

Campus East, Welwyn Garden City, AL8 6AJ

Ecological Appraisal

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Executive Summary

- i) **Introduction.** Aspect Ecology was commissioned by Bellway Homes Ltd in September 2021 to undertake an Ecological Appraisal in respect of proposed redevelopment of land at Campus East, Welwyn Garden City, AL8 6AJ.
- ii) **Proposals.** The proposals are for redevelopment of the site to provide 313 new residential units with associated parking and landscaping.
- iii) **Survey.** The site was surveyed in September 2021, June and August 2022 based on standard extended Phase 1 methodology. In addition, a general appraisal of faunal species was undertaken to record the potential presence of any protected, rare or notable species, with specific surveys conducted in respect of bats and Badger.
- iv) **Ecological Designations.** The site itself is not subject to any statutory or non-statutory ecological designations. The nearest statutory designation is Sherrardspark Wood Site of Special Scientific Interest (SSSI) and Local Nature Reserve (LNR) located approximately 0.7km west of the site. The nearest non-statutory designation is Twentieth Mile Bridge Allotments Local Wildlife Site located approximately 0.8km south of the site. All of the ecological designations in the surrounding area are physically well separated from the site and are therefore unlikely to be adversely affected by the proposals.
- v) **Habitats.** The site comprises hardstanding and a building with small areas of amenity grassland and amenity planting, as well as hedgerows, trees and a wooded belt. The hedgerows are important ecological features of local level value and are to be largely retained under the proposals and will be protected during construction. The hedgerow at the centre of the site and part of the hedgerow at the north-west of the site will be removed to facilitate the development. This will be compensated by new, native species-rich planting. The remaining habitats within the site are not considered to form important ecological features and their loss to the proposals is of negligible significance.
- vi) **Protected Species.** The site offers opportunities for foraging and commuting bats, reptiles and breeding birds. Mitigation measures are provided which will fully safeguard protected species and maintain the favourable conservation status of any individuals/populations present.
- vii) **Enhancements.** The proposals present the opportunity to secure a number of biodiversity net gains, including additional native tree and shrub planting and new roosting and nesting opportunities for bats and birds.
- viii) **Summary.** In summary, the proposals have sought to minimise impacts on biodiversity and subject to the implementation of appropriate avoidance, mitigation and compensation measures, it is considered unlikely that the proposals will result in significant harm, and indeed a number of gains can be readily secured (including faunal enhancements).

1 Introduction

1.1 Background and Proposals

- 1.1.1 Aspect Ecology was commissioned by Bellway Homes Ltd in September 2021 to undertake an Ecological Appraisal in respect of proposed development of land at Campus East, Welwyn Garden City, AL8 6AJ centred at grid reference TL 2400 1330 (see Plan 6146/ECO1), hereafter referred to as 'the site'.
- 1.1.2 The site is proposed for allocation in the emerging Local Plan and the proposals are for redevelopment of the site to provide 313 new residential units with associated parking and landscaping.

1.2 Site Overview

- 1.2.1 The site is located in Welwyn Garden City, Hertfordshire within an urban context. The site is bound to the north, west and south by existing residential and commercial development. It is bound immediately to the east by railway lines beyond which lies further development.
- 1.2.2 The site is in active use as the 'Campus East Lower Car Park', with the majority of the site comprising hardstanding and a building with ground floor parking and garages and upper floor parking area. An area at the north-west of the site is in use as a private residential garden and comprises amenity grassland and planting. Other areas of amenity grassland are present at the west of the site, and a wooded belt and adjacent off-site wet ditch are present along the northern boundary. A number of hedgerows are also present at site boundaries. Small areas of amenity planting are present in the car park, along with scattered trees.

1.3 Purpose of the Report

- 1.3.1 This report documents the methods and findings of the baseline ecology surveys and desktop study carried out in order to establish the existing ecological interest of the site, and subsequently provides an appraisal of the likely ecological effects of the proposals. The importance of the habitats and species present is evaluated. Where necessary, avoidance, mitigation and compensation measures are proposed so as to safeguard any significant existing ecological interest within the site and where appropriate, opportunities for ecological enhancement are identified with reference to national conservation priorities and local Biodiversity Action Plans (BAPs).

2 Methodology

2.1 Desktop Study

- 2.1.1 In order to compile background information on the site and its immediate surroundings Hertfordshire Environmental Records Centre was contacted in September 2021, with data requested on the basis of a search radius of 2km. Where information has been received this is reproduced on Plan 6146/ECO2, where appropriate.
- 2.1.2 Information on statutory designations was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC) database, which utilises data provided by Natural England, with an extended search radius (25km). In addition, the MAGIC database was searched to identify the known presence of any Priority Habitats within or adjacent the site. Relevant information is reproduced on Plan 6146/ECO2, where appropriate.
- 2.1.3 In addition, the Woodland Trust database was searched for any records of ancient, veteran or notable trees within or adjacent to the site.

2.2 Habitat Survey

- 2.2.1 The site was surveyed in September 2021, June and August 2022 in order to ascertain the general ecological value of the land contained within the boundaries of the site and to identify the main habitats and ecological features present.
- 2.2.2 The site was surveyed based on standard Phase 1 Habitat Survey methodology¹, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail through Phase 2 surveys. This method was extended, in line with the Guidelines for Preliminary Ecological Appraisal² to record details on the actual or potential presence of any notable or protected species or habitats.
- 2.2.3 Using the above method, the site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified. The nomenclature used for plant species is based on the Botanical Society for the British Isles (BSBI) Checklist.

2.3 Faunal Surveys

- 2.3.1 General faunal activity, such as mammals or birds observed visually or by call during the course of the surveys was recorded. Specific attention was also paid to the potential presence of any protected, rare or notable species, and specific consideration was given to bats and badger, as described below.

¹ Joint Nature Conservation Committee (2010, as amended) 'Handbook for Phase 1 habitat survey: A technique for environmental audit.'

² Chartered Institute for Ecology and Environmental Management (CIEEM) (2013) 'Guidelines for Preliminary Ecological Appraisal.'

Bats³

Visual Inspection Surveys

- 2.3.2 **Buildings.** Buildings within the site were subject to a specific external inspection survey in September 2021, and an internal inspection survey in June 2022 using ladders, torches and binoculars where necessary.
- 2.3.3 During the external inspections, particular attention was given to any potential roost features or access points, such as broken or lifted roof tiles, lifted lead flashing, soffit boxes, weatherboarding, hanging tiles, etc. and for any external signs of use by bats such as accumulations of bat droppings or staining. Binoculars were used to inspect any inaccessible areas more closely where appropriate.
- 2.3.4 During the internal inspections, evidence for the presence of bats was searched for with particular attention paid to any loft voids and relevant potential roost features and locations, such as ridge boards, rafters, purlins, gable walls, and mortise joints. Specific searches were made for bat droppings that can indicate present or past use and extent of use, whilst other signs that can indicate the possible presence of bats were also searched for, e.g. presence of stained areas, feeding remains, corpses, etc.
- 2.3.5 **Trees.** Trees were assessed for their suitability to support roosting bats based on the presence of features such as holes, cracks, splits or loose bark. Suitability for roosting bats was rated based on relevant guidance⁴ as:
- Negligible;
 - Low;
 - Moderate; or
 - High.
- 2.3.6 Any potential roost features identified were also inspected for any signs indicating possible use by bats, e.g. staining, scratch marks, bat droppings, etc.

Dusk Emergence / Dawn Re-entry Survey

- 2.3.7 Dusk emergence and dawn re-entry surveys were carried out on 2nd/3rd August, 23rd/24th August and 8th September 2022 to identify any bats roosting in the trees highlighted to have moderate and high potential to support roosting bats which would be impacted by the proposals.
- 2.3.8 Surveyors employed Anabat Scout handheld bat detectors to aid identification of any bats observed. At dusk, surveyors were in position 15-30 minutes prior to sunset, remaining in place for approximately 2 hours. At dawn, surveyors were in place approximately 1 hour 30 minutes to 2 hours before sunrise and remained in place until 15 minutes after sunrise. This survey method aims to identify any roosting bats emerging from or returning to potential roost sites.
- 2.3.9 This survey work was carried out during suitable weather conditions, as set out in Tables 2.1 and 2.2 below.

³ Surveys based on: English Nature (2004) 'Bat Mitigation Guidelines' and Collins, J. (ed.) (2016) 'Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).' Bat Conservation Trust

⁴ Collins, J. (ed.) (2016) 'Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).' Bat Conservation Trust

Table 2.1. Dusk survey details.

Date	Start & end times & time of sunset	Structure reference / location	Equipment used	Weather
02/08/2022	Start time: 20.33 End time: 22.48 Sunset: 20.48	T62	Anabat Scout	Dry, 100% cloud, BF1, 23°C
Comments: The survey was undertaken by 2 surveyors under direction of licence holder 2019-38859-CLS-CLS.				
23/08/2022	Start time: 19.54 End time: 21.39 Sunset: 20.09	Ta	Anabat Scout	Dry, 40% cloud, BF3, 23°C
Comments: The survey was undertaken by 2 surveyors under direction of licence holder 2019-38859-CLS-CLS.				
08/09/2022	Start time: 19.17 End time: 21.02 Sunset: 19.32	T62	Anabat Scout	Dry, 40% cloud, BF2, 16°C
Comments: The survey was undertaken by 2 surveyors under direction of licence holder 2019-38859-CLS-CLS.				

BF0 = calm, BF12 = hurricane force.

Table 2.2. Dawn survey details.

Date	Start & end times & time of sunrise	Structure reference / location	Equipment used	Weather
03/08/2022	Start time: 03.56 End time: 05.41 Sunrise: 05.26	Ta	Anabat Scout	Dry, 40% cloud, BF3, 14°C
Comments: The survey was undertaken by 2 surveyors under direction of licence holder 2019-38859-CLS-CLS.				
24/08/2022	Start time: 04.28 End time: 06.13 Sunrise: 05.58	T62	Anabat Scout	Dry, 80% cloud, BF3, 19°C
Comments: The survey was undertaken by 2 surveyors under direction of licence holder 2019-38859-CLS-CLS.				

BF0 = calm, BF12 = hurricane force.

Badger (*Meles meles*)⁵

- 2.3.10 A detailed Badger survey was carried out in September 2021. The survey comprised two main elements. The first element involved searching for evidence of Badger setts. For any setts that were encountered, each sett entrance was noted and mapped. The second element involved searching for signs of Badger activity such as well-worn paths and push-throughs, snagged hair, footprints, latrines and foraging signs, so as to build up a picture of any use of the site by Badger.

2.4 Survey Constraints and Limitations

- 2.4.1 All of the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent during different seasons. The Phase 1 habitat survey was undertaken within the optimal season therefore allowing a robust assessment of habitats and botanical interest across the site.
- 2.4.2 Attention was paid to the presence of any invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, the detectability of such species varies due to a number of factors, e.g. time of year, site management, etc., and hence the

⁵ Based on: Mammal Society (1989) 'Occasional Publication No. 9 – Surveying Badgers'

absence of invasive species should not be assumed even if no such species were detected during the Phase 1 survey.

2.5 Ecological Evaluation Methodology

- 2.5.1 The evaluation of ecological features and resources is based on professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018)⁶, which involves identifying 'important ecological features' within a defined geographical context (i.e. international, national, regional, county, district, local or site importance). For full details refer to Appendix 6146/1.

2.6 National Policy Approach to Biodiversity in the Planning System

- 2.6.1 The National Planning Policy Framework (NPPF)⁷ describes the Government's national policies on 'conserving and enhancing the natural environment' (Chapter 15). NPPF is accompanied by Planning Practice Guidance on 'Biodiversity, ecosystems and green infrastructure' and ODPM Circular 06/2005⁸.

- 2.6.2 NPPF takes forward the Government's strategic objective to halt overall biodiversity loss⁹, as set out at Paragraph 174, which states that planning policies and decisions should contribute to and enhance the natural and local environment by:

'minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'

- 2.6.3 The approach to dealing with biodiversity in the context of planning applications is set out at Paragraph 180:

'When determining planning applications, local planning authorities should apply the following principles:

- a) *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless*

⁶ CIEEM (2018) 'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine', ver. 1.2, Chartered Institute of Ecology and Environmental Management, Winchester

⁷ Ministry of Housing, Communities & Local Government (2021) 'National Planning Policy Framework'

⁸ ODPM (2006) 'Circular 06/2005: Planning for Biodiversity and Geological Conservation – A Guide to Good Practice'

⁹ DEFRA (2011) 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services'

there are wholly exceptional reasons and a suitable compensation strategy exists; and

- d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.'*

2.6.4 The above approach encapsulates the 'mitigation hierarchy' described in British Standard BS 42020:2019¹⁰, which involves the following step-wise process:

- **Avoidance** – avoiding adverse effects through good design;
- **Mitigation** – where it is unavoidable, mitigation measures should be employed to minimise adverse effects;
- **Compensation** – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm; and
- **Enhancement** – planning decisions often present the opportunity to deliver benefits for biodiversity, which can also be explored alongside the above measures to resolve potential adverse effects.

2.6.5 The measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development (BS 42020:2019, section 5.5).

2.7 Local Policy

2.7.1 The principal planning document guiding future development within Welwyn Garden City is set out within the Welwyn Hatfield District Plan (adopted 2005). The following policies are of relevance to ecology at the site:

Welwyn Hatfield District Plan (2005)

Policy R11 – Biodiversity and Development

'All new development will be required to demonstrate how it would contribute positively to the biodiversity of the site by;

- The retention and enhancement of the natural features of the site;*
- The promotion of natural areas and wildlife corridors where appropriate as part of the design;*
- The translocation of habitats where necessary, where it can be demonstrated that the habitat or species concerned cannot be successfully accommodated within the development;*
- The use of locally native species in planting in accordance with Policy D8 Landscaping;*
- Helping meet priorities/targets set out in the Local Biodiversity Action Plan.'*

Policy R17 – Trees, Woodland and Hedgerows

¹⁰ British Standards Institution (2013) 'Biodiversity – Code of practice for planning and development', BS 42020:2019

'The Council will seek the protection and retention of existing trees, hedgerows and woodland by the use of planning conditions, section 106 agreements, hedgerow retention notices and tree preservation orders where applicable. New development will be required to incorporate wherever appropriate new planting with locally native species and should be in accordance with Policy D8 Landscaping.'

3 Ecological Designations

3.1 Statutory Designations

Description

- 3.1.1 The statutory designations of ecological importance that occur within the local area are shown on Plan 6146/ECO2. The nearest statutory designation is Sherrardspark Wood Site of Special Scientific Interest (SSSI) and Local Nature Reserve (LNR) which is located approximately 0.7km west of the site and is designated for extensive ancient semi-natural Sessile Oak/Hornbeam *Quercus petraea*/*Carpinus betulus* woodland which is rare in lowland England.
- 3.1.2 The nearest internationally designated site is Wormley-Hoddesdonpark Woods Special Area of Conservation (SAC) which is located approximately 10km south-east of the site. Lee Valley Ramsar and Special Protection Area (SPA) is located approximately 13km east of the site at the closest point, and Epping Forest SAC and Chilterns Beechwoods SAC are located approximately 22km away to the south-east and west respectively.
- 3.1.3 Natural England has developed Impact Risk Zones (IRZs) as an initial tool to help assess the risk of developments adversely affecting SSSIs, taking into account the type and scale of developments. The site is located within a SSSI Impact Risk Zone in relation to Sherrardspark Wood SSSI which applies to any residential development of 100 units or more, or 50 units or more outside of existing settlements.

Evaluation

- 3.1.4 The site itself is not subject to any statutory ecological designations. The Welwyn Hatfield Local Plan Habitats Regulations Assessment (HRA), dated January 2020, considers potential impacts on Wormley-Hoddesdonpark Woods SAC. Of the potential impacts and activities that may affect the SAC, air pollution and recreational impacts were scoped in. In terms of air pollution, due to the very small area of the SAC located within 200m of the primary road network, adverse effects on the integrity on the SAC due to the local plan were concluded unlikely. With regards to recreational impacts, the HRA states 'it is unlikely that proposed development located more than 7km away from the SAC will result in significant additional recreational pressure'. The site is included as a proposed site allocation in the local plan (Han40a) and therefore is assessed as part of the HRA. Therefore, given the site is located more than 7km from the SAC, and considering the findings of the Local Plan HRA, the proposals are unlikely to have an adverse effect on the integrity of the Wormley-Hoddesdonpark Woods SAC.
- 3.1.5 The site is located within a SSSI Impact Risk Zone in relation to Sherrardspark Wood SSSI which applies to any residential development of 100 units or more, or 50 units or more outside of existing settlements, indicating that there is potential for residential development at the site to adversely impact the SSSI. However, the condition of the SSSI is largely dependent on favourable management and the interest features are not particularly sensitive to indirect pressures from residential development. Furthermore, Sherrardspark Wood is being actively managed to encourage recreational use whilst supporting a wide range of wildlife. As such, it is unlikely that this SSSI, or other statutory designations in the local area, would pose a significant constraint to development of the site.

3.2 Non-statutory Designations

Description

- 3.2.1 The non-statutory designations of nature conservation interest that occur within the local area are shown on Plan 6146/ECO2. The nearest non-statutory designation is Twentieth Mile Bridge Allotments Local Wildlife Site (LWS) located approximately 0.8km to the south of the site which is designated as an important site for protected species. A further 19 Local Wildlife Sites are located within 2km of the site.

Evaluation

- 3.2.2 The site itself is not subject to any non-statutory nature conservation designations. All non-statutory designations in the surrounding area are well separated from the site by existing development and given the urban nature of the area, these designations are unlikely to be affected.

3.3 Priority Habitats, Ancient Woodland and Notable Trees

Description and Evaluation

- 3.3.1 No areas within or adjacent to the site were identified as Priority Habitat after a review of the MAGIC database and no veteran or ancient trees are recorded on-site or adjacent to the site. It is therefore unlikely that any such Priority Habitats or any notable or veteran trees will be affected by the proposals.

3.4 Summary

- 3.4.1 In summary, the site itself is not subject to any statutory or non-statutory ecological designations and it is unlikely that any such designations in the surrounding area will be significantly affected by the proposals.

4 Habitats and Ecological Features

4.1 Background Records

- 4.1.1 No specific records of any protected, rare or notable plant species from within or immediately adjacent to the site are included within the information returned from the Records Centre. A number of records of Bluebell *Hyacinthoides non-scripta*, which are protected from intentional picking, uprooting or destruction under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended), and the Priority Species Basil Thyme *Clinopodium acinos*, Annual Knawel *Scleranthus annuus*, Tower Mustard *Arabis glabra* and Cornflower *Centaurea cyanus* were returned from within the 2km search radius. The closest record of any of these species is a record for Bluebell located approximately 200m west of the site, dated 2020. No evidence for the presence of any of these species within the site was recorded during the survey work undertaken.

4.2 Overview

- 4.2.1 The habitats and ecological features present within the site are described below and evaluated in terms of whether they constitute an important ecological feature and their level of importance, taking into account the status of habitat types and the presence of rare plant communities or individual plant species of elevated interest. The likely effects of the proposals on the habitats and ecological features are then assessed. The value of habitats for the fauna they may support is considered separately in Chapter 5 below.

- 4.2.2 The following habitats/ecological features were identified within/adjacent to the site:

- Amenity Grassland;
- Amenity Planting;
- Hedgerows;
- Wooded Belt;
- Trees;
- Invasive Species; and
- Buildings and Hardstanding.

- 4.2.3 The locations of these habitat types and features are illustrated on Plan 6146/ECO3 and described in detail below.

4.3 Priority Habitats

- 4.3.1 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places duties on public bodies to have regard to the conservation of biodiversity in the exercise of their normal functions. In particular, Section 41 of the NERC Act requires the Secretary of State to publish a list of habitats which are of principal importance for conservation in England. This list is largely derived from the 'Priority Habitats' listed under the former UK Biodiversity Action Plan (BAP), which continue to be regarded as priority habitats under the subsequent country-level biodiversity strategies.

- 4.3.2 Of the habitats within the site, the hedgerows are considered to qualify as Priority Habitats and therefore constitute important ecological features. This is discussed further in the relevant habitat section below.

4.4 Amenity Grassland

Description

- 4.4.1 An area of amenity grassland is present at the north of the site which is in active use as a private residential garden. The grassland is regularly mown to a sward height of approximately 5cm. The grassland is dominated by grass species such as Annual Meadow-grass *Poa annua* and Cock's-foot *Dactylis glomerata*, in addition to herb species such as Daisy *Bellis perennis*, Dandelion *Taraxacum officinale* agg., Creeping Buttercup *Ranunculus repens*, White Clover *Trifolium repens*, Yarrow *Achillea millefolium*, Ribwort Plantain *Plantago lanceolata*, Green Alkanet *Pentaglottis sempervirens*, Herb Robert *Geranium robertianum*, Wood Anemone *Anemone nemorosa* and Spurge *Euphorbia* sp.
- 4.4.2 Additional areas of amenity grassland are present at the west of the site. These areas are shaded by a number of mature trees, forming a semi-enclosed canopy above. The grassland sward was managed to a sward height of approximately 5-10cm at time of survey in September 2021. At the time of a return visit by Aspect Ecology in June 2022 the sward height was considerably higher at approximately 1m, with a sign erected by the council noting the area was to be left to grow out in summer to encourage pollinators to use the area. The area is subject to heavy footfall, as evidenced by a number of informal paths through the grassland.

Evaluation

- 4.4.3 Overall, the amenity grassland supports a low diversity of common and widespread species and is subject to regular management within the garden and disturbance with the west of the site. As such, the amenity grassland does not constitute an important ecological feature and the loss of the grassland under the proposals is of negligible ecological significance.

4.5 Amenity Planting

Description

- 4.5.1 Within the north-eastern corner of the residential garden is an area of amenity planting comprising shrubs and young saplings of a number of native species including Hawthorn *Crataegus monogyna*, Dogwood *Cornus sanguinea*, Hazel *Corylus avellana*, Elder *Sambucus nigra*, Sycamore *Acer pseudoplatanus* and English Oak *Quercus robur* (see Photograph 3). The area is overgrown and also contains a number of other species such as Common Nettle *Urtica dioica*, Dock *Rumex* sp., Greater Periwinkle *Vinca major*, Hogweed *Heracleum sphondylium* and Bramble *Rubus fruticosus*. Grass cutting piles were also present at the time of the survey.
- 4.5.2 Other small areas of amenity planting including shrubs such as Guelder Rose *Viburnum opulus*, Common Broom *Cytisus scoparius*, *Pyracantha* sp. and *Cotoneaster* are present within the car park.

Evaluation

- 4.5.3 The amenity planting covers a small area and supports a low number of common and widespread botanical species, including native and non-native species. The amenity planting does not constitute an important ecological feature and the loss of the area under the proposals is of negligible ecological significance.

4.6 Hedgerows

Description

- 4.6.1 Five hedgerows are present within the site, and form the boundaries at the south, east and north of the site. Two additional standalone hedgerows are present in the centre of the site. The hedgerows are described in more detail in Table 4.1 below, and shown on Plan 6146/ECO3.

Table 4.1. Hedgerow descriptions.

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify#
H1	2.5m	1-1.5m	<u>Hawthorn</u> , <u>Blackthorn</u> , Sweet Chestnut, <u>Ash (y)</u> , <u>Hornbeam</u> , <u>Oak</u> , <u>Dog Rose</u> , Coralberry	5	Ivy, Bramble, <u>Wood Aven</u> s, Hedge Bindweed	Standard trees, bank	Gaps for access to car park, infrequently managed, young trees and shrubs, grassland at base as per adjacent amenity grassland	N
H2	>10m	4-5m	Pine, Hawthorn, <u>Spindle</u> , <u>Ash</u> , <u>Elm</u> , <u>Field Maple</u> , <u>Oak (y)</u> , <u>Wayfaring-tree</u> , <u>Guelder Rose</u> , <u>Field Rose</u> , <u>Dog Rose</u> , Coralberry, Cotoneaster	≥6	Yarrow, Ivy, Stinking Hellebore, Brome sp., Dead-nettle, Timothy,	<10% gaps, standard trees	Generally dense line of trees, unmanaged except for edges adjacent to car park.	N
H3	1.5m	1m	<u>Ash (y)</u> , Horse Chestnut, Sweet Chestnut, Pyracantha, Cotoneaster, Cherry Laurel	1	<u>Wood Aven</u> s, Ivy, Bramble, Ribwort Plantain, Black Horehound	Adjacent to woodland	Very gappy with areas of bare ground beneath, adjacent to wooden fence with woodland beyond, amenity planting	N
H4	>5-8m	1-2m	<u>Ash (sm)</u> , Hawthorn, Blackthorn, Willow, Scots Pine (y), Indian Lilac, Sweet Chestnut, Holly (y), <u>Wayfaring-tree</u> , <u>Guelder Rose</u> , <u>Dog Rose</u> , <u>Silver Birch (y)</u> , <u>Spindle</u> , <u>Cherry</u> , <u>Oak</u> , Hornbeam, Lime, Sycamore, <u>Field Maple</u> , Pyracantha, <u>Ribes sp.</u> , Cotoneaster	9	Black Horehound, White Dead-nettle, Ivy	<10% gaps, standard trees, connects to hedgerows	Shrubby hedgerow with standard trees, some management and brash/rubble piles present	Y
H5	>8m	3.5m	<u>Hawthorn</u> , <u>Dogwood</u> , <u>Wayfaring-tree</u> , <u>Cherry</u> , <u>Ash</u> , <u>Holly</u> , <u>Blackthorn</u> , <u>Silver Birch</u> , <u>Elm</u> , <u>Dog Rose</u> , Pyracantha, Staghorn Sumac	5	Ivy, Bramble, Traveller's Joy	Presence of wall adjacent to hedge, <10% gaps, standard trees	Outgrown and not frequently managed, 0.5m red brick wall and wet ditch adjacent in northern section	Y

Woody species (as listed under Schedule 3 of the Hedgerows Regulations 1997) and woodland ground flora species (as listed under Schedule 2 of the Hedgerows Regulations 1997) underlined, y = young, sm = semi-mature, m = mature, pv = possible veteran, B = bank, W = wall, br = bridleway, f/p = footpath, b/w = byway, (D) = dominant species

* estimated average number of woody species (as listed under Schedule 3 of the Hedgerows Regulations 1997) in any one 30m stretch

likely to qualify – as 'important' under the wildlife and landscape criteria of the Hedgerows Regulations 1997

Evaluation

- 4.6.2 Many of the hedgerows recorded within the site are relatively substantial and outgrown in nature, with the exception of H1 and H3, and contain a number of standard trees. From a preliminary appraisal, hedgerows H1 and H2 are species-rich¹¹ but are unlikely to qualify as ecologically 'important' under the Hedgerows Regulations 1997, based on the number of woody species and associated features. Hedgerows H4 and H5 are species-rich and are likely to qualify as ecologically 'important' under the Regulations. Hedgerow H3 is not species-rich and is unlikely to qualify as important under the Regulations.
- 4.6.3 All of the hedgerows except H3 within the site are likely to qualify as a Priority Habitat based on the standard definition¹², which includes all hedgerows (>20m long and <5m wide) consisting predominantly (≥80%) of at least one native woody species. It has been estimated that approximately 84% of countryside hedgerows in GB qualify as a Priority Habitat under this definition. On this basis, hedgerows H1, H2, H4 and H5 within the site constitute important ecological features, although given the relatively limited network present and the wider context, are only of importance at the local level.
- 4.6.4 The proposals incorporate the retention of the vast majority of hedgerow H1, as well as hedgerows H3, H4 and the section of H5 that runs along the northern boundary of the site. Hedgerow H2 will be entirely lost to the proposals. The loss of hedgerow H2, part of hedgerow H5 and a very small section of hedgerow H1 is of minor ecological significance. Hedgerow H2 is isolated from other ecological features being entirely surrounded by hardstanding, while the section of hedgerow H5 to be lost includes some non-native species and partly forms the curtilage of a residential property. The losses will be compensated through new native, species-rich hedgerow planting and extensive native shrub planting at the site boundaries. Retained hedgerows will be protected during the construction phase of the proposals as per the recommendations included at Chapter 6 below.

4.7 **Wooded Belt**

Description

- 4.7.1 A wooded belt is present at the north-eastern corner of the site, as shown on Plan 6146/ECO3. The wooded belt is infrequently managed and includes young to semi-mature Cherry *Prunus* sp., Ash *Fraxinus excelsior*, English Oak *Quercus robur*, Willow *Salix* sp. and Holly *Ilex aquifolium* within the canopy. The understorey and ground flora includes native and non-native scrub species, including Hawthorn *Crataegus monogyna*, Blackthorn *Prunus spinosa*, Dog-rose *Rosa canina*, Dogwood *Cornus sanguinea*, Portuguese Laurel *Prunus lusitanica* and *Pyracantha* sp., with Ivy *Hedera helix*. An adjacent off-site wet ditch is associated with the northern edge of the wooded belt (see Photograph 4).

Evaluation

- 4.7.2 The wooded belt comprises a small collection of trees and scrub at the boundary of a car park and includes occasional non-native species. The small area does not qualify as a Priority Habitat or important ecological feature. Nevertheless, this feature will be largely retained under the proposed development. The very small loss at the southern edge of the group is of negligible ecological significance and will be compensated through new native tree and shrub planting.

¹¹ i.e. five or more native woody species within a 30m length (or four or more in Northern England) – FEP Manual

¹² Based on: Biodiversity Reporting and Information Group (2011) 'UK Biodiversity Action Plan (BAP) Priority Habitat Descriptions', ed. Ant Maddock

4.8 Trees

Description

- 4.8.1 A number of trees were recorded within the site, largely associated with the on-site hedgerows and wooded belt. Standard trees within the hedgerows were noted to range from young to mature in age.
- 4.8.2 A number of mature trees located outside the hedgerows are present at the west of the site associated with the amenity grassland, including English Oak, Sessile Oak *Quercus petraea* and Elm *Ulmus* sp (see Photograph 1). In addition, scattered young to semi-mature trees are present within the car park planting including Wild Service *Sorbus torminalis*, Scots Pine *Pinus sylvestris*, Silver Birch *Betula pendula*, Lombardy Poplar *Populus nigra 'Italica'* and Hornbeam *Carpinus betulus*.

Evaluation

- 4.8.3 A number of the trees are mature in nature, however there are no ancient or veteran trees present on-site. The more mature trees are of ecological interest in their own right, albeit at present do not constitute important ecological features.
- 4.8.4 The mature trees at the west of the site and within hedgerows H1, H3 and H4 are to be fully retained under the proposals and as such, subject to recommended safeguards set out at Chapter 6 below, the majority of trees within the site will be retained and protected under the proposals, whilst new planting will combine with the existing trees to provide new opportunities for wildlife.

4.9 Invasive Species

Description

- 4.9.1 Variegated Yellow Archangel *Lamium galeobdolon subsp. argentatum* is present within the residential garden area at the north-west of the site. Variegated Yellow Archangel is listed under Schedule 9 Part II of the Wildlife and Countryside Act 1981 (as amended).
- 4.9.2 *Cotoneaster* species are also present within the site, associated with the areas of amenity planting within the car park and hedgerows H2, H3 and H4. Several *Cotoneaster* species are included within the Schedule 9 list, albeit it was not possible to distinguish whether the *Cotoneaster* species present include any of those listed.

Evaluation

- 4.9.3 Variegated Yellow Archangel (and potentially the *Cotoneaster* species) are listed under Schedule 9 Part II of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to cause to grow in the wild any plant listed on the schedule. Further discussion of this issue along with a number of recommendations for removing these species are included at Chapter 6.

4.10 Buildings and Hardstanding

Description

- 4.10.1 The site is dominated by hardstanding and buildings/garages. The site is in active use as the 'Campus East Lower Car Park', with the majority of the site comprising ground floor parking, and a separate upper floor parking area with rows of single storey ground floor garages

beneath (see Photograph 2). The hardstanding predominately comprises concrete and tarmac areas which are generally in good condition, albeit colonising vegetation is present within occasional cracks, including Chickweed *Stellaria media*, Liverwort *Marchantia* sp., Bitter-cress *Cardamine* sp., Annual Meadow-grass *Poa annua* and Herb-robert *Geranium robertianum*.

Evaluation

- 4.10.2 The buildings and hardstanding support a very limited range of common and widespread floral species and are inherently of negligible ecological value. As such, they do not form important ecological features and their removal under the proposals is of negligible ecological significance. Potential for the buildings to support faunal species such as roosting bats is discussed below in Chapter 5.

4.11 **Habitat Evaluation Summary**

- 4.11.1 On the basis of the above, hedgerows H1, H2, H4 and H5 within the site are considered to form important ecological features. Other habitats present within the site include a non-native hedgerow (H3), amenity grassland, amenity planting, a wooded belt, trees, invasive species, buildings and hardstanding, albeit these habitats do not form important ecological features.

5 Faunal Use of the Site

5.1 Overview

- 5.1.1 During the survey work, general observations were made of any faunal use of the site with specific attention paid to the potential presence of protected or notable species. Specific survey work was undertaken in respect of Badgers and bats, with the results described below.

5.2 Priority Species

- 5.2.1 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places duties on public bodies to have regard to the conservation of biodiversity in the exercise of their normal functions. In particular, Section 41 of the NERC Act requires the Secretary of State to publish a list of species which are of principal importance for conservation in England. This list is largely derived from the 'Priority Species' listed under the former UK Biodiversity Action Plan (BAP), which continue to be regarded as priority species under the subsequent country-level biodiversity strategies.

- 5.2.2 During the survey work undertaken, no Priority Species were recorded within the site.

5.3 Bats

- 5.3.1 **Legislation.** All British bats are classed as European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended) and are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). As such, both bats and their roosts (breeding sites and resting places) receive full protection under the legislation (see Appendix 6146/2 for detailed provisions). If proposed development work is likely to result in an offence a licence may need to be obtained from Natural England which would be subject to appropriate measures to safeguard bats. Given all bats are protected species, they are considered to represent important ecological features. A number of bat species are also considered S41 Priority Species.

- 5.3.2 **Background Records.** No specific records of bats from within or immediately adjacent to the site were returned from the desktop study. Information received from the LRC returned records of Common Pipistrelle *Pipistrellus pipistrellus*, Brown Long-Eared bat *Plecotus auritus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Barbastelle *Barbastella barbastellus*, Serotine *Eptesicus serotinus*, Noctule *Nyctalus noctula*, Daubenton's bat *Myotis daubentonii* and Natterer's bat *Myotis nattereri* within 2km of the site. The closest record is for Common Pipistrelle located 220m to the west of the site (dated 2011).

5.3.3 Survey Results

Visual Inspection Surveys

Buildings

- 5.3.4 A detailed visual inspection was undertaken of the building within the site, the results of which are summarised below. No evidence of roosting bats was recorded during the survey work undertaken.
- 5.3.5 Building B1 is a two-storey car park with ground floor parking, and a separate upper floor parking area with rows of single storey ground floor garages beneath. Of the 100 ground floor garages present within the site, 76 were subject to internal inspections where access

allowed, in June and August 2022. The ground floor garages are fronted by metal roller doors that have a small gap at the top, therefore providing potential access for roosting bats into the internal garage spaces. In addition, there are two small holes in the brickwork of garage numbers 1 and 2 which provide potential access for bats into the internal space.

- 5.3.6 The garages are of breezeblock construction with a number having a single wooden beam dropped below the ceiling. The garages were recorded to be damp, and evidence of water leaking through cracks in the ceiling was recorded during the inspection survey. A number of these garages are in semi-frequent use as storage facilities whilst the rest are vacant. Garages one and two have potential access points in the form of holes in the wall and are situated close to a substantial green corridor, and as such, were assessed as providing low potential for roosting bats. However, a thorough internal inspection was completed and there are no crevice spaces present where bats could roost. No evidence of bat occupation e.g. droppings, staining, feeding remains, etc., was recorded during the inspection survey. Therefore, based on the thorough inspection, no additional emergence/ re-entry survey work was required, in accordance with the guidance¹³. No evidence of bat roosting was recorded in association with any of the other garages which have negligible suitability for roosting bats.

Trees

- 5.3.7 A number of semi-mature and mature trees are present on site. The results of the tree assessment work undertaken at the site are illustrated on Plan 6146/ECO3 and summarised in Table 5.1 below:

¹³ Collins, J. (ed.) (2016) 'Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn).' Bat Conservation Trust

Table 5.1. Tree inspection results.

Tree No.	Species	Age	Potential Roost Features	Suitability
T10	Elm	Semi Mature	Lifted bark on branch	Low
T15	English Oak	Mature	Woodpecker hole and limb scar	High
T16	English Oak	Dead	Lifted bark with cracks	Low
T23	Sessile Oak	Mature	Limb scar	Moderate
T34	Lime	Semi Mature	Dense ivy	Low
T50	Corsican Pine	Mature	Dense ivy	Low
T58	Cherry	Semi Mature	Dense ivy	Low
T62	Ash	Mature	Several rot holes on main trunk and branches	High
T71	Oak	Mature	Split limb and dense ivy	Moderate
T74	Cherry	Semi Mature	Dense ivy	Low
T78	Aspen	Semi Mature	Dense ivy	Low
T80	Cherry	Semi Mature	Dense ivy	Low
T83	Balsam Poplar	Mature	Dense ivy	Low
T84	Balsam Poplar	Semi Mature	Dense ivy	Low
T94	Sweet Chestnut	Mature	Single cavity	Low
T95	Sweet Chestnut	Mature	Single limb scar	Low
T105	Laburnum	Dead	Dense ivy	Low
Ta	Field Maple	Semi Mature	Woodpecker hole and dense ivy	Moderate
Tb	Unknown	Semi Mature	Lifted bark	Low

Dusk and Dawn Surveys

Emergence / re-entry surveys (trees)

- 5.3.8 Trees T62 and Ta exhibit high suitability and moderate suitability for roosting bats respectively and will be lost under the proposals. These trees were therefore subject to further survey work in the form of dusk emergence and dawn re-entry surveys. The results of the dusk emergence and dawn re-entry surveys are summarised in Table 5.2 overleaf.

Table 5.2. Emergence / re-entry survey results.

Tree	Date	Sunset/ sunrise	Emergence/ re-entry	Summary of other activity
T62	02/08/2022 (Dusk)	Sunset: 20:48	None	Occasional passes by Common Pipistrelle and Soprano Pipistrelle.
	24/08/2022 (Dawn)	Sunrise: 06:00	None	Single pass from a Common Pipistrelle.
	08/09/2022 (Dusk)	Sunset: 19:32	None	Occasional passes by Common Pipistrelle and Soprano Pipistrelle. Single pass by <i>Nyctalus/Eptesicus</i> sp.
Ta	03/08/2022 (Dawn)	Sunrise: 05:26	None	Single pass from a Common Pipistrelle.
	23/08/2022 (Dusk)	Sunset: 20:08	None	Occasional passes by Common Pipistrelle and Soprano Pipistrelle, very occasional passes by <i>Nyctalus/Eptesicus</i> sp.

5.3.9 Evaluation and Assessment of Likely Effects

Roosting

Buildings

- 5.3.10 The majority of building B1 provides negligible suitability for roosting bats. Garage numbers 1 and 2 have slightly elevated suitability for roosting bats but a thorough internal inspection confirmed that no roosts are present. No evidence of use by roosting bats was recorded within any of the internal garage spaces. In addition, the majority of the garages are situated in the centre of hardstanding away from any green corridors and are subject to regular disturbance and lighting. The proposals are therefore not expected to impact roosting bats through building demolition and no further survey work or mitigation is required.

Trees

- 5.3.11 Numerous trees within the site have suitability to support roosting bats and trees T50, T58, T62, T105 and Ta will be lost to the proposals; however, no evidence to confirm roost presence was recorded during the survey work undertaken. Bats are however highly mobile and dynamic mammals, such that they could utilise these trees in the future. As such, precautionary safeguards are detailed at Chapter 6 to safeguard roosting bats. Subject to the implementation of these measures, it is considered that bats will be fully safeguarded under the proposals.

Foraging / Commuting

- 5.3.12 The on-site hedgerows, wooded belt and mature trees provide some suitable foraging and commuting habitat for bats, however these are small areas. The site is dominated by hardstanding, which is of negligible value for foraging bats, and the site is heavily impacted by lighting. Incidental recordings of bat activity from the emergence / re-entry surveys

recorded very low levels of activity within the site, restricted to common and widespread species. Given the urban location of the site and presence of largely unsuitable habitats, the site is considered to be of only site level value for foraging and commuting bats. The proposals incorporate the retention of the wooded belt and the majority of the hedgerows within the site, with only H2, a section of H5 and a very small part of H1 to be lost. The retention of boundary hedgerows and extensive new native scrub planting will ensure that connectivity across the site and with off-site habitat is retained under the proposals. Accordingly, subject to the implementation of the recommendations outlined at Chapter 6 below, along with other ecological enhancements such as the provision of integrated bat boxes, it is considered that the conservation status of local bat populations will be fully safeguarded under the scheme.

5.4 Badger

5.4.1 Legislation. Badger receive legislative protection under the Protection of Badgers Act 1992 (see Appendix 6146/2 for detailed provisions), and as such should be assessed as an important ecological feature. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain. It is the duty of planning authorities to consider the conservation and welfare impacts of development upon Badger and issue permissions accordingly.

5.4.2 Licences can be obtained from Natural England for development activities that would otherwise be unlawful under the legislation. Guidance on the types of activity that should be licensed is laid out in the relevant best practice guidance.^{14, 15}

5.4.3 Background Records. Records of Badger *Meles meles* were returned from the LRC located within the 1km grid square containing the site, however, no setts were recorded on-site or immediately adjacent to the site.

5.4.4 Survey Results and Evaluation. A single mammal path and push-through was recorded within H5 leading into the adjacent off-site residential garden, which may have been attributable to Badger. No other evidence of Badger was recorded during the survey work and the site is largely unsuitable for this species, being dominated by hardstanding and a building. Badgers are a highly mobile species and may utilise suitable off-site habitat in the surrounding area. As such, it is possible that Badgers will commute through the site on occasion, albeit are highly unlikely to be affected by the proposals. General precautionary safeguards are set out at Chapter 6, which will ensure that any Badgers, or other faunal species, are safeguarded should they enter the site during construction works.

5.5 Dormouse

5.5.1 Legislation: Dormouse is fully protected under the Wildlife and Countryside Act 1981 (as amended) and is a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). Such legislation affords protection to individuals of the species and their breeding sites and places of rest (see Appendix 6146/2 for detailed provisions). Dormouse is also a S41 Priority Species. On this basis, Dormouse is considered to form an important ecological feature.

5.5.2 Background Records: Several records of Dormice *Muscardinus avellanarius* were returned from the records centre within 2km of the site, the closest of which is within a 1km grid

¹⁴ English Nature (2002) 'Badgers and Development'

¹⁵ Natural England (2011) 'Badgers and Development: A Guide to Best Practice and Licensing', Interim Guidance Document

square containing the western half of the site (dated 1998), though this grid reference also contains a substantial portion of Sherrardspark Wood SSSI, within which Dormouse is known to be present and as such, the record is likely to have originated from here.

- 5.5.3 **Evaluation:** The on-site boundary hedgerows provide potentially suitable habitat for Dormouse to forage and shelter, all of which are to be retained under the proposals. However, the site is central to Welwyn Garden City, and the surrounding area is predominately urban with few direct corridors to areas of higher quality habitat for this species. Furthermore, the railway line to the east of the site acts as a substantial barrier to dispersal. As such, it is considered highly unlikely that Dormice are present within the site and this species is highly unlikely to be affected by the proposals.

5.6 Water Vole and Otter

- 5.6.1 **Legislation.** Water Vole and Otter are fully protected under the Wildlife and Countryside Act 1981 (as amended) and are also both S41 Priority Species. As such, these species are considered to represent important ecological features. The legislation affords protection to individuals of the species and their breeding sites and places of shelter. There is no provision under the Act for licensing what would otherwise be offences for the purpose of development. Such activities must be covered by the defence in the Act that permits otherwise illegal actions if they are the incidental result of a lawful operation and could not reasonably be avoided. Otter is also a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). Such legislation affords protection to individuals of the species and their breeding sites and places of rest. See Appendix 6146/2 for detailed provisions).

- 5.6.2 **Background Records.** No specific records of Water Vole or Otter within or adjacent to the site were returned from the desktop study. A number of records of Water Vole and Otter were returned from the 2km search area surrounding the site, with the closest specific record of Water Vole being located approximately 1.5km north of the site, and the closest record of Otter being located within the 1km grid square which at its closest point is approximately 0.5km north of the site.

- 5.6.3 **Survey Results and Evaluation.** The habitats within the site itself are generally unsuitable for Water Vole and Otter, largely comprising hardstanding and buildings. The adjacent off-site wet ditch associated with the northern boundary of the site is shallow, overgrown and heavily shaded such that it is unsuitable for both Water Vole and Otter. As such, Water Vole and Otter are considered likely absent from the site and will be unaffected by the proposals.

5.7 Other Mammals

- 5.7.1 **Legislation.** A number of other UK mammal species do not receive direct legislative protection relevant to development activities but may receive protection against acts of cruelty (e.g. under the Wild Mammals (Protection) Act 1996). In addition, a number of these mammal species are S41 Priority Species and should be assessed as important ecological features.

- 5.7.2 **Background Records.** No specific records of other mammals from within or adjacent to the site were returned from the desktop study. A number of records of Hedgehog *Erinaceus europaeus*, Red Squirrel *Sciurus vulgaris*, Brown Hare *Lepus europaeus*, Harvest Mouse *Micromys minutus* and Polecat *Mustela putorius* (Priority Species), as well as Water Shrew *Neomys fodiens*, Weasel *Mustela nivalis* and Stoat *Mustela erminea* were returned from the 2km search area around the site. The closest record of any of these species is for Hedgehog located approximately 600m to the south-west of the site.

- 5.7.3 **Survey Results and Evaluation.** No evidence of any other protected, rare or notable mammal species was recorded within the site, and at any rate the site provides poor habitat for the species returned from the desktop study. Other mammal species likely to utilise the site, such as Fox *Vulpes vulpes*, remain common in both a local and national context, and as mentioned above do not receive specific legislative protection in a development context. As such, these species are not a material planning consideration and the loss of potential opportunities for these species to the proposals is of negligible significance.
- 5.7.4 The desktop study returned background records of Hedgehog within the surrounding area. Hedgehog is a Priority Species and the site offers potential opportunities for this species, particularly in the form of hedgerows and the wooded belt, although the vast majority of the site comprises hardstanding and a building. The discrete areas of suitable habitat are unlikely to be of importance in a local context, and Hedgehog is considered to be of importance at a site level only. Subject to the implementation of general mammal safeguards during construction (as detailed in Chapter 6 below) it is anticipated that Hedgehog, and other small mammals, will be fully safeguarded under the proposals.

5.8 Amphibians

- 5.8.1 **Legislation.** All British amphibian species receive a degree of protection under the Wildlife and Countryside Act 1981 (as amended). Great Crested Newt *Triturus cristatus* is protected under the Act and is also classed as a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). As such, both Great Crested Newt and habitats utilised by this species are afforded protection (see Appendix 6146/2 for detailed provisions). Great Crested Newt is also a S41 Priority Species, as are Common Toad *Bufo bufo*, Natterjack Toad *Epidalea calamita*, and Pool Frog *Pelophylax lessonae*. As such, these species should be assessed as important ecological features.
- 5.8.2 **Background Records.** No specific records of Great Crested Newt from within or adjacent to the site were returned from the desktop study. A number of records of Great Crested Newt, Common Toad and Alpine Newt *Ichthyosaura alpestris* were returned from the search area surrounding the site, with the closest record of Great Crested Newt located approximately 0.9km to the west of the site (dated 1986-2016).
- 5.8.3 **Evaluation.** No waterbodies are present on-site, nor are any identified from OS mapping as being within 250m of the site. The site itself is dominated by sub-optimal terrestrial habitat in the form of hardstanding, with small, isolated areas of managed amenity grass and hedgerows. It is therefore unlikely that amphibians, including Great Crested Newt, would utilise the site and therefore be adversely impacted by the proposals.

5.9 Reptiles

- 5.9.1 **Legislation.** All six species of British reptile are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), which protects individuals against intentional killing or injury. Sand Lizard *Lacerta agilis* and Smooth Snake *Coronella austriaca* receive additional protection under the Conservation of Habitats and Species Regulations 2017 (as amended); refer to Appendix 6146/2 for detailed provisions. All six reptile species are also S41 Priority Species. As such, all reptile species should be assessed as important ecological features.
- 5.9.2 **Background Records.** Information returned from the LRC returned records for Slow-worm *Anguis fragilis*, Grass Snake *Natrix natrix* and Common Lizard *Zootoca vivipara* from within a 10km x 10km OS grid square, within which the site falls, albeit more specific information was not available that would allow the precise location of these records to be determined

in relation to the site. The next closest records are for Slow-worm, located approximately 80m north of the site (dated 2001).

- 5.9.3 Survey Results and Evaluation.** The residential garden in the north-west of the site comprises an area of short-sward amenity grassland, in addition to native planting. Limited opportunities are present within this area, in the form of the overgrown native planting, in addition to small crass cutting piles and refugia tins, which had been deployed by the homeowner. Evidence, in the form of relatively recent photos provided by the homeowner, confirms that Slow-worm is present within the residential garden. Based on the very small area of habitat available it is however unlikely that the site supports a large population of this species. Nevertheless, suitable mitigation will be required during site clearance and it is recommended that a destructive search of discrete areas of suitable habitat is undertaken in advance of any vegetation clearance works, in order to safeguard any Slow-worms that may be present, as set out within Chapter 6 below. The remainder of the site provides negligible opportunities for this species.

5.10 Birds

- 5.10.1 Legislation.** All wild birds and their nests receive protection under Section 1 of the Wildlife and Countryside Act 1981 (as amended) in respect of killing and injury, and their nests, whilst being built or in use, cannot be taken, damaged or destroyed. Species included on Schedule 1 of the Act receive greater protection and are subject to special penalties (see Appendix 6146/2 for detailed provisions).
- 5.10.2 Conservation Status.** The conservation importance of British bird species is categorised based on a number of criteria including the level of threat to a species' population status¹⁶. Species are listed as Green, Amber or Red. Red Listed species are considered to be of the highest conservation concern being either globally threatened and or experiencing a high/rapid level of population decline (>50% over the past 25 years). A number of birds are also S41 Priority Species. Red and Amber listed species and priority species should be assessed as important ecological features.
- 5.10.3 Background Records.** Information from the data search included numerous records for bird species in the vicinity of the site, including the Red Listed species Skylark *Alauda arvensis*, House Sparrow *Passer domesticus*, Tree Sparrow *Passer montanus*, Fieldfare *Turdus pilaris*, Willow Tit *Poecile montanus*, Yellowhammer *Emberiza citrinella*, Corn Bunting *Emberiza calandra* and Yellow Wagtail *Motacilla flava* which are also all Priority Species. None of the records originate from within the site itself. The closest record to the site of any bird species is that of a Red Kite *Milvus milvus*, located approximately 80m north of the site (dated 2018).
- 5.10.4 Survey Results.** Several species of bird were observed within the site during the Phase 1 survey including Wood Pigeon *Columba palumbus* and Magpie *Pica pica*.
- 5.10.5 Evaluation.** The birds recorded at the site are not listed as having any special conservation status. The site is dominated by hardstanding and is located with the centre of Welwyn Garden City, therefore bird species present are likely to be those typical of urban locations. The habitats present on-site are common in the surrounding area and there is no evidence to suggest the site is of elevated value at a local level for birds. The proposals will result in the loss of sections of hedgerow and a number of mature trees and this could potentially affect any nesting birds that may be present at the time of works. Accordingly, a number of

¹⁶ Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) 'Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man' British Birds 108, pp.708-746

safeguards in respect of nesting birds are proposed, as detailed in Chapter 6 below. In the long-term, new nesting opportunities will be available for birds as described in Chapter 6 below.

5.11 Invertebrates

5.11.1 Legislation. A number of invertebrate species are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). In addition, Large Blue Butterfly *Maculinea arion*, Fisher's Estuarine Moth *Gortyna borellii lunata* and Lesser Whirlpool Ram's-horn Snail *Anisus vorticulus* receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended); refer to Appendix 6146/2 for detailed provisions. A number of invertebrates are also S41 Priority Species. Where such species are present, they should be assessed as important ecological features.

5.11.2 Background Records. No specific records of invertebrates were returned from within or adjacent to the site. A number of Priority Species invertebrate were returned from the LRC within a 2km radius of the site, including but not limited to Cinnabar *Tyria jacobaeae*, Garden Tiger *Arctia caja*, Purple Emperor *Apatura iris*, Small Heath *Coenonympha pamphilus*, Wall *Lasiommata megera*, White-letter Hairstreak *Satyrus w-album*, Dot Moth *Melanchra persicariae*, Ghost Moth *Hepialus humuli*, Mottled Rustic *Caradrina morpheus*, Lackey *Malacosoma neustria*, Pretty Chalk Carpet *Melantheria procellata* and White Ermine *Spilosoma lubricipeda*. The closest precise record is for a White-letter Hairstreak located approximately 850m to the north-west of the site.

5.11.3 Survey Results and Evaluation. No evidence for the presence of any protected, rare or notable invertebrate species was recorded within the site. The site is dominated by buildings, hardstanding and regularly managed amenity planting, which are likely to support only a limited diversity of invertebrates. The site contains few micro-habitats that would typically indicate elevated potential for invertebrates¹⁷, such as a variable topography with areas of vertical exposed soil, areas of species-rich semi-natural vegetation; variable vegetation structure with frequent patches of tussocks combined with short turf; free-draining light soils; walls with friable mortar or fibrous dung. Accordingly, given the habitat composition of the site and lack of adjacent sites designated for significant invertebrate interest, it is unlikely that the proposals will result in significant harm to any protected, rare or notable invertebrate populations, and the site is highly unlikely to support an important invertebrate assemblage.

5.12 Summary

5.12.1 On the basis of the above, a summary of the evaluation of fauna is provided below:

Table 5.2. Evaluation summary of fauna forming important ecological features.

Species / Group	Supported by or associated with the site	Level of Importance
Bats – Roosting	Likely absent	N/A
Bats – Foraging / Commuting	Confirmed presence on site	Site
Badger	Likely absent	N/A
Dormouse	Likely absent	N/A
Water Vole and Otter	Likely absent	N/A

¹⁷ Natural England (2010) 'Higher Level Stewardship – Farm Environment Plan (FEP) Manual', 3rd Edition

Species / Group	Supported by or associated with the site	Level of Importance
Reptiles	Confirmed presence on site	Site - Local
Birds	Confirmed presence on site and suitable nesting habitat	Local

5.12.2 Other fauna which may be supported by the site include non-priority species of mammals and invertebrates. However, these species do not form important ecological features.

6 Mitigation Measures and Biodiversity Net Gains

6.1 Mitigation

- 6.1.1 Based on the habitats, ecological features and associated fauna identified within / adjacent to the site, it is proposed that the following mitigation measures (**MM1 – 8**) are implemented under the proposals. Further, detailed mitigation strategies or method statements can be secured via suitably-worded planning conditions, as recommended by relevant best practice guidance (BS 42020:2019).

Hedgerows and Trees

- 6.1.2 **MM1 – Hedgerow and Tree Protection.** All hedgerows and trees to be retained within the proposed development shall be protected during construction in line with standard arboriculturalist best practice (BS5837:2012) or as otherwise directed by a suitably competent arboriculturalist. This will involve the use of protective fencing or other methods appropriate to safeguard the root protection areas of retained trees / hedgerows.

Bats

- 6.1.3 **MM2 – Felling of Trees Supporting Bat Roosting Potential.** Numerous on-site trees have bat roosting potential. Although no bat roosts were confirmed present during specific presence/absence surveys, the use of roosting features by bats can be sporadic and transitory, such that potential roosting features could be utilised in the future. Furthermore, new roosting features could develop (e.g. as a result of wind damage and woodpecker activity within trees). As such, although current information indicates there will be no loss of bat roosts in trees, it is necessary to adopt a precautionary approach to ensure bats are safeguarded during tree felling works. It is therefore recommended that all trees with low, moderate or high suitability to support roosting bats that require felling are subject to a soft-felling method. This would involve slowly lowering and cushioning any limbs and tree sections that exhibit features (such as peeling bark, split limbs, etc.) considered potentially suitable for bats, thereby reducing the impact on these tree sections as they are brought to the ground.
- 6.1.4 If any evidence for the presence of roosting bats is recorded, works on that tree will be suspended and consideration will be given to the need to undertake works under a European Protected Species (EPS) development licence, and a licence application will be made to Natural England as required.
- 6.1.5 **MM3 – Sensitive Lighting.** Light-spill onto retained and newly created habitat, in particular the retained hedgerows and wooded belt, will be minimised in accordance with good practice guidance¹⁸ to reduce potential impacts on light-sensitive bats (and other nocturnal fauna). This may be achieved through the implementation of a sensitively designed lighting strategy, with consideration given to the following key factors:
- **Light exclusion zones** – ideally no lighting should be used in areas likely to be used by bats. Light exclusion zones or ‘dark buffers’ may be used to provide interconnected areas free of artificial illumination to allow bats to move around the site;

¹⁸ Bat Conservation Trust and Institute of Lighting Professionals (2018) ‘Guidance Note 08/18: Bats and artificial lighting in the UK’; Stone, E.L. (2013) ‘Bats and lighting: Overview of current evidence and mitigation guidance.’; ILP (2011) ‘Guidance notes for the reduction of obtrusive light’ Institution of Lighting Professionals, GN01:2011.

- **Appropriate luminaire specifications** – consideration should be given to the type of luminaires used, in particular luminaries should lack UV elements and metal halide and fluorescent sources should be avoided in preference for LED luminaries. A warm white spectrum (ideally <2,700K) should be adopted to reduce the blue light component;
- **Light barriers / screening** – new planting (e.g. hedgerows and trees) or fences, walls and buildings can be strategically positioned to reduce light spill;
- **Spacing and height of lighting units** – increasing spacing between lighting units will minimise the area illuminated and allow bats to fly in the dark refuges between lights. Reducing the height of lighting will also help decrease the volume of illuminated space and give bats a chance to fly over lighting units (providing the light does not spill above the vertical plane). Low level lighting options should be considered for any parking areas and pedestrian / cycle routes, e.g. bollard lighting, handrail lighting or LED footpath lighting;
- **Light intensity** – light intensity (i.e. lux levels) should be kept as low as possible to reduce the overall amount and spread of illumination;
- **Directionality** – to avoid light spill lighting should be directed only to where it is needed. Particular attention should be paid to avoid the upward spread of light so as to minimise trespass and sky glow;
- **Dimming and part-night lighting** – lighting control management systems can be used, which involves switching off/dimming lights for periods during the night, for example when human activity is generally low (e.g. 12.30 – 5.30am). The use of such control systems may be particularly beneficial during the active bat season (April to October). Motion sensors can also be used to limit the time lighting is operational.

Badger

6.1.6 **MM4 – Badger Construction Safeguards.** In order to safeguard Badger should they enter the site during construction works, the following measures will be implemented:

- Any trenches or excavations within the site that are to be left open overnight will be provided with a means of escape should a Badger enter. This could simply be in the form of a gently graded ramp or roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water;
- Any temporarily exposed open pipes (>150mm outside diameter) should be blanked off at the end of each working day so as to prevent Badgers gaining access as may happen when contractors are off-site;
- Any trenches/pits will be inspected each morning to ensure no Badgers become trapped overnight. Should a Badger become trapped in a trench it will likely attempt to dig itself into the side of the trench, forming a temporary sett. Should a trapped Badger be encountered a suitably qualified ecologist will be contacted immediately for further advice;
- The storage of topsoil or other 'soft' building materials in the site will be given careful consideration. Badgers will readily adopt such mounds as setts. So as to avoid the adoption of any mounds, these will be kept to a minimum and any essential mounds subject to daily inspections with consideration given to temporarily fencing any such mounds to exclude Badgers;

- The storage of any chemicals at the site will be contained in such a way that they cannot be accessed or knocked over by any roaming Badgers;
- Fires will only be lit in secure compounds away from areas of Badger activity and not allowed to remain lit during the night; and
- Unsecured food and litter will not be left within the working area overnight.

Hedgehogs

6.1.7 **MM5 – Hedgehog Safeguards.** In order to safeguard Hedgehogs and other small mammals should they enter the site during construction works, the following measures will be implemented:

- A watching brief should be maintained for Hedgehog and other small mammals throughout any clearance works;
- Any piles of material already present on site, particularly vegetation/leaves, etc. and any areas of dense scrub or hedgerows, shall be dismantled/removed by hand and checked for Hedgehog prior to the use of any machinery/disposal;
- Any material to be disposed of by burning, particularly waste from vegetation clearance and tree works, should not be left piled on site for more than 24 hours in order to minimise the risk of Hedgehogs occupying the pile. If this cannot be avoided, material should be stored within a container such as a skip to prevent animals from gaining access. Any material which has been stored on the ground overnight should be moved prior to burning to allow a thorough check for any animals which may have been occupying the pile;
- In the event that an injured Hedgehog is found, the animal should be wrapped carefully in a towel, the British Hedgehog Preservation Society (BHPS) phoned (01584 890 801) and the Hedgehog taken to a local vet immediately.

Reptiles

6.1.8 **MM6 – Destructive Search.** Given the evidence provided of Slow-worm on-site, a destructive search of discrete areas within the residential garden at the north-west of the site is proposed. The destructive search will involve cutting the suitable habitat to a short height (~15cm) so as to encourage reptiles to disperse to suitable areas of retained/nearby habitat, whilst also allowing for a fingertip search of the area. This exercise should be carried out under the supervision of a competent ecologist during the active reptile season where practicable (generally March/April to September/October, depending on prevailing weather). Any potential refuge features, e.g. reptile tins, heavy logs, grass clipping and brash piles, will be fingertip-searched by an ecologist prior to being carefully disassembled. Any reptiles encountered during the destructive search will be carefully rescued by the supervising ecologist and relocated to suitable nearby habitat.

Nesting Birds

6.1.9 **MM7 – Timing of Works.** To avoid a potential offence under the relevant legislation, no clearance of suitable vegetation should be undertaken during the bird-nesting season (1st March to 31st August inclusive). If this is not practicable, any potential nesting habitat to be removed should first be checked by a competent ecologist in order to determine the location of any active nests. Any active nests identified would then need to be cordoned off (minimum 5m buffer) and protected until the end of the nesting season or until the birds

have fledged. These checking surveys would need to be carried out no more than three days in advance of vegetation clearance.

Invasive Species

- 6.1.10 **MM8 – Invasive Species Safeguards.** Cotoneaster and Variegated Yellow Archangel, which are listed on Schedule 9 Part II of the Wildlife and Countryside Act 1981, were recorded within the site. It is an offence to cause to grow in the wild, any plant listed on the schedule. As such, all relevant precautions should be taken when carrying out actions that could potentially spread these plants. The government has set out guidance on what can be considered ‘causing to grow in the wild’ within a response to the Schedule 9 review which states:

“We would expect that where plants listed in Schedule 9 are grown in private gardens, amenity areas etc., reasonable measures will be taken to confine them to the cultivated area so as to prevent their spreading to the wider environment and beyond the landowner’s control. It is our view that any failure to do so, which in turn results in the plant spreading to the wild, could be considered as ‘causing to grow in the wild’ and as such would constitute an offence...Additionally, negligent or reckless behaviour such as inappropriate disposal of garden waste, where this results in Schedule 9 species becoming established in the wild would also constitute an offence.”

- 6.1.11 As such, it is recommended that appropriate safeguards be put in place to prevent the spread of the Schedule 9 species during the proposed development works. Such measures would likely involve herbicide application and/or excavation and removal of any material within the site itself (which should then be disposed of appropriately to prevent colonisation of off-site areas).

6.2 Biodiversity Net Gains

- 6.2.1 The National Planning Policy Framework (NPPF) encourages new developments to maximise the opportunities for biodiversity through incorporation of enhancement measures. The proposals present the opportunity to deliver ecological enhancements at the site for the benefit of local biodiversity, thereby making a positive contribution towards the broad objectives of national conservation priorities and the local Biodiversity Action Plan (BAP). The recommendations and enhancements summarised below are considered appropriate given the context of the site and the scale and nature of the proposals. Through implementation of the following ecological enhancements (**EE1 – EE6**), the opportunity exists for the proposals to deliver a number of biodiversity net gains at the site.

Habitat Creation

- 6.2.2 **EE1 – New Planting.** Areas of native scrub planting are proposed at the site boundaries which will provide enhanced connectivity for wildlife across the site and with the local area. Species planting will include fruit and nut bearing species which would provide additional food for wildlife, such as Hawthorn, Hazel and Dogwood. New native hedgerow planting is also proposed at the site entrance and tree planting will include native species such as Silver Birch and Field Maple *Acer campestre*. Where non-native species are proposed, these will include species of value to wildlife, such as varieties listed on the RHS’ ‘Plants for Pollinators’ database, providing a nectar source for bees and other pollinating insects.

Bats

- 6.2.3 **EE2 - Bat Boxes.** A number of bat boxes will be incorporated within the proposed development. The provision of bat boxes will provide new roosting opportunities for bats in the area, such as Soprano Pipistrelle, a national Priority Species recorded on-site. So as to maximise their potential use, the bat boxes should ideally be situated on suitable retained trees, erected as high up as possible and sited in sheltered wind-free areas that are exposed to the sun for part of the day, facing a south-east, south or south-westerly direction. In addition, where architectural design allows, a number of integrated bat boxes / roost features should be incorporated into a proportion of the new build. The precise number and locations of boxes / roost features should be determined by a competent ecologist, post-planning once the relevant final development design details have been approved.

Hedgehog

- 6.2.4 **EE3 – Hedgehog Nest Domes.** It is recommended that Hedgehog nest domes be installed within sheltered areas, such as the existing or newly created hedgerows to provide suitable nesting and hibernation sites for this species. The Hedgehog nest domes should be positioned out of direct sunlight, in areas of dense vegetation.

Birds

- 6.2.5 **EE4 - Bird Boxes.** A number of bird nesting boxes are to be incorporated within the proposed development, thereby increasing nesting opportunities for birds at the site. Ideally, the bird boxes will have greater potential for use if sited on suitable, retained trees, situated as high up as possible. The precise number and locations of boxes should be determined by a competent ecologist, post-planning once the relevant final development design details have been approved.

Invertebrates

- 6.2.6 **EE5 – Habitat Piles.** A proportion of any deadwood arising from vegetation clearance works should be retained within the site in a number of wood piles located within areas of new planting, or areas of wildflower grassland in order to provide potential habitat opportunities for invertebrate species, which in turn could provide a prey source for a range of other wildlife. In addition, the provision and management of new native landscape planting will likely provide additional opportunities for invertebrates at the site in the long term.
- 6.2.7 **EE6 – Bee Bricks.** It is recommended that a number of bee bricks be incorporated within the proposed development thereby increasing nesting opportunities for declining populations of non-swarming solitary bee populations. Ideally, bee bricks should be located within suitable south-facing walls (where architectural design allows), located at least 1m off the ground. The bricks should be unobstructed by vegetation, though within close vicinity of nectar and pollen sources.

7 Conclusions

- 7.1.1 Aspect Ecology has carried out an Ecological Appraisal of the proposed development at Campus East, Welwyn Garden City, based on the results of a desktop study, Phase 1 habitat survey and detailed protected species surveys.
- 7.1.2 The available information confirms that no statutory or non-statutory nature conservation designations are present within or adjacent to the site, and none of the designations within the surrounding area are likely to be adversely affected by the proposals.
- 7.1.3 The Phase 1 habitat survey has established that the site is dominated by habitats not considered to be of ecological importance. The proposals have retained the majority of features of greatest relative value, such as hedgerows and trees, whilst small losses will be compensated for through new landscape planting and habitat creation.
- 7.1.4 The habitats within the site have the potential to support several protected species, including species protected under both national and European legislation. Accordingly, a number of mitigation measures have been proposed to minimise the risk of harm to protected species, with compensatory measures proposed, where appropriate, in order to maintain the conservation status of local populations.
- 7.1.5 In conclusion, the proposals have sought to minimise impacts and subject to the implementation of appropriate avoidance, mitigation and compensation measures, it is considered unlikely that the proposals will result in significant harm to biodiversity. On the contrary, the opportunity exists to provide a number of biodiversity net gains as part of the proposals.

Plan 6146/ECO1:

Site Location



Key:

Site Location

aspect ecology

Aspect Ecology Limited West Court Hardwick Business Park
Noral Way Banbury Oxfordshire OX16 2AF
01295 279721 info@aspect.ecology.com www.aspect.ecology.com

Campus East, Welwyn Garden
City
Site Location

6146/ECO1

A/BG

May 2022

PROJECT

TITLE

DRAWING NO.

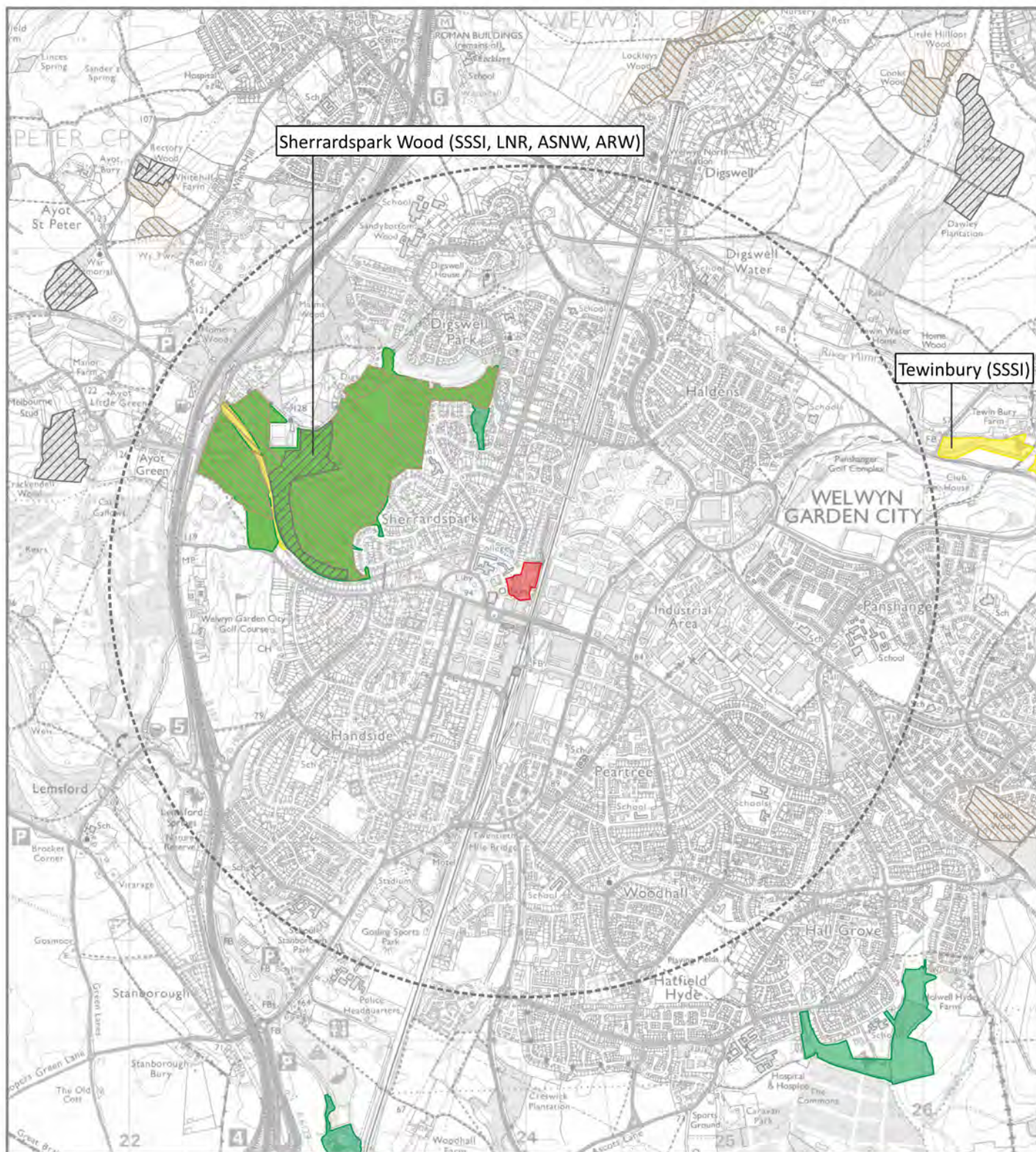
REV

DATE



Plan 6146/ECO2:

Ecological Designations



Key:

- Site Location
- 2km Study Area
- Sites of Special Scientific Interest (SSSI)
- Local Nature Reserve (LNR)
- Ancient Replanted Woodland (ARW)
- Ancient Semi Natural Woodland (ASNW)

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Campus East, Welwyn Garden City
Ecological Designations

6146/ECO2

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May 2022

PROJECT

TITLE

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DATE



Plan 6146/ECO3:

Habitats and Ecological Features



- Key:
- Site Boundary
 - Amenity Grassland
 - Wooded Belt
 - Building
 - Amenity Planting
 - Hardstanding
 - Hedgerow
 - Wet Ditch
 - Tree with Negligible Bat Roosting Potential
 - Tree with High Bat Roost Potential
 - Tree with Moderate Bat Roost Potential
 - Tree with Low Bat Roost Potential
 - Variegated Yellow Archangel



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Campus East, Welwyn Garden City	PROJECT
Habitats and Ecological Features	TITLE
6146/ECO3	DRAWING NO.
B/BG/EG	REV
September 2022	DATE



Photographs

Photograph 1 : Amenity Grassland and Mature Trees



Photograph 2 - Building B1



Photograph 3 : Amenity Planting within Residential Garden



Photograph 4 : Off-site Wet Ditch



Appendix 6146/1:

Evaluation Methodology

Evaluation Methodology

1. The evaluation of ecological features and resources is based on professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described by the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018)¹.

Importance of Ecological Features

2. Ecological features within the site/study area have been evaluated in terms of whether they qualify as 'important ecological features'. In this regard, CIEEM guidance states that *"it is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable"*.
3. Various characteristics contribute to the importance of ecological features, including:
 - Naturalness;
 - Animal or plant species, sub-species or varieties that are rare or uncommon, either internationally, nationally or more locally, including those that may be seasonally transient;
 - Ecosystems and their component parts, which provide the habitats required by important species, populations and/or assemblages;
 - Endemic species or locally distinct sub-populations of a species;
 - Habitat diversity;
 - Habitat connectivity and/or synergistic associations;
 - Habitats and species in decline;
 - Rich assemblages of plants and animals;
 - Large populations of species or concentrations of species considered uncommon or threatened in a wider context;
 - Plant communities (and their associated animals) that are considered to be typical of valued natural/semi-natural vegetation types, including examples of naturally species-poor communities; and
 - Species on the edge of their range, particularly where their distribution is changing as a result of global trends and climate change.
4. As an objective starting point for identifying important ecological features, European, national and local governments have identified sites, habitats and species which form a key focus for biodiversity conservation in the UK, supported by policy and legislation. These are summarised by CIEEM guidance as follows:

Designated Sites

- Statutory sites designated or classified under international conventions or European legislation, for example World Heritage Sites, Biosphere Reserves, Wetlands of International Importance (Ramsar sites), Special Areas of Conservation (SAC), Special Protection Areas (SPA);

¹ CIEEM (2018) 'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine', Chartered Institute of Ecology and Environmental Management, Winchester

- Statutory sites designated under national legislation, for example Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR);
- Locally designated wildlife sites, e.g. Local Wildlife Sites (LWS).

Biodiversity Lists

- Habitats and species of principal importance for the conservation of biodiversity in England and Wales (largely drawn from UK BAP priority habitats and priority species), often referred to simply as Priority Habitats / Species;
- Local BAP priority species and habitats.

Red Listed, Rare, Legally Protected Species

- Species of conservation concern, Red Data Book (RDB) species;
- Birds of Conservation Concern;
- Nationally rare and nationally scarce species;
- Legally protected species.

5. In addition to this list, other features may be considered to be of importance on the basis of local rarity, where they enable effective conservation of other important features, or play a key functional role in the landscape.

Assigning Level of Importance

6. The importance of an ecological feature should then be considered within a defined geographical context. Based on CIEEM guidance, the following frame of reference is used:
 - International (European);
 - National;
 - Regional;
 - County;
 - District;
 - Local (e.g. Parish or Neighbourhood);
 - Site (not of importance beyond the immediate context of the site).
7. Features of 'local' importance are those considered to be below a district level of importance, but are considered to appreciably enrich the nature conservation resource or are of elevated importance beyond the context of the site.
8. Where features are identified as 'important' based on the list of key sites, habitats and species set out above, but are very limited in extent or quality (in terms of habitat resource or species population) and do not appreciably contribute to the biodiversity interest beyond the context of the site, they are considered to be of 'site' importance.
9. In terms of assigning the level of importance, the following considerations are relevant:

Designated Sites

10. For designated sites, importance should reflect the geographical context of the designation (e.g. SAC/SPA/Ramsar sites are designated at the international level whereas SSSIs are designated at the national level). Consideration should be given to multiple designations as appropriate (where an area is subject to differing levels of nature conservation designations).

Habitats

11. In certain cases, the value of a habitat can be measured against known selection criteria, e.g. SAC selection criteria, 'Guidelines for the selection of biological SSSIs' and the Hedgerows Regulations 1997. However, for the majority of commonly encountered sites, the most relevant habitat evaluation will be at a more localised level and based on relevant factors such as antiquity, size, species-diversity, potential, naturalness, rarity, fragility and typicalness (Ratcliffe, 1977). The ability to restore or re-create the habitat is also an important consideration, for example in the case of ancient woodland.
12. Whether habitats are listed as priorities for conservation at a national level in accordance with Sections 41 and 42 of the Natural Environment and Rural Communities Act (NERC) 2006, so called 'Habitats of Principal Importance' or 'Priority Habitats', or within regional or local Biodiversity Action Plans (BAPs) is also relevant, albeit the listing of a particular habitat under a BAP does not in itself imply any specific level of importance.
13. Habitat inventories (such as habitat mapping on the MAGIC database) or information relating to the status of particular habitats within a district, county or region can also assist in determining the appropriate scale at which a habitat is of importance.

Species

14. Deciding the importance of species populations should make use of existing criteria where available. For example, there are established criteria for defining nationally and internationally important populations of waterfowl. The scale within which importance is determined could also relate to a particular population, e.g. the breeding population of common toads within a suite of ponds or an otter population within a catchment.
15. When determining the importance of a species population, contextual information about distribution and abundance is fundamental, including trends based on historical records. For example, a species could be considered particularly important if it is rare and its population is in decline. With respect to rarity, this can apply across the geographic frame of reference and particular regard is given to populations where the UK holds a large or significant proportion of the international population of a species.
16. Whether species are listed as priorities for conservation at a national level in accordance with Sections 41 and 42 of the Natural Environment and Rural Communities Act (NERC) 2006, so called 'Species of Principal Importance' or 'Priority Species', or within regional or local Biodiversity Action Plans (BAPs) is also relevant, albeit the listing of a particular species under a BAP does not in itself imply any specific level of importance.
17. Species populations should also be considered in terms of the potential zone of influence of the proposals, i.e. if the entire species population within the site and surrounding area were to be affected by the proposed development, would this be of significance at a local, district, county or wider scale? This should also consider the foraging and territory ranges of individual species (e.g. bats roosting some distance from site may forage within site whereas other species such as invertebrates may be more sedentary).

Appendix 6146/2:

Legislation Summary

LEGISLATION SUMMARY

1. In England and Wales primary legislation is made by the UK Parliament, and in Scotland by the Scottish Parliament, in the form of Acts. The main piece of legislation relating to nature conservation in the UK is the Wildlife and Countryside Act 1981 (as amended).
2. Acts of Parliament confer powers on Ministers to make more detailed orders, rules or regulations by means of secondary legislation in the form of statutory instruments. Statutory instruments are used to provide the necessary detail that would be too complex to include in an Act itself¹. The provisions of an Act of Parliament can also be enforced, amended or updated by secondary legislation.
3. In summary, the key pieces of legislation relating to nature conservation in the UK are:
 - Wildlife and Countryside Act 1981 (as amended)
 - Protection of Badgers Act 1992
 - Hedgerows Regulations 1997
 - Countryside and Rights of Way (CROW) Act for England and Wales 2000
 - Natural Environment and Rural Communities Act 2006
 - Conservation of Habitats and Species Regulations 2017
4. A brief summary of the relevant legislation is provided below. The original Acts and instruments should be referred to for the full and most up to date text of the legislation.
5. **Wildlife and Countryside Act 1981 (as amended)**. The WCA Act provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs) identified for their flora, fauna, geological or physiographical features. The Act contains strict measures for the protection and management of SSSIs.
6. The Act also refers to the treatment of UK wildlife including protected species listed under Schedules 1 (birds), 5 (mammals, herpetofauna, fish, invertebrates) and 8 (plants).
7. Under Section 1(1) of the Act, all wild birds are protected such that it is an offence to intentionally:
 - Kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird whilst in use* or being built;
 - Take or destroy an egg of any wild bird.

* The nests of birds that re-use their nests as listed under Schedule ZA1, e.g. Golden Eagle, are protected against taking, damage or destruction irrespective of whether they are in use or not.
8. Offences in respect of Schedule 1 birds are subject to special, i.e. higher, penalties. Schedule 1 birds also receive greater protection such that it is an offence to intentionally or recklessly:
 - Disturb any wild bird included in Schedule 1 while it is building a nest or while it is in, on or near a nest containing eggs or young;
 - Disturb dependent young of such a bird.

¹ <http://www.parliament.uk/business/bills-and-legislation/secondary-legislation/statutory-instruments/>

9. Under Section 9(1) of the Act, it is an offence to:
 - Intentionally kill, injure or take any wild animal included in Schedule 5.
10. In addition, under Section 9(4) it is an offence to intentionally or recklessly:
 - Obstruct access to, any structure or place which any wild animal included in Schedule 5 uses for shelter or protection; or
 - Disturb any wild animal included in Schedule 5 while occupying a structure or place which it uses for that purpose.
11. Under Section 13(1) it is an offence:
 - To intentionally pick, uproot or destroy any wild plant listed in Schedule 8; or
 - Unless the authorised person, to intentionally uproot any wild plant not included in Schedule 8.
12. The Act also contains measures (S.14) for preventing the establishment of non-native species that may be detrimental to native wildlife, prohibiting the introduction into the wild of animals (releases or allows to escape) and plants (plants or causes to grow) listed under Schedule 9.
13. **Protection of Badgers Act 1992.** The Act aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain. It should be noted that the legislation is not intended to prevent properly authorised development. Under the Act it is an offence to:
 - Wilfully kill, injure, take, possess or cruelly ill-treat* a Badger, or attempt to do so;
 - To intentionally or recklessly interfere with a sett# (this includes disturbing Badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it).

* the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence

A sett is defined as “any structure or place which displays signs indicating current use by a Badger”. Natural England advice (June 2009) is that a sett is protected so long as such signs remain present, which in practice could potentially be for some time after the last actual occupation by Badger. Interference with a sett includes blocking tunnels or damaging the sett in any way
14. Licences can be obtained from the Statutory Nature Conservation Organisation (SNCO) for development activities that would otherwise be unlawful under the legislation, provided there is suitable justification. The SNCO for England is Natural England.
15. **Hedgerows Regulations 1997.** ‘Important’ hedgerows (as defined by the Regulations) are protected from removal (up-rooting or otherwise destroying). Various criteria specified in the Regulations are employed to identify ‘important’ hedgerows for wildlife, landscape or historical reasons.
16. **Countryside and Rights of Way (CROW) Act for England and Wales 2000.** The CROW Act provides increased measures for the management and protection of SSSIs and strengthens wildlife enforcement legislation. Schedule 12 of the Act amends the species provisions of the WCA 1981, strengthening the legal protection for threatened species. The Act also introduced a duty on Government to have regard to the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

17. **Natural Environment and Rural Communities Act 2006.** Section 41 of the NERC Act requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as local planning authorities, in implementing their duty under Section 40 of the Act, to have regard to the conservation of biodiversity in England, when exercising their normal functions. 56 habitats and 943 species of principal importance are included on the S41 list. These are all the habitats and species in England that were identified as requiring action in the UK Biodiversity Action Plan (BAP).
18. **Conservation of Habitats and Species Regulations 2017 (as amended).** The Regulations enact the European Union's Habitats Directive (92/43/EEC) in the UK. The Habitats Directive was designed to contribute to the maintenance of biodiversity within member states through the conservation of sites, known in the UK as Special Areas of Conservation (SACs), containing habitats and species selected as being of EC importance (as listed in Annexes I and II of the Habitats Directive respectively). Member states are required to take measures to maintain or restore these natural and semi-natural habitats and wild species at a favourable conservation status.
19. The Regulations also require the compilation and maintenance of a register of European sites, to include SACs and Special Protection Areas (SPAs)² classified under Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). These sites constitute the Natura 2000 network. The Regulations impose restrictions on planning decisions likely to significantly affect SPAs or SACs.
20. The Regulations also provide protection to European Protected Species of animals that largely overlaps with the WCA 1981, albeit the provisions are generally stricter. Under Regulation 43 it is an offence, *inter alia*, to:
 - Deliberately capture, injure or kill any wild animal of a European Protected Species;
 - Deliberately disturb any wild animals of any such species, including in particular any disturbance likely to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate, or which is likely to affect significantly their local distribution or abundance;
 - Deliberately take or destroy the eggs of such an animal;
 - Damage or destroy a breeding site or resting place of such an animal.
21. Similar protection is afforded to European Protected Species of plants, as detailed under Regulation 47.
22. The Regulations do provide a licensing system that permits otherwise illegal activities in relation to European Protected Species, subject to certain tests being fulfilled.

² Special Protection Areas (SPAs) are protected sites classified in accordance with Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC) (aka the Birds Directive), which came into force in April 1979. SPAs are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.

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