east 22/07/2019
Red kite	UK (En)	148 records, the majority of which have good connectivity to the Site via arable landscape, grassland, field margins and hedgerows.	Onsite (along the western boundary adjacent Clothall Common) 22/09/2018	~350m west 06/04/2019
Redwing	UK (En)	71 records, the majority of which have good connectivity to the Site via arable landscape, grassland, field margins and hedgerows.	Onsite (along the western boundary adjacent Clothall Common) 01/12/2018	~350m west 13/01/2019
Barn owl	UK (En)	8 records in 4 locations, the majority of which have good connectivity to the Site via arable landscape, grassland, field margins and hedgerows.	~430 m east 14/02/2017	~1km west 30/12/2019

Species	Level of protection ¹	Summary of records ²		
		N- ^o , distribution & connectivity	Distance, direction & date	
			Nearest	Most recent
Western marsh harrier	UK (En)	1 record with slight connectivity to the Site via grassland and watercourses.	~1 km southwest 05/07/2017	~1 km southwest 05/07/2017
Mammals				
Eurasian badger	UK (En.)	24 records in 13 locations, with the vast majority having good connectivity to the Site via hedgerows, arable field parcels and grassland.	Bordering south side of the Site 03/07/2016	~400 m west 23/03/2020
Notes 1. EU – European; UK – UK; (En) – also a notable species in England, e.g. UK Priority/S41 species. Refer to Glossary for details and definitions. 2. As provided by Hertfordshire Biological Records Centre.				

Notable Species (including Priority species)

- 3.1.26 There are five arable bird assemblages with a maximum of five species, as depicted by *MAGIC*, overlapping the Site's boundaries. Three additional arable bird assemblages with a maximum of six species are present within 1 km of the Site. Furthermore, two grassland bird assemblages with a maximum of three species overlapping the Site's boundaries. Species that have shown to form assemblages within 1 km of the Site include corn bunting, grey partridge, lapwing, redshank, stone curlew, tree sparrow, turtle dove and yellow wagtail. All of these species overlapped with the Site boundaries itself. Therefore, there is potential that such species may occur on or use the Site if suitable habitat is present.
- 3.1.27 Corn bunting, grey partridge, lapwing, tree sparrow, turtle dove and yellow wagtail are also noted as Priority species (s41) in accordance with Section 41 of the Natural Environment and Rural Communities Act (2006).
- 3.1.28 There are a total of fifty-seven hedgehog records present within 1 km of the Site as depicted on the Big Hedgehog Map (PTES, 2025) as of the 07/08/2025. The closest of these records borders the Site itself near to the centre along Royston Road, while the vast majority of additional records are located southwest of the Site with strong connectivity via residential gardens and hedgerows.
- 3.1.29 Table 3.5 summarises the notable species records, provided by the Hertfordshire Ecological Records Centre (HERC), returned 01/08/2025, that occurred within 1 km of the Site and within the last 10 years. This Table excludes any species that are specifically protected (see Table 3.4).

Table 3.5 Notable species recorded within 1 km of the Site (as provided by HERC, 01/08/2025)

Species	Status				N- ^o , distribution & connectivity	Summary of records	
	BAP ¹	S41	BoCC ²	Other ³		Distance, direction & date	
						Nearest	Most recent
Amphibians							
Common toad	✓	✓			1 record with some	~460 m east	~460 m east

					connectivity to the Site via grassland.	16/10/2016	16/10/2016
Birds							
Black-headed gull			✓		163 records, with the vast majority having good connectivity to the Site via grassland, arable landscape and residential pathways.	~30 m east 16/02/2018	~1km west 01/01/2019
Common gull			✓		29 records, with some connectivity to the Site via grassland, arable fields, urban/residential pathways and roadside verges.	~1 km southwest 14/03/2017	~1 km southeast 17/11/2019
Common house-martin			✓	LR	44 records, all with some connectivity to the Site via residential/urban pathways and arable landscape.	~180m west 24/08/2019	~180m west 24/08/2019
Common reed bunting	✓	✓	✓		28 records, all with some connectivity to the Site via arable landscape, grassland and residential gardens.	~440 m southwest 16/02/2016	~700 m east 27/05/2019
Corn bunting	✓	✓	✓		225 records in 19 locations, the majority of which have good connectivity to the Site via grassland, arable landscape, hedgerows and residential gardens.	Along the western boundary adjacent Clothall Common 24/06/2018	~130m east 27/05/2019
Dunnock	✓	✓	✓		204 records scattered around the site, with the vast majority having good connectivity to the Site via grassland and arable landscape.	Along the western boundary adjacent Clothall Common 22/09/2018	Along the western boundary adjacent Clothall Common 22/09/2018
Eurasian bullfinch			✓		34 records with the majority having good connectivity to the Site via grassland, woodland parcels and edges, hedgerows and residential gardens.	~650 m northeast 14/05/2016	~1 km south 18/05/2017
Eurasian skylark	✓	✓	✓		156 records, with the majority having good connectivity to the Site via grassland, arable landscape and hedgerows.	~60 m east 29/05/2017	~1km west 30/12/2019
European herring gull			✓		7 records in 3 locations, all with good connectivity to the Site via grassland, residential/urban pathways and arable landscape.	Along the western boundary adjacent Clothall Common 24/06/2018	Along the western boundary adjacent Clothall Common 24/06/2018
Greylag goose			✓		11 records, all with good connectivity to the Site via arable landscape and	~250 m northwest 21/02/2019	~250 m northwest 21/02/2019

					grassland.		
Grey partridge	✓	✓	✓		122 records with the vast majority having good connectivity to the Site via arable fields and grassland.	~60 m east 07/10/2018	~1km south 16/06/2019
Grey plover			✓		10 records, all of which have low connectivity to the Site via watercourses.	~440 m southwest 08/11/2016	~440 m southwest 29/01/2019
Grey wagtail			✓		6 records in 4 locations, all of which have good connectivity to the Site via grassland, arable landscape, watercourses and residential gardens.	~250 m west 27/07/2016	~1 km northeast 16/10/2016
House sparrow	✓	✓	✓		152 records all of which have good connectivity to the Site via grassland, arable landscape, residential/urban features and hedgerows.	~60 m east 24/06/2018	~1 km southwest 05/03/2019
Kestrel			✓		82 records in 8 locations, with the vast majority having good connectivity to the Site via arable landscape, grassland, residential/urban features and roadside verges,	Along the western boundary adjacent Clothall Common 01/12/2018	~1km west 12/10/2019
Lapwing	✓	✓	✓		14 records in 3 locations, all with good connectivity to the Site via arable landscape, grassland and watercourses.	~400 m southwest 17/01/2016	~920 m east 18/11/2017
Lesser black-backed gull			✓		78 records all with the good connectivity to the Site via grassland, arable landscape and residential/urban features.	Along the western boundary adjacent Clothall Common 22/09/2018	~1km east 30/12/2019
Linnet	✓	✓	✓		123 records all with the good connectivity to the Site via grassland, arable landscape and residential/urban features.	Along the western boundary adjacent Clothall Common 24/06/2018	~1km east 01/01/2019
Mallard			✓		62 records all of which have some connectivity to the Site via grassland and watercourses.	~740 m northeast 28/05/2016	~1km northeast 16/03/2019
Marsh tit			✓		13 record with some connectivity to the Site via woodland and grassland.	~1 km west 10/01/2016	~1 km west 01/02/2018
Meadow pipit			✓		81 records in 6 locations, the majority of which have good connectivity to the Site via grassland, arable landscape and hedgerows.	Along the western boundary adjacent Clothall Common 01/12/2018	~120m west 17/07/2019
Mistle thrush			✓		70 records, the majority of which have good	Along the western boundary adjacent	Along the western

					connectivity to the Site via grassland, arable landscape and hedgerows.	Clothall Common 01/12/2018	boundary adjacent Clothall Common 30/12/2019
Song thrush	✓	✓	✓		120 records, the majority with good connectivity to the Site via grassland, arable landscape and hedgerows.	Along the western boundary adjacent Clothall Common 01/12/2018	~1km west 22/08/2019
Spotted flycatcher	✓	✓	✓		5 records with good connectivity to the Site via grassland, arable landscape and hedgerows.	~1km west 30/06/2017	~1km west 16/06/2019
Starling	✓	✓	✓		233 records, with the majority having good connectivity to the Site via grassland, arable landscape, residential gardens and hedgerows.	Along the western boundary adjacent Clothall Common 10/04/2018	~1km west 12/10/2019
Stock dove			✓		77 records in 6 locations with the majority having good connectivity to the Site via grassland, arable landscape, residential gardens, urban features and hedgerows.	Along the western boundary adjacent Clothall Common 22/09/2018	~1km west 12/10/2019
Swift			✓		82 records with the majority having good connectivity to the Site via grassland, arable landscape, residential gardens, urban features and hedgerows.	~Along the eastern boundary 16/06/2019	~Along the eastern boundary 16/06/2019
Western yellow wagtail	✓	✓	✓		14 records with the majority having some connectivity to the site via watercourses, woodland patches and hedgerows.	~120m west 17/07/2019	~120m west 17/07/2019
Whinchat			✓		10 records in 6 locations, with the majority having good connectivity to the Site via grassland, arable landscape, residential gardens, and hedgerows.	~120m east 14/09/2019	~120m east 14/09/2019
Willow warbler			✓		10 records in 3 locations, with the majority having good connectivity to the Site via grassland, arable landscape, residential gardens, and hedgerows.	Along the western boundary adjacent Clothall Common 29/04/2018	Along the western boundary adjacent Clothall Common 29/04/2018
Woodcock			✓		1 record with some connectivity to the Site via grassland and hedgerows.	~960 m northeast 02/01/2017	~960 m northeast 02/01/2017
Yellowhammer	✓	✓	✓		103 records, with the majority having good connectivity to the Site via grassland, arable	Along the western boundary adjacent Clothall Common 01/12/2018	~1km west 30/12/2019

					landscape, residential gardens, and hedgerows.		
Invertebrates							
Adonis Blue				NT	3 records, all within ~100m of the Site with great connectivity via roadside verges, grassland, arable field margins and hedgerows.	~100m south 29/08/2022	~100m south 29/08/2022
<i>Aphanus rolandri</i>				Na	2 records, all within ~100m of the Site with great connectivity via roadside verges, grassland, arable field margins and hedgerows.	~40m south 15/08/2022	~40m south 15/08/2022
Bee Wolf				VU	1 record located onsite within Clothall Common.	On site 14/08/2023	On site 14/08/2023
Chalk hill blue	✓			NT LR	25 records, with the majority having good connectivity to the Site via roadside verges, grassland, arable field margins and hedgerows.	Onsite (within field to the west of the B656 roundabout) 16/07/2018	Onsite (within field to the west of the B656 roundabout) 29/08/2022
Cinnabar	✓	✓			1 record, with good connectivity to the Site via grassland, roadside verges and arable field margins.	Onsite (within field to the west of the B656 roundabout) 06/06/2016	Onsite (within field to the west of the B656 roundabout) 06/06/2016
Red-tailed mason bee				NT	1 record with good connectivity to the Site via grassland, arable landscape, woodland edges and residential gardens.	~610 m west 22/06/2018	~610 m west 22/06/2018
Small Blue	✓	✓		NT	9 records, most bordering the Site and some located south and west with good connectivity to the Site via grassland, arable landscape, woodland edges and residential gardens.	~100 m west 21/07/2020	~1 km west 21/05/2023
Small heath	✓	✓		NT	47 records scattered locations all with good connectivity to the Site via grassland, roadside verges and field margins.	Onsite (eastern boundary of Clothall Common) 16/07/2018	100m south 03/06/2022
White-letter hairstreak	✓	✓		LR	4 records in 2 locations, with good connectivity to the Site via grassland, roadside verges and field margins.	~460 m west 01/07/2017	~870m southwest 23/06/2020
Mammals							
Brown hare	✓	✓		LR	5 records, all with good connectivity to the Site via arable landscape, grassland and field	~1km south 22/09/2020	~100 m southwest 16/06/2019

					margins.		
West European hedgehog	✓	✓		VU	65 records in locations, all with good connectivity to the Site via field margins, roadside verges, woodland edges and patches.	Onsite (within field margin bordering the Baldock bypass) 10/03/2019	~600 m west 08/03/2022
Plants							
Eyebright				LR	2 both associated with Weston Hills LNR with good connectivity to the Site via grassland, woodland and field margins.	~200 m south 07/07/2016	~570 m south 13/07/2016
Field Scabious				NT	3 records southwest of the site with good connectivity to the Site via grassland, woodland and field margins.	~100m southwest 07/07/2016	~780m southwest 13/07/2021
Hoary Plantain				NT	4 records, all with good connectivity to the Site via grassland, field margins and woodland edges.	~290 m south 07/07/2016	~540 m south 13/07/2016
Narrow-leaved Bird's-foot-trefoil				LR	1 record located on site within Clothall Common.	On site 13/07/2021	On site 13/07/2021
Quaking-grass				NT	3 records all of which have good connectivity to the Site via grassland, field margins and woodland edges.	On site 22/07/2021	On site 22/07/2021
Notes 1. Biodiversity Action Plan: UK – UK 2. Birds of Conservation Concern: R - Red listed; A – Amber listed 3. Other: Great Britain Threat Status/England Threat Status or Local Threat Status: EN – Endangered; NT – Near Threatened; VU – Vulnerable; LR – Locally Rare; EX – Locally Extinct. Na – Nationally Notable A; Nb- Nationally Notable B Refer to Glossary for definitions							

- 3.1.30 As part of the draft Hertfordshire LNRS, the majority of arable fields within the Site have been identified within species targeted action plans as areas to increase rare arable plant populations. Southern arable fields within the Site have been highlighted to increase autumn cultivation plants through cultivated margins or plots for rare arable plants such as corn buttercup and spreading hedge-parsley. Arable fields north of Royston Road, the railway line and Bygrave Road have all been identified as an area to increase rare spring cultivated plants through margins/plots of species such as fine-leaved fumitory, basil thyme and red-hemp nettle.

3.2 Extended Phase 1 Habitat Survey: Habitats

Local Context

- 3.2.1 The Site is approximately 220 ha in total however is largely dissected by a railway running east west through the middle of the Site effectively creating a northern and southern portion of the Site. The northern area comprises approximately 144 ha. The southern area comprises approximately 76 ha.

- 3.2.2 The northern area of the Site is composed of land parcels to the north and south of Bygrave Road/Ashwell Road in Baldock, Hertfordshire, centred at Ordnance Survey National Grid Reference TL 25369 34942. It comprises a combination of arable fields and grazed pasture, with a mixture of residential and farm buildings located along Bygrave Road, as well as two small sections of railway line, partially connecting the north to the southern section of the Site. North and east of the site is dominated by farmland, with the town of Baldock located to the south-west. To the west, beyond North Road, is Ivel Springs LNR, Blackhorse Farm Meadow LWS and Ivel Springs, Norton Road LWS.
- 3.2.3 The southern section of the Site is located to the east of the town of Baldock in Hertfordshire and is centred at Ordnance Survey National Grid Reference TL 25643 33923. The site comprises arable fields with occasional boundary hedgerows, with a mixture of residential and farm buildings. It is largely bounded by a railway line to the north, the A505 to the south and east with the residential areas of Clothall Common and Baldock to the west.
- 3.2.4 The following habitats were recorded immediately adjacent to the Site i.e., approximately 50 m from the Site boundary and visible from boundary/inferred from aerial photography:
- North: an agricultural field matrix, comprising arable parcels with associated boundary features.
 - East: an agricultural field matrix, comprising arable parcels with associated boundary features and the village of Bygrave.
 - West: the urbanised area of Baldock, largely sub-urban residential streets and associated infrastructure.
 - South: an agricultural field matrix, comprising arable parcels with associated boundary features and the A505 which runs east-west to the south of the Site.

Site

- 3.2.5 A map depicting the distribution of the habitats, photographs and species recorded on Site are provided in the Appendix.
- 3.2.6 The Site comprises a series of agricultural fields, notably arable, with areas of improved grassland fields. Other habitats within the Site include deciduous woodland, poor semi-improved grassland, semi-improved neutral grassland, various hedgerows, scattered trees, scattered/dense scrub, ruderal, amenity grassland, buildings, hardstanding, railway corridor, bare ground and a LWS (Bygrave Road).
- 3.2.7 A number of public right of ways (PRoW) are present within the Site. Owing to the presence of these well-used PRoW's and general high levels of agricultural and pedestrian activity within the Site and the immediate vicinity, it is considered that disturbance levels are relatively high within the peripheries of the Site in particular with some activity associated with agricultural practice concentrated in the arable fields.
- 3.2.8 Full details, including species lists and target notes, of each area of onsite habitat and linear features are outlined in Appendix E and F. Competencies of those surveying against Phase 1 standards are provided in the appendix.

3.2.9 The following habitats were present on the Site:

3.2.10 Allotment - An allotment was present in the south-western corner of the Site (Photograph 1), known as Clothall Road site.

3.2.11 Arable – the majority of the land within the Site was set to seven actively farmed arable fields of various sizes (Photograph 2). A variety of grassland verges and hedgerows were present along most field margins. The majority of the Site comprised of compartments consisting of either wheat crop or barley. Other crops recorded during the walkover included rye-grass and beet.

3.2.12 Field margins were present however they were not considered to qualify as Arable Field Margins HPI given that they comprised a low diversity of common species, they lacked distinctiveness and size and did not appear to be managed specifically to provide benefit to wildlife.

3.2.13 Amenity grassland – One small area of shortly mown amenity grassland was present in the south-west of the Site associated with an adjacent garden centre and residential property (Photograph 3). Amenity grassland was also located adjacent to the majority of residential properties within the Site (Photograph 4). These were all closely mown and comprised abundant perennial rye-grass and frequent annual meadow-grass.

3.2.14 Bare ground– Areas of bare ground surrounded the majority of shed structures on Site, which were largely devoid of vegetation.

3.2.15 Bygrave Road LWS - Located onsite, Bygrave Road LWS is immediately adjacent to Bygrave Road in the north east of the Site. This verge was herb-rich with frequent greater knapweed, yarrow and lady's bedstraw; and occasional field scabious and field bindweed. Frequent false oat-grass and occasional soft brome was present, in addition to tall ruderal species such as mugwort and common nettle. Small patches of blackthorn scrub were also present along the length of the LWS.

3.2.16 Buildings and hardstanding – A total of 60 buildings were identified within the Site comprising a range of sizes and construction materials (Photograph 5). The majority were associated with the arable land use (which dominated the Site), in addition to residential properties also located within the Site. A full description of each building is located within Appendix E. Small areas of hardstanding were located around the buildings on Site, along roads within the Site and within areas of bare ground; these were used for storage or provided access.

3.2.17 Dense scrub – Parcels of dense scrub were present throughout the Site, particularly surrounding the fenced boundaries of the buildings and boundaries of the Site (Photograph 6). Elsewhere along field margins, road verges, along the railway corridor onsite and at the base of hedgerows, patches of scattered scrub were recorded, typically comprising bramble, but also blackthorn, and ash. An area of dense scrub was recorded in the south-western corner of the northern portion of the Site, which bordered the railway line and neighbouring residential properties (Photograph 7). This area was dominated by bramble, Canadian goldenrod and spear thistle.

- 3.2.18 Hedgerows - An array of species rich and species poor hedgerows occur throughout the Site (Photograph 8). These are considered in more detail in Appendix E.
- 3.2.19 Improved grassland – Multiple areas of improved grassland within the Site largely associated with grazing fields used for pasture (Photograph 9). The majority of compartments were heavily grazed; however, others without livestock had a longer sward.
- 3.2.20 Mixed scattered trees – A large number of broad-leaved and coniferous trees with a range of ages and sizes were recorded on Site generally associated with field boundaries and farmyard/residential properties within the Site. Native and naturalised species commonly encountered included ash, sycamore, small-leaved lime, horse chestnut, hawthorn, goat willow, field maple and silver birch. Non-native species included laburnum, Scot's pine and cypress amongst other species. Details of each tree feature recorded on site, including age, size and species is outlined within the Tree Schedule and Tree Constraints Plan, provided by SEED Arboriculture Ltd in 2024 (Refs: 1827-TCP-000-A to 1827-TCP-008-A and 1827-TS-V1-A). The majority of trees recorded within the Site were of moderate condition, not achieving good condition due to young age class, the feature being a non-native species and/or a lack of ecological niches such as dead bark and cavities. A total of fourteen trees achieved good condition, predominantly medium, large or very large trees that have reached maturity and/or possess ecological niches beneficial for wildlife.
- 3.2.21 Poor semi-improved grassland – Numerous areas of poor semi-improved grassland associated with several field margin features and isolated areas (Photograph 10). Furthermore, a large area of poor semi-improved grassland is located within a ruderal- poor semi-improved habitat mosaic within the northern extent of the southern portion of the Site. Poor semi-improved grassland was also located along the northern boundary bridleway and road verges to the south of Bygrave Road. Knapweed broomrape was recorded within an area of poor semi-improved grassland along the northern boundary of the Site where greater knapweed was present. This may suggest a former herb-rich grassland, which has been agriculturally improved.
- 3.2.22 Semi-improved neutral grassland – Large areas of semi-improved neutral grassland occur within the Site (Photograph 11). Of note is an area bordering an arable field within the southern extent of the Site. A number of the road verges along Bygrave Road and Royston Road also supported thin strips of semi-improved neutral grassland. A significant area of semi-improved neutral grassland also includes a large field parcel in the southern section of the Site.
- 3.2.23 A grass verge approximately 6m wide to the east of the field parcel in the south west of the Site was also recorded as semi-improved neutral grassland as well as within the centre of a roundabout off Royston Road.
- 3.2.24 Tal ruderal - Sporadic patches of tall ruderal occurred throughout the Site largely associated with boundary fence lines. Of note is a large ruderal mosaic located in the north western corner of the southern aspect of the Site (Photograph 12)
- 3.2.25 Woodland – A strip of broad-leaved semi-natural woodland was located in the south-western corner of the northern portion of the Site (Photograph 13).

- 3.2.26 Ivel Springs LNR – Lies on the north western boundary of the Site. Species included common knapweed, cowslip, yellow rattle and common birds-foot trefoil, along with more unusual species such as pyramidal orchid.
- 3.2.27 Other habitat – railway – Two small sections of the Cambridge Train Line fall within the northern section of the Site, partially connecting the northern area to the southern area. Habitat recorded along the railway corridor onsite included ruderal and dense scrub vegetation (Photograph 14).

3.3 Extended Phase 1 Habitat Survey: Protected and Notable Species (including Priority species)

- 3.3.1 There was direct evidence of the following protected and notable species on or immediately adjacent to the Site:
- **Nesting birds** – areas of arable field margins, grassland, scattered scrub, scattered trees, and the woodland block within the Site. Furthermore, various buildings showed signs of historic and present use of nesting birds.
- 3.3.2 Further to the above species, the habitats present within the Site had the potential to support the following protected and notable species:
- **Bats** – Two trees are recorded as providing potential roosting features, e.g. broken limbs. Multiple buildings on Site additionally have been identified to provide some limited roosting opportunity. This is discussed in more detail in section 4. An array of habitat including woodland, dense scrub and grassland particularly in the south of the Site provide suitable habitat for commuting and foraging bats.
 - **Reptile** – The large area of neutral semi-improved grassland (Target Note 60) which has a large south facing aspect provides optimal habitat for reptiles. It is also considered likely that reptiles will use the field margins, areas of scrub and edge habitats present with the Site.
 - **Badger** – A Badger was recorded in September 2022 (road casualty) on Bygrave Road (near TN21). However, no active signs of badger were recorded on Site although ample suitable habitat is present particularly in the north of the Site (Photograph 14 & 15). Further historic evidence of badger was identified along the northern boundary of the Site and within H20.
 - **Common amphibians** – In areas of scrub and grassland the Site has areas of suitable habitat.
 - **Hedgehog** – The Site has areas of scrub, woodland and grassland with moderate connectivity to the wider landscape. There is a record of hedgehog on the Site itself and thus it is considered hedgehog could utilise the Site
 - **Brown hare** - The Site has large areas of arable fields and grassland with good connectivity to the wider arable landscape. There is a record of hedgehog adjacent to the Site itself and thus it is considered brown hare could utilise the Site.

- 3.3.3 Other species recorded during the survey are listed in Appendix F. The potential for the habitats on Site to support other protected and notable species is discussed in Section 4: Evaluation.

4. EVALUATION

4.1 Introduction

4.1.1 This Section reviews the results of the desk study and field surveys in relation to the proposed development proposals; it:

- Determines the ecological importance of habitats at an appropriate geographic level;
- Determines the likelihood of protected and notable species occurring on the Site;
- Identifies any legal and policy implications for developing the Site in relation to nature conservation sites, habitats and species potentially associated with the Site; and
- Identifies high-level biodiversity gain opportunities.

4.2 Habitats

4.2.1 Table 4.1 provides a summary of the nature conservation importance of habitats within the Site.

Table 4.1 provides a summary of the nature conservation importance of habitats within the Site.

Habitat	Meets UK Priority/Local BAP habitat criteria	Condition ¹	Geographical context ²
Arable	No	n/a	Site
Bare ground (& hardstanding)	No	n/a	Site
Buildings	No	n/a	Site
Dense scrub	No	Poor-Moderate	Site to Local
Grassland – amenity	No	Poor	Site
Grassland – improved	No	Poor	Site
Grassland – neutral semi-improved	No	Moderate	Local
Grassland – poor semi-improved	No	Moderate	Site
Hedgerows	Yes	Poor-good	Local
Line of trees	No	Poor	Site
Scattered trees	No	Moderate-good	Local
Woodland – semi-natural broadleaf	No	Poor	Site
Other habitat – railway	No	N/A	Site
Notes: 1. As determined using the Biodiversity Metric 4.0 guidance. Where it is considered that the condition outcome is inappropriate justification is given in the text. See Appendix E for detailed habitat assessments across. 2. Geographic level at which the habitat is considered important			

4.2.2 The arable fields present within the Site are subject to intensive management, with frequent cultivation and applications of agro-chemicals considered likely. Such measures significantly reduce plant and invertebrate species diversity and hence the ecological value of such habitats

- for these species. The arable fields provide suitable habitat for farmland birds and other Priority species such as brown hare, however the fields lack floral diversity.
- 4.2.3 The ditches present within the Site are small and have botanically limited ecological value. However, these features in association with the hedgerows do provide opportunities for certain faunal species and groups to disperse across an agricultural landscape, particularly amphibians.
- 4.2.4 Amenity grassland is a common habitat locally and nationally, and support common native botanical species or non-native species. These habitats are easily restored or re-created. They are of limited value to faunal species as only low botanical species diversity is present.
- 4.2.5 Improved grassland is a common habitat both locally and nationally. This habitat at the Site has very low botanical species diversity and low structural diversity. The habitat area provides only very limited opportunities to faunal species. As such this habitat is considered of low ecological value at the Site level.
- 4.2.6 Significant loss of semi-improved grassland has occurred since WW2 and hence this factor increases the conservation importance of the remaining habitat. However, the field margins supporting this habitat at the Site were all recorded as supporting low botanical species diversity, with the species present all recorded as being common in both a local and a national context. Furthermore, all these areas were small and adjacent to arable fields which were under management. Therefore, the semi-improved grassland present is considered to be 'Poor Semi-improved Grassland' (as per the JNCC classification) and of only limited ecological value. Nevertheless, it is recommended that the results of this preliminary assessment be confirmed through an updated botanical survey undertaken during the recognised botanical survey season.
- 4.2.7 Moreover, there were areas of semi-improved neutral grassland which are scarcer within the locality and provide a moderate diversity of flowering species. A number of the road verges along Bygrave Road also supported thin strips of semi-improved neutral grassland. A diverse range of grasses and herbaceous species was recorded within these areas; however, most road verges were generally less species-rich than Bygrave Road LWS with higher levels of ruderal species such as mugwort and common nettle. The verges appeared to be infrequently managed, which has caused the habitat to decline in quality. Fertiliser enrichment had allowed coarse grasses and ruderals to flourish and crowded out all but the tallest of the more notable species. Although there are some calcareous species present in the areas of neutral grassland such as cock's-foot, bird's-foot-trefoil, greater knapweed, lady's bedstraw, and field scabious, generally the neutral grassland indicator species dominate these areas. Therefore, the neutral semi-improved grassland present is considered to be of moderate ecological value at a local level.
- 4.2.8 There were occasional high value trees within the hedgerows. This habitat feature is common and widespread in the local landscape but is still considered to be of Local value.
- 4.2.9 Areas of scattered trees are common habitats. Those present within the Site comprised a large number of common, native and non-native species across the Site, predominantly of moderate

condition. Several large and very large trees were recorded on site, some of which were of good condition due to mature life stage and provision of important ecological niches such as dead wood, cavities and loose bark. It is considered that the scattered trees present within the Site are of Local value due to the high volume and their moderate/good condition.

- 4.2.10 A single line of trees feature is present within a residential garden, comprised of native species. However, due to its limited extent it is considered to provide ecological value at Site level only.
- 4.2.11 Although the semi-natural broad-leaved woodland (TN35) has some features of a lowland deciduous woodland, there is a lack of species diversity and ground flora in this woodland which means this woodland area is not considered to meet the criteria of Priority Habitat and is considered to be of poor condition owing to the relatively single age-class of the wood, the narrow and linear nature and limited ground flora due to dense ivy/shading.
- 4.2.12 There are also areas of dense scrub within the Site. The scrub habitat within the Site is of some conservation value because this habitat forms an important habitat corridor in a largely arable landscape. Furthermore, this area is considered to be on calcareous soils with some species diversity. The condition of scrub within the Site varied from poor to moderate, with areas of moderate scrub possessing greater species and structural diversity as well as a range of age classes present such as saplings, young shrubs and mature plants. It is considered that areas of scrub on Site are likely to provide ecological opportunities for nesting birds and as well as shelter for reptiles, small mammals and birds.
- 4.2.13 The railway corridor sections present within the Site may be of some conservation value due to the habitats it supports such as ruderal and dense scrub vegetation, of which may be utilised by nesting birds. Furthermore, species such as reptiles or badger may utilise railway banks for basking and sett building opportunities, respectively. The sections that fall within the Site, however, are relatively small, with extensive railway corridor within the locality that falls outside of the Site. Therefore it is considered the areas within the Site provide low value overall.
- 4.2.14 All native hedgerows on Site meet UK Priority Habitat criteria. These habitats are covered in more depth in section 4.4.
- 4.2.15 Under the current proposals, the emerging SMP will look for majority retention of UK Priority habitats and connectivity between them.

4.3 Species

- 4.3.1 This section considers the actual or potential occurrence of protected and notable species (including non-native invasive species) on the Site. It takes account of known data records and habitats on the Site and connectivity, appropriate to given species, across the landscape. Species not specifically listed in this Section are unlikely to occur on the Site on account of at least one of the following factors:
- No habitat on the Site to support the species;
 - No connectivity to suitable habitat beyond the Site boundary; and
 - Site is outside of the species typical geographic range.

- 4.3.2 Of the protected and notable species with potential to occur on Site:

Amphibians (including great crested newt)

- 4.3.3 No suitable waterbodies for GCN were identified during the desk study within 500 m of the Site, alongside no records being returned within 1 km according to *MAGIC* and the Hertfordshire Biological Records Centre (returned 01/08/2025).
- 4.3.4 There are no ponds or waterbodies on Site and hence no breeding potential for amphibians. The majority of the site was considered to be of low quality for great crested newt and other amphibians, due to dominance of arable fields. However, some terrestrial habitat is suitable for common and widespread amphibians such as the broad-leaved woodland, semi-improved neutral grassland, tall ruderal vegetation, hedgerows and scrub all of which provide suitable habitat for amphibians in their terrestrial phase. The hedgerows provide commuter routes to the wider landscape; however, none offered a dispersal corridor between waterbodies.
- 4.3.5 Overall, the site was considered to be of negligible suitability for great crested newt, however it is considered that the Site will support low populations of common and widespread amphibians such as common toad.

Bats

- 4.3.6 The desk study identified a total of twenty-nine records of protected species records relating to bats present within 5 km of the Site. Species associated with these records included: Brown long-eared, common pipistrelle, long-eared bat species, *Myotis* species, noctule bat, pipistrelle bat species, serotine bat and soprano pipistrelle.
- 4.3.7 At least eight bat species were previously recorded as using the Site during activity surveys (WYG 2020a). The previous walked transect survey results indicate that a high proportion of the activity was recorded along the north-eastern Site boundaries and hedgerows in May and July by noctule and *Nyctalus* species.
- 4.3.8 This is reflected in the diversity of species and higher number of calls recorded in this area by the static bat detector in the September 2020 findings. The previous surveys also indicated that the highest number of common pipistrelle bat calls were recorded in the south-west section of the transect, adjacent to Baldock Park Homes, mostly recorded in May 2020. Lower levels of activity were recorded in September 2020 and these were more scattered around the Site, with activity recorded on the boundary of Clothall Common, which had no activity in previous months.
- 4.3.9 The Site was considered to offer some habitat for foraging and commuting bats mainly along hedgerows, as well as other higher value areas such as the semi-improved neutral grassland at the centre of the Site. However, the majority of the site was arable or heavily grazed pasture, which provides limited foraging opportunities for bats. The boundary hedgerows connect with offsite habitats; however, these mainly consisted of large expanses of arable, similar to that within the site. The exception is the LWS habitats located within the Site, which provided suitable commuting, foraging habitat and the railway line which dissects the middle of the Site, which may be used by foraging and commuting bats. The potential for commuting and foraging

bats using the Site is estimated as moderate. This is owing to the presence of some well-vegetated habitat corridors that run across the Site. Resources such as scattered vegetation, e.g. arable field margins, provide further foraging opportunities for bats within the Site. Commuting and foraging bats within the local landscape are considered likely to use the Site relatively frequently.

Tree Bat Roost Assessment

- 4.3.10 There were some suitable features for roosting bats which were recorded on trees within or overhanging the Site and were accordingly assessed as having suitability for roosting bats. One tree was assessed as having moderate suitability for roosting bats. This was a field maple located at the northern tip of the Site, within hedgerow H8 (TN17). The feature identified as providing potential for bats was a south-facing trunk cavity at 3.5m height. Similarly, there was an area of dense scrub associated with H9 which included a semi-mature ash tree with feature suitable for roosting bats (trunk cavity) (TN16).
- 4.3.11 Furthermore, H2 included a mature ash with dense ivy covering up trunk, and consequently the ivy cladding leads to this mature ash being recorded as having low bat roost potential. The other tree species in H2 included field maples which had low bat roost potential owing to ivy cladding.

Buildings Bat Roost Assessment

- 4.3.12 One building was assessed as having high suitability for roosting bats, four buildings with moderate suitability and the subsequent nine buildings which were assessed as having low suitability in the initial assessment. All other buildings were assessed as negligible. Two trees (TN17 and TN39) were identified as having low suitability for roosting bats will additionally be subject to one evening emergence survey. All locations of bat potential buildings and trees are shown on the Phase 1 Habitat Plan (Ref BMD.21.0045.DRE.901 in the Appendix).
- 4.3.13 Building descriptions and features recorded are located within Appendix E. All other buildings were assessed as having negligible suitability to support roosting bats due to a lack of suitable access points or roosting locations. Building locations are provided on BMD.21.0045.DRE.909. Considering the findings of the desk study, the results of the onsite survey, and the reasoning above, it is considered that potential for extensive bat roosting within the Site is low, however, there is moderate potential for small numbers of roosting bats to be utilising various structures and possibly some of the limited tree features recorded within the Site.

Badger

- 4.3.14 There are a total of twenty-four records of badger identified during the desk study, the closest of which borders the Site to the south. Some of the other records have direct connectivity to the Site amongst hedgerows, arable landscape and grassland primarily within the Centre of the Site north of Bygrave Road.
- 4.3.15 There is extensive commuting and foraging habitat for badger particularly in the north of the Site. These habitats included: grassland field margins, hedgerows, scattered scrub and a woodland block. The Site has several open boundaries into adjacent badger-suitable

landscapes. As such, it is estimated that badger is readily able to commute to/from the Site from adjacent habitats.

- 4.3.16 A Badger was recorded in September 2022 (road casualty) on Bygrave Road (near TN21). The badger recorded is considered to have been commuting through the Site given no active setts were recorded on Site. No other field signs of badger were seen during the survey; however, three former setts which may only be intermittently used were recorded.
- 4.3.17 One former sett was recorded [REDACTED] [REDACTED] There was a minimum of one entrance which appeared inactive. The full scope to survey this suspected sett was limited due to access constraints; therefore, recent use by badger could not be confirmed during the initial assessment.
- 4.3.18 The second sett [REDACTED] consisting of approximately twelve entrances with a number of rabbit excavations in the locality. Whilst a number of the entrances were small/collapsed and showed evidence of use by rabbits in the form of droppings, three entrances were suitable in size and shape for use by badger. This sett is considered to be disused by badger.
- 4.3.19 A further former main sett [REDACTED] [REDACTED] is a former main sett which comprised approximately eight entrances. Whilst a number of the entrances were small/collapsed and showed evidence of use by rabbits in the form of droppings, three entrances were suitable in size and shape for use by badger. It is considered this sett is no longer in use by badgers and has become repurposed by rabbits.

Nesting Birds

- 4.3.20 A large quantity of protected and notable bird species within 1 km of the Site were identified during the desk study, these species include: Black redstart, brambling, firecrest, fieldfare, hen harrier, hobby, merlin, peregrine falcon, quail, red kite, redwing, barn owl, western marsh harrier, black-headed gull, common gull, common house-martin, common reed bunting, corn bunting, cuckoo, dunnoek, Eurasian bullfinch, Eurasian skylark, European herring gull, grey partridge, grey plover, grey wagtail, house sparrow, kestrel, lapwing, lesser black-backed gull, linnet, mallard, marsh tit, meadow pipit, mistle thrush, redstart, song thrush, spotted flycatcher, starling, stock dove, swift, turtle dove, western yellow wagtail, whinchat, willow warbler, woodcock and yellowhammer.
- 4.3.21 There are five arable bird assemblages with a maximum of five species, as depicted by *MAG/C*, overlapping the Site's boundaries. Three additional arable bird assemblages with a maximum of six species are present within 1 km of the Site. Furthermore, two grassland bird assemblages with a maximum of three species overlapping the Site's boundaries. Species that have shown to form assemblages within 1 km of the Site include corn bunting, grey partridge, lapwing, redshank, stone curlew tree sparrow, turtle dove and yellow wagtail. All of these species overlapped with the Site boundaries itself and suitable habitat for these species exists.

- 4.3.22 Species which were recorded on Site during the initial survey were linnet, robin, collared dove, great tit, goldfinch, chaffinch, wood pigeon, blackbird, starling, house sparrow, magpie, carrion crow, jay, wren, goldcrest, long tailed tit, corn bunting, coal tit, red kite, buzzard and dunnoek.
- 4.3.23 Red kite was recorded during the initial survey and is listed on Schedule 1 of the Wildlife and Countryside Act (1981). Most of the onsite habitats are suitable for a variety of common, notable and protected nesting birds; particular features of note are the hedgerows, rough grassland areas, woodlands and river corridor. It is considered likely that the Site hosts a range of nesting opportunities for the birds within the local landscape, and thus is considered to be important at a local level with regard to bird species.
- 4.3.24 Corn buntings have been recorded within the Site during previous assessments. The most recent corn bunting surveys were carried out in 2019 which recorded a total of 14 corn bunting territories were noted across the north and southeast Site (10 in the north and 4 on the south east). This makes up 10% of all corn bunting males in Hertfordshire, in accordance with the Birds of Hertfordshire (Smith, K. et al, 2015), a population considered to be of up to County importance.
- 4.3.25 Consequently, as a recommendation from this report an updated corn bunting survey will be undertaken to inform mitigation and support the planning application for the development.

Reptiles

- 4.3.26 There was a total of two records for common lizard within 1 km of the Site (including records of common lizard adjacent to the Site), with all records having good connectivity to the Site through grassland, scrub and woodland parcels.
- 4.3.27 Some habitats on Site offer suitable basking, foraging and shelter opportunities for reptile. These include tall ruderal vegetation, areas of hedgerow and scrub, especially when adjacent to grassland and edge habitats present within the Site. Within the south of the Site the large area of neutral semi-improved grassland, provided foraging opportunities for common reptiles. This area is considered to be of high suitability for reptiles owing to being a south facing, diverse large block of grassland likely to support an abundance of favoured prey.
- 4.3.28 Reptiles have previously been recorded within the Site. Common lizard was found in the North of the Site in 2019, adjacent to Bygrave Road / Ashwell Road. A peak count of two adults indicates a low population. In the South-east site, a peak count of six slow worm were found in 2019, indicating a good population. In 2017, a good population of common lizard were recorded in the South-east site (one common lizard was recorded in the additional survey areas of the South-east site in 2019). The northern area of the Site is intensively managed arable farmland, which is assessed as being sub-optimal for reptiles. Owing to extensive arable fields, the open nature of the Site, and the fragmented nature of suitable habitat within the Site, it is considered that overall, the Site offers low suitability for reptiles. However, the southern aspect of the Site provides previous records as well as suitable habitat mosaics and is considered to be of Local importance for reptile populations.
- 4.3.29 Overall given the open nature of the Site it is considered the Site offers low suitability for significant populations of reptiles.

Invertebrates

- 4.3.30 The local record search identified several records of notable invertebrate species within the study area, including both locally and nationally notable species. Species returned in the local record search included various invertebrates onsite such as bee wolf, chalk hill blue, cinnabar, small heath and white letter hairstreak.
- 4.3.31 The overall habitat value of the Site for invertebrates is generally limited due to the arable dominance within the Site, although there are small areas of woodland, the hedgerow network and grassland areas such as Clothall Common that likely provide important opportunities for invertebrates. Overall, the Site is not considered to be of elevated value for notable invertebrates due to the dominance of lower value habitat, however there is some opportunities present that local invertebrate species may utilise.

Other Notable Fauna

- 4.3.32 One hundred and twenty-two records of hedgehogs were returned during the desk study. The closest of these records is within the Site itself, adjacent to Baldock Bypass, while the vast majority of additional records are located southwest of the Site with strong connectivity via residential gardens and hedgerows. The majority of the remaining records are scattered to the south of the Site, associated with the residential areas of Baldock, with varying distances from the Site. Additionally, five records of brown hare were identified in the desk study, with all records having good connectivity to the Site via field margins, arable landscape and grassland.
- 4.3.33 The vast majority of the Site comprises short-sward, species-poor arable farmland and these habitats are unlikely to support an abundance or diversity of invertebrates, which would provide suitable foraging opportunities for hedgehog. Nevertheless, these habitats provide some suitable opportunities for brown hare, although other such habitats are frequently encountered off-site to the south, south east and south west, such that the Site is considered unlikely to be of particular importance to this Priority listed UK BAP species. The woodland and the mature native hedgerows provide suitable cover and foraging habitat for hedgehog.
- 4.3.34 The mosaic of farmland and adjacent hedgerows with some woodland provide suitable opportunities for the Priority-listed UK BAP species polecat, with frequent evidence of its favoured prey, rabbit, recorded during the Site survey. Furthermore, a record of polecat was returned in the desk study within the center of the Site. Nevertheless, it should be noted that polecat territories are usually large (between 16 and 500 ha), such that even if this species is present the Site is only likely to form part of a much wider Polecat territory.
- 4.3.35 In addition, the likely presence of arable fields within the Site surrounded by a network of hedgerows, provide some suitable habitat for the Priority listed UK BAP species harvest mouse. Therefore, in summary, the Site is considered to provide some opportunities to other protected, rare, notable or Priority-listed mammal species, but these opportunities are considered common in a local context, or sub-optimal for the species concerned. As such, no further survey work regarding the potential presence of these species is considered necessary at the Site.

- 4.3.36 In addition, grey squirrel, mole and rabbit are known to utilise the site, whilst given the habitats present rat, fox, common shrew, field vole and bank vole are considered likely to utilise the site. However, these mammal species do not receive any specific legislative protection and hence no further survey work or mitigation measures are considered necessary regarding these species.
- 4.3.37 Ultimately, based on the habitats recorded on Site, the Site is considered unlikely to support significant populations of other protected or notable species.

Invasive non-native species

- 4.3.38 No invasive non-native species were identified within the desk study in the locality of the Site, as returned by HERC (01/08/2025).
- 4.3.39 Two invasive species were recorded during the initial walkover. These were Japanese rose (TN27) and cotoneaster (TN57). Both of these locations are provided on BMD.21.0045.DRE.901.

4.4 Legal and Policy Implications

Statutory Sites of Nature Conservation

- 4.4.1 The statutory sites of nature conservation identified during the desk study are sufficiently removed from the Site to not be affected by the proposed development.
- 4.4.2 The Site does not lie within the Impact Risk Zone (IRZ) of any statutory designated sites of nature conservation. However, given the nature and scale of proposed works, consultation with Natural England would be advisable given the LWS within the Site and nearby LNRs.

Habitats

- 4.4.3 All hedgerows with the exception of H40 within the Site comprise 80% or more cover of at least one woody UK native species and hence all hedgerows qualify as UK Priority Habitats.
- 4.4.4 In addition, at least eight of the hedgerows present at the Site qualify as being 'Species Rich' (i.e. contain five qualifying native woody species or more). These hedgerows are H3, H3a, H8, H9, H10, H11, H27 and H28. It should be noted that only low /very low abundances of some of the qualifying native woody species listed under the Wildlife and Landscape criteria of the Hedgerows Regulations 1997 were recorded in some of these hedgerows. Therefore, these may not qualify as 'Important' hedgerows when fully assessed against the Hedgerows Regulations 1997 criteria. Presently, H28 on Site is considered to be important hedgerows under The Hedgerows Regulations 1997 (see Appendix E).
- 4.4.5 By contrast, the remaining hedgerows do not contain enough qualifying native woody species and hence even with supporting secondary features taken into consideration these hedgerows would not qualify as 'Important' under the Regulations; no further survey of these features is warranted (see Habitat Evaluation).

- 4.4.6 It is considered that the majority of notable hedges would be retained within the Site, therefore no further surveys are required necessary to inform the development proposals. However, hedgerows should be adequately buffered to protect their integrity.

Species

- 4.4.7 The potential presence of protected and/or notable species on the Site means that they are a material consideration in the planning system through the NPPF and the Local Planning Policy. The following species/species groups have policy implications if impacted by the proposed development:

- Amphibians (excluding great crested newt);
- Bats;
- Badger;
- Hedgehog;
- Nesting birds;
- Reptiles; and
- Invasive plants.

- 4.4.8 Any development of the Site could have impacts on the other listed species if confirmed to be present. The LPA may request further species-specific surveys prior to determining a planning application associated with the Site.

Summary

- 4.4.9 Based on the current known ecological baseline of the Site, Table 4.2 summarises the legal and policy implications in relation to wildlife for developing the Site.

Table 4.2 Legal and policy implications of developing the Site

Habitat	Protected &/or notable species associated with the habitat	Legal implication	Policy implication
Arable	Potential for badger and nesting farmland birds.	Badgers, their setts, and some associated habitats are protected. All birds, their nests, and eggs are protected during nesting period.	NPPF & local policy pertaining to protected and notable species. Protection of Badgers Act 1992 Environment Act 2021 NERC Act 2006
Bare ground & hardstanding	Low potential for hedgehog and reptile.	Common reptile protected under domestic legislation.	NPPF & local policy pertaining to protected and notable species. Environment Act 2021 NERC Act 2006
Building	Low potential habitat for bats and nesting birds.	Bats are protected under EU & domestic legislation.	NPPF & local policy pertaining to protected

Habitat	Protected &/or notable species associated with the habitat	Legal implication	Policy implication
		All birds are protected during nesting period. Potential for Schedule 1 birds (e.g. barn owl) with additional protection against disturbance during nesting. Invasive plants require control and eradication to prevent them spreading in the wild.	and notable species. Environment Act 2021 NERC Act 2006
Dense scrub	Potential habitat for bats, badger, nesting birds, and reptile. Low risk of invasive plants.	Bats are protected under EU & domestic legislation. Badgers, their setts, and some associated habitats are protected. Common reptiles are protected under domestic legislation. All birds, their nests, and eggs are protected during nesting period. Invasive plants require control and eradication to prevent them spreading in the wild.	NPPF & local policy pertaining to protected and notable species. Protection of Badgers Act 1992 Environment Act 2021 NERC Act 2006
Grasslands (improved, neutral semi-improved & poor semi-improved)	Potential for nesting birds, hedgehog, and reptiles.	Common reptile are protected under domestic legislation. All birds, their nests, and eggs are protected during nesting period.	NPPF & local policy pertaining to protected and notable species. Environment Act 2021 NERC Act 2006
Scattered trees and line of trees	Potential habitat for bats, and nesting birds.	Bats are protected under EU & domestic legislation. All birds, their nests, and eggs are protected during nesting period.	NPPF & local policy pertaining to protected and notable species. Environment Act 2021 NERC Act 2006
Woodland	Potential habitat for bats, badger, nesting birds, and reptile. Low risk of invasive plants.	Bats are protected under EU & domestic legislation. Badgers, their setts, and some associated habitats are protected. Common reptiles are	NPPF & local policy pertaining to protected and notable species. Protection of Badgers Act 1992 Environment Act 2021

Habitat	Protected &/or notable species associated with the habitat	Legal implication	Policy implication
		protected under domestic legislation. All birds, their nests, and eggs are protected during nesting period. Potential for Schedule 1 birds (e.g. red kite) with additional protection against disturbance during nesting. Invasive plants require control and eradication to prevent them spreading in the wild.	NERC Act 2006
Other habitat – railway	Railway embankments provide potential habitat for badger, bats, reptile and other fauna such as hedgehog. Low risk of invasive plants.	Badgers, their setts, and some associated habitats are protected. Bats are protected under EU & domestic legislation. Common reptiles and hedgehog are protected under domestic legislation. Invasive plants require control and eradication to prevent them spreading in the wild.	NPPF & local policy pertaining to protected and notable species. Protection of Badgers Act 1992 Environment Act 2021 NERC Act 2006

4.5 Opportunities for Achieving Biodiversity Gain

Habitat Retention and Enhancement

- 4.5.1 It is understood at the time of writing that the areas of grassland, woodland, scrub, and hedgerows which are of elevated ecological value are to be retained within the emerging SMP. As such, it is recommended that these areas are maintained and suitably protected during all works. Maintaining and enhancing areas of ground flora associated with woodlands, hedgerows and associated periphery grassland will allow natural regeneration of plant communities with opportunities for growth into newly create habitats nearby. Additionally, retainment and enhancement of existing grassland is especially recommended for areas of the Site that fall within the 'Grass and Heath Focus Areas' of the Hertfordshire LNRS, as this is identified as a strategic priority.
- 4.5.2 Furthermore, the proposals seek to retain and enhance 'Areas of Particular Importance for Biodiversity' that fall within the Site, as mapped by the Hertfordshire LNRS, such as Clothall Common and the Bygrave Road LWS.

- 4.5.3 It is assumed that large areas of arable land/improved grassland are to be cleared under the current planning proposal. As such, these habitat features cannot be enhanced or retained. Where certain habitat retention is not practicable, compensation on site will be expected through long term management and enhancement/ restoration of habitats which meet the trading rules associated with BNG assessment and is deliverable.
- 4.5.4 Within the Hertfordshire Ecological Network Map are areas of habitats within the Site that are strategically significant for ecological restoration. These include areas of grassland and an area within Ivel Springs. These key areas are to be retained within the masterplan. Ivel Springs Greenspace Action Plan identifies management prescriptions that should be followed when creating and enhancing areas of grassland throughout the Site along with enhancement opportunities below.

Habitat Enhancement and Creation

- 4.5.5 Based on the features present on site and within the locality the following enhancement opportunities would seem appropriate (to be developed to more detail during the scheme design stages):
- Management and enhancement of existing retained woodlands and scrub areas including implementation of ecological features, and management of any non-native species within the areas;
 - Significant enhancement of greenspace areas. Buffering and planting will strategically increase biodiversity and connectivity to wider habitat areas including chalk grassland, priority woodland and hedgerow features;
 - Opportunities for significant improvement of habitat connectivity within the wider area by linking the Priority Habitat to other areas of elevated ecological value within the Site and the scrub/woodland blocks across the Site;
 - Opportunities for significant improvement of habitat connectivity within the wider area by linking woodland/hedgerows within the Site with each other (via strengthened/new hedgerows) and the watercourses within the Site;
 - Possibility of coordination of wildlife-beneficial greenspace provision with adjacent priority habitat areas to provide landscape-level ecological enhancements and improve ecological connectivity;
 - Retention and enhancement of existing hedgerow and tree features within the Site in designated wildlife corridors;
 - Creation of linear habitat corridors as part of the wider green infrastructure in an area of former arable land, improving ecological connectivity and increasing species diversity;
 - Increasing number of ponds and wetland areas in an area devoid of such features through habitat creation works and also use of multi-functional SUDS (designed to benefit wildlife); and
 - Retention and buffering of protected and key habitats such as woodland, neutral semi-improved grassland and hedgerows for targeted protected and notable species recorded on Site.

- As the majority of the Site falls within the 'Herts Chalk Focus Area' as part of the Hertfordshire LNRS, creation of new chalk grassland habitats within these zones is recommended to achieve a post-development scheme that is strategically significant in terms of biodiversity.
- Incorporation of arable plant strips within the post-development design, with implementation focusing on areas of the Site that fall within the rare arable plant zones identified by the Hertfordshire LNRS. This further offers some mitigation for the loss of arable habitat within these zones.

4.5.6 The retained woodland feature could be managed to qualify as lowland deciduous woodland priority habitat. This would mean achieving:

- A tree canopy comprising of varied mixtures of species including oak, downy birch, silver birch, ash, wych elm, sycamore, holly and hazel. However, the native species from the local context are good indicators of which species should be within the woodland.
- Species rich and varied in structure ground flora including calcicolous shrubs and plants such as dogwood, privet, spindle, wayfaring-tree, guelder rose, dog's mercury and enchanter's nightshade.
- Diversity in the structure and species composition of the ground vegetation as well as maintaining bryophyte and lichen assemblages on Site.
- Trees that are more than 5 m high when mature, and which form a distinct, although sometimes open, canopy with a canopy cover of greater than 20%.
- At least 90% native species.
- Removal of any non-native invasive species

4.5.7 The following species-specific enhancement may be appropriate and will be considered as part of the emerging SMP and subsequent outline planning application:

- Amphibians (including great crested newt):
 - Retention, protection and enhancement of sheltered movement corridors where possible, e.g. existing vegetated field margins and treelines to be retained;
 - Existing refugia, such as dead wood piles and half buried features, to be retained where possible; and
 - Installation of multiple hibernacula within the Site at a suitable distance from waterbodies suitable for amphibians. Final installation details to be agreed by the project ecologist.
- Bats (all species):
 - Retention, protection and enhancement of suitable onsite commuting, foraging, and roosting habitats, i.e. hedgerows and scattered trees;
 - Enhancement of retained waterbodies to improve foraging resources for bats;
 - Bat friendly planting in any soft landscaping areas, e.g. night scented species such as jasmine; and

- Provisions for artificial bat roosts in new buildings and landscaped areas. In-built features capable of supporting maternity roosts should be prioritised, with the final installation details to be agreed by the project ecologist.
- Birds:
 - Retention, protection and enhancement of suitable onsite foraging and nesting habitats, i.e. hedgerows, rough grassland, scattered trees, scrub and woodland;
 - Bird-friendly planting to provide additional foraging resources for a variety of species to be included in landscaped areas and boundary features;
 - Provisions for artificial nesting features in new buildings and landscaped areas. Swift bricks and house martin 'nest cups' should be a core focus of onsite enhancement schemes, with the final installation details to be agreed by the project ecologist; and
 - Provision of open grass/scattered tree interface with adjacent arable land (particular along northern/eastern edge of the site) to provide enhance features for key farmland bird species in the locality such as corn bunting, yellowhammer and linnet, all of which are considered a flagship species within the Hertfordshire LNRS.
 - Retain, protect and create tall, wide mature scrub and hedgerows within the southeast of the Site as well as areas of open ground to provide habitat for turtle doves, a county-wide target species identified within the Hertfordshire LNR. Habitat improvements are likely most beneficial within the southeast of the Site as it borders Weston Hill LWS and LNR where turtle doves have been recorded previously.
- Hedgehogs:
 - Retention, protection and enhancement of suitable onsite commuting, foraging and hibernation habitat, i.e. hedgerows and woodlands;
 - Retention, protection and enhancement of sheltered movement corridors where possible, e.g. existing vegetated field margins and treelines to be retained; and
 - Provisions for marked movement corridors through residential areas of development parcels, so-called 'Hog Highways', should be included within the onsite enhancement scheme. Final installation details to be agreed by the project ecologist.
- Invertebrates:
 - Retention, protection and enhancement of key onsite habitats, i.e. waterbodies and woodlands;
 - Insect-friendly planting to provide a diversity of foraging resources for invertebrates to be included in any soft landscaping. Planting designs informed by The National Pollinator Strategy (DEFRA 2014);
 - Provisions for artificial nesting and sheltering features in development buildings and landscaped areas. So-called 'Bee Blocks' (or similar units designed for solitary bee occupancy) should be included within onsite enhancement

schemes, with the final installation details to be agreed by the project ecologist;
and

- Provisions for bee and beetle banks should be explored across the development where feasible.
- Creation and enhancement of chalk grasslands within the Site is likely to provide greater opportunities overall for invertebrates. In particular, the creation of this habitat may offer suitable receptor sites for species targeted within the Hertfordshire LNRS such as the liquorice piercer moth, mottled grasshopper and duke of burgundy butterfly with the aim to restore their populations.
- Reptiles:
 - Retention, protection and enhancement of suitable onsite basking, commuting, and foraging habitat, i.e. grasslands, waterbodies, railway embankments and woodlands; and
 - Retention, protection and enhancement of sheltered movement corridors where possible, e.g. existing vegetated field margins and treelines to be retained.

5. RECOMMENDATIONS

5.1 Surveys

5.1.1 Based on the evaluation documented in Section 4, the following further surveys are deemed appropriate and/or necessary at outline planning application stage to provide a fuller evaluation of the proposed development:

- **Bat** – activity surveys and potential roosting surveys (trees and structures).
- **Birds** – Breeding bird surveys to assess corn bunting territories on Site, farmland bird assemblage and any notable breeding species associated with woodland, hedgerows, arable fields and grassland during April to July.
- **Reptile Survey** – survey of suitable grassland areas and suitable scrub areas during May to July.

5.1.2 It is recommended that the opportunities for biodiversity enhancement detailed in Section 4.5 are reviewed and considered when developing detailed plans for the scheme.

5.2 Mitigation

5.2.1 This Section is based solely on the current baseline data set out above. It outlines recommended ecological control and protection measures to be undertaken and secured at outline planning application stage to ensure:

- No harm comes to faunal species (unprotected species as well as protected and notable species);
- There is minimal habitat loss and disturbance;
- Retention of S41 NERC Act Habitats;
- No harm comes to the adjacent habitats;
- Pollution risk is minimised;
- Ecological best practice is followed;
- Conformity with current planning requirements pertaining to wildlife; and
- No breaches of current wildlife legislation.

5.2.2 The following mechanisms will ensure implementation of the protection measures:

- **Tool box talk** – To be given to all Site staff, including those joining later in the project. Site staff to be made aware of the safeguard measures put in place and why they are necessary.
- **Suitably qualified ecologist** – To provide advice and guidance as required throughout the development process.

5.2.3 The measures detailed focus on legally protected and notable species but will also ensure harm and disturbance is minimised to other common fauna, such as rabbits and foxes that may utilise the Site.

Generic Safeguarding Measures

5.2.4 Pollution:

- The former Pollution Prevention Guidelines (PPG) have been withdrawn while they are being reviewed and updated. Until such time as new guidance becomes available, standard industry best practice in relation to construction sites and dust production/water pollution must be adhered. Further guidance is to be documented in a Construction Environmental Management Plan (CEMP). Measures to include:
 - Dust damping measures.

5.2.5 Works between sunset and sunrise:

- To be avoided; and
- If works cannot be avoided then there is to be no significant increase in external light and noise over and above what is anticipated in the area post construction.

Local Wildlife Site

5.2.6 As set out in this report Bygrave Road is situated within the Site boundary and although incorporated into a 'green lane' may be subject to temporary works. Large areas of the LWSs will remain unaffected by the works but protection measures will be required as set out below.

5.2.7 Best-practice pollution-prevention guidelines will be required to protect the LWS from pollution as a result of construction/operational phases of development proposals.

5.2.8 General habitat and environmental protection measures will be adhered to as set out in this mitigation section to ensure no indirect impacts to nearby nature conservation sites.

Habitats – Retained and Adjacent to Site

5.2.9 RISK AREAS: Retained habitat areas are illustrated within the emerging SMP, these include S41 NERC Act Habitats. Key areas requiring protection include elevated hedgerows, areas of neutral grassland and Bygrave Road LWS. The majority of hedgerows will also be retained around the Site peripheries. Works within the LWS will require management to ensure no creep beyond construction areas.

5.2.10 AIM: To ensure no direct or indirect impacts occur to the retained habitats or those adjacent to site and also the LWS areas.

5.2.11 RATIONALE:

- To protect the integrity of retained and adjacent habitats.
- To ensure no long-term/delayed damage occurs to habitats.

5.2.12 APPROACH:

5.2.13 Woodland, hedgerows, scattered trees, neutral grassland areas and Bygrave LWS:

- Adoption of Ivel Springs Greenspace Action Plan Management Prescriptions

- Appropriate root Protection areas to be defined prior to any works commencing, and maintained throughout the development;
- Establishment and maintenance of buffer around specified onsite woodlands, hedgerows and grassland to be clearly marked throughout the development; and
- No spoil to be deposited or works to take place within the protection zones of retained onsite woodlands and hedgerows

5.2.14 Air and waterborne pollution:

- Standard industry best practice in relation to construction sites and dust production/water pollution will minimise impacts to retained/adjacent habitats.

Bats

5.2.15 General:

- The woodland, and areas of neutral semi-improved grassland are the main habitats within the Site that offer roosting potential for bat species. These areas should be retained/enhanced where possible within the emerging SMP.
- Free standing trees are also present within a number of the hedgerows and some of these features may also support bat roosting potential. If any trees are required to be removed or subject to pruning works, additional inspections by a suitably qualified ecologist would be required prior to any works commencing. It is understood that where feasible trees will be retained with hedgerow features within the scheme design.

5.2.16 Lighting:

- No additional flood lighting to be used between sunset and sunrise without agreement with a suitably qualified ecologist; and
- Retained habitat corridors within and adjacent to the Site to remain as dark corridors during works and post-development, with no increase in current light levels where feasible to do so.

Nesting Birds

5.2.17 Works impacting on/in close proximity to the onsite hedgerows, woodlands and/or rough grass during the core nesting season (March to August inclusive):

- Immediately prior to works commencing (within 48 hours) an inspection by a suitably qualified ecologist to check for any evidence of nesting or nest building birds. If evidence is found, works may be delayed.

5.2.18 If nesting birds are found at any stage during construction works:

- All works that are likely to cause disturbance and/or within the zone of influence of the birds, MUST stop and not re-commence until advice has been received from a suitably qualified ecologist; and
- Depending on the species, situation, stage of nesting and works in immediate vicinity it is likely that an exclusion zone will be put up around the nest and works will be stopped or restricted within the exclusion zone.

- Schedule 1 bird species would require a bespoke mitigation strategy to be agreed with the suitably qualified ecologist depending on species, stage of nesting and location within the Site.

Other Fauna (including common amphibians, reptiles, and hedgehog)

5.2.19 Dependant of timing of works but likely to involve the following supervised by a suitably qualified ecologist:

- Check for presence of mobile fauna. Any animals present to be removed or encouraged to move to a place of safety following best practice at the time;
- Vegetation to be cut to a height of 150 mm, in a continuous direction allowing any fauna to disperse. All cut material to be removed immediately off-site/to an area that will not be affected by the proposed works; and
- Check for potential refugia sites and dismantle with care and in a controlled manner. This typically needs to be completed using handheld tools.

5.2.20 Hedgehog specific:

- If active hedgehogs are encountered works that are likely to cause disturbance and/or within the zone of influence of the hedgehog MUST stop and not re-commence until advice has been received from a suitably qualified ecologist;
- If required, the Ecological Clerk of Works will carefully move the hedgehog by hand from the construction area to nearby retained habitat features away from construction works; and
- If a hibernating hedgehog is encountered (i.e. during the months of November to February) works MUST stop and the a suitably qualified ecologist will assess the situation. If the hedgehog can be left in-situ then the nesting material will be carefully replaced and suitable food/water will be left in the area as a precaution should the hedgehog come out of hibernation. The nest area will be monitored by the a suitably qualified ecologist until it is evident that that hedgehog has moved on. If the hedgehog is left in-situ then habitat connectivity must be maintained, i.e. it must not become isolated by being surrounded by areas of high-risk and/or low suitability. If there is an imperative reason for the clearance works to continue then the a suitably qualified ecologist would be required to carefully relocate the hedgehog within its nesting material to an appropriately sheltered location away from the works area. Food and water would be left in the vicinity of the relocation site as a precaution should the hedgehog come out of hibernation.

Non-Native Invasive Species

5.2.21 Given the ground type (including both historic and recent disturbances) and dense vegetation areas there is a risk of invasive plants being locally present. Prior to construction works commencing a thorough check for such species should be undertaken during the growing season.

5.2.22 If invasive plants are found to be present in small areas, then a treatment and removal strategy would be required, to be facilitated through an appropriately qualified contractor.

6. CONCLUSIONS

6.1.1 Based on the current study:

- The further surveys set out in section 5 are considered necessary in order for the LPA to grant outline planning permission;
- The Site does not lie within the IRZ of any statutory sites of nature conservation.
- Bygrave Road is a LWS which is likely to be impacted, however the emerging SMP strategy is to likely retain this feature within a proposed 'green lane' no significant impact is envisioned. This feature is proposed to be largely retained and enhanced. No other non-statutory designated sites are considered likely to be directly affected by the proposed plans due to the nature of the proposals and intervening landscape between the Site and non-statutory designated sites. Indirect effects would be managed through standard ecological mitigation measures.
- There are S41/Priority Habitats within the area surrounding the Site and small blocks within the Site. However, it is determined that with appropriate retention, buffering, mitigation and precautions, these habitats will not be negatively impacted by the proposed works.
- No protected or notable species will be negatively impacted if appropriate mitigation and precautions are followed, as set out in this report (to be further informed through additional species-specific survey works).
- It is recommended that onsite woodlands and hedgerows should be retained and suitably buffered and protected during any works.
- The proposed works have the potential to provide biodiversity enhancement through implementing various recommendations as outlined in section 4.

7. REFERENCES AND BIBLIOGRAPHY

- Amphibian and Reptile Groups of the UK (2010). Advice Note 5: Great Crested Newt Habitat Suitability Index.
- Baker, J (2016) Biodiversity Net Gain Good Practice Principles for Development.
- Baker, J., Hoskins, R., Butterworth, T. (2019) Biodiversity Net Gain. Good Practice Principles for Development. A Practical Guide. CIRA.
- Bat Conservation Trust (2023). Bats and Artificial Lighting at Night' ILP Guidance Note
- Smith, K., Dee, C. W., Fearnside, J. D., Harris, A (2015). Birds of Hertfordshire. Hertfordshire Natural History Society.
- Bright, Morris and Mitchell-Jones (2006). *The Dormouse Conservation Handbook*.
- British Standards Institute (BSI) (2013). *BS42020 - Biodiversity Code of Practice for Planning and Development*. BSI, London.
- British Standards Institute (BSI) (2020). BS8683 – Designing and Implementing Biodiversity Net Gain. BSI, London.
- CCW (2009) Otters. A Guide for Developers. *CCW Species Series*. CCW.
- Chanin P (2003b) Monitoring the Otter *Lutra lutra*. Conserving Natura 2000 Rivers Monitoring Series No 10. *English Nature*, Peterborough.
- CIEEM (2017). Guidelines for Preliminary Ecological Appraisal (2nd edn). Winchester: CIEEM.
- CIEEM (2017a). Guidelines on Ecological Report Writing (2nd edn). Winchester: CIEEM.
- Collins, J. (ed) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. (3rd ed) Bat Conservation Trust. London.
- Countryside Management Service (2020). Ivel Springs Greenspace Management Plan (2020-2025).
- Countryside Management Service (2020a). Weston Hills Greenspace Management Plan (2020-2025).
- DEFRA (2007) Hedgerow Survey Handbook: A standard procedure for local surveys in the UK. 2nd ed [online]. Defra, London. PB1195. Available from: Hedgerow Survey Handbook (publishing.service.gov.uk)
- DEFRA (2014). The National Pollinator Strategy: for bees and other pollinators in England.
- Environment Agency (2012). Working at Construction and Demolition Sites: PPG6 Pollution Prevention Guidelines (2nd edn). Bristol: Environment Agency.
- Gent, T. & Gibson, S. (eds). 2003. *Herpetofauna Workers' Manual* (revised) JNCC.
- Harris, S., Cresswell, P., & Jefferies, D. *Surveying Badgers* (1989).
- Hertfordshire County Council (2025). Hertfordshire Local Nature Recovery Strategy *DRAFT*.
- Hertfordshire Ecological Habitats Map (2020). PowerPoint Presentation.
- HM Government (1981). Wildlife and Countryside Act 1981 (as amended).
- HM Government (2000). Countryside and Rights of Way Act, 2000.
- HM Government (2005). ODPM Circular 06/05 Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System.
- HM Government (2021). Protected species and development: advice for local planning authorities. <https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications> [Accessed 01/03/2022]
- HM Government (2025). National Planning Policy Framework. Department for Communities and Local Government.
- HM Government (2021a). *Environment Act 2021*.
- JNCC (2010). Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. Peterborough: JNCC.

- Joint Nature Conservation Committee (2001) Habitat management for bats. A guide for land managers, land owners and their advisors.
- Langton, T., Becket, C. & Foster, J. *Great Crested Newt Conservation Handbook* (2001)
- Maddock, A (ed.) (2008). UK Biodiversity Action Plan; Priority Habitat Descriptions (Updated Dec 2011).
- Maddock, A (ed.) (2008). UK Biodiversity Action Plan; Priority Habitat Descriptions: Lowland Mixed Deciduous Woodland (Updated November 2016).
- Maddock, A (ed.) (2008a). UK Biodiversity Action Plan; Priority Habitat Descriptions: Ponds (Updated November 2016).
- Mitchell-Jones, A.J. & McLeish (2004). *Bat Workers' Manual*, 3rd edition, JNCC, Devon.
- Natural England (2010). Higher Level Stewardship Farm Environment Plan Manual (3rd ed).
- Natural England (2019). *MAGIC*. (Accessed 07/08/2025).
- Oldham *et al.* (2000). Evaluating the suitability of habitat for Great Crested Newt (*Triturus cristatus*). *Herpetological Journal*, Volume 10, pp. 143-155. PTES.
- Panks, S. *et al.* (2023a). Biodiversity metric 4.0: Auditing and accounting for biodiversity – User Guide. Natural England.
- Panks, S. *et al.* (2023b). Biodiversity metric 4.0: Auditing and accounting for biodiversity – Technical Supplement. Natural England
- PTES (2022). The Big Hedgehog Map. <https://bighedgehogmap.org/> [Accessed 07/08/2025]
- SEED Arboriculture Ltd. (2024). Tree Constraints Plan - Baldock, Hertfordshire. (Refs: 1827-TCP-000-A to 1827-TCP-008-A).
- SEED Arboriculture Ltd. (2024). Tree Schedule – Baldock, Hertfordshire (Ref: 1827-TS-V1-A).
- Stace, C. *et al.* A taxonomic, genetic and ecological data resource for the vascular plants of Britain and Ireland (2019).
- The Bat Conservation Trust (2014). *The State of the UK's Bats 2014*.
- The Conservation of Habitats and Species Regulations 2017, as amended.
- The Mammal Society – Dean M. *et al.* (2016). The water vole mitigation handbook. *The Mammal Society*.
- WYG, (2019a), Ecology Chapter, Baldock North, Report on behalf of Hertfordshire County Council, Project number A090070-171-2.
- WYG, (2019b), Ecological Appraisal, Baldock South-east, Report on behalf of Hertfordshire County Council, Project number A090070-171-2.
- WYG, (2019c), Reptile Survey report 2019 on behalf of Hertfordshire County Council, Project number A090070-171-2.
- WYG, (2020a), Bat Activity Report, Baldock South-east, Report on behalf of Hertfordshire County Council, Project number A090700-171-2
- WYG, (2020b), Corn Bunting and Farmland Bird Report, Baldock South-east, Report on behalf of Hertfordshire County Council, Project number A090700-171-2

8. GLOSSARY

8.1 Scientific Terms and Acronyms

BoCC Birds of Conservation Concern, the UK Red-list for birds, produced by the British Trust for Ornithology and last updated in December 2015.

CIEEM Chartered Institute of Ecology and Environmental Management, the professional organisation and provider of professional codes of conduct for ecological consultancy.

cLWS Candidate Local Wildlife Site. Non statutory designation.

CPERC Cambridgeshire & Peterborough Environmental Records Centre.

EPS European Protected Species For the purposes of this report EPS are species that require particular licences to allow certain works to go ahead. Species falling within the following situations are not considered as EPS within this report:

Birds listed on Appendix 2 of the Bern Convention (European legislation). The protection requirements of this Appendix are fully integrated in UK law, notably through the Wildlife and Countryside Act 1981 (as amended).

Birds listed on Annex 1 of the Birds Directive (European legislation). The protection of such species survival and reproduction within their geographic distribution is ensured through special conservation measures in relation to their habitats. Such measures are implemented through the establishment of Special Protection Areas. Therefore, any implications are considered at regional habitat and country level rather than individual bird/species level.

HERC Hertfordshire Environmental Records Centre

Historic pLWS Previous survey on designation is dated and present information on whether the site has potential is limited.

LBAP Local Biodiversity Action Plan.

Level of protection – ‘EU’ Protected under the Conservation of Habitats and Species Regulations (2017) as amended.

Level of protection – ‘UK’ Protected under the Wildlife and Countryside Act 1981 (as amended).

LNRR Local Nature Reserve. Statutory designation.

LWS Local Wildlife Site. Non-statutory designation.

NNR National Nature Reserve. Statutory designation.

Non-native invasive species For the purposes of this report: species listed on Schedule 9 of the wildlife and Countryside Act 1981 (as amended). Widely naturalised species, such as grey squirrel, are excluded.

Notable species A species which is listed as a UK Priority Species, carries an unfavourable conservation status (e.g. scarce, rare, threatened, Red-listed), is invasive or is otherwise worthy of note from an ecological perspective.

pLWS Potential Local Wildlife Site. Non-statutory designation.

Protected species A species protected under specific UK or European legislation, including Habitats Directive, Wildlife and Countryside Act.

PTES Peoples Trust for Endangered Species

SAC Special Area of Conservation. Designated under European Union Habitat Directive (92/43/EEC) to protect species and habitat of European interest.

SPA Special Protection Area. A site designated under the European Union Directive on the Conservation of Wild Birds.

SSSI Site of Species Scientific Interest. Statutory designation of biological or geological importance.

UK Priority Habitat and species A habitat or species identified as a priority for conservation in accordance with Section 41 of the Natural Environment and Rural Communities Act (2006). Section 40 of the Act places a duty on public authorities to have regard for the conservation objectives of these habitats and species. (Also known as Section 41 (S41) habitats/species).

8.2 Scientific Names

8.2.1 Scientific names of species mentioned in this report are outlined in Table 8.1. This table excludes species recorded on Site; see Appendix F.

Table 8.1 Scientific names of species mentioned within this report

English Name	Scientific Name
Amphibians	
Common toad	<i>Bufo bufo</i>
Great crested newt	<i>Triturus cristatus</i>
Bats	
Bat species	<i>Chiroptera sp.</i>
Brown long-eared bat	<i>Plecotus auritus</i>
Common pipistrelle	<i>Pipistrellus pipistrellus</i>
Long-eared bat species	<i>Plecotus auritus</i>
Myotis bat species	<i>Myotis sp.</i>
Noctule bat	<i>Nyctalus noctula</i>
Pipistrelle species	<i>Pipistrellus sp.</i>
Serotine	<i>Eptesicus serotinus</i>
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>
Birds	
Barn owl	<i>Tyto alba</i>
Black redstart	<i>Phoenicurus ochruros</i>
Black-headed gull	<i>Chroicocephalus ridibundus</i>
Brambling	<i>Fringilla montifringilla</i>
Bullfinch	<i>Pyrrhula pyrrhula</i>
Canada goose	<i>Branta canadensis</i>
Common gull	<i>Larus canus</i>
Common house-martin	<i>Delichon urbicum</i>
Common reed bunting	<i>Emberiza schoeniclus</i>
Corn bunting	<i>Emberiza calandra</i>
Cuckoo	<i>Cuculus canorus</i>
Dunnock	<i>Prunella modularis</i>
Fieldfare	<i>Turdus pilaris</i>
Firecrest	<i>Regulus ignicapilla</i>
Grey partridge	<i>Perdix perdix</i>
Grey plover	<i>Pluvialis squatarola</i>
Grey wagtail	<i>Motacilla cinerea</i>
Greylag goose	<i>Anser anser</i>
Hen harrier	<i>Circus cyaneus</i>
Herring gull	<i>Larus argentatus</i>
Hobby	<i>Falco subbuteo</i>
House sparrow	<i>Passer domesticus</i>
Kestrel	<i>Falco tinnunculus</i>
Kingfisher	<i>Alcedo atthis</i>
Lapwing	<i>Vanellus vanellus</i>
Lesser black-backed gull	<i>Larus fuscus</i>

English Name	Scientific Name
Linnet	<i>Linaria cannabina</i>
Mallard	<i>Anas platyrhynchos</i>
Marsh tit	<i>Poecile palustris</i>
Meadow pipit	<i>Anthus pratensis</i>
Merlin	<i>Falco columbarius</i>
Mistle thrush	<i>Turdus viscivorus</i>
Peregrine falcon	<i>Falco peregrinus</i>
Quail	<i>Coturnix coturnix</i>
Red kite	<i>Milvus milvus</i>
Redstart	<i>Phoenicurus phoenicurus</i>
Redwing	<i>Turdus iliacus</i>
Ring ouzel	<i>Turdus torquatus</i>
Short-eared owl	<i>Asio flammeus</i>
Skylark	<i>Alauda arvensis</i>
Song thrush	<i>Turdus philomelos</i>
Spotted flycatcher	<i>Muscicapa striata</i>
Starling	<i>Sturnus vulgaris</i>
Stock dove	<i>Columba oenas</i>
Swift	<i>Apus apus</i>
Turtle dove	<i>Streptopelia turtur</i>
Western marsh harrier	<i>Circus aeruginosus</i>
Western yellow wagtail	<i>Motacilla flava</i>
Whinchat	<i>Saxicola rubetra</i>
Willow warbler	<i>Phylloscopus trochilus</i>
Woodcock	<i>Scolopax rusticola</i>
Yellowhammer	<i>Emberiza citrinella</i>
Invertebrates	
Adonis blue	<i>Polyommatus bellargus</i>
Chalk hill blue	<i>Polyommatus coridon</i>
Cinnabar	<i>Tyria jacobaeae</i>
Red-tailed mason bee	<i>Osmia bicornis</i>
Small blue	<i>Cupido minimus</i>
Small heath	<i>Coenonympha pamphilus</i>
White clawed crayfish	<i>Austropotamobius pallipes</i>
White ermine	<i>Spilosoma lubricipeda</i>
White-letter hairstreak	<i>Satyrion w-album</i>
Yellow meadow ant	<i>Lasius flavus</i>
Mammals	
Badger	<i>Meles meles</i>
Brown hare	<i>Lepus europaeus</i>
Grey squirrel	<i>Sciurus carolinensis</i>
Hedgehog	<i>Erinaceus europaeus</i>
Muntjac	<i>Muntiacus reevesi</i>
Polecat	<i>Mustela putorius</i>
Water vole	<i>Arvicola amphibius</i>
Plants	
Bulbous buttercup	<i>Ranunculus bulbosus</i>
Common bird's foot trefoil	<i>Lotus corniculatus</i>
Common broomrape	<i>Orobanche minor</i>
Eyebright	<i>Euphrasia sp.</i>
Field scabious	<i>Knautia arvensis</i>
Greater pignut	<i>Bunium bulbocastanum</i>
Hairy violet	<i>Viola hirta</i>
Hoary plantain	<i>Plantago media</i>

English Name	Scientific Name
Lady's bedstraw	<i>Galium verum</i>
Narrow-leaved bird's-foot-trefoil	<i>Lotus tenuis</i>
Prickly poppy	<i>Argemone sp.</i>
Pyramidal orchid	<i>Anacamptis pyramidalis</i>
Quaking-grass	<i>Briza media</i>
Rough poppy	<i>Papaver hybridum</i>
Yellow rattle	<i>Rhinanthus minor</i>
Reptiles	
Common lizard	<i>Zootoca vivipara</i>
Slow worm	<i>Anguis fragilis</i>

APPENDICES

SITE PLAN

BMD.21.0045.DRE.901.Phase 1 Habitat Survey Plan

SITE PHOTOGRAPHS



Photograph 1: allotment within the Site



Photograph 2: example of arable fields within the Site



Photograph 3: area of amenity grassland in the south-west of the Site



Photograph 4: example of amenity grassland within the Site



Photograph 5: example of buildings and hard standing within the Site



Photograph 6: example of scrub within the Site associated with boundary features



Photograph 7: example of dense scrub in the north west of the Site.



Photograph 8: example of hedgerow within the Site



Photograph 9: example of improved grassland within the Site



Photograph 10: an example of some poor semi-improved grassland specifically an arable field margin



Photograph 11: example of semi-improved neutral grassland within the Site



Photograph 12: example of tall ruderal in the Site, specifically the central area associated with the railway



Photograph 13: the edge of the woodland block located in the north west of the Site



Photograph 14: A section of the railway corridor that falls within the Site.



Photograph 15: example of a badger sett entrance [REDACTED]



Photograph 16: example of badger sett entrance [REDACTED]

A. POLICY, LEGISLATION AND GUIDANCE

A.1 Overview

A.1.1 Tables A1.1 and A1.2 provide a summary of wildlife legislation and policy of relevance to development at the Site.

Table A1.1 Overview of species/species groups relevant to the current proposals and associated legislation and policy

Species/Species group	European	UK ¹	Priority species ²
Amphibians (common)		Various	Incl. common toad
Badger		Full	✓
Bats (all species)	✓	Full	Species dependent
Birds		Full	Species dependent, incl. House sparrow
Mammals (general)		Species-dependent	Incl. hedgehog
Reptiles (excluding sand lizard and smooth snake)		Partial – incl. killing and injury	✓
Notes ¹ Principally the Wildlife and Countryside Act: Full = full protection, either from the Wildlife and Countryside Act 1981 (as amended) alone or in combination between this act and European legislation; partial = partially protected. ✓ = covered by other specific legislation. ² Includes over 900 species listed in accordance with section 41 of the NERC Act (2006). Species known or most likely to utilise the Site are indicated where appropriate.			

Table A1.2 Relevant species legislation for development at the Site

Species / group	Legislation ^{see notes}													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Amphibians (common)										✓				
Badger	✓						✓							✓
Bats (all species)					✓		✓		✓	✓				✓
Birds (nesting)		✓	✓							✓				
Invasive species								✓			✓	✓	✓	
Invertebrates										✓				
Hedgehog							✓			✓				✓
Plants										✓				
Reptiles					✓	✓				✓				
Notes ¹ Protection of Badgers Act 1992 ² Wildlife and Countryside Act, 1981 (as amended) – Part 1 ³ Wildlife and Countryside Act, 1981 (as amended) – Schedule 1 (some species, none recorded within the Site) ⁴ Wildlife and Countryside Act, 1981 (as amended) – Schedule 5, Section 9 ⁵ Wildlife and Countryside Act, 1981 (as amended) – Schedule 5, Section 9 (4b, 4c) and (5) ⁶ Wildlife and Countryside Act, 1981 (as amended) – Schedule 5, Section 9 (1, in respect of killing and injuring) and (5) ⁷ Wildlife and Countryside Act, 1981 (as amended) – Schedule 6, Section 11 ⁸ Wildlife and Countryside Act, 1981 (as amended) – Schedule 9, Section 14 ⁹ Conservation of Habitats and Species Regulations 2017 – Schedule 2 (European protected species) ¹⁰ Natural England and Rural Communities Act (2006) – Various species listed in accordance with Section 41 ¹¹ Invasive Species regulations: EU Regulation (1143/2014) on invasive alien (non-native) species ¹² Anti-social Behaviour, Crime and Policing Act 2014 ¹³ Environmental Protection Act 1990 ¹⁴ Wild Mammals (Protection) Act 1996														

A.1.2 The key national planning policies and documents are:

- The Environment Act (2021);
- Schedule 7A of the Town and Country Planning Act (1990);
- The National Planning Policy Framework (2025); and
- The Natural Environment and Rural Communities (NERC) Act (2006).

B. ASSESSMENT METHODOLOGIES

B.1 Desk Study

B.1.1 The desk study involved:

- Gathering and analysing existing ecological data within the Site boundary and extending to a radius of 5 km; and
- Reviewing readily available habitat data within 5 km radius of the Site boundary.

B.1.2 The results of the desk study were used to aid in the interpretation of the survey results and were obtained from the following sources:

- Hertfordshire Environmental Record Centre (HERC) & Bedfordshire & Luton Biodiversity Record Monitoring Centre (BRMC) ;
- The Multi-Agency Geographical Information for the Countryside (MAG/C) – web-based database;
- The Woodland Trust Ancient Tree Inventory;
- People's Trust for Endangered Species Big Hedgehog Map – web-based citizen science database of hedgehog sightings;
- Readily available maps (modern and historic); and
- Readily available aerial photographs.

B.1.3 In terms of species, particular attention was given to the following species/species groups:

- Amphibians;
- Badgers;
- Bats;
- Birds;
- Invertebrates (as appropriate based on geographic location and habitats present on Site);
- Invasive species (as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended));
- Plants (as appropriate based on geographic location and habitats present on Site);
- Mammals; and
- Reptiles.

B.1.4 Some species, such as the blue tit, may be listed on red data books but described as neither threatened nor near threatened; such species are not included in the protected and notable species tables within the desk study sections. Species listed solely on Schedule 5 Section 9(5)a and 9(5)b are not considered to be protected species in the context of this report as offences detailed in these Sections relate to sale/intention to sell.

B.1.5 For the purposes of this report species falling within the following situations are not indicated as having European level of protection in the desk study tables:

- Birds listed on Appendix 2 of the Bern Convention (European legislation). The protection requirements of this Appendix are fully integrated in UK law, notably through the Wildlife and Countryside Act 1981 (as amended).
- Birds listed on Annex 1 of the Birds Directive. The protection of such species survival and reproduction within their geographic distribution is ensured through special conservation measures in relation to their habitats. Such measures are implemented through the establishment of Special Protection Areas. Therefore, any implications are considered at regional habitat and country level rather than individual bird/species level.

B.1.6 For the purposes of this report widely naturalised non-native invasive species listed in Schedule 9 of the Wildlife and County Act, such as grey squirrel and muntjac, are excluded.

B.2 Extended Phase 1 Habitat Survey

B.2.1 The Extended Phase 1 Habitat Survey involved a walk-over of the Site recording and mapping the various habitats present (as defined by and in line with the standard methodology in JNCC, 2010) in each definable land parcel. Where applicable, land parcels were separated into their component habitats. In addition to the floristic component of each habitat or habitat parcel (where it had a different character), each was described in terms of its likely origin (e.g. self-established, planted), character, condition and management. The condition of the habitat was determined using professional judgement and the Biodiversity Metric 4.0 condition assessments.

B.2.2 Attention was also paid to the presence or potential for protected and notable species occurring on Site. This focused on the species/species groups as listed in paragraph B1.3.

B.2.3 Target notes were used to aid the interpretation of mapped habitats to indicate notable features within the Site.

B.3 Evaluation

Habitats

B.3.1 The habitats were assessed against the criteria and descriptions of Priority Habitats to determine if they could be considered as Priority Habitat and, therefore, likely to have greater implication on developing the Site.

B.3.2 Habitats were also considered in relation to their wider landscape integration, notably connectivity and acting as a buffer to other habitats or protected sites.

B.3.3 The habitat condition assessments followed the habitat condition criteria set out in the Biodiversity Metric 4.0 guidance.

Species

B.3.4 The Site was assessed in terms of its potential to support protected and notable species with particular attention being paid to those listed in paragraph B1.3. It takes account of habitats present on Site, the desk study species data, connectivity to known records and other suitable

habitat and geographic range of species. For example, a Site may have suitable habitat for sand lizard but is outside the species geographic distribution and as such would not be considered in the evaluation of the Site. Another example would be if water vole were returned in the desk study data but there was no watercourse within the site or within a zone of influence which may be indirectly affected by pollution run-off.

Great Crested Newt

- B.3.5 The Site was appraised for its suitability to support GCN. The assessment was based on Guidance outlined in the Herpetofauna Workers' Manual (Gent & Gibson, 2003) and the Great Crested Newt Conservation Handbook (Langton, Becket & Foster, 2001).

Bats - Roosting Bats – Buildings / Structures / Trees

- B.3.6 A bat roost assessment of all structures and trees present were carried out by Jonathan Wood on the 17th and 18th of March 2022. The buildings and trees were assessed from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) – hereafter referred to as the 'BCT Guidelines'. The system shown in Table B3.1 was therefore used to categorise the bat roost suitability of any features found.

Table B3.1 Categories for determining bat roost suitability

Suitability	Typical Roosting Feature
Negligible	Negligible habitat features on site likely to be used by roosting bats.
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 potential roost features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
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 & potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Foraging / Commuting Bats

- B.3.7 The BCT Guidelines use the criteria shown in Table B3.2 to categorise the potential value of habitats and features for use by foraging and commuting bats and these have been used to characterise the value of this site.

Table B3.2 Categories for determining bat foraging/commuting suitability

Suitability	Typical Foraging & Commuting Features
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by another habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.

Reptiles

- B.3.8 The Site was appraised for its suitability to support reptiles. The assessment was based on guidance outlined in the Herpetofauna Workers' Manual (Gent & Gibson, 2003).

Badgers

- B.3.9 The site was surveyed for evidence of badger setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to published criteria (Harris, Cresswell & Jefferies, 1989).

Other Species

- B.3.10 The Site was also appraised for its suitability to support other protected or notable fauna e.g. invertebrates with regard to the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) and BS42020:2013 Biodiversity – Code of Practice for Planning and Development (BSI, 2013). Evidence of any current or historical presence of such species was recorded.

C. METADATA, SURVEY CONDITIONS AND LIMITATIONS

C.1 Metadata

Factor	Detail
Data	Habitats described and mapped in accordance to JNCC (2010). Target notes of specific features.
Reason for collection	To provide baseline ecological data to inform master planning, planning applications and appropriate mitigation in relation to proposed development.
Location	Land to the east and south of Baldock, Hertfordshire approximate centre: TL 25319 34539.
Date	17/03/2022, 18/03/2022, 07/07/2022
Method of collection	Phase 1 Habitat Survey: JNCC (2010).
Who collected	Jonathan Wood BSc MCIEEM James Patmore CEcol Cenv MCIEEM Katie Dalton BSc (Hons) MRSB

C.2 Survey Conditions

Date	Start Time	Preceding days	Cloud (%)	Sun	Temp. (°C)	Precipitation	Wind (Beaufort scale & direction)
17/03/2022	08:00 – 17:00	Sunny	20-30	Sunny	4-10	None	2 NE
18/03/2022	08:00-15:30	Sunny	40-70	Sunny Spells	6-11	Scattered showers	1 S
07/07/2022	08:00-13:00	Sunny	20-30	Sunny	16-20	None	2 SW

C.3 Limitations Review

Consideration	Comment
Survey & data	
Personal competence, i.e. qualifications, training, skills, understanding, experience	All survey works were undertaken by or directly supervised by personnel experienced in ecological surveying (see meta data; Section C1). <u>Jonathan Wood BSc (Hons) MCIEEM</u> has over 7 years' experience in ecological consultancy, including an experience of performing and coordinating the survey work and assessments undertaken at Site. <u>James Patmore CEng CEnv MCIEEM</u> has over 20 years of experience in ecological consultancy, including an extensive amount of experience performing and directing ecological survey work and assessments. <u>Katie Dalton BSc (Hons) MRSE</u> has over 5 years' experience in ecological consultancy, including an experience of performing the survey work and assessments undertaken at Site along with technical reporting.
Resources (equipment and/or personnel)	Appropriate resources and suitably qualified personnel were used.
Time spent surveying	Sufficient time was spent on site to undertake all surveys. No surveys were 'cut short'.
Data (e.g. arising from incomplete or inappropriate surveys)	The data used and collected were sufficient for the purpose of the works. The data held by PTES on the Big Hedgehog Map is the output of various surveys including citizen science and as such a degree of caution should be applied when depending solely on these data to inform impacts as data may not have been verified.
Lack of statistical robustness and higher uncertainties	Statistical analysis of data was not deemed necessary for the purpose of the current works.
Old and out of date data	The data used to complete this Ecological Constraints Assessments were current and up to date.
Timing or seasonal constraints and suboptimal survey periods	The survey was conducted in March/July 2022. This is inside the window of the optimal period for habitat surveys
Partial use of and/or departures from good practice guidelines	All surveys accorded with the relevant best practice guidelines.
Site conditions & other factors	
Adverse weather conditions	No significantly adverse weather conditions were encountered during the survey work undertaken at the Site that would be considered to have significantly adversely impacted the reliability and/or accuracy of data collected.
Restricted access to site or part of site	Some areas of the Site had restricted access as this was private residential property. However, given the view that was available within the Site boundary of these areas it is considered that this has not significantly adversely impacted the assessment.
Unrealistic deadlines	No restrictions on survey data collected or analysed to date are as a result of unrealistic deadlines.
Unproven or untested measures for mitigation and compensation	N/A
Evaluation of conservation value and impacts	The evaluation of the conservation value of habitats and species associated (or potentially associated) with the site and impacts of the development, are based on the current information available. This evaluation will need to be reviewed and updated as necessary should a considerable period of time (24 months) elapse and/or more data from other survey work (on and within 500 m of the site) becomes available.

D. DESK STUDY SCOPING EXERCISE

- D.1.1 A data search on *MAGIC* and other web-based data sources was completed on 7th August 2025. A summary of features checked is provided in Tables D1.1. to D1.5.
- D.1.2 A review of the Woodland Trust Ancient Tree Inventory (Woodland Trust, 2021) as of 07/08/2025 highlighted no known ancient, veteran or notable trees on the Site or within 1 km.

Table D1.1 Statutory nature conservation sites within 2 km of the Site (extending to 5 km for European designated sites)

Site designation	Number of sites				
	Total	On Site	0-1 km	1-2 km	2-5 km
AONB	0	0	0	0	0
LNR	4	0	2	0	2
NNR	0	0	0	0	0
National Park	0	0	0	0	0
Ramsar	0	0	0	0	0
SSSI	0	0	0	0	0
SAC	0	0	0	0	0
SPA	0	0	0	0	0
Impact Risk Zone	No				

Table D1.2 Priority (and notable) habitats within 1 km of the Site

Broad category	Priority Habitat Inventory	Other habitats	On Site	0-1 km
Coastal	Saltmarsh		0	0
	Sand Dunes		0	0
	Vegetated Shingle		0	0
	Maritime Cliffs and Slopes		0	0
	Mudflats		0	0
	Saline Lagoons		0	0
Grassland	Calaminarian Grassland		0	0
	Coastal and Floodplain Grazing Marsh		0	0
		Good quality semi-improved grassland (non-priority)	0	3 parcels
	Lowland Calcareous Grassland		0	4 blocks of 6 parcels
	Lowland Dry Acid Grassland		0	0
	Lowland Meadows		0	4 blocks of 6 parcels
	Purple Moor Grass and Rush Pasture		0	0
	Upland Calcareous Grassland		0	0
	Upland Hay Meadows		0	0
Heath	Lowland Heathland		0	0
	Mountain Heaths and Willow Scrub		0	0

Broad category	Priority Habitat Inventory	Other habitats	On Site	0-1 km
	Upland Heathland		0	0
Limestone pavements	Limestone Pavements		0	0
Marine	Intertidal Substrate Foreshore		0	0
Wetland	Blanket Bog		0	0
	Lowland Fens		0	0
	Lowland Raised Bog		0	0
	Reedbeds		0	0
	Upland Flushes, Fens and Swamps		0	0
Woodland		Ancient: Semi-natural	0	3 parcels
		Ancient: Replanted	0	1 parcel
	Deciduous Woodland		0	20 blocks of 26 parcels
		National Inventory of Woodland & Trees ¹	0	20 parcels
	Traditional Orchards		0	2 blocks of 3 parcels
	Wood pasture and Parkland BAP Priority Habitat		0	0
Trees ²		Ancient, veteran or notable trees	0	0
Other		Fragmented heath (Non-Priority)	0	0
		Grass Moorland (Non-Priority)	0	0
		No main habitat but additional habitat exists	0	1 block 2 parcels
	Open Mosaic Habitat		0	0
Notes 1. Not notable habitats but provide information to guide mitigation 2. Woodland Trust Ancient Tree Inventory				

Table D1.3 European Protected Species license applications within 1 km and 5 km (bats) of the Site. NB excluding GCN, see Table D1.4.

Protected species licence applications	Number of applications				
	Total	On Site	0-1 km	1-2 km	2-5 km
Bat	7		✓		✓
Species covered by the bat licences					
Alcathoe bat					
Barbastelle					
Bechstein's bat					
Brandt's bat					
Brown long-eared bat	6		✓		✓
Common pipistrelle	4		✓		✓
Daubenton's bat					
Greater horseshoe bat					
Grey long-eared bat					

Protected species licence applications	Number of applications				
	Total	On Site	0-1 km	1-2 km	2-5 km
Leisler's bat					
Lesser horseshoe bat					
Nathusius pipistrelle					
Natterer's bat					
Noctule					
Pipistrelle sp.					
Serotine					
Soprano pipistrelle	2				✓
Whiskered bat					
Notes 1. As depicted on <i>MAGIC</i>					

Table D1.4 Great crested newt data within 1 km of the Site

Data source	Number of records		
	Total	On Site	0-1 km
NE Class licence database ¹	0	0	0
NE country-wide survey data ¹	0	0	0
Development licenses ¹	0	0	0
Notes 1. As depicted on <i>MAGIC</i>			

Table D1.5 Notable fauna in relation to the Site

Species	On Site	0-1 km
Farmland bird assemblages¹		
Arable (max number of species)	5	6
Grassland (max number of species)	3	3
Black grouse		
Cirl bunting		
Corn bunting	✓	✓
Curlew		
Grey partridge	✓	✓
Lapwing	✓	✓
Redshank	✓	✓
Snipe		
Stone curlew	✓	✓
Tree sparrow	✓	✓
Turtle dove	✓	✓
Twite		
Yellow wagtail	✓	✓
Mammals		
European hedgehog ²	1	57
Notes 1. As depicted on <i>MAGIC</i> 2. As depicted on the Big Hedgehog Map (PTES, 2021)		

E. HABITAT TARGET NOTES

E.1.1 Table E1.1 shows target note ID's and the respective habitats as well as habitat conditions in these areas.

Table E1.1 Habitat areas

Target Note ID	Description	Condition
TN1	Poor Semi-improved grassland Area of poor semi-improved grassland which had some diversity however was subject to agrichemical influence from adjacent arable fields. The presence of false oat grass and cocks foot were sufficient indicators in recording this area as poor semi-improved grassland. Species within this area included yarrow, creeping bent, barren brome false oat-grass, mugwort, common mouse-ear, creeping thistle, traveller's-joy, crested dog's tail, cock's foot, cleavers, dove's-foot crane's-bill, common ivy, bristly oxtongue, hogweed and cows parsley.	Poor
TN2	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN3	Tall ruderal An area of tall ruderal in amongst the hedgerow. Species included false oat-grass, greater knapweed, creeping thistle, marsh thistle, hemlock, cock's foot, common, mallow, bramble, common nettle	Poor
TN4	Poor Semi-improved grassland Area of poor semi-improved grassland which had some diversity however was subject to agrichemical influence from adjacent arable fields. The presence of false oat grass and cocks foot were sufficient indicators in recording this area as poor semi-improved grassland. Species within this area included yarrow, creeping bent, barren brome false oat-grass, mugwort, common mouse-ear, creeping thistle, traveller's-joy, crested dog's tail, cock's foot, cleavers, dove's-foot crane's-bill, common ivy, bristly oxtongue, hogweed and cows parsley. There is also a small area of hardstanding adjacent to this area comprised of a former buildings foundation and small areas of rubble.	Poor
TN5	A suspected former outlier badger sett [REDACTED] [REDACTED] Given the proximity to the adjacent residential property, access was restricted to the area to identify any further signs. It is considered this sett is no longer in use and has become repurposed by rabbits. However, a pre works check would be required to ascertain presence.	N/A
TN6	Poor semi-improved grassland field margin	Poor

	The grassland field margin was managed short with limited diversity. Species included false oat grass, cocks foot, cleavers and spear thistle.	
TN7	Poor semi-improved grassland Within the gap provided by the defunct hedgerow an area of poor semi-improved grassland was present. Species included garlic mustard, greater burdock, false oat-grass, mugwort, rosebay willowherb, spear thistle, cock's foot, cleavers, hogweed, cows parsley, annual mercury, field forget-me-not, bramble, prickly sow-thistle goat's-beard, scentless mayweed and nettle.	Poor
TN8	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN9	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN10	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN11	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN12	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN13	Improved grassland Improved grassland which was grazed by sheep at the time of survey. Species included creeping bent, daisy, common mouse-ear, creeping thistle, spear thistle, field bindweed, smooth hawk's-beard, cock's foot, bristly oxtongue, hogweed, ragwort, perennial rye-grass, timothy, bramble, broad-leaved dock, dandelion, white clover and nettle	Poor
TN14	Improved grassland Improved grassland which was grazed by sheep at the time of survey. Species included creeping bent, daisy, common mouse-ear, creeping thistle, spear thistle, field bindweed, smooth hawk's-beard, cock's foot, bristly oxtongue, hogweed, common ragwort, perennial rye-grass, timothy, bramble, broad-leaved dock, dandelion, white clover and nettle	Poor
TN15	A former main badger sett [REDACTED] [REDACTED] It is considered this sett is no longer in use by badgers and has become repurposed by rabbits. However, a pre works check would be required to ascertain presence.	N/A
TN16	Dense scrub	Moderate

	Area of dense scrub associated with H9. Species include elder, blackthorn, hawthorn and a semi-mature ash tree with feature suitable for roosting bats (trunk cavity)	
TN17	Field maple with feature suitable for roosting bats (trunk cavity)	N/A
TN18	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN19	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN20	Semi-improved neutral grassland Semi-improved neutral grassland associated with Bygrave Road Verge LWS which also had areas of scattered scrub specifically blackthorn. Species present included yarrow, false oat-grass, mugwort, black horehound, soft brome, greater knapweed, fat hen, creeping thistle, field bindweed, smooth hawk's-beard, cock's foot, wild carrot, cleavers, lady's bedstraw, hogweed, wall barley, field scabious, perennial rye-grass, common mallow, ribwort plantain, knotgrass, white campion and hedge mustard. Although some calcareous indicator species are present, the more dominant species were those were neutral grassland species, thus overall this area is mapped as semi-improved neutral grassland.	Moderate
TN21	Poor semi-improved grassland Area of poor semi-improved grassland which has been heavily influenced by agricultural practise. This area has large depositions of hay bales and supports little species diversity other than common herbaceous plants such as spear thistle, nettle and cock's foot.	Poor
TN22	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN23	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN24	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN25	Increased rabbit warren activity associated with southern end of H7	N/A
TN26	Poor semi-improved grassland Within the corner of the arable field TN19 there is a patch of poor semi-improved grassland which supports predominantly cocks foot, nettle, bramble and thistle. Amongst this area are large dead stems of ruderal species.	Poor
TN27	Schedule 9 listed Japanese Rose within hedgerow H22.	N/A
TN28	Mixed scattered trees	Moderate

	An area of scrub with scattered trees in the corner of the northeastern section of the Site, some of which fall offsite. Species in this area included field maple, hawthorn, blackthorn, sycamore, silver birch, copper beech, ash, laburnum and cypress.	
TN29	Amenity grassland Amenity grassland areas associated with residential properties. Species include yarrow, creeping bent, common mouse-ear, dove's-foot crane's-bill, perennial rye, grass, daisy, dandelion and white clover.	Poor
TN30	A former main badger sett [REDACTED] It is considered this sett is no longer in use by badgers and has become repurposed by rabbits. However, a pre works check would be required to ascertain presence.	N/A
TN31	Tall ruderal A newly created earth bank associated with recent earthworks in the locality. This bank supports mainly ruderal vegetation comprising of nettle, teasel, bristly oxtongue, spear thistle, bitter dock and cocks foot.	Poor
TN32	Poor semi-improved grassland Area of poor semi-improved grassland. Species included false oat-grass, mugwort, spear thistle, cock's-foot, cleavers, hogweed, cows parsley, annual mercury, field forget-me-not, bramble, prickly sow-thistle, goat's-beard, scentless mayweed and nettle.	Poor
TN33	Improved grassland A strip of improved grassland within the south west corner of the northern aspect of the Site. This area was previously recorded as poor semi-improved grassland however the grassland was managed short, species diversity is considered to be low and limited to buttercup, red fescue, lesser celandine, yarrow, dandelion, daisy, cocks foot, nettle and bramble.	Poor
TN34	Dense Scrub An area of dense scrub was recorded in the south-western corner of the northern aspect of the Site, which bordered the railway line and neighbouring residential properties. This was largely dominated by thick bramble with teasel, thistle, cows parsley, ivy and nettle.	Poor
TN35	Broad-leaved Semi-natural Woodland A strip of broad-leaved semi-natural woodland was located in the south-western corner of the northern aspect of the Site. The canopy was dominated by field maple and ash, with an understorey including elder, wych elm and hawthorn. The ground flora was dominated by common ivy, with common nettle also recorded. The presence of ivy and nettle is sufficient to confirm this as secondary woodland, which has developed over time on previously agricultural land. The presence of common nettle indicates some degree of nutrient enrichment.	Poor
TN36	Improved grassland	Poor

	A series of Improved grassland fields which was grazed by horses at the time of survey. Species included creeping bent, daisy, common mouse-ear, creeping thistle, spear thistle, field bindweed, smooth hawk's-beard, cock's-foot, bristly oxtongue, hogweed, common ragwort, perennial rye-grass, timothy, bramble, broad-leaved dock, dandelion, white clover and nettle.	
TN37	Semi-improved neutral grassland An area of semi-improved neutral grassland was located in the western extent of site, just north of Bygrave Road. The grassland had been managed and mown short prior to survey; however, previous assessments on site, suggested that it was left to develop as a wildflower meadow. Although some calcareous indicator species are present, the more dominant species were those were neutral grassland species, thus overall this area is mapped as semi-improved neutral grassland. The sward comprised frequent grass species perennial rye-grass, creeping bent with occasional cock's-foot, barren brome and false oat-grass. There was a mix of herbs which included frequent yarrow, field bindweed and smooth hawk's-beard with occasional dove's-foot cranes-bill, white clover and ribwort plantain	Moderate
TN38	Other habitat Garden behind building 4a with short sward amenity grassland and associated allotment.	N/A
TN39	Mature elder covered with ivy within arable field which has low bat roost potential.	N/A
TN40	Amenity grassland, garden which comprised perennial ryegrass, clover sp., conifer sp. hedge along the west boundary (H26) and a semi-mature ash	Poor
TN41	Amenity grassland Amenity grassland, with Perennial ryegrass, red fescue, ribwort plantain and clover sp.	Poor
TN42	Designated Bygrave Road verge LWS. Vegetation along roadside includes; field Bindweed, red dead-nettle, ribwort plantain, cow parsley, ragwort sp. and greater Knapweed. Although some calcareous indicator species are present, the more dominant species were those were neutral grassland species, thus overall this area is mapped as semi-improved neutral grassland.	Moderate
TN43	Amenity grassland Garden with daisy sp. which is considered to be mixed use. Species include perennial ryegrass, clover sp. a semi-mature rowan, semi mature ash, holly, sycamore, cypress and other ornamental plants present.	Moderate
TN44	Poor semi-improved grassland Poor semi-improved grassland roadside verge. Species include field bindweed common ragwort, white campion, ribwort plantain, creeping thistle, black medic, common knapweed, cock's foot, perennial ryegrass, nettle, sheep sorrel, common mallow, yarrow, and false oat grass.	Moderate
TN45	Poor semi-improved grassland Public footpath which is largely poor semi-improved grassland with some	Poor

	elements of tall ruderal. Species include nettle, common mallow, bindweed sp., herb-Robert, cocks foot, perennial rye grass, broadleaved dock, bramble, spear thistle, white dead nettle, and cow parsley.	
TN46	Dense continuous scrub A small isolated pocket of climax scrub in close association with some scattered trees. Species included small-leaved lime, horse chestnut, wild cherry, elder, cherry sp. and blackthorn. Ground flora in this area included nettle, daisy, St. John's wort, lords and ladies and stinking iris.	Moderate
TN47	Poor semi-improved grassland A mosaic of poor semi-improved grassland and ruderal in close association. Species in this area include false oat-grass, wild oat, musk thistle, creeping thistle, field bindweed, smooth hawk's-beard, teasel, common couch, broad-leaved willowherb, st john's-wort, common mallow, common nettle, mugwort and common mullein.	Poor
TN48	Tall ruderal An area of tall ruderal which is largely dominated by teasel, bramble and nettle. Other species were recorded in close association with the surrounding poor semi-improved grassland which were false oat-grass, wild oat, musk thistle, creeping thistle, field bindweed, smooth hawk's-beard, teasel, common couch, broad-leaved willowherb, st john's-wort, common mallow, common nettle, mugwort and common mullein.	Poor
TN49	Dense continuous scrub An area of dense scrub in association with the residential gardens to the south and possibly a former hedgerow feature. Species included blackthorn, cherry sp., dogwood, maple sp. butterfly bush, buckthorn and elder. Ground flora recorded in this area included greater knapweed, teasel, daffodil, sweet violet, spear thistle, nettle, hawkbit, creeping cinquefoil, bluebell and ragwort.	Moderate
TN50	Poor semi-improved grassland A mosaic of poor semi-improved grassland, ruderal and scattered scrub in close association. Species in this area include false oat-grass, wild oat, musk thistle, creeping thistle, field bindweed, smooth hawk's-beard, teasel, common couch, broad-leaved willowherb, St. john's-wort, common mallow, common nettle, mugwort and common mullein. Some of the emergent scrub species include hawthorn, blackthorn, dogwood and butterfly bush.	Moderate
TN51	Dense continuous scrub An area of dense scrub which wraps around the hardstanding and active storage and worker units associated with TN 52. Species include greater burdock, white bryony, butterfly-bush, hemlock, field bindweed, dogwood, hawthorn, cleavers, prickly lettuce, nettle, scentless mayweed, bluebell, daffodil, cleavers, blackthorn, dogrose, bramble, elder and grey willow.	Poor
TN52	Hardstanding An area of hardstanding and associated buildings associated with an industrial holding.	Poor
TN53	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN54	Other habitat - railway	N/A

	A railway corridor which is comprised of climax dense scrub falls partially within the Site and directly adjacent to Site. Species included largely blackthorn, elder, and ash. Throughout this embankment there was evidence of mammal excavations which could be attributed to badger. However no distinctive setts were identified along the railway corridor.	
TN55	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN56	Dense continuous scrub An area of dense continuous scrub associated with the corner of TN 55. Species in this area included bramble, hawthorn, blackthorn, cocks foot, tufted hair grass, nettle, dogwood and cleavers	Poor
TN57	Scattered scrub An area of disturbed grassland with emergent scrub. Species include creeping thistle, buckthorn, teasel, yarrow, common mullein, hemlock, common mugwort, European spindle tree, common knapweed, dogwood, mugwort, ribwort plantain, scotch broom, cocks foot, daffodil, tall white top, Danish scurvy grass, blackthorn and hawthorn. Cotoneaster was recorded in this area. Cotoneaster is listed as a schedule 9 species.	Moderate
TN58	Neutral semi-improved grassland Neutral semi-improved grassland associated with the margins of TN 55. Species include barren brome, false oat-grass, mugwort, daisy, soft brome, musk thistle, wild basil, smooth hawks-beard, cocks foot, wild carrot, teasel, cleavers, lady's bedstraw, common ivy, bristly oxtongue, wall barley, common ragwort, common mallow, ribwort plantain, knotgrass, creeping cinquefoil, selfheal, wild mignonette, white campion, sow thistle, dandelion, hop trefoil, scented mayweed and white clover.	Good
TN59	Neutral semi-improved grassland Neutral semi-improved grassland associated with the margins of TN 55 with some emergent scrub features. Species include barren brome, false oat-grass, mugwort, daisy, soft brome, musk thistle, wild basil, smooth hawks-beard, cocks foot, wild carrot, teasel, cleavers, lady's bedstraw, common ivy, bristly oxtongue, wall barley, common ragwort, common mallow, ribwort plantain, knotgrass, creeping cinquefoil, selfheal, wild mignonette, white campion, sow thistle, dandelion, hop trefoil, scented mayweed and white clover. Emergent scrub in this area included common broom and blackthorn.	Moderate
TN60	Neutral semi-improved grassland/ Patch of calcareous grassland to the east This grassland consisted of a diverse range of tall vegetation. Species included frequent field scabious, greater knapweed and goat's-beard. Grasses included abundant false oat-grass, cock's-foot, Yorkshire-fog and frequent tall fescue. Other species included yarrow, mugwort, creeping bent, wild oat, daisy, blackthorn, butterfly bush, willowherb sp., as well as occasional soft brome, kidney vetch, musk thistle and goat willow, Scots pine, lesser celandine, rosebay willowherb. Although some calcareous indicator species are present, the more dominant species were those were neutral grassland species, thus overall this area is mapped as semi-improved neutral grassland.	Good

TN61	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN62	Poor semi-improved grassland Poor semi-improved grassland field margin in association with TN 61. Species diversity is lowered due to exposure to agrichemicals. Species include false oat grass, cocks foot, yarrow, greater knapweed, rosebay willowherb, wild basil, Yorkshire fog, spear thistle, nettle, bristly oxtongue, teasel, nipplewort, oxeye daisy, common mallow, ribwort plantain and broad-leaved dock.	Poor
TN63	Poor semi-improved grassland Poor semi-improved grassland field margin in association with TN 61. Species diversity is lowered due to exposure to agrichemicals. Species include false oat grass, cocks foot, yarrow, greater knapweed, rosebay willowherb, wild basil, Yorkshire fog, spear thistle, nettle, bristly oxtongue, birdseye speedwell, common tansy, golden marguerite, wild carrot, colts foot, butterfly bush, blackthorn, walnut, teasel, nipplewort, oxeye daisy, common mallow, ribwort plantain and broad-leaved dock.	Moderate
TN64	Dense continuous scrub An area of dense continuous scrub in association with highway embankment planting. Species in this area were largely blackthorn with beech, hazel, rose sp., dog rose, butterfly bush. Ground flora in this area was limited to wood avens, bramble, cleavers, creeping thistle and ribwort plantain. There were areas of new planting which included hawthorn, ash and hazel. It is considered that this climax scrub is progressing towards a semi-natural broadleaved woodland owing to the canopy species which are beginning to become more dominant. However, this area is considered to be climax scrub given that majority of the canopy is blackthorn.	Moderate
TN65	Scattered scrub An area of scattered scrub in close association to building 17 and hardstanding. Species include Norway maple and bramble with ruderal species such as common groundsel, cleavers, spear thistle, cocks foot, mugwort, cow parsley, teasel, bitter dock and perennial rye grass	Poor
TN66	Poor semi-improved grassland An area of poor semi-improved grassland associated with TN 61 and the interface with the road verge. Species include nettle, spear thistle, mugwort, bitter dock, cocks foot, Yorkshire fog, perennial rye grass, bramble and cows parsley.	Poor
TN67	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN68	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN69	Poor semi-improved grassland	Poor

	An area of former arable field which has been left to go fallow and now supports a community of poor semi-improved grassland species with low diversity. Species include Yorkshire fog, nettle, cow parsley, mugwort, teasel, false oat-grass, spear thistle, bristly ox tongue, ivy, wild lettuce, willowherb sp., perennial rye grass and bramble.	
TN70	Poor semi-improved grassland A semi-improved grassland margin in connection with a corrugated metal fence associated with the adjacent allotment to the north. Species include nettle, bramble, Yorkshire fog, perennial rye grass, bristly ox tongue, mugwort, cleavers and cow parsley.	Poor
TN71	Poor semi-improved grassland A semi-improved grassland margin in connection with arable fields (TN 67 and TN 68). Species include lords and ladies, false oat-grass, babbington's poppy, daffodil, nettle, bramble, Yorkshire fog, perennial rye grass, bristly ox tongue, mugwort, cleavers and cow parsley.	Poor
TN72	Amenity grassland An area of amenity grassland with some scattered trees. Species included abundant perennial rye-grass, ribwort plantain, yarrow, cows parsley, white clover, dandelion, wild daffodil, birdseye speedwell with occasional daisy, sweet violet and bluebell	Poor
TN73	Poor semi-improved grassland A semi-improved grassland margin in association with H1. Species include lords and ladies, false oat-grass, white top, nettle, bramble, Yorkshire fog, perennial rye grass, bristly ox tongue, mugwort, cleavers and cow parsley.	Poor
TN74	Arable Arable field parcels with associated grassland verges. Present throughout the Site.	N/A
TN75	Neutral semi-improved grassland Neutral semi-improved grassland associated with the margins of TN 74 with large areas of bramble associated with the highway boundary. Species include barren brome, dog rose, elder, false oat-grass, mugwort, daisy, soft brome, musk thistle, black horehound, wild carrot, Canadian goldenrod, common tansy, timothy, greater knapweed, smooth hawks-beard, cocks foot, wild carrot, wild teasel, cleavers, lady's bedstraw, common ivy, bristly oxtongue, common ragwort, common mallow, ribwort plantain, knotgrass, creeping cinquefoil, white campion, sow thistle, dandelion, hop trefoil, scented mayweed and white clover.	Moderate
TN76	Dense continuous scrub An area of dense continuous scrub in association with highway embankment planting. Species in this area were largely blackthorn with beech, hazel, rose sp., dog rose, hawthorn, elder, yew sp. and plum. Ground flora in this area was limited to large leaved avens, bramble, cleavers, creeping thistle and ribwort plantain. It is considered that this climax scrub is progressing towards a semi-natural broadleaved woodland owing to the canopy species which are beginning to become more dominant. However, this area is considered to be climax scrub given that majority of the canopy is blackthorn.	Moderate

TN77	Improved grassland A series of Improved grassland field parcels which were grazed by horses at the time of survey. Species included creeping bent, daisy, creeping thistle, spear thistle, field bindweed, smooth hawk's-beard, cock's-foot, bristly oxtongue, common ragwort, perennial rye-grass, timothy, broad-leaved dock, dandelion, white clover and nettle	Poor
TN78	Poor semi-improved grassland A mosaic of poor semi-improved grassland and scattered scrub in close association. Species in this area include false oat-grass, creeping thistle, field bindweed, smooth hawk's-beard, teasel, broad-leaved willowherb, common mallow, common nettle, mugwort, spear thistle, cow parsley, wild angelica, cow parsnip, brome sp., cocks foot, nettle and common mullein. Some of the emergent scrub species include hawthorn, blackthorn, dogwood, buckthorn, walnut and butterfly bush	Moderate
TN79	Poor semi-improved grassland A semi-improved grassland area in connection with a previous building and rubble. Species include nettle, bramble, daffodil, Yorkshire fog, bitter dock, yarrow, ribwort plantain, nettle, perennial rye grass, bristly ox tongue, mugwort, cleavers and cow parsley. Some emergent scrub and adjacent tree species included hawthorn, butterfly bush, ash, sycamore, cedar sp., wild privet and staghorn sumac.	Poor
TN80	Dense continuous scrub An area of dense continuous scrub in association with highway embankment planting. Species in this area were largely blackthorn with ash, hazel, rose sp., dog rose, hawthorn, elder, butterfly bush wild privet and common pear. Ground flora in this area was limited to wood avens, bramble, cleavers, bristly oxtongue, cocks foot, wild carrot, common knapweed, creeping thistle and ribwort plantain.	Moderate
TN81	Neutral semi-improved grassland Neutral semi-improved grassland. Species include bramble, yarrow, oxeye daisy, barren brome, false oat-grass, mugwort, daisy, soft brome, wild carrot, common tansy, timothy, common knapweed, smooth hawks-beard, cocks foot, wild teasel, cleavers, lady's bedstraw, common ivy, bristly oxtongue, common ragwort, ribwort plantain, sow thistle, dandelion and nettle.	Moderate
TN82	Poor semi-improved grassland A semi-improved grassland margin in connection with an arable field (TN 74). Species include lords and ladies, false oat-grass, daffodil, nettle, bramble, Yorkshire fog, perennial rye grass, bristly ox tongue, mugwort, cleavers and cow parsley.	Poor
TN83	Poor semi-improved grassland with some scattered scrub A semi-improved grassland margin in connection with an arable field (TN 74) with some scattered scrub. Species include lords and ladies, false oat-grass, daffodil, nettle, bramble, Yorkshire fog, perennial rye grass, bristly ox tongue, mugwort, cleavers and cow parsley.	Poor
TN84	Scattered trees In close association with the poor semi-improved grassland described in TN	Moderate

	50, TN 45 and TN 47 are scattered trees. Tree species include, field maple, sycamore, horse-chestnut, hornbeam, hazel, hawthorn, ash, walnut, wild cherry, cherry plum, lime, blackthorn, elder, apple and rowan.	
TN85	Scattered trees There were also scattered trees along the boundary which interface with Hartsfield Junior Mixed & Infant School. These species include sycamore, field maple, walnut, hawthorn, holly, goat willow and Norway maple.	Moderate
TN86	Species poor semi-improved grassland Area of species poor semi-improved grassland, managed by routine mowing. Bounded by species poor intact hedgerows. Well used by the public backs on to Ivel Springs LNR to the north and allotments to west. Ruderal edges bounding grassland and hedge, abundant rabbit warrens surrounding boundary. Grassland species include; dandelion, false oat grass, cocksfoot, smooth hawks-beard, creeping thistle, ragwort, bind weed, self-heal, poppy, lady's bedstraw, red dead nettle, lords and lady's and dark mullein. Ruderal edges species include; nettle, white dead nettle, broad leaf dock, ground ivy, cow parsley, field elm and walnut.	Moderate
TN87	Neutral semi-improved grassland An area of grassland forming the island of Royston Road roundabout. Species comprised of predominantly oxeye daisy alongside yarrow, ribwort plantain, cow parsnip, lesser knapweed, greater knapweed, willowherb sp., ground ivy, cowslip, fescue sp., and cock's foot.	Moderate

E.1.2 Table E1.2 shows building descriptions of structures within the Site and their suitability for bats.

Table E1.2 Building descriptions

Building No.	Grid reference	Description and potential roosting bat features	Suitability for roosting bats	Photograph
1	TL 24694 34440	Previous survey assessment recorded a stone shed included timber panelling with a pitched corrugated likely asbestos roof. A timber framed window was present on the southern aspect. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Internally, the structure was dirty with no evidence of	Negligible	No photograph

		bats or roosting points.		
2	TL 24697 34437	Previous survey assessment recorded a single-storey outbuilding consisted of timber panelling with a hipped clay tile roof. Overall, the building was in a good state of repair; however, a slipped tile was recorded on the northern aspect of the roof. Internally the building contained no evidence of bats. Cobwebs were present and no access points were noted.	Negligible	No photograph
3	TL 24703 34427	Previous survey assessment recorded the two-storey residential structure consisted of brick walls, with white render and a clay tiled hipped roof. The building included timber soffit boxes and two chimney stacks. Overall, the building was in a good state of repair; however, slipped tiles were recorded on the northern, eastern and southern aspects of the roof. Inspection on the day of survey showed no change to these external features. An internal inspection was undertaken. The loft void contained cobwebs. No evidence of bats was noted. The roof is lined with	Low	

		bitumastic felt allowing opportunity within the void between the liner and the tiles.		
4	TL 24710 34428	Previous survey assessment recorded a shed structure which consisted of timber panelling with a pitched corrugated metal roof. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features.	Negligible	
5	TL 24724 34436	Previous survey assessment recorded a shed structure which consisted block work/metal walls, with areas of timber cladding and a pitched corrugated likely asbestos roof. A metal shutter was located on the eastern aspect. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features.	Negligible	

6	TL 24722 34455	Previous survey assessment recorded a shed structure consisting of timber panelling on a brick base, with a pitched corrugated likely asbestos roof. Timbers fascia boards and window frames were present and a flat roofed blockwork/brick section extended from the northern aspect. The building showed signs of wear and tear, with gaps between the timber wall panels, damaged windows and gaps under the likely asbestos sheeting provide access/egress. Feeding remains were noted throughout the building.	Low	 
7	TL 24743 34546	Previous survey assessment recorded an open shed structure which was formed from a combination of brick and pre-fabricated walls on cement struts. The single-pitch roof was formed of corrugated likely asbestos. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external	Negligible	No photograph

		features.		
8	TL 24747 34448	Previous survey assessment recorded an open shed structure which consisted corrugated metal walls on a steel girder frame. The pitched corrugated metal roof included skylights. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features.	Negligible	No photograph
9	TL 24766 34439	Previous survey assessment recorded an open shed structure consisted of corrugated metal walls on a timber frame. The single-pitch roof was formed of corrugated metal. In places the building was in a poor state of repair; however, openings around the joints in the frame or roof led to exposed areas which were not suitable for roosting bats. Inspection on the day of survey showed no change to these external features.	Negligible	

10	TL 24888 34427	Previous survey assessment recorded a two-storey residential structure consisted of brick walls, with white render and a clay tiled hipped roof. The building included timber soffit boxes and two chimney stacks. Overall, the building was in a good state of repair. Inspection on the day of survey showed no change to these external features. However, the surveyor had a limited view of the structure due to access constraints. A further external and internal inspection was conducted in April 2023 following recent granted access. Externally the ridge of the build is uplifted in sections and there are some small gaps are present along the chimney bricks and roof tiles. Internal inspection conducted within loft void, 5-6 m in height with wooden struts and beams, extremely dirty and cobwebbed, unlined therefore no void between rafters. A gap is present within the western apex. No signs of bats or birds identified. Two historic wasp nests are present within the attic.	Negligible	 
11	TL 24897 34421	Previous survey assessment	Negligible	No photograph

		recorded a single-storey outbuilding consisted of timber panelling with a hipped clay tile roof. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Internal inspection recorded no evidence of bats. The roof is unlined and there are no access points internally		
12	TL 24894 34415	Previous survey assessment recorded a single storey double garage which consisted of timber walls, with metal up and over doors on the eastern aspect. The roof mainly consisted of pitched felt, with a single pitch flat section over the western extension which protruded west. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features.	Negligible	No photograph
13	TL 24879 34392	Previous survey assessment recorded a building which consisted of a steel shipping container and single storey timber shed. The shed comprised	Negligible	No photograph

		a single pitch timber roof. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features.		
14	TL 24905 34443	Previous survey assessment recorded a single storey stable which consisted of a brick structure clad in timber panels. Two timber extensions were also located on the south-eastern aspect. The main roof was pitched and formed from likely asbestos tiling. The extensions included single pitch corrugated likely asbestos sheeting roofs. The building showed signs of wear and tear, with gaps between the timber wall panels, and open doorways provide access/egress. Internal inspections were undertaken. Numerous access points and opportunities were noted with bat droppings recorded within the south of the stable block.	Moderate	

15	TL 24917 34453	A small attachment to the stable block. Constructed of weatherboarded single panel walls with a flat corrugated sheeting roof.	Negligible	
16	TL 24923 34444	Previous survey assessment recorded a shed structure which consisted of timber panelling and corrugated metal sheeting. The two sections of the roof comprised of a single sheet of metal and a pitched felt at the southern end. The building showed signs of wear and tear, but was considered largely unsuitable for roosting bats. Internally no evidence of bats was recorded.	Negligible	No photograph
17	TL 25054 34611	Previous survey assessment recorded a two-storey residential structure consisted of brick walls, with white render on the first floor and a clay tiled hipped roof. A timber framed conservatory protruded from the southern edge of the building. Timber soffit boxes and a chimney stack were also recorded. Overall, the building was in a good state of repair; however, slipped tiles were recorded on the southern aspect of the roof. Inspection	Low	

		on the day of survey showed no change to these external features. A further external and internal inspection was conducted in April 2023 following recent granted access. Slipped tiles with small gaps are present at the roof, house sparrows were utilising gaps at roof edges above the guttering at northeast elevation. Internal inspection conducted within loft void (5-6 m in height with wooden struts and beams). Loft space was extremely dirty, cobwebbed and unlined with no void at rafters. No signs of bats were identified during the inspection.		
18	TL 25060 34601	Previous survey assessment recorded a single-storey outbuilding which consisted of timber panelling with a hipped clay tile roof. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Internal inspections recorded no evidence of bats or features likely to be used by bats. Regularly used so high disturbance.	Negligible	No photograph
19	TL 25062 34603	A very small shed structure,	Negligible	No Photograph

		constructed of brick and timber cladded walls with a tiled pitched roof. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Internally the structure was very dirty. No opportunities for roosting bats.		
20	TL 25067 34568	Previous survey assessment recorded a shed structure consisted which of corrugated block work/metal walls, with areas of timber cladding and a pitched corrugated likely asbestos roof. A metal shutter was located on the eastern aspect. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes to the original inspection were made.	Negligible	

21	TL 25069 34552	Previous survey assessments recorded an open shed structure which consisted corrugated likely asbestos walls on a steel girder frame, with a corrugated likely asbestos roof. Sections of the likely asbestos sheeting was damaged exposing the northern and southern ends of the structure; however, no features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes to the original inspection were made. Nesting birds identified utilising the feature.	Negligible	
22	TL 25072 34525	A newly constructed wooden open shed structure that connect at the northern elevation to B21, plastic sheeting is present at western elevation wall. Joists are fairly tight and there is a lack of access/egress points. No signs of nesting birds or bats were identified.	Negligible	

23	TL 25069 34504	Previous survey assessments recorded an open shed structure which consisted of block work/metal walls on a steel girder frame. The pitched corrugated metal roof included skylights. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes to the original inspection were made. Nesting birds identified utilising the feature.	Negligible	
24	TL 25107 34515	Previous survey assessments recorded an open shed structure which consisted of block work/metal walls on a steel girder frame. The pitched corrugated metal roof included skylights. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the	Negligible	

		day of survey showed no change to these external features. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes to the original inspection were made. Nesting birds identified utilising the features and white wash was present.		
25	TL 25096 34561	Previous survey assessments recorded an open shed structure which consisted of metal sheeting walls on a timber frame, with a flat corrugated metal roof included skylights. The building showed signs of wear and tear, but was considered largely unsuitable for roosting bats. Inspection on the day of survey showed a slight change to these external features which means internal inspections are required. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes to the original inspection were made. Nesting birds identified utilising	Negligible	

		the feature.		
26	TL 25089 34585	Previous survey assessment recorded an open shed structure which consisted of blockwork/corrugated metal walls on a stone frame. The pitched likely asbestos metal roof included skylights. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed a slight change to these external features which means internal inspections are required. A further external and internal inspection was conducted in April 2023 following recent granted access. Wooden cladding on southern wall present which have small gaps. No other changes to the original inspection were made. Nesting birds identified utilising the feature.	Negligible	

27	TL 25083 34614	Previous survey assessment recorded a shed structure which consisted block work/metal walls, with areas of timber cladding and a pitched corrugated likely asbestos roof. Two single storey pent roof sections were positioned on the northern edge. A metal shutter was located on the western aspect. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed a slight change to these external features which means internal inspections are required. Further external inspection conducted within April 2023. Gaps between corrugated metal walls and concrete base, the northern end of build contains attached single storied wooden store with window with small spaces between soffit and walls.	Negligible	
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28	TL 25128 34666	Previous survey assessment recorded a two-storey residential structure consisted of brick walls, with white render and a clay tiled hipped roof. Two single storey outbuildings were connected to the southern edge, which included pitched clay tile/metal sheeting roofs. Overall, the building was in a good state of repair. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes to the external features were identified. Internal inspection conducted within loft void (5-6 m in height with wooden struts and beams). Loft space was extremely dirty, cobwebbed and unlined with no void at rafters. No signs of bats were identified during the inspection.	Negligible	
29	TL 25126 34658	Previous survey assessment recorded a garden shed which consisted of timber walls, with the entrance on the northern aspect. Timbers window frames were present, and the roof consisted of a pitched felt. Overall,	Negligible	No photograph

		the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Internal inspections recorded no roosting opportunities for bats. Used regularly so high disturbance.		
30	TL 25138 34657	Previous survey assessments recorded a single storey summer house which consisted of timber walls, with the entrance on the northern aspect. Timber fascia boards and window frames were present, and the roof consisted of a pitched felt. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Internal inspection recorded no evidence of bats, cobwebs present	Negligible	No photograph
31	TL 25158 34670	Previous survey assessment recorded an open shed structure which consisted of blockwork/corrugated metal walls on a stone frame and a pitched corrugated metal roof. A metal shutter was located on the western aspect Overall, the	Negligible	

		building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes were recorded to the original inspection findings.		
32	TL 25163 34643	Previous survey assessment recorded an open shed structure which consisted of timber walls on a metal frame and a pitched corrugated metal roof, with timber barge boards. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed a slight change to these external features which means internal inspections are required. A further external and internal inspection was conducted in April 2023 following recent granted	Negligible	

		access. No changes were recorded to the original inspection findings.		
33	TL 25188 34627	Previous survey assessment recorded an open shed structure which consisted of blockwork/corrugated metal walls on a metal frame. The roof formed from pitched likely asbestos sheeting. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes were recorded to the original inspections findings.	Negligible	
34	TL 25181 34660	Previous survey assessment recorded an open shed structure consisted of timber walls on a metal frame and a pitched corrugated metal roof, with timber barge boards. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats	Negligible	No photograph

		were recorded. Inspection on the day of survey showed a slight change to these external features which means internal inspections are required. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes were recorded to the original inspections findings other than the presence of a structural gap at the ridge of the build.		
35	TL 25177 34675	Previous survey assessment recorded a small shed structure which consisted of timber/corrugated metal walls. The pitched metal roof included timber barge boards. The building showed signs of wear and had been constructed in a non-uniform fashion. No access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed a slight change to these external features which means internal inspections are required. A further external and internal inspection was conducted in April	Low	 

		2023 following recent granted access. Multiple large access points to interior via roof breaks, gaps in wooden walls, rafters and fascia board. Elder tree is present between B35 & B36. Interior quite drafty, multiple historic and active bird nests are present within the build including confirmed wren. One historic bat dropping was present on the floor of interior.		
36	TL 25173 34689	Previous survey assessment recorded a shed structure which consisted of blockwork/corrugated likely asbestos walls on a stone frame and a pitched corrugated likely asbestos roof. A metal shutter was located on the western aspect. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed a slight change to these external features which means internal inspections are required. A further external and internal inspection was conducted in April 2023 following	Negligible	

		recent granted access. Some small gaps between corrugated metal walls and concrete base, however these were all dirty. Internally well-sealed with lack of access points, currently utilised as a workshop.		
37	TL 25210 34748	Previous survey assessment recorded a two-storey residential structure which consisted of brick walls, with white render and a clay tiled hipped roof. The building included timber soffit boxes and a chimney stack. Overall, the building was in a good state of repair; however, the southern and western aspect of the building could not be surveyed due to access constraints. Inspection on the day of survey showed no change to these external features. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes to the external features were identified other than the presence of a conservatory at the southern elevation. Internal inspection conducted within loft void (5-6 m in height	Negligible	

		with wooden struts and beams). Loft space was extremely dirty, cobwebbed and unlined with no void at rafters. No signs of bats were identified during the inspection.		
38	TL 25221 34738	Previous survey assessment recorded a single storey garage which consisted of stone walls with a single-pitch felt roof. The northern aspect comprised of a metal up and over door. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Internal inspections recorded no evidence of bats or opportunities for roosting.	Negligible	No photograph
39	TL 25321 34774	Previous survey assessment recorded a single storey stable which consisted of a brick and blockwork structure clad in timber panels. The system of roofs comprised pitched sections formed from likely asbestos tiles and corrugated sheeting. The building showed signs of wear and tear, with gaps between the timber wall panels, damaged windows and gaps under the likely asbestos	Moderate	

		sheeting progress access/egress. Inspection on the day of survey showed no change to these external features.		
40	TL 25348 34789	Previous survey assessment recorded a shed structure which consisted of corrugated metal sheets on a timber structure, with part flat, part single-pitch corrugated metal roof. Timber fascia boards and skirting was also present surrounding the side-hinged doors on the southern aspect. In places the building was in a poor state of repair; however, openings around the joints in the frame or roof led to exposed areas which were not suitable for roosting bats. Inspection on the day of survey showed no change to these external features. A further external inspection was conducted in April 2023 however, no access internally. Small gaps present at eastern and western joints at wooden frame and slight damage to corrugated metal walls which may provide limited access points.	Low	
41	TL 25324 34717	Previous survey assessments recorded a small open shelter which	Negligible	No photograph

		was formed from timber panelling, with a single-pitch corrugated metal roof. Overall, the building was in a good state of repair and no access/egress points or features suitable for roosting bats were recorded. Inspection on the day of survey showed no change to these external features.		
42	TL 25369 34346	Previous survey assessment recorded a shed structure which consisted of timber panelling with a flat corrugated metal roof. The surveyor had a limited view of the structure due to dense vegetation and limited access to the other aspects of the building. There were little access points and opportunities for bats. The structure was damp and in a bad state of repair.	Negligible	No photograph
43	TL 25529 34414	Previous survey assessment recorded an individual metal shipping container with no access internally or externally for roosting bats.	Negligible	No Photograph
44	TL 25535 34363	Previous survey assessment recorded a shed structure which consisted of timber panelling with a dilapidated, slightly pitched corrugated metal roof. Several large holes in the	Low	No photograph

		roof meant it was open to the elements. Conditions are most likely to be draughty, wet when it rains, exposed to high levels of light and therefore considered unsuitable for roosting bats. Inspection on the day of survey showed no change to these external features.		
45	TL 25540 34351	Previous survey assessment recorded a two-storey residential structure Which consisted of brick walls and a clay tiled pitched roof. Overall, the building was in a good state of repair and did not include any soffit boxes and no tiles appeared to be missing. No features suitable for bats to use as access points or roosting locations were recorded. Internally the loft void is unlined and historic bat droppings were present within the loft space	High	
46	TL 25623 34420	This temporary structure included a gently sloping corrugated metal roof. Mesh netting surrounded three of the aspects. It was entirely open to the elements and there were no crevices for bats to roost in.	Negligible	No photograph
47	TL 25640 34400	A small portacabin used as an office.	Negligible	No photograph

		The structure was a steel contained, tight from an external view. Internally it is used as an office, no access or opportunities for roosting bats.		
48	TL 25630 34385	The Warren farmhouse consisted of timber panelling, which was bricked up in places with large concrete slabs. The roof was pitched and consisted of likely asbestos cement roofing tiles. A few tiles were missing from the roof and there is a crevice within the tip of the pitched annex, possibly leading to suitable roosting habitat. Inspection on the day of survey showed no change to these external features. Further external inspection and eastern side of build subject to interior inspection. Multiple missing tiles, present damaged wooden gable ends have multiple access points, wall void is present which is highly suitable for bats, damaged soffit, guttering and wooden rafters. Interior contains multiple wooden beams, some torn butterfly remains are present in eastern interior. Multiple	Moderate	

		historic and active bird nests including wren and magpie were identified. Concrete wall features within centre of exterior have breaks and cracks that are being readily utilised by birds.		
49	TL 25658 34394	A garage type structure, possibly used as a kennel currently. The building is open on one end allowing access. Externally and internally no roosting points noted. The building is constructed of single lined timber panelling and a pitched tiled roof. The building was in a good state of repair with no missing tiles or access points for bats noted.	Negligible	
50	TL 25661 34380	Previous survey assessment recorded a two-storey residential structure consisted of brick walls and a clay tiled pitched roof. Overall, the building was in a good state of repair and did not include any soffit boxes and no tiles appeared to be missing. No features suitable for use by bats as access points or roosting locations were identified. Inspection on the day of survey showed a slight change to these external features which means	Negligible	

		internal inspections are required. A further external and internal inspection was conducted in April 2023 following recent granted access. No changes to the external features were identified. Internal inspection conducted within loft void (5-6 m in height with wooden struts and beams). Loft space was extremely dirty, cobwebbed and unlined with no void at rafters. Small gap between rafters and tiles however not suitable for bats. No signs of bats were identified during the inspection.		
51	TL 25460 33332	Previous survey assessment recorded a building which consisted of timber panelling. The mansard roof consisted of likely asbestos cement roofing tiles. The guttering and timber panelling on western extension had come away and a small hole lead into the building. Inspection on the day of survey showed no change to these external features.	Low	
52	TL 25481 33321	Previous survey assessment recorded a two-storey residential structure Which consisted of	Negligible-Low. Needs internal inspection	No photograph

		brick walls and a clay tiled pitched roof. Overall, the building was in a good state of repair and did not include any soffit boxes and no tiles appeared to be missing. No features suitable for use by bats as access points or roosting locations were identified. Inspection on the day of survey showed a slight change to these external features which means internal inspections are required.		
53	TL 25513 33288	Previous survey assessment recorded a building which consisted of timber panelling. The roof is pitched and consists of likely asbestos cement roofing tiles. Some tiles were missing, but no cavities available as a result. There was lifted wood panelling at the gable/apex of the building. Inspection on the day of survey showed no changes to these features.	Low	
54	TL 25527 33281	Inspection on the day of survey showed a features which would require internal inspections. Internal inspections recorded no evidence of bats, tightly sealed exterior with no entry points, dirty and cobwebs recorded within interior.	Negligible	No photograph

55	TL 25239 33433	Previous survey assessment recorded a shed which consisted of an old pig shed. Constructed of a flat tin roof, open on all sides to the elements. Internally, a number of crevices within the boardings of the walls were recorded and other roosting opportunities internally that were suitable to support roosting bats. The structure was damp in many places and dilapidated.	Low	
56	TL 25273 33465	Previous survey assessment recorded a building used as a stable block and storage barns. The structure consisted of timber panelling. The roof was pitched and consisted of tiles on a single lined timber panelling. A number of gaps were noted externally including lifted weatherboarding and gaps under the eaves allowing access internally. Internally the structure was free of evidence of bats, cobwebs present and dirty throughout the storage barns. Gaps from missing mortar under the stable vents allow opportunity for roosting bats as well as other external features.	Moderate	

57	TL 25239 33433	Previous survey assessment recorded a shed which consisted of a flat tin roof, open on all sides to the elements. No crevices or features present that were suitable to support roosting bats. Inspection on the day of survey showed no change to these external features.	Negligible	
58	TL 25262 33435	Previous survey assessment recorded a shed which consisted of timber panelling with a gently sloping corrugated metal roof. A large open hole in the roof meant it was open to elements. This suggests that it gets wet/damp and draughty, making it unsuitable to support roosting bats. Inspection on the day of survey showed no change to these external features.	Negligible	No photograph
59	TL 25293 33452	Previous survey assessment recorded a two-storey residential structure Which consisted of brick walls and a clay tiled pitched roof. Overall, the building was in a good state of repair. A number of tiles on the south western elevation had slipped allowing access for roosting bats between the tiles and mortar. Internally the loft	Low	

		void is unlined and no evidence was recorded.		
60	TL 25324 33493	The warehouse was used as a fertiliser store and consisted entirely of corrugated likely asbestos cement. PVC skylights within the building, allowing light in. Tightly sealed around guttering, however lead flashing around roof overhangs the corrugated metal, allowing gaps for bats to roost. Some lifted metal flashing around door to building. Inspection on the day of survey showed no change to these external features.	Negligible	

- E.1.3 Table E1.3 shows target note descriptions of linear features within the Site which is solely comprised of hedgerows. Table E1.2 encompasses composition as well as conditions in these areas.
- E.1.4 The key and descriptions provided in the Defra (2007) 'Hedgerow Survey Handbook' were used to determine if a feature should be considered a hedgerow, hedgerow with trees, a line of trees or not a hedgerow at all.
- E.1.5 Hedgerows were assessed in terms of condition based on the DEFRA (2007) Hedgerow Survey Handbook and the Biodiversity Metric 4.0 Technical Supplement Guide to inform the condition for use in the Biodiversity Metric Net Gain Assessment associated with this application.

Table E1.3 Linear features on the Site

Target Note ID	Description	Condition
H1	Native species-poor intact hedgerow Beech hedge along the road and boundary of Laymore Farm. Ivy and bramble were also present within the hedge. The western extent of the feature is also comprised of wild privet. Failed A2, C1, C2 and D2	Moderate
H2	Native species-poor intact hedgerow	Moderate

	A largely intact hedgerow feature along Salisbury Road comprised of hazel, hawthorn, wild privet, cherry laurel, blackthorn, elder and lilac. A singular silver birch tree is present within the feature. Failed A2, C1, C2 and D2	
H3	Native species-rich hedgerow with trees Species predominantly consists of elder with hawthorn, blackthorn and elm, dog rose and ivy also recorded. The hedgerow is defunct in places and becomes less dense within the northern extent. Tree species recorded within the feature included ash and field maple. Failed A1, A2, B2 and C2	Moderate
H3a	Native species-rich hedgerow with trees Species include blackthorn, hawthorn, elder, buckthorn, elm, dog rose, oak, sycamore with ivy. Tree species included within the hedgerow consisted of field maple and ash. Sections of H3a are defunct and broken with multiple elms showing signs of dieback consistent with Dutch Elm Disease. Failed A1, A2, B2, C2 and E2.	Moderate
H4	Native intact species-poor hedgerow Intact, species-poor hedgerow with some gaps 1-3 m wide. Species include; hawthorn, ivy, blackthorn, field maple, buckthorn, wild privet, dog rose, elder. There was ruderal species associated with the understory of the hedgerow which comprised of nettle, black horehound, cow parsley, perennial ryegrass, white dead-nettle, garlic mustard. Failed A1, A2, B2, and C2	Moderate
H5	Native intact species-poor hedgerow Intact, species-poor hedgerow comprised of hawthorn, blackthorn, and elder. Failed A1, A2, B2, and C2	Moderate
H6	Native defunct species-poor hedgerow Defunct, species-poor hedgerow with large gaps. Species limited to elder, hawthorn and blackthorn. Failed A1, A2, B2, C2 and D2	Moderate
H6a	Native intact species-poor hedgerow As H6 extends further east the species comprises predominantly of wild privet as well as conifer sp. which are largely associated with a residential garden. Failed A1, A2, B2, and C2	Moderate
H7	Native defunct species-poor hedgerow Hedgerow H7 was recorded as a defunct hedge – native species-poor. This was due to the high level of gaps recorded and, despite evidence suggesting its previous function as a boundary habitat, it's lack of continuous structure. Species included white bryony common ivy, hawthorn, blackthorn, bramble and elder. Failed A1, A2, B2, C2 and D2	Moderate

H8	Native species-rich hedgerow with trees Defunct hedgerow and trees, 4 m x 3 m, with large numbers of rabbit holes. Species included field maple, hawthorn, blackthorn, elder, and elm. One tree was assessed as having moderate suitability for roosting bats. This was a field maple located at the northern tip of the Site, within hedgerow H8 (TN17) Failed A2, B2, C2 and D2	Moderate
H9	Native intact species-rich hedgerow with trees H9 classified as hedge with trees – native species-rich. This was due to the higher diversity of species recorded such as wayfaring tree, spindle, crab apple and hazel. Other species included field maple, white bryony, dogwood, hawthorn, ash, common ivy, holly, wild privet, blackthorn, dog-rose, bramble, elder and wych elm. Japanese rose was also recorded within this hedgerow which is a schedule 9 species. Failed A2, B2, C2, D1 and D2	Moderate
H10	Native intact species-rich hedgerow H10 was classified as intact hedge – native species-rich, however sporadic trees are present. Species present included blackthorn, hawthorn, elder, ash, field maple with the understory comprising cocks foot, perennial rye grass, nettle, white bryony, broad-leaf dock, rose sp. and bramble. Failed A2, B2, C2 and D2	Moderate
H11	Native intact species-rich hedgerow H11 was classified as intact hedge – native species-rich, however sporadic trees are present. Species present included blackthorn, hawthorn, elder, ash, field maple with the understory comprising cocks foot, perennial rye grass, nettle, white bryony, broad-leaf dock, rose sp., cranesbill sp. and bramble. Failed A2, B2, C2 and D2	Moderate
H12	Native intact species-poor hedgerow H12 was classified as an intact hedge – native species-poor with occasional trees. Species included hawthorn, blackthorn, dogwood with occasional ash and elder. Failed A2, B2, C2 and D2	Moderate
H13	Native intact species-poor hedgerow H13 was classified as an intact hedge – native species-poor with occasional trees. Species included hawthorn, blackthorn, dogwood with occasional ash and elder. Failed A2, B2, C2 and D2	Moderate
H14	Native intact species-poor hedgerow	Poor

	H14 was classified as an intact hedge – native species-poor with occasional trees. Species included hawthorn, blackthorn, dogwood with occasional ash and elder. Failed A2, B2, C2 and D2	
H15	Native intact species-poor hedgerow Intact, species-poor hedgerow with a single tree feature, approximately 3 m x 2 m. Species included elder, blackthorn, hawthorn with occasional sycamore. Understory species included dead nettle, nettle, creeping thistle, ivy, bindweed, hogweed, cleavers, bramble and common mouse ear Failed A2, B2, C2 and D2	Moderate
H16	Native intact species-poor hedgerow Intact, species-poor hedgerow, approximately 3 m x 2 m. Species included elder, blackthorn, hawthorn with occasional sycamore. Understory species included dead nettle, nettle, creeping thistle, ivy, bindweed, hogweed, cleavers, bramble and common mouse ear Failed A2, B2, C2 and D2	Moderate
H17	Native defunct species-poor hedgerow Defunct species-poor hedgerow, approximately 3 m x 2 m. Large gaps existed in the hedgerow. Species included elder, blackthorn, hawthorn with occasional sycamore. Understory species included dead nettle, nettle, creeping thistle, ivy, bindweed, hogweed, cleavers, bramble and common mouse ear Failed A2, B2, C2 and D2	Moderate
H18	Native defunct species-poor hedgerow Defunct, species-poor hedgerow with large gaps within the hedgerow. Species included elder, blackthorn, hawthorn with occasional sycamore. Understory species included dead nettle, nettle, creeping thistle, ivy, bindweed, hogweed, cleavers, bramble and common mouse ear Failed A2, B2, C2 and D2	Moderate
H19	Native intact species-poor hedgerow H19 was classified as an intact hedge – native species-poor which comprised largely of elder, bramble and ivy as well as field maple, hawthorn, blackthorn and elm. Failed A1, A2 and C2	Moderate
H20	Native defunct species-poor hedgerow H20 was classified as a defunct hedge – native species-poor which was dominated by hawthorn as well blackthorn and elder. Although classified as a hedgerow, H20 was evolving more into scattered scrub. Failed A1, A2, B1, B2, C1, C2 and D2	Poor
H21	Native defunct species-poor hedgerow H21 was classified as a defunct hedge – native species-poor which was	Poor

	dominated by hawthorn as well as blackthorn and elder. Although classified as a hedgerow, H21 was evolving more into a line of scattered scrub. Failed A1, A2, B1, B2, C1, C2 and D2	
H22	Native defunct species-poor hedgerow This hedgerow is small and is largely associated with TN28. There are large gaps within the hedgerow with species limited to hawthorn, Japanese rose, hazel, blackthorn and ash. Failed B1, B2, C1, C2, D1 and D2	Poor
H23	Native intact species-poor hedgerow H23 was classified as an intact hedge – native species-poor which comprised largely of blackthorn and hawthorn as well as field maple and elder. Failed B1, C1, C2 and D2	Moderate
H24	Native intact species-poor hedgerow H24 was classified as an intact hedge – native species-poor which comprised largely of privet sp. and cypress associated with a residential garden. Fails criteria A1, A2 and C2	Moderate
H25	Native intact species-poor hedgerow with trees H25 was classified as an intact species-poor hedge with trees – native species-poor which comprised largely of privet sp., sycamore trees/saplings and holly associated with a residential garden. Fails criteria A1, A2 and C2	Moderate
H26	Native intact species-poor hedgerow H26 was classified as an intact hedge – native species-poor which comprised largely of hawthorn, blackthorn and elder associated with a residential garden. Fails criteria A1, A2 and C2	Moderate
H27	Native intact species-rich hedgerow Intact, species-rich hedgerow with a single ash tree within the western extent. Species recorded included elm, ash, blackthorn, hawthorn, elder, field maple and ivy. The mature ash tree was considered to offer low bat roost potential owing to ivy cladding. The understory of this hedgerow included perennial ryegrass white-dead nettle, dandelion sp., thistle sp., ribwort plantain, wall barley and red dead nettle. Failed C2	Good
H28	Native intact species rich hedgerow with trees Mature, species-rich hedge with trees associated with arable fields (TN67 and TN68). Species include field maple, sycamore, hornbeam, hazel, hawthorn, wild cherry, walnut, blackthorn, turkey oak, elder, common lime and rowan.	Moderate

	This hedgerow is considered important in accordance with the Hedgerow Regulations (1997), owing to supporting nine woody species; an associated public right of way and at least one tree per 50m of hedgerow. Failed B1, B2, C2 and E2	
H29	Native intact species-poor hedgerow H29 was classified as an intact hedge – native species-poor which comprised largely of blackthorn and hawthorn. Failed C2	Good
H30	Native intact species-poor hedgerow H30 was classified as an intact hedge – native species-poor which comprised largely of blackthorn and hawthorn as well as elder and elm. Fails criteria C2	Good
H31	Native defunct species poor hedgerow Native defunct species poor hedgerow with species limited to field maple, hawthorn, common dogwood, blackthorn and elder. Failed A2, B1, B2 and C2	Moderate
H32	Native defunct species poor hedgerow with trees Native defunct species poor hedgerow with trees. Tree species included a mature ash with dense ivy covering up trunk, and consequently the ivy cladding leads to this mature ash being recorded as having low bat roost potential. Other species were limited to hawthorn, ivy and sycamore. Failed B2, C2 and D2	Moderate
H33	Native intact species poor hedgerow with trees Native intact species poor hedgerow with trees. Tree species include walnut, ash and sycamore. Other species include blackthorn, hawthorn, ash and elm.	Moderate
H34	Native defunct species poor hedgerow Native defunct species poor hedgerow with dominant species limited to bramble, dog rose, blackthorn and elder. Failed A2, B2 and C2	Moderate
H35	Native intact species poor hedgerow Native intact species poor hedgerow predominantly comprised of blackthorn and dog rose with occasional elder. Failed A2 and C2	Good
H36	Line of trees A line of trees within a residential garden, comprised of species such as field maple, hawthorn, ash, holly, wild cherry, plum and rowan. Failed B, C and D	Poor
H37	Native defunct species-poor hedgerow	Moderate

	A defunct species-poor hedgerow bordering a western field parcel comprised of hawthorn, elm, elder, blackthorn, field maple and common lime. In some extents the feature is transforming into scrub-like vegetation, with some parts denser than others. Failed A2, B2 and C2	
H38	Native defunct species-poor hedgerow A defunct native hedgerow feature comprised of common dogwood, hawthorn, blackthorn and elder with a singular common walnut tree. Failed A2, B2 and C2	Moderate
H39	Native intact species-poor hedgerow An intact hedgerow features adjacent to the public footpath on Wallington Road. Species were comprised of field maple, hazel and hawthorn. Failed A2 and C1	Good
H40	Non-native ornamental hedgerow A well-managed, non-native hedgerow feature comprised of golden cypress.	Poor
H41	Native intact species-poor hedgerow A well-managed native hedgerow comprised predominantly of wild privet, bordering Bygrave Road and a residential property. Failed A1, A2, C1 and D2	Poor

F. DETAILED SURVEY RESULTS

F.1 Species Recorded on Site

English Name	Scientific Name
Birds	
Blackbird	<i>Turdus merula</i>
Buzzard	<i>Buteo buteo</i>
Carrion crow	<i>Corvus corone</i>
Chaffinch	<i>Fringilla coelebs</i>
Coal tit	<i>Periparus ater</i>
Collared dove	<i>Streptopelia decaocto</i>
Corn bunting	<i>Emberiza calandra</i>
Dunnock	<i>Prunella modularis</i>
Goldcrest	<i>Regulus regulus</i>
Goldfinch	<i>Dendrocopos major</i>
Great tit	<i>Parus major</i>
House sparrow	<i>Passer domesticus</i>
Jay	<i>Garrulus glandarius</i>
Linnet	<i>Linaria cannabina</i>
Long tailed tit	<i>Aegithalos caudatus</i>
Magpie	<i>Pica pica</i>
Red kite	<i>Milvus milvus</i>
Robin	<i>Erithacus rubecula</i>
Starling	<i>Sturnus vulgaris</i>
Wood pigeon	<i>Columba palumbus</i>
Mammals	
Field vole	<i>Microtus agrestis</i>
Rabbit	<i>Oryctolagus cuniculus</i>
Plants	
Annual mercury	<i>Mercurialis annua</i>
Apple	<i>Malus domestica</i>
Ash	<i>Fraxinus excelsior</i>
Babbingtons poppy	<i>Papaver lecoqii</i>
Barren brome	<i>Bromus sterilis</i>
Bent sp.	<i>Agrostis sp.</i>
Birdseye speedwell	<i>Veronica persica</i>
Blackthorn	<i>Prunus spinosa</i>
Black horehound	<i>Ballota nigra</i>
Black medic	<i>Medicago lupulina</i>
Bramble	<i>Rubus fruticosus agg.</i>
Bluebell	<i>Hyacinthoides non-scripta</i>
Bristly oxtongue	<i>Helminthotheca echioides</i>
Broad-leaved dock	<i>Rumex obtusifolius</i>
Broad-leaved willowherb	<i>Epilobium montanum</i>
Brome sp.	<i>Bromus sp.</i>
Buckthorn	<i>Rhamnus cathartica</i>
Butterfly bush	<i>Buddleja davidii</i>
Buttercup sp.	<i>Ranunculus sp.</i>
Butterfly bush	<i>Buddleja davidii</i>
Canadian goldenrod	<i>Solidago canadensis</i>
Cedar sp.	<i>Cedrus sp.</i>
Cherry plum	<i>Prunus cerasifera</i>
Cherry sp.	<i>Prunus sp.</i>

English Name	Scientific Name
Cleavers	<i>Galium aparine</i>
Cocksfoot	<i>Dactylis glomerata</i>
Colts foot	<i>Tussilago farfara</i>
Common beech	<i>Fagus sylvatica</i>
Common couch	<i>Elymus repens</i>
Common groundsel	<i>Senecio vulgaris</i>
Common knapweed	<i>Centaurea nigra</i>
Common lime	<i>Tilia × europaea</i>
Common mallow	<i>Malva neglecta</i>
Common mouse-ear	<i>Cerastium fontanum</i>
Common mullein	<i>Verbascum thapsus</i>
Common nettle	<i>Urtica dioica</i>
Conifer sp.	<i>Pinophyta sp.</i>
Cotoneaster sp.	<i>Cotoneaster sp.</i>
Cowslip	<i>Primula veris</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Cow parsnip	<i>Heracleum maximum</i>
Crab apple	<i>Malus sylvestris</i>
Cranesbill sp.	<i>Geranium sp.</i>
Creeping bent	<i>Agrostis stolonifera</i>
Creeping cinquefoil	<i>Potentilla reptans</i>
Creeping thistle	<i>Cirsium arvense</i>
Crested dog's tail	<i>Cynosurus cristatus</i>
Cypress sp.	<i>Cupressus sp.</i>
Daffodil	<i>Narcissus pseudonarcissus</i>
Danish scurvy grass	<i>Cochlearia officinalis</i>
Daisy	<i>Bellis perennis</i>
Dandelion	<i>Taraxacum officinale</i>
Dog rose	<i>Rosa canina</i>
Dogwood	<i>Cornaceae sp.</i>
Doves-foot cranesbill	<i>Geranium molle</i>
Elder	<i>Sambucus nigra</i>
Elm	<i>Ulmus sp</i>
European spindle tree	<i>Euonymus europaeus</i>
False oat-grass	<i>Arrhenatherum elatius</i>
Fat hen	<i>Chenopodium album</i>
Fescue	<i>Festuca sp.</i>
Field bindweed	<i>Convolvulus arvensis</i>
Field forget-me-not	<i>Myosotis arvensis</i>
Field maple	<i>Acer campestre</i>
Field scabious	<i>Knautia arvensis</i>
Garlic mustard	<i>Alliaria petiolata</i>
Goat willow	<i>Salix caprea</i>
Goats beard	<i>Aruncus dioicus</i>
Golden marguerite	<i>Cota tinctoria</i>
Greater burdock	<i>Arctium lappa</i>
Greater knapweed	<i>Centaurea scabiosa</i>
Grey willow	<i>Salix cinerea</i>
Ground ivy	<i>Glechoma hederacea</i>
Hard rush	<i>Juncus inflexus</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Hedge mustard	<i>Sisymbrium officinale</i>

English Name	Scientific Name
Hemlock	<i>Conium maculatum</i>
Herb-Robert	<i>Geranium robertianum</i>
Hogweed	<i>Heracleum sp.</i>
Holly	<i>Ilex aquifolium</i>
Hop trefoil	<i>Trifolium campestre</i>
Hornbeam	<i>Carpinus betulus</i>
Horse chestnut	<i>Aesculus hippocastanum</i>
Ivy	<i>Hedera helix</i>
Japanese rose	<i>Rosa rugosa</i>
Kidney vetch	<i>Anthyllis vulneraria</i>
Knotgrass	<i>Polygonum aviculare</i>
Laburnum	<i>Legumes sp.</i>
Lady's bedstraw	<i>Galium verum</i>
Lesser celandine	<i>Ficaria verna</i>
Lesser knapweed	<i>Centaurea nigra</i>
Lords and ladies	<i>Arum alpinum</i>
Maple	<i>Acer sp.</i>
Marsh thistle	<i>Cirsium palustre</i>
Mugwort	<i>Artemisia vulgaris</i>
Musk thistle	<i>Carduus nutans</i>
Nipplewort	<i>Lapsana communis</i>
Norway maple	<i>Acer platanoides</i>
Oak	<i>Quercus sp.</i>
Perennial ryegrass	<i>Lolium perenne</i>
Plum	<i>Prunus domestica</i>
Prickly lettuce	<i>Lactuca serriola</i>
Prickly sow thistle	<i>Sonchus asper</i>
Privet sp.	<i>Ligustrum</i>
Ragwort	<i>Jacobaea vulgaris</i>
Red dead nettle	<i>Lamium purpureum</i>
Red fescue	<i>Festuca rubra</i>
Ribwort plantain	<i>Plantago lanceolata</i>
Rose	<i>Rosa sp.</i>
Rosebay willowherb	<i>Chamerion angustifolium</i>
Rough hawkbit	<i>Leontodon hispidus</i>
Rowan	<i>Sorbus subg. Sorbus</i>
Scented mayweed	<i>Matricaria chamomilla</i>
Scentless mayweed	<i>Tripleurospermum inodorum</i>
Scots pine	<i>Pinus sylvestris</i>
Selfheal	<i>Prunella vulgaris</i>
Sheep sorrel	<i>Rumex acetosella</i>
Silver birch	<i>Betula pendula</i>
Small leaved lime	<i>Tilia cordata</i>
Smooth hawk's-beard	<i>Crepis capillaris</i>
Soft brome	<i>Bromus hordeaceus</i>
Soft rush	<i>Juncus effusus</i>
Sow thistle	<i>Sonchus sp.</i>
Spear thistle	<i>Cirsium vulgare</i>
Staghorn sumac	<i>Rhus typhina</i>
St. John's wort	<i>Hypericum perforatum</i>
Stinking iris	<i>Iris foetidissima</i>
Sweet violet	<i>Viola odorata</i>
Sycamore	<i>Acer pseudoplatanus</i>

English Name	Scientific Name
Tall white top	<i>Lepidium latifolium</i>
Teasel	<i>Dipsacus fullonum</i>
Timothy	<i>Phleum pratense</i>
Travellers-joy	<i>Clematis vitalba</i>
Tufted hair grass	<i>Deschampsia cespitosa</i>
Turkey oak	<i>Quercus cerris</i>
Wall barley	<i>Hordeum murinum</i>
Walnut	<i>Juglans sp.</i>
Wayfaring	<i>Viburnum lantana</i>
Wild angelica	<i>Angelica sylvestris</i>
White bryony	<i>Bryonia dioica</i>
White campion	<i>Silene latifolia</i>
White clover	<i>Trifolium repens</i>
White dead nettle	<i>Lamium album</i>
Wild basil	<i>Clinopodium vulgare</i>
Wild carrot	<i>Daucus carota</i>
Wild cherry	<i>Prunus avium</i>
Wild lettuce	<i>Lactuca virosa</i>
Wild mignonette	<i>Reseda lutea</i>
Wild oat	<i>Avena fatua</i>
Wild privet	<i>Ligustrum vulgare</i>
Willow sp.	<i>Salix sp.</i>
Willowherb sp.	<i>Epilobium sp.</i>
Wych elm	<i>Ulmus glabra</i>
Yarrow	<i>Achillea millefolium</i>
Yew sp.	<i>Taxus sp.</i>
Yorkshire fog	<i>Holcus lanatus</i>

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