



**Land south of
Mortimers Lane, Fair
Oak**

Ecological Appraisal

Prepared by:
**The Environmental Dimension
Partnership Ltd**

On behalf of:
Bloor Homes Limited

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Section 1 Introduction

- 1.1 This Ecological Appraisal has been prepared by The Environmental Dimension Partnership Ltd (EDP) on behalf of Bloor Homes Limited (hereafter referred to as “the Applicant”). This Appraisal considers the ecological implications of proposed development at Land south of Mortimers Lane, Fair Oak (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 Appraisal¹;
 - CIEEM Guidelines for Ecological Impact Assessment²;
 - British Standard: Biodiversity - Code of Practice for Planning and Development³; and
 - British Standard: Process for designing and implementing Biodiversity Net Gain⁴.
- 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) SU 50676 18652. The local planning authority (LPA) is Eastleigh Borough Council. The location and extents of the Site are shown on the Development Framework Plan (**Appendix EDP 1**) and described in the material supporting the planning application, particularly the Design and Access Statement.
- 1.5 The Site is bound to the north by Mortimers Lane (B3037). Further North beyond Mortimers Lane lays the residential development known as ‘Pembers Hill Park’. A group of Grade II listed buildings, associated with the Mortimer farmstead, lies to the north-east and are subject to a recent planning approval for alterations, extensions and conversion of four existing barns and the construction of five new dwellings within their curtilage.

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

⁴ BSI (2021) *Process for designing and implementing Biodiversity Net Gain. Specification*. BS 8683:2021. British Standards Institute

- 1.6 To the east lies East Horton Golf Club. Characteristic of all golf courses, the course has been sculpted and heavily managed and maintained.
- 1.7 Abutting the Site to the west are two recent residential development known as 'Pembers Hill Drive' and 'East Knowle'.
- 1.8 Further west lays Knowle Hill Conservation Area which includes a car park, picnic area and permissive footpaths which lead through woodland to Knowle Park, a 14ha country park and important local recreational asset.
- 1.9 Immediately south of the Site lays East Horton Business Park, Deer Farm Park Industrial Estate. A new development of fifteen business units abutting the southern site boundary and form an extension to East Horton Business Park. This Site was granted planning permission for general industrial buildings (Use Class B2) in July 2023 and has since been built out.
- 1.10 Adjacent to the business park lays the Knowle Lane Local Wildlife Site (LWS). Designated on account of the woodland and grassland it supports. It includes a woodland and large pond.
- 1.11 The Site comprises improved grassland fields which are bounded by a hedgerow, treelines and woodland edge habitat.

DEVELOPMENT PROPOSALS

- 1.12 The development proposals are for the delivery of up to 245 dwellings (Use Class C3), up to 350sqm multi-functional space, mobility infrastructure (Use Class Sui Generis), with associated open space, landscaping, infrastructure, and vehicular access off Mortimers Lane, Fair Oak; All matters reserved except for vehicular access off Mortimers Lane and pedestrian/cycle connections to the site boundary. The proposals are to be the subject of an outline planning application, and the Development Framework Plan is provided as **Appendix EDP 1** to this report.
- 1.13 The ecological sensitivities of the Site have influenced the illustrative masterplan through an iterative design process. Thus, the masterplan incorporates a degree of 'inherent' mitigation to avoid or reduce the severity of potential ecological impacts. It is anticipated that future reserved matters will allow the incorporation of requisite mitigation measures to avoid ecological impacts and secure enhancements.

SCOPE OF THE ASSESSMENT

- 1.14 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 framework 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.

1.15 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:

- Hampshire Biological Records Centre (HBIC);
- Multi-Agency Geographic Information for the Countryside (MAGIC) website⁵; and
- National Biodiversity Network (NBN) Atlas website⁶.

2.4 The desk study was undertaken during November 2022 and August 2024 and involved obtaining the following information:

- International statutory designations (15km radius around site);
- National statutory designations and non-statutory local sites (2km radius);
- Annex II bat species⁷ records (5km radius);
- All other protected, priority and notable species records (2km radius); and
- All other notable habitat records (500m radius).

2.5 These search areas are considered sufficient to cover the potential zones of influence⁸ of the proposed development in relation to designated sites, habitats and species.

⁵ www.magic.gov.uk

⁶ www.nbnatlas.org

⁷ Bat species listed in Annex II of the EC Habitats Directive, namely Greater horseshoe, Lesser horseshoe, Barbastelle and Bechstein's bats

⁸ Zone of Influence - the areas and resources that may be affected by the proposed development

- 2.6 The adopted Eastleigh Borough Council (EBC) Local Plan 2016-2036 and EBC Biodiversity Supplementary Planning Document (SPD) 2009 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 initially identified by undertaking an Extended Phase 1 Habitat survey in November 2022. An Updated Extended Phase 1 Habitat survey was also undertaken in June 2023 following a change of management regime (i.e. from cow pasture to hay production).
- 2.8 During the survey, habitat type and condition were also recorded to meet the Statutory Biodiversity Metric (November 2023) data requirements for calculating biodiversity net gain/loss. This was undertaken with reference to the Metric user guide⁹ and UK Habitat Classification System¹⁰ which underpins the Metric.
- 2.9 Full details of the habitat survey methodology are provided within **Appendix EDP 3**.

DETAILED (PHASE 2) SURVEYS

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

Breeding Bird Survey

- 2.11 The Site contains habitats which are suitable for nesting birds including hedgerows, trees and woodland edge habitat. The grassland within the site was also noted to be of potential to ground nesting birds. Breeding bird surveys were therefore undertaken with reference to standard methodology, entailing a modified Common Bird Census (CBC)¹¹ 'territory mapping' approach. This involved the completion of three visits to the Site, undertaken monthly between April and June 2023 to coincide with the height of the breeding bird season for lowland Britain.
- 2.12 Full details of the breeding bird survey methodology, and any limitations encountered, are provided in **Appendix EDP 5**.

Wintering Bird Survey

- 2.13 The Site also contains suitable habitat for wintering birds, including grassland. There is estuarine/coastal habitat in the vicinity which includes designations on account of the overwintering bird populations they support. Whilst the Site lies outside of existing and

⁹ Natural England Joint Publication JP039. The Statutory Biodiversity Metric User Guide (draft). November 2023

¹⁰ UKHAB LTD. (2022) UK Habitat Classification [online]. Available from: <http://ukhab.org>

¹¹ Marchant, J. (1983). *Common Bird Census Method*. BTO

recognised areas of supporting habitat (also known as functionally linked land), there does remain a potential for the grassland habitat to support qualifying bird species.

- 2.14 A single pilot surveys was undertaken in undertaken 31 January 2023. Full details of the winter bird survey methodology, and any limitations encountered, are provided in **Appendix EDP 6**.

Bat Surveys

- 2.15 During the Extended Phase 1 Habitat survey, seven trees present within, or immediately adjacent to, the Site were identified as having potential to support roosting bats. In addition, a number of habitats present within the Site, including hedgerow, treeline and woodland edge habitat, were identified as being of moderate suitability to support foraging and commuting bats. The following surveys for bats were therefore undertaken, with reference to best practice guidelines at the point of survey¹²:

Bat Roost Inspection Surveys - Trees

- Preliminary ground level roost assessment of trees for bat roosting suitability, undertaken on 04 May 2023.

Bat Activity Surveys:

- Manual transect surveys conducted in April, May, June, July, August, September and October; and
- Automated detector surveys conducted in April, May, June, July, August, September and October.

- 2.16 Full details of the bat survey methodologies, and any limitations encountered, are provided in **Appendix EDP 7**.

- 2.17 Updated guidelines for bat surveys have recently been published, however, all bat surveys described in this report were conducted prior to this and therefore the 2016 guidelines will continue to be referred to in this assessment, and cross-referenced with latest guidance where appropriate. If further surveys are necessary, they will be completed in line with the 2023 guidance¹³.

Dormouse Survey

- 2.18 Owing to the southernly location of the Site, the presence of woodland in the local area, and records of dormouse (*Muscardinus avellanarius*) the potential suitability of the hedgerow/treelines across the Site for, a nest tube survey to determine the presence/likely absence of the species was undertaken in accordance with best practice guidelines¹⁴.

¹² Collins, J. (ed.) (2016). *Bat Surveys: for Professional Ecologists: Good Practice Guidelines (3rd edition)*. The Bat Conservation Trust, London

¹³ Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London.

¹⁴ Bright, P.W, Morris, P.A. and Mitchell-Jones, T. (2006). *The Dormouse Conservation Handbook Second Edition*. English Nature, Peterborough.

2.19 A total of 51 standard nest tubes, each comprising a wooden tray and nesting tube made from plastic tree guard material, were deployed throughout the Site in all suitable habitat at approximately 20m intervals on 16 May 2023 see **Plan EDP 2**. Nest tubes were erected at approximately 1.5m to 2m above ground and tied to suitable branches located within the hedgerows or lower branches of trees. Tubes were left *in situ* and checked for evidence of use by dormouse during suitable weather conditions on six separate occasions between June and November.

2.20 With reference to the best practice guidelines, a total survey effort score can be derived by adding together the index of probability in detecting dormouse presence within nest tubes for each of the months during which the nest tubes were deployed (assuming a minimum deployment of 50 nest tubes). These guidelines recommend that a score of at least 20 is achieved to provide a robust assessment of presence/absence. As illustrated in **Table EDP 2.1** the total survey effort score is 21 which exceeds this minimum.

Table EDP 2.1: Dormouse survey effort

Month	Index of Probability	Visit Details	Weather Conditions During Survey
May	1	51 Tubes deployed 16 May 2023	N/A
June	2	Tubes checked 19 June 2023	No rain/wind, cloud 10 – 15%, temp. 19 - 21 °C.
July	2	Tubes checked 24 July 2023	Light rain/wind, cloud 100%, temp. 17 °C
August	5	Tubes checked 21 August 2023	Light wind no rain, cloud 60-100%, temp. 19 – 24 °C
September	7	Tubes checked 27 September 2023	Light wind no rain, cloud 80-100%, temp. 14 - 15 °C
October	2	Tubes checked 11 October 2023	Light wind no rain, cloud 90-100%, temp. 16 °C
November	2	Tubes checked 29 November 2023	Light wind no rain, cloud 10-20%, temp. 7 - 8 °C
Total survey effort score	21		

Limitations

2.21 The survey visits were completed in suitable weather conditions and the minimum survey effort score of 20 was exceeded. The survey is therefore not subject to any significant limitations.

Badger Survey

- 2.22 A survey to record any evidence of badger (*meles meles*) activity within the Site, and within 30m of the Site where access was permitted, was undertaken during the Extended Phase 1 Habitat survey.
- 2.23 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

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

Great Crested Newt Survey

- 2.25 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, 16 waterbodies were identified adjacent and within a 500m radius of the Site, of which six are within 250m.
- 2.26 Those waterbodies within 250m of the Site were to be assessed to establish the presence of great crested newt within the Site/local area. However, no response was received from the pond access request letters sent in Spring 2023, and therefore access was not granted to conduct the surveys. Given the lack of access, and as no waterbodies are present within the Site, it is considered that a District Level Licence (DLL) would be a suitable alternative to eDNA and aquatic surveys.
- 2.27 Waterbodies more than 500m from the Site were not surveyed as the likelihood of great crested newts dispersing over this distance within to the Site is much reduced, and surveys of the nearer waterbodies are sufficient to identify likelihood of presence on-site and assess impacts on the local population.
- 2.28 The location of the waterbodies immediately adjacent to the Site is shown on **Plan EDP 1**.

ECOLOGICAL SURVEYS SCOPED OUT

2.29 **Table EDP 2.2** 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 2.2: Ecology Surveys Scoped Out

Survey Type	Reasons for Scoping Out
Otter (<i>Lutra lutra</i>)/Water Vole (<i>Arvicola amphibicus</i>)	There is no suitable habitat present on or immediately adjacent to the Site to support the species. The ditches present have been identified to be either mostly dry or supporting low levels of water. Both species are thus presumed absent from the Site such that no further survey is recommended.
Reptiles	The Site was found to be largely suboptimal for reptiles, the management regime (mixed grazing and hay production) results in only temporary opportunities for reptiles. Sensitive habitat removal will be implemented to safeguard any incidental individuals should they be present.
Invertebrates	The farmed habitats on-site are likely to support common and widespread opportunities for invertebrates. The mature trees on-site may also offer opportunities, however these are mostly at the site boundary/off-site and will be mostly retained.

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 > Site > 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 Ramsar sites). These designations are protected under the Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations). These designations are referred to as 'habitats sites' in the National Planning Policy Framework (NPPF, July 2021) and development which would adversely affect a habitats site (alone or in combination) cannot benefit from the NPPF presumption in favour of sustainable development.
- 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). The NPPF states that development which would adversely affect as SSSI should not normally be permitted.
- 3.6 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.

- 3.7 No part of the Site is covered by any statutory designations and there are no county important designations within 2km of the Site. However, there are five internationally important designations within 15km of the Site and two nationally important designations within 5km . Also, the Site lies within the impact risk zone of the River Itchen SSSI. These sites are summarised in **Table EDP 3.1** and illustrated on **Plan EDP 3**.

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

Designation	Approx. distance from Site	Interest Feature(s)
Internationally Important Statutory Designated Sites (within 15km of the Site)		
River Itchen SAC (303.99ha)	3.3km East	A sub-type 1 chalk river with associated fens and deciduous forest along the river corridor. Notable for supporting populations of southern damselfly (<i>Coenagrion mercuriale</i>) and bullhead (<i>Cottus gobio</i>), other notable species present include white-clawed crayfish (<i>Austropotamobius pallipes</i>) and otter (<i>Lutra lutra</i>).
Solent and Southampton Water SPA and Ramsar (5,399.6ha)	6.0km South	A series of estuaries and harbours with extensive mudflats and saltmarshes, with adjacent coastal habitat including shingle beaches, saline lagoons, reedbeds and damp woodland. The site is notable for waterfowl, including breeding populations of multiple gull and tern species as well as providing opportunities for overwintering species.
Solent Maritime SAC (1,1240.83ha)	6.0km South	A major estuarine system on the south coast of England, encompassing eight estuaries across two physiographic sub-types and a hydrographic regime unique in Britain and Europe. Notable for supporting four cord-grass species in close proximity. The only site for smooth cord-grass (<i>Spartina alterniflora</i>) in the UK, one of two for small cord-grass (<i>S. maritima</i>). In addition, despite colonisation by cord-grass, the site also contains a large amount of ungrazed Atlantic salt meadow.
Emer Bog SAC (37.56ha)	10.7km West	Comprised of a hollow filled with a bog and transitional mires with scattered willow scrub (<i>Salix</i> sp.) surrounded by open heathland and mature willow woodland. Flora is dominated by bottle sedge (<i>Carex rostrata</i>) and marsh cinquefoil (<i>Potentilla palustris</i>), with occasional bogbean (<i>Menyanthes trifoliata</i>) in pools and white sedge (<i>Carex curta</i>) towards the edges of the bog.

Designation	Approx. distance from Site	Interest Feature(s)
Portsmouth Harbour SPA Ramsar (1,249.60ha)	14.6km South-east	An industrialised estuary with associated mudflats, tidal creeks, islands and inlets. Mudflats with extensive beds of eelgrass (<i>Zostera sp.</i>), combined with reedbeds, provide ample overwintering opportunities for waterfowl. Notable species including dark-bellied brent goose (<i>Branta bernicla bernicla</i>), red-breasted merganser (<i>Mergus serrator</i>), black-tailed godwit (<i>Limosa limosa islandica</i>) and dunlin (<i>Calidris alpina alpina</i>).
Nationally Important Statutory Designated Sites (within 5km of the Site)		
River Itchen SSSI (748.43ha)	3.3km East	A sub-type 1 chalk river with associated fens and deciduous forest along the river corridor. Notable for supporting populations of southern damselfly and bullhead, other notable species present include white-clawed crayfish and otter.
Moorgreen Meadows SSSI (14.32ha)	4.3km South-west	Neutral meadows and alder (<i>Alnus sp.</i>) woodland bordering a tributary of the river Hamble. The meadows sit on a bed of alluvial and clay with thin layers of peat. Flora comprises at least 17 species of co-dominant herbs and grasses. Notably, the site supports an isolated population of northern marsh orchid (<i>Dactylorhiza purpurella</i>), alongside other species of the same genus. All of which regularly hybridize.

Non-statutory Designations

- 3.8 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 Hampshire, such designations are termed Local Wildlife Sites (LWSs). 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. The importance of LWSs is recognised in the NPPF and in the Eastleigh Borough Local Plan, specifically Policy DM11, Nature Conservation.
- 3.9 No part of the Site is covered by any non-statutory designations, however Land at Knowle Lane, Fair Oak LWS lies adjacent to the southern site boundary. There are 24 LWSs located within 2km of the Site, as summarised in **Table EDP 3.2** and shown on **Plan EDP 4**.

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

Designation	Approx. distance from Site	Interest Feature(s)
Land at Knowle Lane, Fair Oak LWS	Adjacent to southern Site boundary	A narrow band of deciduous woodland and rush pasture surrounding a pond.
Knowle Lane Open Space LWS	0.1km West	A small patch of deciduous woodland with scattered open areas of grassland and several public footpaths. West of Knowle Lane.
Moplands Copse LWS	0.3km East	Small patch of lowland mixed deciduous woodland bounded by a golf course and semi-improved grassland.
Gore Copse LWS	0.3km North-west	A narrow band of lowland mixed deciduous woodland along a stream corridor.
Dunley Copse LWS	0.4km South	Lowland mixed deciduous woodland, with portions of ancient woodland in the middle of East Horton golf course.
Knowlehill Copse LWS	0.4km South-west	A small patch of lowland mixed deciduous woodland along the northern side of Knowle Park.
Tippers Copse LWS	0.4km North	A small block of lowland mixed deciduous woodland in the corner of an arable field.
Hall Lands Copse LWS	0.6km North-west	Mixed deciduous and wet woodland, most considered ancient woodland, bounded by arable fields.
Barnhurst Meadow LWS	0.6km East	A series of lowland meadows with a tiny portion of rush pasture west of Alma Lane.
Stroud Wood, Fair Oak and Horton Heath LWS	0.6km North-east	A tiny block of lowland mixed deciduous woodland bounded by fields of semi-improved grassland.
Parker's Copse/Fir Plantation/Greenwood LWS	0.6km South-east	An expansive block of woodland incorporating fir plantation woodland, lowland mixed deciduous woodland and the Greenwood ancient woodland.
Park Hills Wood LWS	0.7km North	A large band of lowland mixed deciduous woodland with portions of ancient woodland, bounded by arable fields and adjacent to Chestnut Gully Wood LWS.
Lower Itchen Headwater, Stocks Farm LWS	1.0km West	c.400m of stream corridor north of Winchester Road.
Chestnut Gully Wood LWS	1.4km North-west	A block of mixed lowland deciduous woodland with thin strips of lowland meadow bounded by arable fields.

Designation	Approx. distance from Site	Interest Feature(s)
Wyvern Technology College Meadow LWS	1.4km South-west	A field of mixed deciduous woodland, wet woodland, lowland meadow, rush pasture and streams.
Ponds and Meadow adjacent to Wyvern Technology College LWS	1.5km South-west	A pond surrounded by wet woodland and lowland mixed deciduous woodland between Wyvern Technology College and Quobleigh Pond and Woods LWS.
Quobleigh Pond and Woods LWS	1.5km South-west	A series of ponds and streams surrounded by a mix of wet and lowland mixed deciduous woodland.
Lower Upham Meadows LWS	1.6km North-east	A single field of lowland meadow bisected by a ditch.
Alma Meadows (North)	1.6km North-east	A small field of lowland meadow with scattered trees east of Alma Lane.
Hardings Lane Wooded Bank LWS	1.7km North-west	A mature treeline c.240m long running beside a footpath.
Deeps Copse/Deeps Bushes Copse LWS	1.7km North	A large block of ancient woodland north of Portsmouth Road, adjacent to Upham Copse LWS.
Upham Copse LWS	1.8km North	A smaller block of ancient woodland adjacent to Deeps Copse, part of South Downs National Park.
Crowdhill Copse LWS	1.8km West	A spur of lowland mixed deciduous woodland off Stoke Park Woods LWS, incorporating a portion of Stoke Park Woods ancient woodland, bounded by arable fields and a residential area.
Stoke Park Woods LWS	1.8km West	A large area of ancient woodland hosting multiple footpaths and a bike park, including wet woodland and lowland mixed deciduous woodland.

- 3.10 Given the geographical context and nature of these LWSs, impacts are considered unlikely impacts from developments can largely be ruled out. However, the Land at Knowle Hill, Fair Oak LWS sits immediately adjacent to the Site, and so is considered further within this assessment.

HABITATS

- 3.11 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 as priority habitats, the conservation of which public authorities in England must have due regard to as part of policy or decision making under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006;
 - The recently enacted Environment Act 2021 introduces a mandatory minimum 10% biodiversity net gain requirement for all new developments that are subject to the Town and Country Planning Act 1990;
 - Paragraph 186 of the NPPF includes a presumption against development which results in significant harm to biodiversity (including habitats), or results in the loss of irreplaceable habitat¹⁵. This paragraph also encourages development to secure measurable net gains for biodiversity; and
 - The importance of protecting habitats, and networks of habitats, is reflected in the Eastleigh Borough Local Plan, specifically Policy DM11.
- 3.12 The distribution of different habitat types within and adjacent to the Site is illustrated on **Plan EDP 1**. The habitats are further described in **Appendix EDP 3** alongside illustrative photographs and species lists.
- 3.13 A summary and qualitative assessment of the existing habitats, using both JNCC Phase 1 and Defra Statutory Metric terminology, is provided in **Table EDP 3.3**. Further details of the habitat condition assessment, with reference to the criteria contained within the Technical Annexes of the Statutory Metric, are provided within **Appendix EDP 8**.

¹⁵ Irreplaceable habitats are technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen.

Table EDP 3.3: Summary of Existing Habitats Within the Site

JNCC Phase 1	DEFRA Statutory Metric			Area/ Length	Distribution	Intrinsic Ecological Importance*
Habitat Type	Habitat Type	Distinctiveness	Condition			
Improved grassland	Modified grassland	Low	Poor	11.05 ha	The Site is dominated by grassland fields.	Site
Intact species-rich hedgerow	Native species-rich hedgerow	Medium	Good	0.074km	Located at the northern Site boundary	Local
Line of Trees	Line of Trees	Low	Moderate	0.445km	Located along the eastern Site boundary	Local
Line of Trees	Line of Trees associated with bank or ditch	Low	Poor	0.105km	Passing through the centre of the northern part of the Site	Local
Wet ditch	Ditch	Medium	Poor	0.342km	Located at the southern Site boundary	Site

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

- 3.14 As noted within **Table EDP 3.3**, the Site is mostly made up of habitats which are of less than Local, or negligible, intrinsic importance. However, the hedgerow is considered to be of Local importance. 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

- 3.15 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.
- 3.16 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, the conservation of which public authorities in England must have due regard to under the NERC Act (2006). The NPPF recognises species as an important component of biodiversity, as does the Eastleigh Borough Local Plan, specifically Policy DM11.
- 3.17 The likelihood of presence, or confirmed presence, of protected, priority or other notable¹⁶ 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 the appendices and plans where referenced.

Breeding Birds

- 3.18 All wild birds, their nests and eggs are protected under the Wildlife and Countryside Act 1981 (as amended) (WCA). 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.
- 3.19 In addition, further protection is afforded to those wild bird species listed on Schedule 1 of the WCA, 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.
- 3.20 A large number of records of bird species were retrieved during the desk study, including several species of note that were either a WCA Schedule 1 species, a priority species or included on the

¹⁶ Notable species are those which are not legally protected but are formally identified as being of conservation concern

latest Red and Amber lists of Birds of Conservation Concern¹⁷. Records of notable species with possible suitable breeding habitats on Site include linnet (*Linaria cannabina*), house sparrow (*Passer domesticus*), mistle thrush (*Turdus viscivorus*), song thrush (*Turdus philomelos*) and yellowhammer (*Emberiza citrinella*).

- 3.21 The full results of the breeding bird survey are provided in **Appendix EDP 5** and on **Plan EDP 6**. In summary, a total of three bird species of note were recorded as breeding or probably breeding on-site. This includes no WCA Schedule 1 species, one priority species and two other species of conservation concern. Those species of note include house sparrow, woodpigeon (*Columba palumbus*) and wren (*Troglodytes troglodytes*).
- 3.22 Overall, the assemblage of breeding bird species recorded on-site is as expected given the low diversity of breeding habitats available. Of the probable breeding species, none are of particular note due to their common regional status. Therefore, the breeding bird assemblage on-site is judged to be of Site level importance.

Wintering Birds

- 3.23 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.
- 3.24 The desk study found estuarine/coastal habitat in close proximity to the Site. The Solent and Southampton Water SPA and Ramsar site lies 6km south and supports overwintering bird assemblages.
- 3.25 The full results of the wintering bird survey are provided in **Appendix EDP 6**. In summary, a total of seven bird species were recorded on-site. This includes two WCA Schedule 1 species, four priority species and one other species of conservation concern. Those species of note include:
- WCA Schedule 1 species include: fieldfare and redwing in low numbers; and
 - Priority species include: common starling, dunnock, herring gull and house sparrow – all in relatively low numbers.
- 3.26 A further seven species not of conservation importance were also recorded.
- 3.27 Overall, the assemblage of wintering bird species recorded on-site is being typical for farmland on a suburban edge. The breeding bird assemblage on-site is therefore judged to be of Local level importance.

Bats

- 3.28 All species of British bat are listed as European Protected Species (EPS) on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) (referred to as the

¹⁷ Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I. 2021. *The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain*. British Birds 114: 723-747.

'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.

3.29 Additional protection for bats is also afforded under the WCA, 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.

3.30 The desk study returned many records for bat species relating to common and widespread species including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), serotine (*Eptesicus serotinus*), Natterer's (*Myotis nattereri*), daubenton's bat (*Myotis daubentonii*). The locations of these bat records are deemed sensitive so lack location names, however there are records of a mixed soprano and common pipistrelle roost from 2015 c.0.1km west of the Site and a brown long-eared maternity roost to the c.0.1km east of the Site recorded in 2021.

3.31 In addition, there are records from 2017 of maternity roosts of soprano pipistrelle, brown long-eared bat, common pipistrelle and regular serotine roost c.0.1km east of the Site. Given this proximity and the foraging/commuting opportunities within the Site it is likely these species will be present within the Site. Finally, there are three records of western barbastelle (*Barbastella barbastellus*) recorded in 2016, the closest a single bat in a day roost c.2.2km east of the Site.

3.32 Seven records within 2km of the Site relating to European Protected Species Mitigation Licences (EPSML) issued for bats were returned from the data search on MAGIC. These include common pipistrelle, soprano pipistrelle and brown long-eared roosts. The closest of which is located approximately 800m to the south of the Site, pertaining to non-breeding roosts of common and soprano pipistrelle. All other EPSML records are located further away from the Site to the east, south and west.

Bat Roosting

Trees

3.33 A total of 14 trees were identified with suitable features for bat roosting, however the majority of these sit just outside the red line boundary. Full details are provided within **Appendix EDP 7** with tree locations shown on **Plan EDP 1**.

Bat Foraging/Commuting Activity

- 3.34 Overall, the habitats present within the Site were assessed as being of Moderate suitability for foraging and commuting bats, primarily based on the woodland edge habitat present, mature tree lines, and general connectivity to local parcels of woodland.
- 3.35 The findings of the manual transect and automated detector surveys are provided in detail within **Appendix EDP 7** with the transect route and locations of the automated detector surveys shown on **Plan EDP 6**. The approximate distribution and diversity of bat species recorded during the transect surveys are illustrated on **Plan EDP 7** to **Plan EDP 13**.
- 3.36 In summary, levels of bat activity recorded during the manual transects were generally low to moderate and comprised common pipistrelle, soprano pipistrelle, serotine, *Myotis* spp., and Nathusius' pipistrelle. Activity was generally concentrated on boundary habitats including the hedgerow, lines of mature trees and woodland edges. Species diversity was lowest in April and October, where only common pipistrelle were recorded, and highest in June and July where four species/species groups were recorded.
- 3.37 Levels of bat activity recorded during the automated detector surveys were generally low to moderate and primarily comprised common pipistrelle, with soprano pipistrelle and *Myotis* spp. the next abundant. Serotine, *Plecotus* spp., noctule, barbastelle and Nathusius' pipistrelle were recorded infrequently. The number of calls recorded was higher at Location 1 from April to June, and higher in Location 2 from July to October, reflecting a change of use in the latter half of the active period.
- 3.38 Taking into account the diversity of bat species utilising the Site and the extent of their roosting, foraging and commuting activity, the overall bat species assemblage using the Site is considered to be of Local importance.

Dormouse

- 3.39 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 WCA as summarised above in respect of bats. This species is also listed as a priority species.
- 3.40 A single record for dormouse was returned within 2km of the Site's boundaries during the desk study. In addition, a record relating to a EPSML issued for dormouse was returned from the data search on MAGIC, approximately 3.5km south of the Site.
- 3.41 The habitats on Site are of moderate suitability for dormice comprising the hedgerow and mature tree lines, with connectivity to offsite woodlands and wider hedgerow network. However, the dormouse nest tube survey found no evidence of dormouse. A small number of wood mice (*Apodemus sylvaticus*) and evidence of their activity (including nests and food caches) were also recorded.
- 3.42 Based on the survey results above, dormice are not considered to be present within the Site.

Otter

- 3.43 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 WCA as summarised above for bats. This species is also listed as a priority species.
- 3.44 Nine records of otter were returned within 2km of the Site, the closest record being 0.6km from the Site within the River Hamble.
- 3.45 The habitats on-site are not considered to be suitable for otter. The ditch which bisects the northern part of the Site is scrubby over and was found to be mostly dry across all site visits. The ditch which sits just off-site was found to be typically wet but only ever supporting shallow water within a very narrow channel, with no opportunities for resting places or holts. Its considered unlikely this ditch would be used for commuting otter on any significant basis, given its condition and general lack of connectivity to more significant water courses.

Water Vole

- 3.46 Water vole and their burrows receive protection under Schedule 5 of the WCA. 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.
- 3.47 Water vole is also listed as a priority species.
- 3.48 Eight historical records of water vole were returned within 2km of the Site's boundaries, the closest record being 0.6km from the Site which appear to be associated with the East Horton golf course golf club from 1999.
- 3.49 The habitats on-site are not considered to be suitable for water vole for similar reasons as stated above regarding otter. The wet ditch which sits just off-site, adjacent the southern boundary supports only shallow, sluggish water. There is a notable absence of suitable marginal vegetation, possibly as a result of regular maintenance for drainage purposes.

Badger

- 3.50 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.

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

3.52 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.

3.53 The desk study returned a number of badgers records from within the 2km search area. Largely these records are at least ten years old and document single instances of badger sightings. However, the most recent record from 2017 is also the closest at 0.5km of the Site indicating they likely are present in the wider landscape.

3.54 The badger survey recorded no badger setts within the Site, however evidence of commuting and occasional foraging badger was identified, including push throughs and a single print. The Site is therefore considered suitable for foraging and edge habitats may be suitable for sett building.

3.55 Taking into account the common status of badger within the country and district and the extent within the Site, the overall population is considered to be no greater than Site level importance, if present.

Other Mammal

3.56 The desk study returned a number of notable mammals within 2km and dated within the last decade, including 22 records of hedgehog (*Erinaceus europaeus*) of which the closest was approximately 1km, recorded in 2022.

3.57 Given the habitats present on the Site, it is considered suitable for foraging hedgehog. If present, hedgehog would be considered no greater than Site level importance.

Great Crested Newt

3.58 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 WCA as summarised above in respect of bats. This species is also listed as a priority species.

3.59 The desk study returned four records of great crested newt, three of these are located c.1.7km away from around Quobleigh Pond LWS the most recent was from 2020 of a population of 300 individuals. The fourth record is from 2011 from 1.3km West of six individuals in a pond next to Greenwood LWS. There are however four suitable ponds within 0.2km of the Site with no major barriers to access.

- 3.60 Two nearby records relating to EPSMLs issued for great crested newt were returned from the data search on MAGIC, both located approximately 1.5km and 1.6km to the south-west and dated 2009 and 2018.
- 3.61 Proposed eDNA surveys of off-site ponds could not be completed due to lack of access. The Site does not support any waterbodies, and so no opportunities for breeding amphibians are present. The Site was found to be largely suboptimal for terrestrial phase amphibians, with this site being historically grazed and hay management regime being implemented. The latest habitat surveys in June 2023 found the grassland sward to be dense and coarse, dominated by tall palatable grasses. The management regime of the Site (i.e. a mix of grazing and hay production), therefore only results in temporary opportunities for this species (if present).

Reptiles

- 3.62 All species of common reptile, namely common lizard (*Zootoca vivipara*), slow-worm, grass snake (*Natrix helvetica*) and adder (*Vipera berus*), receive at least limited protection from harm under the WCA, making it an offence to cause intentional killing and injuring of these species. In addition, these species are also listed as priority species.
- 3.63 The desk study returned no records of reptiles within the Site. However, multiple records of grass snakes (*Natrix helvetica*), common lizards (*Zootoca vivipara*) and slow worms (*Anguis fragilis*) within the 2km search radius. Indicating low numbers of common reptile species are likely present within the Site.
- 3.64 The Site is suboptimal for reptiles, due to the Site being historically grazed and hay management regime implemented. The habitat surveys in June 2023 found the grassland sward to be dense and coarse, dominated by tall palatable grasses.
- 3.65 The management regime of the Site (i.e. a mix of grazing and hay production), results in only temporary opportunities for reptiles, and so it's only likely to support occasional foraging reptiles, rather than a permanent population.
- 3.66 Given their assumed limited density within the Site and relative widespread distribution across the County, the populations of common lizard, grass snake and slow-worm (if present) within the Site are judged to be of no greater than Local importance.

Invertebrates

- 3.67 A large number of invertebrates records were returned within 2km of the Site, with 160 records dated within the last decade. Of note, stag beetle was recorded approximately 400m from the Site in 2017, with Jersey tiger (*Euplagia quadripunctaria*), silver-washed fritillary (*Argynnis paphia*), white admiral (*Limenitis camilla*), cypress groundling (*Gelechia senticetella*) and *Oedemera femoralis* recorded within 1km within the last decade.
- 3.68 The vast majority of habitat within the Site offer only opportunities for common and generalist species of invertebrates. On that basis, the invertebrate assemblage present within the Site is assumed to be of negligible importance.

Rare/Scarce Plant Species

- 3.69 The desk study returned a number of records of rare and scarce plants within 2km. Of these, nine species were returned, dated within the last decade, including: strawberry clover (*Trifolium fragiferum*), butcher's-broom (*Ruscus aculeatus*), box (*Buxus sempervirens*), lesser spearwort (*Ranunculus flammula*), white ramping-fumitory (*Fumaria capreolata*), annual beard-grass (*Polypogon monspeliensis*) Jersey cudweed (*Gnaphalium luteoalbum*), red hemp-nettle (*Galeopsis angustifolia*) and *Lapsana communis*. Butcher's-broom and white ramping-fumitory were the closest, recorded approximately 500m to the north-east from the Site. A single specimen of butchers's-broom was recorded on-site at TL1.

Invasive Species

- 3.70 HBIC returned many records of invasive species within 2km of the Site, notably Japanese knotweed (*Fallopia japonica*), butterfly bush (*Buddleia davidii*), false-acacia (*Robinia pseudoacacia*) and Himalayan cotoneaster (*Cotoneaster simonsii*) c.0.3km West of the Site, and three-cornered garlic c.0.4km to the west.

SUMMARY OF KEY SURVEY FINDINGS

- 3.71 The key ecological features/receptors pertinent to the development proposals, based on the survey findings described above, are set out in **Table EDP 3.4**.

Table EDP 3.4: Summary of Ecological Features

Feature	Key Attributes	Ecological Importance
Statutory Designated Sites		
River Itchen SAC and SSSI	3.3km off-site. Chalk river with associated fens and woodland. Supports white-clawed crayfish, otter, bullhead and notable invertebrates, including Southern Damselfly	International
Solent and Southampton Water SPA, Ramsar	6km off-site. A series of estuaries and harbours with extensive mudflats and saltmarshes and other associated habitats. Notable for breeding waterfowl and overwintering species.	International
Solent Maritime SAC	6km off-site. A major estuarine system with ungrazed Atlantic salt meadow. Notable for cord-grasses.	International
Portsmouth Harbour SPA Ramsar	14km off-site. An industrialised estuary with associated mudflats, tidal creeks, islands and inlets which support overwintering waterfowl.	International

Feature	Key Attributes	Ecological Importance
Moorgreen Meadows SSSI	4.3km off-site. Neutral meadows and alder woodland. Of botanical interest, including orchids.	National
Non-Statutory Designated Sites		
Land at Knowle Lane, Fair Oak LWS	Adjacent to southern site boundary. A narrow band of deciduous woodland and rush pasture surrounding a pond.	County
Habitats		
Intact species-rich hedgerow with trees	H1, located along the northern Site boundary. Classified as 'Important' under hedgerow regulations.	Local
Line of Trees	Mature lines of trees delineating field boundaries	Local
Scattered Broadleaved Trees	Scattered trees along the fence lines and western site boundary.	Local
Ditches	One dry ditch (bisecting east-west through the middle of the Site) and one wet ditch along the southern site boundary.	Site
Modified grassland	Historically grazed and hay management regime being recently implemented. The grassland sward was dense and coarse, dominated by tall palatable grasses.	Site
Broadleaved woodland	Immediately off-site. One parcel lies to the east of the Site boundary and the second lies to the south of the Site boundary.	Local
Ponds	Located at off-site but in close proximity to Site boundary	Local (off-site)
Species		
Breeding birds	Abundance and diversity consistent with extent and diversity of habitats onsite.	Local
Wintering birds	Low diversity and abundance, reflective of habitats present.	Local
Bats	Seven trees with high or moderate suitability for roosting bats were recorded. Foraging and commuting bats recorded along the boundaries, including small numbers of Annex II barbastelle.	Local
Badger	No setts present. Some suitability for commuting and foraging.	Local

Feature	Key Attributes	Ecological Importance
Great crested newt	Lack of access prevented eDNA of off-site ponds. No breeding habitats on-site and limited on-site suitability for terrestrial phase.	Local (if present)
Reptiles	Suboptimal habitats present on-site.	Local (if present)

Section 4

Impact Assessment, Mitigation and Enhancements

- 4.1 This section of the Ecological Appraisal first considers any avoidance/mitigation which is embedded within development design, as represented by the Development Framework Plan 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 Development Framework Plan (**Appendix EDP 1**) although illustrative, reflects some important measures to avoid, mitigate or compensate for ecological impacts as well as other measures designed to provide long-term ecological enhancements. This embedded mitigation comprises the following:
- Open spaces for recreation to minimise impacts on off-site designations – including Public Open Space (POS) through the centre of the scheme, with additional green space at the entrance, buffering Mortimer's Farm, and in the southern corner to buffer the off-site woodland;
 - Retention/buffering of valuable habitats (including habitats known to support protected/notable species) – including buffering the off-site ditches and woodlands and creations of new woody corridors to improve general connectivity;
 - Avoidance of trees with roosting bat potential where possible, using existing gaps in treeline TL1 (see **Plan EDP 1**);
 - Inclusion of natural/informal greenspace within the development where the creation or enhancement of ecologically valuable/biodiverse habitat is proposed; and
 - Inclusion of Sustainable urban Drainage System (SuDS) to maintain run-off rates and to maintain or improve the quality of surface water discharging and designed for biodiversity and wildlife.

IMPACTS ON DESIGNATED SITES

Statutory Designations

- 4.3 As described in **Section 3**, there are six statutory designated sites 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

River Itchen SAC and SSSI

- 4.4 The River Itchen SAC, and the SSSI which underpins it, lies approximately 3.3km to the west of the Site. Therefore, there is the potential for likely significant effects (LSE) on this international site.
- 4.5 Given the River Itchen is a freshwater system, phosphorus is the key limiting nutrient in the system, and nitrogen is already present in excess (as a result of agricultural practices). On that basis, the SAC itself is unlikely to be significantly impacted directly by nitrogen deposition as a result of increased traffic.
- 4.6 However, a qualifying feature of the SAC is the southern damselfly (*Coenagrion mercuriale*) which is sensitive to nitrogen deposition; increased traffic can adversely impact the breeding habitats of this species.
- 4.7 The Eastleigh Local Plan 2016 – 2036 was adopted in April 2022; during its preparation, a Habitats Regulation Assessment (HRA)¹⁸ was prepared to demonstrate that the quantum of development proposed as part of the Local Plan would not lead to any harm on internationally designated sites. The HRA included consideration of both the River Itchen SAC and was supported by an air quality assessment that included dispersion modelling of road traffic emissions. The air quality assessment considered traffic associated with all development (completed, permitted and new allocations, totalling ~11,000 new dwellings) outlined in the Local Plan, and assessed the impacts both ‘in isolation’ (i.e. the Local Plan on its own), and ‘in combination’ (i.e. the impacts associated with both the Local Plan and other plans and projects).
- 4.8 The air quality assessment concluded that impacts on concentrations of nitrogen oxides (NO_x) and ammonia, and deposition fluxes of nutrient nitrogen could not be discounted based on comparison with the critical levels/loads and published screening criteria, and that consideration of the effects on the specific ecosystems as part of the HRA was necessary.
- 4.9 The HRA, prepared by Urban Edge Environmental Consulting, concluded with respect to the River Itchen SAC that:
- Ammonia concentrations were only predicted to exceed the critical load adjacent to the M27, and that elevated ammonia levels were not considered likely to be significant in this location (Paragraph 6.2.29);
 - It is not clear how concentrations of atmospheric NO_x affect aquatic and semi-aquatic vegetation; thus, concentrations of NO_x were not considered further (Paragraph 6.2.31); and
 - The key impact pathway will be via deposition of nutrient nitrogen (from both NO_x and ammonia), therefore an Appropriate Assessment was undertaken.
- 4.10 As part of the air quality assessment, areas where dispersion modelling demonstrated that the additional traffic would lead to changes greater than 1% of the nutrient nitrogen critical load

¹⁸ Urban Edge Environmental Consulting (2021), HRA for the Eastleigh Borough Local Plan: Main Modifications Stage

(15 kgN/ha/yr), and the critical load would be exceeded were identified (Figures 7.1 and 7.2 of the HRA). As part of the Appropriate Assessment stage, these areas were coupled with survey data recording the presence of the Southern damselfly to identify Southern damselfly habitats that could be affected by the implementation of the Local Plan. The HRA determined that approximately 1,900m of supporting watercourses within the SAC, with a further 850m outside the SAC, would experience changes in nutrient nitrogen deposition fluxes greater than 1%. Further interrogation of the predicted changes in critical load from additional traffic determined that the maximum change would be 1.33% (0.2 kgN/ha/yr); such a change was described in the HRA as 'not substantial' (Paragraph 7.2.13).

- 4.11 The HRA concluded that this level of change, coupled with the habitat conditions at the affected areas, would have “no adverse effect on the integrity of the SAC for this species as a consequence of predicted changes in air quality”.
- 4.12 During the course of the preparation of the HRA, an area of land, referred to as the “Strategic Growth Option” (SGO) to the north of Bishopstoke and Fair Oak, was removed from the Local Plan allocation. This land was identified to supply 3,350 dwellings and link road, and was associated with a large volume of traffic assessed as part of the air quality assessment for the HRA.
- 4.13 The proposed development is located within the SGO Draft Policy Area identified in the original Local Plan; therefore, to a certain degree, the effects of the development on the designated sites have already been quantified as part of the HRA. Nonetheless, a review of EBC’s planning portal identifies that since September 2022, only eight major planning applications have been submitted. In total, the applications propose ~250 residential units (comprising retirement units, dwellings and care home beds), which constitutes a small (~7%) of the SGO allocation that was removed from the Local Plan. As such, it is reasonable to conclude that there remains a substantial buffer between the quantum of development assessed in the HRA and the quantum of development coming forward within EBC, such that the conclusions of the HRA are unlikely to be affected by the proposed development.
- 4.14 Notwithstanding the above, an assessment of the air quality impacts on the River Itchen and Solent Maritime SAC will be submitted during determination. In line with the HRA, the assessment will quantify the impact of emissions associated with additional traffic on the local road network on concentrations of NO_x and ammonia, and nutrient nitrogen deposition fluxes. Detailed consideration of such potential impacts will be included within a shadow Habitats Regulations Assessment (sHRA), to be submitted separately, which will inform the outline planning application.
- 4.15 Notably, the Site falls outside the River Itchen catchment, such that impacts as a result of increased phosphates are not anticipated.

Solent and Southampton Water SPA and Ramsar/Solent Maritime SAC/Portsmouth Harbour SPA and Ramsar

- 4.16 Following the release of Natural England’s ‘Advice on Achieving Nutrient Neutrality for New Development in The Solent Region’ (version 3, March 2020) consideration must be afforded to the Solent and Southampton Water SPA and Ramsar Site, Solent Maritime SAC, and Portsmouth Harbour SPA and Ramsar Site.

- 4.17 It has been established that these 'Solent sites' are suffering from high levels of nitrogen and phosphorus input – primarily as a result of agricultural activity – which is causing eutrophication and adversely impacting these statutory sites of European/international importance. As it stands, there is uncertainty as to whether new growth within the region will further deteriorate designated sites.
- 4.18 In light of the potential impacts new development might have on these Solent sites, and given the strict protection afforded to SACs, SPAs and Ramsar sites by the Conservation of Habitats and Species Regulations 2017 (as amended), the interim and precautionary position is that all new development within the Solent region must achieve 'nutrient neutrality'. This is to ensure that wastewater from new development will - at the very least - not add to the existing nutrient burden on the Solent sites.
- 4.19 As such, in line with adopted interim guidance, the development proposals will demonstrate their ability to achieve nutrient neutrality via a nutrient budget.
- 4.20 The nutrient budget for the Site has been calculated using Natural England Nutrient Neutrality Budget Calculator for the Solent Marine Sites¹⁹. **Table EDP 4.1** below summarises the nutrient budget calculations.

Table EDP 4.1: Total Nutrient Budget Calculations

Total nutrient budget calculations	
Description of values generated	Values generated
Wastewater TN load (kg TN/year):	185.56
Net land use TN change (kg TN/year):	-43.79
TN budget:	141.77
TN budget + 20% buffer:	170.12
Annual nutrient budget	
The total annual nitrogen load to mitigate is (kg TN/yr):	170.12
Pre-2030 nutrient budget	
The total annual nitrogen load to mitigate is (kg TN/yr):	720.61

Based on the development delivering 245 units, the development will generate approximately 142kg per year of additional nitrogen. With the requisite 20% buffer, the total nitrogen budget is 170.12kg TN/yr. The pre-2030 nutrient budget for Chickenhall Wastewater Treatment Works (WwTW) is **720.61kg**, and represents the total amount of nutrient mitigation required before the changing permit date for Chickenhall WwTW. The Nutrient Neutrality Budget Calculator (.xlsx) is included at **Appendix EDP 9**.

- 4.21 Consultation with EBC has identified that nutrient credits are available for purchase through the EBC 'nutrient offset scheme' and are specifically available for purchase within the Fair Oak area.

¹⁹ <https://www.gov.uk/government/publications/solent-nutrient-neutrality-calculator> (Jan 2024)

Any such measures will be detailed within a Nutrient Mitigation Strategy which can be secured via Condition, such that no likely significant effects on Solent sites are anticipated. The sHRA submitted during determination will also detail any mitigation necessary to ensure no LSE on Solent Sites.

- 4.22 Further consultation with Southern Water in October 2024 suggested that the St. Johns Crowborough WwTW is currently proposed as the drainage point for the Site. This is yet to be confirmed and given St. Johns Crowborough WwTW sits 144km east of the Site, it would suggest sewage is being deliberately pumped outside the Solent catchment area. The issue is under investigation and any further updates will be provided via an addendum report.
- 4.23 In any event, there is no reason to suggest that the nitrogen budget (if required) could not be mitigated through the existing off-setting strategies.
- 4.24 With respect to the Solent Maritime SAC, the Local Plan HRA concluded that
- The only feature sensitive to ammonia concentrations was Desmoulin's whorl snail, which is not present in the study area (Paragraph 4.3.25), and thus ammonia was not considered further (Paragraph 6.2.35); and
 - With respect to nutrient nitrogen deposition, exceedances of the critical load were only predicted adjacent to the M27. No saltmarsh habitat is present at this location, and thus, it was concluded that there would be no likely significant effect, and no further assessment was necessary (Paragraph 6.2.42).
- 4.25 As with the River Itchen SAC above, the SGO Draft Policy Area removal from the local plan is considered to allow significant headroom within the HRA assessment such that no likely significant effects on the Solent Maritime SAC are considered likely.

Emer Bog SAC

- 4.26 Given Emer Bog SAC lies over 10km from the Site, it is considered unlikely that the proposed development will have any significant impacts.

National Designations

- 4.27 Any potential impacts on SSSIs which underpin European and internationally designated Sites will be considered within the sHRA used to inform the outline planning application.

Moorgreen Meadows SSSI

- 4.28 The closest SSSI to the Site lies approximately 4.3km to the south-west of the Site, with limited direct connectivity. There is therefore a significant degree of separation between the Site and this SSSI, such that impacts are considered unlikely.
- 4.29 Subject to the implementation of best practice during construction and standard engineering protocols, it is considered that impacts on this national designation can be fully avoided.

Non-statutory Designations

- 4.30 The closest non-statutory site is the Land at Knowle Lane, Fair Oak LWS which comprises a band of deciduous woodland, rush pasture and a pond, situated to the immediate south of the

Site. It's possible that construction activity could impact this LWS without appropriate mitigation. Although there is currently no public access, this Site may be subject to recreational use or vandalism without appropriate mitigation.

- 4.31 It is considered that construction impacts on LWS designations can be fully avoided, subject to the implementation of best practice during construction and standard engineering protocols. Where necessary fencing and/or strategic planting can be used to deter access into Land at Knowle Lane, Fair Oak LWS (as appropriate).

IMPACTS AND MITIGATION: HABITATS

- 4.32 As described above with respect to embedded mitigation, the development design follows the mitigation hierarchy. In addition, it also follows the Biodiversity Gain Hierarchy as set out in the Town and Country Planning (Development Management Procedure) (England) Order 2015. The scheme has sought to retain the most important habitats within the proposed layout, namely the majority woody boundaries. Where these effects cannot be avoided, mitigation, and then enhancements, have been provided within the Site (as described within Section 5).
- 4.33 Based on the Illustrative Masterplan, assumptions can be made regarding the habitats present post-development, made up of habitats retained in their current state (with no change), habitats retained and enhanced, and newly created habitats. A preliminary assessment of the predicted habitat losses/gains as a result of the proposed development has been undertaken using the Statutory Biodiversity Metric. This assessment considers all habitats proposed to be lost, retained, enhanced, or created through the proposed development.
- 4.34 A full account of the habitat impacts as result of the proposed development is provided in the indicative BNG Assessment provided in **Appendix EDP 8**. A full copy of the Biodiversity Metric spreadsheet (report ref: edp7852_r012) has also been submitted to the LPA with the planning application and is available on request. **Table EDP 4.1** provides a summary of the net impacts on habitats.

Table EDP 4.2: Indicative Net Impact on Habitats

	Habitat Units	Hedgerow Units	Watercourse Units
Total Net Unit Change	+2.51	+1.49	+0.16
Total Net % Change	+11.36%	+67.79%	+15%
Trading Rules Satisfied	Yes	Yes	Yes

- 4.35 Based on the Biodiversity Metric calculations described above the net impact on habitats, following implementation and maturation of the proposed landscaping, is predicted to be positive. However, in the absence of further mitigation measures, there is a risk of the following:
- Damage/deterioration/pollution of retained habitats from adjacent construction activities; and
 - Not achieving target condition for retained and new habitats due to inappropriate management.

- 4.36 Measures will be required to protect the retained habitats from damage and disturbance during the construction phase. This can be achieved through a combination of the following:
- Tree protection measures (for trees and hedgerows), to within an Arboricultural Method Statement (AMS) or an equivalent document at the detailed design stage;
 - Additional physical protection for wider habitats such as grasslands and water courses, to be detailed within an Ecological Construction Method Statement (ECMS) or an equivalent document. The ECMS will define Ecological Protection Zones (EPZs), in which construction activities will be excluded or carefully controlled in order to avoid or minimise harm to habitats; and
 - General environmental protection measures, including control of dust and other pollutants, to be detailed in a Construction Environmental Management Plan (CEMP).
- 4.37 The AMS, ECMS and CEMP are standard documents which are capable of being secured by planning conditions.
- 4.38 Detailed specifications for new planting and other habitat creation should be provided with a detailed Soft Landscaping Scheme secured by a suitably worded planning condition.
- 4.39 In addition, measures to restore and enhance existing habitats, to ensure successful establishment of new habitats, and to maintain the value of all ecological features in the long-term will be delivered through a Landscape and Ecology Management Plan (LEMP), or an equivalent document, which can be secured by planning condition.

IMPACTS AND MITIGATION: PROTECTED, PRIORITY OR OTHER NOTABLE SPECIES

- 4.40 The applicant is a signatory of the Homes for Nature initiative²⁰, developed by the Future Homes Hub's On-Site Nature Measures Working Group. The Homes for Nature commitment ensures this development will see an integrated bird nesting features installed on every new property, as well as hedgehog highways created as standard. In addition to these enhancement measures, and as encouraged by the initiative, the proposals will also include additional measures such as new bat roosting opportunities and reptile and amphibian hibernacula. All such measures are outline below.

Breeding Birds

- 4.41 Breeding birds utilise the boundary hedgerows which are mostly proposed for retention and buffering as part of the development proposals.
- 4.42 Whilst the majority of opportunities will be retained, some losses of suitable habitat will occur as a consequence of development meaning there is a risk of damaging, destroying or disturbing active bird's nests if these works take place during the peak nesting bird season (March–August inclusive).

²⁰ <https://www.futurehomes.org.uk/homes-for-nature>

- 4.43 The loss of suitable habitats (namely hedgerow/treelines and associated scrub) proposed as a result of the development proposals is minimal. Given the amount of retained habitat and the suitability of the surrounding countryside it is considered that birds present on the Site will not be significantly impacted by the proposed development.
- 4.44 The wintering bird population recorded within the Site is typical and well-suited to semi-urban environments, such that opportunities for such species are unlikely to be displaced as a result of the proposals.
- 4.45 The habitat protection measures described above will avoid harm to breeding birds present with retained habitats. However, some removal of hedgerow which is capable of supporting nesting birds will be required to facilitate development. Any removal of these habitats should be undertaken between September and February inclusive to avoid the bird breeding season. Any habitat removed outside of this period should be inspected by a suitably experienced ecologist prior to removal. Any habitat removed outside of this period should be inspected by a suitably qualified ecologist/Ecological Clerk of Works (ECoW) prior to removal. These measures can be delivered through the ECMS.
- 4.46 The provision of EPZs around the retained hedgerows and trees, as discussed previously, will protect any birds that are using these habitats during construction. The proposed enhancement of the existing hedgerows to the east and west; planting of new tree and scrub habitat; the creation of species-rich and structurally diverse grassland, and the creation of new wetlands in the SuDS basins will together enhance opportunities for foraging and nesting birds post-development.
- 4.47 Further enhancement of bird nesting opportunities can be achieved through the installation of bird boxes/bricks on retained trees and/or on new buildings. As per the Homes for Nature scheme, every building will support a nesting feature (e.g. swift brick). These measures/specifications can be delivered and secured through the LEMP.
- 4.48 Imbedded mitigation includes the retention and buffering of favourable habitats including the areas of woodland, hedgerows, grassland and scrub, which will benefit a variety of breeding and foraging bird species.

Roosting Bats

- 4.49 The proposed layout and the accompanying Arboricultural Impact Assessment (AIA) report prepared for the Site (edp7852_r014) indicates that all of the trees identified as having suitability to support roosting bats are to be retained as part of the proposed development. This includes trees within TL1 which will be breached to facilitate a road. Subject to sensitive lighting design, no impacts to roosting bats are anticipated by the proposed development.
- 4.50 The roosting potential of trees can vary over time as a result of storms and natural decay. As such, should the proposals change or the requirement for any felling/pruning works be identified, an update tree roost assessment should be undertaken by a suitably experienced ecologist prior to these works to ensure there have been no changes to the roost suitability of the tree(s), and to advise on any required further survey/mitigation if required.

- 4.51 All retained trees must be suitably protected by fencing to ensure they are not accidentally damaged by construction activities. This can be achieved via the use of standard tree protection fencing, to be prescribed within a detailed AIA or equivalent document, secured via a planning condition.
- 4.52 Any works involving the felling or removal of limbs from any of the trees with bat roost suitability will be undertaken following a soft felling technique, following confirmation from an ecologist that doing so would not result in a potential offence. Details of soft felling techniques will be provided with the CEMP.
- 4.53 Enhancement of bat roosting opportunities can be achieved through installation of bat boxes/bricks on retained trees and/or on new buildings. These measures/specifications can be delivered through the LEMP.

Foraging/Commuting Bats

- 4.54 The manual transect and automated detector surveys recorded a bat population of moderate species diversity that is of Local ecological importance. As would be expected, commuting/foraging behaviour is largely focussed at the woody boundaries of the site, which will be retained and buffered from the development.
- 4.55 The removal of section of H1 is not considered to constitute a significant impact on commuting corridors and will not reduce the suitability of the Site for use by commuting bats. The proposed development will strengthen overall connectivity (including a new green corridor on the western boundary of the Site) and provide new opportunities for commuting and foraging bats, including new species-rich habitats and wetland features.
- 4.56 The introduction of artificial lighting during the construction and operational phases could prevent some species of bats from utilising the available habitat for foraging/commuting and the assemblage of bats could be restricted to those more commonly associated with urban environments such as common and soprano pipistrelle bats.
- 4.57 The habitat protection measures discussed previously, and to be included within an ECMS, are considered sufficient to ensure that all retained habitats suitable for foraging/commuting bats will be suitably protected to prevent accidental damage during construction.
- 4.58 Enhancement of bat foraging/commuting opportunities through the strengthening of the existing woody boundaries. Furthermore, the creation of species-rich hedgerows, SuDS/bioswales and species-rich wildflower meadow planting will create enhanced foraging opportunities for bats within the Site.
- 4.59 In addition to the above, a sensitive lighting scheme should be devised at the detailed design/Reserved Matters stage, which minimises light spill from street lighting onto retained/new bat foraging habitat adjacent to the development area. Such a lighting scheme can be secured by planning condition.

Badgers

- 4.60 The proposed development might result in the minor loss of suitable foraging habitats across the grasslands, however, the boundary vegetation will be retained and enhanced, and new foraging opportunities will be introduced to the Site.
- 4.61 Losses to foraging and dispersal habitat are not considered likely to result in a significant impact to the local badger population. The provision of new habitats within the Site will likely be of value to the local badger population.
- 4.62 As badger can excavate new setts in a relatively short space of time the disturbance to or damage/destruction of additional active badger setts is possible during site clearance and the construction phase. An updated survey should be undertaken prior to any site clearance or construction activities commencing.
- 4.63 During the construction phase, fencing used for the EPZs discussed is likely to temporarily obstruct foraging/commuting routes. Furthermore, during construction there is a risk of mammals falling into any trenches or excavations on the Site. Therefore, it is recommended that the following precautionary measures set out within the ECMS are as followed:
- All fencing used during construction (perimeter and tree protection zones), contains sufficient gaps underneath to allow movement of badgers; and
 - Good practice construction measures to ensure mammals cannot become trapped in excavations (e.g. through covering up at night, inserting an 'escape ramp' at 45 degrees or creating stepped edges).

Other Mammals

- 4.64 Vegetation clearance/construction could result in harm to hedgehogs which may be utilising the Site for foraging, dispersal, refuge, and hibernation.
- 4.65 Dispersal and foraging of hedgehogs will not be impacted as a result of the proposed development, given the ecological buffers present around the edge of the development footprint, which will maintain connectivity across the Site for terrestrial mammals.
- 4.66 As per the Homes for Nature initiative, hedgehog highways will be delivered across the site, ensuring continued foraging and dispersal opportunities for hedgehogs.

Great crested newts/Other Amphibians

- 4.67 The vast majority of the habitat lost comprises farmland, which is of low suitability to support great crested newt. Therefore, if present, they are likely to be confined to the more suitable habitats along the base of the hedgerow/treelines which delineating the field boundaries, which they are likely to favour for dispersal, foraging and refuge.
- 4.68 Areas of suitable terrestrial habitat will be retained and not impacted by the proposed development, maintaining dispersal and refuge opportunities.

- 4.69 If clearance of vegetation suitable to support great crested newt is required to facilitate the proposed development, then there is the potential to injure or kill great crested newt (if they are present within the Site).
- 4.70 Inherent mitigation in the design layout includes the retention and buffering of favourable habitats including hedgerow/treelines, which amphibians could access in the long-term, should they be present in the locality. Furthermore, the provision of wildflower grassland in areas of open space, as well as the provision of log piles will serve to enhance the Site's overall suitability for long-term use by amphibians, including great crested newts. These measures/specifications can be delivered through a LEMP.
- 4.71 Given the locality of a number of ponds, none of which have been surveyed due to access constraints, a District Level Licence will be sought to mitigate any potential impacts on the local great crested newt population.
- 4.72 The mitigation and enhancement measures outlined above will ensure effects upon amphibians, if present in the locality, are avoided/minimised.

Reptiles

- 4.73 The vast majority of the habitat lost is unsuitable to support reptiles in any significant way. Therefore, if reptiles are present, they are likely to be confined to the more suitable habitats along the base of the hedgerows/treelines and grassland delineating the south and east of the site, which they are likely to favour for dispersal, foraging and refuge.
- 4.74 Areas of suitable habitat will be retained and not impacted by the proposed development, maintaining connectivity and refuge opportunities. The proposals are not expected to significantly reduce the overall carrying capacity for reptiles across the Site if present.
- 4.75 If clearance of vegetation suitable to support reptiles is required to facilitate the proposed development, then there is the potential to injure or kill reptiles during habitat clearance.
- 4.76 As a precaution, habitat clearance and manipulation will be undertaken a suitable time of year, ideally within the active season for reptiles (March – September), and done so in a step-wise manner to avoid impacts on reptiles at the construction phase. The working methodology for site clearance will be outlined within the ECMS. During the operational phase, new opportunities for reptiles will be made available, including foraging and basking spots, plus hibernacula in the form of log piles.
- 4.77 Log piles/hibernacula will be delivered within the south-eastern parts of the Site to create opportunities for reptiles which are currently absent.

Consultation

- 4.78 During consultation, the Ecology Officer at EBC requested confirmation on whether there are any likely in-combination effects on barn owls and bats as a result of urbanisation. The development of the eastern side of Fair Oak, most notably at Pembers Hill Farm (ref. RM/18/83278), Land at Knowle Lane (ref. RM/18/83737) and Land Adjacent the Mazels (ref. O/15/77465) resulted in the loss of agricultural land (both pasture and arable) which is extensive in the local area.

- 4.79 The site itself (until recently grazed and currently producing hay crop) is only of limited value to foraging bats, and where opportunities exist (i.e. the boundary vegetation), these will mostly be retained and enhanced for wildlife (including bats). Permitted development within the local area has not significantly impeded connectivity / green infrastructure, with strong green connectivity across the localised landscape, including connections to woodland.
- 4.80 No barn owls were recorded at Pembers Hill Farm, Knowle Lane or Adjacent the Mazels. Rough grassland habitats identified at Pembers Hill Farm were enhanced specifically for barn owls, with a nest box also erected, resulting in no residual impacts on this species. No barn owls have been recorded on the Site, and HBIC returned no high-resolution barn owl records from within or close to the site. The grassland with the site is suboptimal for foraging barn owls, with the majority supporting no litter layer which is a limiting factor in terms of vole (i.e. key prey) availability. As such, no impacts on barn owls are anticipated and no specific mitigation for barn owls is considered necessary. Based on the results of specific faunal and flora survey work, and the proposed strategy to improve the ecological value site boundaries, no in-combination impacts on these are any other protected species/groups are anticipated.

Summary

- 4.81 Potential impacts, and proposed avoidance or mitigation measures, in respect of protected, priority or other notable wildlife species are set out in **Table EDP 4.2**.

Table EDP 4.3: Species Impact and Mitigation

Species/species group	Potential/Actual Impacts	Avoidance/Mitigation Measures	Delivery Mechanism
Birds	Disturbance or damage to active birds' nests during vegetation clearance.	Sensitive timing and/or method of clearance to either avoid the nesting season (March-August inclusive) or check the affected areas for nests prior to clearance.	ECMS
	Small scale loss of nesting habitat	Limit losses woody vegetation. New habitat creation (native planting and grassland) within and adjacent to the Site. Provision of nest boxes on suitable mature trees and within the development footprint.	Soft landscape scheme, LEMP
Bats	Small scale loss of foraging or commuting habitat	New habitat creation (native planting and grassland) within and adjacent to the Site.	Soft landscape scheme, LEMP
	Reduced access to foraging or commuting habitat due to increased lighting	Minimise any new lighting associated with the development and design to avoid or minimise light spill onto foraging habitat.	Sensitive lighting design
	Impacts to trees with roosting potential	Losses and impacts to trees with roosting bat potential will be avoided, however should any trees require removal at the detailed design stage, then further survey work and, where necessary, a licence sought from Natural England. New roosting opportunities provided.	Soft landscape scheme, Sensitive lighting design, licenced removal (as necessary), LEMP
Badger	Disturbance/damage to active setts (not currently present)	Check within 30m of proposed works for badger setts prior to clearance and groundworks. Pre-commencement survey - if setts are found, exclusion of badgers prior to works and if necessary, excavation under supervision.	ECMS/Licenced method statement (if setts present)
Reptiles and amphibians (including Great Crested Newt)	Direct harm to reptiles or amphibians during vegetation clearance (low likelihood)	Check affected area for reptiles prior to clearance. Should any reptiles or amphibians be found relocate these to safe location (avoiding the hibernation period). Great crested new District Level Licence (DLL) will be applied for prior to any works on-site.	ECMS and DLL

Section 5

Summary and Conclusions

5.1 **Table EDP 5.1** provides an overview of Mitigation and Enhancement Strategy described in **Section 4**.

Table EDP 5.1: 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: • 0.34km field ditches; • 0.025km hedgerow; • 0.531km treelines.	Habitat retention embedded in Masterplan 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 zones.	Detailed AMS and ECMS secured via pre-commencement planning condition.
	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 • Supervision by Ecological Clerk of Works (ECoW).	ECMS secured via pre-commencement planning condition.

Mitigation Type	Key Principles	Mechanism(s) to Secure Delivery
Mitigate or compensate for habitat loss and deliver net gains	Habitat enhancement: • Treeline. Habitat creation: • Wildflower grassland; • Native scrub; • Pond • Wetland SuDS; and • Urban trees.	Space for new habitat embedded in the Masterplan, which will be an 'approved plan' to which detailed designs must align. Landscape and Ecological Management Plan (LEMP) to be secured by planning condition.
	Habitat features to be provided in suitable locations: • Bat boxes and/or bat bricks; • Bird boxes; and • Reptile hibernacula.	LEMP to be secured by planning condition.
	Measures to maintain or enhance habitat connectivity: • Green corridor formed along the boundary to enhance connectivity between the two offsite woodlands.	LEMP to be secured by planning condition. Detailed engineering designs submitted as part of reserved matters applications.
	Lighting strategy to avoiding 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 to ensure new habitat becomes established, to achieve target condition; 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 and hibernacula etc.) in good condition or replace as necessary.	LEMP to be secured by planning condition.

5.2 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

Development Framework Plan



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KEY

- Site Boundary
- Gross Development Area:** Including Residential, Mobility Hub, Multi-functional Space, Incidental Public Open Space, Play Facilities, Drainage Features, Landscaping & Ancillary Infrastructure.
- Strategic Public Open Space:** Including Play Facilities, Drainage Features, Pedestrian/ Cycle Links, Landscaping, Retained Vegetation (inc. Root Protection Areas) & Ancillary Infrastructure.
- Access Infrastructure & Roads Through Open Space
- Vehicular, Pedestrian & Cycle Access Point.
- Agricultural, Pedestrian & Cycle Access Point
- Pedestrian & Cycle Access Point
- Pedestrian Connections to Site Boundary

- Existing Trees & Hedgerows to be retained
- Root Protection Areas (for the retained trees & hedgerows)
- Existing Trees & Hedgerows to be removed
- New Site Boundary Planting
- Indicative Locations of Play
- Indicative Location of Mobility Hub & Multi-functional Space

Notes:
- All Features & Areas Subject to a tolerance of +/- 5m.
- Utility and/or access infrastructure may need to be located in POS areas.



LAND SOUTH OF MORTIMERS LANE, FAIR OAK – DEVELOPMENT FRAMEWORK

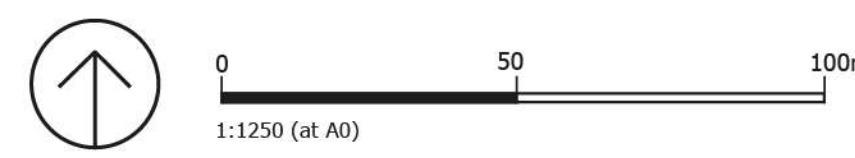
PEGASUSGROUP.CO.UK | TEAM/DRAWN BY: TB | APPROVED BY P.M: TB | DATE: 15.10.24 | SCALE: 1:1250@A1 | DRWG: P23-2261_DE_007_01_C | CLIENT: BLOOR HOMES

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Appendix EDP 2
Illustrative Masterplan
(P23-2261_DE_004_D_01_IMP_REVD)



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LAND SOUTH OF MORTIMERS LANE, FAIR OAK – ILLUSTRATIVE MASTERPLAN

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