

**Hawke Ridge Business Park Ltd and Bellway
Homes Ltd**

Land at Hawke Ridge Business Park

Environmental Statement: Volume 1, Main Text

Chapter 11: Ecology and Nature Conservation





11 ECOLOGY AND NATURE CONSERVATION

INTRODUCTION

11.1 This chapter of the Environmental Statement (ES) assesses the likely significant effects of the Proposed Development in terms of Ecology and Nature Conservation. It incorporates a summary of the ecological baseline, survey methodologies, evaluation of ecological features, assessment of likely significant effects, mitigation measures and residual effects presented within the accompanying technical appendices at **Appendix 11.1** to **Appendix 11.12**.

11.2 The chapter describes the assessment methodology; the relevant legislation, planning policy and guidance; the baseline conditions at the Application Site and its surroundings; the likely significant environmental effects of the Proposed Development; the mitigation measures required to prevent or reduce any significant adverse effects; the likely residual effects after these measures have been employed; and the enhancement measures proposed to secure gains for biodiversity.

11.3 This chapter has been prepared by Ethos Environmental Planning, whose ecologists are experienced in undertaking ecological survey and assessment across relevant terrestrial and aquatic habitat types, for full personnel details, see **Appendix 11.12**. The assessment has been undertaken and reviewed by members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and accordingly accords with CIEEM's Code of Professional Conduct.

11.4 Pre-application consultation was undertaken with Natural England through the Discretionary Advice Service (DAS) in respect of bats and the Application Site's location within the consultation zones of the Bath and Bradford-on-Avon Bats SAC and the Kennet Valley Barbastelle Bats SAC. The advice received informed both the survey programme and the iterative design of the scheme, as set out in this chapter.

11.5 It should be noted that the substantial majority of the ecological survey programme had been completed at the time of submission. In relation to bats, the outstanding field survey effort was limited to no more than one month of the programmed activity survey period, following completion of surveys across the preceding seasons. The bat baseline presented in this chapter is therefore informed by an extensive dataset collected during 2025 and 2026 and is considered sufficient to support a robust, precautionary assessment of likely effects. The remaining survey



data, together with final verification and analysis of the complete dataset, will be reported in an ecological addendum and used to confirm or, where necessary, refine the assessment and mitigation measures. Other limited outstanding survey results will similarly be incorporated into the addendum on completion.

ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

Zone of Influence

11.6 To inform the scope of the assessment, consideration has been given to the Zone of Influence (Zoi) of the Proposed Development. The Zoi is defined as the area over which the Proposed Development has the potential to result in direct or indirect ecological effects during construction and operation. The extent of the Zoi has been determined on a receptor-specific basis, taking account of the characteristics of the Proposed Development, the ecology and mobility of individual habitats and species, recognised impact pathways, and relevant best practice guidance, including the CIEEM Guidelines for Ecological Impact Assessment (2024) and taxon-specific survey guidance. Consequently, survey extents and desk study search areas vary according to the ecological receptor being assessed, with the rationale for these set out within the relevant technical appendices. Two broad zones of influence have been identified:

- A primary zone of influence largely relating to the Application Site itself, incorporating habitats and associated species directly affected by the development footprint and associated works (in terms of habitat loss or damage). This zone also includes areas affected by factors such as noise, vibration, lighting, dust and pollution, the effects of which will be focused within the nearby surrounds of the Proposed Development. Survey work has focused on this area to allow an assessment of habitats and species directly affected by the Proposed Development.
- A wider (or secondary) zone of influence, where ecological features may be subject to wider-scale effects such as recreational disturbance, air pollution from traffic, or hydrological effects within the wider catchment. Given the location of the Application Site within the consultation zones of the Bath and Bradford-on-Avon Bats Special Area of Conservation (SAC) and the Salisbury Plain Special Protection Area (SPA), the wider zone of influence for these designations extends up to several kilometres from the Application Site, and background data have been gathered accordingly (a 4km radius for bats, and up to 10km for internationally designated sites).



Assessment Methodology

11.7 The Application Site has been subject to a comprehensive programme of ecological survey during 2025 and 2026. The methodology utilised can be split into three main areas: desktop study, habitat survey, and faunal survey. Further details on survey methodologies are provided in the technical appendices, and a summary is set out below.

Desktop Study

11.8 A background data search was obtained from the Wiltshire and Swindon Biological Records Centre (WSBRC), covering designated sites and protected and notable species records within 2km of the Application Site. Additional searches for granted European Protected Species (EPS) licences, and for internationally designated sites (SACs, SPAs and Ramsar sites) up to 10km from the Application Site, were undertaken using publicly available information (Defra MAGIC database). The bat data search was extended to a 4km radius, reflecting the foraging ranges of the SAC-qualifying bat species.

Habitat Survey

11.9 A UK Habitat Classification (UKHab) survey was undertaken on 21st August 2025, in accordance with the UK Habitat Classification (Version 2.0). The survey incorporated a detailed assessment of the land within the development boundary, including a description and mapping of all key habitat types and notable plant species. Grasslands were assessed using 1m x 1m quadrats (a minimum of three per grassland parcel), with the coverage of each species recorded using the DAFOR scale. Habitat condition was assessed in accordance with the methodology set out in the statutory Biodiversity Metric. Full details are provided at **Appendix 11.3**.

Faunal Surveys

11.10 Specific faunal surveys were undertaken for protected and notable species considered likely to occur, or with potential to be affected by the Proposed Development, as summarised in Table 11.1 below. General faunal activity observed during the survey visits was also recorded. Further detail on each survey methodology is provided within the relevant technical appendix.



Table 11.1: Summary of faunal surveys undertaken

Faunal group	Survey methodology	Dates of surveys	Appendix
Bats	Night-time bat walkover (NBW) transect surveys across three seasons; automated static detector monitoring at seven locations (five-day deployments each month), with acoustic data processed using BatDetect2 and feeding activity assessed using BuzzFindR.	NBW: Sep 2025, Apr & Jun 2026. Static: Aug 2025 - Jul 2026 (ongoing)	11.4
Breeding birds	Three breeding bird transect surveys; two deployments of automated static acoustic monitoring (Quicksight analysis).	Mar, May & Jun 2026	11.5
Hazel Dormouse	Deployment of 53 nest tubes at 20-40m intervals in suitable habitat, checked over the active season.	Aug 2025 - Jul 2026 (final check pending)	11.6
Badger	Survey for setts, latrines, paths and foraging signs across the Application Site.	2025-2026 (ongoing)	11.7
NERC S41 mammals	Habitat suitability assessment and search for field signs of hedgehog, brown hare, polecat and harvest mouse.	2025-2026 (ongoing)	11.8
Reptiles	Attempted presence/absence survey using artificial refugia (curtailed due to repeated theft of refugia; precautionary approach adopted).	Aug - Sep 2025	11.9
Great Crested Newt	Habitat Suitability Index assessment of ponds within 500m; eDNA survey of on-site watercourse.	2025-2026 (eDNA result pending)	11.10
Otter and Water Vole	Survey of the Bitham Brook tributary and associated bankside habitat for field signs (holts, couches, spraints, tracks, burrows).	2025-2026	11.11

Evaluation of Ecological Baseline

11.11 The evaluation of ecological features and resources is based on sound professional judgement, drawing on the latest available industry guidance and research. The approach taken follows that described in the 'Guidelines for Ecological Impact Assessment in the UK and Ireland' published by CIEEM (2024) (Ref. 11.1), whereby important ecological features are identified and considered within a defined geographical frame of reference: International, National, Regional, County/Metropolitan, District/Borough, and Local/Parish (or 'within the zone of influence only').

11.12 Features considered to be of importance at the site level only are generally scoped out of the detailed assessment, with the exception of protected species, which are considered in terms of mitigation and any legislative requirements. Further detail on this approach and the criteria used for evaluation is provided within the technical appendices.



Assessment of Effects and Significance

11.13 In accordance with Chapter 3 methodology, the terminology 'effects' is used in place of 'impacts', and effects are described as Adverse, Beneficial or Neutral, with the significance of the effect indicated (i.e. major, moderate, minor, negligible).

11.14 It should be noted that the CIEEM (2024) guidance, which represents the discipline-specific best practice for ecological assessment, does not assess significance through a matrix of receptor sensitivity against magnitude of change in the same way as other ES topics. Instead, CIEEM defines a 'significant effect' as one that either supports or undermines biodiversity conservation objectives for important ecological features, or for biodiversity in general. This chapter therefore characterises each effect by reference to its nature (adverse, beneficial or neutral), whether it is permanent or temporary, its geographic scale of importance, and whether it is considered ecologically significant. This represents a justified departure from the standard Chapter 3 significance terminology, consistent with recognised discipline-specific guidance.

11.15 Using the agreed parameters of the scheme, likely effects are determined with reference to the ecological structure and function on which each feature depends. Based on this, the nature of the effect is characterised and an assessment made as to whether it is likely to be ecologically significant, and at what geographic scale. For internationally designated sites, the assessment is also informed by, and will be confirmed through, Habitats Regulations Assessment (HRA) screening undertaken with the competent authority.

Limitations of the Assessment

11.16 The habitat survey was undertaken during the optimal season, allowing a robust assessment of habitats and botanical interest across the Application Site.

11.17 As noted in the Introduction, a number of faunal surveys were ongoing at the time of submission. The bat activity surveys, hazel dormouse and badger surveys had not been fully completed, and the Great Crested Newt eDNA result was awaited. The baseline and assessment represents the best available evidence at the time of submission and will be updated where necessary following completion of the outstanding survey programme.

11.18 The reptile presence/absence survey could not be completed because the artificial refugia were repeatedly stolen from the Application Site (which is crossed by a public right of way); a precautionary approach has therefore been adopted for reptiles. No other significant limitations were experienced.



LEGISLATION, PLANNING POLICY AND GUIDANCE

Policy Background

National Planning Policy

11.19 Guidance on national policy for biodiversity and geological conservation is provided within the National Planning Policy Framework (NPPF), the most recent version being published by the Ministry of Housing, Communities and Local Government in December 2024 (with subsequent amendment in February 2025). The NPPF confirms the Government's commitment to conserving and enhancing the natural environment through the planning system, including specific reference to protecting and enhancing biodiversity and to limiting the impact of light pollution from artificial light on nature conservation.

11.20 The NPPF requires local planning authorities to apply the biodiversity mitigation hierarchy (avoid, mitigate, compensate), to attach appropriate weight to statutory nature conservation designations, protected species and priority habitats, and to secure measurable net gains for biodiversity. The National Planning Practice Guidance (NPPG) provides additional detail, placing emphasis on biodiversity enhancement and the importance of ecological networks.

Local Planning Policy

11.21 The relevant Local Planning Authority is Wiltshire Council. The statutory development plan is the Wiltshire Core Strategy, adopted January 2015. The following adopted Core Policies are relevant to this assessment:

- Core Policy 50 (Biodiversity and Geodiversity), which requires all development proposals to incorporate appropriate measures to avoid and reduce disturbance of sensitive wildlife species and habitats throughout the lifetime of the development, to avoid direct and indirect impacts upon local sites through sensitive location and layout and by maintaining sufficient buffers and ecological connectivity, and to make a reasonable contribution to the favourable long-term management of features affected;
- Core Policy 51 (Landscape), which requires development to protect, conserve and where possible enhance landscape character, including tranquillity and the need to protect against intrusion from light pollution; and



- Core Policy 57 (Ensuring High Quality Design and Place Shaping), which requires development to have regard to the amenity of existing occupants, including in respect of light intrusion.

11.22 The Application Site also falls within the area of the Trowbridge and Westbury Bat Mitigation Supplementary Planning Document (SPD), and Wiltshire Council's Planning Guidance for the Bath and Bradford-on-Avon Bats SAC. These documents set out the requirements for development within the SAC consultation zones, including the illuminance zone approach (Zones A, B and C) used to control light spill on retained bat habitat, and the need to demonstrate no adverse effect on the integrity of the SAC. Compliance with these documents is central to this assessment and is addressed in the following sections.

11.23 The emerging Wiltshire Local Plan was withdrawn in May 2026 and therefore forms no part of the development plan; its policies carry no weight and are not relied upon in this assessment. The assessment is undertaken against the adopted Wiltshire Core Strategy (2015), the NPPF, and the adopted Trowbridge and Westbury Bat Mitigation SPD.

Biodiversity Action Plans and NERC Act Section 41

11.24 The assessment has regard to the list of habitats and species of Principal Importance in England under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, and to relevant local Biodiversity Action Plan priorities. Reference to habitats and species listed as Priority Habitats and Species is made, where relevant, in the following sections of this chapter.

Key Legislation

11.25 The applicable legislative framework for ecology and nature conservation relevant to the Proposed Development is summarised as follows:

- The Conservation of Habitats and Species Regulations 2017 (as amended), which transpose the Habitats and Birds Directives, providing protection for European sites (including the Bath and Bradford-on-Avon Bats SAC and Salisbury Plain SPA) and for European Protected Species such as bats;
- The Wildlife and Countryside Act 1981 (as amended, including by the Countryside and Rights of Way Act 2000), which affords protection to nesting birds, certain species including reptiles, and controls the spread of invasive plant species listed under Schedule 9;



- The Protection of Badgers Act 1992, which protects badgers and their setts;
- The Natural Environment and Rural Communities (NERC) Act 2006, which places a duty on public authorities to have regard to conserving and enhancing biodiversity, and lists habitats and species of Principal Importance under Section 41;
- The Hedgerow Regulations 1997, which afford protection to 'important' countryside hedgerows; and
- The Environment Act 2021, which introduced the mandatory requirement for development to deliver a minimum 10% Biodiversity Net Gain (BNG).

11.26 Discussion of this legislation in relation to particular ecological features is provided in the relevant sections of this chapter and the technical appendices. Biodiversity Net Gain is addressed through a separate Biodiversity Net Gain Assessment and Biodiversity Gain Plan submitted with the application; the numerical outputs are not reproduced in this chapter, but the Proposed Development will be designed to deliver the statutory minimum 10% net gain.

11.27 Full details of policy and legislation are located in **Appendix 11.1**

BASELINE CONDITIONS

Ecological Designations

11.28 Ecological designations occurring within the wider area, together with the relevant SAC consultation zones, are summarised in Table 11.2 below. Further detail is provided in the Designated Sites assessment at **Appendix 11.2**.

11.29 One statutory designated site was identified within 2km of the Application Site: Picket and Clanger Wood Site of Special Scientific Interest (SSSI), approximately 0.75km to the north-east on the far side of the A350, which is characterised by ancient woodland. In addition, the Application Site falls within the consultation zones of three internationally designated sites.

Table 11.2: Ecological designations relevant to the Application Site

Designation	Level / status	Relationship to the Application Site
Bath and Bradford-on-Avon Bats SAC	International	Application Site lies within the greater horseshoe bat 4,000m buffer and lesser horseshoe bat 2,000m buffer. Designated for greater and lesser horseshoe bats.
Salisbury Plain SPA	International	Application Site lies within the 6.4km recreational disturbance buffer. Designated for stone curlew and other qualifying features.



Designation	Level / status	Relationship to the Application Site
Trowbridge and Westbury Bat Mitigation SPD area	Policy designation	Application Site lies within both the Red Zone (High Risk) and Yellow Zone (Medium Risk).
Picket and Clanger Wood SSSI	National	Approximately 0.75km north-east, on the far side of the A350; ancient woodland.
Four Local Wildlife Sites (Flowers Wood, Kettle Lane Wood, Round Wood (Heywood), Westbury Lakes) and one Local Geological Site (Hawkridge Lane)	Local (County)	Between approximately 0.5km and 1.7km from the Application Site; principally lowland mixed deciduous woodland and, at Westbury Lakes, standing open water and wet woodland.

11.30 The internationally designated bat sites are the most significant designations for this assessment. The majority of the Application Site lies within the Yellow Zone (Medium Risk), with only a small portion of the eastern part of the Site falling within the Red Zone (High Risk), associated with the railway and watercourse corridor. This area has informed the survey scope, layout and proposed dark-buffer and lighting measures.

11.31 This means there is potential for functionally important foraging and commuting habitat for SAC-qualifying bats on or near the Application Site. Recreational disturbance is the principal potential pathway of effect on the Salisbury Plain SPA. These pathways are considered further below and in the impact assessment and will be confirmed through HRA screening with the competent authority.

Ancient Woodland

11.32 No ancient woodland is present within the Application Site. Several parcels of ancient and semi-natural woodland occur within the 2km study area, principally associated with the Local Wildlife Sites to the north and north-east and with the Picket and Clanger Wood SSSI. Given the intervening distances and land use, no direct effects on ancient woodland are anticipated; these features are considered in the context of the wider ecological network and the Suitable Alternative Natural Greenspace (SANG) strategy.

Habitats and Ecological Features

11.33 Full descriptions of the habitats present are given in the UKHab survey at **Appendix 11.3**. The Application Site is dominated by two large arable fields (cereal crops, principally maize, covering approximately 12.37ha) to the north and south. The field boundaries and central strip of land comprise the principal habitats of ecological value, including a network of native hedgerows (several with mature trees, and one native species-rich hedgerow with trees),



areas of mixed, willow and bramble scrub, small parcels of other neutral grassland, one non-priority pond, and a non-priority watercourse (a tributary of the Bitham Brook) along the eastern boundary of the northern field. Areas of modified grassland, ruderal/ephemeral vegetation, introduced shrub, bare ground and developed (sealed) surface are associated with Mill Lane and the roundabout in the centre of the Application Site.

11.34 A summary of the habitats considered to be of ecological importance is given in Table 11.3 below. The arable cropland, modified grassland and developed land are of low ecological value and are not subject to detailed assessment, although the biodiversity value of all habitats is accounted for within the separate Biodiversity Net Gain Assessment.

Table 11.3: Summary and evaluation of important habitats

Habitat	Extent / description	Condition	Evaluation
Native hedgerows (incl. hedgerows with trees and one species-rich hedgerow with trees)	Eight native hedgerows plus hedgerow associated with bank/ditch, hedgerow with trees, and species-rich hedgerow with trees, on the boundaries and bisecting the fields.	Mostly moderate; one good	Local importance; key linear features and Priority Habitat / potential 'important' hedgerows.
River / watercourse (non-priority) - Bitham Brook tributary	Approximately 0.2km along the eastern boundary of the northern field; densely vegetated, seasonally dry.	Fairly poor	Local importance; foraging/commuting resource and riparian mammal habitat.
Scrub (mixed, willow, bramble)	Approximately 0.47ha combined, on the northern and southern boundaries and field corners.	Poor to moderate	Local importance.
Other neutral grassland	Three parcels totalling approximately 0.94ha.	Poor to moderate	Local importance.
Pond (non-priority)	One pond of approximately 0.015ha adjacent to the southern boundary of the northern field.	Moderate	Local importance.



Faunal Use of the Application Site

11.35 A range of faunal surveys were undertaken during 2025 and 2026 for bats, breeding birds, hazel dormouse, badger, reptiles, Great Crested Newt (GCN), otter and water vole, together with an assessment of the suitability of the Application Site for NERC Section 41 mammals. A summary of the faunal species considered to be of ecological importance within the primary zone of influence is set out below, with full details in the technical appendices. As noted, several surveys remain ongoing and the results below are, in part, preliminary.

Bats

11.36 Bats are the most significant faunal feature of this assessment, reflecting the Application Site's location within the consultation zones of the Bath and Bradford-on-Avon Bats SAC. Eleven bat species have been recorded on the Application Site to date, including the Annex II species barbastelle, greater horseshoe bat and lesser horseshoe bat. Common pipistrelle was by far the most abundant species recorded (approximately 49% of all calls), followed by Nathusius' pipistrelle and soprano pipistrelle. Barbastelle (0.51% of calls), greater horseshoe (0.18%) and lesser horseshoe (0.15%) were recorded in low numbers, with activity concentrated at the more wooded and well-vegetated boundaries. It is noted that these numbers are preliminary and indicative as final surveys and full analysis are yet to be completed at the time of writing, and will be reported on, upon completion, in an addendum of this chapter.

11.37 The highest levels of activity were recorded along the unlit, hedgerow-lined Hawkrigge Road on the western boundary (static Location 3) and along the tree-lined railway corridor on the eastern boundary (static Location 6), the latter providing ecological connectivity towards the core bat areas of the wider Bath and Bradford-on-Avon Bats SAC. These linear features, together with the boundary hedgerows and the Bitham Brook tributary, provide a network of commuting and foraging habitat assessed as being of high importance for bats. The intensively managed arable cropland that dominates the Application Site is of low value for foraging bats. As Annex II species, barbastelle is scoped in as a feature of regional importance and the horseshoe bats as features of international importance; the more common species are considered at the local level. Full results are provided at **Appendix 11.4** and will be finalised in the addendum.



Breeding Birds

11.38 Thirty bird species were recorded across the breeding bird surveys, with a total of twenty-three species recorded during static acoustic monitoring. Species of note included the Schedule 1 species red kite, Red-listed Birds of Conservation Concern (greenfinch, herring gull and skylark), and a range of Amber-listed species. Three skylark were recorded on one survey, with behaviour suggesting the potential for low-density skylark nesting within the arable fields. The boundary hedgerows were assessed as the key bird habitat, with the arable fields important for ground-nesting skylark. The Application Site is assessed as being of local importance for breeding birds. Full details are provided at **Appendix 11.5**.

Hazel Dormouse

11.39 Fifty-three dormouse nest tubes were deployed in suitable habitat and checked over the active season. No evidence of dormouse was recorded (only wood mouse), and hazel dormouse is therefore considered likely to be absent from the Application Site, subject to confirmation by the final survey check and addendum. Dormouse is not considered further in this assessment. Details are provided at **Appendix 11.6**.

Badger

11.40 Badger latrines were recorded across the southern field boundaries during the 2025 surveys, although no setts or evidence of sett-building were found. The Application Site is assessed as forming part of the territory of a local badger clan, used for commuting and foraging. The 2026 surveys were ongoing at the time of writing and will be finalised in the addendum. Details are provided at **Appendix 11.7**.

NERC Section 41 Mammals

11.41 The habitat suitability assessment identified the woodland edges, hedgerows and wetland habitats as being of highest value for Section 41 mammals (hedgehog, brown hare, polecat and harvest mouse), with the arable cropland of low to moderate value. These species are considered on a precautionary basis in relation to mitigation. Details are provided at **Appendix 11.8**.



Reptiles

11.42 The presence/absence reptile survey could not be completed owing to repeated theft of the artificial refugia from the Application Site. Given the presence of reptile records in the wider area (slow-worm and grass snake) and small areas of suitable habitat within the field margins, scrub and hedgerows, a low population of reptiles is assumed on a precautionary basis and mitigated accordingly. Details are provided at **Appendix 11.9**.

Great Crested Newt

11.43 A Habitat Suitability Index (HSI) assessment scoped the on-site watercourse (poor suitability) and the West Wiltshire Trading Estate pond (average suitability) into further survey. The Application Site lies predominantly within Natural England's 'green' Great Crested Newt risk zone, with a small area of the north-east corner within the 'amber' zone. An eDNA survey of the watercourse was undertaken in spring 2026; the result was awaited at the time of writing and will be reported in the addendum. Details are provided at **Appendix 11.10**.

Otter and Water Vole

11.44 Otter spraint was recorded at two locations along the Bitham Brook tributary, together with one potential otter/mink couch beneath the bridge just south of the northern field. The watercourse provides suitable habitat for both otter and water vole, with earthen banks suitable for burrowing; no water vole field signs were confirmed. The watercourse is considered to have potential for both species and will be subject to further survey to inform detailed design. Details are provided at **Appendix 11.11**.

Schedule 9 Invasive Species

11.45 No Schedule 9 invasive non-native plant species were identified as a specific constraint during the survey work. Should any such species be identified during subsequent survey or construction, they will be addressed through the Construction Environmental Management Plan (CEMP) in accordance with the Wildlife and Countryside Act 1981 (as amended).

Summary of Ecological Baseline

11.46 Based on the desktop study, habitat surveys and protected species surveys undertaken to date, the principal ecological receptors requiring further consideration within the Ecological Impact Assessment comprise internationally designated sites associated with SAC qualifying



bats and Salisbury Plain SPA, Picket and Clanger Wood SSSI, Local Wildlife Sites, hedgerows, the tributary of Bitham Brook, bats, breeding birds, badger, reptiles and riparian mammals. Other ecological features, including hazel dormouse and great crested newt, remain subject to ongoing survey work and are considered on a precautionary basis where appropriate pending completion of the survey programme.

INHERENT DESIGN MITIGATION

11.47 The scheme assessed within this chapter has been developed following an iterative design process, with a number of ecological mitigation measures incorporated as embedded features of the Proposed Development. Particular measures incorporated in relation to ecology include:

- Approximately 10–12 years ago, substantial native boundary planting was undertaken around the Application Site in anticipation of future development. This planting has since matured to form a well-established network of hedgerows, scrub and woodland edge habitats, providing ecological connectivity and valuable commuting and foraging habitat, particularly for bats. The retention of these established features forms an integral part of the Proposed Development and provides inherent mitigation through the maintenance of existing green infrastructure.
- Retention of the key boundary hedgerows and the tree-lined eastern railway corridor, maintaining the highest-value bat commuting and foraging habitat and the principal ecological connectivity across the Application Site;
- Retention of the Bitham Brook tributary on the eastern boundary within a substantial buffer, protecting riparian mammal and foraging habitat;
- Retention of dark commuting corridors along the unlit hedgerow-lined Hawkridge Road (western boundary) where possible, and the eastern railway/watercourse corridor, with Zone A bat habitat buffers established along the southern boundaries of the development parcels in accordance with the Trowbridge and Westbury Bat Mitigation SPD;
- A sensitive lighting strategy (see the Lighting Impact Assessment, DFL ref. 4143-DFL-ELG-XX-RP-EO-13001) designed to comply with ILP GN01:2021, BCT/ILP GN08:2023 and the Trowbridge and Westbury Bat Mitigation SPD, incorporating luminaires with 0% upward light ratio, warm colour temperatures ($\leq 2700\text{K}$), flat (0°) tilt, minimised mounting heights, back-light shielding, directional optics and motion-sensor controls on non-adoptable lighting;



- Provision of extensive new green and blue infrastructure, including a SANG in the south of the Application Site, new woodland, hedgerow and species-rich grassland planting, and a Sustainable Drainage System (SuDS), to provide alternative recreational greenspace, new foraging and commuting habitat, and enhanced ecological connectivity.

11.48 The retention and configuration of the dark bat buffers has been informed by pre-application consultation with Natural England through the Discretionary Advice Service (DAS). Natural England was generally positive regarding the approach to dark buffers proposed for the Application Site. Natural England advised that consideration be given to extending dark buffers around the wider perimeter of the Application Site, rather than solely along the northern and eastern boundaries, as originally designed based on habitat connectivity through the wider landscape. In response, and as part of the iterative design process, the dark buffer along the northern boundary of the southern parcel has been strengthened, further protecting connectivity between the retained linear features and reinforcing the dark commuting corridors used by the highly light-averse horseshoe species and barbastelle. This DAS consultation also informed the survey programme, including the deployment of an additional static bat detector (Location 7) during the 2026 survey period to gain a greater understanding of bat movement across the open fields as well as in boundary hedgerows.

11.49 Further detail on how these embedded measures avoid or reduce effects is given in the following sections.

IDENTIFICATION AND EVALUATION OF KEY EFFECTS

11.50 This section identifies and evaluates the likely ecological effects of the Proposed Development during the construction and operational phases, taking account of the baseline conditions, embedded mitigation and design measures described above. The assessment considers ecological receptors identified as being of importance at the local level or above, together with protected species and other receptors requiring consideration for legislative or mitigation purposes. Receptors of site-level importance only are not subject to detailed assessment unless specific mitigation or legal compliance measures are required. The assessment is based on the construction and operational information presented in Chapter 5: The Proposed Development and Chapter 6: Development Programme and Construction.

11.51 As set out in the methodology, the assessment follows CIEEM (2024) discipline-specific guidance, with effects characterised by reference to their nature, duration, geographic scale and ecological significance. The principal receptors carried forward for assessment are



internationally designated sites, including the Bath and Bradford-on-Avon Bats SAC and Salisbury Plain SPA; SAC-qualifying bat species, including barbastelle, greater horseshoe and lesser horseshoe bats; other bat species, notably common pipistrelle; breeding birds, including skylark; badger; NERC Section 41 mammals; reptiles; Great Crested Newt; and otter and water vole. Where survey work remains ongoing, receptors have been assessed on a precautionary basis and the assessment will be reviewed and updated, if necessary, through the ecological addendum.

Construction Phase Effects

Ecologically Designated Sites

11.52 There are no statutory or non-statutory designated sites within or directly adjacent to the Application Site. Potential indirect construction effects on Picket and Clanger Wood SSSI, nearby Local Wildlife Sites, off-site Priority Habitats and habitats functionally associated with the bat SACs could arise through dust deposition, changes in surface water runoff and water quality, noise and vibration, artificial construction lighting, and accidental pollution events.

11.53 Given the separation distances involved, the absence of direct effects on designated features, and the implementation of standard best-practice construction controls secured through a Construction Environmental Management Plan (CEMP), including pollution prevention, dust suppression, sensitive lighting and surface water management, construction effects on statutory and non-statutory designated sites are considered to be **temporary, slight adverse**, and **not ecologically significant**.

11.54 There are no statutory designated sites within or directly adjacent to the Application Site. Potential indirect construction effects on Picket and Clanger Wood SSSI, the Local Wildlife Sites (particularly Westbury Lakes via watercourse connectivity) and off-site Priority Habitats could arise through dust deposition, changes in surface water runoff and quality, noise and vibration, artificial construction lighting near bat SAC foraging/commuting habitat, and accidental pollution events.

Habitats

11.55 The Proposed Development will result in the permanent loss of habitats within the development footprint, principally comprising arable cropland of low ecological value, together with the loss of some sections of hedgerow and small areas of scrub and grassland. The permanent land-take is considered as an operational-phase effect below. During construction,



retained habitats of greater ecological value, including boundary hedgerows, retained scrub, trees and the watercourse corridor, could be subject to temporary adverse effects through dust deposition, soil compaction, accidental encroachment, pollution events and damage to retained vegetation.

11.56 Key retained habitats will be protected during construction through measures secured within the CEMP, including protective fencing, appropriate buffers, root protection measures where relevant, pollution prevention, dust control and demarcation of retained habitat areas. Subject to the implementation of these measures, construction effects on retained habitats are considered **temporary, slight adverse** and **not ecologically significant at the local level**.

Bats (SAC-qualifying and common species)

11.57 The principal construction-phase risk to bats relates to artificial construction lighting illuminating retained hedgerows, the watercourse and the dark commuting corridors used by the highly light-averse horseshoe species, barbastelle and the more common species. Loss of a small amount of hedgerow could also cause localised, temporary disruption of commuting routes. No structures suitable for roosting horseshoe bats are present, and trees with barbastelle roosting potential will be retained and protected.

11.58 Prior to detailed mitigation, and pending completion of the bat surveys, construction effects on commuting and foraging bats (including SAC-qualifying species) are considered to relate primarily to temporary lighting and localised habitat disturbance, and to be **slight to moderate, adverse** and **temporary**, and **significant at the international level (uncertain, to be fully determined upon survey completion)** in the absence of a sensitive construction lighting regime. This will be avoided through the measures set out in the following section and confirmed through HRA screening.

Breeding Birds

11.59 Vegetation and hedgerow removal, and disturbance of the arable fields used by ground-nesting skylark, could result in the loss of active nests, constituting an offence under the Wildlife and Countryside Act 1981 (as amended). Construction noise, visual disturbance and lighting could also affect nesting birds in close proximity to works.

11.60 Prior to mitigation, construction effects on breeding birds are considered to be **slight, adverse** and **temporary**, and **non-significant at the local level**, subject to the timing and supervision measures set out below.



Badger, NERC S41 Mammals, Reptiles and Riparian Mammals

11.61 Badgers use the Application Site for commuting and foraging; construction could disturb foraging/commuting individuals through lighting or cause harm through open excavations. NERC Section 41 mammals, and a precautionary low population of reptiles, could be at risk of injury or habitat loss during vegetation clearance. Otter and water vole could be affected by pollution of, or disturbance to, the Bitham Brook tributary.

11.62 Prior to detailed mitigation, construction effects on these species are considered to be **slight to moderate, adverse and temporary**, and potentially **significant at the local level** in the absence of precautionary measures (sensitive lighting, phased/supervised clearance, escape provision within trenches, two-stage vegetation cuts and watercourse protection), which are set out in the following section.

Operational Phase Effects

Internationally Designated Sites - Bath and Bradford-on-Avon Bats SAC

11.63 The principal operational pathway of effect on the bat SACs is the introduction of artificial light at night (ALAN) from the Proposed Development, together with potential fragmentation of commuting corridors and recreational disturbance, which could affect the foraging and commuting function of the Application Site for SAC-qualifying bats. As the Application Site lies within the greater horseshoe 4,000m, lesser horseshoe 2,000m, and within the Red and Yellow Zones of the Trowbridge and Westbury Bat Mitigation SPD, the Proposed Development is required to demonstrate no adverse effect on the integrity of the SAC.

11.64 Prior to the embedded lighting and habitat mitigation, operational effects on the bat SACs from lighting and habitat change could be **moderate, adverse and long-term**, and potentially **significant at the international level (uncertain)**. With the embedded mitigation in place, no adverse effect on SAC integrity is anticipated, as set out below and to be confirmed through HRA.

Internationally Designated Sites - Salisbury Plain SPA

11.65 The Application Site lies within the 6.4km recreational disturbance buffer of the Salisbury Plain SPA. The residential-led development will increase the local population and associated recreational activity, with potential for increased recreational pressure on the SPA.



11.66 Prior to mitigation, operational effects on the Salisbury Plain SPA through recreational disturbance are considered to be **slight, adverse and long-term**, and potentially **significant at the international level (uncertain)**. This will be addressed through SANG provision and a SAMM contribution, as set out below and confirmed through HRA.

Local Wildlife Sites and Priority Habitats

11.67 Increased population and recreational activity could result in operational effects on nearby Local Wildlife Sites (particularly Westbury Lakes and Round Wood, Heywood) and off-site Priority Habitats through trampling, nutrification and disturbance. On-site SANG and open space, together with a managed access network, will provide sufficient recreational capacity to be largely self-contained.

11.68 With these measures, operational effects on off-site Local Wildlife Sites and Priority Habitats are considered to be **negligible and non-significant**.

Habitats and Bats - Habitat Loss and Lighting

11.69 The Proposed Development will result in the permanent loss of arable cropland (low value) and a small amount of hedgerow, scrub and grassland. The key boundary hedgerows and the eastern railway/watercourse corridor will be retained, and extensive new woodland, hedgerow and species-rich grassland will be created, principally in the east and south of the Application Site. The operational lighting scheme has been modelled against the retained bat habitat: light spill at the Zone A bat receptors is ≤ 0.08 lux, well within the GN08:2023 / SPD threshold of < 0.5 lux and the dark-corridor targets of 0.2 lux (horizontal) and 0.4 lux (vertical), such that the residual lighting effect on ecological receptors is assessed within the Lighting Impact Assessment as Neutral to Slight (not significant).

11.70 Taking account of the retention of dark commuting corridors and the creation of a substantial area of high-value foraging habitat, the operational effect on SAC-qualifying and more common bats is assessed as a **minor to significant beneficial and long-term** effect, with a **significant beneficial** effect anticipated for common pipistrelle. No significant adverse effect is anticipated.

Breeding Birds, Badger, S41 Mammals, Reptiles and Riparian Mammals

11.71 Operationally, the loss of hedgerow and arable habitat will be more than compensated by new hedgerow, woodland, grassland and wetland creation, retained and enhanced habitat



within the SANG and open space, and the enhancement of the watercourse corridor. Skylark habitat loss will be compensated through skylark plots or a suitably managed grassland regime within the SANG. Increased recreational access to the watercourse could disturb otter and water vole; this will be managed through screening, planting and the retention of a substantial buffer.

11.72 With the embedded habitat creation and management, operational effects on breeding birds, badger, S41 mammals, reptiles and riparian mammals are considered to be **neutral to minor beneficial** and **long-term**, and **non-significant** in adverse terms.

Assessment of Cumulative Effects

11.73 The cumulative schemes identified for the ES (Glenmore Farm; Land off Storridge Road; Land at Shallow Waggon Lane; Court Farm; and the pending Land at Bratton Road application) are considered in Chapter 3. In ecological terms, the principal cumulative pathways relate to in-combination recreational pressure on the Salisbury Plain SPA and the Local Wildlife Sites, and in-combination lighting and habitat effects on the Bath and Bradford-on-Avon Bats SAC.

11.74 The provision of on-site SANG (to the standard of not less than 8ha per 1,000 additional population) and a SAMM contribution will address the Proposed Development's contribution to cumulative recreational pressure on the Salisbury Plain SPA. The retention of dark commuting corridors, the sensitive lighting strategy and the creation of new foraging and commuting habitat will ensure the Proposed Development does not contribute to a significant cumulative effect on the bat SACs. Accordingly, no significant cumulative ecological effects are anticipated, in combination with the identified schemes. This conclusion will be confirmed through HRA screening with the competent authority.



Inter-Relationship Effects

11.75 There are inter-relationships between this chapter and the Air Quality chapter (in respect of potential air pollutant effects on designated woodland habitats), the Water Quality, Hydrology and Flood Risk chapter (in respect of the SuDS scheme and protection of the watercourse and Westbury Lakes), the Landscape and Visual Amenity chapter (in respect of the green infrastructure and SANG), and the Transport and Access chapter (in respect of recreational access and traffic). These inter-relationships have been taken into account in the assessment. No other inter-relationship effects with other topics have been identified.

ENHANCEMENT, MITIGATION AND RESIDUAL EFFECTS

Mitigation Measures

Construction Phase Mitigation

11.76 A Construction Environmental Management Plan (CEMP), secured by planning condition, will set out standard construction best practice to protect retained habitats and designated sites, including protective fencing and buffers (a minimum 5m buffer to retained hedgerows and the watercourse), dust suppression, pollution prevention and surface water management to protect the Bitham Brook tributary and, via connectivity, Westbury Lakes LWS.

11.77 A sensitive construction lighting plan will be included within the CEMP, ensuring that retained hedgerows, the watercourse and the dark commuting corridors are not subject to artificial lighting during construction, and no night-time working will be undertaken. This measure protects commuting and foraging bats (including SAC-qualifying species), badger and nesting birds.

11.78 Vegetation clearance will, wherever practicable, be undertaken outside the bird nesting season (March to August inclusive, extended to September for skylark). Where this is not possible, a pre-clearance nesting bird check by a Suitably Qualified Ecologist (SQE) will be undertaken, with exclusion zones implemented around any active nests. Where suitable skylark habitat is to be lost, compensatory skylark plots or a suitably managed grassland regime will be provided within the SANG.

11.79 Precautionary measures for reptiles and NERC S41 mammals will be implemented, comprising a two-stage vegetation cut under ecological supervision during the active season, destructive searching of suitable refugia, and translocation of any individuals found to retained



habitat. A pre-works badger survey will be undertaken, and gently sloping ends or ramps provided in open excavations to allow the escape of any animals. A surface water management strategy will protect otter and water vole using the watercourse.

Operational Phase Mitigation

11.80 A sensitive operational lighting strategy (Lighting Impact Assessment, DFL ref. 4143-DFL-ELG-XX-RP-EO-13001), designed in accordance with ILP GN01:2021, BCT/ILP GN08:2023 and the Trowbridge and Westbury Bat Mitigation SPD, will maintain the Zone A bat habitat buffers and the dark commuting corridors in 'completely dark' condition (below 0.2 lux horizontal and 0.4 lux vertical). Embedded measures include 0% upward light ratio luminaires, warm colour temperatures ($\leq 2700\text{K}$), flat (0°) tilt, minimised mounting heights, back-light shielding, directional optics and motion-sensor controls on non-adoptable lighting; the perimeter residential (secondary) roads will remain unlit. The modelled light spill at the Zone A bat receptors is ≤ 0.08 lux, and the residual lighting effect on ecological receptors is assessed as Neutral to Slight (not significant).

11.81 In accordance with Wiltshire Council's requirements and Natural England's standing advice, a Suitable Alternative Natural Greenspace (SANG) will be provided within the south of the Application Site at a standard of not less than 8ha per 1,000 additional population, designed and managed to attract and retain residents and thereby divert recreational pressure away from the Salisbury Plain SPA. A financial contribution towards Strategic Access Management and Monitoring (SAMM) will also be provided. Together with the sensitive lighting strategy, habitat retention and creation, and any financial contributions required under the bat SPD, these measures will ensure no adverse effect on the integrity of the Salisbury Plain SPA and the Bath and Bradford-on-Avon Bats SAC, alone or in combination with other plans and projects. This will be confirmed through HRA.

11.82 All habitat creation, enhancement and long-term management will be secured through a Landscape and Ecological Management Plan (LEMP), secured by planning condition.

Residual Effects

11.83 Following implementation of the embedded design mitigation and the measures set out above, all construction and operational effects on ecological receptors are considered to be reduced to non-significant levels in adverse terms. No adverse effect on the integrity of the internationally designated sites is anticipated, subject to confirmation through HRA screening. The retention of dark corridors and the creation of extensive new habitat result in residual



beneficial effects for bats (significant beneficial for common pipistrelle) and minor beneficial effects for a range of other species.

Enhancement Measures

11.84 The NPPF and Wiltshire Core Strategy encourage new development to maximise opportunities for biodiversity. The Proposed Development presents the opportunity to deliver ecological enhancements at the Application Site, making a positive contribution to national and local conservation priorities and ensuring the statutory minimum 10% Biodiversity Net Gain is achieved (as demonstrated in the separate Biodiversity Net Gain Assessment). Proposed enhancement measures, to be detailed and secured through the LEMP, include:

- New native woodland planting to extend and buffer existing woodland blocks and provide foraging and commuting habitat for SAC bat species;
- New species-rich native hedgerow planting to enhance connectivity across the Application Site and with the wider landscape, and supplementary planting of retained hedgerows;
- Creation of species-rich grassland within the SANG and open space, managed by traditional-style hay cutting or low-intensity grazing;
- Enhancement of the Bitham Brook tributary corridor and creation of wetland features within the SuDS scheme, benefiting riparian mammals, amphibians, birds and foraging bats;
- Retention and management of dark commuting and foraging corridors for bats along the western, eastern and southern boundaries;
- Integrated biodiversity features within the built development, including integral bat boxes, swift and other bird nest bricks, and hedgehog highways (gaps in garden fencing), in accordance with local policy requirements; and
- Provision of habitat piles, hibernacula and skylark plots (or equivalent managed grassland) to benefit reptiles, invertebrates and ground-nesting birds.

SUMMARY

11.85 This chapter has assessed the likely significant effects of the Proposed Development on ecology and nature conservation. The Application Site comprises predominantly low-value arable cropland, with the principal ecological interest concentrated on the boundary hedgerows, the tree-lined eastern railway and watercourse corridor, and the unlit western boundary, which together provide habitat of high importance for bats and connectivity to the wider landscape. The Application Site lies within the consultation zones of the Bath and Bradford-on-Avon Bats



SAC and the Salisbury Plain SPA, and within the Red and Yellow Zones of the Trowbridge and Westbury Bat Mitigation SPD.

11.86 Through an iterative design incorporating retention of key habitat and dark corridors, a sensitive lighting strategy compliant with GN01:2021, GN08:2023 and the bat SPD, SANG and SAMM provision, precautionary species measures secured through a CEMP, and extensive habitat creation and management secured through a LEMP, the Proposed Development will avoid significant adverse effects on ecological receptors and on the integrity of the internationally designated sites. The scheme will deliver the statutory minimum 10% Biodiversity Net Gain and result in residual beneficial effects for bats and a range of other species. A number of surveys were ongoing at the time of submission, and the assessment will be confirmed in an ecological addendum and through HRA screening with the competent authority.

11.87 A summary of the effects of the Proposed Development is provided in Table 11.4 below. Non-Technical Summary text is provided in the separate section following the appendices.

Table 11.4: Ecology and Nature Conservation Summary Table

Potential Effect	Nature of Effect (Permanent or Temporary)	Significance	Mitigation / Enhancement Measures	Residual Effects
Construction effects on designated sites, Local Wildlife Sites and Priority Habitats (dust, water quality, disturbance)	Temporary	Slight adverse; non-significant	CEMP: buffers, dust and pollution control, surface water management	Non-significant
Construction lighting and habitat disturbance affecting bats (incl. SAC-qualifying species)	Temporary	Slight to moderate adverse; potentially significant (uncertain) without mitigation	CEMP sensitive construction lighting plan; no night-time working; habitat retention/protection	Non-significant
Construction effects on breeding birds (incl. skylark)	Temporary	Slight adverse; non-significant	Clearance outside nesting season / SQE nesting checks; skylark compensation	Non-significant
Construction effects on badger, S41 mammals, reptiles, otter and water vole	Temporary	Slight to moderate adverse; potentially significant (local) without mitigation	Precautionary measures via CEMP: phased/supervised clearance, two-stage cuts, trench escape, watercourse protection	Non-significant



Potential Effect	Nature of Effect (Permanent or Temporary)	Significance	Mitigation / Enhancement Measures	Residual Effects
Operational lighting and habitat change affecting Bath and BoA Bats SAC	Permanent	Moderate adverse; potentially significant (international, uncertain) without mitigation	Embedded sensitive lighting strategy (GN01/GN08/SPD); dark corridors; habitat retention and creation; LEMP; HRA	No adverse effect on integrity; minor to significant beneficial for bats
Operational recreational disturbance to Salisbury Plain SPA	Permanent	Slight adverse; potentially significant (international, uncertain) without mitigation	SANG provision (>=8ha/1,000 population); SAMM contribution; HRA	No adverse effect on integrity; non-significant
Operational recreational pressure on Local Wildlife Sites and Priority Habitats	Permanent	Negligible; non-significant	On-site SANG, open space and managed access; LEMP	Non-significant
Permanent habitat loss and effects on breeding birds, badger, S41 mammals, reptiles and riparian mammals	Permanent	Non-significant adverse; net beneficial	Habitat creation and management (LEMP); SuDS; integrated biodiversity features; BNG	Neutral to minor beneficial
Biodiversity Net Gain	Permanent	Beneficial	Minimum 10% BNG via LEMP (separate BNG Assessment)	Significant beneficial (biodiversity)
Cumulative and in-combination effects	Permanent	Non-significant with mitigation	SANG/SAMM; sensitive lighting; habitat creation; HRA	Non-significant

REFERENCES

Ref. 11.1: Chartered Institute of Ecology and Environmental Management (CIEEM) (2024); 'Guidelines for Ecological Impact Assessment in the UK and Ireland', CIEEM.

Ref. 11.2: UKHab Ltd (2023); 'UK Habitat Classification, Version 2.0', UKHab Ltd.

Ref. 11.3: Collins, J. (ed.) (2023); 'Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th Edition', Bat Conservation Trust.

Ref. 11.4: Institution of Lighting Professionals (2021); 'Guidance Note 01/21: The Reduction of Obtrusive Light (GN01:2021)', ILP.

Ref. 11.5: Bat Conservation Trust and Institution of Lighting Professionals (2023); 'Bats and Artificial Lighting in the UK (GN08:2023)', BCT/ILP.



Ref. 11.6: Wiltshire Council; 'Trowbridge and Westbury Bat Mitigation Supplementary Planning Document', Wiltshire Council.

Ref. 11.7: DFL (Designs for Lighting Ltd) (2026); 'Hawke Ridge Business Park, Westbury - Lighting Impact Assessment', ref. 4143-DFL-ELG-XX-RP-EO-13001.

Ref. 11.8: Ministry of Housing, Communities and Local Government (2024, amended 2025); 'National Planning Policy Framework', MHCLG.

Ref. 11.9: Wiltshire Council (2015); 'Wiltshire Core Strategy', Wiltshire Council.

Ref. 11.10: HM Government (2021); 'Environment Act 2021', The Stationery Office.