

# Riverside Energy Park

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## Environment Bank Site Selection for Biodiversity Offsetting Report

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# 1 Introduction

1.1.1 Environment Bank (EB) has been commissioned by Cory Environmental Holdings Limited (trading as Cory Riverside Energy (Cory or “the Applicant”)) to undertake a preliminary site search for a proposed biodiversity offset associated with Riverside Energy Park (REP) and its associated Electrical Connection, which is situated within the London Borough of Bexley (LBB) and the Borough of Dartford (DBC). This report details the methods and findings of the preliminary site search to date, together with an initial list of suitable offset sites that are available to deliver compensation for an equivalent loss of biodiversity as a result of the Proposed Development and to provide a minimum 10% biodiversity net gain.

## 1.2 Proposed Development

1.2.1 The Applicant is applying to the Secretary of State under the Planning Act 2008 (PA 2008) for powers to construct, operate and maintain an integrated Energy Park, to be known as Riverside Energy Park (REP). The principal elements of REP comprise complementary energy generating development and an associated Electrical Connection (together referred to as the ‘Proposed Development’). As the generating capacity of REP will be in excess of 50 MWe capacity, it is classified as a Nationally Significant Infrastructure Project (NSIP) under section 14 and 15 of the PA 2008 and therefore requires a Development Consent Order (DCO) to authorise its construction and operation. The DCO is currently subject to examination by the Examining Authority (ExA) (PINS reference EN010093). This report forms part of the Applicant’s submission at Deadline 7 of the examination.

1.2.2 The two principal elements of the Proposed Development are: (1) REP, which would be located adjacent to an existing Energy Recovery Facility (ERF) operated by Cory (referred to as Riverside Resource Recovery Facility (RRRF)) situated at Norman Road in Belvedere within the LBB, and (2) the Electrical Connection, which would run from the REP site and terminate at the Littlebrook substation in DBC.

## 1.3 Offset Requirement

1.3.1 A **Biodiversity Accounting Report (8.02.09, REP2-060)** was produced by Peter Brett Associates in collaboration with Environment Bank to establish the estimated biodiversity losses and gains associated with the Proposed Development and to determine the biodiversity offset requirements needed to achieve net gain. Biodiversity offset requirements were established using the DEFRA biodiversity metric (DEFRA, 2012) and calculated for both habitats and linear features in ‘biodiversity units’, a value comprised of a habitat area, quality and condition.

1.3.2 The Biodiversity Accounting Report took into account the biodiversity offset requirements for two proposed development impact scenarios. These were:

- A realistic worst-case overall route; and,
- A realistic best-case route.

1.3.3 The scenarios were derived prior to the refinement of the Application boundary to a single Electrical Connection between REP and Littlebrook substation to the south east. The scenarios were developed to be representative of 'realistic' case impacts, taking into account all reasonable worst or best outcomes so that a likely scale of impact was obtained. The resulting scenarios provided the limits to inform the offset requirement for the purposes of this preliminary site search.

1.3.4 Whilst a single Electrical Connection route has been proposed that closely follows the best-case route, there are slight differences, meaning that the current offset requirement is likely to fall between the limits of the offset requirements set out below. However, as the final offset requirement would be based on an updated Biodiversity Accounting Report for the final scheme following detailed design (as approved under requirement 2 of the draft Development Consent Order), the aim of this preliminary site search is to identify offset availability towards the upper limits of the offset requirement to ensure that biodiversity net gain can be achieved.

1.3.5 Subsequent to the submission of the **Biodiversity Accounting Report (02.09, REP2-060)** and following the refinement of the Application Boundary, Environment Bank has updated the biodiversity impact calculation, to provide an interim estimation of offset requirement. Results can be found in Tables 1.1 and 1.2 below. This updated calculation has taken into account:

- There will be no open mosaic habitat compensation on the flood bank at the north of the REP site. This was removed in response to concerns raised by the Environment Agency about the potential conflict with its role as a flood embankment.
- There will be no direct impact to Crossness Nature Reserve as this option was removed during further refinement of the Electrical Connection route.
- The Main Temporary Construction Compound will be sited on the land of the proposed data centre, directly to the south of the REP site and along Norman Road. This was to rationalise the footprint of the land required for development. As the proposed data centre is subject to future development after its use as a temporary construction compound, compensation for its loss will not be possible on-site. An off-site compensation requirement for the data centre has subsequently been added to the offsetting requirements for the Proposed Development. The proposed compound to the south of the Data Centre site (Landsul site) will have no direct impact (permanent nor temporary).
- Given the Application Boundary retains some flexibility to enable detailed design, the final biodiversity offsetting requirement for the Proposed

Development will be accounted for as part of the updated Biodiversity Accountancy Statement on completion of the detailed design. The "worst case" as re-calculated below will be the "worst-case" calculation, given that it assumes the maximum parameters across the Proposed Development are utilised, which is not realistic.

- Tables 1.1 and 1.2 summarise the interim offsetting requirements following the refinement of the Application Boundary. The reference to "Realistic best-case" and "Realistic worst-case" are now references to the best and worst cases that can be achieved following the Applicant's refinement to the Application Boundary, rather than as defined in the **Biodiversity Accounting Report (8.02.09, REP2-060)**. The figures below have been used to inform the preliminary site selection process in this report.

Table 1.1: Interim biodiversity impact assessment results summary

Biodiversity Assessment Results	Biodiversity units	
	Realistic best-case	Realistic worst-case
Existing site biodiversity units	197.62	197.62
Gross biodiversity loss	-53.72	-61.02
On-site compensation gain	8.48	12.72
<b>Net biodiversity balance</b>	<b>-45.24</b>	<b>-48.28</b>
<b>+10% net gain</b>	<b>50.61</b>	<b>54.39</b>

Table 1.2: Interim linear biodiversity impact assessment results summary

Linear Assessment Results	Linear units	
	Realistic best-case	Realistic worst-case
Existing site linear units	26.06	26.06
Gross linear loss	-8.56	-8.56
On-site compensation gain	5.45	5.45
<b>Net biodiversity balance</b>	<b>-3.11</b>	<b>-3.11</b>
<b>+10% net gain</b>	<b>3.97</b>	<b>3.97</b>

1.3.6 For a compensation scheme of a minimum 50.61 biodiversity units, it is estimated that a biodiversity offset scheme of 8.2– 11.3 ha would be required. The final offset would be determined upon site baseline, achievable targets and management proposals.

1.3.7 A biodiversity unit breakdown of the net habitats and linear feature impacts for each development scenario is summarised in Table 1.3 and Table 1.4 below. These figures will be used to guide design of the biodiversity offset package. As a general principle, and in accordance with the Defra metric guidance, it is recommended that high distinctiveness habitats are compensated like-for-like, and as a minimum must be compensated for through enhancement of other high distinctiveness habitats. Medium and low distinctness habitats should be traded up to priority habitats and habitats that support local nature conservation.

Table 1.3: Summary breakdown of interim net biodiversity impact for high, medium and low distinctiveness habitats

Habitat types	Net impact (biodiversity units)	
	Realistic best-case	Realistic worst-case
High: Open Mosaic Habitat	32.01	32.01
High: Broad-leaved woodland	0.25	0.25
High: Standing water	0.29	0.29
High: Streams	0	0.03
Medium: all habitats	4.44	4.49
Low: all habitats	8.07	11.04

Table 1.4: Summary breakdown of interim net biodiversity impact for linear features

Linear features	Net impact (linear biodiversity units)	
	Realistic best-case	Realistic worst-case
Hedgerows	0	0
Ditches	3.07	3.07
Other	0.04	0.04

## 2 Biodiversity Offsetting Context

### 2.1 Background

- 2.1.1 Biodiversity offsets are '*conservation activities designed to deliver biodiversity benefits in compensation for losses, in a measurable way*'. Biodiversity offsetting is distinguished from other forms of compensation by the requirement for measurable outcomes. This is achieved by quantifying net biodiversity impacts caused by development; using the same metric to assess direct and indirect negative impacts to habitats and the value of any on-site compensation, to set the framework of off-site compensation (offset) requirements and the biodiversity net gain generated by these offsets. Biodiversity offsetting ensures that off-site compensation proposed is both proportionate to the development concerned and that a measurable net gain for biodiversity can be achieved.
- 2.1.2 Biodiversity offsetting, like other forms of compensation, is the last step of the mitigation hierarchy (first avoid, then reduce, and finally, compensate) and is applied as a last resort to otherwise policy-compliant development proposals. 'Offsetting' – i.e. creating or restoring new wildlife habitat in a different place to where it was lost – is therefore complementary to existing planning policies regarding biodiversity and is recognised in the British Standard for Biodiversity in Planning (BS 42020:2013) as an appropriate mechanism for delivering biodiversity compensation. As biodiversity offsetting utilises the same biodiversity accounting metrics to evaluate the off-site compensation (or offset) as it does to quantify residual impacts on the development site, it ensures that any offset provided delivers both proportionate compensation and a measurable net gain for biodiversity.
- 2.1.3 Biodiversity accounting metrics and biodiversity offsetting have become widely used across England since their introduction in 2012. According to Environment Bank's own estimations, more than 80 Local Authorities apply the metrics and offsetting to development schemes of varying sizes either routinely through locally mandated biodiversity net gain policies, or on a case-by-case basis in advance of the forthcoming national policy requirement for net gain in all development. The metrics, developed by Defra, have become industry standard and provide a consistent, quantifiable method to assess biodiversity impacts from development, and to determine the extent of compensation required. In contrast to traditional forms of biodiversity compensation, delivered through commuted sums to the Local Authority, biodiversity offsetting provides a robust framework for compensation delivery to ensure that measurable net gain is achieved. In addition to providing a mechanism for quantifiable compensation and net gain, biodiversity offsets provide reliable biodiversity outcomes as they are long-term, monitored and enforceable with adaptable management plans for optimised success.
- 2.1.4 Biodiversity net gain, metrics and offsetting have been adopted as standard operating practice by many local planning authorities, by developers including Barratt Homes and Berkley Group, and infrastructure and utilities companies

including Network Rail. Biodiversity offsets have been used on a wide range of scale and type of development, from supermarkets, to large scale housing developments to new towns/settlements. It is also being used on major infrastructure development including rail development and airport expansion. Case examples of biodiversity offsetting schemes delivered by Environment Bank are included in Appendix A.

## **2.2 National Policy and Legislation**

2.2.1 This section details the legislative and planning policy context for biodiversity offsetting. The reader is referred to the original documents for accurate interpretation.

### **Natural Environment and Rural Communities Act 2006**

2.2.2 Section 40 of the Natural Environment and Rural Communities Act 2006 places a statutory duty on all public bodies in England and Wales to have regard to the purpose of conserving biodiversity, when exercising their normal functions.

### **National Policy Statements - Energy**

2.2.3 National Policy Statements (NPSs) for Energy set out the Government's policy on the delivery of nationally significant infrastructure projects (NSIPs). They form the primary basis on which decisions on energy NSIPs are made. National Policy Statements for Energy comprise an Overarching NPS (EN-1) and, in respect of the Proposed Development, the NPS for Renewable Energy Infrastructure (EN-3) and the National Policy Statement for Electricity Networks Infrastructure (EN-5). In respect of biodiversity, EN-1 contains the relevant policies for this report:

#### Overarching National Policy Statement for Energy (EN-1)

2.2.4 Section 5.3 of National Policy Statement EN-1 sets out policy principles with regards to biodiversity and geological conservation. The policy states that the Secretary of State decision making should take into account the Government's Biodiversity Strategy, set out in 'Working with the grain of nature' to ensure:

- A halting, and if possible, a reversal, of declines in priority habitats and species as part of a healthy functioning ecosystem; and,
- The general acceptance of biodiversity's essential role in enhancing the quality of life, with its conservation becoming a natural consideration in all relevant public, private and non-governmental decisions and policies.

2.2.5 Developments should aim to avoid significant harm to biodiversity through mitigation and consideration of reasonable alternatives and where harm cannot be avoided, compensation should be sought.

2.2.6 The applicant should ensure that appropriate mitigation measures will be put in place. This should include:

- Seeking to ensure activities are confined to the minimum areas required for the work;
- Restoring habitats after construction works have finished, where practicable; and,
- Seeking opportunities to create and enhance new habitats of value within the site landscaping.

### **National Planning Policy Framework (NPPF), February 2019**

2.2.7 Whilst the NPPF does not contain specific policies for nationally significant infrastructure projects, the NPPF may be considered an important and relevant document in the determination of the Proposed Development. The NPPF sets out a broad framework of policies for the planning system in England and how they should be applied. Underpinning the framework is the principal aim of sustainable development which is to be pursued through the fulfilment of interdependent economic, social and environmental objectives.

2.2.8 Chapter 15 of the NPPF details core policy principles with respect to conserving and enhancing the natural environment. Securing 'net gains' for biodiversity, in accordance with the Government's 'A Green Future; Our 25 Year Plan to Improve the Environment' paper is a key theme running through the Chapter.

### **Planning Practice Guidance**

2.2.9 'Planning Practice Guidance for the Natural Environment' (Planning portal, 2014) accompanies the NPPF and provides further details and explanation about the implementation of the policies. The Guidance outlines that under Section 40 of the Natural Environment and Rural Communities Act 2006, local planning authorities have a duty to embed consideration of biodiversity as an integral part of policy and decision-making and should be seeking to make a significant contribution towards the commitments of the Government's Biodiversity 2020 Strategy. The practice also introduces the process of biodiversity offsetting in the planning system as a means of providing measurable conservation outcomes to compensate for residual adverse biodiversity impacts resulting from development.

## **2.3 Biodiversity Net Gain**

2.3.1 The 'Biodiversity Net Gain - good practices principles' (CIEEM *et al.*, 2016) sets out a series of principles that should be applied to development proposals in order to achieve net gain. The following principles are of most relevance to the preliminary site search:

Principle 5: Make a measurable net gain contribution

Achieve a measurable, overall gain for biodiversity and the services ecosystems provide whilst directly contributing to nature conservation priorities.

Principle 6: Achieve the best outcomes for biodiversity

Achieve the best outcomes for biodiversity by using robust and credible evidence, and local knowledge to make clearly justified choices when:

- Delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses.
- Achieving net gain locally to the development whilst also contributing towards nature conservation priorities at local, regional and national levels.
- Enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity.

Principle 7: Be additional

Achieve nature conservation outcomes that demonstrably exceed existing obligations (i.e. do not deliver something that would occur anyway).

Principle 9: Optimise sustainability

Prioritise net gain, and where possible, optimise the wider environmental benefits for a sustainable society and economy.

## 2.4 Biodiversity Offsetting Standards

2.4.1 Good practice standards for biodiversity offsetting are set out by the Business and Biodiversity Offsets Programme (BBOP, 2012). These standards inform the approach for selection and development of suitable offset sites and projects. Of these standards, the following provide the most relevant UK framework for the preliminary offset site search:

- The proposed offset site should be identified as suitable for the creation and/or enhancement of a target habitat within the vicinity of where the impact occurs;
- The site must be available and managed for a minimum specified term (25 years in this instance).
- The landowner must agree to an enforceable delivery mechanism to secure the long-term management.

- The site must be available for monitoring to ensure appropriate management is being undertaken and to report biodiversity progress back to the local planning authority.

2.4.2 Further standards, with regards to offset site surveys and ensuring that appropriate target habitats and units can be achieved, will form part of the detailed site search that will proceed the preliminary site search.

## 3 Methods

3.1.1 The following section describes the methods used to undertake the preliminary site search.

### 3.1 Desk Study

3.1.1 An ecological desk study was carried out to determine the ecological context for the preliminary site search area. This included reviewing existing nature conservation projects, green infrastructure proposals and local priorities for LBB and surrounding authorities. This search was supplemented by a search of Environment Bank's site registry and a review of aerial maps to identify other parcels of land within nature conservation interest or connectivity to existing areas of nature conservation importance. The purpose of the exercise was to both identify strategic landowners, sites and project providers within the area of search and to ensure that any offset schemes positively contribute towards identified nature conservation objectives or project initiatives for the area.

#### ExA Submissions

3.1.2 Submissions received at Deadlines 4 and 5 of the Examination which specifically referred to the site selection process were also reviewed during the desk study. Site recommendations and local aspirations for achieving net gain were considered and used to provide further context for the landowner search detailed below. The submissions reviewed included those from LBB, Thames Water Utilities Ltd, the Friends of Crossness Nature Reserve and Ralph Todd. A summary of each response is provided in Section 4.1.

### 3.2 Landowner Search

3.2.1 The landowner search involved contacting key landowners within LBB and surrounding boroughs to identify if:

- The landowner is, in principle, willing to become an offset provider and is in a position to enter into a management agreement for a period of 25 years; and,
- The landowner has sites or projects that can facilitate a net gain for biodiversity above and beyond what is currently on-site or what is committed to through an existing management agreement or obligation (e.g. an extant Section 106 agreement).

3.2.2 The Environment Bank also met with landowners to discuss the offsetting process, landowner commitments, funding and project ideas; ensuring that landowners are fully informed about the process of becoming an offset provider from the outset.

### **3.3 Site proposals**

3.3.1 Site proposals were discussed with interested landowners to determine suitable sites and projects that could be eligible for biodiversity offsetting. Aerial maps, existing management documents and landowner input was used to determine the following information:

- Location of site (including site boundaries, where applicable);
- Site description (including size of eligible land and existing habitat types);
- Current land use and existing management;
- Any existing management commitments or obligations (e.g. Section 106 agreement); and
- Opportunities for habitat enhancement/creation.

3.3.2 Sites were then screened to determine, in order of priority, if the sites were in the LBB area, if they could deliver like-for-like habitat replacement for the offset requirements set out in Section 1.3, if they supported ecological connectivity to the LBB or if they were within 10 km of the site and contributed towards the nature conservation objectives of the London BAP and/or the target habitats for the offset search.

3.3.3 All sites and projects were considered in respect of their additionality (i.e. ability to secure net gain above and beyond what is currently on-site) and the ability to maintain these features over the course of a 25-year management agreement. Sites that were able to meet the criteria for achieving net gain and are available for a 25-year period are brought forward in this report.

### **3.4 Report limitations**

3.4.1 This report details the findings of the preliminary offset site search. The purpose was to assess initial availability of offset projects. This report presents the findings of the preliminary search to date as at Deadline 7. However, the search process is ongoing and the Applicant, with the Environment Bank, will be continuing its review to ensure that when the Applicant submits its proposals to LBB for approval, under Requirement 5 of the draft Development Consent Order, it has a thorough assessment of sites and reasoning as to why the preferred site or sites has been chosen.

3.4.2 The preliminary search is the initial stage of the offset search process and therefore only includes broad information about each site at this stage. This will assist in the site shortlisting process with LBB to identify those that have the best opportunities for offsetting and should therefore be developed further as part of a comprehensive biodiversity offsetting package for the Proposed Development. Section 5.2 detail the next steps with regard to preferred sites moving forward from the initial site search.

## 4 Results

### 4.1 Desk Study

4.1.1 The following documentation was reviewed during the desk study to provide the nature conservation context and priorities for LBB and to identify any strategic landowners (i.e. those with existing significant landholdings within LBB or those engaged in or associated with existing nature conservation projects in LBB) that should be contacted as part of the landowner search:

- London Biodiversity Action Plan;
- All London Green Grid – Area 5 River Cray and Southern Marshes Framework;
- Bexley Biodiversity Action Plan 2010 – 2015;
- Local Development Framework: Bexley Open Space Strategy 2008;
- Bexley’s Sustainability Strategy;
- London Borough of Bexley – Sites of Importance for Nature Conservation;
- Managing the Marshes 2016; and,
- Darent Action Plan.

4.1.2 Additional nature conservation context was also provided by discussions with local landowners and project providers during the landowner search (see Section 4.2).

#### Submissions to the Examination

4.1.3 Interested party submissions to the Examination, which related to the site selection process, were received at Deadlines 3, 4 and 5 and are summarised below in Table 4.1. Recommendations provided in these submissions included offset site locations or nature conservation aspirations for the area in close vicinity to the Proposed Development. These submissions were considered in the site selection process and informed the approach to the landowner search (detailed in Section 4.2).

Table 4.1: Summary of comments and recommendations relating to the preliminary site search received during Examination

Respondent	Recommendations	Approach for preliminary sites search
London Borough of Bexley Council	LBB acknowledged that the Applicant met with the Council on 17/07/19. There were initial discussions regarding the	Subsequent to the meeting with LBB on 17/07/19, LBB has agreed on submitting a number of potential sites that would be

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REP5-037	<p>biodiversity offsetting process and further meetings were considered necessary.</p>	<p>suitable for biodiversity offsetting. These sites are included in Section 4.3. Environment Bank has reviewed the proposed sites to determine their suitability and potential delivering a biodiversity net gain.</p>
	<p>Consideration should be given to the sites identified by the Friends of Crossness Nature Reserve in their deadline response (Crossness Reserve, Thamesmead Golf Centre and the Crayford Marshes).</p>	<p>Crossness Nature Reserve was initially considered but due to the existing Section 106 agreement obligations on the site, the site was not pursued further at this stage. Should this site be further explored of offsetting potential consideration will need to be given to additionality.</p> <p>Landowner Peabody has been contacted regarding Thamesmead Golf Centre.</p> <p>LBB, Dartford Council and Stoneham Estate contacted regarding Crayford Marsh (See Section 4.3)</p>
<p><b>Thames Water Utilities Ltd.</b> REP4-039</p>	<p>Thames Water offered the following suggested sites with regards to the delivery of off-site compensation for the scheme:</p> <p>Crossness Nature Reserve; Thamesmead Golf Centre; and</p> <p>Other Peabody land (including Norman Road Field and Veridian Park)</p>	<p>Crossness Nature Reserve was considered as a potential offsetting site. However, this site was not pursued at this stage due to the existing S106 agreement obligations at the site and the ability to achieve additionality.</p> <p>Thames Water have been contacted to discuss other properties in the area that are under their ownership.</p> <p>Environment Bank met with Peabody on 02/08/19 to discuss the availability of their sites in LBB (see Section 4.2 and 4.3). The availability of Thamesmead Golf Centre, Norman Road Field and Veridian Park were all raised at the meeting.</p>
<p><b>Friend of Crossness Nature Reserve</b> REP4-033</p>	<p>The submission encourages the Applicant to involve LBB Council in discussion about offsetting opportunities in the borough.</p>	<p>Environment Bank met LBB to discuss offsetting opportunities and specifically the availability of sites on Council owned land (See Section 4.2).</p> <p>LBB Council will be involved in the site selection process to determine which of the initial sites identified will be taken forward in the final offset strategy.</p>

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	<p>The submission encourages the Applicant to talk to Peabody Estates about the Thamesmead Golf Centre.</p>	<p>Peabody were contacted 02/08/19 to discuss availability and suitability of the Thamesmead Golf Centre. (See Section 4.2 and 4.3)</p>
	<p>The submission encourages the Applicant to talk to Stoneham Estates about improving Crayford Marshes.</p>	<p>Trustees of the Russell Stoneham Estate were contacted (see Section 4.3 below).</p>
	<p>An independent review should be carried out by LBB Council to assess biodiversity net gain in the borough before compensating outside of the borough.</p>	<p>Priority has been given to identifying landowners within LBB first. LBB, Peabody, Thames Water, Stoneham Estate and London Wildlife Trust were all contacted to discuss their landholdings within LBB</p> <p>Requirement 5 of the draft DCO (REP2 – 003) states that the final Biodiversity and Landscape Mitigation Strategy is subject to approval by LBB Council, therefore the council will have opportunity to review the opportunities for net gain prior to approval.</p>
<p>Ralph Todd REP5-036</p>	<p>Document entitled - A Vision for People, Wildlife, the Environment and Communities in and around the Thamesmead Golf Centre.</p> <p>The representation recommends the acquisition of the Thamesmead Golf Centre (currently owned by Peabody) and the development of a partnership proposal to develop the site as a nature reserve and community open space.</p> <p>Proposal to include creation of priority open mosaic habitat in replacement for that lost from the data centre site and the establishment of an environmental centre and solar farm.</p>	<p>Environment Bank met with Peabody on 02/08/19 to discuss availability and suitability of the Thamesmead Golf Centre (See Section 4.2)</p> <p>The broad proposals put forward in the submission have been considered in discussion with Peabody about the Thamesmead Golf Centre.</p>
	<p>Concerns at the loss of nature conservation assets in the north of the borough.</p>	<p>The site/landowner search included landowners in proximity to REP Site. The final location of offset sites will be subject to approval by LBB in accordance with Requirement 5 of the draft DCO.</p>

## 4.2 Landowner Search

4.2.1 The landowner search was carried out in July and August 2019. The search area prioritised landowners within LBB before expanding out to adjacent local authorities to identify projects outside of LBB but which have connectivity to ecological networks within LBB. Part of the landowner search also involved contacting key project delivery bodies in LBB to identify private landowners, who work in partnership with these delivery bodies, who may also wish to participate in a biodiversity offsetting scheme. The landowners and project delivery organisations contacted to date are summarised in Table 4.2.

Table 4.2: Landowners and project delivery organisations contacted during the preliminary site search

Authority	Organisation	Type	Correspondence
Bexley	LBB	Landowner / Project delivery organisation	<p>Meeting with LBB on 17/07/19 to discuss principle of LBB becoming an offset provider and to determine the availability of suitable sites in their ownership.</p> <p>LBB has confirmed an interest in becoming a provider in principle and have provided four project proposals.</p> <p>Additionally, LBB has confirmed that they do manage other land with good potential as offset receptors, however these areas are outside of LBB ownership and as such LBB has chosen to exclude them from consideration at this time.</p>
Bexley	Peabody	Landowner	<p>Meeting with Peabody on 02/08/19 to discuss principle of becoming an offset provider and to identify the availability of sites in their ownership within LBB, including the former Thamesmead Golf Centre, Norman Road Field and the Veridian site. Peabody have subsequently confirmed their interest in principle of becoming an offset provider, and have proposed four possible sites for further exploration as part of the preliminary offset search (See Section 4.3). Peabody are not in a position to confirm the use of these sites for biodiversity offsetting until further work and detail is carried out.</p>
Bexley	Thames Water	Landowner	<p>Phone meeting with Thames Water on 14/08/19 to discuss the principle of Thames Water becoming an offset</p>

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			provider and determine the availability of suitable offset sites within their wider landholdings in Bexley. Thames Water have agreed to the principle of becoming an offset provider and have provided one site for consideration.
Bexley	London Wildlife Trust (LWT)	Land manager / Project delivery organisation	Meeting with LWT on 02/08/19 to discuss the principle of LWT as an offset provider and to discuss other landowners and nature conservation projects in LBB. LWT did not have any project sites that they wished to put forward for the preliminary search.
Bexley	Trustees of Russell Stoneham Estate	Landowner	Contacted regarding the availability of Crayford marshes for offsetting. No response to date.
Bexley	Thames21	Project delivery organisation	Phone conversation with Thames21 on 13/08/19 about existing and proposed projects and potential landowners in LBB. No new opportunities in addition to those already being explored by Environment Bank were forthcoming.
Bexley	Southeast Rivers Trust (SRT)	Project delivery organisation	Phone conversation with SRT 16/08/19 about existing and proposed projects associated with the River Cray. SRT recommended a site within Bromley Borough and under the ownership of Bromley Council. This site was also brought forward during our discussion with Bromley Council and has been included in section 4.3.
Dartford	Dartford Borough Council (DBC)	Landowner	Meeting on 21/08/19 to discuss the principle of DBC becoming an offset provider and to determine the availability of suitable offset sites in their ownership. DBC confirmed on 22/08/19 that they are unable to put forward any sites at this time.
Bromley	Bromley Borough Council (BBC)	Landowner	Meeting on 19/08/19 to discuss the principle of BBC becoming an offset provider and to determine the availability of suitable offset sites in their ownership. BBC have expressed an interest in becoming an offset provider in principle and have provided three project proposals for consideration (see

			Section 4.3)
Greenwich	Royal London Borough of Greenwich Council	Landowner	Contact made with Greenwich on 13/08/19. A response from Greenwich is outstanding at the time of drafting this response.
Barking and Dagenham	London Borough of Barking and Dagenham Council (LBBD)	Landowner	Meeting on 19/08/19 to discuss principle of LBBD becoming an offset provider. LBBD have expressed an interest in becoming an offset provider and have provided two project proposals for consideration (see Section 4.3).

### 4.3 Site Search

4.3.1 The following sites are those that have been identified during the preliminary site search to provide potential offsetting opportunities. A summary of the sites is included within Table 4.3 below and the locations of these sites are illustrated in Section 7 (Figure 7.1). Additional sites may come forward as a result of ongoing discussions with the strategic landowners identified in Section 4.2. The final project type and size will be determined at a later date following site survey and further discussions with land managers (see section 5.2). Until that time it cannot be confirmed whether any one site can provide 100% of the required compensation and it is anticipated that several sites may be utilised to form an optimum compensation package based on habitat enhancement opportunities and site location. However, from this preliminary site search, it is clear that there are a number of sites that have the clear potential to provide the required compensation for the Proposed Development.

#### Site 1 (Crayford Rough)

Size: 8.47 ha

Location: London Borough of Bexley

Proposed by: LBB

Description:

The site comprises a former rail yard situated alongside the River Cray. The site has a variety of habitats including areas of semi-improved neutral grassland, wet grassland, scrub and secondary woodland which support a diverse range of notable plant and invertebrate species. The site is designated as a Site of Metropolitan Importance for Nature Conservation (SMINC) and has free public access to the site. LBB currently own the southern half of the site and are seeking ownership of the northern half of the site from the current landowner.

Opportunities:

The site has been subject to scrub encroachment in recent years due to a lack of management which may impact the notable plant and invertebrate species. An opportunity exists to halt and reverse the succession of the scrub encroachment and create a wider range of habitats on-site. Given the site's industrial origins, the site may offer some potential to support the creation/restoration of open mosaic habitat on previously developed land (OMH) which is a Habitat of Principal Importance and priority habitat in the London Biodiversity Action Plan.

Rationale for inclusion:

The site lies within LBB, approximately 6.3 km to the southeast of the REP site and 1.8 km south of the proposed Electrical Connection Route. The site supports the restoration of a SMINC and potential for the creation and/or enhancement of OMH which is both a national and local priority habitat and a target habitat for the offset search.

**Site 2 (Bexley Park Woods)**

Size: 12.9 ha

Location: London Borough of Bexley

Proposed by: LBB

Description:

The site is an ancient hornbeam coppice woodland which is crossed by the River Shuttle. The woodland has a very diverse ground flora and includes areas of running water, semi-improved grassland and scrub that support a notable assemblage of breeding birds, rare plants and butterflies and is notified as a Site of Borough (Grade I) importance for Nature Conservation (SBINC Grade I). The site is heavily used by the public and the woodland ground flora suffers from erosion and trampling.

Opportunities:

The woodland coppicing activities have lapsed and the woodland ground flora, which was sprayed in the 1960's is struggling to regenerate under the shaded canopy. The even-aged canopy is also limiting canopy structure and long-term resilience. Opportunities exist to re-instate coppicing to open up the canopy and support regeneration of the ground flora, and to provide young growth to replace failing trees. Measures to control the effects of dog walking on existing areas of ground flora could also be considered.

Rationale for inclusion:

The site is located in LBB, approximately 6.9 km south of the REP site and 4 km southwest of the Electrical Connection Route. The site supports the

enhancement of a SBINC (Grade I) and includes the restoration of a woodland habitat which is a Habitat of Principal Importance and a priority habitat in the London and Bexley Local Biodiversity Action Plan. Broad-leaved woodland habitat is also a target habitat for the offset site search.

### **Site 3 (Franks Park)**

Size: 17.8 ha

Location: London Borough of Bexley

Proposed by: LBB

Description:

The site comprises a mature woodland which may have once formed part of the nearby Lesnes Woodland. The site is a SBINC (Grade 1) and includes areas of acid grassland and regionally important plants as well as being one of the best recorded sites in the borough for bats. The site is publicly accessible and forms one of the few significant council-owned public open spaces in the northeast of the borough.

Opportunities:

The site is succumbing to the spread of invasive native and non-native species which are starting to dominate the tree and shrub layers. Opportunities exist to arrest the spread of invasive species, in particular brambles, and reinstate coppicing in neglected sweet chestnut coppice.

Rationale for inclusion:

The site is situated within LBB, approximately 1.8 km south of the REP site and 480 m south west of the proposed Electrical Connection Route. The proposal includes the restoration of a SBINC (grade I) site and the enhancement of a Habitat of Principal Importance and a priority habitat in the London and Bexley Biodiversity Action Plan. Broad-leaved woodland habitat is also a target habitat for the offset search.

### **Site 4 (Slade Green Recreation Ground)**

Size: 6.45 ha

Location: London Borough of Bexley

Proposed by: LBB

Description:

The site comprises two fields, one comprising amenity managed grassland and the second comprising rough, hummocky grassland with acid grassland species. The site is designated as a SBINC (grade II) and supports a very

large population of common lizard. The site is also situated adjacent to the Belvedere Railway strategic green wildlife corridor.

Opportunities:

The site provides opportunities to expand and enhance existing areas of rough grassland for the existing populations of common lizard and prevent any encroachment of boundary scrub habitat. Other opportunities for habitat creation on existing areas of amenity grassland could also be considered and Bexley Council have suggested that there is potential for OMH creation at the site.

Rationale for inclusion:

The site is within LBB and lies approximately 4.5 km southeast of the REP Site and 440 m east of the proposed Electrical Connection Route. The site includes the enhancement of a SBINC (grade II) and opportunities for the enhancement of habitats that support common lizard which is a Species of Principal Importance and a priority species in the London Biodiversity Action Plan.

**Sites 5 – 8 (Peabody Estates)**

Sites 5-8 were identified during initial discussions with Peabody Estates when discussing suitable candidates for biodiversity offsetting projects. The Applicant and Environment Bank will explore opportunities for additional enhancements at these sites further with Peabody Estates to identify projects that accord with their emerging Green Infrastructure Strategy and Peabody's aspirations for the site, once more detailed site information is available. Therefore, no specific project proposals have been identified at this stage and Peabody will only enter into agreements or commitments when and if further proposals are developed that are acceptable. The details below for sites 5-8 provide a context for their inclusion should project suitability be confirmed.

**Site 5 (Thamesmead Golf Centre)**

Size: 14.3 ha

Location: London Borough of Bexley

Proposed by: Peabody Estates

Description:

The site is a disused former golf course comprising semi-improved acid to neutral grassland with areas of planted woodland. The site is notified as a SBINC (grade I) and supports a number of dragonfly species, notable plants and a good diversity of birds.

Rationale for inclusion:

The site is located within LBB and lies approximately 1.3 km west of the REP site. Projects at the site will include the restoration and/or enhancement of a SBINC (grade 1). The site forms part of a wider cluster of connected ecological sites in the Thamesmead area including Crossness Nature Reserve and the Ridgeway and is part of the Ridgeway Link strategic green wildlife corridor.

**Site 6 (Norman Road Field)**

Size: 0.7 ha (approx.)

Location: London Borough of Bexley

Proposed by: Peabody Estates

Description:

The site is situated to the southeast of Crossness Nature Reserve but forms part of the wider Erith Marshes SMINC. However, there is currently limited information available about the baseline conditions of the site.

Rationale for inclusion:

The site is located within LBB and is situated 600 m south of the REP site and adjacent to the proposed Electrical Connection Route. The site offers potential enhancement opportunities for a part of a SMINC and also forms part of the Thames Marshes strategic green wildlife corridor.

**Site 7 (Land to East of Veridian Park)**

Size: 4.1 ha (approx.)

Location: London Borough of Bexley

Proposed by: Peabody Estates

Description:

The site comprises a linear area of ditches situated to the east of Veridian Park. The site forms part of the wider Erith Marshes SMINC, however there is currently limited available information about the baseline conditions at the site.

Rationale for inclusion:

The site is situated within LBB and lies approximately 1 km south of the REP site and 570 m southwest of the proposed Electrical Connection Route. Projects at the site could provide restoration and/or enhancement of a SMINC. The site also forms part of the Thames Marshes strategic green wildlife corridor.

### Site 8 (Crossways Lake Nature Reserve)

Size: 3.0 ha (approx.)

Location: London Borough of Bexley

Proposed by: Peabody Estates

Description:

The site comprises small nature reserve comprised of a reed-fringed lake and wooded island located at the end of the Thamesmead Canal system and also includes part of the Thameside walk which consists of linear areas of semi-improved grassland and scrub. The site is notified as a SBINC (grade I) and supports a good range of wetland and migrating birds.

Rationale for inclusion:

The site lies within LBB and approximately 1.8 km to the northwest of the REP site. The site support potential opportunities to restore or enhance a SBINC (grade I) site and existing nature reserve. The site forms part of the River Thames and the Thamesmead Link strategic green wildlife corridors.

### Site 9 (The Ridgeway)

Size: 10.5 ha (5.31 ha in Bexley)

Location: London Borough of Bexley/Greenwich

Proposed by: Thames Water

Description:

The ridgeway is a linear cycle route extending from Crossness Pumping Station in Bexley to Plumstead Station in Greenwich. A footpath runs along the length of the ridgeway which has recently been upgraded to a surfaced footpath. The site is a Site of Local Importance for Nature Conservation (SLINC) and forms part of the Thames Marshes strategic green wildlife corridor through Thamesmead for people and wildlife.

Opportunities:

There are a number of opportunities on the ridgeway, although priority is for the removal of dense scrub habitat to restore areas of grassland. The post-industrial nature of the site lends itself to the potential creation of OMH which is a Habitat of Principal Importance in England and a London Biodiversity Action Plan habitat. However, the feasibility of this cannot be determined until detailed site surveys have been carried out.

Rationale for inclusion:

The site lies partially within LBB and approximately 1.3 km to the west of the REP site. It has ecological connectivity to habitats within the site via Crossness Nature Reserve, Thamesmead Golf Course and Erith marshes. OMH habitat is a target habitat for the offset site search and therefore this site has the potential to make significant contribution towards the fulfilment of like-for-like habitat replacement, whilst also contributing towards wider nature conservation targets in Bexley and London.

**Site 10 (Former Waste4Fuel Site)**

Size: 0.6 ha

Location: London Borough of Bromley

Proposed by: Bromley Council

Description:

The site forms a former waste site that was misused and has since been remediated by Bromley Council who removed 27,000 tonnes of waste. The site currently comprises an empty concrete shell that is becoming colonised by early pioneering habitats. The site is situated adjacent to the Bexley boundary and within the wider River Cray corridor which runs through Bexley.

Opportunities:

The site has potential to be manipulated to facilitate the development of OMH, including a range of features such as scrub grassland and lentic wetland features. This could be achieved through capital works such as soils and concrete scrapes, butterfly bank creation, wetland scrapes and pond creation and management to support establishment of a habitat mosaic.

Rationale for inclusion:

The site is located on the border of Bromley and Bexley and is situated approximately 10.6 km south of the REP site and 7.3 km south of the proposed Electrical Connection Route. The site supports the creation of new OMH which is a Habitat of Principal Importance and Priority Habitat in the London Biodiversity Action Plan. OMH is also a target habitat for the offset search. Creation of OMH at this location will also complement linkages with the adjacent Ruxley Gravel Pits in LBB and improve connectivity along the River Cray Valley strategic green wildlife corridor.

**Site 11 (Riverside Gardens)**

Size: 10 ha (approx.)

Location: London Borough of Bromley

Proposed by: Bromley Council

Description:

The site is an amenity managed open space situated along the River Cray between the industrial estates of Orpington bypass and residential housing. The gardens form an important area of open space along the chalk stream, which along with formal amenity features such as formalised planting and model boating lake, includes new woodland features and veteran trees.

Opportunities:

The site supports opportunities for the enhancement of the river corridor through the removal and control of non-native species including Japanese knotweed, giant hogweed and parrots feather which will have knock on benefits downstream in Bexley. There are also opportunities for habitat creation works along the river corridor including the development of bankside vegetation structure, meadow establishment, backwater creation and restoration.

Rationale for inclusion:

The site is located outside of Bexley and approximately 12.7 km south of the REP site and 9 km southwest of the proposed Electrical Connection Route. The project includes the restoration and enhancement of a river corridor which is a Habitat of Principal Importance and a priority habitat in the London and Bexley Biodiversity Action Plan. The improvement of ecological conditions, including the removal of invasive species, will positively contribute to the quality of the River Cray downstream in Bexley and habitat creation at the site will enhance connectivity along the River Cray strategic green wildlife corridor outside of Bexley.

### **Site 12 (Priory Gardens)**

Size: 7.5

Location: London Borough of Bromley

Proposed by: Bromley Council

Description:

The site is a grade two listed garden situated adjacent to Orpington High Street and Riverside Gardens. The site is the source of the River Cray where it rises up to form lakes on the surface, percolating onto less permeable clay through layers of chalk. The site supports a range of waterfowl and has the potential to be of importance to a range of amphibians and invertebrates.

Opportunities:

Given its proximity to the major roads, the site currently suffers from high levels of road surface run off and so opportunities exist to improve water quality at the site natural filtration such as the creation of marginal lakeside plating and re-distribution of silt in the lakes. Habitat enhancement opportunities are also available for areas of surrounding grassland and scrub.

Rationale for inclusion:

The site is located outside of Bexley and approximately 14 km south of the REP site and 10.3 km of the proposed Electrical Connection Route. The project includes the enhancement of the River Cray at source with potential benefits to the River Cray downstream in Bexley. The creation of marginal vegetation, which could be loosely categorised as fen, marsh and swamp, would support the creation of this priority habitat in the London Biodiversity Action Plan. Swamp habitat is also target habitat in the offset search.

**Site 13 (Eastbrookend Country Park – Project 1)**

Size: 16.9 ha

Location: London Borough of Barking and Dagenham

Proposed by: Barking and Dagenham Council

Description:

The site forms part of the wider Eastbrookend Country Park currently owned and managed by Barking and Dagenham Council. It is considered part of a green corridor which runs from Hainault to the River Thames and includes the Chase Nature Reserve, Beam Valley Country Park, Beam Parklands and Eastbrook playing Fields. The site is designated as a SMINC.

The site supports a variety of habitats including areas of semi-improved neutral grasslands, heathland, woodland and wetland (principally comprising ponds and marginal wetland vegetation). There are no existing management obligations on-site and standard maintenance is carried out in accordance with Council budgets.

Opportunities: Skylark Meadows Restoration

The population of skylark at the site has declined due to a change in habitat conditions on-site. This has been partly attributable to disturbance from dog walkers during the nesting season and also due to the reversion of existing grassland to a rank and scrubby sward in the absence of management.

The project proposes to restore the degraded grassland habitat on-site with specific emphasis for skylark. This will include the introduction of a cut and collect hay meadow management regime on rotation. Capital works will

include clearance of scrub from the grassland and the installation of gates/fences to restrict sensitive areas to the public during nesting season.

Rationale for inclusion:

The project is located outside of Bexley and approximately 5.2 km north of the REP site but on the north of the River Thames. The project will contribute towards the restoration of a SMINC. Whilst the site does not physically connect to LBB, the site forms part of a locally important migratory bird route supporting permeability for this priority species in London.

**Site 14 (Eastbrookend Country Park – Project 2)**

Size: 1.4 ha

Location: London Borough of Barking and Dagenham

Proposed by: Barking and Dagenham Council

Description: (See description for Site 9 above).

Opportunities: Broad-leaved Woodland Restoration

Approximately 75% of the existing woodland comprises mature willows which have started to degrade. There is currently limited understorey and an impoverished field layer and the once damp conditions are now drying out due to changes in local hydrological conditions.

The project proposes to remove and make safe some of the existing mature willows to create areas of standing deadwood, open up the canopy and remove health and safety risks for the public. The works will be accompanied by underplanting to improve the field layer and provide future canopy trees. The focus will be on species of drier conditions to ensure the woodland is resilient to further changes in hydrological conditions as a result of climate change.

Rationale for inclusion:

The project is located outside of Bexley and approximately 4.9 km to the north of the REP site but north of the River Thames. The project will contribute towards the restoration of a SMINC and towards the enhance of broad-leaved woodland, which is a Habitat of Principal Importance and a priority habitat in the London and Bexley Biodiversity Action Plans. Broad-leaved woodland is a target habitat for the offset search.

**Summary**

- 4.3.2 Table 4.3 summarises each site and the potential project type available. Sites selected within the next stage (see 5.2 next steps) will be subject to site survey, confirmation of project habitat targets and biodiversity accounting calculations of achievable biodiversity gains.

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Table 4.3: Summary of potential offset receptor sites availability to date within the identified area of search

Authority	Site name	Size (ha)	Project type
Bexley	Site 1 Crayford Rough	8.47	Open mosaic restoration/creation
Bexley	Site 2 Bexley Park Woods	12.9	Woodland enhancement
Bexley	Site 3 Franks Park	17.8	Woodland enhancement
Bexley	Site 4 Slade Green Recreation ground	6.45	Grassland/scrub mosaic enhancement and creation
Bexley	Site 5 Thamesmead Golf Course	14.3 (approx.)	To be determined
Bexley	Site 6 Norman Road Field	0.7 ha (approx.)	To be determined
Bexley	Site 7 Land to East of Veridian Park	4.1 ha (approx.)	To be determined
Bexley	Site 8 Crossways Lake Nature Reserve	3.0	To be determined
Bexley/ Greenwich	Site 9 The Ridgeway	10.5 (approx.)	Open mosaic/grassland restoration
Bromley	Site 10 Former Waste4Fuel site	0.6	Open mosaic habitat creation
Bromley	Site 11 Riverside Gardens	10 (approx.)	Enhancement of a chalk stream corridor and associated habitats
Bromley	Site 12 Priory Gardens	7.5	Open water and swamp enhancement
Barking and Dagenham	Site 13 Eastbrookend Country Park	16.9	Grassland enhancement for Skylarks

Barking and Dagenham	Site 14 Eastbrookend Country Park	1.4	Woodland restoration
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**Other sites considered:**

- 4.3.3 **Crossness Nature Reserve:** Being adjacent to the Proposed Development, Crossness Nature Reserve was initially considered as a potential receptor for biodiversity offset of development impacts. However, it is understood that the site has limited availability for additional conservation enhancement due to the existing S106 agreement liabilities on-site. The Applicant and Environment Bank are happy to revisit this decision with Thames Water during the site selection process, should further information be provided.
- 4.3.4 **Crayford Marshes:** This site was identified by the Friends of Crossness Nature Reserve in their submission to the Examination at Deadline 4. The suggested the owner of the marshes, the Trustees for Russell Stoneham Estate, were approached for initial discussions, but no response was received. Environment Bank are willing to review and proposed this site, in addition to those above, if it was brought forward prior to site selection.

## 5 Discussion and Next Steps

### 5.1 Summary of Offset Proposals

- 5.1.1 The preliminary site search indicates that there are currently 14 sites within the London Borough of Bexley and surrounding authorities that could provide potential offset projects for the purposes of the identified offset requirement.

#### Sites within LBB

- 5.1.2 A total of nine potential offset sites (including one site spanning LBB and Greenwich) have been identified within LBB. These sites cumulatively comprise 78.22 ha with potential for habitat enhancement works within LBB. This far exceeds the total ha required (which is currently estimated to be between 8.2– 11.3 ha) to compensate the Proposed Development. These sites include a range of habitat projects including opportunities for OMH and woodland ensuring that like-for-like projects are available in LBB to replace priority habitats lost to the Proposed Development. All projects include the restoration or enhancement of a Site of Importance for Nature Conservation, either at the metropolitan, borough or local level, and so would support the consolidation of the local ecological networks LBB. Furthermore, projects include enhancements for both priority habitats and species, thereby providing opportunities to contribute toward local nature conservation objectives both in London and LBB.

#### Sites outside LBB

- 5.1.3 There are three sites available in the London Borough of Bromley all of which are situated along the River Cray corridor upstream of LBB. The projects combined provide around 18 ha of potential habitat improvements, which include target habitats for the offset site search and enhancements along the River Cray corridor that could lead to improvements in habitats downstream in Bexley. These projects therefore contribute towards nature conservation objectives for both London and Bexley and could form part of a wider strategy for supporting net gain for biodiversity for the Proposed Development overall.
- 5.1.4 There are currently two sites available in the London Borough of Barking and Dagenham. Initial analysis suggest that the projects combined could provide up to 18.3 ha of habitat improvements. Whilst these sites are not physically connected to LBB they do support wider nature conservation objectives for London and support compensation proposals that could form part of a wider biodiversity offsetting strategy that supports net gains for biodiversity for the Proposed Development overall.

#### Summary

- 5.1.5 The offset search identified sites or projects that could cumulatively provide up to an estimated area of 114.62 ha, with opportunities for habitat enhancements. It is acknowledged that not all land in each site will be suitable

as offset and provide an uplift in biodiversity value. The area available will therefore be further refined as detailed assessment is carried out and the number of biodiversity unit uplift calculated. However, even accounting for a reduction in the area of land that can appropriately be utilised as offset, the extent of offsetting land identified during the search is likely to significantly exceed the estimated offset requirement of 8.2 – 11.3 ha, indicating that there is sufficient flexibility to achieve a robust compensation package and biodiversity net gain.

## 5.2 Next Steps

5.2.1 The preliminary site search is the first step in identifying availability of potential offset sites for the Proposed Development. Further work will be required to short-list sites and provide detailed site-based information to help determine their suitability, costs and proposals to inform decision making for the final offset site strategy. The following next steps indicate the process moving forward from the preliminary site search:

1. Environment Bank will carry out a revised Biodiversity Accounting Assessment based on the detailed design of the proposals to determine the final biodiversity offset requirements of the Proposed Development.
2. Environment Bank (EB), on behalf of the applicant, will meet with LBB to discuss the preferred sites for offsetting the biodiversity impacts of REP in accordance with the final biodiversity offsetting requirements. The suitability of each of the potential sites will be discussed along with what benefits each site offer with regards to the site selection criteria.
3. Short-listed sites, those likely to form the final offset package, will undergo further analyses to confirm suitability:
  - An ecological survey will be completed to confirm the habitat baseline and potential conservation options;
  - Further discussions will be had with the landowners and land managers on:
    - i. Work required for finalisation of offset proposal and long-term delivery processes;
    - ii. Site history and current usage;
    - iii. Viable management practices;
    - iv. Preferred conservation options; and,
    - v. Capital works, management costs and contingency.;
  - Identification of specific offset land parcels, habitat targets and outline management for each short-listed project; and

- Biodiversity accounting calculation of the available biodiversity compensation will be completed.
  - 4. A final offset package, formed by 1 or several sites, will be provisionally identified and agreed with LBB.
  - 5. EB, in partnership with landowners and land managers, will prepare long-term conservation management and monitoring plans for the proposed offset receptor sites and delivery costs will be agreed.
  - 6. Prior to commencement of development, the final offset package will be submitted for formal approval pursuant to Requirement 5 of the draft Development Consent Order.
  - 7. Following approval of the offset package funding, offset delivery will be secured from the Applicant via the signing of a Conservation Credit Purchase Agreement (CCPA) with EB. The Applicant will make complete payment for the scheme, which will be prior to commencement of the development. Scheme management and monitoring funds will be held in designated offset client account by EB.
  - 8. Concurrently, EB will enter into a Conservation Bank Agreement (CBA) with the landowner(s) of the final offset package. This agreement sets out the terms of the 25-year offset delivery. The first offset payment will be made to cover all year 1 works.
- 5.2.2 For further information on long-term offset delivery please refer to Biodiversity Offsetting Delivery Framework Report (8.02.25, REP3-031) (Environment Bank (2019).

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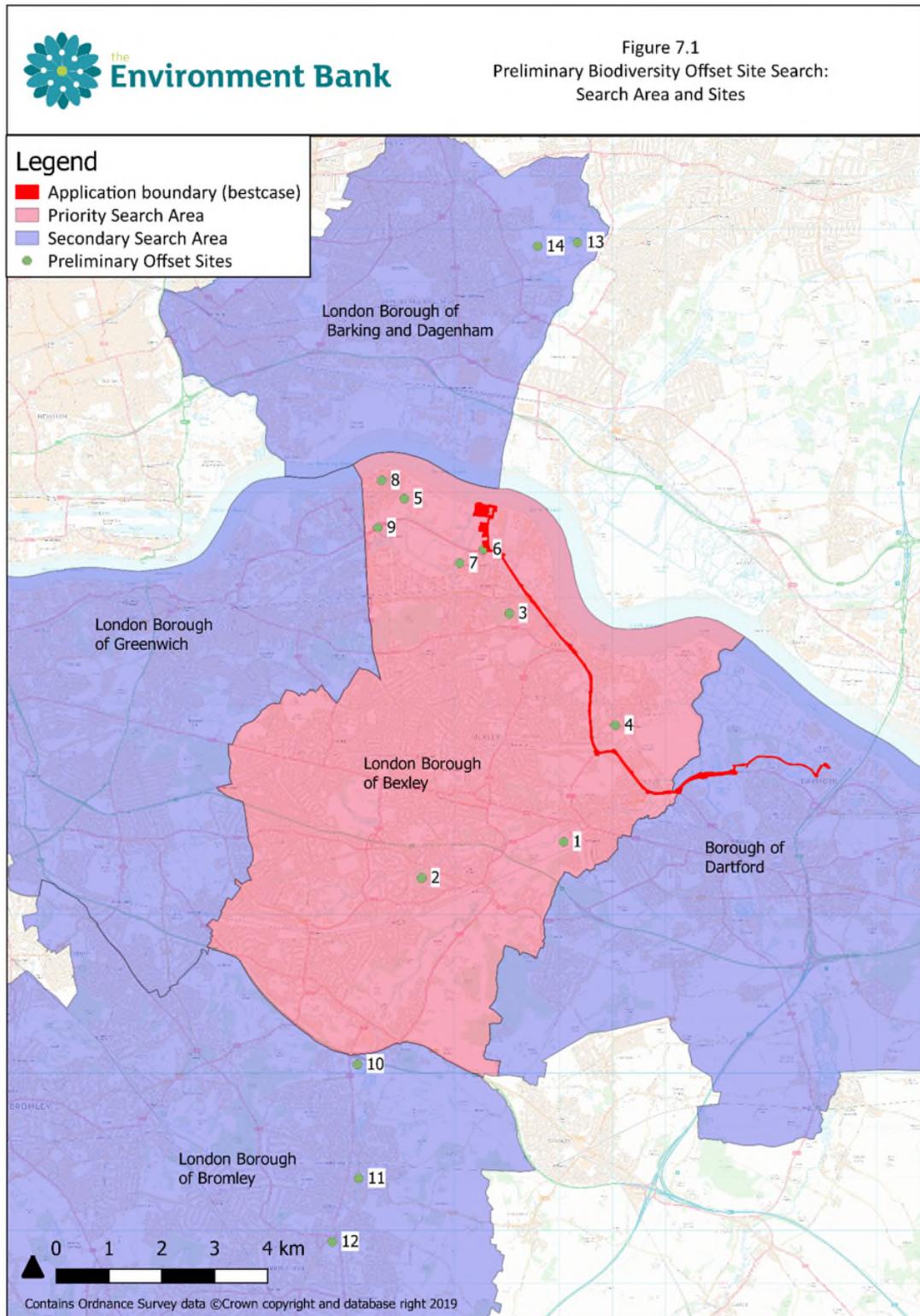
## 7 Figures

### Figure 7.1 - Site Numbers

- 1) Crayford Rough
- 2) Bexley Park Woods
- 3) Franks Park, Belvedere
- 4) Slade Green Road Recreation Ground
- 5) Thamesmead Golf Course
- 6) Norman Road Field
- 7) Land to east of Veridian Park
- 8) Crossways lake Nature Reserve
- 9) The Ridgeway
- 10) Former Waste4Fuel Site
- 11) Riverside gardens
- 12) Priory Gardens
- 13) Eastbrookend Country Park (project 1)
- 14) Eastbrookend Country Park (project 2)

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Figure 7.1: Offset Search and Site Locations



## Appendix A Case study examples

### Biodiversity Accounting and Compensation in Practice

The following case studies are examples of Environment Bank projects, illustrating how a system of biodiversity accounting and offsetting works in practice, with significant benefits to business and the environment.

#### A. Large development – Stratford, Warwickshire

Off-site compensation balanced lack of available land for enhancements on-site at a development.

- *Development: 240 dwellings + sports facilities, 13 ha, 10.6 biodiversity loss*
- *Offset: 2.4 ha, priority grassland target, 6 km of development, 14.7 biodiversity compensation*

A residential and sports facility development, upon predominantly agricultural land, had very limited space within the development to achieve any on-site compensation measures. Although the habitat value of the site was low, due to the scale of loss the planning authority requested a biodiversity impact assessment and a net biodiversity loss of 10.61 was assessed and agreed with the developer and their consultant ecologists. The requirement for compensation to be secured prior to commencement of development was included as an obligation within the s106 agreement. Environment Bank were then contacted to undertake a search for an appropriate site. Although alternative options were available, the final compensation site was provided by the original landowner of the development site, which was being sold to the development company once permission was granted. Environment Bank worked with the landowner to identify an area of land at the right scale to meet the requirement, which would deliver the best biodiversity opportunities whilst having a minimal impact to the farm business. A 2.4 ha parcel of organic land used for silage production was selected within an area identified as strategic for grassland connectivity by Warwickshire County Council. The site was within 6 km of the development, within an area identified as strategic for grassland restoration projects and within the same Local Authority. A 30-year management plan was developed with the landowner, whereby the flora of the grassland would be enhanced and managed as a tradition, species-rich hay meadow with rough margins. The developer discharged any ongoing obligations via one payment, to cover management, monitoring and brokerage for 30 years.

#### B. Housing development – Vale of White Horse, Oxfordshire

Saved time, streamlined planning process for developer, good for wildlife, eased burden on LPA.

- Development: 3.7 ha, c. 100 dwellings, -14.6 biodiversity loss
- Offset: 2.1 ha, priority grassland target, 18.3 biodiversity compensation

A local authority in Oxfordshire contacted Environment Bank to apply the metric to assess the impacts and determine the scope of biodiversity compensation scheme requirements for a housing development in the Vale of White Horse. The developer agreed to pursue use of the biodiversity offsetting as a way to deliver any residual off-site compensation and secure No Net Loss to biodiversity.

The development was on a relatively small site (<4ha) and was host to species-poor semi-improved habitat. Environment Bank applied the Government metric to the information available in the developer's Ecological reports and determined a biodiversity impact of 14.6 biodiversity units.

The local authority requested that Environment Bank secure a suitable compensation site prior to the planning application being granted permission. A nearby site, owned by a nature conservation organisation and over 2 ha in size, where poor condition calcareous grassland can be brought up to good condition over 15 years was put forward; a cost for long-term delivery was prepared accepted by the LPA and developer.

Using s106 obligations, the LPA secured the developer's commitment to fulfil the compensation requirement prior to commencement of development. Shortly after permission was granted the purchase was made, and compensation site secured, using Environment Bank's legal agreements. Although the local authority had the opportunity to also be signatory to the landowner agreement, they trusted Environment Bank's model of delivery and decided this was not required. Based on the payment plan within the agreement, Environment Bank has been providing annual management funds to the scheme, on receipt of satisfactory monitoring. The scheme is now in its 6<sup>th</sup> year and monitoring has already shown a marked increase in diversity and abundance of target flora on site, which, among other benefits, has led to the new record of the rare Liquorice Piercer moth (*Grapholita pallifrontana*). Biodiversity account and offsetting continues in use through the local authority with requirements for biodiversity No Net Loss and off-site compensation now set out in local policy.

### **C. Housing development – Warwick, Warwickshire**

Greater efficiency reduces compensation negotiations.

- Development: 2.9 ha, c. 60 dwellings, -5.1 biodiversity loss
- Offset: 1.4 ha, priority grassland target, 2.3 km from development, 7.4 biodiversity compensation

A biodiversity accounting assessment had been approved by the local authority determining a net biodiversity loss of 5.09. This was deemed as

significant by the local authority and as part of their planning permission, a requirement to offset this loss was secured under the section 106 agreement. EB worked with the developer and landowners in the area to bring forward a viable biodiversity offsetting scheme. The final identified site would create over 1 ha of wildflower meadow within 3km of the development and in an area identified as strategic for grasslands by the local authority. The offset sale went through quickly, removing need for lengthy discussions on compensation processes.

#### **D. Habitat banking in the Ribble Valley, Lancashire**

Quick credit sale due to set habitat bank costs, contributes to restoration of local community reserve.

- Development: Supermarket, -1.59 biodiversity units
- Offset: Purchase from local habitat bank.

The first sale of conservation credits from Ribble Valley Borough Council's new habitat bank site was secured early 2015. Developers pay for the credits they need once they receive planning permission, at a set price per credit, based on the total funding required for the restoration of a local site. The first sale of 1.59 credits out of a total 15.9 credits available demonstrated how the streamlined approach can prevent costly delays for developers and planning authorities – at the end of January 2015 a developer signed a purchase contract, received an invoice, paid for the credits and received a credit certificate to discharge the relevant planning condition, all within 4 working days. Further sales of credits from this bank site are currently being arranged.

#### **E – Biodiversity gain at new settlement development, Yorkshire**

Proposal for a new settlement of 6000 houses to the south of York delivering on-site biodiversity gain

- Development: 6000 dwellings and open space, -1098 biodiversity loss
- Offset: 192 ha, priority grassland target, adjacent to development, 1270 biodiversity gain

The proposed allocation site for 6000 homes within an entirely new settlement, comprised largely arable farmland and a mosaic of hardstanding and semi-natural grassland habitats at a redundant airfield site, host to significant populations of breeding and wintering birds and habitat mosaics. The industry standard biodiversity impact accounting method was applied to all the development land parcels to calculate the loss of biodiversity units, including potential indirect impacts from the development on the Lower Derwent Valley SPA, a nearby SSSI and a county value woodland. Based on a range of management prescriptions for proposed compensation land, the uplift in distinctiveness and condition was used to calculate biodiversity units after creation and management of these land parcels.

The application of the metric to the proposed development, including both direct and indirect impacts, provided as assessment of an impact of – 1098.02 biodiversity units. To compensate for that loss and range of land parcels were brought together to create an extensive area of habitat, secured under a long-term management plan. The compensation areas comprise:

- a) The conversion of the western half of the airfield for nature conservation (54.96 ha) by the removal of hardstanding and seeding with characteristic vegetation communities, using translocated material from an area to be lost from the eastern half of the airfield;
- b) The creation and management of 46.43 ha of a Habitat Enhancement Area to the north of the SSSI, comprising a wet grassland and wetland mosaic, with a detailed access management plan (no access allowed) and boundary treatments to avert entry by cats to benefit breeding and overwintering waders and wildfowl and Skylark;
- c) The creation and management of 90.66 ha of a wet grassland and tussocky grassland mosaic with a detailed access management plan (no access allowed) and boundary treatments to avert entry by cats to benefit breeding and overwintering waders and wildfowl and breeding Skylark.

Together, these compensation areas, totalling 192.05 ha, would ensure that the development of the allocation site would deliver a significant net positive gain of 172.15 credits, making the proposed development compliant with the City of York Council's policy with respect to biodiversity conservation.

#### **F. Large-scale major residential development – Rochford, Essex**

- Development: 21.7 ha, 600 dwellings + school, -13.5 biodiversity loss
- Offset: 3 ha, priority woodland and wetland target, 14.6 biodiversity compensation

The first development to commence a biodiversity offset within Essex. Environment Bank worked with developers to assess the net biodiversity impact of the development; the net loss per hectare was kept to a minimum due to the comparatively low value of habitats that was to be impacted and the proposal of some on-site compensation measures. This was approved by the LPA who requested details of biodiversity offsetting as a compensation mechanism. After a land search 2 provisional sites were identified and outline delivery costs agreed by the landowners, developers and LPA. The LPA subsequently approved the development knowing that an offset agreement was achievable. Following approval of the development the final 25-year scheme for the offset site was prepared, providing wetland restoration with new woodland planting on a publicly accessible site, and purchase of the conservation credits made prior to commencement of development.

### **G. Restoration of meadow to compensate for residential development in Rugby, Warwickshire**

- *Development: 4.1 ha, c. 110 dwellings, -19.0 biodiversity loss*
- *Offset: 4.0 ha, priority grassland target, 4 km from development, 22.7 biodiversity compensation*

The proposed housing development will impact semi-improved grassland with a net loss within the development boundary of 18.95 credits; this biodiversity impact was deemed significant and although the grassland is not priority habitat it is increasingly rare within Warwickshire and therefore a meadow compensation scheme was requested by the LPA. A biodiversity offset was identified which would restore 4 ha of publicly accessible grassland to priority meadow quality within a strategic grassland area, enhancing landscape connectivity..

### **H. Woodland compensation for a residential development, Castle Point, Essex**

Compensation has been arranged for proposed impacts to a mosaic of woodland, scrub and grassland.

- *Development: 2.7 ha, c. 70 dwellings, -30.4 biodiversity loss*
- *Offset: 6.0 ha, priority woodland target, 1.3 km from development, 42.4 biodiversity compensation*

A residential development application was permitted in Castle Point, Essex, with an unavoidable impact to woodland, scrub, grassland mosaic. An offset requirement of 30.4 credits was secured under a s106 obligation and following a site search, Environment Bank proposed a 6 ha woodland restoration scheme, which was approved by the local authority. The prepared scheme received funding in February 2017 in line with the timeline set out within the s106; the offset will be subsequently managed for a period of 25 years.

### **I. Small-scale major residential development – South Oxfordshire, Oxfordshire**

- *Development: 2.0 ha, c. 50 dwellings, -7.9 biodiversity loss*
- *Offset: 1.1 ha, priority grassland target, 7 km from development, 8.0 biodiversity compensation*

The development is proposed on an area of unmanaged and declining meadow and will cause an unavoidable impact to this grassland habitat. Although areas of conservation open space are provided, due to the baseline value of the site a net biodiversity loss is still apparent. The LPA has required offsite biodiversity compensation so that a No Net Loss strategy can be delivered, the developer requested this be identified prior to determination of the planning application to provide a more realistic cost assessment within the

viability analysis. The identified site is within 7 km of the development and will provide a little over 1 ha of grassland creation along the edge of a nationally designated woodland. The biodiversity offset scheme was prepared and credit purchase made immediately after final application approval.

### **J – New town expansion with farmland bird compensation - Cambridgeshire**

- Development: c. 220 ha, New town expansion, -209.94 biodiversity loss
- Offset: 71 ha, arable forage, grassland mosaic target, <6km from development, 428.56 biodiversity compensation

A proposed large residential development was assessed and found to impact a mosaic of habitats and assemblages of farmland birds. Environment Bank worked closely with the developer, quantifying biodiversity losses and gains across the large site and advising on onsite biodiversity enhancements. The Environment Bank then worked with neighbouring landowners to bring forward a 71-ha offset compensation package that will not only compensate for biodiversity habitat impacts but also provide replacement breeding, and foraging habitats for the farmland birds. The site will be managed for a period of 30 years. Due to the large scale of the compensation package management, delivery cost efficiencies have been able to be employed to achieve a low credit cost. The site has been purchased by the developer to best secure long-term compensation provision, with the existing landowners being retained as land managers for the site. The secured compensation site is sufficient to not only compensate for the current phase of development (with a minimum 10% net gain) but also partially compensate for the next phase of development. The next phase is in the early stages of planning and an expansion to the current offset is proposed to deliver a large-scale conservation project to compensate for any further biodiversity losses and deliver a net gain to biodiversity.

### **K – Large-scale major residential development – Meadow compensation – Rugby, Warwickshire**

- Development: c. 38 ha, 860 dwellings and open space, -12.5 biodiversity loss
- Offset: 3 ha, priority grassland target, 1 km from development, 14.1 biodiversity gain

Despite reasonable openspace provision and onsite biodiversity compensation the proposed development would result in a significant biodiversity loss. Environment Bank worked with the original landowner to assess alternative areas of land offsite which could be managed to enhance biodiversity value; an area of 3 ha of existing specie-poor grassland within 1 km of the development will be enhanced to provide a species-rich wildflower meadow and be sensitively managed with hay cutting and sheep grazing for a period of

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30 years. The developer has approved the scheme and costs and the final scheme was approved by the local authority.