Langstone, Newport

Ecological Appraisal

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On behalf of:
United Welsh Housing Association

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Executive Summary

S1 This Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of United Welsh Housing Association (hereafter referred to as 'the Applicant'). This Appraisal considers the ecological implications of proposed development at Langstone, Newport (hereafter referred to as 'the Site'). The proposed development will comprise nine residential units with associated parking and landscaping.

S2 To establish the ecological baseline of the Site and subsequently inform a planning application submission for residential development, a desk study, Extended Phase 1 Habitat survey and further detailed surveys with respect to bats and great crested newt (*Triturus cristatus*) were completed by EDP during 2024 and 2025.

S3 With respect to habitats on-site, the Site comprises a single arable field subject to ploughing at the time of the survey, whose boundaries are delineated by hedgerows, scattered trees and scrub. A machinery shed is located within the north-west corner of the Site and an unnamed stream runs along the southern boundary. The majority of the Site comprises habitats which are of less than Local level importance, albeit with potential to support protected and notable species. The hedgerows and stream are, however, judged to be of Local level importance whilst also comprising priority habitats for Wales.

S4 With respect to further detailed surveys, the machinery shed (building **B1**) was found to support a brown long-eared (*Plecotus auritus*) night roost/feeding perch, confirmed through environmental DNA analysis of droppings collected. **B1** is not considered to be suitable for day, maternity or hibernation roosting, however. The Site also offers limited opportunities for dormouse (*Muscardinus avellanarius*) and otter (*Lutra lutra*), and is of Site level importance with respect to its potential to support a breeding bird assemblage, badger (*Meles meles*), common reptiles, common amphibians (including great crested newt), invertebrates and other notable mammal species including polecat (*Mustela putorius*) and European hedgehog (*Erinaceus europaeus*).

S5 Accordingly, EDP has provided specific proposals for the avoidance, mitigation and compensation of any predicted impacts including, where possible, the retention, protection and enhancement of those features of greater ecological importance, namely the retention of native hedgerow **H3**, non-native hedgerows **H2**, **H4**, **H5**, the majority of non-native hedgerow **H1**, scattered trees and the unnamed stream located along the southern boundary. This is in combination with the proposed provision of tree, shrub and grassland planting across the development, together with the provision of sustainable drainage features across the Site. To compensate for the required loss of building **B1**, the development proposals include the provision of an open-fronted unlit car barn/garage, allowing fly-in access for night roosting brown long-eared bats.

S6 Overall, therefore, given the scope of the proposed mitigation measures in respect of habitats and protected species, EDP considers that the proposed development is capable of compliance with relevant wildlife legislation and planning policy and can deliver net benefits for wildlife and biodiversity.

Section 1
Introduction

1.1 This Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of United Welsh Housing Association (hereafter referred to as 'the Applicant'). This Appraisal considers the ecological implications of proposed development at Langstone, Newport (hereafter referred to as 'the Site').

1.2 This report has been prepared with reference to the following key guidance:

- Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal[1];
- CIEEM Guidelines for Ecological Impact Assessment[2]; and
- British Standard: Biodiversity - Code of Practice for Planning and Development[3].

1.3 EDP is an independent environmental planning consultancy with offices in Cirencester, Cardiff and Cheltenham. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained at our website (www.edp-uk.co.uk).

SITE CONTEXT

1.4 The Site is centred approximately at Ordnance Survey Grid Reference (OSGR) ST 36814 89885. The local planning authority is Newport City Council. The location and extents of the Site are illustrated on **Plans EDP 1-3** and described in the material supporting the planning application.

1.5 The Site measures circa 0.7 hectares (ha) and is located within Langstone, a village north-east of Newport. It comprises a single field subject to regular agricultural management, currently comprising arable ley. Other features on-site include boundary hedgerows, scattered trees and scrub. A machinery shed (building **B1**) is located within the north-west corner of the Site and an unnamed stream runs along the southern boundary, culverted beneath the current vehicular entrance to the Site. The Site is directly surrounded by existing residential development to the north, east, south and west, with an area of public open space located immediately adjacent to the west of the southern extent of the Site. Land use within the wider landscape includes agricultural fields with parcels of woodland to the north, east and south with a golf course to the north-west and the city of Newport to the south-west.

[1] CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

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

[3] BSI (2013) *Biodiversity - Code of Practice for Planning and Development*. BS 42020:2013. British Standards Institute.

DEVELOPMENT PROPOSALS

1.6 In brief, the proposed development comprises the construction of nine residential units with associated parking and landscaping.

1.7 The proposals are to be the subject of a planning application, and the Site Layout is provided as **Appendix EDP 1** to this report.

1.8 The ecological sensitivities of the Site have influenced the final layout through an iterative design process. Thus, the masterplan incorporates a degree of 'inherent' mitigation to avoid or reduce the severity of potential ecological impacts.

SCOPE OF THE ASSESSMENT

1.9 This Ecological Appraisal describes the current ecological interest within and around the Site, which has been identified through standard desk- and field-based investigations. It then considers the potential ecological impacts and opportunities for ecological enhancement based on the final masterplan (incorporating inherent mitigation) in the context of relevant legislation and planning policy. Finally, this Appraisal identifies the necessary additional measures to avoid, mitigate or provide compensation for potential impacts, and the mechanisms for securing such measures.

1.10 The remainder of this report is structured as follows:

- **Section 2** summarises the methodology employed in determining the baseline ecological conditions within and around the Site (with further details provided within Appendices and on plans where appropriate);
- **Section 3** summarises the baseline ecological conditions (with further details also provided within appendices and on plans where appropriate) and identifies and evaluates any pertinent ecological features/receptors;
- **Section 4** describes how the development design has responded to the ecological constraints and any embedded/inherent mitigation, and then considers the potential impacts of the proposals on pertinent ecological features;
- **Section 5** proposes mitigation and enhancement measures for the current and possible future planning stages, in the context of relevant legislation and planning policy, and mechanisms to secure their delivery; and
- **Section 6** summarises the Mitigation and Enhancement Strategy for the Site and provides the overall conclusions of the Appraisal.

Section 2
Baseline Methodology

2.1 This section of the Ecological Appraisal summarises the methodologies employed in determining the baseline ecological conditions within and around the Site. This has been undertaken by appropriately qualified ecologists using relevant best practice methodologies wherever possible. Reasons for any departure from best practice methodology are given and normally relate to the timing of EDP's commission and/or the availability of access to parts of the Site or wider study area. Full details of the techniques and process adopted are, where appropriate, provided within appendices and on plans to the rear of this report.

DESK STUDY

2.2 The desk study is an important element of undertaking an initial ecological appraisal of a site proposed for development, which entails the initial collation and review of contextual information, such as designated sites, together with known records of important habitats or species.

2.3 The desk study involved collating biodiversity information from the following sources:

- South East Wales Biological Records Centre (SEWBReC); and
- Multi-Agency Geographic Information for the Countryside (MAGIC) website[4].

2.4 The desk study was undertaken during September 2024 and involved obtaining the following information:

- International statutory designations (10km radius around the Site);
- National statutory designations and non-statutory local sites (2km radius);
- Annex II bat species[5] records (6km radius);
- All other protected, priority and notable species records (2km radius);
- Ancient woodland units (2km radius); and
- Phase 1 Habitats (2km radius).

2.5 These search areas are considered sufficient to cover the potential zones of influence[6] of the proposed development in relation to designated sites, habitats and species.

[4] www.magic.gov.uk

[5] Bat species listed in Annex II of the EC Habitats Directive, namely Greater horseshoe, Lesser horseshoe, Barbastelle and Bechstein's bats

[6] Zone of Influence - the areas and resources that may be affected by the proposed development

2.6 Newport City Council's adopted Local Development Plan (LDP) 2011-2026[7] and Supplementary Planning Guidance relating to Wildlife and Development, and Trees, Woodland, Hedgerows and Development Sites, were also reviewed as part of the desk study to understand local priorities with regard to protection of ecological features/biodiversity.

EXTENDED PHASE 1 HABITAT SURVEY

2.7 The main habitats within the Site, together with their dominant/characteristic plant species, were identified by undertaking an Extended Phase 1 Habitat Survey in September 2024.

2.8 Full details of the habitat survey methodology are provided within **Appendix EDP 2**.

DETAILED (PHASE 2) SURVEYS

2.9 The scope of Phase 2 surveys undertaken within the Site was defined following the initial studies described above.

2.10 The surveys 'scoped in' based upon the findings of the Extended Phase 1 Habitat survey are summarised in turn below, with reference to sources of further detailed information where applicable.

Bat Surveys

2.11 During the Extended Phase 1 Habitat survey, a machinery shed present within the Site was identified as having potential to support roosting bats whilst trees within/adjacent to the Site were also considered for their potential to support roosting bats. The following surveys for bats were therefore undertaken, with reference to best practice guidelines[8]:

Bat Roost Inspection Surveys – Trees:

- Preliminary ground level roost assessment of trees for bat roosting suitability, undertaken on 17 September 2024.

Bat Roost Inspection Surveys – Buildings/Built Structures:

- Preliminary roost assessment of the machinery shed (**B1**) to search for evidence of bats and determine the suitability of features to support roosting, undertaken on 17 September 2024.

2.12 Full details of the bat survey methodologies, and any limitations encountered, are provided in **Appendix EDP 3**.

[7] Newport City Council (2015). Newport City Council Adopted Local Development Plan 2011-2026. Available at: https://www.newport.gov.uk/documents/Planning-Documents/LDP-2011-2026/LDP-Adopted-Plan-January-2015.pdf. [Accessed on 22 November 2024].

[8] Collins, J. (ed.) (2023). *Bat Surveys: for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London

Badger Survey

2.13 During the Extended Phase 1 Habitat survey the Site was found to support suitable foraging habitats for badger (*Meles meles*). A survey to record any evidence of badger activity within the Site was therefore undertaken on 17 September 2024 during the Extended Phase 1 Habitat survey.

2.14 During the survey, any signs of badger activity such as holes, latrines, trails, snuffle holes and hairs on fencing or vegetation were recorded. Where holes of a size and shape consistent with badgers were identified, the following signs of badger activity were searched for in order to determine whether they were currently in use:

- Fresh spoil outside entrances;
- Bedding material (typically dried grass) outside entrances;
- Holes being cleared of leaf litter/other debris;
- Badger guard hairs; and
- Footprints and fresh tracks leading to/from the holes.

Limitations

2.15 Badger surveys can be undertaken at any time of year and are, therefore, not limited by seasonal factors.

2.16 There were no limitations to the survey effort.

Great Crested Newt Survey

2.17 An initial assessment of the Site's suitability to support great crested newt (*Triturus cristatus*) was undertaken during the Extended Phase 1 Habitat survey and with reference to desk study records as described above. No waterbodies were identified within the boundaries of the Site. However, three waterbodies were identified adjacent and within a 500m radius of the Site, of which all three are within 250m, in addition to an unnamed stream located south of the Site.

2.18 Waterbodies within 500m of the Site (but not separated from the Site by significant dispersal barriers) to which access was granted, were subject to a Habitat Suitability Index (HSI) Assessment[9] in accordance with relevant best practice guidance.

[9] Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus). Herpetological Journal 10 (4), 143-155.

ECOLOGICAL SURVEYS SCOPED OUT

2.20 **Table EDP 2.1** summarises other survey types which, whilst occasionally required to inform a planning submission for development sites, are not deemed to be necessary/appropriate in this case.

Table EDP 2.1: Ecology Surveys Scoped Out

Survey Type	Reasons for Scoping Out
Detailed Botanical Survey	The Site comprises a recently ploughed field likely managed as arable lay, with hedgerows dominated by non-native species present along the boundaries of the Site. Such habitats were typically species poor and lacking in structural diversity. No notable plant species were recorded during the Extended Phase 1 Habitat survey. No further assessment of floristic communities is, therefore, considered necessary to inform a planning application.
Bats (Roost Emergence survey)	Given building **B1** is a confirmed brown long-eared bat night roost/feeding perch with negligible suitability for day roosting or breeding, no further emergence surveys are considered necessary.
Bats (Commuting/Foraging)	Given the small extent and low suitability of the Site for bat commuting/foraging, no further survey is proposed, with appropriate enhancement measures instead proposed, to include habitat retention and creation measures, together with the inclusion of sensitive lighting and appropriate planting to benefit the local bat assemblage likely using the Site.
Breeding and Wintering Birds	Given the small size of the Site and nature of those habitats supported therein, no further breeding or wintering bird surveys are recommended in this instance. Precautionary measures of clearance during the pre-construction phases of development are instead recommended to ensure no harm/disturbance to nesting birds (if found to be present).
Dormouse (*Muscardinus avellanarius*)	Given the small extent of the Site and dominance of arable land, together with surrounding land use, comprising residential development and roads, opportunities for dormouse, should they be present within the locality, are considerably limited, and confined to the hedgerow boundaries proposed for retention. Precautionary clearance methodologies alongside habitat enhancement and creation measures are therefore proposed.

Survey Type	Reasons for Scoping Out
Otter (*Lutra lutra*)	A short section of an unnamed watercourse runs along the southern boundary of the Site. This feature is relatively narrow, of variable flow and culverted in a number places, limiting its potential usage by otter for opportunistic dispersal. Given its location outside of the proposed development footprint, no further survey is required although sensitive working methodologies are recommended to ensure no harm/disturbance to a population if present in the wider landscape.
Water Vole	Given the sub-optimal nature of the watercourse combined with the absence of connectivity with suitable habitat across the wider landscape, water vole is presumed absent from the Site.
Reptiles	Suitable terrestrial habitat is limited to the field margins and site boundaries. Given the small extent of the Site and limited suitability of those habitats supported however, along with ongoing agricultural management, no further surveys are recommended. Precautionary measures of clearance during the pre-construction phases of development are instead recommended to ensure no harm/disturbance to reptiles (if found to be present).
Invertebrates	Habitats present on-site are considered likely to support a limited assemblage of common and widespread invertebrate species only. In respect of the relatively small size of the Site, dominated by recently ploughed arable lay no further survey is considered necessary in this instance.

Section 3
Baseline Results

3.1 This section of the Ecological Appraisal summarises the baseline ecological conditions determined through the course of desk-based and field-based investigations described in **Section 2**. In particular, this section identifies and evaluates those ecological features/receptors that lie within the Site's potential zone of influence, and which are pertinent in the context of the proposed development. Further technical details are, where appropriate, provided within appendices and on plans to the rear of this report.

3.2 Where a particular ecological feature/receptor has been confirmed to be present, or presence is inferred based on habitat suitability, its ecological importance is assessed. The level of ecological importance assigned to each ecological feature is based upon established geographical value systems and the uses the following scale: International and European (highest) > National > Regional > County > District > Local > Negligible (lowest).

DESIGNATED SITES

3.3 Information regarding designated sites was obtained during the desk study. Statutory designations (those receiving legal and planning policy protection) and non-statutory designations (those receiving planning policy protection only) are discussed in turn below.

Statutory Designations

3.4 Statutory designations represent the most significant ecological receptors. Internationally important statutory designations include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites (including potential SPAs, possible SACs and proposed Ramsars). These designations are protected under the *Conservation of Habitats and Species Regulations* 2017 (as amended) (hereafter referred to as the '*Habitats Regulations'*).

3.5 Nationally important statutory designations include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). NNRs are also SSSIs, both of which are protected under the *Wildlife and Countryside Act* 1981 (as amended).

3.6 The legal protection of SACs, SPAs, Ramsar Sites and SSSIs is also reflected in policies included within Planning Policy Wales 12 (February 2024) (PPW 12) and within Technical Advice Note 5: *Nature Conservation and Planning* (TAN5), which are a material consideration during the planning application process. Further consideration is afforded to the protection SSSIs within recent updates to Chapter 6 of PPW 12, published during October 2023, with increased clarity on the position for site management and exemptions for minor development necessary to maintain a 'living' landscape, and contribute to an ecologically coherent and resilient network of protected sites and linkages between these. Other development is considered unacceptable as a matter of principle.

3.7 Local level statutory designations include Local Nature Reserves (LNRs) and are generally considered to be of importance at the County level or lower. LNRs are designated under the *National Parks and Access to the Countryside Act* 1949, however, protection of LNRs is given via local planning policies and/or by-laws.

3.8 Statutory designations are also recognised as key natural assets within the within the Newport City Council LDP 2011-2026 (adopted January 2015). Of pertinence, General Policy 5 (GP5 General Development Principle – Natural Environment) states:

"Development will be permitted where, as applicable:

ii) The proposals demonstrate how they avoid, or mitigate and compensate negative impacts to biodiversity, ensuring that there are no significant adverse effects on areas of nature conservation interest including international, European, national, Welsh Section 42 and local protected habitats and species, and protecting features of importance for ecology"

3.9 No part of the Site is covered by any statutory designations. However, there are four internationally important designations within 10km of the Site and two nationally important designations within 2km of the Site. These sites are summarised in **Table EDP 3.1** and illustrated on **Plan EDP 1**.

Table EDP 3.1: Statutory Designations Within the Site's Potential Zone of Influence

Designation	**Approximate Distance from Site**	**Interest Feature(s)**
Internationally Important Statutory Designated Sites (within 10km of the Site)		
River Usk SAC	Closest point 1.8km north-west, also located to the north, west and south-west.	The SAC is designated as a watercourse of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation, an Annex I habitat. The site is also designated for populations of sea lamprey (*Petromyzon marinus*), river lamprey (*Lampetra fluviatilis*) and brook lamprey (*Lampetra planeri*), twaite shad (*Allosa fallax*), Atlantic salmon (*Salmo salar*), bullhead (*Cottus gobio*) and otter.

Designation	Approximate Distance from Site	Interest Feature(s)
Severn Estuary SPA, SAC and Ramsar	Closest point 7.5km south-west, also located south, south-east and east.	SPA: Designated for supporting populations of European importance, overwintering Bewick's swan (*Cygnus columbianus bewickii*) and migratory curlew (*Numenius arquata*), dunlin (*Calidris alpina*), pintail (*Anas acuta*), redshank (*Tringa tetanus*) and shelduck (*Tadorna tadorna*). The site also supports a population of European importance of passage ringed plover (*Charadrius hiaticula*) and is a wetland of international importance. SAC: Designated for its assemblage of Annex I habitats including: estuaries; mudflats and sandflats not covered by seawater at low tide; and Atlantic salt meadow. Also, a qualifying feature are its populations of twaite shad (*Allosa fallax*), sea lamprey (*Petromyzon marinus*) and river lamprey (*Lampetra fluviatilis*). Ramsar: Designated for its immense tidal range; presence of unusual estuarine communities, reduced diversity and high productivity; populations of migratory fish; bird assemblages of international importance; and fish species associated with the whole estuarine and river system.
Nationally Important Statutory Designated Sites (within 2km of the Site)		
Langstone-Llanmartin Meadows SSSI	1.3km east.	The site comprises two unimproved wet meadows located in the same hydrological unit which are the remnants of a formerly more extensive low-lying area of meadow and fen. Together they exemplify a wide range of mesotrophic grassland and wetland community types. The site is also important for the large number of locally rare species which are present, most notably meadow thistle (*Cirsium dissectum*), fen orchid (*Dactylorhiza praetermissa*), fragrant orchid (*Gymnadenia conopsea*), fen bedstraw (*Galium uliginosum*) and blunt-flowered rush (*Juncus subnodulosus*).

Designation	Approximate Distance from Site	Interest Feature(s)
River Usk (Lower Usk)/ Afon Wysg (Wysg Isaf) SSSI	Closest point 1.8km north-west, also located to the north, west and south-west.	The River Usk comprises a large, linear ecosystem which acts as an important wildlife corridor, an essential migration route and key breeding area for many nationally and internationally important species. The Usk is of special interest as a fine example of a river running over sandstones and for its associated plant and animal communities. Its character spans a wide range of types from an upland, base-poor stream to a large lowland river with extensive tidal reaches. Its overall diversity is a product of its underlying geology, soil type, adjacent land-use and fluvio-geomorphological regime.

Non-statutory Designations

3.10 Non-statutory designations are also commonly referred to in planning policies as 'local sites', although such designations are typically considered to be of importance at a County level. In Newport, such designations are termed Sites of Importance for Nature Conservation (SINCs). Additional sites such as non-designated nature reserves (e.g., Wildlife Trust nature reserves) and Ancient Semi-natural Woodland (ASNW) are considered here when not covered by other designations.

3.11 The importance of SINCs is also recognised in PPW 12 and in the adopted LDP for Newport, specifically Policy CE8 (Locally Designated Nature Conservation and Geological Sites), which states:

"Proposals affecting locally designated sites will only be permitted where:

i) There would be no overall loss of the nature conservation resource for which the site has been designated;

ii) There would be no significant adverse effect on the geological interest of the site;

iii) Appropriate mitigation or compensatory measures can be achieved".

3.12 No part of the Site is covered by any non-statutory designations. There are 18 SINCs located within 2km of the Site, as summarised in **Table EDP 3.2** and shown on **Plan EDP 2**.

Table EDP 3.2: Non-Statutory Designations Within 2km of the Site

Designation	Approximate Distance from Site	Interest Feature(s)
Coed Rhedyn/ Scotch Wood SINC	500m south-west.	ASNW.
Coldra Wood SINC	790m west.	ASNW on base-rich soils with rich ground flora.
Flat Wood SINC	840m south-west.	Remnants of ASNW.

Designation	Approximate Distance from Site	Interest Feature(s)
Delbury Grasslands SINC	890m east.	Species-rich semi-improved neutral grassland.
New Wood East SINC	1.0km north.	ASNW.
Stock Wood (East & West) SINC	1.1km south-east.	ASNW.
Monk's Ditch SINC	1.1km south-east.	Linear freshwater stream used by otters.
Hartridge Fields SINC	1.3km south.	Calcareous grassland.
Kemeys Graig SINC	1.3km north-east.	Large ancient woodland site with large, replanted areas and areas of ASNW with areas of bracken on woodland edge, all of which support rich ground flora including abundant bluebells.
Little Bulmore Wood SINC	1.3km north-west.	ASNW.
New Wood West SINC	1.4km north.	ASNW.
Underwood Field SINC	1.4km south-east.	Unimproved neutral and marshy grassland with pale sedge (*Carex pallescens*).
Hartridge Wood SINC	1.6km south-west.	ASNW.
Ringland Wood SINC	1.6km south-west.	ASNW.
Dockwell Wood SINC	1.7km south.	ASNW.
Coed-Y- Caerau Fields North and South SINC	1.8km north-east.	Unimproved neutral grassland with bracken slopes with semi-improved neutral grassland with scattered trees.
The Routes Wood SINC	1.8km south-east.	ASNW.
Bulmore Road Fields SINC	2.0km west.	Semi-improved acidic grassland.

3.13 Several areas of ASNW units were also identified within 2km of the Site, including an approximately 0.2ha area of ASNW 290m north-east of the Site.

HABITATS

3.14 There are several mechanisms by which habitats that lie outside of statutory and non-statutory designations are protected, or by which their importance is recognised at a national level. This includes the following:

- 'Important' hedgerows are protected from removal (out with the planning process) by the *Hedgerows Regulations* 1997;

- Certain habitats are listed priority habitats, which public authorities in Wales must seek to maintain and enhance (to promote ecosystem resilience) as part of policy or decision making under Section 6 of the *Environment (Wales) Act* 2016; and in so doing, deliver net benefits to biodiversity in accordance with Chapter 6 of PPW 12 through the adoption of a

stepwise approach by ensuring that any adverse environmental effects are firstly avoided, then minimized, mitigated, and as a last resort, compensated for. Enhancement must be secured by delivering a biodiversity benefit primarily on a site or immediately adjacent to the site, over and above that required to mitigate or compensate for any negative impact;

- PPW 12 includes a presumption against development which results in significant harm to biodiversity and ecosystem functioning, or results in the loss of irreplaceable habitat[11]. PPW 12 also sets out how planning authorities should fulfil their 'Biodiversity and Resilience of Ecosystems Duty' as required by the *Environment (Wales) Act* 2016. Pertinent to this, Chapter 6 of PPW 12 also afford further consideration to the protection of trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial green infrastructure function;

- Chapter 6 of PPW 12 places further emphasis on adopting a proactive approach to integration of green infrastructure within development plans/proposals, adopting building with nature standards and in so doing, supporting the delivery of ecosystem services and net benefits to biodiversity across site boundaries; and

- The importance of protecting habitats, and networks of habitats, is reflected in the adopted LDP for Newport, specifically Policies GP5 and CE8.

3.15 The distribution of different habitat types within and adjacent to the Site is illustrated on **Plan EDP 3**. The habitats are further described in **Appendix EDP 2** alongside illustrative photographs and species lists. A summary and qualitative assessment of these habitats is provided in **Table EDP 3.3**.

[11] Irreplaceable habitats are technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed. Habitats noted as irreplaceable within PPW 12 are ancient woodland, semi-natural woodland, and ancient, veteran and heritage trees.

Table EDP 3.3: Summary of Habitats Within the Site

Habitat Type	Distribution	Intrinsic Ecological Importance*
Arable	The single field comprising the Site.	Negligible.
Non-native Hedgerows	Hedgerows **H1**, **H2**, **H4** and **H5**.	Site.
Native Hedgerow	Hedgerow **H3**.	Local, priority habitat.
Scattered Broadleaved Trees	Within and/or adjacent to the boundary hedgerows.	Site.
Scattered Scrub	Scattered at the north-west corner of the Site, adjacent to building **B1**.	Site.
Running Water	Unnamed watercourse aligning southern boundary of the Site.	Local, priority habitat.
Building	Building **B1** within the north-west corner of the Site.	Negligible.

*Importance irrespective of any protected, priority or other notable species which may be present.

3.16 As noted within **Table EDP 3.3**, the majority of the Site is made up of habitats which are of less than Local intrinsic importance. Although native hedgerows, scattered trees and the unnamed stream are judged to be of Local level importance whilst also comprising priority habitats for Wales. Furthermore, a number of the habitats, including those which are of limited intrinsic importance, also require consideration in relation to their importance in maintaining populations of protected, priority or other notable species. This is discussed further below.

PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

3.17 Certain species receive legal protection in the UK and are commonly known as 'protected species'. In reality, the level of protection for different species varies considerably, from protection solely against 'killing and injury' to full protection of the species and their places of refuge. Where pertinent, details of legal protection afforded to species/species-groups are provided below.

3.18 In addition to protected species there are other species/species-groups that do not receive legal protection, but which are notable owing to their conservation status. This includes priority species, which public authorities in Wales must seek to maintain and enhance as part of policy or decision making under Section 7 of the *Environment (Wales) Act* 2016. PPW 12 recognises species as an important component of biodiversity, as does the adopted LDP for Newport, specifically Policies GP5 and CE8.

3.19 The likelihood of presence, or confirmed presence, of protected, priority or other notable[12] wildlife species within the Site is summarised below with reference to desk study records, habitat suitability and detailed surveys where relevant. Further details are made available within appendices and plans where referenced.

[12] Notable species are those which are not legally protected but are formally identified as being of conservation concern.

Breeding and Wintering Birds

3.20 All wild birds, their nests and eggs are protected under the *Wildlife and Countryside Act* 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is in use or being built;
- Take, damage or destroy the egg of any wild bird; or
- To have in one's possession or control any wild bird (dead or alive) or egg, or any part of a wild bird or egg.

3.21 In addition, further protection is afforded to those wild bird species listed on Schedule 1 of the *Wildlife and Countryside Act* 1981 (as amended), prohibiting any intentional or reckless disturbance to these species while it is nest building, or at a nest containing eggs or young, or to recklessly disturb the dependent young of such a bird. A number of species are also included as priority species.

3.22 Wintering birds do not receive direct legal protection; however, they may form part of a protected assemblage originating from a statutory designation in the vicinity.

3.23 A large number of records of bird species were retrieved during the desk study, including records of *Wildlife and Countryside Act* 1981 (as amended) Schedule 1 species, species listed on Section 7 of the *Environment (Wales) Act* 2016, and records of species included on the latest Red and Amber lists of Birds of Conservation Concern in Wales[13] .

3.24 Records of Schedule 1 species within 2km of the Site include barn owl (*Tyto alba*), Cetti's warbler (*Cettia cetti*), fieldfare (*Turdus pilaris*), goshawk (*Accipiter gentilis*), kingfisher (*Alcedoatthis*), peregrine (*Falco peregrinus*), red kite (*Milvus milvus*) and redwing (*Turdus iliacus*).

3.25 A number of other priority species have also been recorded within 2km, including records of Red listed species include black-headed gull (*Chroicocephalus ridibundus*), goldcrest (*Regulus regulus*), greenfinch (*Chloris chloris*), herring gull (*Larus argentatus*), kestrel (*Falco tinnunculus*), lesser black-backed gull (*Larus fuscus*), linnet (*Linaria cannabina*), meadow pipit (*Anthus pratensis*), starling (*Sturnus vulgaris*), swift (*Apus apus*) and whitethroat (*Curruca communis*).

3.26 Amber listed species include bullfinch (*Pyrrhula pyrrhula*), common sandpiper (*Actitis hypoleucos*), dunnock (*Prunella modularis*), great black-backed gull (*Larus marinus*), green woodpecker (*Picus viridis*), grey wagtail (*Motacilla cinerea*), house sparrow (*Passer domesticus*), mistle thrush (*Turdus viscivorus*), skylark (*Alauda arvensis*) and snipe (*Gallinago gallinago*).

[13] Johnstone, I.G., Hughes, J., Balmer, D.E., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G. & Taylor, R.C. 2022. Birds of Conservation Concern Wales 4: the population status of birds in Wales. Milvus 2:1.

3.27 Mature tree standards, building **B1**, scrub and hedgerows within and adjacent to the Site provide suitable features for nesting birds. Additionally, mature trees, scrub and hedgerows within the Site offer additional habitat for breeding birds more generally. The arable field within the Site provides an additional foraging resource to a breeding bird assemblage. Given the relatively small size of the Site, however, the likelihood of a significant bird assemblage utilising the Site is considered to be limited.

3.28 Overall, a breeding bird assemblage is considered to be of no more than Site level importance whilst a wintering bird assemblage is considered to be of negligible importance.

Bats

3.29 All species of British bat are listed as European Protected Species (EPS) on Schedule 2 of the *Habitats Regulations*. This affords strict protection to bats and their roosts, and makes it an offence to:

- Deliberately capture, injure or kill a wild animal of an EPS;
- Deliberately disturb wild animals of an EPS wherever they are occurring, in particular, any disturbance which is likely to impair their ability to survive, to breed or reproduce, to significantly affect the local distribution or abundance of the species to which they belong, or in the case of hibernating or migratory species, to hibernate or migrate; or
- Damage or destroy a breeding site or resting place of a wild animal of an EPS.

3.30 Additional protection for bats is also afforded under the *Wildlife and Countryside Act* 1981 (as amended), making it an offence to intentionally or recklessly disturb bats whilst they are occupying a structure or place which is used for shelter or protection, or to obstruct access to this structure or place. In addition, soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared bat (*Plecotus auritus*), greater horseshoe bat (*Rhinolophus ferrumequinum*), barbastelle bat (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteinii*), noctule (*Nyctalus noctula*), and lesser horseshoe bat (*Rhinolophus hipposideros*) are also listed as priority species.

3.31 The desk study returned multiple records for bats within the 2km search radius around the Site. These records relate to at least nine different species, including: brown long-eared bat, common pipistrelle (*Pipistrellus pipistrellus*), lesser horseshoe bat, Nathusius' pipistrelle (*Pipistrellus nathusii*), Natterer's bat (*Myotis nattereri*), noctule, serotine (*Eptesicus serotinus*), soprano pipistrelle and whiskered bat (*Myotis mystacinus*), in addition to unspecified records of long-eared (*Plecotus* sp.), *Myotis* sp., and *Pipistrellus* sp., bats.

3.32 In addition to lesser horseshoe bat, records for other Annex II species occurring within 6km of the Site include barbastelle bat.

3.33 The closest record of confirmed bat roosting is for whiskered bat located approximately 1.3km west of the Site. Of pertinence is a maternity roost of whiskered bats circa 1.9km west of the Site and a day roost of over 100 soprano pipistrelle bats circa 1.7km north-west. Further confirmed bat roosts include 3 common pipistrelle day roosts (closest 1.5km south-east), one noctule roost 1.5km south-east, a further 3 soprano pipistrelle day roosts (closest 1.5km

south-east) and 13 lesser horseshoe bat roosts (closest 1.7km north-west). In addition to 1 possible roost records of soprano pipistrelle roost 1.2km south-west and 1 possible Pipistrellus sp., bat roost 1.5km south-east of the Site.

Bat Roosting

Trees

3.34 With respect to trees, no trees were identified with suitable features for bat roosting.

Buildings/Built Structures

3.35 The single building within the Site (**B1**, a machinery shed) was identified to have suitable features for bat roosting, with it confirmed as a brown long-eared bat night roost/feeding perch based on the presence of droppings and feeding remains. The building is not considered to be suitable for day/maternity/hibernation roosting however. Full details are provided within **Appendix EDP 3** with the building location shown on **Plan EDP 3**.

Dormouse

3.36 Hazel dormouse is an EPS receiving strict protection under the *Habitats Regulations* as summarised above in respect of bats. Additional protection is also afforded to this species under the *Wildlife and Countryside Act* 1981 (as amended) as summarised above in respect of bats. This species is also listed as a priority species.

3.37 During the desk study, 32 records for dormouse were returned within 2km of the Site's boundaries. The closest dormouse record is from 2014, located approximately 350m north of the Site within woodland between the A449 and Catsash Road, with direct habitat connectivity to the Site. Multiple dormouse records were also returned from 2016-2021 in association with the strip of vegetation which delineates the A449, located approximately 450m-2km north of the Site, with additional records extending north along the length of the A449 outside of the 2km desk study search area. Of further pertinence, are records of dormouse from 2016-2018 located approximately 750m west of the Site near Junction 24 of the M4, also situated south-east of the A449, located within ASNW also directly connected to the Site.

3.38 The Site is dominated by arable land of negligible suitability to dormouse, although boundary hedgerows could offer some, albeit limited, opportunities for opportunistic dispersal and foraging should a population be present in the locality. However, such habitats are surrounded by existing residential development to the immediate west, north and east of the Site, with Chepstow Road bordering its southern boundary. The Site is therefore largely isolated from suitable dormouse habitat present within the wider landscape and thus considered sub-optimal overall.

Otter

3.39 Otter is an EPS receiving strict protection under the *Habitats Regulations* as summarised above in respect of bats. Additional protection is also afforded to this species under the *Wildlife and Countryside Act* 1981 (as amended) as summarised above in respect of bats. This species is also listed as a priority species.

3.40 Within 2km of the Site, five records of otter were returned, the closest record being of a spraint located on a culvert 230m north-west from the Site.

3.41 An unnamed stream flows along the southernmost boundary of the Site, parallel to Chepstow Road. The channel is approximately 2m wide and supports a variable flow, its substate characterised by cobbles with boulders in the margin of the stream and some patches of gravel. The watercourse is heavily shaded by the trees and bound by a hedgerow and bramble scrub. Whilst such habitat could offer some suitable cover for otter, this feature is otherwise considered sub-optimal, with usage likely limited to opportunistic dispersal during periods of heavy rainfall. Additionally, the stream is culverted to facilitate the existing access into the Site, in addition to further culverted sections present to the immediate west and east of the Site to facilitate access into development adjacent. Such culverting likely disrupts dispersal opportunities. No evidence of this species, including field signs and potential resting places/holts, were identified during the Extended Phase 1 Habitat survey. In the context of the Site and habitats supported therein therefore, otter is considered to be of Site level importance.

Water Vole

3.42 Water vole and their burrows receive protection under Schedule 5 of the *Wildlife and Countryside Act* 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take (capture) a water vole;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a water vole uses for shelter or protection; and
- Intentionally or recklessly disturb water voles while they are in a place of shelter or protection.

3.43 Water vole is also listed as a priority species.

3.44 No records of water vole were returned within 2km of the Site's boundaries.

3.45 The Site itself is considered sub-optimal for this species. Burrowing and foraging opportunities are also significantly limited. Given the sub-optimal nature of the watercourse combined with the absence of connectivity with suitable habitat across the wider landscape, water vole is presumed absent from the Site.

Badger

3.46 Badgers and their setts are protected under the *Protection of Badgers Act* 1992, which makes it an offence (*inter-alia*) to:

- Wilfully kill, injure, take, or cruelly ill-treat a badger; and
- Damage or interfere with a sett, by doing one of the following things:
    - Damage a badger sett or any part of it;
    - Destroy a badger sett;

- Obstruct access to, or any entrance of, a badger sett;
- Cause a dog to enter a badger sett; or
- Disturb a badger when it is occupying a sett.

3.47 The 1992 Act defines a badger sett as "*any structure or place which displays signs indicating current use by a badger*".

3.48 The protection afforded to badgers is primarily due to animal welfare issues and history of persecution rather than concerns over their unfavourable nature conservation status.

3.49 Within 2km of the Site, 10 records of badger were returned.

3.50 No evidence of badger was identified during the Extended Phase 1 Habitat survey. However, scrub, hedgerow boundaries and arable field within the Site offers opportunities for badger foraging and sett building. The population of badger potentially occurring on the Site are considered to be of Site level importance.

Other Mammal Species

3.51 Records of the following priority mammal species were returned within 2km of the Site:

- Polecat (*Mustela putorius*) – a single record returned, approximately 1.4km from the Site; and
- European hedgehog (*Erinaceus europaeus*)[14] – 15 records returned, the closest record being 90m north of the Site. The majority of the other records are in association with residential housing within Langstone and Newport.

3.52 The Site encompasses a range of suitable foraging and breeding habitats for these species, with the hedgerow and scrub habitat in particular providing suitable foraging resource and habitat for breeding and hibernation. The populations of polecat and hedgehog potentially occurring on the Site are therefore considered to be of Site level importance.

Great Crested Newt and Other Amphibian Species

3.53 Great crested newt is an EPS receiving strict protection under the *Habitats Regulations* as summarised above in respect of bats. Additional protection is also afforded to this species under the *Wildlife and Countryside Act* 1981 (as amended) as summarised above in respect of bats. This species is also listed as a priority species.

3.54 Other legally protected amphibians are rare and have a very restricted distribution[15] , however, common toad (*Bufo bufo*) is a widespread species which is listed as a priority species.

[14] Hedgehogs are also protected from capture or killing by specific methods under Schedule 6 of the *Wildlife and Countryside Act* 1981 (as amended).

[15] Natterjack toad (*Epidalea calamita*) and Northern pool frog (*Pelophylax lessonae*) are EPS, protected under the *Wildlife and Countryside Act* 1981 (as amended) and priority species.

3.55 A single record of great crested newt was returned within 2km of the Site, approximately 1.7km east of the Site. A single record of an unspecified newt species (*Lissotriton* sp.) was also returned, 1.7km east of the Site.

3.56 The desk study assessment, using Ordnance Survey (OS) mapping and online resources, identified at least three waterbodies within 500m of the Site, including a swale/attenuation feature 10m to the immediate west of the Site in association with adjacent residential development, and two waterbodies situated circa 25m east of the Site either side of Stockwood View Road, in association with a foul water pumping station compound.

3.57 The Site is otherwise bound by the unnamed stream along its southern boundary, with other tributaries situated to the north and south of the Site. Such features are considered unsuitable for a great crested newt and other common amphibians however due to their fast-flowing nature and likely presence of fish (predator) populations.

3.58 The full results of the great crested newt surveys are detailed in **Appendix EDP 4** and summarised in **Table EDP 3.4**. The locations of the surveyed waterbodies are illustrated on **Plan EDP 3**.

Table EDP 3.4: Great Crested Newt Survey Results

Waterbody Reference Number	Distance to Site	HSI Result
WB1	10m west.	0.54 – below average.
WB2a	25m east.	No access permitted.
WB2b	25m east.	No access permitted.

3.59 With respect to terrestrial habitat within the Site, scrub and hedgerows offer some, albeit limited, refuge, foraging and dispersal opportunities for great crested newt and other common amphibians. Such habitats are limited in extent and isolated in nature, being surrounded by residential development. The arable field dominating the Site is otherwise considered of negligible value for this species, being subject to regular disturbance through ploughing and lacking structural and botanical diversity.

3.60 Given the suboptimal nature of those terrestrial habitats present on-site, and with off-site waterbodies only present to the south of the Site, coupled with the distance of known records for this species, movement of great crested newt across the Site itself is considered unlikely. Great crested newt is therefore unlikely to pose a constraint to proposed development of the Site. Nevertheless, acknowledging the limitations of the survey effort, populations of great crested newt and other amphibian species may occur within the locality and are therefore considered to be of Site level importance.

Reptiles

3.61 All species of common reptile, namely common lizard (*Zootoca vivipara*), slow-worm (*Anguis fragilis*), grass snake (*Natrix helvetica*) and adder (*Vipera berus*), receive at least limited protection from harm under the *Wildlife and Countryside Act* 1981 (as amended), making it an offence to cause intentional killing and injuring of these species. In addition, these species are also listed as priority species.

3.62 A single reptile record was returned within 2km of the Site, relating to adder approximately 1.9km north of the Site.

3.63 Hedgerow boundaries and scrub offer some, albeit limited, opportunities for refuge, foraging and dispersal, being limited in extent and with little connectivity to more suitable habitats within the wider landscape. Additionally, the arable field is considered unsuitable to a reptile population given its poor structural and botanical diversity offering limited/no cover from predators or potential foraging opportunities.

3.64 Nevertheless, given the widespread distribution of common reptile species, presence of low numbers of individuals is possible. Common reptiles are therefore considered to be of Site level importance.

Invertebrates

3.65 The desk study returned multiple records for notable invertebrate species within 2km of the Site. These include the priority species august thorn (*Ennomos quercinaria*), blood-vein (*Timandra comae*), brindled beauty (*Lycia hirtaria*), buff ermine (*Spilosoma lutea*), cinnabar (*Tyria jacobaeae*), mouse moth (*Amphipyra tragopoginis*), pretty chalk carpet (*Melanthia procellata*), shrill carder bee (*Bombus sylvarum*) and small phoenix (*Ecliptopera silaceata*).

3.66 This is in addition to records for species of conservation concern including pied grey (*Eudonia delunella*) and spindle knot-horn (*Nephopterix angustella*) and locally important species including banded demoiselle (*Calopteryx splendens*), beautiful demoiselle (*Calopteryx virgo*), black-tailed skimmer (*Orthetrum cancellatum*), golden-ringed dragonfly (*Cordulegaster boltonii*), holly blue (*Celastrina argiolus britanna*), red-eyed damselfly (*Erythromma najas*), ruddy darter (*Sympetrum sanguineum*), short-winged cone-head (*Conocephalus dorsalis*) and speckled bush-cricket (*Leptophyes punctatissima*).

3.67 The arable field, the dominant habitat type present within the Site, is considered unlikely to support a notable assemblage of invertebrate species given the overall poor botanical and structural diversity. Hedgerows, however, are likely to support a more diverse assemblage, with shrubs providing a foraging and breeding resource to certain species. The invertebrate assemblage likely supported by the Site is therefore considered to be no greater than Site level importance.

Rare/Scarce Plant Species

3.68 The desk study returned records for red data book species soft-tufted beard-moss (*Didymodon vinealis*), wall screw-moss (*Tortula muralis*) and common pocket-moss (*Fissidens taxifolius*), within 500m of the Site. In addition to records for bluebell (*Hyacinthoides non-scripta*) listed under Schedule 8 of the*Wildlife and Countryside Act* 1981 (as amended), within 1km of the Site.

3.69 No notable or invasive plants were identified within the Site during the Extended Phase 1 Habitat survey. The Site is dominated by habitats and floral communities that are relatively common and widespread in Wales and the UK.

SUMMARY OF KEY SURVEY FINDINGS

3.70 The key ecological features/receptors pertinent to the development proposals, based on the survey findings described above, are set out in **Table EDP 3.5**.

Table EDP 3.5: Summary of Ecological Features

Feature	Key Attributes	Ecological Importance
Statutory Designated Sites		
River Usk SAC	Closest point 1.8km north-west, also located to the north, west and south-west. Designated for its riverine habitats, freshwater and otter.	European
Severn Estuary SPA, SAC and Ramsar	Closest point 7.5km south-west. Designated for populations of overwintering and migratory birds, populations of migratory fish species and estuarine/intertidal habitats.	International
Langstone-Llanmartin Meadows SSSI	Located 1.3km east. Designated for low lying area of meadow and fen, exemplifying a wide range of mesotrophic grassland and wetland community types. Also important for the locally rare plant species present.	National
River Usk (Lower Usk)/ Afon Wysg (Wysg Isaf) SSSI	Closest point 1.8km north-west, also located to the north, west and south-west. Designated for being a fine example of a river running over sandstones and for its associated plant and animal communities.	National
Non-statutory Designated Sites		
Coed Rhedyn/Scotch Wood SINC	Located 500m south-west. Designated for ASNW.	County
Coldra Wood SINC	Located 790m west. Designated for ASNWon base-rich soils with rich ground flora.	County
Flat Wood SINC	Located 840m south-west. Designated for remnants of ASNW.	County
Delbury Grasslands SINC	Located 890m east. Designated for species-rich semi-improved neutral grassland.	County
Habitats		
Non-native Hedgerows	Hedgerows **H1**, **H2**, **H4** and **H5**.	Site.
Native Hedgerows	Hedgerow **H3**.	Local, priority habitat
Scattered Broadleaved Trees	Within and/or adjacent to the boundary hedgerows.	Site

Feature	Key Attributes	Ecological Importance
Scattered Scrub	Scattered at the north-west corner of the Site, adjacent to building **B1**.	Site
Running Water	Unnamed watercourse along the southern boundary of the Site.	Local, priority habitat
Species		
Breeding Birds	Building **B1**, scrub and hedgerow habitat considered likely to support common and widespread bird species.	Site
Bats	Building **B1** supports a night roost/ feeding perch for brown long-eared bats. The hedgerow, scrub and scattered trees provide some foraging opportunities.	Local
Badger	Scrub, hedgerow boundaries and arable field across the Site provide some limited, suitable habitat for foraging badger and sett building.	Site
Dormouse	Opportunities for dormouse, should a current population be present within the wider landscape, are considerably limited, being confined to hedgerow boundaries.	Local
Otter	Occasional, opportunistic dispersal by otter via the unnamed stream aligning the southernmost extent of the Site during optimal conditions cannot be ruled out, should they be present in the locality.	Site
Notable mammals (polecat, European hedgehog)	Hedgerow boundaries provide some, albeit limited, opportunities for these species.	Site
Great Crested Newt and Other Amphibians	Habitats on-site are considered suboptimal for these species, whilst suitable aquatic habitat features are limited to the surrounding habitats south of the Site. Nevertheless, hedgerow boundaries could offer suitable refuge should a population occur within the wider landscape.	Site
Common Reptiles	Hedgerow boundaries provide some, albeit limited, opportunities for these species.	Site
Invertebrates	Common and widespread species likely present in association with hedgerow habitat.	Site

Section 4
Impact Assessment

4.1 This section of the Ecological Appraisal first considers any avoidance/mitigation which is embedded within development design, as represented by the Site Layout provided as **Appendix EDP 1**. It then considers the likely impacts of the development proposals on the pertinent ecological features identified in **Section 3** in the absence of additional mitigation.

EMBEDDED MITIGATION

4.2 EDP has provided input throughout the iterative design process so the development layout reflects some important measures to avoid, mitigate or compensate for ecological impacts as well as other measures designed to provide long-term ecological enhancements. In so doing, a site-wide mitigation strategy has been developed with reference to the 'Mitigation Hierarchy' described within CIEEM Guidelines for Ecological Impact Assessment, the principles of which are further adopted within PPW 12's 'step-wise approach'. These principles include:

- First, avoidance and minimisation of adverse impacts to ecological receptors through e.g., retention of habitat, connectivity and populations of protected/notable species;
- Next, mitigation for any unavoidable impacts including loss/fragmentation of habitats and/or harm to protected/notable species;
- Where residual impacts remain following avoidance and mitigation, provide appropriate compensation such as the creation of new/alternative habitat and opportunities; and
- In addition to avoidance, mitigation and compensation, the inclusion of measures for the enhancement of biodiversity and ecological resilience and their long-term resilience.

4.3 Embedded mitigation comprises the following:

- Retention of native hedgerow **H3**, non-native hedgerows **H2**, **H4**, **H5** and the majority of non-native hedgerow **H1**, in addition to the retention of trees supported therein and located along the southern boundary, as detailed within **Appendix EDP 5**;
- Full retention of the unnamed stream located along the southern boundary, for integration into areas of public open space;
- Provision of sustainable drainage features across the Site, including permeable paving, rain gardens and an attenuation basin located within public open space located across the southern extent of the Site;
- Inclusion of appropriate, species-rich wildflower seed mixes, shrub and native tree planting across the attenuation basin, rain gardens and areas of green open space, providing benefits to recreation and visual amenity as well as providing opportunities for habitat creation and biodiversity benefits;

- Provision of an open-fronted unlit car barn/garage located adjacent to plots 6 and 7 and western boundary hedgerow **H3**, allowing fly-in access for night roosting brown long-eared bats in compensation for the loss of building **B1**; and

- Provision of ornamental and native tree and shrub planting across the development footprint.

IMPACTS ON DESIGNATED SITES

Statutory Designations

4.4 As described in **Section 3**, there are six statutory designations within the potential zone of influence of the Site. The potential impacts on these designations, in the absence of additional mitigation, are discussed below.

International Designations

4.5 In accordance with Part 6 of the *Habitats Regulations*, a Habitats Regulations Assessment (HRA) is required where a plan or project may give rise to significant effects upon any European site designated to conserve natural habitats and species that are rare, endangered, vulnerable or endemic within the European Union. This includes SACs designated for their habitats and/or species of European importance, and SPAs classified for rare, vulnerable and regularly occurring migratory bird species. Such requirements also apply to those sites going through the formal designation process, including candidate SACs (cSACs) and Sites of Community Importance. Additionally, Government policy also affords the same level of protection to internationally important wetlands (Ramsar sites), potential SPAs (pSPAs), possible SACs (pSACs) and proposed Ramsar Sites, requiring such sites to also be treated as European sites for planning purposes.

4.6 The HRA Screening Report prepared for Newport City Council's adopted LDP in January 2015[16] considered the likely significant effects of the policies and proposals of the LDP on European Protected Sites. Pertinent to the Site, the HRA considered effects upon the River Usk SAC and the Severn Estuary SPA/SAC/Ramsar site. In particular, impact pathways that may have potential for significant effects upon European sites have been broadly identified as:

- Urbanisation impacts and recreational (due to increased population) – River Usk SAC and Severn Estuary SPA/SAC/Ramsar site;

- Land take (due to proximal and adjacent development to European sites, including impacts on surrounding 'buffer' habitats/green space areas not designated for European interest but part of wider habitats connectivity supporting site integrity) – River Usk SAC and Severn Estuary SPA/SAC/Ramsar site;

[16] Newport City Council in conjunction with Atkins Limited (2025). Habitats Regulations Assessment Screening Report of the Newport Local Development Plan (LDP) 2011-2025 (January 2025). Available at https://www.casnewydd.gov.uk/documents/Planning-Documents/LDP-2011-2026/Habitats-Regulation-Assessment--final.pdf [Accessed on 29 May 2025]

- Water resources and water quality (due to increased demand for water consumption and discharge requirements); and

- Atmospheric pollution (due to increased traffic, transport and general development).

4.7 Overall, however, it was concluded that with mitigation the policies and proposals within the LDP could be delivered without likely significant effects on European sites, either alone or in combination.

4.8 At the Site level, given the small extent of the Site, nature of proposed development and distance from the River Usk SAC and Severn Estuary SPA/SAC/Ramsar site, no direct impacts associated with recreational pressure, habitat loss/damage or atmospheric pollution are anticipated to arise following development. There is, however, the potential for indirect effects to arise in respect of water quality.

4.9 The River Usk SAC (and overlapping River Usk SSSI) is located 1.8km north-west of the Site at its closest point, discharging into the Severn Estuary SPA/SAC/Ramsar site located approximately 7.5km south-west of the Site. Given the presence of the unnamed stream aligning the southern boundary of the Site, in absence of mitigation there is the potential for increased contaminated surface water run-off to transfer further downstream to the River Usk and Severn Estuary via any surface or ground water connections in the wider landscape during the construction phase of development. Pollution incidents could also arise as a result of leaks and spills from construction activities, resulting in the introduction of hydrocarbons and other contaminants from demolition activities, site plant or of sediment loads arising from dust deposition or spoil movement.

4.10 Such effects may continue during the operational phase of development. However, inherent within the development proposals is the implementation of a sensitive drainage strategy in accordance with relevant planning policy to receive and treat surface water runoff during operation of the development prior to it discharging into the existing network. In this instance, operational effects associated with an increase in contaminated surface water runoff following development of the Site is considered unlikely.

National Designations

Langstone-Llanmartin Meadows SSSI

4.11 Hydrological connectivity exists between the unnamed stream aligning the southern boundary of the Site and Langstone-Llanmartin Meadows SSSI situated 1.3km east of the Site; this SSSI is notified for hydrologically sensitive areas of meadow and fen. In absence of mitigation therefore, there is the potential for increased contaminated surface water run-off to impact this SSSI during the construction phase of development, whilst pollution incidents could also arise. Implementation of the proposed sensitive drainage strategy will, however, ensure no impacts will arise following occupation.

Non-statutory Designations

4.12 As described in **Section 3**, there are 18 statutory designations within the potential zone of influence of the Site. Several non-statutory designations are sufficiently distant/spatially separated from the Site by significant barriers including the M4 motorway, such that no direct and indirect effects are anticipated and will not be discussed further within this assessment.

4.13 However there is the potential for air quality impacts to arise upon sensitive woodland habitat associated with Coldra Wood SINC and ancient woodland units situated to the north and west of the Site as a result of increased traffic during the construction and following occupation.

IMPACTS ON HABITATS

4.14 Habitats within the Site have been assessed through an Extended Phase 1 Habitat survey. The vast majority of the Site is considered to be of negligible ecological importance, being dominated by a single arable field subject to regular ploughing and of limited extent. Proposed habitat loss is largely confined to this arable field, in addition to small areas of scattered scrub, building **B1** and a c.10m section of non-native hedgerow (**H1**) to facilitate access to the proposed development. The loss of such habitat features is not considered significant on ecological grounds.

4.15 Native hedgerow **H3**, scattered trees and the unnamed watercourse along the southern boundary of the Site are however, considered to be of greater ecological importance and comprise priority habitats. These features, together with non-native hedgerows **H2**, **H4** and **H5** are to be fully retained, with the vast majority of non-native hedgerow **H1** also proposed for retention with exception to the removal of a c.10m section to facilitate access.

4.16 Notwithstanding the above, in the absence of mitigation there remains the potential for physical damage and/or indirect degradation of retained features to occur during construction, given the proximity of built development and/or proposed landscaping works. Retained trees/hedgerows may be further subject to indirect impacts, such as soil compaction, erosion and pollution (including air pollution). Indirect effects associated with increased levels of disturbance will likely occur during the construction phase, through the use of lighting and increased levels of vehicular traffic, machinery use and plant movement. Given that the majority of the works will be undertaken during daylight hours however, the usage of artificial lighting will likely be limited to the early morning and early evening hours, with greater requirements for artificial lighting during the winter months. In the absence of additional mitigation, impacts associated with disturbance and lighting may persist during the operational phase however, following occupation of the Site.

4.17 As discussed above in relation to statutory designated sites, there is also the potential for impacts upon water quality within the unnamed watercourse, associated with increased surface water runoff from the Site during the construction and operational phase of proposed development.

IMPACTS ON PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

Breeding and Wintering Birds

4.18 The loss of potential bird nesting habitat following development of the Site will primarily be limited to the scattered scrub, a c.10m section of hedgerow **H1** and building **B1**. The majority of suitable habitat, including scattered broadleaved trees, hedgerows **H2**-**H5** and the majority of hedgerow **H1** will be retained, although disturbance of nesting and foraging habitat through light spill, noise, visual and human disturbance during construction and operation could potentially occur. In respect of the magnitude of habitat loss, degradation and disturbance combined with the importance of a breeding bird assemblage on-site, such impacts are considered limited and will occur at the Site level only.

4.19 Of further pertinence is the potential for clearance/demolition of vegetation/buildings to result in direct harm/injury to nesting birds, if present. However, the legal protection afforded to birds and their nest (their eggs and young) and the requirement to avoid commencement of such works during the breeding bird season is considered inherent mitigation to ensure no effects relating to direct harm/injury arise in respect of the breeding bird assemblage. Therefore, negligible impact is predicted.

Bats

Impacts on Roosting Bats

4.20 The development proposals will result in the loss of building **B1**, a confirmed brown long-eared bat night roost/feeding perch. This structure is considered to be of negligible suitability for day roosting however, and therefore likely absence of day roosting bats. As such no significant impacts are anticipated during the building demolition.

4.21 Inherent within the Site Layout is the provision of an open-fronted unlit car barn/garage located adjacent to plots 6 and 7 and western boundary hedgerow **H3** as mitigation, allowing fly-in access for night roosting brown long-eared bats in compensation for the loss of building **B1**.

4.22 All trees within the Site were assessed to have negligible suitability to support roosting bats and are all proposed to be retained. However, with respect to those trees to be retained, degradation through damage and disturbance during the construction phase could result in the loss of future roosting and breeding sites (where present), in addition to the potential loss of habitat important for foraging, dispersal, and migration.

Impacts on Foraging/Commuting Bats

4.23 With respect to a foraging/commuting bat assemblage, loss, degradation and erosion of linear features (hedgerows) and foraging habitat (arable field, scattered scrub and building **B1**), coupled with potential disturbance impacts in respect of lighting and noise arising from development could impact the local bat assemblage.

4.24 In addition, increased levels of traffic movement by vehicles, machinery and plant throughout the construction phase, particularly when constructing the access road and removing vegetation across which species may disperse and forage, could result in increased risks of collision. However, given that such impacts will most likely be confined to daylight hours,

combined with retention of hedgerows **H2**-**H5** and the majority of hedgerow **H1**, no significant negative effects are considered likely to arise.

Dormouse

4.25 Proposed development will require the loss of a c.10m section of non-native hedgerow **H1** to facilitate access. The vast majority of the hedgerow network on-site will otherwise be retained, including the full retention of native hedgerow **H3** which, like hedgerow **H1**, provides north/south connectivity between the Site and suitable habitat in the wider landscape. As such, proposed losses are not considered significant.

4.26 As previously discussed above in relation to habitats, there is also the potential for further physical damage and/or indirect degradation of retained features to occur during construction, combined with indirect impacts upon a dormouse population (if present) associated with increased noise/lighting/cat ownership during the construction and/or operational phases of development.

Otter

4.27 An unnamed watercourse aligns the southern boundary of the Site. No evidence of otter (including holts/resting places) were identified following a search for evidence of these species during the Extended Phase 1 Habitat survey however, with this feature and associated habitats considered sub-optimal for otter. Nevertheless, this species may utilise this feature for opportunistic dispersal should they be present in the locality.

4.28 No upgrade to the watercourse is proposed within the development proposals, although an outfall connection to this feature is proposed as part of the drainage strategy. In the absence of additional mitigation, there is the potential for damage/degradation of retained habitats during its installation, with potential disruption to dispersal routes. Increased levels of traffic movements by vehicles, machinery and plant may also arise throughout the construction phase.

4.29 Contaminated surface water run-off to the watercourse with subsequent negative effects to water quality may also arise, with adverse effects upon the freshwater ecosystem more generally. Pollution incidents could also arise as a result of leaks and spills from construction activities and will require additional mitigation.

Badger

4.30 With respect to badger, dense scrub, grassland and hedgerows across the Site provides some foraging habitat. Given the common and widespread status of this species, combined with the limited extent of habitat loss (largely confined to the arable field), such losses are not considered significant.

4.31 No active setts were identified on-site, such that no impacts to badger associated with loss of/damage to a place of rest are likely. However, given the potential for badger to excavate setts in a short space of time, there is potential for this species to occupy suitable habitat in the future. Future development may therefore result in loss/damage to an active sett in addition to the potential for harm/injury to this species resulting from an increase in the movement of construction traffic and entrapment within open excavations.

Reptiles, Amphibians and Other Mammals

4.32 Hedgerows forming the boundaries of the Site provide some, albeit limited, opportunities for dispersal and forage, in addition to refuge and hibernation for a common reptile and amphibian population and other notable mammals. Whilst losses are predominantly confined to the arable field and scrub of little ecological value, a c.10m loss of hedgerow **H1** will be required to facilitate access for the development. Given that the majority of the hedgerow network on-site will otherwise be retained, such losses are not considered significant.

4.33 In the absence of additional mitigation however, there is the potential for damage/degradation of retained habitats of value to reptiles, amphibians and notable mammals, combined with the killing and injury of such species during vegetation clearance and following increased levels of traffic movements by vehicles, machinery and plant throughout the construction and operational phases of development.

Section 5
Mitigation and Enhancement Strategy

5.1 This section of the Ecological Appraisal considers the impacts set out in **Section 4** and puts forward additional measures to firstly avoid or minimise any ecological impact, or else to mitigate unavoidable impacts arising from proposed development necessary to comply with relevant planning policy and avoid any infringement of relevant legislation.

5.2 This section also sets out proposed ecological enhancements for the Site, in line with the wording within PPW 12 and local planning policy, specifically the requirement to deliver net benefits for biodiversity and ecosystem resilience of ecosystems by maximising those attributes of the DECCA[17] framework. Enhancements must be secured primarily on-site or immediately adjacent to the Site, over and above that required to mitigate or compensate for any negative impact.

DESIGNATED SITES

Statutory Designations

5.3 To protect water quality of the River Usk SAC, overlapping River Usk SSSI and the River Severn Ramsar site/SAC/SPA further downstream, appropriate pollution control measures will be employed in accordance with the relevant Environment Agency standards[18] relating to: GPP1: *Good Environmental Practices*, GGP55: *Works and Maintenance in or Near Water*; PPG6: *Pollution Prevention Guidance for Working at Construction and Demolition Sites*; GPP8: *Safe Storage and Disposal of Used Oils*; and GPP21: *Pollution Incident Response Planning* to ensure that detrimental impacts to aquatic features on, and immediately adjacent to the Site, as a result of surface run-off arising during the pre-construction and enabling works phases, are fully avoided.

5.4 This will be combined with implementation of a sensitive drainage strategy incorporating a detention basin and rain gardens, to collect, remediate and manage surface water runoff from the Site. It is recommended that such features are to be planted with appropriate species to increase their natural filtration and sedimentation properties and contribute to the remediation of any contaminated water, whilst also providing benefits to biodiversity. In so doing, proposed planting of attenuation features will increase the diversity of habitats supported by the Site whilst delivering ecosystem service benefits in terms of climate regulation, water management, and pollination.

5.5 Subject to the implementation of the measures summarised above and the inherent mitigation previously discussed in **Section 4**, impacts on statutory designations can be avoided or reduced

[17] The DECCA framework comprises five key attributes which must be taken into account when demonstrating steps taken towards securing a net benefit for biodiversity, including the Diversity, Extent, Condition, Connectivity and Adaptability to change of habitats, species and ecosystems.

[18] PPGs were withdrawn in December 2015; however, they remain the main source of information on good practice in Wales with respect to guidance on pollution prevention. A replacement guidance series, comprising Guidance for Pollution Prevention (GPPs), are currently in development.

to insignificant levels, such that the development can be delivered in accordance with relevant planning policy.

Non-statutory Designations

5.6 During construction, protective fencing will be erected along retained hedgerow habitat, as recommended within BS 5837:2012 *Trees in Relation to Design, Demolition and Construction*, to physically protect retained habitats on-site with establishment of Ecological Protection Zones (EPZ). Protective fencing will incorporate the full root protection area of the feature to be retained and will be protected and maintained throughout the duration of all site-enabling and pre-construction activities.

5.7 This will be combined with the adoption of dust control measures during construction to minimise potential impacts upon air quality that may arise upon this sensitive habitat, including restrictions on traffic movement and/or speed, appropriate storage of materials and/or use of screens and fencing as necessary.

5.8 Such measures can be secured through the provision and implementation of a Construction Environmental Management Plan (CEMP) and/or Ecological Construction Method Statement (ECMS)) secured by condition.

5.9 Subject to the implementation of the measures summarised above and those measures previously discussed in relation statutory designations, impacts on non-statutory designations will be avoided.

HABITATS

5.10 Measures will be required to protect the retained habitats described in **Section 4** from damage and disturbance during the construction phase.

5.11 To protect retained habitats during construction, protective fencing will be erected as previously recommended to physically protect retained trees and hedgerow habitats on-site and establish EPZs to be protected and maintained throughout the duration of all site-enabling and pre-construction activities.

5.12 No works (other than planting), including the storage of materials, plant and machinery, will be carried out within or immediately adjacent to all areas of protective fencing/areas marked for protection as described above, so as to ensure no detrimental impacts to sensitive features arising from physical damage and/or pollution. The digging of trenches and pits for new tree and scrub planting adjacent to areas of protective fencing, where this lies inside root protection areas, will be carried out by hand only, in accordance with best practice guidance as stipulated within BS 5837:2012.

5.13 Construction will also be limited to daylight hours as far as possible to mitigate effects of increased visual and noise disturbance upon sensitive habitats and associated protected/notable species, with the use of temporary, artificial lighting avoided during the hours between dusk and dawn, and with directional and low-level lighting used away from sensitive habitat corridors to mitigate effects relating to increased use of artificial lighting.

5.14 Such measures, alongside those previously discussed in relation to pollution control, can be secured through the provision of an Arboricultural Method Statement (AMS), CEMP and ECMS comprising standard documents which are capable of being secured by condition to any forthcoming planning consent.

5.15 As discussed within **Section 4**, the development has been designed to retain those habitat features of greatest ecological importance as far as possible. This includes:

- Retention of native hedgerow **H3**, non-native hedgerows **H2**, **H4**, **H5** and the majority of non-native hedgerow **H1** in addition to the retention of trees supported therein and located along the southern boundary as detailed within **Appendix EDP 5**; and

- Retention of the unnamed stream located along the southern boundary, for integration into areas of public open space.

5.16 In addition to the above, the Site allows for a number of opportunities for the creation of new habitats necessary to deliver net benefits to biodiversity through the provision of structurally and botanically diverse habitat features, as illustrated at **Appendix EDP 1** and summarised below:

- Provision of sustainable drainage features across the Site, including permeable paving, rain gardens and an attenuation basin located within public open space located across the southern extent of the Site;

- Provision of appropriate, species-rich wildflower seed mixes, shrub and native tree planting across the attenuation basin, rain gardens and areas of green open space, providing benefits to recreation and visual amenity as well as providing opportunities for habitat creation and biodiversity benefits;

- Provision of an open-fronted unlit car barn/garage located adjacent to plots 6 and 7 and western boundary hedgerow **H3**, allowing fly-in access for night roosting brown long-eared bats in compensation for the loss of building **B1**; and

- Provision of ornamental and native tree and shrub planting across the development footprint.

5.17 Such habitat creation measures are considered sufficient to compensate for the small scale of habitat losses anticipated, whilst ensuring the protection and further enhancement of retained habitats to maximise habitat function and connectivity across the Site for protected and priority species. It is further recommended for such habitats and features to be subject to sensitive management and monitoring over the long-term to increase their resilience and mitigate long-term disturbance effects, with proposed measures to include:

- The implementation of a sensitive hay cutting regime across newly created areas of informal grassland and wildflower meadow planting, so as to promote a structurally diverse and species-rich sward, which also maximises the value of foraging, dispersal, breeding and hibernation resources for protected/notable species;

- The management of retained hedgerows to maintain their condition and promote structural diversity, including rotational cutting and ecotone planting to achieve a continuous (<10% gaps), dense and bushy 'A' shaped structure whilst maintaining heights at no less than 3m and widths of at least 2m;

- The selective removal of scrub around establishing young trees/shrubs to facilitate natural regeneration across retained and newly created habitats;

- The selective removal of species-poor/bramble scrub, as required, along the unnamed watercourse to maintain open sections of value for maintaining in stream diversity; and

- The provision of log piles and deadwood utilising arisings from tree works undertaken on Site, so as to maximise habitat structure and foraging availability for protected and notable species.

5.18 Detailed specifications in respect of new planting and habitat creation should be provided with a detailed Soft Landscaping Scheme secured by planning condition. In addition, measures to restore and enhance existing habitats, to ensure the successful establishment of new habitats created, and to maintain the value of all ecological features in the long-term which are necessary to ensure their continued ecological functionality and contribution to the biodiversity of the Site, will be delivered through a Landscape and Ecological Management Plan (LEMP), or equivalent document, which can be secured by planning condition.

5.19 Subject to the implementation of the measures summarised above, impacts upon retained habitats will be avoided, whilst net benefits for biodiversity and ecosystem can be achieved in accordance with relevant national and local planning policy and legislation.

PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

Breeding and Wintering Birds

5.20 The habitat protection measures described above will avoid harm to breeding birds present within retained habitats. However, the removal of scrub, hedgerow and building **B1**, which are capable of supporting nesting birds, will be required to facilitate development.

5.21 Given the protection afforded to all breeding birds, their nests, eggs and young, sensitive vegetation clearance (and building demolition) required during the pre-construction and construction phases of development should be timed to avoid the main bird breeding season (March to August inclusive).

5.22 Should this seasonal constraint prove impracticable, then vegetation clearance outside of this period should only commence following the advice and under supervision of a suitably qualified ecologist. Pre-commencement checks for active nests will be required prior to any vegetation clearance occurring during the main bird breeding season, with appropriate buffers marked out around active nests or nests under construction, until all eggs have hatched, and chicks fledged. These measures can be delivered through the ECMS.

5.23 The proposed enhancement of the existing hedgerow **H1**; planting of new trees and shrubs; wildflower seeding, and creation of new sustainable drainage features will together enhance opportunities for foraging and nesting birds post-development.

5.24 To further enhance bird nesting opportunities across the Site, bird nest boxes are recommended for installation upon retained mature trees and/or buildings as appropriate, specific details for which in terms of location, number, management and monitoring can be secured within an LEMP to be delivered as a condition of planning consent. A variety of such features are suggested to accommodate different bird species and include:

- Schwegler 1B nest boxes with 26mm holes for blue tit (*Cyanistes Caeruleus*) and coal tit (*Periparus ater*);
- No 16. Schwegler Swift Box; and
- Schwegler sparrow terrace/Woodstone house sparrow nest box or similar.

5.25 A minimum of three bird boxes/nesting chambers should be installed on-site, equating to 33% of the total number of residential units proposed, with installation undertaken in accordance with manufacturer's specifications and with such features sited carefully in relation to aspect, so as to be protected from strong wind, rain and sunlight (i.e., not south facing), and at suitable heights above ground level (c.3–6m above ground level).

5.26 Overall, those habitat retention and enhancement measures recommended above in relation to non-statutory designations and valued habitats, combined with the measures outlined above, are considered sufficient to minimise impacts upon the breeding bird assemblage.

Bats

Roosting Bats

5.27 No trees are proposed to be removed to facilitate development. Furthermore, all trees within the Site were assessed to have negligible suitability to support roosting bats during the ground level tree assessment undertaken by EDP in September 2024.

5.28 Nevertheless, given the potential for trees to degrade/decay over time such that their potential to support roosting bats may increase, should the felling of trees with bat potential occur more than 12 months since the previous bat roost assessment, then such trees should be subject to an update tree roost assessment by a suitably qualified and a Natural Resource Wales (NRW) bat licensed ecologist, with appropriate mitigation/precautionary measures followed.

5.29 Where bat roosts are confirmed, owing to the strict legal protection afforded to bats and their roosts, works are likely to require a Development Licence from NRW before works can continue.

5.30 If no evidence of roosting bats is uncovered during the update assessment, works may proceed without a Development Licence from NRW. However, regarding those trees identified as having potential to support roosting bats, a 'soft felling' technique' involving the sectional dismantling of the tree will be adopted, involving the following:

- Tree felling will avoid cutting through any cracks, cavities, limb/knot holes or any other potential roosting features – i.e., by cutting above and below the feature when removing sections with suitable features;
- Any sections to be cut supporting suitable roosting features are to be suitably harnessed and supported before cutting using industry-standard rigging equipment, and gently lowered to the ground once cut, to avoid violent shaking of potential roosting features; and
- Any cut sections with potential roosting features are to be retained on-site by one of the following methods:
    - Strapping to existing, retained mature trees and appropriately secured in position;
    - Retained on-site at ground level within an area of retained woodland; and
    - Retained on-site for minimum 48 hours, with potential entrances not blocked i.e., facing away from ground, before they are removed or chipped.

5.31 Should any bats be discovered during the felling of any trees, then works will necessarily cease and a suitably qualified and NRW bat licensed ecologist contacted for further advice. It may be necessary to obtain a development licence from NRW before works can continue.

5.32 Given the presence of a brown long-eared bat night roost/feeding perch within building **B1** proposed for demolition, a development licence from NRW will likely be required prior to commencement, with demolition sensitively timed to avoid the main bat active season when bats would otherwise be utilising this structure, unless otherwise approved within any future NRW Development Licence.

5.33 Prior to the commencement of proposed works, suitable bat boxes will be installed on suitable mature trees present along the retained boundaries of the Site following the advice of a suitably qualified ecologist. These will act as suitable receptor sites for bats in the unlikely event that any individuals are found during demolition and to compensate for roost loss arising as a result of proposed activities.

5.34 Soft-stripping of any features deemed to have potential for bats will be undertaken under the supervision of the named ecologist and/or accredited agents/assistants listed on the Development Licence. Contractors will remove all fascia's, bargeboards, soffits, roof tiles, etc., by hand, carefully checking for any evidence of bats.

5.35 In addition to the bat boxes installed on trees, further compensatory measures suitable for crevice dwelling bats (soprano pipistrelle, *Myotis* sp., and brown long-eared) will be provided within new buildings. Such roosting features may include the integration of Schwegler 1F Bat Tubes, bat bricks or similar into the exteriors of new buildings. Overall, a minimum of three bat

boxes/roosting features should be installed on-site, equating to 33% of the total number of residential units proposed.

5.36 In respect of the loss of the brown long-eared bat night roost/feeding perch within building **B1**, however, compensatory night roost/feeding perch provision should take the form of a purpose-built unlit open-fronted car barn/garage, given the requirement of this species to have a place to perch, sheltered from the wind/rain. For its construction, materials should be rough (for grip) and non-toxic or non-corrosive. The proposed location of the car barn/garage is adjacent to plots 6 and 7, as close to the existing roost as the development proposals allow with connectivity to the retained hedgerow along the western boundary.

Foraging/Commuting Bats

5.37 With respect to a foraging/commuting bat assemblage, those habitat creation measures detailed above in relation to designated sites, habitats and breeding birds will provide adequate compensation for minor losses arising across the Site.

5.38 To avoid disturbance of a foraging/commuting bat assemblage during construction however, working at night and the use of night lighting should be avoided. Where this is not possible (i.e., for security reasons), lighting should be kept to the lowest permissible level through the use of a sensitive lighting design as detailed above in respect to habitats and directed away from retained trees lines.

5.39 This should be combined with the implementation of a sensitive lighting strategy during the operational phase of development to ensure that retained habitats on and adjacent to the Site used by light-sensitive species such as bats will not be adversely lit. Directional, timed or low-lux lighting should be incorporated across the development footprint. Where lighting is required, e.g., for security, lighting columns should be directed away from habitat edges to minimise disturbance and light spill. Lighting should include directional, timed and/or low lux lighting, utilising shields and/or hoods where required.

5.40 Subject to the implementation of those key mitigation measures detailed above with respect to bats and previously with respect to habitats, no significant detrimental impacts upon the roosting and foraging/commuting bat assemblage utilising the Site are considered likely to arise. Key mitigation measures/specifications can be delivered through the LEMP.

Dormouse

Desk study records confirm the presence of known dormouse populations within the locality. However given the small extent of the Site and the predominance of arable land, together with surrounding the land use, comprising residential development and roads, opportunities for dormouse are considerably limited on-site, confined to hedgerow boundaries proposed for retention. Nevertheless, precautionary clearance methodologies alongside habitat enhancement and creation measures are recommended, as follows:

- Clearance of woody vegetation including hedgerow removal should be undertaken following single-stage clearance methodologies, with both above-ground and below-ground vegetation clearance confined to the period 01 – 31 May or 01 September – 31 October, so as to avoid the main dormouse breeding season (considered to be between mid-June and August inclusive), and hibernation period (considered to be between November and

March inclusive). The later period of September/October is preferable, given that it also avoids the main breeding bird season (considered to be between March to August inclusive);

- A thorough pre-commencement check for dormouse, their nests and active bird nests will be undertaken by a suitably qualified ecologist immediately prior to clearance;
- In the unlikely event that any dormouse (or evidence of dormouse) is encountered during the clearance works, then works will cease until a Development Licence is obtained from NRW for the remainder of the works;
- Vegetation will be removed using hand-held tools/machinery only and in a direction towards retained habitat to aid dispersal of wildlife potentially remaining, with the ecologist working closely alongside the contractor, declaring specified habitat sections as being clear following completion of a thorough search prior to clearance of those specified areas commencing;
- All woody vegetation including trees, shrubs and scrub to be removed will be cut down to heights of between 30cm and 50cm above ground level and in a direction towards retained vegetation;
- Following above-ground clearance, brash will remain *in situ* for 24 hours to aid dispersal of wildlife during this time; and
- Immediately thereafter, all below-ground material including tree stumps, root balls, buried rubble, spoil, etc., will be lifted out using a tracked excavator and undertaken in a sensitive manner to ensure no significant disturbance to soil and adjacent, retained planting. Vehicles will avoid tracking across areas subject to clearance.

5.42 Additionally, native tree, shrub and hedgerow planting to be implemented across the Site, in addition to retained habitats, will be subject to ongoing sensitive and appropriate management over the lifetime of the development to further enhance the Site for dormouse. Sensitive management will seek to maximise the value of food, dispersal, breeding, and hibernation resources for dormouse through:

- The management and monitoring of mature tree standards to ensure their long-term viability;
- The implementation of long cutting cycles, with cutting undertaken on a three-year rotation cycle, with a maximum of 30% of the hedgerow resource cut at any one time (thereby enabling a minimum of 30% left to grow for 7 to 10 years), to ensure that a proportion of cut versus un-cut habitat exists on-site at any one time; and
- The selective thinning of all retained and newly planted native trees and shrubs.

Otter

5.43 As discussed above, the ECMS will contain measures to physically protect retained aquatic and riparian habitats outside of the construction footprint through the establishment of EPZs and implementation of construction works in accordance with relevant pollution prevention guidelines.

5.44 There does, however, remain the potential for disturbance of this species (if present) through elevated noise and lighting during the construction phase and particularly in the event a holt/resting place is identified through pre-commencement surveys. Restricted night-time working and sensitive construction lighting to minimise light spill onto retained habitats, as set out previously, will prevent such disturbance. Where construction activities are to encroach within 10m of the watercourse and associated riparian habitats, this will be preceded by a pre-commencement survey of such adjacent habitats for evidence of otter, in particular features considered to be used as resting sites or laying up.

5.45 Where evidence of a resting place or laying up site is identified, the suitably qualified ecologist will determine those additional sensitive methodologies necessary to ensure no damage or disturbance to the holt/resting place, including the establishment of additional buffers.

Badger

5.46 No evidence of badger was identified within the Site during the badger survey undertaken during the Extended Phase 1 Habitat survey in September 2024. However, given the widespread and opportunistic nature of badger, an update walkover of the Site by a suitably qualified ecologist is recommended prior to the commencement of any development works to determine whether any badger setts have established on or adjacent to the Site during the interim period.

5.47 In the event an active sett is identified and is to be affected by development works, and owing to the strict legislation protecting active setts, a licence from NRW will be required to exclude badger from the sett (restricted to the period between July and November inclusive), with a mitigation strategy based on the following principles:

- Exclusion of badgers from setts using one-way gates, where confirmed active at the time;
- Sett monitoring of closed setts, to ensure badgers have not regained access to any setts; and
- Excavation of the badger sett with all tunnels dug back to end.

5.48 In addition to the above and in respect of the presence of badgers more generally, the following measures will apply throughout the construction phase of the development:

- All machinery will be operated by trained personnel only;
- There will be no working at night as far as possible; and
- All trenches/excavations will be covered up overnight and a means of escape provided to avoid wildlife becoming trapped.

5.49 In addition, a sensitive lighting scheme is recommended to be adopted throughout the construction and operational phase of development in accordance with those recommendations detailed above.

5.50 Those recommended habitat creation measures discussed above in relation to habitats and other protected/notable species, including the proposed enhancement of retained habitats and new tree, hedgerow, shrub and wildflower planting, will provide suitable foraging habitat for this species (if present), as well as maintain suitable dispersal corridors for the movement of badger and other wildlife across the Site.

Reptiles, Amphibians and Other Mammals

5.51 Given the limited potential of the Site to support low numbers of common reptiles, common amphibians and other mammals, a precautionary approach to habitat clearance is recommended to ensure no harm to these species. Clearance of any suitable vegetation should be undertaken in accordance with the following precautionary methods of working:

- Vegetation clearance should be undertaken between the late spring and early autumn months so as to avoid the main hibernation period of hedgehog and common reptiles/amphibians (typically considered to be between October and March);

- Should the above seasonal constraint be considered impracticable, then clearance works between late October and March inclusive will require additional pre-commencement checks and/or supervision by a suitably qualified ecologist to ensure no disruption to potential hibernacula, with the adoption of additional precautionary measures as appropriate;

- A first cut should aim to reduce vegetation height to no less than 200mm and should be undertaken through the use of a hand-held strimmer or brush cutter. The second cut should be undertaken thereafter and within 24 hours of the initial cut, during which, the vegetation should be reduced to ground level;

- Both cuts should be undertaken in a direction towards retained habitats, i.e., towards the adjacent semi-natural habitat off-site, so as to allow for any wildlife present to disperse safely towards this resource;

- Any suitable refugia identified during clearance works will be subject to a finger-tip search by a suitably experienced ecologist, with any species identified re-located to areas of retained vegetation. Thereafter, refugia will be dismantled by hand and relocated to areas of retained vegetation to ensure suitable refuge/hibernation opportunities are retained; and

- In the event any reptiles, amphibians or mammals are identified during site clearance, these will be captured by hand where appropriate and immediately released into retained habitat located immediately adjacent to the construction footprint.

5.52 More generally, and particularly in respect of mammals, the following precautionary measures will be adhered to during the construction phase:

- All machinery will be operated by trained personnel only;
- There will be no working at night;
- All trenches/excavations will be covered up overnight and/or a means of escape provided (such as mammal ramps) to avoid wildlife becoming trapped; and
- Any open pipework with an outside diameter of greater than 120mm must be covered at the end of each working day to prevent animals entering/becoming trapped.

5.53 To facilitate the dispersal of European hedgehog across the Site during the operational phases of development, it is further recommended for any proposed close board fencing marking the boundaries between development, formal landscaping features or semi-natural habitat off-site, to include a 13cm x 13cm gap at the bottom to allow hedgehogs to pass through.

5.54 Further enhancements can be achieved through the creation of hibernacula and deadwood log piles within south facing habitat and/or within the natural/informal greenspace areas.

5.55 The mitigation and enhancement measures outlined above will ensure that effects upon reptiles and common amphibians, if present in the locality, are avoided/minimised with an overall positive increase in the availability of suitable habitat across the Site.

Section 6
Summary and Conclusions

6.1 **Table EDP 6.1** provides an overview of Mitigation and Enhancement Strategy described in **Section 5**.

Table EDP 6.1: Summary of Proposed Mitigation and Enhancement

Mitigation Type	Key Principles	Mechanism(s) to Secure Delivery
Avoid by Design	Retention of habitats with appropriate development buffers: • Native hedgerow **H3**, non-native hedgerows **H2**, **H4**, **H5** and the majority of non-native hedgerow **H1**; • Scattered trees located along the southern boundary; and • Unnamed stream located along the southern boundary.	Habitat retention embedded in the Site Layout, which will be an 'approved plan' to which future detailed designs must align.
Avoid or Minimise Construction Impacts	Sensitive methods of operation during enabling and construction works: • Control of working hours; • Minimise noise and vibration; • Air quality measures/dust suppression; • Control/eradication of invasive species; • Surface water management; • Storage of fuels/chemicals; and • Sensitive lighting.	CEMP secured via pre-commencement planning condition.
	Protection of retained habitats: • Fencing and signage to create development exclusion and EPZs.	AMS and ECMS secured via pre-commencement planning condition.

Mitigation Type	Key Principles	Mechanism(s) to Secure Delivery
	Methods to avoid harming individuals or interfering with breeding of protected species prior to/during habitat destruction: • Pre-commencement checks/surveys; • Avoidance of trapping animals in excavations; • Timings to avoid sensitive periods/breeding seasons; • Phased vegetation clearance; • Maintaining dispersal routes; • Destructive searches; and • Ecological supervision where required.	ECMS secured via pre-commencement planning condition. Detailed Method Statement for bats as part of any future NRW Development Licence application required.
Mitigate or Compensate for Habitat Loss and Deliver Net Gains	Habitat creation and enhancement: • Provision of ornamental and native tree and shrub planting across the development; • Provision of a sustainable drainage features across the Site and within green open space proposed; • Provision of species rich grassland, shrub and tree planting across areas of public open space, including the provision of appropriate seed mixes across the proposed attenuation basin; and • Provision of an open-fronted unlit car barn/garage located adjacent to plots 6 and 7 and western boundary hedgerow **H3**, allowing fly-in access for night roosting brown long-eared bats in compensation for the loss of building **B1**.	Space for new habitat embedded in Site Layout, which will be an 'approved plan' to which detailed designs must align. LEMP to be secured by planning condition. Detailed mitigation for bats secured via a future NRW Development Licence if required.

Mitigation Type	Key Principles	Mechanism(s) to Secure Delivery
	Habitat features to be provided in suitable locations: • Bat boxes and/or bat bricks; • Bird boxes/nesting chambers; • Gaps beneath boundary fences of residential gardens to facilitate dispersal of hedgehog and other wildlife; and • Reptile/invertebrate hibernacula/log piles.	LEMP to be secured by planning condition. Detailed mitigation features for bats secured via a future NRW Development Licence if required.
	Lighting strategy to avoid disturbance of nocturnal species, in particular foraging/commuting bats.	Detailed lighting design to be secured by planning condition.
Maintenance, Monitoring and Management Post-construction	Habitat-specific, namely measures to: • Enhance retained habitat and ensure successful establishment of newly created habitat; and • Monitor and maintain habitats in good ecological condition once enhanced/established.	LEMP to be secured by planning condition.
	Species-specific, namely measures to: • Maintain habitat features (boxes, etc.) in good condition or replace as necessary.	LEMP to be secured by planning condition. Monitoring requirements for bats secured via any future NRW Development Licence required.

6.2 EDP concludes that, in light of the embedded mitigation and subject to the full implementation of the additional measures summarised above, the proposed development is capable of compliance with relevant planning policy and legislation and can deliver net benefits for wildlife and biodiversity.

Appendix EDP 1
Site Layout