

OTTERPOOL PARK

Environmental Statement (ES) Appendix 7.20: Biodiversity
Action Plan (BAP) 2022 Update v2.0

AUGUST 2022



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1 Introduction

- 1.1.1 Arcadis Consulting (UK) Limited has been commissioned by Otterpool Park LLP ('the applicant') to produce a project specific Biodiversity Action Plan (BAP) to accompany the Environmental Statement (ES) for a proposed new development. The proposed Development is 'Otterpool Park', a garden settlement located within Kent.
- 1.1.2 An outline planning application was previously submitted in 2019 for Otterpool Park, accompanied by an ES, which was supported by documents including a BAP. This BAP is an update of the BAP produced for the 2019 submission taking into account the revised design and tiered application approach.
- 1.1.3 As part of the proposed Development, mitigation will be created for a range of species and habitats. Alongside this, strategies are outlined to ensure that the conservation status of biodiversity within, and in the vicinity of, the works are protected and enhanced beyond the end of the construction of the proposed Development. This approach to safeguarding biodiversity in the long term is outlined within this Biodiversity Action Plan.
- 1.1.4 The submission is being progressed through a tiered approach, as outlined in the section below.
- 1.1.5 This version of the BAP (v2.0) dated July 2022 is an updated submission in response to comments from the Local Planning Authority (LPA). The following changes have been made:
 - Addition of woodland within the habitat BAP;
 - Inclusion of additional bird species within the selected notable birds BAP;
 - Addition of a Breeding Birds BAP; and
 - Addition of a Wintering birds BAP.
- 1.1.6 All other sections remain unchanged

1.2 Approach to the Tiered Planning Application

- 1.2.1 The application is being submitted for outline planning approval. Parameter plans are being submitted which fix key aspects of the development, such as Open Space (OPM(P)4002), Development Areas and Movement Corridors (OPM(P)4001), Building Heights (OPMP(4003) and Indicative Phases (OPM(P) 4004), available in ES Appendix 4.2.
- 1.2.2 The parameter plans fix key aspects of the development, alongside the Development Specification (ES Appendix 4.1) which further outlines required aspects of the development. Further detail will be provided at Tier 2 and 3, but must fit with the parameters secured at Tier 1.
- 1.2.3 The illustrative masterplan (ES Appendix 4.5) demonstrates one way that the development can be detailed within the fixed parameters. This illustrative masterplan demonstrated that the parameters can appropriately accommodate the mitigation proposed (illustrated in ES Appendices 7.18, 7.21, the Design and Access Statement ES Appendix 4.11 and the Green Infrastructure Strategy ES Appendix 4.16). Additionally, it is considered that there is sufficient flexibility in mitigation parameters to respond appropriately to likely flex in planning policy, potential future baselines, best practice guidance and/or legislation. This BAP is prepared utilising information in the illustrative masterplan (ES Appendix 4.5) and the accompanying parameter plans.
- 1.2.4 Following consultation on the ES submitted as part of the 2019 planning application (the '2019 ES'), a 'three-tier' approach is proposed for the amended planning application and accompanying EIA. This comprises the three stages of the planning process: Tier 1 Outline Planning Application, Tier 2 detailed masterplan and Tier 3 reserved matters application. The design and mitigation will therefore evolve in line with the tiers. The table below outlines the proposed methodology for evolving the BAP through the planning permission through the tiers.

Table 1: Methodology for the evolution of ecological mitigation through the tiered planning process

Aspect of the development	Tier 1	Tier 2	Tier 3
Biodiversity Action Plan	<p>Provision of an outline site wide BAP identifying key habitats and species and a general approach to safeguarding and enhancing for these receptors.</p> <p>An outline for community engagement with relation to wildlife.</p>	<p>No further input into BAP.</p> <p>(However, the design specification for the Phase will include specifications for the inclusion of biodiversity features within the phases, i.e. bat boxes, hedgerows etc).</p>	<p>Evolution of the sitewide BAP (this should be kept as a live document).</p> <p>Details of approaches to safeguard and enhance the habitats and species identified in the BAP within each parcel.</p> <p>Details of the approach to community engagement in relation to wildlife and biodiversity.</p>

1.3 BAP Overview

1.3.1 The BAP summarises:

- Receptors for which a priority Habitat or Species Action Plan is the most appropriate mechanism for safeguarding their status;
- Design parameters for habitats to support these receptors;
- The targets for what will be achieved;
- The priorities for biodiversity management; and
- Action plans to achieve these targets.

1.3.2 This is intended to be a live document that will require updating as the detailed design evolves, management plans are written and implemented, and monitoring information is obtained. It should also be updated through liaison with residents and stakeholders throughout the operational phase of the proposed Development.

2 Basis of the Otterpool Biodiversity Action Plan

- 2.1.1 Biodiversity Action Plans (BAPs) are a method of identifying and delivering effective measures to further biodiversity conservation. At a national scale, the UK Biodiversity Action Plan (UK BAP) has been superseded by Section 41 of the NERC Act (HMSO 2006). The NERC Act places a duty upon public bodies to consider enhancement of biodiversity within all of their actions. Section 41 lists flora, fauna and habitats considered by the Secretary of State to be of Principal Importance for conservation of biodiversity in England. Within this report, this legislation is referenced to as 'S41'. In addition, the NERC Act lists habitats and species that were previously identified within the UK BAP. Locally, the Kent BAP, which lists species and habitats of principal importance within Kent, has been superseded by the Kent Biodiversity Strategy (Kent Nature Partnership 2019). This outlines broad conservation approaches and targets at the county scale and is a good resource for guiding conservation at a site scale.
- 2.1.2 BAPs should promote the conservation of habitats and species which are the most distinctive and which are most at risk. In addition, a BAP should consider species which are particularly characteristic of the area and should reflect the views of the local community, in terms of habitats and species which are most valued or popular. As a result, as well as delivering biodiversity goals, a thorough BAP is also capable of improving social cohesion, and developing networks and other community benefits through, for example, providing outdoor activity and education opportunities.
- 2.1.3 This BAP seeks to guide conservation actions for identified species throughout the construction and operation phase of the proposed Development. In order to put the conservation approaches outlined in the context of conservation at a county and national scale, this document should be read alongside:
- The NERC Section 41 habitats and species list;
 - The Kent Biodiversity Strategy (Kent Nature Partnership 2019); and
 - The Kent BAP (Kent Biodiversity Action Plan Steering Group 1997). This is now superseded by the Kent Biodiversity Strategy, however this document does still contain useful information and guidance on conservation within Kent.

2.2 Site Location and Setting

- 2.2.1 The site is located within Folkestone, Kent within the administrative boundary of Folkestone and Hythe District Council (F&HDC) and spans a large area located immediately south of Junction 11 of the M20. The site as referred to in this report is largely agricultural in nature with the majority of the site comprising arable and pasture fields, a disused horseracing course with an artificial lake ('Folkestone Racecourse Lake'), areas modified from historical use (airfields), existing historic settlements and relatively new industrial areas.
- 2.2.2 The M20 motorway, Channel Tunnel Rail Link and Westenhanger Station are located to the north of the site, beyond which lie the villages of Stanford and Postling within a largely rural setting including the Kent Downs Area of Outstanding Natural Beauty (AONB). This AONB extends to the east, beyond which lies the town of Hythe, and to the south where it includes Lympe village. The site also includes the settlements of Barrowhill, Sellindge, Westenhanger and Newingreen. Lympe Industrial Park and some areas of woodland are located immediately south of the site. In addition, East Stour River flows through the site in a north-east to west direction. The site is centred on BNG TR 111 363.
- 2.2.3 Beyond the site to the north lies the largely grassland and arable areas interspersed with small villages and hamlets. The Kent Downs AONB lies to the north east and south of the site. Beyond the site to the south lies Lympe Escarpment, beyond which is a large area of arable land, and Romney Marsh.
- 2.2.4 An aerial image illustrating the site as surveyed is presented in Image 1.

Image 1 Outline planning application (OPA) Boundary (Red)



2.3 Proposed Development

- 2.3.1 The planning application seeks permission for a new garden settlement accommodating up to 8,500 homes (Use Classes C2 and C3) and Use Class E, F, B2, C1, Sui Generis development, including use of retained buildings as identified, with related infrastructure, highway works, green and blue infrastructure, with access, appearance, landscaping, layout and scale matters to be reserved.

2.4 Species and Habitat Surveys Conducted

- 2.4.1 In order to inform the EIA and other ecological and environmental appraisals, a suite of desk and site surveys have been conducted. The full results of these surveys are presented within Appendices to the ES, the name and location of these reports and associated figures is presented in Table 2.

Table 2: Structure of Environmental Statement Appendices and Figures

Appendix Number	Appendix Content
7.3	Habitat and hedgerow survey report
7.4	Arboricultural scoping report
7.5	Desk study data
7.6	Reptile survey report
7.7	Badger survey report and mitigation
7.8	Dormouse survey report
7.9	Great crested newt survey report
7.10	Otter and water vole survey report
7.11	Bat survey results summary report and impact assessment
7.12	Bat transect survey report
7.13	Bat emergence survey report
7.14	Bat static survey report
7.15	Breeding birds survey report
7.16	Wintering birds survey report
7.17	Invertebrate scoping report

3 The Otterpool Park BAP Vision

3.1 Introduction

3.1.1 The overall approach to ecology on the proposed Development site is to maintain and enhance the conservation status of the notable species and habitats present within the existing site. This is proposed to be achieved through the following approaches:

- Retention of valuable features where possible and design of the development accordingly;
- Maintaining green infrastructure connectivity and permeability. A key facet to the proposed Development design overall is retaining and enhancing green corridors to maintain permeability for wildlife and links to the wider area and other developments, including dark corridors and green / blue corridors;
- Multifunctional green spaces throughout the proposed Development including a riverside park and country park, and a nature / wetland area in the north-west;
- Integrated naturalised flood alleviation including Sustainable Drainage Systems (SuDS) using ecosystem service principals where possible;
- Maximising the biodiversity potential of flood attenuation; and
- Maximising the biodiversity benefit of amenity greenspaces.

3.1.2 In addition, a plan has been made to protect, enhance and create habitats for biodiversity across the proposed Development, ensuring creation of NERC S41 Priority Habitats, and to secure their positive management.

3.2 Objectives of the Otterpool Park BAP

3.2.1 The Otterpool Park Biodiversity Vision has the following objectives:

- Protect existing habitats and species following the proposed Development design (with appropriate targets and monitoring);
- Enhance areas which are lacking in significant wildlife interest as per the proposed Development design (with appropriate targets and monitoring);
- Ensure that existing and to be created wildlife sites are accessible to people, where appropriate;
- Raise awareness of nature conservation issues and promote interaction with the developments wildlife;
- Specify targets to which subsequent management and monitoring plans will aim and
- Ensure that the detailed design evolution is faithful to the commitments of the consented masterplan design including biodiversity net gain of c.20%.

3.2.2 This BAP outlines how these goals should be achieved in relation to the priority habitats and species.

3.3 Involvement of Stakeholders

3.3.1 The BAP should be a live document and should be updated throughout the design / construction and operation process. The BAP should be updated in relation to the changing situation on site and input from stakeholders at appropriate intervals including:

- Local planning authority;
- Otterpool residents and community groups;
- Landscape management organisation (to be determined);
- Further designers iterating detailed designs;
- Contractors fulfilling the design; and

- Local wildlife trust.

3.3.2 The detail of the approach to stewardship on the Otterpool Park site is yet to be determined. As a component of the application, a Governance and Stewardship Strategy has been prepared (ES Appendix 4.13). This outlines the how decisions are to be made and by whom and how the quality of the proposed Development can be sustained over the long-term. Having appropriate governance arrangements in place at the outset of a development is essential to its ultimate success as a 'place'. It allows legal structures to be put in place that provide a vehicle for the involvement of the local community, that secure long-term resident involvement, allow land to be held for the benefit of the community and for contributions to be guaranteed for long-term management purposes.

3.3.3 The document outlines at which stage the details of governance and stewardship will be detailed. A summary of the proposed timings for the provision of governance and stewardship details are provided below in Table 3.

Table 3: Governance Body – indicative timescales

Aspect	Date
Legal structure	
Agree shortlist of options for structure	November 2021
LLP agree preferred option	January 2022
Cabinet agrees option	March 2022
Establish legal entity (dormant)	April 2022
Board	
Agree members of shadow/advisory board	March 2022
Establish shadow/advisory board	June 2022
Establish permanent board	January 2024

3.3.4 During the formulation of the stewardship arrangements, it will be important to ensure that the habitat and species targets that the proposed Development aspires to are retained. The organisations to be involved in these stewardship agreements are yet to be determined, however a potential structure of delivery of the stewardship bodies is presented in Table 4 below.

Table 4: The organisations foreseen to be involved in the stewardship of the Otterpool Park

Asset/Facility	Ownership	Management/ Maintenance
Open space/green infrastructure		
Strategic open spaces	Governance Body Plot Company	Governance Body or Contracted Provider Plot Management Company
Smaller spaces/areas of amenity		
Play areas (standalone)		
Habitat		
Allotments	Governance Body, Parish or Society	N/A
Cemetery	F&HDC	F&HDC

3.3.5 The management and maintenance of the habitats created would need to be secured within the responsibilities of the organisations to be appointed to the roles in Table 4 above. This BAP document should be utilised to drive the targets for the management and monitoring organisations above and ensure that this meets the requirements of the habitats and species detailed in this document (as a minimum).

3.4 Management and Monitoring

3.4.1 Ecological Management Plans (EMPs) will be required to meet the BAP targets. More detailed target communities for habitats should be evolved in conjunction with the EMPs. These will be live documents informed by the monitoring results.

3.4.2 Monitoring to ensure these targets are met should be undertaken yearly throughout the development process and every 5 years thereafter. Where this ties in with an existing condition (for example Natural England (NE) license, Code of Construction Practice (CoCP) or planning condition) the information from that element of monitoring incorporated into the BAP monitoring data. A BAP Report would be produced at least five yearly to inform ongoing management. These reports and data will be shared with the Local Planning Authority, the local community, local wildlife groups and any other Local BAP organisation. Any issues identified will be communicated to the Management / Maintenance team (as identified in Table 4 above). Within the reports, specific actions would be outlined, which would be the responsibility of the relevant managing organisation, whether that be a management company, local residents association or wildlife trust to complete.

4 Target Habitats and Species

4.1 Introduction

4.1.1 This section outlines the habitats and species identified for inclusion within the Otterpool Park BAP. It also outlines the rationale for the selection of these species. The habitats and species selected are those that have conservation value (either due to their listing on S41 of the NERC Act – i.e. priority habitats or species), value in Kent (as stated in the Kent Biodiversity Strategy) or their prevalence on the Otterpool site (either in the baseline state or in the proposed Development). The habitats and species selected are those which can be benefited the most from the proposed Development and ongoing community involvement.

Habitats

4.1.2 The habitats identified for inclusion within the Otterpool Park BAP are as follows:

- Rivers;
- Neutral Grassland;
- Ponds and Ditches;
- Woodland; and
- Hedgerows.

Species

4.1.3 The species identified for inclusion within the Otterpool Park BAP are:

- Bats (all species recorded within the surveys);
- Reptiles (common species);
- Water vole;
- Otter;
- Terrestrial invertebrates (particularly glow worm);
- Hazel dormouse;
- Selected notable bird species, namely house sparrow, kingfisher, barn owl and black redstart;
- Breeding bird species (as an assemblage);
- Wintering bird species (as an assemblage);
- Farmland bird species (off-site offsetting).

Nature Conservation Benefit

4.1.4 Table 5 outlines the nature conservation benefit possible through the inclusion of each habitat or species to be listed on the Otterpool Park development BAP.

Table 5: BAP Habitats and Species within the Otterpool Park Development Site

Species or Habitat	Applicable Legislation	Nature Conservation Benefit
Rivers	<p>The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (HMSO 2017)</p> <p>Protected under other legislation if supporting protected species (e.g. Bats).</p>	<p>The East Stour River crosses the site, from Westenhanger Castle in the east to Harringe Lane in the west. Two tributaries to the East Stour River (south of the A20 and from Harringe Brooks Wood) are within the site.</p> <p>Within the site, there is approximately 0.15ha of running water.</p> <p>As of 2019, the East Stour River was classified under the Water Framework Directive (WFD) parameters (EA 2021) as having moderate ecological status, moderate biological quality elements, good fish and invertebrate status and moderate macrophytes and phytobenthos status.</p> <p>In addition, the river and its tributaries provides a range of ecosystem services, including drainage, water cycling, pollution control, landscape and recreational services and provisioning services, such as irrigation. In addition, this feature is known to support an assemblage of notable receptors, including fish, foraging bats and birds, and aquatic invertebrates.</p> <p>Downstream of the site, the East Stour River is a tributary to the Great Stour, sections of which are the rare habitat 'chalk stream'.</p> <p>This habitat supports a diverse range of species on the site, including:</p> <ul style="list-style-type: none"> • Aquatic invertebrates; • Bats; • Otter; • Fish; • Birds, including kingfisher; • Aquatic plants.
Neutral Grassland	<p>Protected under wildlife legislation if supporting protected species (e.g. Great Crested Newts).</p>	<p>The grassland on site is not particularly notable, i.e. none of the grassland is considered to qualify as a S41 habitat. In addition, only a very small area of the site (2.84%) of the site is considered semi-improved neutral grassland habitat, with the remaining grasslands on site being species poor semi-improved, improved or amenity grassland.</p> <p>Grassland habitats provide a range of ecosystem services including carbon sequestration, flood attenuation and erosion protection. They are a landscape feature which are visible in the wider area. They are also an important habitat for protected species including bats, birds and small mammals.</p> <p>In addition, the Kent BOA 'Kent Gault and Greensand Ridge' (which is partially within the site) lists multiple targets relating to grassland. The development within the site has the opportunity to contribute towards these targets. This, combined with some of the notable faunal species present on the site that are supported by grassland, has resulted in this habitat being included in this BAP.</p>
Ponds	<p>Protected under wildlife legislation if supporting protected species</p>	<p>Over 30 ponds were recorded within or adjacent to the site, varying from relatively large water bodies such as the Folkestone Racecourse Lake (also referred to as Pond 19) to small ephemeral ponds. In summary:</p> <ul style="list-style-type: none"> • The larger ponds on site have emergent vegetation at the periphery, dominated by Common Reed and Bulrush. • A stocked fish pond on site south of the A20 has limited emergent vegetation, mainly Common Reed, Bulrush and Water-lily. This pond is surrounded by pond sedge with Yellow sedge also present. On the island there is the non-native invasive plant species Giant rhubarb.

Species or Habitat	Applicable Legislation	Nature Conservation Benefit
		<ul style="list-style-type: none"> • Some of the overgrown ponds within and adjacent to the site are devoid of emergent vegetation. • The smaller ponds on site were shallow and supported plants including Water Mint and Fool's Water-cress. • A number of ponds also supported invasive non-native species. <p>Prior to development, many ponds qualify as S41 habitats. These include the following ponds which are on or around the site:</p> <ul style="list-style-type: none"> • Pond 5; • Pond 6 (off site) in Harringe Wood; • Pond 8 (off site) in Harringe Wood despite being recently reprofiled the surrounding vegetation was indicative of a diverse habitat that will rapidly recolonise; • Pond 9; • Pond 11; • Pond 12; • Pond 15; • Pond 16; • Pond 17; • Pond 19 (Folkestone Racecourse Lake); • Pond 27. <p>This is due to their size (greater than 0.3ha); reasonable water quality; diversity of emergent and marginal plants of less common of species; and support of notable fauna.</p> <ul style="list-style-type: none"> • Heterogenous banks with varied bankside vegetation. <p>The national decline of ponds in the last century provides the opportunity to create new, high quality ponds that are suitable to support a diverse assemblage of wildlife should be taken at every opportunity.</p> <p>Ponds can play a valuable role in the conservation of aquatic organisms.</p> <p>This habitat supports a diverse range of species on the site, including:</p> <ul style="list-style-type: none"> • Aquatic invertebrates; • Bats; • Otter; • Fish; • Birds, including kingfisher; • Aquatic plants <p>Significant numbers of ponds and wetlands are to be created as a component of the development. These are primarily located:</p> <ul style="list-style-type: none"> • Within and adjacent to the riparian park; • Adjacent to Harringe Brooks Wood; • In the wildlife area in the north-west of the site.

Species or Habitat	Applicable Legislation	Nature Conservation Benefit
		<p>In addition, a range of Sustainable Urban Drainage Systems (SuDS) features are to be incorporated within the development.</p>
Woodlands	<p>Protected under wildlife legislation if supporting protected species (e.g. Bats).</p>	<p>Woodlands are present across the site, albeit as a small percentage at 3% of the site..</p> <p>Woodlands provide a wide range of ecosystem services and biodiversity benefits – they provide important habitat for woodland plants and animals, they bind carbon, prevent flooding and are of recreational value as well as providing a wide range of other services.</p> <p>Woodlands provide feeding opportunities for important wildlife including badgers; birds, dormice and invertebrates, which in provide prey for small mammals and bats.</p> <p>In addition to the benefits listed above woodlands provide many other opportunities for wildlife, including:</p> <ul style="list-style-type: none"> • Nesting for birds; • Bat roosting; • Sett building for badgers; and • Hibernation for a range of species. <p>Therefore, woodlands have been included due to their value, scarcity on the site in the baseline state and importance for notable fauna.</p>
Hedgerows	<p>Hedgerows Regulations 1997</p>	<p>Hedgerows are present across the site. Of the 67 hedgerows on site which were surveyed, only 12 are currently likely to qualify as important under the Hedgerows Regulations.</p> <p>Hedgerows provide important refuges for woodland plants, they reduce soil erosion by wind, provide buffers from pollution sources (such as road traffic) and sequester carbon. They provide wildlife corridors for protected species. They form part of the farmland habitat complex that supports farmland birds.</p> <p>Hedgerows play a vital role in connecting disparate patches of habitat at the landscape level. They provide commuting/dispersal corridors for woodland plants and animals. They enable dormice to travel between patches of woodland, great crested newt to travel to new ponds and bats to navigate between foraging sites. They provide cover for many other species enabling them to move around the landscape, including hedgehog and other small mammals.</p> <p>Hedgerows also provide feeding opportunities; birds feed on the fruits of the hedgerow plants, insects feed on the plant matter providing prey for, small mammals, birds and bats. A diverse food-web allows great biodiversity to be found in hedgerows.</p> <p>In addition to the benefits listed above hedgerows provide many other opportunities for wildlife, including:</p> <ul style="list-style-type: none"> • Nesting; • Hibernation; • Territory boundaries <p>Therefore, hedgerows have been included due to their value in Kent and importance for notable fauna.</p>
Bats	<p>All UK bat species are protected under:</p>	<p>UK bat species have undergone marked population declines since the widespread use of insecticides. As such it makes it all the more important to consider and conserve large and important populations.</p>

Species or Habitat	Applicable Legislation	Nature Conservation Benefit
	Habitat Regs Schedule 2* WCA Schedule 5**	<p>Within the site, ten species were recorded and identified to species level. The vast majority of bats recorded were common or soprano pipistrelle bats. Some rarer and / or less recorded bats were identified, areas of the site important for these species were identified.</p> <p>A low number of barbastelle calls were identified from the static data, and considering the number of calls it appears that the site is not of value for this species.</p> <p>The most valuable areas appeared to be the following:</p> <ul style="list-style-type: none"> • The corridor along the East Stour tributary in the south east of the site; • The area around the Folkestone Racecourse Lake; • An area around and associated with Harringe Brooks Woods; • An area around the racecourse buildings, with the activity here almost all pipistrelle bats; • An area around Park Wood in the west of the site. <p>Four locations had a notably higher proportion of not common or soprano pipistrelle calls. These locations were:</p> <ul style="list-style-type: none"> • An area adjacent to Folkestone Racecourse Lake; • Within the bunker area to the west of the site; • Adjacent to Harringe Brooks woodland in the west of the site; • Adjacent to Park Wood in the west of the site. <p>Full details in Appendices 7.12, 7.13 and 7.14.</p>
Reptiles (common species)	WCA Schedule 5**	<p>All reptiles are protected under UK law and S41 listed. This is due to a combination of scarcity and population declines, depending on the species in question. Within Kent, the reptile species recorded on the site are relatively abundant and widely recorded.</p> <p>Across the site, three common reptile species were recorded, common lizard, grass snake and slow worm. In total, over 500 individual records of reptiles were recorded across the site during the surveys.</p> <p>Common lizard was widely distributed across the site, with most survey areas supporting this species, with a few key areas where populations were higher and a 'good' population was supported.</p> <p>The results of the survey suggested that no area of the site supported a particularly high population of grass snake, with peak counts in all areas not exceeding two adults. Distribution across the site was widespread at low density.</p> <p>The distribution of slow worm across the site was much more variable, with the majority of the survey areas not supporting this species, and good populations being present in a number of areas where this species was present.</p> <p>During the Arcadis surveys in 2017 and 2021, no adder were observed within the survey area. This species has been recorded within the vicinity of the site (from desk study data) and anecdotal evidence from local residents suggests that this species has been noted within the site area.</p> <p>Details located within ES Appendix 7.6</p> <p>Extensive improvements of the habitat of the site for reptiles proposed for the site. This includes:</p> <ul style="list-style-type: none"> • Increasing the area of grassland habitat; • Creation of refugia;

Species or Habitat	Applicable Legislation	Nature Conservation Benefit
		<ul style="list-style-type: none"> • Creation of hibernacula; <p>Buffer zones around other areas of habitat vsalue e.g. river corridors, to minimise human impacts.</p>
Water Vole	WCA Schedule 5**	<p>Water vole are found throughout much of the UK, but at low population densities due to the threats posed by habitat loss and predation by the non-native American mink. This had led to water voles suffering one of the most serious declines of a wild mammal in the 20th century in Britain.</p> <p>Of the water bodies surveyed (on site and adjacent to site) for water vole during the 2017, 2018 and 2021 surveys (considering the highest population recorded), one water body had high water vole populations, four water bodies had medium water vole populations and 18 water bodies had low water vole populations (once all of the survey results were combined) (Strachan <i>et al</i> 2011).</p> <p>Improvements can be made by:</p> <ul style="list-style-type: none"> • Favourable planting e.g. Reed Sweet-grass, sedges and Yellow Iris; • Installation of coir roles; • Leave at least 50cm of vegetation unmown at the water's edge; <p>Creating buffer zones (of natural soft landscaping including grass, scrub, standing water and trees) around riverine habitats</p>
Otter	Habitat Regs Schedule 2* WCA Schedule 5**	<p>Otters are an iconic species of British waterways that that have suffered catastrophic declines. This was due to a combination of persecution, habitat loss and pollution, among other factors. Otter populations have increased from this low point, but a still low and highly fragmented, so improving the area of habitat available to them must be carried out where possible. This will allow otters to spread into other areas of suitable habitat and populations to grow.</p> <p>Two probable otter signs were identified on the 28 September 2017. These included one otter spraint and one 'anal jelly', located approximately 185m apart, in the north-west corner of the site, along the East Stour River between Harringe Lane and Somerville Court Farm. These results are the first evidence of otter found within the local area (i.e. within 2km of the site) in over 40 years. No other otter signs were observed within the surveys (2018 – 2021), although anecdotal evidence from local residents suggests that otter have been observed.</p>

Species or Habitat	Applicable Legislation	Nature Conservation Benefit
<p>Selected Birds: Kingfisher, house sparrow, barn owl and black redstart.</p>	<p>WCA Schedule 1 for Kingfisher, barn owl and black redstart.</p>	<p>Kingfisher</p> <p>The kingfisher is amber listed on the Birds of Conservation Concern (BOCC) list (BTO 2015). This is also a charismatic species intrinsically linked to Britain’s waterways.</p> <p>Two records (one visit three individuals with an additional sighting of a juvenile in June, visits 2 & 6) plus incidental records of nest-burrow and behaviour indicative of breeding recorded during surveys on site in 2017.</p> <p>House Sparrow</p> <p>The house sparrow is red listed on the BOCC (BTO 2015) and is listed as a S41 species due to declines in the UK. House sparrow were recorded within the site during the breeding bird season, with a peak count of 19 birds. These birds were generally observed adjacent to residential areas.</p> <p>It is assessed that there is the opportunity to greatly increase the habitat quality within the site for these species as a component of the development.</p> <p>Barn Owl</p> <p>Barn owl is listed on Schedule 1 of the Wildlife and Countryside Act.</p> <p>Whilst barn owl breeding has not been confirmed on site, roosting activity has been recorded in multiple buildings and barn owl have been observed foraging across the site. Of the structures assessed for barn owl nesting and roosting potential only a small number provided habitat for the species (14 of 97). As such, there is an opportunity to provide additional roosting and breeding sites for this species.</p> <p>Black Redstart</p> <p>Black redstart is listed on Schedule 1 of the Wildlife and Countryside Act and is also listed on the amber list of BOCC.</p> <p>One breeding pair has been observed on site around Hilhurst Farm. Considering that there are very few breeding pairs of this species (up to approximately 100), in the UK, there is significant conservation opportunity to be derived by improving habitat for this species.</p>
<p>Terrestrial invertebrates</p>	<p>A range of terrestrial invertebrate species are listed under:</p> <ul style="list-style-type: none"> • Habitat Regs Schedule 2* • WCA Schedule 5** 	<p>Terrestrial invertebrates are a key part of the ecosystem. They aid in the decomposition process, they pollinate flowers and are prey for larger organisms. Studies suggest that moths, butterflies, ladybirds and ground beetles have declined between 65-70% over recent decades (RSPB 2013).</p> <p>Most of the site has been intensively farmed for many decades (arable/grazing) and is of limited value to invertebrates. The field margins and hedgerows in the intensively farmed areas are species poor and would support impoverished invertebrate communities. Indeed, very few species of conservation concern have been recorded from the site. The habitats with most potential within the site include species rich hedgerows, semi-improved neutral grassland, ancient woodland, water bodies and riparian habitats. With the exception of the riparian corridor, these habitats are poorly connected at the landscape scale.</p> <p>There is extensive opportunity for creating habitat of greater value for invertebrates within the development.</p> <p>During the 2021 bat surveys glow worm were recorded on the site. This species is included in this BAP under the Terrestrial Invertebrates.</p>

Species or Habitat	Applicable Legislation	Nature Conservation Benefit
Hazel dormouse	Habitat Regs Schedule 2* WCA Schedule 5**	<p>Hazel dormouse was once widespread and common throughout England. However, it has suffered significant declines in range and population in the last century. This has largely been caused by reduction in the size of woodlands, reduction in number and quality of hedgerows and the virtual cessation of coppicing as a management technique.</p> <p>Although dormouse is not confirmed to be utilizing the site, it is present in low numbers in Harringe Brook Wood adjacent to the site. There was some evidence in 2021 that dormouse may be expanding into the site, but no signs were definitive.</p> <p>It is therefore possible that in the future dormouse could use the site via the newly connected hedgerow habitat.</p> <p>As such it is important to consider dormouse and make allowances and enhancements to the site to benefit this species.</p>
Breeding bird species (as an assemblage) Wintering bird species (as an assemblage)	Wildlife and Countryside Act	<p>It is difficult to place an overall trend on bird conservation status, as the large number of species within the UK each have varying requirements and whilst some are adversely impacted by changes in management, development and climate change, others benefit. However, reviewing the overall status of the UK's birds can be achieved by reviewing the BoCC list relevant to the date that the surveys were undertaken gives an indication of the status of birds known to be resident in the UK.</p>

Species or Habitat	Applicable Legislation	Nature Conservation Benefit
<p>Farmland bird species (off-site offsetting)</p>		<p>Species that are of high nature conservation concern, listed as 'Red-List' and 'Amber-list' on the Royal Society for the Protection of Birds (RSPB) list of Birds of Conservation Concern (BoCC). This non-legislative system was derived from the review of the population status of bird species that are regularly found breeding within the United Kingdom, using data from national monitoring schemes by the leading governmental and non-governmental conservation organisations in the UK.</p> <p>In 2015, of the 247 species considered, 67 species were on the red list, 96 were on the amber list. Overall, although there was an increase of bird species on the 'green list', there was also an increase in species on the 'red list' (an increase of 15 species since 2009). This is indicative of an overall negative trend in the status of bird populations overall in the UK.</p> <p>Farmland bird conservation</p> <p>Farmland birds have undergone a significant decline in numbers since 1950. The RSPB farmland bird indicator suggests that farmland bird numbers may have declined by 48 percent between 1970 and 2007 and declined by 9% between 2010 and 2015. The turtle dove (<i>Streptopelia turtur</i>), grey partridge (<i>Perdix perdix</i>), corn bunting (<i>Emberiza calandra</i>) and tree sparrow (<i>Passer montanus</i>) have declined by more than 80 per cent.</p> <p>It is considered that this decline is not solely due to loss of farmland, but primarily due to intensification of farming, loss of hedgerows and changes in farming practices (such as the loss of field margins and increasing planting of winter-sown crops, which reduce the availability of feeding resources over winter).</p> <p>Woodland bird conservation</p> <p>Woodland birds are calculated to have declined by up to 23% between 1970 and 2015. There are more woodland birds on the BoCC red list than of any other habitat. There are potentially multiple causes for this decline, from a loss of habitat, climate change and changes in management within woodlands.</p> <p>Water fowl and wetland bird conservation</p> <p>Wetland bird populations overall are estimated to have declined by 8% between 1975 and 2015. The causes of this decline are many and varied, largely due to the extremely variable nature of the biology of the individual species in this group. Causes of decline may result from persecution across the species range (particularly for migratory species), changes in habitats (different management, climate change, development) and changes in availability of feeding resources. Overall, it appears that generalist species (i.e. those which do not have specific habitat or feeding resource requirements) are not declining or declining less than more specialist species. There is also potential that recorded declines may be accounted for by fewer species migrating to the UK due to climate change.</p> <p>The site supported 90 different recorded species during the breeding season and 77 different species in the wintering season and supports 19 recorded species considered as farmland birds or reliant on the farmland on the site. As such, these groupings of species are included in the BAP. As the site supports a notable assemblage of bird species, actions to improve foraging and nesting habitat for birds could have a significant conservation impact.</p>

*Conservation of Habitats and Species Regulations 2019 (EU Exit); **Wildlife and Countryside Act 1981 (as amended)

5 Habitat Action Plans

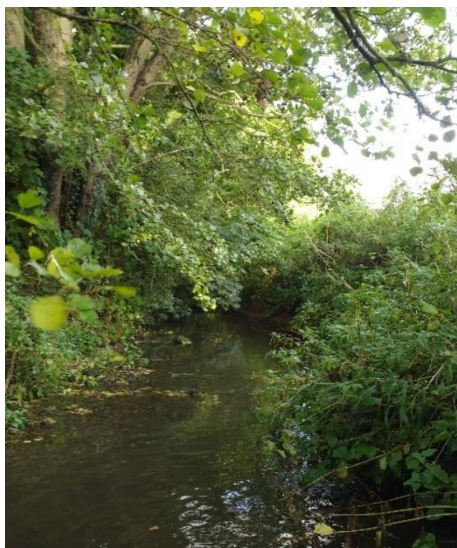
5.1 Habitat - Rivers

Background and Context

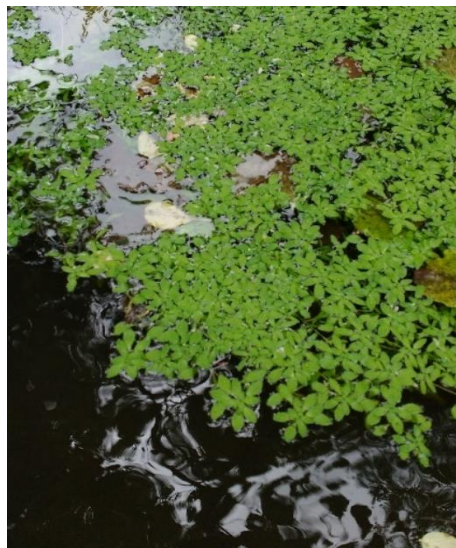
- 5.1.1 The S41 Definition (within UK Habitats of Principal Importance Context) is: “This habitat type includes a very wide range of types, encompassing all natural and near-natural running waters in the UK (i.e. with features and processes that resemble those in ‘natural’ systems). These range from torrential mountain streams to meandering lowland rivers.”
- 5.1.2 Rivers form an integral part of many landscapes, both aesthetically and due to the ecosystem service benefits they provide. Rivers are habitats themselves, supporting communities of a wide range of plants and animals. They also support habitats in the surrounding area enabling them to flourish by providing water for terrestrial animals to drink and plants to grow. The correct management of river systems can provide significant benefits to local residents and the natural environment.

Status on Site

- 5.1.3 The East Stour River crosses through the site, from the Westenhangar Castle grounds in the east to Harringe Lane in the west. Two tributaries to the East Stour River (south of the A20 and from Harringe Brooks Wood) are also within the site. The river and tributaries on-site are currently used by a wide variety of wildlife, including invertebrates, fish, water vole and otter and foraging bats. Photographs of rivers on the site are presented below (Photographs 1 – 3).



Photograph 1: The current status of the river on site. The banks of the river are largely overgrown and over shaded with vegetation including Alder and Hawthorn.



Photograph 2: Water Starwort present within the East Stour on site, indicative of good water quality.



Photograph 3: East Stour River to the north of the site. It is envisaged that areas of the East Stour within the site will be enhanced to have a species rich emergent plant community not shaded by trees and shrubs as shown above.

Integration within masterplan

5.1.4 The East Stour River will have a 50m buffer either side of it and tributaries will have a minimum of a 15m buffer either side of them. These buffers will either retain the original vegetation or have the vegetation enhanced through the creation of species rich grassland and scrub habitats. The buffers will not contain illumination by artificial lights. Illumination for path or road crossings will be minimised, with crossing designs sympathetic to enable animals to continue to follow the watercourse beneath the crossing (i.e. clear span bridges). Human activities, such as dog walking, will be discouraged in retained and/or enhanced habitats. The river corridor will be enhanced to improve habitat heterogeneity and improve the value for key species, such as water vole and otter. Banks for kingfisher nesting will also be created. Trees and shrubs will be removed opening up of areas to improve habitat heterogeneity. Overall, the proposed Development is envisaged to reduce nutrient and pesticide inputs into the river and has the potential to improve water quality.

Targets post construction

5.1.5 The following parameters should be used as the targets for river habitats within the site post construction:

- Manage buffer zone habitat as per specific habitat targets. These targets should be specified within an Ecological Management Plan (EMP);

- Ensure that no non-native invasive plant species are present. These should be controlled through an ongoing non-native invasive plants management plan;
- Ensure that watercourse does not get choked with vegetation, clearing vegetation as required. This should be monitored through the BAP monitoring protocol described above;
- Maintain water vole population levels at pre-construction numbers or above post construction and during operation and
- Maintain numbers of kingfishers breeding pairs on site during construction, increase numbers during operation.

Actions Required

- Creation of artificial banks for species such as king fishers in two locations;
- Create one artificial otter holt;
- Manage buffer zones to maintain existing vegetation or rough grassland/scrub as appropriate;
- Prevent grassland becoming too rank and overgrown with Brambles and other scrub;
- Retain mature trees and replace specimens if they die or require removal;
- Restrict any mowing of vegetation to autumn or winter;
- Do not manage habitat uniformly, create and maintain heterogeneity where possible; banks, buffer zones etc. For example:
- Create varied age structure of vegetation along length of the ditch and allow marginal vegetation to grow in areas;
- Retain standing deadwood, if they are not dangerous, as potential habitat for bats, birds, insects and other species;
- Keep river systems clear of litter and excessive vegetation;
- Consider monitoring invertebrate assemblages in the river, potentially as community or school projects;
- Monitor waterways for invasive non-native species in liaison with local wildlife groups and
- Avoid the use of pesticides and fertilisers near to rivers.

Aspirations

- Otters foraging and resting on site, potentially breeding;
- Water voles occupying all the rivers on site;
- Three kingfisher pairs confirmed to be breeding on site and
- The East Stour River to achieve 'Good Ecological Status' as assessed within the WFD.

5.2 Habitat - Neutral Grassland (analogous to S41 Habitat Lowland Meadows)

Background and Context

- 5.2.1 BAP Definition (within UK BAP Context): “The definition of lowland meadows ... includes both hay-meadows and unimproved pastures found in the lowlands on neutral soils.”
- 5.2.2 Grasslands have the potential to show stunning levels of biodiversity, including some rare plant species. They can support a wealth of wildflowers that light up meadows with a delightful array of colours. While being highly pleasing on the eye, it also provides a home for a wide range of other animals. Pollinators such as bees are provided with abundant foraging opportunities, swallows are provided with insect prey and reptiles are able to shelter in the long grass. These are but a few of the animals supported within this habitat. Unfortunately, massive declines in the area of lowland meadows in the UK have occurred in the 20th century.

Status on Site

- 5.2.3 The grassland on site is either amenity, improved, species poor semi-improved or semi-improved neutral grassland. Species poor semi improved grassland makes up 14.14% of the site and semi-improved neutral grassland, makes up 2.84% of the site.
- 5.2.4 Semi improved neutral grassland is a transitional habitat, not being sufficiently species poor to be improved grassland but having too low a diversity to be classified as an unimproved neutral grassland. The main areas of this habitat on site were around the disused Lympne airfield and north of the Link Park.
- 5.2.5 Species poor-semi improved grassland is more widespread on the site, including areas of arable field margins, areas of the Folkestone Racecourse land, areas of Lympne airfield in the south of the site and the largest area of habitat within the Otterpool Quarry SSSI in the centre of the site.
- 5.2.6 Photographs of grasslands on the site and target habitats are presented below (photographs 4 – 6).

Photographs



Photograph 4: An area of species-poor semi-improved grassland to the west of Folkestone Racecourse Lake (to be retained within the development).



Photograph 5: The grassland on the right in the image is semi-improved (within the airfield), this is retained. The grassland on the left is species poor semi-improved and would benefit from altered management regimes i.e. within the Lympe Resilience area in the south -east of the site.



Photograph 6: Diverse grassland flora. This is an example of the species rich floral diversity which is the target of this BAP.

Masterplan integration

5.2.7 Areas of species rich wildflower grassland will be created across the site, within large areas of Green Infrastructure (GI) (i.e. the park south of Westenhanger Castle and the Lympe Resilience area) and smaller areas within the GI (i.e. buffers around retained hedgerows). The habitat composition / seed and planting mix should be based upon the soil present but would largely be based upon the descriptions of S41 priority habitat (lowland meadow). The species targeted in these areas may include: Common Bent, Sweet Vernal-grass, Common Knapweed, Crested Dog's-tail, Cock's-foot, Red Fescue, Yorkshire-fog, Common Bird's-foot-trefoil, Lady's Bedstraw, Meadow Cranesbill, Field Scabious, Oxeye Daisy, Rough Hawkbit and Common Sorrel.

Targets post construction

- 20% of the grasslands over 1ha in area (excluding sports pitches) are classified as semi improved or species rich (using the classification system outlined in the 'save our magnificent meadows' project (Magnificent Meadows 2019).
- Areas of meadows within public open spaces to be fenced to prevent impacts from recreation and dogs.

- Cover of undesirable species (creeping thistle, spear thistle, curled dock, broad-leaved dock, common ragwort, common nettle, marsh ragwort, cow parsley) less than 5%.
- Cover of wildflowers and sedges throughout the sward (excluding the undesirable species listed above and creeping buttercup and white clover) more than 20%.
- Cover of bare ground (including localised areas, for example, rabbit warrens) less than 10%.
- Cover of invasive trees and shrubs less than 5%.
- Indicators of water logging (such as large sedges, rushes, reeds) less than 30%.
- Utilisation of the site by farmland birds, such as skylark, and meadow pipits.

Actions Required

- Carry out a hay cut after September to allow plants to set seed;
- Ensure cuttings are removed annually and stacked in the margins of the fields to provide shelter habitat for reptiles and small mammals;
- Avoid fertilisation of grassland; lower nutrient levels correspond to higher wildflower diversity levels;
- Allow tussocky grassland (excellent habitat for small mammals and reptiles) to develop at field edges by cutting every other year in margins and
- Do not allow scrub species such as blackthorn to spread into this area.

Aspirations

- That 50% of the grasslands over 1ha in area (excluding sports pitches) are classified as semi improved or species rich grassland;
- Support less common native plant species, such as Snake's Head Fritillary, Dyer's Greenweed, Petty Whin, Greater Butterfly Orchid, Meadow Vetchling, Pepper Saxifrage and Wood Bitter Vetch. Specific interventions are likely to be required to achieve this aspiration.

5.3 Habitat - Ponds and Ditches

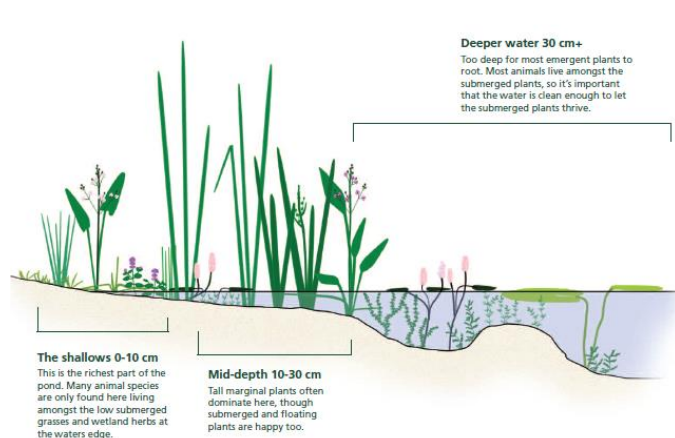
Background and Context

- 5.3.1 BAP Definition (within UK BAP Context): “Ponds, for the purpose of UK BAP priority habitat classification, are defined as permanent and seasonal standing water bodies up to 2ha in extent.”
- 5.3.2 Ponds have been a staple of the British countryside for hundreds of years, from village duck ponds to providing agriculture with hydration. They also provide great benefits to the natural environment too; deer will travel to drink at ponds, amphibians like frogs, toads and newts utilise ponds to breed and bats will forage for insects above the water. These are but a few of the examples of ways in which ponds support wildlife. Aquatic and semi-aquatic plant species are able to flourish in and around ponds, providing cover and feeding opportunities to many species, including some of those mentioned above.

Status on Site

- 5.3.3 There are c.20 existing ponds of various sizes spread throughout the site, with over 30 ponds in the vicinity of the site (i.e. within 500m). Some are of low value to wildlife, so work will be undertaken to enhance the overall quality of pond habitats on site. A network of newly created ponds around the site will greatly improve the amount and quality of habitat present. New ponds of varying sizes are proposed, some primarily for wildlife, others for water management. The existing and new ponds have the potential to support a diverse assemblage of flora and fauna and the management outlined below should be followed to maximise this potential. Photographs of target habitats are presented below (Photographs 7 – 9).

Photographs



Photograph 8: Newly Created Pond



Photograph 9: Example of an artificial pond suitable to support newts

Photograph 7: Zones to be created within the newly created ponds

Integration within masterplan

- Ponds were selected for retention within the masterplan, only one pond of wildlife value is to be lost to the development (pond 27);
- Terrestrial habitat around retained ponds is retained and connectivity is enhanced within the development;
- Within the development, there will be retention and enhancement buffers of rough grassland around retained habitat features including hedgerows to ensure that species using ponds and ditches, such as bats, toads and plants, can utilise areas of the site and/or move through the site;
- SuDS are to be created across the site, including swales, ponds, ditches and standing water areas while not primarily created for wildlife habitat these areas will have biodiversity value;
- A large number of water management ponds are proposed that will have a high value for wildlife and
- Pond creation and habitat enhancement adjacent to Harringe Brooks woods, and in the north-west of the site, along with ditches to benefit, water vole bats, birds, invertebrates, amphibians and plants.

Targets post construction

- At least 9 wildlife ponds are to be created to best practice guidelines;
- Ensure SuDS are ecologically valuable whilst maintaining function;
- At least 21ha of the site will be aquatic habitat;
- Management of new ponds to achieve (Suffolk Wildlife Trust 2019);
- Where ponds are identified for great crested newt habitat, these should meet HSI 'good or excellent criteria';
- Inundating vegetation no more than 25% of the pond surface;
- No more than 25% of pond surface should be shaded by trees and shrubs;
- A diverse floral species assemblage being present and
- Provide a valuable ecological resource.
- In addition, the management should be targeted to ensure that all newly created ponds for wildlife meet the following criteria for pond condition (Natural England 2018)
- The pond should be set within a semi-natural habitat.
- It should be within 500 m of another wetland feature (such as a pond, river or fen)
- There should be no obvious sign of pollution or of inappropriate quality of the water supply
- There should be an absence of damaging non-native plant or animal species. (Damaging plants include water fern, Australian swamp stonecrop, parrot's feather, floating pennywort and Japanese knotweed (on the bank). Damaging animals include non-native species of crayfish, reptiles and amphibians.)
- The pond should not be stocked with fish or support damaging numbers of wildfowl
- It should experience only natural fluctuations in water levels

Actions required

- Actions which may be required to achieve the targets (to be determined throughout the construction and operation phase) may include:
- Removal of shading vegetation (if over 25%);
- Removal of inundating vegetation (if over 25% coverage) in autumn raking out submerged plants and leaving them on the pond edge overnight for small creatures to crawl back into the water;
- Control of non-native invasive plant species;
- Removal of rubbish;
- Control of fish in ponds only (i.e. not ditches) as these can inhibit great crested newt presence;
- Discourage waterfowl (e.g. do not create a duck island or provide food);
- Avoid managing all ponds at the same succession stage;
- Avoid attempting to cram all habitats into each pond; allow a mosaic of habitats to form and
- Monitor wildlife under the supervision of a suitably qualified individual.

Aspirations

- Confirm amphibian breeding within all the newly created ponds;
- Confirm presence of all native amphibians on the site. This may require positive interventions alongside district scale amphibian mitigation to achieve.

5.4 Habitat - Woodland

Background and Context

- 5.4.1 Lowland mixed deciduous woodland is a priority habitat in England. It is an important habitat for multiple reasons, providing habitat for species, providing ecosystem services such as flood prevention and carbon sequestration and being an intrinsic part of the English landscape.
- 5.4.2 Within Kent, approximately 17% of the land area is covered by tree canopy, with Folkestone and Hythe having only 8% tree cover (Ref. 33).

Status on Site

- 5.4.3 Woodland and forest (including tree lined areas along the River East Stour) cover approximately 16 hectares of the total site area, approximately 3% of the site area.
- 5.4.4 Ancient Woodland only covers 2% of the UK and is an irreplaceable habitat, meaning that once it is lost it cannot be replaced with new planting. There are no Ancient Woodlands within the proposed Development site boundary, but there are two Ancient Woodlands in the vicinity of the site – the Harringe Brooks Wood immediately to the west and Kiln Wood immediately to the east. Within 2 km of the site, 24 Ancient Woodland blocks were recorded upon the Ancient Woodland Inventory (AWI).
- 5.4.5 In addition to the Ancient Woodlands, there is lowland mixed deciduous woodland, broadleaved woodland and plantation woodland in the site. On site these woodlands vary, with some supporting large mature trees, and varied species composition, such as Park Wood in the east of the site, and some woodlands with a younger age profile and more limited species composition, such as the small woodlands south of the A20. Springfield Wood in the west of the site is a small, isolated woodland which shows negative impacts from grazing with sheep.
- 5.4.6 Park Wood, the wooded areas around the East Stour River and around the Racecourse and Westenhanger Castle supported woodland prior to 1877 as confirmed on historical maps. They comprise mature Oak and Ash with areas of Hazel coppice. Park Wood has ground flora indicative of Ancient Woodland.
- 5.4.7 The blocks of woodland are an important feature on site, supporting woodland plants that are uncommon in Kent and providing a range of ecosystem services including carbon sequestration, flood attenuation, and erosion protection. They are a landscape feature which are visible in the wider area. They are also an important habitat for protected species including bats, dormouse, breeding birds and small mammals. It is considered that a number of these woodlands would qualify as priority habitats under Section 41 of the NERC Act.
- 5.4.8 Photographs of woodlands on the site are presented below (photographs 10 – 12).

Photographs



Photograph 10: Park Wood in the west of the site



Photograph 11: Coppiced Hazel in Harringe Brooks Wood



Photograph 12: Springfield Wood

Integration within masterplan

- The following approaches are included within the masterplan to integrate and safeguard woodland:
- Buffering and retention of adjacent Ancient Woodland sites and retention as private sites, to avoid effects of direct disturbance such as noise, light and visual disturbances.
- Avoiding direct habitat degradation and avoidance of habitat loss.
- Avoiding indirect habitat degradation by (a) creating extensive areas of high quality public open space within the masterplan (b) routing of footpaths away from certain sensitive adjacent areas (c) creating buffer areas which use planting and topography to discourage access to sensitive areas.
- Avoiding direct and indirect pollution in form of air and water quality.
- Buffering key areas to deter access, designated 'no dogs' areas and fencing to control disturbance by domestic animals.
- Enhancing or reinstating woodland management – including wood pasture management where appropriate – extend and reconnect fragmented woodlands where this would not conflict with grassland conservation and management, including the creation of a wooded belt along the west of the site to connect Harringe Brooks Woods to the East Stour River Corridor.
- Access prevented to Harringe Brooks Woods through a 50 m buffer area and around the woodland. For Kiln Wood, proposals for relocating the A20 road away from the woodland will reduce disturbance of the broadleaved woodland that supports the Ancient Woodland.

- Advanced woodland planting and habitat creation using native species to benefit later phases of development and to avoid temporary loss of biodiversity value when construction begins.
- Advanced woodland planting, habitat creation and community green space shall also be designed to relate to local landscape character and to prevent the coalescence of the new settlement with Lymington and to separate neighbourhoods within the settlement itself.
- Planting and habitat creation will also be used to provide distance buffers between the M20/ High Speed transport corridor for noise and air quality mitigation purposes.

Targets post-construction

- 100% of existing woodlands retained. Retained woodlands to have habitat condition safeguarded or enhanced where possible.
- 50ha of new woodland to be planted within the proposed Development.
- Restoration of the understory and ground vegetation of Springfield Wood through removal of grazing pressure.
- Actions required
- For Ancient Woodlands, a minimum of 50 m offset buffer to be created from development.
- For lowland mixed deciduous woodland, broadleaved and plantation woodland, a minimum of 25 m offset buffer to be created and maintained from edge of woodland.
- Additional woodlands to be planted. Existing woodland areas to be retained and enhanced.
- Woodland management plans to be drawn up for all woodlands on site to outline actions to achieve good condition. Actions may include selective felling, supplementary planting and traditional management, including coppicing of hazel. Woodland management plans must be delivered alongside this BAP to maximise the value for woodland species such as dormouse.
- Recreational use of woodland sites to be limited to avoid impacts such as trampling and littering, through fencing, signage and topography including ditches.
- Fences and signage used to safeguard habitats where required.

Aspirations

- All existing and proposed woodland to be managed according to a woodland management plan to achieve optimum potential habitat condition.

5.5 Habitat - Hedgerows

Background and Context

- 5.5.1 BAP Definition (within UK BAP Context) “A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide”.
- 5.5.2 Hedgerows are found throughout the UK, from field margins to along countryside tracks and rides. Hedgerows are typically made up of woody species, frequently blackthorn and hawthorn. While narrow they are important features in the landscape. For example, they are vital in enabling dormouse to disperse between otherwise unconnected woodland, bats commute along them to feeding grounds and they provide birds with nesting opportunities. Unfortunately, many hedgerows have been lost due to more intensive farming practices and hence a desire for larger fields. It is important to improve the quality of existing hedges and plant new ones when the opportunity arises.

Status on Site

- 5.5.3 There is a total of 67 'hedgerows' identified within the site, totalling approximately 12km of hedgerows within the proposed Development site (14km across the wider surveyed site) with only 12 hedgerows being classified as being “Important” (meeting the necessary criteria under the wildlife and landscape criteria of the Hedgerows Regulations (1997)). Of the hedgerows surveyed, 25% were considered species rich (having 5 or more native woody species (Defra 2007)). Hawthorn was the most common and most abundant woody species within the hedgerows surveyed. Blackthorn was the second most common woody species. Photographs of hedgerows on the site are presented below (photographs 13 – 15).



Photograph 13: Parallel species rich hedgerows in the north west of the proposed Development (to be retained)



Photograph 14: A defunct hedge with trees in the south east of the site



Photograph 15: An intact hedgerow in the south-east of the site.

Integration within masterplan

5.5.4 Within the development, less than 10% of hedgerows are to be removed. The vast majority of removal is to facilitate road crossings. Removed hedgerows are to be translocated as a component of the development.

- Retained areas of hedgerow are to be buffered by rough, species rich grassland.
- Where hedgerows are not dark corridors, and do not contain trees, the buffer is a minimum of 5m offset from edge of retained hedge.
- In the case of hedgerows with significant trees this buffer should be extended.
- Where it is identified that the hedgerow may be important for the movement of fauna, appropriate tunnel crossings are proposed.
- No access to these buffers by motorised vehicles will be permitted.
- No lighting is permitted within the buffers. Lighting on adjacent land will be directed away from hedgerow, with backspill limited.
- Pedestrian and cycle routes are permitted within buffers, but in locations away from the feature retained.
- Where the hedgerow is a dark corridor, the buffer is 25m offset from edge of habitat.
- Where roads and pathways cross the dark corridor, lighting in these crossing areas will be minimised and measures to ensure that bats can navigate these crossings will be incorporated. Crossings should have sufficient clear span to ensure that fauna can navigate beneath them.

- Links into riparian corridor, woodlands and other habitats are maintained, these dark corridors form a key part of the 'green grid' around the site.
- Within the developed parcels, hedgerows are to be incorporated (to be secured at Tier 2 and 3).

Targets post construction

- Ensure that all hedgerows in the GI are managed according to good practice (overview below).
- New hedgerows will be species rich (5 native woody species or more)
- Maintain "Important" hedgerows.

Actions required

- Fill in gaps in at least 50% of retained 'defunct hedgerows' to meet above target.
- Plant native hedgerows in gardens, especially where these areas are adjacent to GI areas.
- Plant areas of new native hedgerow.
- Ensure that all hedgerows in the GI are managed according to good practice (Ref. 34):
- Cut hedges in January and February, this avoids the nesting bird season from March to August and allows berry crops to be used by wintering birds from September to December.
- Trim hedges in a two to three-year rotation system and coppice sections if they get too overgrown.
- Cut only one side of a hedge at a time.
- Retain old, dying and dead trees if they are not a hazard.
- Allow individual trees to grow in hedgerows at 5-10m intervals.

Aspirations

- Manage hedgerows such that at least 30% of the hedgerows on the site qualify as 'Important' (where hedgerows are applicable to this legislation – i.e. hedgerows on the periphery of residential areas are omitted).
- Fill in gaps in all defunct hedgerows so that all hedgerows on site are intact.
- Support bullfinches, turtle dove, whitethroats, linnets, yellowhammers, dunnocks, lesser whitethroats and willow warblers breeding on the site.

6 Species Action Plans

6.1 Species - Bats

Background and Context

- 6.1.1 There are 17 species of bats which breed in the UK. All bat species are protected under UK law. All actions relating to bats must be conducted under a suitable licence. In addition, Barbastelle bat; Bechstein's bat; noctule; soprano pipistrelle; brown long-eared bat; greater horseshoe bat and lesser horseshoe bat are S41 species.
- 6.1.2 The main threats to bats in the UK are thought to include:
- Building and development work, leading to loss or damage of roosts;
 - Loss of habitat through development and land use change; and
 - The intensification of agriculture, inappropriate riparian management and changes in land use; leading to a decline of insect prey and loss of connectivity for feeding and commuting (BCT 2021).

Status on Site

- 6.1.3 The following species are recorded on the site: common pipistrelle; soprano pipistrelle; Nathusius pipistrelle; noctule; Leisler's; serotine; brown-long-eared bat; unidentified Myotis bats and Daubenton's bat. There are known roosts on site, a total of 25 confirmed / probable / possible roosts were identified. All but one of these roosts was a small 'summer' roost of common or soprano pipistrelles, with one roost being a likely maternity roost of brown long eared bats.
- 6.1.4 Photographs of habitats and features for bats are presented below (photographs 16 – 19).

Photographs



Photograph 16: Bat house – six of these type of structures are proposed across the site.



Photograph 17: Building where pipistrelle summer roosts and a brown-long eared maternity roost were identified.



Photograph 18: Example of a Bat Box for Tree Mounting



Photograph 19: Bat Brick to be Integral to Buildings

Integration within masterplan

- Important foraging areas are to be retained, buffered and enhanced e.g. landscaping and low lighting levels including creating heterogeneity in the East Stour River Corridor.
- Creation of new commuting routes between areas known to be of value for bats.
- New habitats will be created e.g. dark corridors, hedgerows, rough grassland and scrub, dedicated wildlife areas and ponds and SuDs.

- Creation of a lighting strategy to minimise the impact of light spill on areas important for bats.
- Minimisation of impacts to offsite roosts, through pollution, light spill, recreational impacts etc.
- Installation of new roosting opportunities including at least six bat houses/barns and tree/structure mounted boxes.
- Retention and enhancement of connectivity between known / likely roosting sites and foraging habitats.
- Roost provision is proposed within the developed parcels, this will be defined at Tiers 2 and 3.

Targets post construction

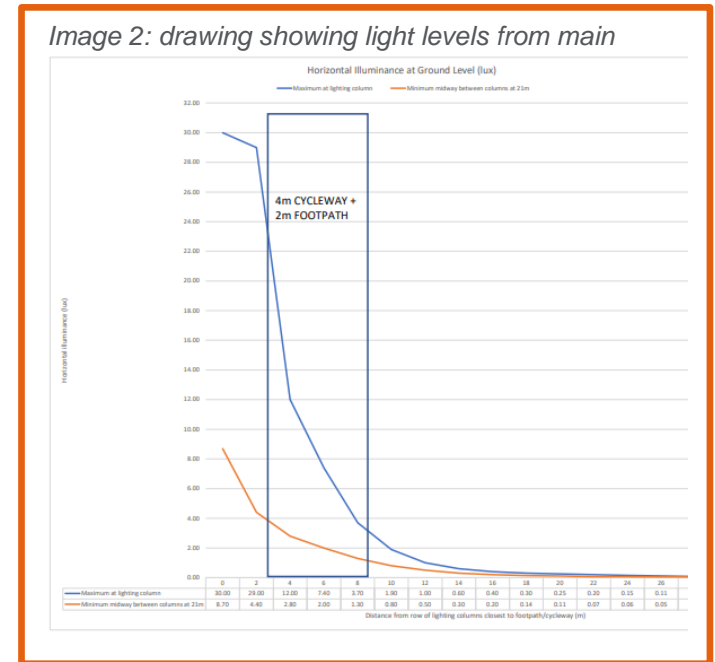
- Maintain a minimum of nine bat species present on the site.
- Increase numbers of the rarer species of bats within the site, especially serotine, Daubenton's and Natterer's bat.
- Maintain dark corridors (i.e. 1 to 1.5 lux) which support key commuting routes (it is confirmed that the lighting proposed on site can retain dark corridors – see box to right – Image 2).

Actions required

- Manage the GI for bats (BCT 2019).
- Put up bat boxes in areas of woodland, in buffers around river corridors and on houses;
- Plant species in gardens and public areas that are attractive to moths and other night-flying insects;
- Allow standing deadwood to remain, if it is not dangerous to do so;
- Avoid the use of pesticides in public and private areas;
- Survey populations in liaison with local experts/bat groups etc; and
- Arrange night time lighting sympathetically for bats, specified within a lighting strategy. Examples include: have lights on timers and/or motion sensors, direct light downwards to minimise light pollution and choose low-intensity lighting.

Aspirations

- Confirm that multiple species are utilising the roosting features of the newly built bat houses.
- Confirm brown long-eared bats utilising the features, such as the bat barns, as a maternity roost.



6.2 Species - Reptiles (common species)

Background and Context

- 6.2.1 The UK is home to three lizard species and three snake species. All native reptiles are protected under UK law. Three species of reptile are considered to be common and may be encountered in gardens and the countryside in suitable areas of habitat. These species are grass snake, slow worm and common lizard. Adder are less common and less likely to be seen. Smooth snake and sand lizard are the other two species of reptile found in the UK, but these species are very rare and highly unlikely to occur on site.
- 6.2.2 Common species of reptile can be found in a range of habitats, including rough grassland, scrub and hedges. They favour areas with areas they can bask in the sun in warm weather, especially when these areas are south facing. They feed on small mammals, bird eggs, and insects, among other things. During the cold winter months, they go into hibernation, favouring areas with a constant temperature. Such areas include in amongst tree roots or in the gaps within rock piles. Reptiles can be encouraged by constructing artificial refugia and hibernacula for them to shelter and hibernate in.
- 6.2.3 Within the S41 Priority Species description for this species, the following key actions are stated, which the masterplanning of the site and this site BAP contributes to:
- “..development schemes, could significantly enhance their current conservation status”.*

Status on Site

- 6.2.4 A population of grass snake, slow worm and common lizard are present within distinct areas of the site. Full details of the reptile populations present on the site can be found in ES Appendix 7.6, Reptile Survey Report (Arcadis, 2021). Photographs of reptiles and habitats and features for reptiles are presented below (photographs 20 – 23).



Photograph 20: Common Lizard



Photograph 21: Grass Snake



Photograph 22: East facing embankment on site which supports reptile populations. This feature is to be retained.



Photograph 23: Hibernacula being created for common reptile species

Integration within masterplan

- Key areas for reptiles are to be retained.
- Connectivity between retained and enhanced habitats is to be improved, with >5m buffers of suitable habitats along hedgerows.
- Creation of new areas of reptile habitat, including a c.14ha nature area featuring a mosaic of wetlands, species rich grassland and scrub, hibernacula and water bodies in the north-west of the site.
- Where reptile habitat is lost, reptiles will be translocated to retained or enhanced habitat. This will need to be determined as each zone of the development proceeds through the planning process.
- SuDS areas, where appropriate, will be designed to provide reptile habitats with the provision of rough grassland and hibernacula.
- Brush piles and grass piles will be created from hedgerow and grass management and where maintenance actions are required on woody vegetation.
- Targets post construction
- A minimum of 20 brush piles and 20 grass piles will be created within suitable reptile habitat.
- Ensure there are good populations of the three common reptile species in the Lympe resilience area, the proposed Country Park, East Stour River Riparian Park and the north west wildlife areas.
- Increase population size of the three common reptile species so that there are good populations on 50% of the habitat identified for reptiles.

Actions required

- Management of reptile habitat as per as per best practice guidance for reptiles (Ref 1 and Ref 16) including:
- Creation of piles of decomposing organic matter (e.g. grass cuttings and logs).
- Creation of hibernacula and refugia; log banks and brash piles in the GI areas.
- Create ponds; to encourage grass snakes.
- Create rockeries, ideally south-facing.
- Survey population on site with local experts/wildlife groups.

Aspirations

- Establishment of a population of adder within the site, particularly within the buffer area around Harringe Brooks Wood.

6.3 Species - Water Vole

Background and Context

- 6.3.1 Water vole typically inhabit small streams and ditches. They tend to build burrows in the banks of these water courses, with the entrance being just above or below the waterline. These secretive animals are rarely seen, but signs of their presence are easier to see, such as small, neat piles of vegetation with ends nibbled at 45 degrees. Water voles are currently declining nationally at a rapid rate. This is due to a combination of factors, including loss of habitat, pollution and the introduction of American mink, a voracious predator of water voles. As such steps should be taken to make the area as suitable as possible for water voles, to encourage their spread onto the site, if any nearby populations. Water voles are protected under the Wildlife and Countryside Act 1981 (as amended) from killing or taking by certain prohibited methods. Their breeding and resting places are fully protected from damage, destruction or obstruction; it is also an offence to disturb them in these places. They are listed on S41.
- 6.3.2 The south east of England has the highest percentage of occupied water vole sites and shows the slowest rate of decline. As such it represents the stronghold of the species. The Kent population is in the highest 1/3 of counties in mainland Britain (The Wildlife Trusts 2017). The site has a number of areas which support a population of water voles including areas with medium and high population densities.

Status on Site

- 6.3.3 Of the 46 water bodies present on the site, one had a high water vole population, four had medium water vole populations and 18 had low water vole populations. Water voles are thought to be absent from the remaining water bodies on site. These populations are largely in the south and east of the site. Water bodies supporting high or medium populations tended to have a bank covered by a dense growth of emergent vegetation and were largely separated from main water courses (likely due to the impact upon the population from the presence of American mink). Photographs of water voles and habitats and features for water voles are presented below (photographs 24 – 27).



Photograph 24: Water vole



Photograph 25: Water vole burrows present within dense bankside vegetation.



Photograph 26: Heterogeneous habitat with cover for water voles will be created in the north-west of the site and adjacent to the East Stour River tributary south of the A20.



Photograph 27: Pond 17 – this pond on site has dense emergent vegetation and supported a population of water voles.

Integration within masterplan

- Areas of value to water voles are largely retained.
- Enhancement of retained areas of habitat, for example by increasing bankside vegetation along the East Stour River of emergent plants such as reeds, rushes and sedges.
- Retention and enhancement buffers of rough grassland around retained habitat features.
- Newly created habitat in the north west of the site and adjacent to the tributary of the East Stour River which is south of the A20, will improve connectivity throughout the site.
- SuDS areas will be designed to maximise their biodiversity potential, including creating habitat for water vole

6.3.4 In total, approximately 950m of water vole ditch will be lost to the development, and c.2200m of bank of water vole habitat will be reduced in value for this species, predominantly due to the potential for increased disturbance. However, 3700m of water vole habitat/potential water vole habitat will be enhanced (primarily along the East Stour River corridor. In excess of 3 - 4km of water vole banks will be created in a 14ha area in the north west of the site. This is a total of:

- Replacement of 3 times the amount of ditch lost:
- Enhancement of 1.5 times the amount of habitat reduced in value.
- Targets post construction
- Six waterbodies will have an occupancy with a high population of water vole (over double the current baseline)

Actions required

- Manage buffer zone and bankside vegetation sympathetically for water voles. For example:
- Coppicing trees in densely shaded areas
- Do not cut wetland vegetation too short
- Do not cut both banks in the same year
- Only remove silt from the centre of the channel
- Maintain grasses, common reeds and sedges
- Survey populations with support from local experts/wildlife groups
- Keep dogs out of buffer zones using signage and spot fines
- Avoid the use of pesticides near to watercourses

Aspirations

- 20 waterbodies will have an occupancy with a population of water vole
- Commence a mink control and eradication programme within the East Stour catchment (this is beyond the scope of the proposed Development as this would need to be on a regional scale).

6.4 Species - Otter

Background and Context

- 6.4.1 For the 5th National Otter Survey of England in 2010 (Environment Agency 2010) reports of otter in the southern region (in which most of Kent is based) were extremely low. For Kent including the area surrounding Otterpool, otter were absent, that is the Kentish Stour, East Rother North Kent. The report concluded the apparent demise of the otter population(s) in Kent and East Sussex. In 2011 two otter were spotted, with holts on the Medway and Eden rivers (BBC 2011). Otter are still very rare in Kent.
- 6.4.2 The East Stour River has the potential to support rather than maintain a low number of individual otter.
- 6.4.3 Within the S41 priority species descriptions, the following actions are listed, which the development on the site will contribute to:
- “... work towards meeting water quality objectives on all rivers across the UK so they can support healthy fish stocks. Ensure that riparian habitat has sufficient bankside vegetation and undisturbed terrestrial cover to provide resting and breeding sites for otters.”*

Status on Site

- 6.4.4 Otter signs have been observed (otter spraint and anal jelly) in the north-west corner of the site, along the East Stour River between Harringe Lane and Somerville Court Farm. These results are the first evidence of otter found within the local area (i.e. within 2km of the site) in over 40 years. Anecdotal evidence from local residents suggests that otter may be present on the site. Photographs of otter signs and habitats and features for otter are presented below (photographs 28 – 31).



Photograph 28: Habitat suitable for otter holt located under a bankside tree on the site.



Photograph 29: Otter spraint identified during Autumn 2017 survey. Makeup and scent indicative of otter



Photograph 30: Otter anal jelly found during Autumn water vole survey.



Photograph 31: Example of an artificial otter holt. Features such as this can be created from the arisings from vegetation management works.

Integration within masterplan

- The river corridors within the site are retained and buffered as stated within the 'River' habitat BAP within this report.
- The Masterplan maintains connectivity on site and with suitable habitat in the surrounding area.
- Creation of buffers either side of significant water bodies is proposed, replacing agricultural boundaries with species rich grassland and scrub.
- The design on the site has ensured that Water Framework Directive parameters for water quality of the East Stour can be maintained.

Targets post construction

- Increase use of site by otters (i.e. more than 2 signs of otter per monitoring rotation of the site).

Actions required

- Create a minimum of two holts;
- Manage buffer zones sympathetically for otter, for example;

- Encourage occasional thick patches of scrub, particularly blackthorn, bramble and reed;
- Leave the root plate of fallen trees nearby rivers;
- Retain mature riverside trees, especially with exposed roots;
- Leave parts of river banks uncut / un-grazed to encourage dense clumps of vegetation;
- Low intensity management of woodlands, to minimise disturbance;
- Cut vegetation on only one bank at a time; and
- Leave natural boulder piles near rivers.
- Keep dogs out of buffer zones using signage and spot fines;
- Avoid the use of pesticides near the water course;
- Maintain fish populations in water courses, for example, by controlling fishing along water courses;
- Create woody brash piles for use as otter couches;
- Where possible leave flood debris (such as branches) in the channel, as these are used for resting, crossing and sprainting and
- Survey populations with support from local experts/wildlife groups.

Aspirations

- Create 5 artificial otter holts on the site;
- Support breeding otter on site.

6.5 Species - Terrestrial Invertebrates

Background and Context

6.5.1 Invertebrates are a crucial part of many ecosystems. Many insects act as pollinators, such as many butterfly species. Invertebrates carry out important functions breaking down plant and animal matter, aiding with the decomposition process. Invertebrates are food for many different types of animal, from birds and bats to reptiles and dormouse. As such reductions in numbers can have large, knock-on effects on other species higher up the food chain. Unfortunately, most invertebrates have declined over the course of the 20th century. This has largely been caused by loss of habitat, increasingly intensive farming methods and the increasing use of pesticides. Glow worm, were recorded on site during the 2021 bat surveys. The BAP for invertebrates should focus on this species.

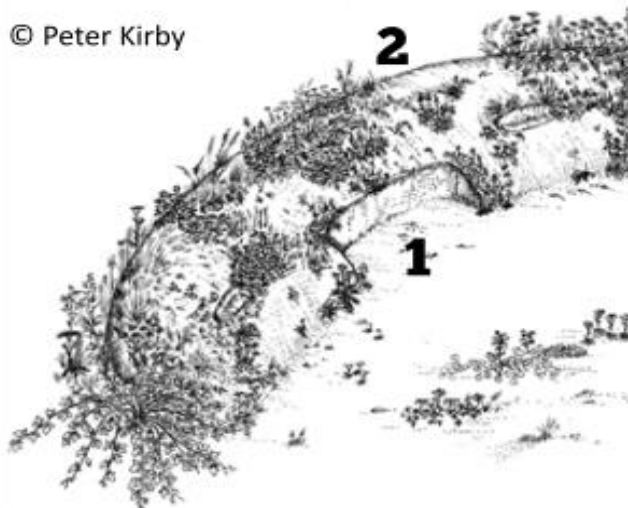
Status on Site

6.5.2 The habitats due to be lost or degraded by the works are largely areas of arable/pasture that have been intensively farmed for many years. As a result, the site is largely species poor with few species of conservation concern recorded onsite. Areas separated spatially from the intensively farmed areas (such as species rich hedgerows, neutral grassland, ancient woodland, water bodies and riparian habitats) are likely to hold more diverse insect populations, although with the exception of the riparian corridor, these habitats are poorly connected to the wider landscape. Photographs of invertebrates and valuable habitats and features for invertebrates are presented below (photographs 32 – 35).



Photograph 32: An earth mound on the site. This area was notably rich in aculates (bees and wasps).

© Peter Kirby



Photograph 33: Example of a bee bank. Area 1 is a small cliff, suitable for burrowing bees. Area 2 shows the sparse vegetation sward that should be maintained. Area 3 is bare ground, which should be retained in proximity to the bank.

These features should be created as a component of the development (Buglife 2020)



Photograph 34: A heterogenous and species rich habitat rich in invertebrate fauna adjacent to the Folkestone Racecourse Lake. This is to be retained within the development.



Photograph 35: A glow worm on site

Integration within masterplan

- Majority of habitats of some value to invertebrates to be retained and buffered with broad margins
- Creation of new, suitably buffered, habitats, including: ponds, ditches, botanically-rich grassland, bare ground, scrub and woodland is proposed
- The quantity and quality of newly created habitat will more than compensate for the areas that will be lost
- For glow worm, managing the airfield in a way that nurtures areas of rough grassland and minimises eutrophication will benefit this species. Glow-worm will benefit from the cessation of intensive agriculture
- Planting throughout the development will be native species with a focus on those plant species that are currently found in the woodland edges, field margins and less improved grassland. Planting in this way will increase the habitat available for the species currently found in the existing margins and will allow glow worm to disperse through the landscape more easily. It is crucial there is a system in place for the long-term management of these margins and the planted areas on the development

Targets post construction

- Compliance with all BAP habitat targets.
- Compliance with the reptile brash pile and grass pile targets.
- Create 0.2ha of bare ground.
- Extend the area of the site which supports glow worm.

Actions required

- Create bug hotels from wood, branches, logs, bricks, dry leaves, woodchips, moss, dead stems etc.
- Leave rotten logs or piles of stones within the GI of the site.
- Leave overgrown areas of vegetation.
- Plant trees where possible, especially native species (oak, silver birch, hawthorn and yew support a diverse range of insects).
- Planting sympathetically to encourage insects.
- In gardens.
- At the base of hedges.
- Allow some ivy in hedges/on walls.
- Create ponds.
- Avoid the use of pesticides.
- Maintain habitat heterogeneity where possible in gardens and in the wider landscape. For example, in a garden a few trees, flower beds, shrubs, a hedge, long grassland areas will encourage biodiverse assemblage of insects.
- Maintain mature trees and retain standing deadwood.
- Create compost heaps.
- Allow patches of grassland to grow longer.
- Monitor populations with local experts/wildlife groups.

Aspirations

- Encourage nationally scarce species known to be present in the local area (such as flea beetles) to colonise wider areas of the site.
- Increase of heterogeneity of areas of the site.

6.6 Species - Hazel Dormouse

Background and Context

- 6.6.1 Dormouse is a nocturnal species that spends its most of its life in trees. It feeds on a wide range of food items, such as flowers, insects, fruit and nuts, including hazelnuts, after which it is partly named. Due to its habit of sleeping during the day and hibernating over the winter it is not frequently seen. Widespread declines in population and range have occurred in the past hundred years. It is predominantly found in the south of England.
- 6.6.2 The following priority actions are listed on the S41 information sheet for this species which this BAP contributes towards:
“Increase the extent of suitably managed woodland and connective hedgerows by encouraging appropriate habitat management”.
- 6.6.3 Actions on the site are guided by this target.

Status on Site

- 6.6.4 This species is known to be present in the vicinity of the Otterpool Park development site (due to records centre data and signs of dormouse found nearby in Harringe Brooks Wood). Hedgerows provide connectivity between offsite areas where dormouse is present and the suitable habitat onsite. Therefore, there is a strong possibility that dormouse would utilise the site, or will utilise it in the future, at low densities.



Photograph 36: A Hazel dormouse



Photograph 37: A dormouse nest in a nest tube found within Harringe Brooks Wood



Photograph 38: A potential corridor for hazel dormice to colonise the site which extends from Harringe Brooks wood in the North to the East Stour River corridor.



Photograph 39: Hedgerow suitable for dormouse dispersal – similar habitats will be created on site particularly in the west.

Integration within masterplan

- A minimum buffer of 50m around Harringe Brooks Wood from built development and appropriate buffers around retained woodlands within the site.
- Retention of hedgerows as detailed in the hedgerow BAP.
- Planting of new woodland blocks and creation of new hedgerows.

Targets post construction

- Increase the amount of woodland on the site.

Actions required

- Manage hedgerows sympathetically for dormouse (English Nature 2006):
- Cut on-site hedges connected to Harringe Brooks Wood in a three-year cycle (or greater if possible), year 1, one side, year 2 top, year 3 other side
- Ideally cut in January and February.
- Cut 10-30% of hedgerows per year.
- Maintain a diverse mixture of native species that provide food for much of the year.
- Examples include: hawthorn, blackthorn, field maple, hazel, oak, English elm, elder, yew, brambles, wild privet, spindle, dog rose, field rose and guelder-rose.
- Fill in gaps with native species, such as those listed above.
- Not too many trees such that they shade out hedge species.
- Manage woodland on site sympathetically for dormouse.
- Manage woodland in a rotation system, so large areas are not cleared in one year.
- Maintain a diverse range of woody species all mixed together, not in large clumps.
- For example: Hazel, hawthorn, English elm, field maple, elder, yew hornbeam, ash, wayfaring tree, blackthorn and dogwood.
- Manage using traditional techniques, such as coppicing and pollarding.
- For example, coppice hazel over 15-20 year time frame to allow the hazel to fruit before it is cut back again.
- Allow patches of understorey to develop.
- Retain climbing plants, such as, ivy, honeysuckle and wild clematis where possible.
- Prevent sycamore from dominating woodland and shading out the understorey.
- Encourage a 3D environment, with plenty of links between woody vegetation at all levels (from brambles to tree tops).
- Create 10x10m to 20x20m gaps in the tree canopy to encourage heterogeneity in the understorey.
- Manage woodland rides such that constrictions occur regularly where the canopies either side meet, allowing for aerial dispersal and reduce the risk of predation.

- Set up monitoring programme for Harringe Brooks Wood with local experts/local wildlife groups.

Aspirations

- Dormouse spread onto the site from Harringe Brooks Wood.

6.7 Species – Selected Notable Bird Species

Background and Context

- 6.7.1 An assemblage of birds is present on the site, including farmland birds, waders and waterfowl. In the context of the proposed Development, four specific species are selected within this BAP for further consideration, as enhancement actions on the site could have significant positive impacts on the conservation status of these species in the area and / or these species are particularly notable for the area or considered likely to be valued by stakeholders (including future residents). These species are kingfisher, house sparrow, barn owl, and black redstart.
- 6.7.2 The kingfisher is amber listed on the Birds of Conservation Concern (BOCC) list (BTO 2015) This is also a charismatic species intrinsically linked to Britain's waterways. There is a stable breeding population of 75 – 100 pairs in Kent (Kent Ornithological Society 2014 - 2019) .
- 6.7.3 The house sparrow is red listed on the BOCC (BTO 2015) and is listed as a S41 species due to declines in the UK with the following actions applicable: "Ensure home-owners, Local Authorities, developers and others consider needs of, and action for, House Sparrows in building design/maintenance and garden/green space management (joint action)". This BAP contributes towards this action, through guiding building design and associated GI provision.
- 6.7.4 The barn owl is listed on schedule 1 of the Wildlife and Countryside Act. The population of barn owls in the UK declined in the middle of the last century, but numbers appear to be currently increasing (Ref. 36).
- 6.7.5 The black redstart is Amber listed on the BOCC (BTO 2015). There are fewer than 100 breeding pairs in the UK. It is also listed as a Schedule 1 species on The Wildlife and Countryside Act.

Status on Site

- 6.7.6 With regard to kingfisher, two sightings were recorded during the breeding bird surveys, plus incidental records of nest-burrows and behaviour indicative of breeding was recorded during the suite of other surveys conducted on the site. These observations were around the East Stour River corridor in the west of the site and around the Folkestone Racecourse Lake.
- 6.7.7 House sparrow were recorded within the site during the breeding bird season, with a peak count of 19 birds. These birds were generally observed adjacent to residential areas. It is assessed that there is the opportunity to greatly increase the habitat quality within the site for this species as a component of the development.
- 6.7.8 Pellets and feathers of barn owls in two buildings (during barn owl building survey) and incidental sightings have been recorded. Breeding is not confirmed on site but roosting is confirmed and breeding on site is possible. During the barn owl building surveys, 14 buildings (out 97 buildings assessed) were found to have potential to support nesting of barn owls, and two buildings had definitive evidence of barn owl use.
- 6.7.9 Black redstart were recorded during the breeding bird surveys, but only one individual was recorded. An incidental record of a family with two adults and a fledgeling at Hilhurst farm in August 2021 was returned. This confirmed breeding of the species has occurred at or near the farm (which is likely to provide suitable habitat). Photographs of notable birds and habitats and features for notable bird species are presented below (photographs 40 – 47).



Photograph 40: an area adjacent to Lympe Village where a significant number of house sparrows were observed.



Photograph 41: A kingfisher nest observed on the site.



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Photograph 42: An example of a house sparrow nesting box which can be incorporated within built structures.



Photograph 43: An example of an artificial kingfisher nesting bank (Photograph obtained from: <http://appletonwildlifediary.blogspot.com/2015/05/rs-pb-rye-meads.html>)



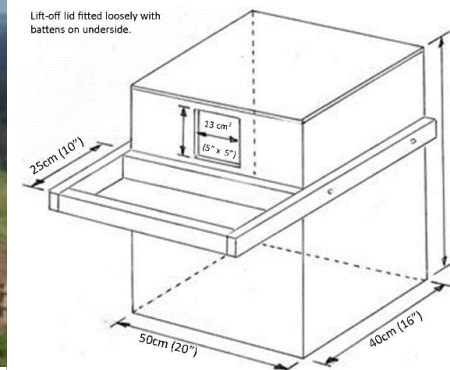
Photograph 44: Example of green roof black redstart (Photograph obtained from [Black redstart roof three years after construction](#) (photo by D. Gedge). | [Download Scientific Diagram](#) (researchgate.net))



Photograph 45: Black Redstart



Photograph 46: A typical barn owl nest box



Photograph 47: Nest box plan for barn owls (source: RSPB)

Integration within masterplan

6.7.10 The following approaches have been incorporated within the masterplan to avoid impacts to breeding birds:

- The majority of hedgerows are being retained and buffered within suitable GI to allow these features to continue to provide a resource for breeding birds, both nesting and feeding, and hedgerow sections which are removed to facilitate road and footpath crossings will be translocated.
- The vast majority of trees are being retained within the development, aquatic features and areas identified as having particular value for notable bird species, including the East Stour River corridor and Folkestone Racecourse Lake are to be retained, buffered and enhanced within the development
- The ancient woodland, off-site to the west (Harringe Brooks Wood) is to be retained and buffered, in a buffer which is a minimum of 50m along its length.
- Multiple small woodlands are to be retained and buffered within the development, including Park Wood, Springfield Wood and a young woodland to the north of Link Park.

6.7.11 In addition to this retention, there will be significant area created within the GI of the proposed Development that will be of value for breeding birds. This will include:

- A wetland area containing ditches, channels, trees and scrub in the north west of the development, which will provide foraging and nesting habitat for breeding birds, including kingfisher.
- A large number of new water features are to be created, including SuDS and specific wildlife ponds, which will provide a foraging resource for birds.
- A large area of grassland and SuDS features are proposed to be created in the south east of the site, between Lympne and the development, which will be of value for foraging and breeding birds.
- New parkland areas are to be created, in the centre of the development a woodland park is proposed, which will provide enhanced foraging and breeding habitats for breeding birds. A town park is proposed, adjacent to the Folkestone Racecourse Lake, which will provide a resource for breeding bird species, including house sparrow.
- New areas of woodland and tree planting are proposed, largely as landscape buffers, but these areas will provide significant nesting opportunities for breeding birds.
- Banks for kingfisher nesting will be created along the East Stour River corridor, and within the wildlife area in the north-west of the development. Exact details will be informed by pre-commencement surveys.
- Within the built parcels, there will also be parameters set (dependent upon the proposed density of the parcels buildings) for GI which will be of value for wintering birds. This will include:
 - Parameters for the amount of green roof within built parcels (including green roofs designed for black redstart);
 - Inclusion of barn owl boxes in locations across the site (away from the M20 motorway). Areas of rough grassland for barn owl foraging will be created and maintained.
 - Parameters for bird box installation;
 - Parameters for the number of trees and street trees within built parcels.
- These details will be secured through the Tier 2 and 3 applications.

- Targets post-construction
- A minimum of two kingfisher breeding pairs to be breeding on site (baseline is estimated to be a maximum of two pairs).
- A wider distribution of dense populations of house sparrow across the site.
- Continued foraging by barn owl on the site
- Continued use of the site by Black Redstart for breeding.

Actions required

- Installation of bird boxes within the green spaces and built parcels.
- Creation and retention of rough grassland areas with management to create barn owl foraging habitats.
- Creation of kingfisher banks within the East Stour River corridor and the new wildlife area in the north-west of the site.
- Maintenance of newly created and installed features, including replacement of bird boxes as needed.
- Survey kingfisher populations with support from local experts/wildlife groups.
- Creation of black redstart habitats including green / brown roofs.

Aspirations

- To have 5 pairs of kingfisher breeding on site.
- To confirm house sparrow nesting in a minimum of 75 nest boxes.
- To have breeding black redstart on site every breeding season.
- To have confirmed barn owl breeding in erected barn owl boxes.

6.8 Species – Breeding Bird Species (assemblage)

Background and Context

- 6.8.1 In addition to actions targeted as specific bird species (listed in the section above) more general actions to maximise the value of the site for breeding birds as an assemblage are to be included in the development and ongoing maintenance. A rich assemblage of breeding birds is present on the site, with 90 different species being recorded on the site during breeding bird surveys. The species recorded breeding on site included common and widespread species such as blackbird, chaffinch and chiffchaff and species listed on the BOCC amber and red lists including dunnock and yellowhammer. Probable and possible breeding species on site include yellow wagtail, turtle dove and skylark.
- 6.8.2 This section of the BAP outlines on site actions to maximise the value of the development for breeding birds. Alongside this it is proposed that an offsite offsetting package is delivered to offset for impacts to farmland birds.

Status on Site

- 6.8.3 Ninety different bird species were recorded during the breeding bird surveys. The table below lists confirmed, probable and possible breeding species recorded on the site Photographs of birds recorded on the site are presented below (photographs 48 – 51).

Table 6: Results of the Breeding Bird Surveys

Confirmed breeders (on or near to site)	Probable breeders	Possible breeders
Blackbird; Blue tit; Buzzard; Carrion crow; Chaffinch; Coot; Dunnock; Goldfinch; Great crested grebe; Great-spotted woodpecker; Great tit; Green woodpecker; Jackdaw; Kestrel; Kingfisher; Linnet; Magpie; Mallard; Pheasant; Rook; Song thrush; Starling; Stock dove; Treecreeper; Whitethroat; Wood pigeon; Wren; Yellowhammer	Collared dove; Greylag goose; Mistle Thrush; Moorhen; Reed bunting; Skylark; Yellow wagtail	Blackcap; Bullfinch; Canada goose; Chiffchaff; Coal tit; Common gull; Common snipe; Cormorant; Cuckoo; Feral pigeon; Gadwall; Goldcrest; Greenfinch; Grey heron; Grey wagtail; Herring gull; House martin; House sparrow; Jay; Lesser whitethroat; Little egret; Little grebe; Long-tailed tit; Meadow pipit; Mute swan; Nightingale; Nuthatch; Pied wagtail; Raven; Red kite; Red-legged partridge; Reed warbler; Ringed plover; Robin; Sedge warbler; Siskin; Sparrowhawk; Stonechat; Swallow; Swift; Tawny owl; Tufted duck; Turtle dove; Willow warbler



Photograph 48: A dunnock perched on a branch



Photograph 49: A turtle dove (source: eBird)



Photograph 50: A yellow wagtail (source: eBird)



Photograph 51: A yellowhammer (source: RSPB)

Integration within masterplan

6.8.4 In line with the mitigation hierarchy, the masterplan has been designed to avoid and minimize impacts to breeding birds. The following approaches have been incorporated within the masterplan to avoid impacts to breeding birds:

- The majority of hedgerows are being retained and buffered within suitable GI to allow these features to continue to provide a resource for breeding birds, both nesting and feeding, and hedgerow sections which area removed to facilitate road and footpath crossings will be translocated
- The vast majority of trees are being retained within the development
- Aquatic features and areas identified as having particular value for notable bird species, including the East Stour River corridor and Folkestone Racecourse lake are to be retained, buffered and enhanced within the development
- The ancient woodland, offsite to the west (Harringe Brooks Wood) is to be retained and buffered, in a buffer which is a minimum of 50 m along its length
- Multiple small woodlands are to be retained and buffered within the development, including Park Wood, Springfield Wood and a young woodland to the north of Link Park (Centred on OSGR TR 112 361)

6.8.5 In addition to this retention, there will be significant area created within the green spaces of the proposed development that will be of value for breeding birds. This will include:

- A wetland area containing ditches, channels, trees and scrub in the northwest of the development, which will provide foraging and nesting habitat for breeding birds, particularly waders and waterfowl

- A large number of additional hedgerows, which are to be buffered are proposed to be planted across the development, these will subdivide development plots and provide a permeable barrier to wildlife
- A large number of new water features are proposed to be created, including SuDS and specific wildlife ponds, which will provide a foraging resource for breeding birds
- A large area of orchard, grassland and SuDS features are proposed to be created in the south-east of the site, between Lypne and the development, which will be of value for foraging and breeding birds, particularly farmland species, including ground nesting species
- New parkland areas to be created, in the centre of the development a woodland park is proposed, which will provide enhanced foraging and breeding habitats for breeding birds. A town park is proposed adjacent to the Folkestone Racecourse Lake, which will provide a resource for breeding bird species which are associated with urban areas, such as starlings.

New areas of woodland and tree planting are proposed, largely as landscape buffers, but these areas will provide significant nesting opportunities for breeding birds

- Habitat Targets post-construction
- Increase in quality of grasslands and woodlands
- Increase in woodland area on site by over 50 ha
- Increase in wetland area of over 500%.

Actions required

- Preservation and maintenance of existing grasslands and woodlands.
- Creation of areas with limited human disturbance and dog-free areas.
- Woodlands to be retained and buffered.
- Creation of wetlands.
- New tree planting including woodland blocks for prospective nesting habitats.
- Regular monitoring of species.
- Ensuring that all maintenance works to habitats are conducted at a time or through a methodology that minimises impacts to breeding birds.

Aspirations

- To have a confirmed breeding population of turtle dove on the site.
- To record all species noted as confirmed, probable or possible breeders on site during the construction and operation of the site.
- To have an increased population of garden bird species.

6.9 Species – Wintering Bird Species (assemblage)

Background and Context

- 6.9.1 The site supports a valuable assemblage of wintering birds, with 77 different species recorded during the wintering bird surveys.
- 6.9.2 It is difficult to place an overall trend on bird conservation status, as the large number of species within the UK each have varying requirements and whilst some are adversely impacted by changes in management, development and climate change, others benefit. However, reviewing the overall status of the UK's birds can be achieved by reviewing the BoCC list gives an indication of the status of birds known to be resident in the UK (Ref 5).
- 6.9.3 Species that are of high nature conservation concern, listed as 'Red-List' and 'Amber-list' on the Royal Society for the Protection of Birds (RSPB) list of Birds of Conservation Concern (BoCC). This non-legislative system was derived from the review of the population status of bird species that are regularly found breeding within the United Kingdom, using data from national monitoring schemes by the leading governmental and non-governmental conservation organisations in the UK.
- 6.9.4 In 2015, of the 247 species considered, 67 species were on the red list and 96 were on the amber list. Overall, although there was an increase of birds species on the 'green list', there was also an increase in species on the 'red list' (an increase of 15 species since 2009). This is indicative of an overall negative trend in the status of bird populations overall in the UK. This trend appears to be a continuous trend since the first survey was conducted in 1996.
- 6.9.5 The proposed Development has the potential to impact upon wintering bird species. This BAP section outlines how on-site measures will maximise the value of the development for wintering birds.
- 6.9.6 A subset of the wintering birds recorded on the site are also considered to be part of the farmland bird assemblage. The approach to mitigation off-site for these species is presented in the subsequent BAP section.

Status on Site

- 6.9.7 Of the 77 species recorded on site during the wintering bird surveys, a subset is considered notable. These species are selected due to their legal status, conservation status or value locally.



Photograph 52: A song thrush (source: eBird)



Photograph 53: A common gull (source: eBird)



Photograph 54: A redwing (source: eBird)



Photograph 55: A meadow pipit (source: eBird)

Integration within masterplan

6.9.8 In line with the mitigation hierarchy, within the masterplan, the initial approach to limiting impacts would be through avoidance. The most important areas for a number of wintering waders and ducks are retained. These areas are:

- The Folkestone Racecourse Pond, which is to be retained and included within an improved buffer area;
- The area to the west of the Folkestone racecourse lake where woodcock and snipe were recorded;
- The pond to the south of the A20; and
- The East Stour River Corridor, which is to be retained and buffered.

6.9.9 In addition, there are areas designed to provide valuable habitats for wintering birds within the masterplan design and GI within the development. These include:

- A large area of varied space to be created to the south-east of the site, including wet areas (for sustainable drainage systems (SuDS)) and rough grassland;
- New hedgerows to be created across the site;
- A large number of SuDS and water features to be created within the development; and
- Sports pitch and park boundaries and buffers which will be of value for foraging.
- In addition, during the operation phase, impacts to retained and newly created habitats would be minimised through GI design to focus recreational impacts in certain areas and to minimize impacts to other areas, utilizing topography, habitat and fencing to control recreational pressures.

- Native planting, including scrub and trees, will provide habitats and food sources for birds.
- Within built parcels, there will also be parameters set for GI which will be of value for birds. This will include (a) parameters for amount of green roof within built parcels, and (b) parameters for the number of trees and street trees within built parcels; parameters for landscaping species (native species of wildlife value).

Targets post-construction

- Increase in quality of grasslands and woodlands, especially pertaining to the provision of winter foraging resources.
- Increase in the number of wintering birds associated with wetland habitats.
- Maintenance of wintering bird assemblage on site (not including farmland birds – see section below).

Actions required

- Include all habitat and soft estate management plans approaches to ensure that maximising the provision of food resources for wintering birds is a key consideration when outlining management and supplementary planting.
- Ensure all landscaping within built parcels considered provision of resources for wintering birds.
- Hedgerows to be retained within the development and new hedgerows to be created in the green infrastructure areas and built parcels.
- Improvement and management of grasslands for foraging wintering birds.

Aspirations

- To record the notable wintering waders and wildfowl on the proposed wetland areas.
- To increase the peak counts of all non-farmland specialised wintering birds on the site.

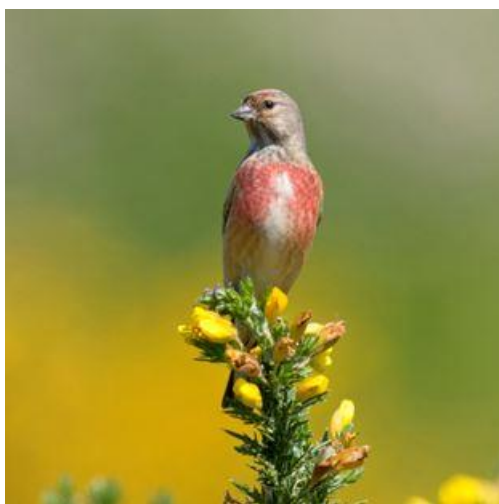
6.10 Species – Farmland Birds (assemblage)

Background and Context

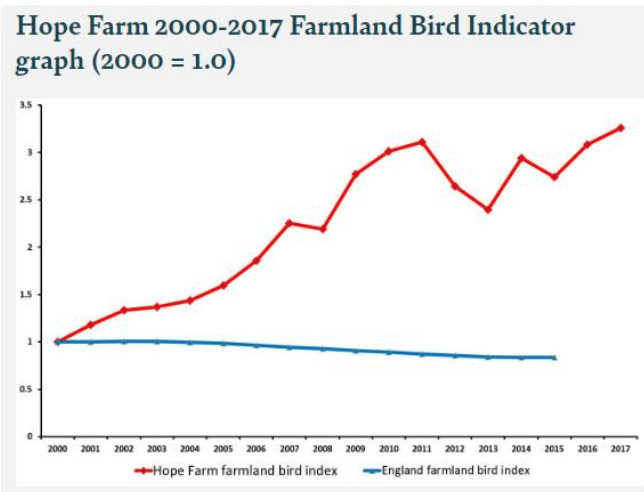
- 6.10.1 The site supports a valuable assemblage of farmland birds.
- 6.10.2 Farmland birds have undergone a significant decline in numbers since 1950. The RSPB farmland bird indicator (RSPB 2018) suggests that farmland bird numbers may have declined by 48 percent between 1970 and 2007 and declined by 9% between 2010 and 2015.
- 6.10.3 It is considered that this decline is not solely due to loss of farmland, but primarily due to intensification of farming, loss of hedgerows and changes in farming practices (such as the loss of field margins and increasing planting of winter sown crops, which reduce the availability of feeding resources over winter).
- 6.10.4 The proposed Development has the potential to impact upon farmland bird species. This BAP section outlines how off-site measures will mitigate impacts of the development. It is not possible to fully mitigate for impacts to farmland birds on-site therefore off-site offsetting is required.

Status on Site

- 6.10.5 The following species that are considered farmland birds have been recorded on the site: goldfinch; greenfinch; jackdaw; kestrel; linnet; long-tailed tit; meadow pipit; mistle thrush; reed bunting; rook; skylark; song thrush; starling; stock dove; turtle dove; whitethroat; wood pigeon; yellow wagtail; yellowhammer. Photographs of farmland birds recorded on the site are presented below (photographs 56, 58).



Photograph 56: A linnet (source: RSPB)



Photograph 57: Potential increases in farmland bird numbers achievable through farmland improvements (from Ref. 35)



Photograph 58: A skylark (source: 'The Wildlife Trusts')

Off Site Offsetting

6.10.6 It is not possible to fully mitigate for impacts to farmland birds and other groups which require large areas of open farmland within the development. As such, off-site offsetting is proposed. This would be in the form of payments to farmers and landowners to improve farmland for farmland birds. A scheme at Hope Farm in Cambridgeshire run by the RSPB has demonstrated that farmland bird increases of over 200% are possible through farmland improvements, whilst allowing agricultural use to continue (Ref. 35).

Funds would be provided to enhance local habitats for farmland birds through appropriate, proven management regimes to increase carrying capacity of local habitats. The payments are proposed to be based on (but may be different to) Country Stewardship: higher Tier or ELMS (Environmental Land Management Scheme) options which are targeted specifically at farmland birds and aim to provide the three elements considered to limit farmland bird numbers.

These are: (a) safe nesting habitat

(b) summer food; and

(c) winter food.

Targets post construction

6.10.7 A suite of farmland enhancements delivering improved habitat for farmland birds in the area around the development.

6.10.8 A demonstrable increase in the number of farmland birds at a level that offsets any impact from the development.

Actions required

6.10.9 It is not considered necessary to purchase land specifically for the habitat management, since it is not the lack of farmland that is limiting bird numbers, but the lack of appropriate management. It is proposed to contribute funds to bodies such as a specifically created group, a wildlife trust or conservation group which would guarantee, through a legal agreement, that the money would be used to deliver the proposed benefits for farmland birds in the local area. The detail of this agreement would be set out in a S106 or similar legal agreement which would form part of the reserved matters for each planning application.

6.10.10 The disturbance and habitat loss that would have the largest effect on nesting farmland birds would occur during site clearance; it is therefore proposed that the monies would be provided to the grant-giving body at least six months, and ideally one year, in advance of the impacts occurring (i.e. at last six months and ideally one year in advance of site clearance for each phase of the development). It is proposed that funds provided should be sufficient to enhance farmland for farmland birds for a period of 30 years (the management time expected as stated in the Environment Act). The sums would be provided as lump sums in advance of each phase of site clearance sufficient to cover management for the 30-year period. It is currently calculated that 579.5 ha of land will be needed for the offset, but this must be reassessed as the development progresses and the real world increase in farmland bird numbers achieved is known (to increase or decrease the provision of offsets). For the initial phase of the development land owned by the Applicant is identified for initial offsets. This will provide an example for further parties that become involved in the offset provision. The location of the initial offset area is presented below in Image 1. The proposed process for identifying suitable offsets is shown in Image 2.

- A suite of farmland enhancements delivering improved habitat for farmland birds in the area around the development.
- A demonstrable increase in the number of farmland birds at a level that offsets any impact from the development.

Actions required

6.10.11 It is not considered necessary to purchase land specifically for the habitat management, since it is not the lack of farmland that is limiting bird numbers, but the lack of appropriate management. It is proposed to contribute funds to bodies such as a specifically created group, a wildlife trust or conservation group which would guarantee, through a legal agreement, that the money would be used to deliver the proposed benefits for farmland birds in the local area. The detail of this agreement would be set out in a S106 or similar legal agreement which would form part of the reserved matters for each planning application.

6.10.12 The disturbance and habitat loss that would have the largest effect on nesting farmland birds would occur during site clearance; it is therefore proposed that the monies would be provided to the grant-giving body at least six months, and ideally one year, in advance of the impacts occurring (i.e. at least six months and ideally one year in advance of site clearance for each phase of the development). It is proposed that funds provided should be sufficient to enhance farmland for farmland birds for a period of 30 years (the management time expected as stated in the Environment Act). The sums would be provided as lump sums in advance of each phase of site clearance sufficient to cover management for the 30-year period. It is currently calculated that 579.5 ha of land will be needed for the offset, but this must be reassessed as the development progresses and the real world increase in farmland bird numbers achieved is known (to increase or decrease the provision of offsets). For the initial phase of the development land owned by the Applicant is identified for initial offsets. This will provide an example for further parties that become involved in the offset provision. The location of the initial offset area is presented below in Image 1. The proposed process for identifying suitable offsets is shown in Image 2.

Image 1: location identified for initial offset

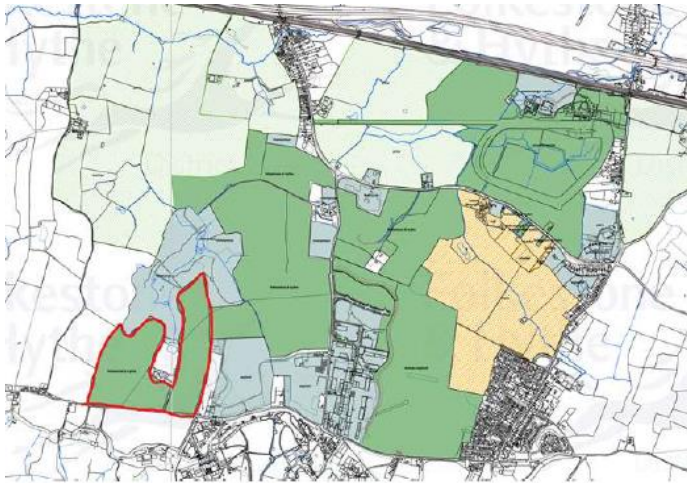
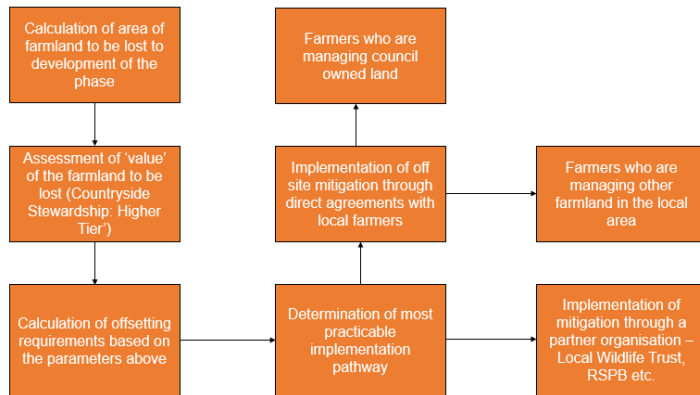


Image 2: process for identifying offsets for each phase of the development



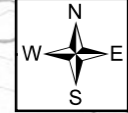
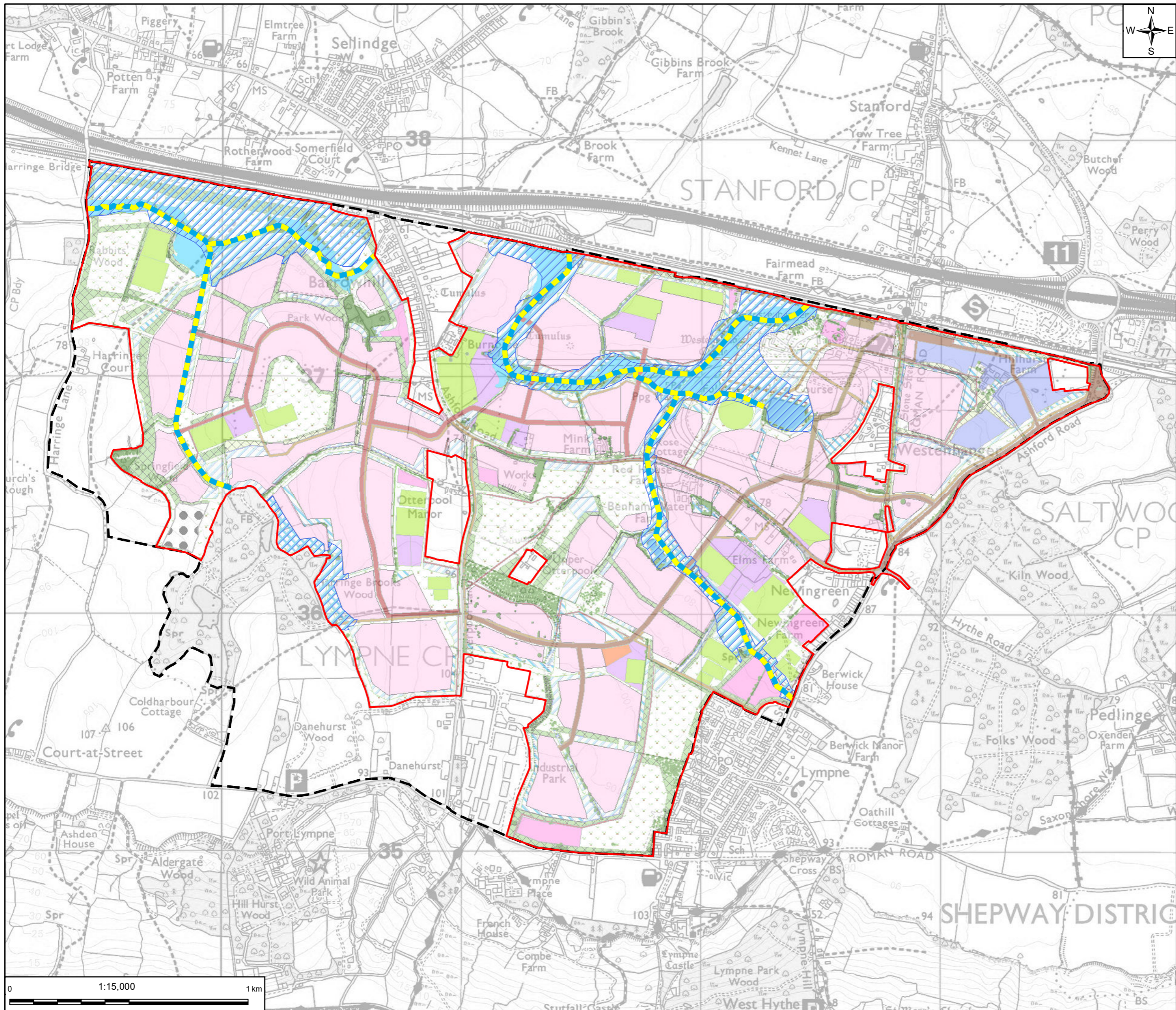
Aspirations

- An increase in farmland bird numbers comparable to that shown by Hope Farm across the offset farmland.
- Utilising the enhanced areas as a case study for other developments to encourage wider adoption of offsetting approaches for farmland bird impacts.

7 References

Reference	Title
Ref 1	Amphibian and Reptile Conservation (2009) Dragons in your Garden
Ref 2	BBC (2011) Otters return to every county in England - BBC News [accessed 25/01/2022]
Ref 3	BCT (2019) Bat Conservation Trust (2019) Gardening for Bats [https://www.bats.org.uk/advice/gardening-for-bats]v
Ref 4	BCT (2021) Threats to bats - About Bats - Bat Conservation Trust [accessed 25/01/2022]
Ref 5	BTO (2015) Birds of Conservation Concern online at Birds of Conservation Concern BTO - British Trust for Ornithology
Ref 6	Buglife (2020) Bee-bank-booklet-2.pdf (buglife.org.uk) [accessed 25/01/2022]
Ref 7	Environment Agency (2010) Fifth otter survey of England 2009 – 2010
Ref 8	Environment Agency (2021) Catchment Ecological Status from East Stour Catchment Data Explorer Catchment Data Explorer [accessed 25/01/2022]
Ref 9	HMSO (1981) Wildlife and Countryside Act. HMSO, London.
Ref 10	HMSO (2006) The Natural Environment and Rural Communities Act HMSO, London.
Ref 11	HMSO (2017) The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017
Ref 12	HMSO (2019). The Conservation (Natural Habitats, & c) Regulations 2019 (EU Exit Regulations).
Ref 13	Defra (2007). Hedgerow Survey Handbook: a standard procedure for local surveys in the UK. Prepared on behalf of the Steering Group for the UK. Available from: http://www.defra.gov.uk/foodfarm/landmanage/landscape/documents/hedgerow-survey-handbook.pdf
Ref 14	English Nature (2006) Dormouse Conservation Handbook Second Edition, Peterborough
Ref 15	JNCC, UK BAP (1994 and 2007) available online http://jncc.defra.gov.uk/page-5155 [Accessed 19/09/2014]
Ref 16	JNCC (2003) Herptofauna Workers Manual
Ref 17	Kent Nature Partnership - Kent Biodiversity 2020 and beyond – a strategy for the natural environment 2015-2025
Ref 18	Kent Biodiversity Action Plan Steering Group (1997) The Kent Biodiversity Action Plan: A framework for the future of Kent's wildlife
Ref 19	Kent Nature Partnership (2019) Biodiversity Strategy 2020 to 2045 20-00025 - Kent Biodiversity Strategy March 2020.pdf
Ref 20	Kent Ornithological Society (2014 - 2019) Kent Bird Report Volumes 63 – 68

Figure 1: Key Areas for Site BAP Habitats



- Legend**
- Outline Planning Application Boundary
 - Framework Masterplan Boundary
 - River and Riparian
 - Ponds and Ditches
 - Advance Planting Phase 1
 - Advance Planting Phase 2 & 3
 - Existing Road
 - Existing Scattered Trees
 - Existing Trees Existing Hedges
 - Existing Water Pond
 - Existing Water Area / Proposed River Park
 - Existing Woods
 - Existing Woods Outside
 - Proposed Allotments
 - Proposed Bridge Crossing
 - Proposed Burial Ground
 - Proposed Business
 - Proposed Cycleways
 - Proposed Development Areas.
 - Proposed Footpaths
 - Proposed General Green infrastructure
 - Proposed High School
 - Proposed Movement corridor
 - Proposed Phasing 1A
 - Proposed Potential Accessibility
 - Proposed Primary Roads
 - Proposed School Area
 - Proposed Sport Field
 - Proposed Suds Hatch
 - Proposed Suds Water Management
 - Proposed Woodland

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REV	Date	Description	Drawn	Check	Approv
02	19/11/21	FOR INFORMATION	RM	BM	MG
01	22/01/18	FOR INFORMATION	PN	BM	MG

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 80Fen
 80 Fenchurch Street
 London
 EC3M 4BY


OTTERPOOL PARK
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Figure 1
Key Areas for Habitats
Post Construction (BAP)

scale	original size	datum	grid
1:15,000	A3	Sx	BNG

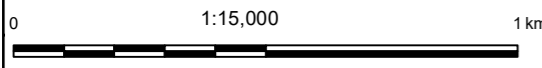
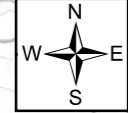
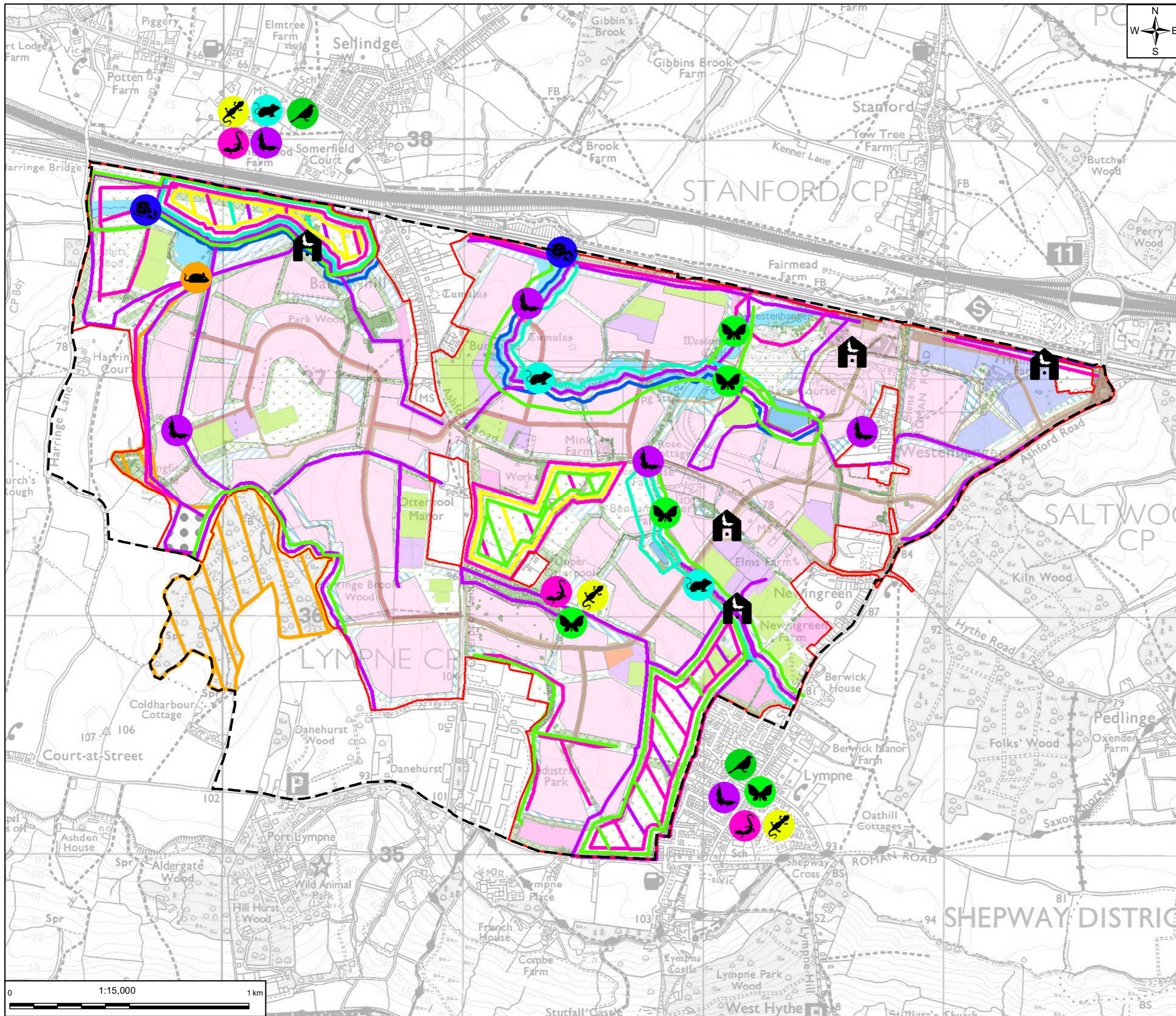


Figure 2: Key Areas for Site BAP Species



Legend

- Outline Planning Application Boundary
- Framework Masterplan Boundary
- Bird habitat
- Bat House (indicative)
- Invertebrate habitat
- Reptile habitat
- Great crested newt habitat
- Water vole habitat
- Bat habitat
- Dormouse habitat
- Otter habitat
- Invertebrate
- Reptile
- Great Crested Newt
- Water Vole
- Bat
- Dormouse
- Otter
- Advance Planting Phase 1
- Advance Planting Phase 2 & 3
- Existing Road
- Existing Scattered Trees
- Existing Trees Existing Hedges
- Existing Water Pond
- Existing Water Area / Proposed River Park
- Existing Woods
- Existing Woods Outside
- Proposed Allotments
- Proposed Bridge Crossing
- Proposed Burial Ground
- Proposed Business
- Proposed Cycleways
- Proposed Development Areas
- Proposed Footpaths
- Proposed General Green infrastructure
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- Proposed Movement corridor
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- Proposed Suds Water Management
- Proposed Woodland

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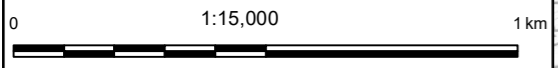
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01	22/01/18	FOR INFORMATION	PN	BM	MG

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Figure 2
 Key Mitigation
 Areas for Species

scale	original size	datum	grid
1:15,000	A3	Sx	BNG



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