DECARBONISATION

# OUTLINE LANDSCAPE, BIODIVERSITY, ACCESS AND RECREATION DELIVERY STRATEGY: 7.9

## Cory Decarbonisation Project

PINS Reference: EN010128

~~September~~October 2025

Revision ~~G~~H

Note: Some document reference numbers were updated throughout the examination process, in response to questions and representations, and with the aim of clarifying issues regarding the proposed scheme, mechanisms for delivery, monitoring and maintenance. Reference should be made to the certified documents.

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# 1. EXECUTIVE SUMMARY

1.1.1. This Outline Landscape Biodiversity, Access and Recreation Delivery Strategy (Outline LaBARDS) has been prepared by LDA Design on behalf of Cory Environmental Holdings Ltd (hereafter referred to as the Applicant). It accompanies the application for a Development Consent Order ('the DCO Application') in relation to the Cory Decarbonisation Project ('the Proposed Scheme') in Bexley, London. The DCO Application has been made under section 37 of the Planning Act 2008 (as amended) ('PA 2008') and submitted to the Secretary of State ('the SoS') for Energy Security and Net Zero (DESNZ). The resultant development consent order, if made by the SoS, would be known as the Cory Decarbonisation Order.

1.1.2. The Applicant is seeking development consent for the proposed construction, operation, maintenance and decommissioning of a carbon capture facility to capture carbon dioxide from energy from waste facilities Riverside 1 and Riverside 2 (at the time of writing, construction works for Riverside 2 are being undertaken) at the Riverside Campus, located adjacent to the River Thames at Belvedere in the London Borough of Bexley ('LBB'). The technology to be utilised is referred to as post-combustion carbon capture as the carbon dioxide ('CO2') is captured from the flue gas produced during the combustion of waste in Riverside 1 and 2. The Proposed Scheme is designed to remove at least 95% of the carbon dioxide from the flue gas from each of Riverside 1 and Riverside 2, resulting in overall negative emissions of greenhouse gases.

1.1.3. The Proposed Scheme also incorporates: a Proposed Jetty, to export the liquified CO2 offsite to permanent storage; the Mitigation and Enhancement Area, to provide improved access to open land, habitat mitigation, compensation and enhancement and contribute to biodiversity net gain; temporary construction compounds; and utilities connections and site access works.

1.1.4. This document is submitted for approval and provides a single point of reference for all elements of the Applicant's landscape, biodiversity, access and recreation proposals including provision of mitigation and Biodiversity Net Gain (BNG) in support of the Proposed Scheme. This document is intended to demonstrate that the Applicant has made appropriate undertakings to support the delivery of the Proposed Scheme and specifically the landscape, biodiversity, access and recreation proposals including BNG. The Proposals are informed by an appreciation of, and strategy to, minimise the effects of the Proposed Scheme on MOL in relation to its purposes and its performance with regard to Bexley Local Plan Policy SP8, to address relevant nature conservation policies in relation to SINC and Local Nature Reserves, and to consider impacts to green infrastructure and open space.

1.1.5. This Outline LaBARDS seeks to provide a clear context for the proposals and how they will be developed and delivered and is structured as follows:

- Structure and status of the outline LaBARDS – Section 4
- Extents of the Outline LaBARDS – Section 5
- Introduction to the Environmental, Access and Recreation Proposals – Section 6
- Planning policy background and nature conservation designations – Section 7
- The proposed scheme – Section 8
- Design Principles and Design Code – Section 9
- The proposals and strategies: environment and access and recreation – Section 10
- The proposed biodiversity net gain (BNG) strategy – Section 11
- The delivery mechanism/s for the proposals and BNG strategy – Section 12
- Outline of required works to deliver the proposals and BNG strategy – Section 13
- Monitoring, Management and Maintenance – Section 14

1.1.6. The Environmental Proposals, Access and Recreation Proposals and BNG Strategy within the Site and Order limits, will be secured via inclusion in the full LaBARDS, which must be in substantial accordance with this outline. The Access Proposals that lie offsite will be secured via a Deed of Obligation. The elements of the BNG proposals that are offsite are required to be delivered through the DCO and details of the legal agreements which underpin its delivery and on-going maintenance will be submitted alongside the full LaBARDS submitted for approval. As such, the creation and management measures set out in this document are secured through the DCO.

1.1.7. The DCO requires that in submitting the full LaBARDS(s) for approval, the Applicant must show how the Design Principles and Design Code have been taken into account in developing it.

1.1.8. The construction of the CCF and connecting pipework, will require land that currently forms part of an extant section 106 commitment that led to the establishment of the Crossness LNR. The Applicant proposes to mitigate this loss of land that currently forms part of the LNR, with the expansion of the existing Crossness LNR to encompass Norman Road Field to achieve delivery of an expanded Crossness LNR.

1.1.9. The Outline LaBARDS describes the monitoring, management and maintenance proposals for landscape and habitat works (proposed and existing) across the Site comprising the CCF Area and the expanded Crossness LNR with reference to field names and area references.

1.1.10. The full LaBARDS(s) submitted prior to the commencement of development shall present an Ecological Monitoring Strategy (EMS) that would establish biodiversity baselines (at the time of submission) and explain how biodiversity would be reassessed in the subsequent years. Implementation of the EMS over time will be informed by periodic Ecological Monitoring Reports. A management plan to cover the whole of the extended LNR would be prepared to deliver the required management and maintenance details to deliver the on-site specified mitigation, enhancements and BNG targets.

1.1.11. Details of the full management practices across the Site and on the BNG Opportunity Area (but not any alternative mechanism which will be dealt with purely by Deed of Obligation) must be set out in the full LaBARDS approved by LBB under DCO Requirement. These will be developed by the Applicant in engagement with relevant landowners.

1.1.12. Alongside delivering national, and local climate change priorities, the Proposed Development integrates proposals for the Mitigation and Enhancement Area addressing biodiversity, access and recreation as demonstrated through this Outline LaBARDS.

# 2. INTRODUCTION

## 2.1. DESCRIPTION OF THE PROPOSED SCHEME

2.1.1. LDA Design has been instructed by Cory Environmental Holdings Ltd (hereafter referred to as the Applicant) to prepare an Outline Landscape Biodiversity, Access and Recreation Delivery Strategy (Outline LaBARDS) for the Cory Decarbonisation Project to be located at Norman Road, Belvedere in the London Borough of Bexley (LBB) (National Grid Reference/NGR 549572, 180512).

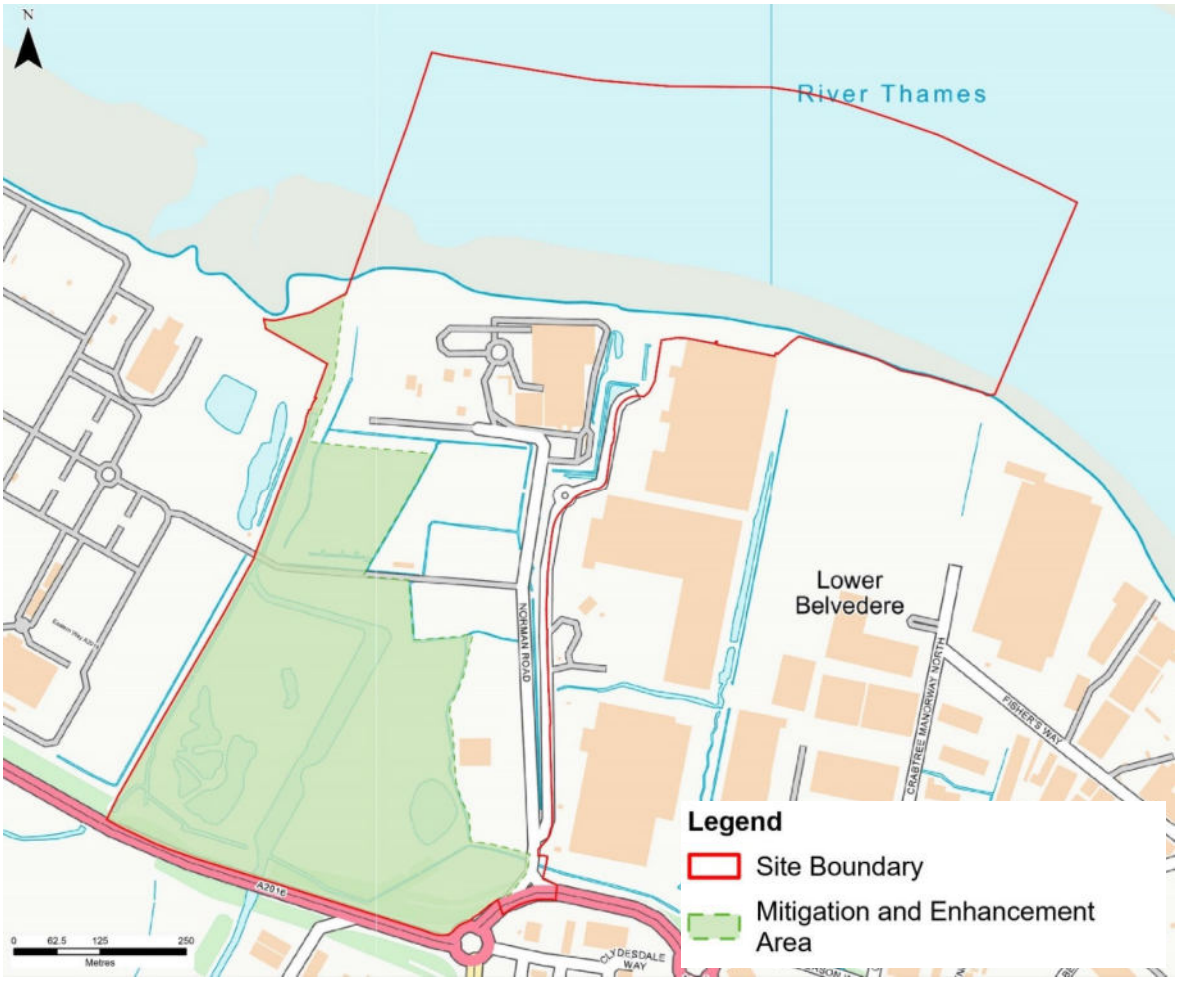


**Figure 1 - Site boundary**

2.1.2. **Figure 1** illustrates the Site boundary. The following Figures are available in the **Environmental Statement (ES) (Document Reference 6.2)**:

- Figure 1-1: Site Boundary Plan (Volume 2); and
- Figure 1-2: Satellite Imagery of the Site Boundary Plan (Volume 2).

2.1.3. The Applicant intends to construct and operate the Proposed Scheme to be linked with the River Thames. It comprises of the following key components, with further detail provided within the **Environmental Statement (ES) Chapter 2: Site and Proposed Scheme Description (Document Reference 6.1.2):**

- The Carbon Capture Facility (CCF) (including its associated Supporting Plant and Ancillary Infrastructure): the construction of infrastructure to capture a minimum of 95% of carbon dioxide (CO2) emissions from Riverside 1 and 95% of CO2 emissions from Riverside 2 once operational, which is equivalent to approximately 1.3Mt CO2 per year. The capture rate is the annual average. The Carbon Capture Facility will be one of the largest carbon capture projects in the UK.
- The Proposed Jetty: a new and dedicated export structure within the River Thames as required to export the CO2 captured as part of the Carbon Capture Facility.
- The Mitigation and Enhancement Area: land identified to provide improved access to open land, habitat mitigation, compensation and enhancement (including forming part of the drainage system and Biodiversity Net Gain delivery proposed for the Proposed Scheme) and planting. The Mitigation and Enhancement Area provides the opportunity to improve access to outdoor space and to extend the area managed as the Crossness Local Nature Reserve (LNR). This Outline LaBARDS describes how the proposals are delivered.
- Temporary Construction Compounds: areas to be used during the construction phases for activities including, but not limited to office space, warehouses, workshops, open air storage and car parking, as shown on the **Works Plans (Document Reference 2.3)**. These include the core Temporary Construction Compound, the western Temporary Construction Compound and the Proposed Jetty Temporary Construction Compound.
- Utilities Connections and Site Access Works: The undergrounding of utilities required for the Proposed Scheme in Norman Road and the creation of new, or the improvement of existing, access points to the Carbon Capture Facility from Norman Road.

2.1.4. Together, the Carbon Capture Facility (including its associated Supporting Plant and Ancillary Infrastructure), the Proposed Jetty, the Mitigation and Enhancement Area, the Temporary Construction Compounds and the Utilities Connections and Site Access Works are referred to as the 'Proposed Scheme'. The land upon which the Proposed Scheme is to be located is referred to as the 'Site' and the edge of this land referred to as the 'Site Boundary'. The Site Boundary represents the Order Limits for the Proposed Scheme as shown on the **Works Plans (Document Reference 2.3).**

# 3. PURPOSE OF THE DOCUMENT AND DELIVERY OF COMMITMENTS

3.1.1. The development of this Outline LaBARDS into the full LaBARDS for the Proposed Scheme, will be the mechanism to ensure the successful delivery, implementation and management of the Applicant's mitigation and enhancement proposals onsite (Mitigation and Enhancement Area and the CCF) and offsite. This Outline LaBARDS deals with:

1. the proposals to deliver the Applicant's onsite mitigation and enhancement measures including Environmental Proposals and Access and Recreation Proposals;
2. the proposals for delivery of the Biodiversity Net Gain (BNG) Strategy – on site and offsite;
3. the delivery mechanisms for the proposals;
4. the required works to deliver the Proposals and BNG Strategy; and
5. a framework for the detailed management including objectives.

## 3.2. DELIVERY COMMITMENT

3.2.1. A Requirement of the **Draft DCO (Document Reference 3.1)** will ensure that the onsite measures identified to mitigate effects on landscape, biodiversity, access and recreation, and to provide enhancements to the same, along with onsite BNG provision, are included in any full LaBARDS(s), to be prepared for the Proposed Scheme prior to the construction phase commencing. The full LaBARDS(s) will detail the mitigation and enhancement measures to be implemented, and their ongoing management and monitoring, and will be in substantial accordance with this Outline LaBARDS. The extent of onsite works relevant to this LaBARDS (known as the 'Mitigation and Enhancement Area' and 'CCF Area' - see section 2), is illustrated in **Figure 2**.

3.2.2. The BNG provision will make reference to a schedule of habitat types and areas required to support the delivery of a minimum 10% BNG (onsite and offsite – see below) for the Proposed Scheme and to support a flexible delivery model.

3.2.3. The onsite BNG provision will be secured via the DCO Requirement. The Access Proposals that lie offsite will be secured via a Deed of Obligation. The elements of the BNG proposals that are offsite that are required to be delivered through the DCO and details of the legal agreements which underpin its delivery and on-going maintenance will be submitted alongside the full LaBARDS submitted for approval. The option of offsite BNG delivery at the former Thamesmead Golf Course (known as the 'BNG Opportunity Area' – see section 4) is illustrated in **Figure 2**.

3.2.4. This Outline LaBARDS may be developed into multiple full LaBARDS(s) given the different measures to be delivered onsite and offsite or relating to phasing of works, for example. References to 'the full LaBARDS' can therefore also be read as 'any' LaBARDS, and any full LaBARDS(s) need only contain the measures relevant to the scope of the works that are the subject of that full LaBARDS.

3.2.5. The first LaBARDS submitted will constitute an overarching LaBARDS for the onsite measures for the Proposed Scheme as a whole (which will also include details of the specific measures for the part of the works for which the Requirement is sought to be discharged). Any subsequent LaBARDS submitted for approval will make clear how it relates to the first submitted overarching document, or explain how it is to be amended or superseded following further details becoming available as part of later phases of work.

3.2.6. As set out throughout this report, the Applicant is committed to engaging with stakeholders including throughout development of the full LaBARDS(s) that is ultimately submitted for approval. Where this outline LaBARDS indicates engagement is to occur, the Applicant commits that this engagement will include meetings, not just written/email correspondence. An engagement report will be produced to accompany any full LaBARDS submission, which will set out the engagement activities that have been undertaken in the preparation of that document and how feedback has been taken into account.

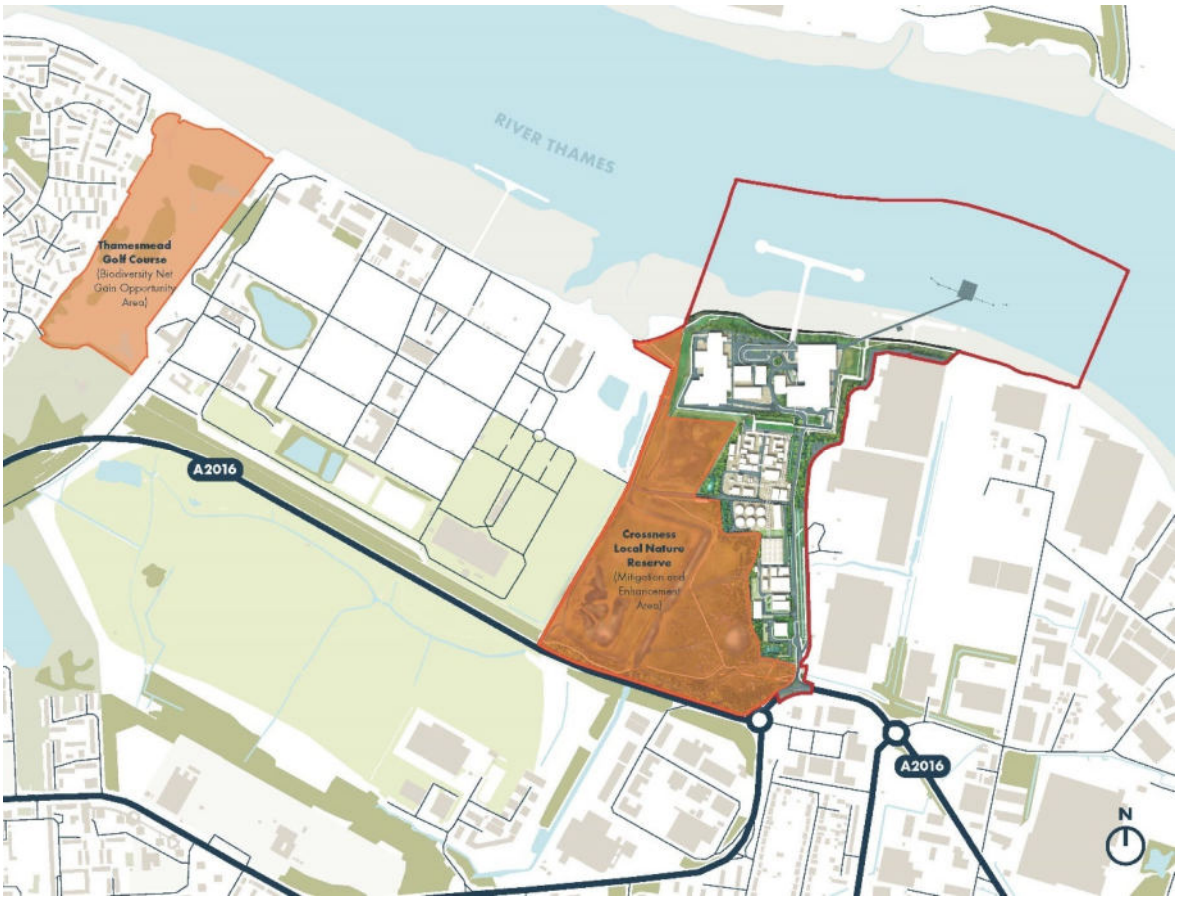


**Figure 2 - Location of onsite and offsite works**

# 4. STRUCTURE AND STATUS OF THE OUTLINE LABARDS

## 4.1. STRUCTURE

4.1.1. The Outline LaBARDS is structured as follows:

- Extents of Outline LaBARDS – Section 4
- Introduction to the Environment, Access and Recreation Proposals – Section 5
- Planning Policy background and nature conservation designations – Section 6
- The Proposed Development – Section 7
- Design Principles and Design Code – Section 8
- The Environmental Proposal, Access and Recreation Proposals – Section 9
- The Proposed Biodiversity Net Gain (BNG) Strategy – Section 10
- The Delivery Mechanism/s for the Strategy – Section 11
- Outline of Required Works to Deliver the Landscape, Biodiversity, Access and Recreation Delivery Proposals and Strategy – Section 12
- Detailed Management Plan – Section 13
- Appendix
- References

## 4.2. STATUS

4.2.1. This document is submitted to provide a single point of reference for all elements of the Applicant's landscape, biodiversity, access and recreation proposals including provision of mitigation and Biodiversity Net Gain (BNG) in support of the Proposed Scheme.

4.2.2. The Environmental Proposals, Access and Recreation Proposals and BNG Strategy within the Site and Order limits, will be secured via inclusion in the full LaBARDS and in compliance with and secured via the DCO Requirement. The Access Proposals that lie offsite will be secured via a Deed of Obligation. The elements of the BNG proposals that are offsite that are required to be delivered through the DCO and details of the legal agreements which underpin its delivery and on-going maintenance will be submitted alongside the full LaBARDS submitted for approval.

4.2.3. As outlined above, the full LaBARDS, shall be prepared for the Proposed Scheme prior to the construction phase commencing and shall be approved through the discharge of relevant DCO Requirements. The full LaBARDS will detail the mitigation and enhancement measures to be implemented, ongoing management

regimes, monitoring and review processes, and will be in substantial accordance with this Outline LaBARDS.

4.2.4. The first LaBARDS submitted will constitute an overarching LaBARDS for the onsite measures for the Proposed Scheme as a whole (which will also include details of the specific measures for the part of the works for which the Requirement is sought to be discharged). Any subsequent LaBARDS submitted for approval will make clear how it relates to the first submitted overarching document, or explain how it is to be amended or superseded following further details becoming available as part of later phases of work.

# 5. EXTENTS OF THE OUTLINE LABARDS

## 5.1. INTRODUCTION

5.1.1. This section provides a brief description of the key spatial elements of this Outline LaBARDS.

## 5.2. THE MITIGATION AND ENHANCEMENT AREA

5.2.1. The Mitigation and Enhancement Area is illustrated in **Figure 3**. It extends across Norman Road Field to the east and to the west to encompass a portion of the Crossness LNR up to FP1, a definitive PRoW that extends along the eastern boundary of the Protected Area of the Crossness LNR, which is located behind fencing. The Norman Road Field area forms the focus of the majority of the Proposed Scheme's mitigation for landscape, biodiversity and on-site BNG provision, and is currently in use as grazing land occupied by a single long-term grazier. Grazing is recognised as an essential element in the maintenance of the valued grazing marsh habitat and its future conservation, and will be maintained by the Applicant as part of its ongoing obligations to habitat management. The Crossness LNR, provides opportunities for access and recreation mitigation and wider opportunities for enhancement of LNR habitats.

5.2.2. The area is identified to allow for comprehensive master planning of a coordinated green infrastructure strategy and to support the proposed enlargement of the Crossness LNR to include Norman Road Field. This proposal is outlined in section 10.

5.2.3. Both the Norman Road Field and Crossness LNR have been subject to ecological surveys to inform an understanding of the presence of existing habitats and their current condition.

**Figure 3 - Mitigation and Enhancement Area**

## 5.3. BNG OPPORTUNITY AREA

5.3.1. The BNG Opportunity Area is a possible area for offsite BNG provision located at the former Thamesmead Golf Course on the Thamesmead Estate, illustrated in **Figure 4**. The land is owned by the Peabody Trust and comprises a disused golf course that formed part of the Thamesmead development masterplan and has been identified in Peabody's 'Living in the Landscape' framework document as an area with potential for enhancement. The golf course has been subject to an ecological survey to understand the presence of existing habitats and their current condition.


**Figure 4 - Offsite BNG Opportunity Area**

## 5.4. CROSSNESS LOCAL NATURE RESERVE

5.4.1. The Crossness LNR comprises a terrestrial nature reserve of approximately 25ha lying to the east of the existing Thames Water Sewage Treatment Works and west of Norman Road Field. The Crossness Nature Reserve was established as part of a section 106 Agreement between Thames Water and the London Borough of Bexley, in 1994 as part of the development of the (no longer operational) Crossness Sewage Sludge Incinerator.

5.4.2. Under the terms of the agreement Thames Water are to provide a Conservation Management Plan which seeks to conserve and maintain the existing value of the nature conservation land and where practicable, to enhance the existing habitats and nature conservation importance of the nature land for a period of 99 years, including through continued grazing.

5.4.3. The Crossness LNR is managed in accordance with the agreed Conservation Management Plan. The current management plan is appended at Appendix 2.

5.4.4. **Figure 5** illustrates the extents of the Crossness LNR.


**Figure 5 - Existing Crossness LNR**

## 5.5. CARBON CAPTURE FACILITY (CCF) INC NORMAN ROAD

5.5.1. The CCF Area is illustrated in **Figure 6** and comprises a secure operational area adjoining the Mitigation and Enhancement Area to the west and Norman Road to the east. Norman Road comprises an adopted road that extends to the roadside kerb to the west (including a narrow grassed verge, portions of the existing ditch/ main river feature) and a pavement to the west.

5.5.2. The CCF Area includes planting and habitat proposals to the east and western boundaries inside and outside the secure fence line. To the east, the existing ditch (water course) network is retained adjoining the Norman Road corridor along with new planted areas. To the west, the existing ditch profile is to be improved to support habitat development and soil rewetting along with new planting. To the southern end of the CCF Area, opportunities for habitat creation and planting are identified in combination with water management infrastructure and associated with the proposed LNR visitor car park.

**Figure 6 Carbon Capture Facility (CCF) Area**

# 6. INTRODUCTION TO THE ENVIRONMENTAL, ACCESS AND RECREATION PROPOSALS

6.1.1. This Outline LaBARDS seeks to provide clear objectives and general principles for establishment and longer-term management of the Environmental Proposals comprising landscape, and ecological mitigation and BNG proposals onsite, within the Mitigation and Enhancement Area and CCF Area onsite, and offsite within the BNG Opportunity Area. This document also sets out the process for delivery of the Access and Recreation Proposals including proposals for Public Rights of Way (PRoW) identified for the area within the Site and offsite areas.

6.1.2. The Environmental Proposals and Access and Recreation Proposals are briefly introduced in this section with additional detail provided in section 9 and BNG strategy in section 11.

## 6.2. ENVIRONMENTAL PROPOSALS

6.2.1. The onsite works are illustrated on **Figure 15** in section 9. Plan area and field references are used to support the description of the proposals in section 10. The Environmental Proposals and Access and Recreation Proposals and BNG Strategies are scheduled in section 13 (Outline of Required Works to deliver the Proposals and Strategy) and the field references are illustrated on **Figure 7**.

6.2.2. The onsite works relating to the CCF Area substantially overlay land identified as SIL policy (Strategic Industrial Location) but also East Paddock and Stable Paddock, which form part of Crossness LNR.

6.2.3. The onsite works relating to the Mitigation and Enhancement Area extends across the following fields (from south to north):

- Norman Road Field - habitat mitigation
- Island Field - habitat enhancement
- Lagoon Field - Proposed PRoW diversion and stable relocation (mitigation) and habitat enhancement
- West Paddock - CCF pipework connection and associated new ditch (mitigation) and habitat enhancement
- Sea Wall Field - CCF pipework connection and associated new ditch (mitigation) and habitat enhancement

Note: the Mitigation and Enhancement Area also extends across the existing Thames Water access road. The intention, where practicable, is to avoid additional land take within Crossness LNR for works or adjustments to existing vehicular access routes. Any additional land take, if it were to occur, would be a result of design to allow for emergency vehicles to

access Crossness Sewage Treatment Works. Realignment of the access road would require temporary land-take to allow its construction, as well a new permanent paved road broadly of similar width as the current one. Thus, although temporary land take would be required this would be remediated through restoration of habitats to their former condition. Permanent land take for any newly aligned road would be balanced by replacement compensatory habitat creation. Details of such compensatory habitat creation would be included in the full LaBARDS submitted for approval to LBB.

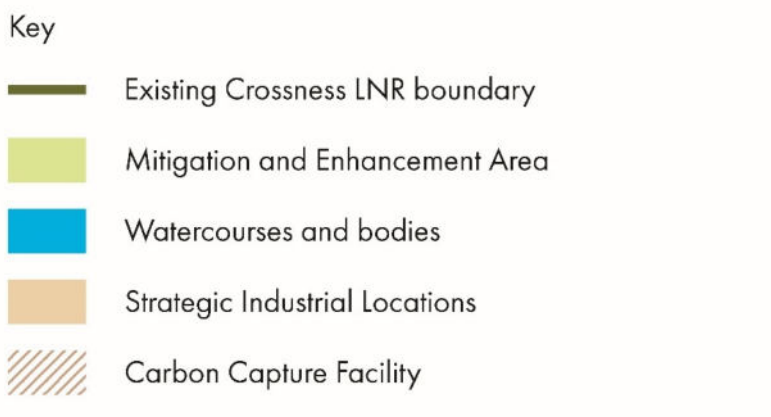


**Figure 7 – Onsite works Area and Field reference plan**

6.2.4. The extents of the CCF Area and onsite mitigation works overlay in part, the existing Crossness Local Nature Reserve (CLNR).

## 6.3. BNG

6.3.1. Provision of Biodiversity Net Gain (BNG) associated with the Proposed Scheme will be made both onsite and offsite. A full description of the BNG requirement is outlined in **Appendix 7 -1 BNG Report** of the **ES (Document Reference 6.3)** and relevant details are provided in section 11 of this document (The Proposed Biodiversity Net Gain (BNG) Strategy).

6.3.2. One option for provision of offsite BNG is at the former Golf Course at Thamesmead. This document outlines in section 11 the relevant work and mechanism for the delivery of BNG at Thamesmead and alternative approaches to BNG delivery, in the event that the Thamesmead delivery option is not progressed. **Figure 4** illustrates the location of the Thamesmead Golf Course.

## 6.4. PUBLIC RIGHTS OF WAY

6.4.1. A description of the construction and operational phase works associated with PRoW is outlined below. The existing PRoW subject to diversion (temporary or permanent) are illustrated in **Figure 8** and additional proposed PRoW are illustrated in **Figure 9.**


**Figure 8 - Existing PRoW and Accessible Open Land**

## CONSTRUCTION PHASE

6.4.2. The existing PRoW subject to diversion during construction (temporary) comprise:

- FP3/NCN1 - England Coastal Path;
- FP 2 - extending through the Crossness LNR; and
- FP4 - extending east of Riverside 1.

6.4.3. **Chapter 14 of the ES (Document Reference 6.1)** sets out the construction phase mitigation strategy in relation to FP3, which is summarised here for ease of reference.

6.4.4. The design will ensure that routes used by walkers, graziers and cyclists (including PRoW, long distance walking routes and NCN routes) will, where practicable, remain open and accessible to users during construction. Where this is not practicable, suitable temporary diversions will be identified, which will ensure that appropriate surfaced roues are provided for all current users of these routes.

6.4.5. Any temporary diversion routes will be agreed with London Borough of Bexley (LBB) before implementation pursuant to approval of the full Code of Construction Practice.

6.4.6. FP2 is located within the Site and would need to be permanently diverted as a result of the construction activities and for the operational requirements of the Carbon Capture Facility. It may also need to be temporarily diverted prior to this in the construction phase on routes to be agreed with LBB.

6.4.7. It is also anticipated that the construction works would be phased and, therefore, the remaining informal routes within Crossness LNR and Erith Marshes SINC (which are publicly accessible and classed as Accessible Open Land) would be closed to the public in phases (rather than in full) during the construction phase. These temporary restrictions would cease upon completion of construction.

6.4.8. FP4 is located within the Site and provides a link between the England Coast Path (FP3/NCN1) and Norman Road. During construction, a number of Above Ground LCO2 Pipelines are likely to be installed along the eastern side of the Site Boundary, to connect the Carbon Capture Facility to the Proposed Jetty. It is expected that this PRoW will be closed for shorter periods (i.e. less than a day) throughout the construction phase, whilst specific activities are undertaken – namely lifting heavy objects. Due to the ad hoc nature and limited duration of closures, no diversion is anticipated, Chapter 2 of the ES sets out the proposed footpath control mechanisms in priority order.

## OPERATION PHASE

6.4.9. The existing PRoW subject to amendment during operation (permanent) comprise:

- FP2 – realignment;
- FP2 - extension/provision of additional 'arm' to connect to FP3; and
- FP1 – extension.

6.4.10. **Chapter 14 of the ES (Document Reference 6.1)** sets out the operational phase strategy in relation to PRoW, which is summarised here for ease of reference.

6.4.11. The permanent diversion of FP2 is required for CCF safety reasons. The diversion route will be agreed with LBB as part of agreeing the full LaBARDS, to enable the diversion route to dovetail with the wider landscape and habitat proposals in the Mitigation and Enhancement Area.

6.4.12. Similarly, the final routing and details of the extensions to FP1 and FP2 proposed would be approved by LBB alongside agreeing the full LaBARDS.

6.4.13. The start and end points of these permanent changes are shown on the Access and Rights of Way Plans (Document Reference 2.4) and comprise a likely diversion of a portion of the FP2 route between Norman Road and the connection to the north- south route of FP2 to the west of the Crossness LNR.

6.4.14. Additional PRoW routes are proposed illustrated on Figure 9 and detailed in section 9. Additionally, enhancements will be developed and provided including for example, interpretation boards and localised works to the boundaries to the immediate context of the England Coast Path (FP3/NCN1). These will be detailed as part of the full LaBARDS. The DCO also provides for the Applicant to be able to authorise motorised use of FP1 – FP4 during both the construction and operational phases – this is for the Applicant's requirements, but also to allow for improved access arrangements for graziers and the Friends of Crossness LNR, if required.

6.4.15. Proposals for new footpaths, grazier access routes and permissive paths or links will be developed with terrestrial biodiversity in mind and through engagement with LBB, the graziersand relevant user groups to ensure that potential negative impacts are understood, mitigated and managed through construction and operation phases. This could include installation of boardwalks, fences, all weather surfacing, gates and signage, with the aim of improving the user experience and conservation of habitats. The alignment of new public rights of way (footpaths) will be secured through submission and approval of the full LaBARDS.


**Figure 9 – Operation phase PRoW diversions and PRoW creations**

# 7. PLANNING POLICY BACKGROUND AND NATURE CONSERVATION DESIGNATIONS

7.1.1. The Site is covered by a number of nature conservation, green infrastructure and planning policy designations illustrated in **Figures 10 and 11**. The policies are, in cases, interrelated, addressing several topics in a single policy.


**Figure 10 – Nature conservation designations**

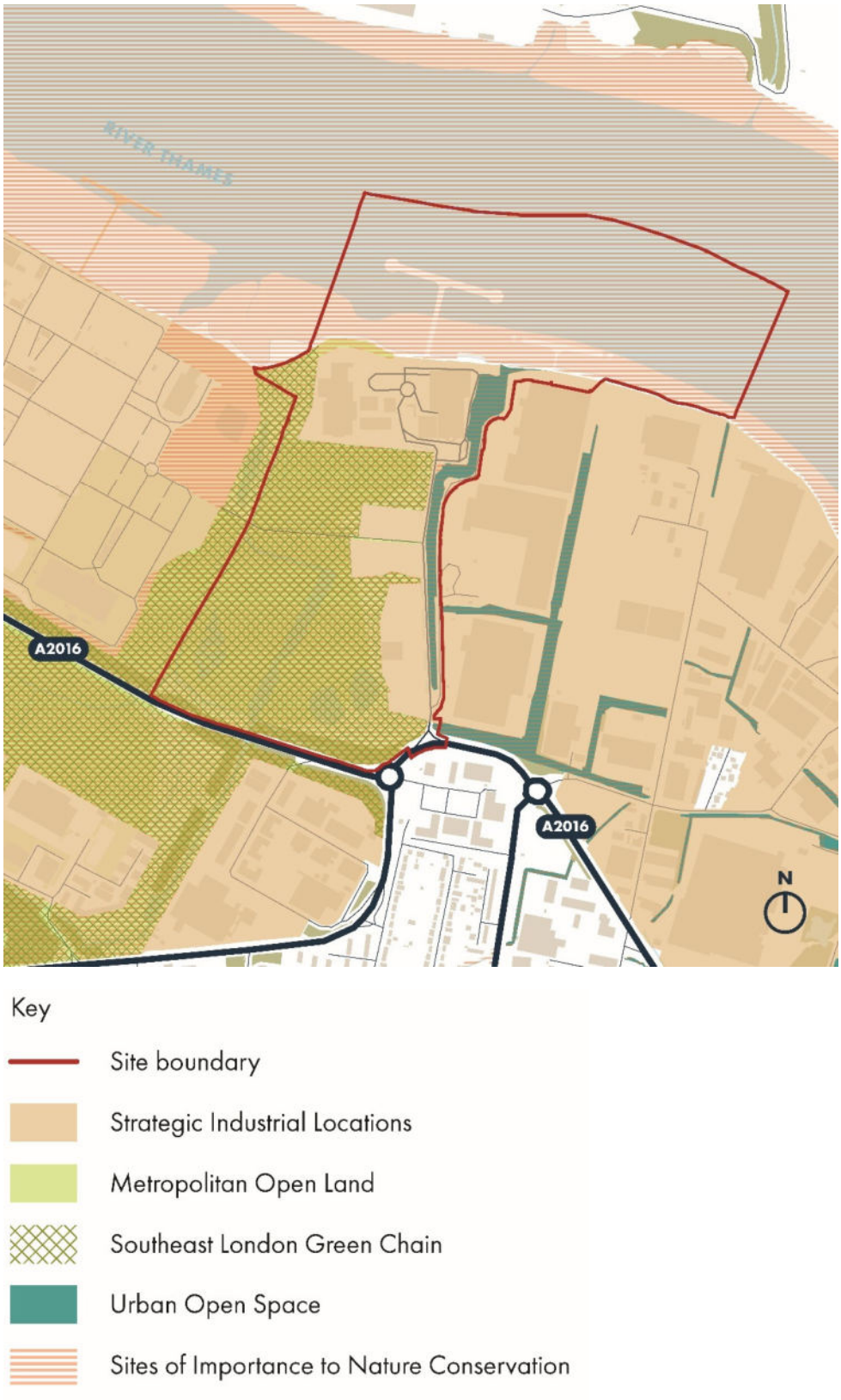


**Figure 11 – Planning Policy designations inc SIL, MOL and Open Space**

## 7.2. NATURE CONSERVATION:

7.2.1. The Site straddles the Erith Marshes Site of Importance for Nature Conservation (SINC), and the Belvedere Dykes SINC. Crossness Nature Reserve (LNR) which forms part of the Erith Marsh complex, is designated as a Site of Metropolitan Importance for Nature Conservation and forms part of the Southeast London Green Chain.

7.2.2. These SINC are connected to the River Thames SINC and also reflected in identified Strategic Green Wildlife Corridors identified in LLB's SINC Report Addendum 2022.

## 7.3. GREEN INFRASTRUCTURE

### NATIONAL PLANNING PRACTICE GUIDANCE 1 (NPPG 1) AND LONDON ENVIRONMENT STRATEGY

7.3.1. National Planning Practice Guidance 1 defines Green Infrastructure as:

7.3.2. "*A network of multifunctional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities. Green infrastructure is not simply an alternative description for conventional open space. As a network it includes parks, open spaces, playing fields, woodlands, but also street trees, allotments and private gardens. It can also include streams, canals and other water bodies and features such as green roofs and walls*."

7.3.3. The inclusion of green infrastructure as part of new development has been identified by the Intergovernmental Panel on Climate Change (IPPC) as having a wide range of climate benefits relating to both mitigating and adapting to climate change.

**7.3.4.** The London Environment Strategy provides additional detail on the benefits of Green Infrastructure (GI): *'London's green infrastructure is the network of parks, green spaces, gardens, woodlands, rivers and wetlands (as well as features such as street trees and green roofs) that is planned, designed and managed to: Promote healthier living; Lessen the impacts of climate change ; Improve air quality and water quality; Encourage walking and cycling ; Store carbon; and Improve biodiversity and ecological resilience*.'

### BEXLEY LOCAL PLAN POLICY SP8

7.3.5. The Bexley Local Plan Policy SP8 – '*Green Infrastructure including designated Green Belt', notes that Green Infrastructure is a 'valuable asset delivering a number of environmental, societal and health benefits..... and ……that Bexley's green*

*infrastructure comprises a series of spaces and corridors, forming a network that stretches throughout and beyond the borough. Blue infrastructure includes tidal/inland waterways and water features*.'

7.3.6. This policy seeks to protect both open space and green infrastructure, making clear an expectation that mitigation will be required in response to development which affects provision of these assets. It also seeks to protect sites of nature conservation (including SINC and LNR) for their biodiversity value, recognising that they are important spaces for people, and policy encourages access to them.

7.3.7. Bexley's ambitions for local green and blue infrastructure include improving access to open space and nature; supporting maintenance and enhancement of blue infrastructure; ensuring existing and new green infrastructure is maintained and enhanced to a high standard and protecting and enhancing biodiversity and strategic green corridors.

### BEXLEY GREEN INFRASTRUCTURE STUDY 2020

7.3.8. The Bexley Green Infrastructure Study 2020 aimed to develop a comprehensive understanding of existing green infrastructure assets, future demands, surpluses and deficiencies, and opportunities to inform the development of policies such as SP8.

7.3.9. **Figure 12** illustrates the local GI assets in relation to the Site and the following text considers how the GI Study characterised those assets.

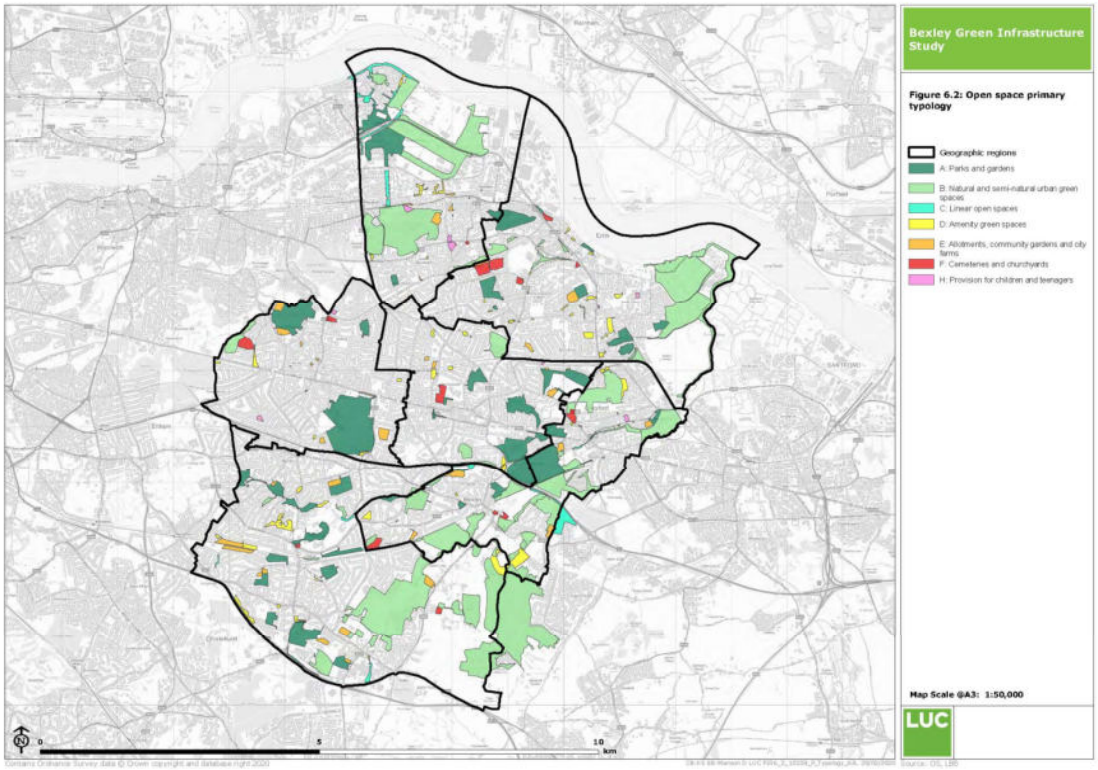


**Figure 12 – Local GI assets**

7.3.10. Parts of the Site form part of the Southeast London Green Chain which is described as forming a linked system of approximately 300 open spaces including a series of circular walks that link major open spaces extending from the River Thames to Crystal Palace Park.

7.3.11. Other highlights from the Green Infrastructure Study relevant to the Proposed Scheme are as follows:

- Biodiversity: In relation to biodiversity there are four Local Nature Reserves (LNR) distributed throughout the borough, covering 130.02ha. Access to LNR is more limited in the north east of the borough which is assumed to include the Site.
- Green Infrastructure: The Study outlines a range of existing and emerging strategies as well as consideration of the drivers for GI. The Study culminates in a GI Opportunities Map that sets out potential opportunities to strengthen and optimise the GI network. The Site is identified as 'Thames Path and Northern Boundary'. Opportunities identified include '*enhance opportunities for recreation through improved links towards the Thames Path…and strengthen the Thames*

*Path link to the east…….. enhance interpretation of the area's history and cultural assets. Mitigate against detracting features through landscape enhancements and appropriate planting*.'

- Metropolitan Open Land (MOL): In relation to MOL the Study identified the undeveloped areas of the Site and those lying outside land identified for development in the Local Plan (MOL1c Land to north and south of Eastern Way including Southmere Park and Crossway Park), as having '*strong openness'*.
- Open space: The Study identified the open land within the Site as being of '*Higher quality/higher value*' open space. Such sites are '*considered to be best open spaces within the borough offering the greatest value and quality for the surrounding communities. Future management should seek to maintain the standard for these spaces and ensure they continue to meet the requirements of the communities they serve*.' However, the Study noted that natural and seminatural urban green space are considered to feel less open and secure and that it is therefore important to have a frequent flow of people within open spaces to offer self-surveillance.

## 7.4. PLANNING

7.4.1. The majority of the Carbon Capture Facility area forming part of the Proposed Scheme, falls within an 'Employment Opportunity Area' allocated under the London Plan policy 4.12 and at a local level, 'Employment growth, innovation and enterprise' Bexley Local Plan policy SP3 and also forming part of the Belvedere Industrial Area – Bexley Local Plan policy DP7.

7.4.2. The areas of undeveloped land and lying outside policy SP3 and DP7, are designated as MOL, under London Plan Policy G3 – 'Metropolitan Open Land' and Bexley Local Plan policy SP8 - 'Green Infrastructure including designated Green Belt' and associated supporting text.

7.4.3. LBB Policy SP8 'Green Infrastructure including designated Green Belt' notes the following (which underpins the Environmental Proposals and Access and Recreation Proposals that form part of the Proposed Scheme):

- that beneficial use of MOL should be encouraged for public access, outdoor recreation, retaining and enhancing landscapes, visual amenity, biodiversity or to improve damaged or derelict land;
- protecting Urban Open Space, only allowing development where the public benefit of development clearly outweighs harm;
- agreeing proposals for creating or improving habitat, implementing priorities for the recovery of nature outlined in local nature recovery strategies etc;

- protecting land that forms part of the Southeast London Green Chain as important environmental, recreational and educational resource…. seeking to improve public access to and through the area and promoting it as a recreational resource and visual amenity;
- supporting the creation of new cycling and walking routes to connect publicly accessible open spaces….;
- ensuring all new development deliver a net increase to green infrastructure;
- protecting …existing amenity space that has been provided as part of a development…; and
- protecting and enhancing the biodiversity, heritage … values of open spaces….

7.4.4. The rationale for the Proposed Scheme and Carbon Capture Facility location in relation to both the MOL and SINC/Crossness LNR, is outlined in the **Terrestrial Site Alternatives Report (TSAR) (Document Reference 7.5)** and **DAD (Document Reference 5.6)** and seeks to minimise impacts on these designations. The Environment Proposal and Access and Recreation Strategy outlined in section 9 seeks to respond to the aforementioned nature conservation and planning policy designations.

7.4.5. It should be noted that open space, identified in Bexley Local Plan policy SP8, extends across the undeveloped areas of the Site and excludes land identified for industrial development. However, the open space as illustrated in the Bexley Local Plan Key Diagram, is not necessarily accessible to the public. For clarity the Applicant has identified 'Accessible Open Land', **Figure 8**, to inform the understanding of any mitigation that may be appropriate in the light of policy. Accessible Open Land comprises land of an open character within the Site, that is accessible to the public and that is not fenced for the purposes of restricting access. The Applicant considers that this land can also be classified as 'public open space' for Planning Act 2008 purposes as it is accessed and used by the public for recreational walking and activities. This land is designated as:

- 'publicly accessible open space' and as part of the Southeast London Green Chain in the Bexley Local Plan 2023; and
- Metropolitan Open Land in the London Plan 2021

7.4.6. Note: Part of the Accessible Open Land also falls within the Crossness LNR and Erith Marshes SINC.

7.4.7. Whilst the Proposed Scheme involves the loss of land within these designations, it does not result in the loss of any Accessible Open Land.

7.4.8. Planning policy compliance is considered further in the **Planning Statement (Document Reference 5.2)**.

# 8. THE PROPOSED SCHEME

## 8.1. THE PROPOSED SCHEME

## 8.2. OPERATION PHASE

8.2.1. The Proposed Scheme (operation phase) is composed of four elements illustrated in Figure 13:

- Carbon Capture Facility (CCF);
- Interactions with Riverside 1 and 2;
- Proposed Jetty; and
- Mitigation and Enhancement Area.

8.2.2. These elements are described in full in the ES Chapter 2 (Document Reference 6.1.2) and defined in the **Works Plans (Document Reference 2.3)** which are submitted for approval and accompanied by the **Design Principles and a Design Code (Document Reference 5.7)**, also submitted for approval.

8.2.3. This Outline LaBARDS supports the delivery of key elements of the Proposed Scheme for the terrestrial element of the Proposed Scheme only. Marine design elements of the Proposed Scheme are controlled through the same controls listed above and will also be considered through a Requirement of the DCO.

8.2.4. The **Design Approach Document (DAD) (Document Reference 5.6)** describes the evolution of the design and its interaction with the natural environment and the approach to mitigating impact on the natural environment and planning policy designations which is summarised in section 7 of this document. The consideration of options is also summarised in the **DAD (Document Reference 5.6)** and detailed in the **TSAR (Document Reference 7.5) and JSAR (Document Reference 7.6)**.

8.2.5. The effects of the Proposed Scheme are recorded in the **ES (Document Reference 6.1)** and summarised in the **ES Non-Technical Summary (Document Reference 6.4)** under construction and operation phases.

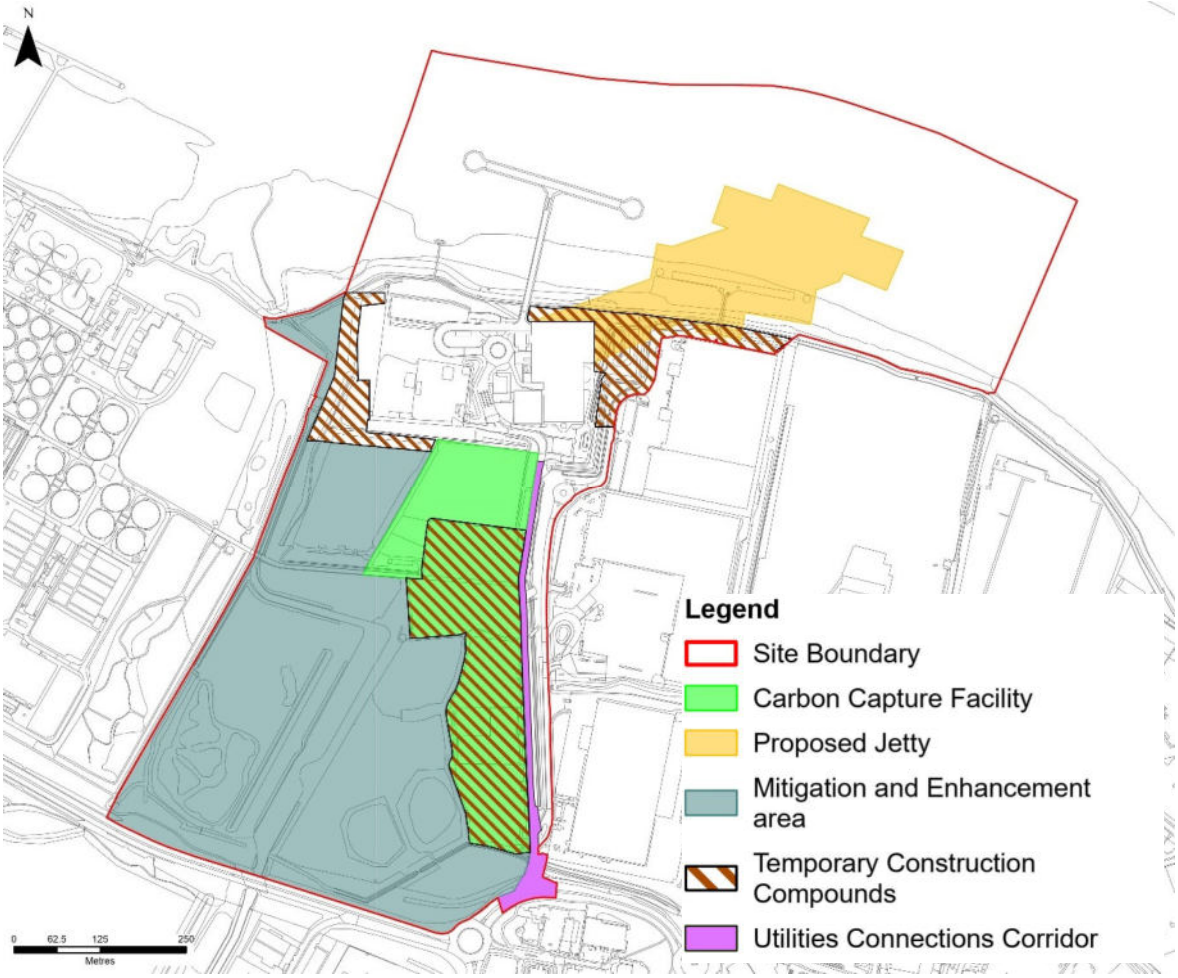


**Figure 13 Key elements of Proposed Scheme**

## 8.3. CONSTRUCTION PHASE

8.3.1. The construction phase effects are recorded in the **ES (Document Reference 6.1)** and summarised in the **ES Non-Technical Summary (NTS) (Document Reference 6.4)**. The main effects and mitigation measures relevant to this Outline LaBARDS arising from the Proposed Scheme and summarised in the NTS are as follows.

### BIODIVERSITY

8.3.2. The construction of the Proposed Scheme results in the loss of the following habitats due to the installation of the Carbon Capture Facility and alignment of connecting pipework to Riverside 1 and 2:

- Reedbed: 0.373ha;
- Other neutral grassland (moderate condition): 0.665ha;

- Other neutral grassland (poor condition): 0.037ha;
- Coastal floodplain grazing marsh: 2.042ha;
- Modified grassland: 0.905ha;
- Bramble scrub: 0.905ha;
- Open Mosaic Habitat on Previously Developed Land (Open Mosaic Habitat) (previously proposed to be reinstated by Riverside 2 but now falling under the footprint of the CCF): 0.982ha;
- Ditch habitat: 400m/0.091ha; and
- Mudflat (littoral mud): 0.001ha.

8.3.3. During the construction of the Proposed Scheme works to mitigate effects comprising the enhancement of existing habitats or the establishment of new habitats will commence and be subject to ongoing management to deliver the proposed mitigation defined in this Outline LaBARDS. **Figure 14** illustrates the existing habitats and those to be established which are detailed in section 10 and 12 of this document.

8.3.4. Land utilised to accommodate temporary construction compounds, processes and construction routes in the Mitigation and Enhancement Area, such as within Sea Wall field, will be appropriately restored following its temporary use. Upon completion of the construction phase Open Mosaic Habitat would be installed within the CCF, compensated at a suitable offsite location or a combination of these two options to honour the reinstatement commitment for this habitat type. This is discussed further in section 11.


**Figure 14 – Existing Habitats, New Habitats and Landscape Proposals**

8.3.5. Key onsite habitat mitigation in the Mitigation and Enhancement Area secured in this Outline LaBARDS comprises:

- improvement in Flood Plain Grazing Marsh habitat from Poor condition to Moderate condition secured through improved ground wetting delivered via proposed drainage proposals associated with improved existing ditches and new ditches;
- establishment of new ditch and reedbed habitat;
- establishment of new neutral grassland habitat;
- establishment of ditch, reedbed replacement habitat and enhancement of existing ditch habitat for water voles, secured pursuant to licensing;
- establishment of supporting habitat for protected and notable species including bats: foraging and commuting habitat; breeding birds: nesting habitat; wintering birds: foraging habitat; and habitat for reptiles and invertebrates;
- increasing biodiversity of existing deciduous woodland habitat through management; and
- management of ditches and water courses to improve aquatic planting species diversity.

8.3.6. The control of America Mink through survey and trapping to support water vole populations is secured through the **Outline Code of Construction Practice (CoCP) (Document Reference 7.4)**.

8.3.7. Impacts to ongoing grazing activities will be minimised during construction, including through temporary relocation of horses and facilities, and establishment of new permanent equivalent facilities. The intention is to enable horses to remain within the Mitigation and Enhancement Area throughout the construction phase where practicable.

## TOWNSCAPE AND VISUAL

8.3.8. The construction activities associated with the Proposed Scheme may generate significant adverse effects for the local character, vegetation cover within the Site, and views from the Accessible Open Land and open spaces in the surrounding area. The effects on other sensitive receptors are not anticipated to be significant. A key mitigation measure will be to sensitively manage diversions of PRoW, which is dealt with in the **Outline CoCP (Document Reference 7.4)**.

## 8.4. OPERATION PHASE

8.4.1. The operation phase effects are recorded in the **ES (Document Reference 6.1)** and summarised in the **ES Non-Technical Summary (Document Reference 6.4)**

8.4.2. The main operation phase effects relevant to this Outline LaBARDS arising from the Proposed Scheme comprise:

### BIODIVERSITY

8.4.3. During operation of the Proposed Scheme, the only potentially significant residual effect to terrestrial biodiversity is in relation to changes in air quality. These can be considered further, and sought to be managed, through detailed design and the measures set out in **Chapter 5: Air Quality** of the **ES (Document Reference 6.1.5)** which will be delivered through implementation of the Operational Environmental Management Plan, as secured by a requirement of the **Draft DCO (Document Reference 3.1)**.

**8.4.4.** Through an Operational Environmental Management Plan, work will be timed to avoid sensitive periods of the year for specific species, such as avoidance of bird nesting season.

**8.4.5.** Managed grazing is an important factor in maintenance of the valued flood plain grazing marsh habitat and will be retained to perform this function, with suitable provision made for the graziers.

### TOWNSCAPE AND VISUAL IMPACT

8.4.6. Once the Proposed Scheme becomes operational, it is likely to be a dominant feature in views for users of accessible open land in close proximity to the Site. Significant effects are anticipated for changes in character and visual amenity from accessible open land in proximity to the Site. The effects on other receptors are not anticipated to be significant. Mitigation measures to limit the effects on sensitive receptors will be implemented pursuant to this Outline LaBARDS:

- the creation of a landscape buffer along the boundaries of the Site to minimise any potential visual effects;
- a permanent diversion of FP 2 within the CLNR to reduce ‘up close’ views of the Site for users of this footpath; and
- incorporating additional tree planting to provide screening to operational equipment in suitable areas, without compromising the distinctiveness or condition of valued existing habitats.

# 9. DESIGN PRINCIPLES AND DESIGN CODE

9.1.1. The **Design Principles and Design Code (Document Reference 5.7)** submitted as a document for approval are set out in the **DAD (Document Reference 5.6)** within supporting narrative. The Design Principles and Design Code information of relevance to the LaBARDS, is provided in this document.

9.1.2. The DCO requires that in submitting the full LaBARDS(s) for approval, the Applicant must show how the Design Principles and Design Code have been taken into account in developing it.

## 9.2. DESIGN PRINCIPLES

9.2.1. As described in the **DAD**, the Design Principles have been developed for the Proposed Scheme and should be read alongside this Outline LaBARDS as together they will control the development of the Environmental, Access and Recreation Proposals set out in this strategy.

9.2.2. These Design Principles are structured to accord with the National Infrastructure Commission's guidance under the thematic headings of: Climate, People, Places and Value. The most relevant Design Principles within these themes are as follows:

### CLIMATE

9.2.3. Deliver resilient habitat mitigation and compensation that is capable of being sustained and ensure that building and infrastructure fabric retains integrity:

- DP_CL 1.1 Direct site drainage from the main operational area hard standing areas to support local ground water levels and to enhance grazing marsh and existing and proposed wetland habitat. Attenuate and treat surface run-off from the main operational areas onsite before releasing into the local ditch network to support wetland water quality site wide.
- DP_CL 1.3 Provide increased species diversity within defined grazing marsh areas and adjacent habitats to provide further resilience in the face of changing climate.
- DP_CL 1.4 Contribute to habitat enhancement, creation, and resilience at Thamesmead through provision of off-site mitigation and Biodiversity Net Gain works.

## PEOPLE

9.2.4. Deliver benefits to people and communities reflecting what the community wants:

- DP_PE 1.1 Improve the local public footpath connections to deliver a recreation and commuting route linking Thamesmead to the Crossness Local Nature Reserve and promotion of local circular route via Thames Path including local enhancements for wayfinding and information.
- DP_PE 1.2 Make provision for new interventions in addition to the retention and enhancement of existing features to improve public awareness of local nature and points of cultural and educational interest.
- DP_PE 1.4 Work with stakeholders to further their objectives and balance conflicts of interest including the FoCLNR (Friends of Crossness Local Nature Reserve) and existing graziers.
- DP_PE 1.5 Provide a visually attractive environment that secures a sense of belonging and personal security that is of consistent quality in terms of open space, natural habitat access, landscape design and architectural quality.

## PLACES

9.2.5. Deliver a project that promotes a sense of identity, improves the quality of and access to the natural environment and mitigates changes in the character and visual environment through good design:

- DP_PL 1.2 Provide well organised and well designed and managed boundaries to the operational areas. Control the visual appearance of the operational area in views from adjoining areas to deliver a coherent appearance. Provide planted boundaries appropriate to local character around the CCF Area to support the natural character of the Local Nature Reserve and an organised interface with Norman Road.
- DP_PL 1.3 Extend the extent of the Local Nature Reserve and improve existing habitats to compensate for the loss resulting from the development.
- DP_PL 1.7 Optimise the performance of retained Metropolitan Open Land purposes and secure enhancement through good design and management, improved interpretation and access.
- DP_PL 1.10 Existing points of access and vehicular routes should be maintained in their current locations where practicable, including the Thames Water Access Road to Norman Road. Where temporary diversions or minor changes to alignment are required, full remediation of habitats and compensatory planting should be provided.

**VALUE**

9.2.6. Deliver a project that is efficient and secures benefits beyond the immediate CCF Area boundary:

- DP_VA 1.2 Minimise the loss of open land and natural habitat including through a transparent optioneering process focused on efficiency in the final layout and detailed design delivery.
- DP_VA 1.3 Provide benefits to the local community through direct proportionate mitigation and compensation for loss of open land, public access, and access to natural areas.
- DP_VA 1.5 Support the delivery of a more attractive and useable Local Nature Reserve through any alteration of area or configuration, support to improved management and provision of improved access, interpretation, and activation recognising the sensitivity of existing habitats.

## 9.3. DESIGN CODE

9.3.1. The **Design Code** is also submitted for approval **(Document Reference 5.7)** and should be read alongside this Outline LaBARDS. The Code is arranged under the following headings.

- Campus Wide;
- Carbon Capture and Storage Facility;
- Nature Reserve and Open Space;
- Thames Path and Jetties; and
- Norman Road.

# 10. THE PROPOSALS AND STRATEGIES: ENVIRONMENT AND ACCESS AND RECREATION

10.1.1. The Proposals are informed by an appreciation of, and strategy to, minimise the effects of the Proposed Scheme on MOL in relation to its primary aim to be '*a break within the built-up area*' and its purposes and its performance with regard to Bexley Local Plan Policy SP8, to address relevant nature conservation policies in relation to SINC and Local Nature Reserves, and to consider impacts to green infrastructure, open space and its user groups.

10.1.2. In relation to the performance of the MOL to its defined purposes, consideration has focused on the purpose '*to check unrestricted sprawl of large built up areas*'. However, local plan policy also sets broader purposes for the MOL, not least London Plan policy G3 of the London Plan which recognises that '*It plays and important role in London's green infrastructure'* such that paragraph A(2) introduces a requirement on boroughs to *'work with partners to enhance the quality and range of uses of MOL'* and the supporting text at paragraph 8.3.4 (replicated at paragraph 5.65 of the Bexley Local Plan) states that '*proposals to enhance access to MOL and to improve poorer quality areas such that they provide a wider range of benefits for Londoners that are appropriate within the MOL will be encouraged.*' The text advises that examples of this would include *'improved public access for all, inclusive design, recreation facilities, habitat creation, landscaping improvement and flood storage'*. In its undeveloped state, the Site including the CCF, is visually open but the character is compromised by the presence of industrial and large scale logistics development, and infrastructure that adjoins the Site. In its developed state, the CCF Area will be characterised by built development and infrastructure reducing in intensity of scale from north to south, with a focus of higher elements to the north associated with existing tall structures associated with Riverside 1 and 2. The proposed CCF layout in the south is lower, less dense and less 'industrial' in character and supports a looser and more 'visually open' development character that steps down to engage with the nearby local community of Belvedere as illustrated in the **DAD (Document Reference 5.6).**

10.1.3. This layout supports the establishment of a generous physical and visual approach to the expanded and reconfigured Crossness LNR off Norman Road illustrated in the DAD. The open areas of the Site comprising the proposed expanded and reconfigured Crossness LNR, will be visually open and characterised by an increased coherence of 'natural' landscape and delivery of the 'One Nature Reserve' concept. This concept is delivered through the Environmental Proposals and Access and Recreation Proposals in this document and takes into

consideration the Green Infrastructure Strategy, the Levels, Hydrology and Drainage Strategy and Edges and Interfaces Strategy described in the DAD.

10.1.4. This indicative masterplan has been designed to respond positively to the wider aims and purposes attributed to MOL by policies G3 and SP8 of The London Plan and Bexley Local Plan respectively, which extend beyond the simple spatial intentions of Green Belt policy. These local development plan documents require MOL not only to provide a break within a built up area, but also to improve Londoners' quality of life by providing wider benefits for residents, including improved access to enhanced outdoor spaces that also function effectively for eg nature conservation and flood storage.

10.1.5. It is acknowledged that the proposed CCF results in the loss of an area of Crossness LNR and MOL immediately south of Riverside 1 and 2. The reasoning for this is outlined in the DAD, Terrestrial Sites Alternatives Report (TSAR) and Planning Statement and in Examination submissions.

10.1.6. The proposal for the expanded Crossness LNR provides compensation for loss of habitat and resilience for the LNR, following the proposed removal of East and Stable Paddock to enable the delivery of the CCF. The expansion proposes the inclusion of Norman Road Field to provide an expanded Crossness LNR, provide mitigation for the loss of flood plain grazing marsh and ditch habitat and an opportunity to improve water levels in the LNR from improved ditch engineering, management and control water levels arising from the Proposed Scheme. Improved control and regulation of water levels also seeks to benefit graziers (an important component of the grazing marsh landscape) and reduce the impact of flooding. The expanded Crossness LNR would be defined to the east, by existing ditch habitat enhancement works that tie into the boundary planting proposals for the CCF itself.

10.1.7. The total area of the existing Crossness LNR is 25ha. In total, the Proposed Scheme would lead to the following impacts:

- The area of LNR lost to the CCF footprint comprises: 2.3ha
- The area of LNR lost to the CCF connecting pipework connecting to Riverside 1 and 2 requiring the relocation of the existing ditches to establish a new LNR boundary to the north, comprises: 1ha (worst case)
- The land proposed to be incorporated into the management of the existing LNR: 8.4ha.
- The net area by which the Crossness LNR would be expanded: 5-6ha.

10.1.8. The Environmental Proposals are illustrated in **Figure 15** and reflect how the Applicant has sought to respond to planning policy constraints identified during

design development, the results of the EIA process and the desire to integrate the CCF into its setting.


Key

- Site boundary
- 1 Existing ditch relocation associated with flue gas ductwork
- 2 Attenuation basin
- 3 Potential relocation of stable block
- 4 Tree planting screening
- 5 Enhanced grazing marsh
- 6 Wetland habitat
- 7 Boardwalk over wetland habitat
- 8 Attenuation basin/water storage

**Figure 15 – Environmental Proposals**

10.1.9. The Environmental Proposal is underpinned by 3 main elements:

## ONE NATURE RESERVE

10.1.10. Expand the existing Crossness Local Nature Reserve (CLNR) into the land immediately south and west of the CC Facility providing a gain of 5-6ha for land under CLNR management.

10.1.11. The Proposed Scheme results in the loss of an area of the existing Crossness LNR. The proposal is to compensate for this loss of LNR area through the dedication of an existing area of grassland habitat including poor quality grazing marsh to establish an expanded LNR under a single management regime. This proposal allows for the ongoing Crossness LNR management to be retained and the additional benefits of a single and enlarged LNR to be secured through the Proposed Scheme. **Figure 16** illustrates the existing and proposed extents of the LNR. The DAD provides a description of the LNR proposals and the benefits, which address relevant policies and policy ambitions in relation to MOL, open space and green infrastructure. The proposed approach to management of the expanded LNR is addressed in section 13.

## DIVERSE GRAZING MARSH

10.1.12. Improve the distinctiveness and condition of existing valued flood plain grazing marsh habitats, delivered by raising water table and managed grazing densities, delivering direct mitigation for the physical loss of grazing marsh habitat; provide additional habitat measures to mitigate impacts and improve biodiversity; and onsite BNG. These measures and proposals are described and illustrated below and are to be delivered within the CCF Area and Mitigation and Enhancement Area.

10.1.13. The habitat enhancements are secured through improved management and creation outlined below. The post development biodiversity strategy is illustrated in Figure 17. The proposals will be delivered in defined areas outlined in section 11 of this report and identified by area and field name, as appropriate.

10.1.14. The proposed habitat measures include the following:

- nesting habitat;
- vegetation enhancement – bramble scrub and introduced scrub;
- works to enhance existing ditches and reed habitat;
- ditches and habitat creation;
- wetland areas – ponds and standing water;
- attenuation basins;
- enhanced coastal and floodplain grazing marsh;
- lowland mixed deciduous woodland and management of existing;

- creation and management of existing neutral grassland and modified grassland, including habitats to benefit invertebrates; and
- increased water supply to support ground water levels to support grazing marsh habitat restoration.

10.1.15. The Environmental Proposals would be developed through engagement with stakeholders (including the graziers, Buglife, Friends of Crossness LNR and Thames Water) and agreed with LBB alongside the approval of the full LaBARDS.

## OFFSITE COMPENSATION

10.1.16. Offsite compensation is focussed on delivering habitats to support the Proposed Scheme's ambition to deliver at least 10% BNG and potentially (depending on the extent of onsite habitat delivery chosen) to ensure no net loss of Open Mosaic Habitat and reedbed. The offsite BNG Strategy is described in section 11 below.


**Figure 16 – Existing and Proposed expanded Crossness LNR**


**Figure 17 – Post Development Biodiversity Strategy**

10.1.17. The priorities of the Environmental Proposals include:

- mitigating the loss of Local Nature Reserve area and habitats within the Site;
- mitigating visual impact of the development through landscape proposals which will establish a buffer zone comprising planting of appropriate character associated with an enhanced ditch habitat that will minimise the impact on visual openness arising from the CCF and integrate the CCF into its setting;
- securing the beneficial use of Metropolitan Open Land (MOL) supporting the promotion of public access, grazier activities, outdoor recreation, retaining and enhancing landscapes, visual amenity, biodiversity or to improve damaged or derelict land;

- protecting open space, avoiding loss of Accessible Open Land;
- protecting land where possible, that forms part of the Southeast London Green Chain as important environmental, recreational and educational resource and seeking to improve public access to and through the area and promoting it as a recreational resource and visual amenity;
- protecting and enhancing the biodiversity, heritage and value of open spaces, through habitat enhancement and creation, and the enhancement of the proposed open space through the development of an expanded Crossness LNR;
- support bringing forward proposals for creating and improving habitat, implementing priorities for the recovery of nature, and continuing an appropriate level of grazing by horses;
- protecting existing amenity space that has been provided as part of a development, through the provision of an extend Crossness LNR to address loss of area required for the CCF; and
- delivery of enhanced ecological value through a minimum 10% Biodiversity Net Gain (BNG)
- Consultation and engagement with Friends of Crossness Nature Reserve and Buglife has identified further opportunities for enhancement following ongoing consultation which would be subject to ongoing scoping and confirmation in the full LaBARDS including:
  - establishment of bird and owl boxes; and
  - enhanced habitat within the existing Crossness LNR, including the Member's Protected Area; and
  - promoting (i.e. enhance) the topographical mosaic within Norman Road Field such that it is enhanced for invertebrates as well as resulting in improved condition of Floodplain Grazing Marsh

10.1.18 Establishment of Key Habitats and Species

It is important that the mitigation measures required to balance the impacts of the Proposed Scheme on habitats and species, are successfully and sustainably established within the required timeframes. None more so important than for establishment of new and enhanced water vole habitats, ahead of their translocation/reintroduction. Any Water Vole Method Statement approved by Natural England will be implemented as approved. The below gives a summary of expected works.

- Existing ditches will be enhanced and approximately 1.3km of ditches will be dug creating two wetland areas within the Mitigation and Enhancement Area to create two water vole receptor sites. Each site will be fenced off to prevent colonisation prior to translocation of voles from the affected area. Excavation of ditches within the receptor sites, and installation of vegetation will be carried out in sufficient time to allow for two growing seasons to ensure full establishment in readiness for the voles, prior to the start of CCF construction works which may impact the affected ditches. Establishment will be monitored to ensure that water voles have sufficient vegetation to provide food and cover, before release, which could be earlier than the 2 growing seasons estimate.
- During digging within existing wetland areas in the Mitigation and Enhancement Area, effort will be made to retain any extant food or cover plant species, including some associated bank top cover to aid re-growth of vegetation in the area. Any mature turf stripped during excavation will be retained for placement on top of the final bare soil areas to also aid re-growth of vegetation.
- Additionally, approximately 540m of existing ditches within the Site, will be enhanced. These ditches will be enhanced by:
  - planting of emergent vegetation to increase the species diversity to >10 species present within 20m ditch length;
  - improving water levels to sufficient water levels all year round (a minimum summer depth of approximately 50cm in minor ditches and 1m in main drains) by removing silt and excess vegetation and allowing open water to return;
  - improving water quality by removal of rubbish and waste that pollutes the ditches;
  - thinning out reed; and
  - planting water vole food plants such as reedmace Typha latifolia, yellow flag Iris pseudacorus and reed canary grass Phalaris arundinacea.

10.1.19 The CLNR Members Area west of footpath 2 (FP2) sits outside of the Order limits and outside of the proposed Mitigation and Enhancement Area. Thames Water has confirmed that it does not wish for this area to be brought into the auspices of the Landscape, Biodiversity, Access and Recreation Strategy, but through engagement on the Environmental Proposals set out above, the Applicant will work closely with Thames Water Utilities Limited to seek to ensure that the Applicant's proposals can co-exist with TWUL's on-going management of the CLNR Members' Area.

## 10.2. ACCESS AND RECREATION PROPOSALS

10.2.1. The Access and Recreation Proposals are illustrated in **Figure 18** and supported by the Access and Movement Strategy illustrated in the **DAD (Document Reference 5.6)**.

10.2.2. The Access and Recreation Proposals provide enhanced PRoW routes and connectivity within the Site and works offsite. The proposals encourage improved opportunity for active travel access, improved amenity and recreation experience and safety of routes.

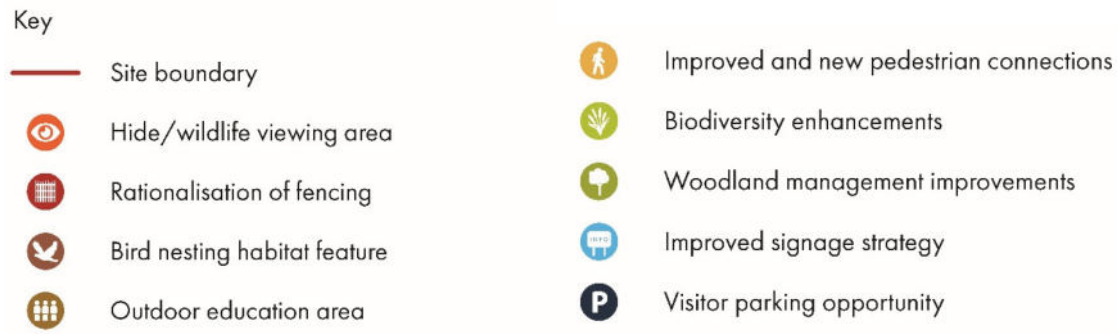


**Figure 18 – Access and Recreation Proposal**


**Figure 9 – Operation phase ProW diversions and ProW creations (repeat)**

10.2.3. Opportunities have been identified for enhancement to existing PRoW within the Order Limits for onsite works or via contributions to LBB via Deed of Obligation for offsite works. The proposed permanent alterations to PRoW are illustrated in **Figure 9** and comprise:

- establishing a generous new entrance to Norman Road Field and the proposed expanded Crossness LNR at the southern end of Norman Road setting back the existing field boundary to allow for a wide paved entrance to support improved visitor experience, safe grazier access and orientation signage;
- FP1 - the existing route extending west towards Thamesmead and parallel to Eastern Way including improved signage and vegetation management;
- FP3 - improvement in the existing context of the Thames Path including possible removal of redundant/ dilapidated river wall structures, improvements in river wall access openings (gates etc) subject to relevant approvals and provision of quality signage; and
- FP4 - improvement in the quality of the public realm associated with the existing PRoW extending east of Riverside 1.

10.2.4. New PRoW connections have been identified comprising:

- establish a link connecting FP2 to FP1 forming a connection from Norman Road Field to Thamesmead extending over the south end of Great Breach Lagoon; and
- establish a link between FP3 Thames Path, to the Crossness LNR approaching from the east forming an extension to the existing FP2.

10.2.5. The exact routes of these PROW alterations on-site would be agreed with LBB pursuant to the provisions of the DCO, alongside the approval of the full LaBARDS. Off-site proposals would be delivered through LBB via Deed of Obligation contributions.

10.2.6. The Recreation Proposals include provision of way finding, visitor and education facilities as part of the expanded Crossness LNR and will define through improved visitor interpretation facilities an enhanced appreciation and enjoyment of the recreation amenity forming part of the expanded Crossness LNR proposal. The proposals include cycle parking provision, relocated stable block, the potential for a new visitor car park as part of a generous southern entrance and gateway to the LNR and to the north, a more obvious presence of the Crossness LNR off the Thames Path marked by an additional PRoW and proposed visitor interpretation facilities.

10.2.7. Further engagement with graziers should feed into development of equine related facilities (eg stabling, water, power supply) and access requirements, with the

matters agreed to be set out in the full LaBARDS. Details relevant to the design of replacement stables would be a matter for the detailed design phase of the Proposed Scheme. However, at this stage, the Applicant expects the replacement stables to be on a like-for-like basis, and materially the same size and shape as its current formation.

10.2.8. For Crossness Local Nature Reserve maintenance and graziers access a new route will be provided to replace use of the Thames Water emergency access route. This is due to the technical and security requirements of the CCF and to ensure the safety of all parties.

10.2.9. The alternative access route is indicatively shown in Figure 9 and follows the new nature reserve's eastern boundary from the proposed car parking in the south up to the relocated stable block. This route provides access for nature reserve teams, for graziers and the EA (for maintenance of watercourses). The route would likely comprise a reinforced grass construction, raised slightly above the adjacent land to reduce waterlogging risk and utilise bridges where necessary for watercourse crossings. The new route removes the need for vehicles to access directly into Norman Road Field from the southern end of Norman Rd, identified as a high-risk area due to proximity to the junction with the A2016 and with poor visibility. The route would not be accessible to the public and would be controlled at both ends.

10.2.10. Installation of reinforced grass for access tracks would not prevent the growth of grasses and other plants where it would be installed. It would be an integral part of floodplain grazing marsh habitat to allow grazing animals to be moved around for management purposes, and also to provide vehicle access such that other management activities can be undertaken. Overall, the access track can be considered part of the floodplain grazing marsh, and other habitats it passes through.

10.2.11. Full details of the proposed new access routes are to be approved by LBB through submission of a full LaBARDS(s). The detailed design of the route, including surface treatment, means of access and security, would be prepared in compliance with the relevant Design Principles and Design Code (principally: DP_PL 1.10; DP_VA 1.5; DC_LNR 1.8; DC_LNR 1.15; and DC_NOR 1.2).

10.2.12. These proposals will improve access to the Accessible Open Land for the local community and user groups in close proximity to the local community, in the vicinity of the existing rights of way and road crossing facilities and local public transport connections

10.2.13. The Access and Recreation Proposals would be agreed with LBB alongside the approval of the full LaBARDS to ensure that potential negative impacts to biodiversity are understood, mitigated and managed.

# 11. THE PROPOSED BIODIVERSITY NET GAIN (BNG) STRATEGY

## 11.1. BNG DELIVERY

11.1.1. The BNG Assessment outlined in the **ES Appendix 7.1 (Document Reference 6.3)** identifies the following habitats and condition targets to deliver a minimum 10% BNG onsite and offsite.

| UKHab Code | Habitat Description | Action | Area (m^2) | Target Condition |
|---|---|---|---|---|
| f2e | Reedbed | Create | 5051 | Moderate |
| f2e | Reedbed | Retain | 45816 | No Change |
| g3c | Other Neutral Grassland | Create | 17379 | Moderate |
| g3c | Other Neutral Grassland | Enhance | 463 | Moderate |
| g3c | Other Neutral Grassland | Retain | 29873 | No Change |
| g3c(19) | Coastal and Floodplain Grazing Marsh | Create | 6610 | Moderate |
| g3c(19) | Coastal and Floodplain Grazing Marsh | Enhance | 67854 | Moderate |
| g3c(19) | Coastal and Floodplain Grazing Marsh | Retain | 53981 | No Change |
| g3c(19,d) | Coastal and Floodplain Grazing Marsh | Create | 110 | Moderate |
| g3c(19,d) | Coastal and Floodplain Grazing Marsh | Enhance | 2033 | Moderate |
| g4 | Modified Grassland | Retain | 6539 | No Change |
| h3d | Mixed Scrub | Retain | 13321 | No Change |
| r1(39,41) | Cory Pond 6 / CNR Waterbodies | Retain | 20762 | No Change |
| r2 | Ditches | Create | 1761 | Poor |
| r2 | Ditches | Retain | 11038 | No Change |
| w1f | Woodland | Create | 7381 | Poor |
| w1f | Woodland | Enhance | 9979 | Moderate |
| w1f | Woodland | Retain | 4806 | No Change |

11.1.2. Onsite baseline habitats will be lost, retained or enhanced, post-development.

11.1.3. Onsite baseline habitat is quantified in Table 3-1 for Area Habitats, and Table 3-2 for Watercourse Habitats, and Table 3-3 for offsite baseline habitats which are provided in Appendix 1 of this Outline LaBARDS.

11.1.4. New habitats will also be created onsite, and are detailed in Table 4-3 for Terrestrial and Marine, Table 4-4 for Watercourses and 4-6 for offsite habitat creation which are provided in Appendix 1 of this Outline LaBARDS.

11.1.5. Table 4-1 details onsite habitats retained, enhanced and lost and Table 4-2 onsite Watercourse Habitats retained, enhanced and lost. Table 4-5 details offsite Area Habitats retained, enhanced and lost. These are provided in Appendix 1 of this Outline LaBARDS.

11.1.6. These tables are based on a worst-case assumption that the Applicant will not be able to deliver its total requirements for compensation of impacts to Open Mosaic Habitat and the delivery of reedbed units onsite, rather than requiring them to be delivered offsite (as discussed below). However, the Applicant does consider that it would be possible to deliver all of these requirements onsite, as indicated in **Figure 19** below. The final allocation of what is to be delivered onsite and what is to be delivered offsite will be set out in the relevant LaBARDS submitted to LBB for approval.

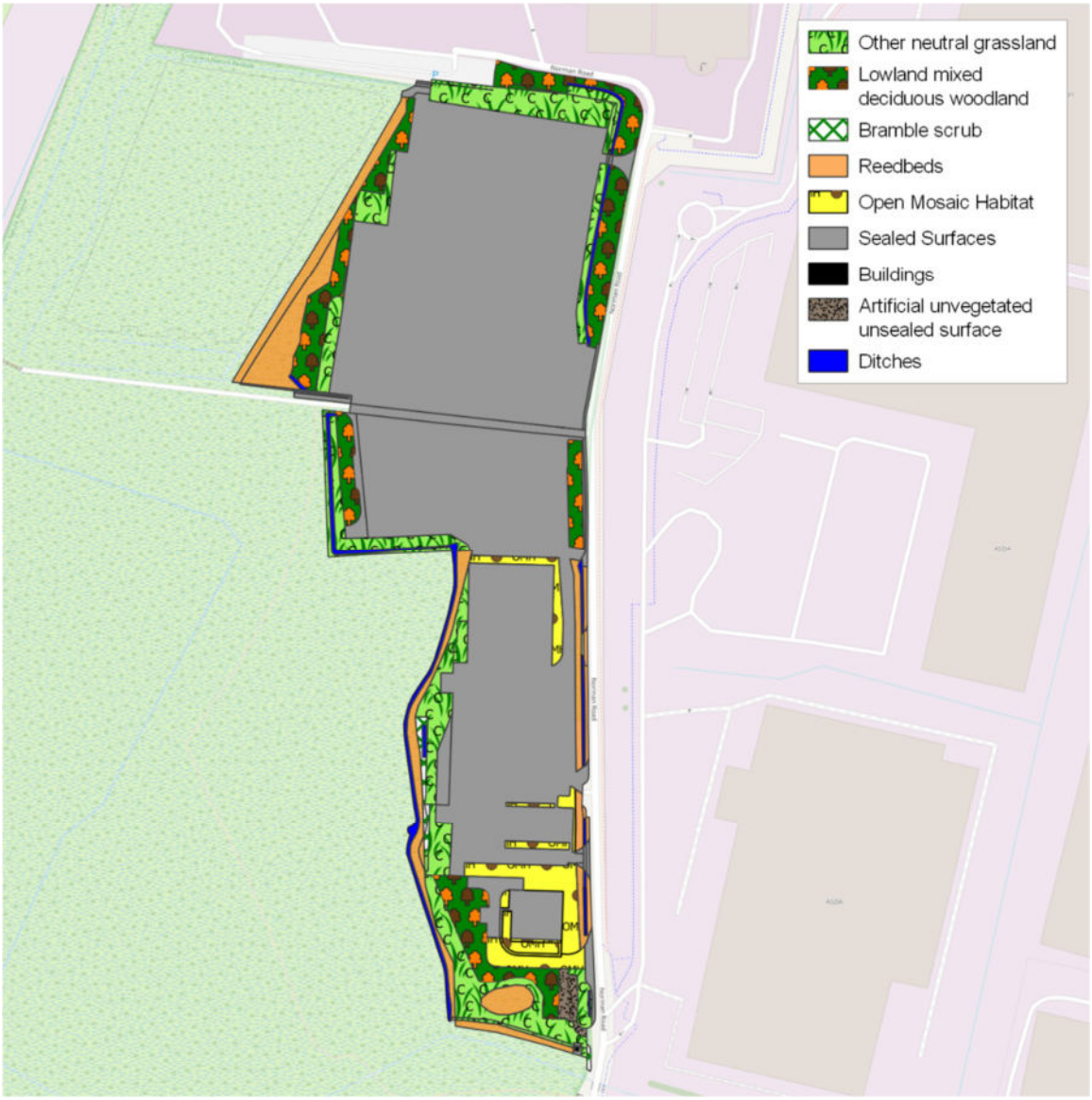


**Figure 19 – Indicative configuration of habitats within the CCF, incorporating required Open Mosaic Habitat and reedbed**

11.1.7. It is assumed that the majority of habitat creation and enhancement work, both onsite and offsite, will take place concurrently with construction of the Carbon Capture Facility and connecting pipework. However, woodland, reedbed, other neutral grassland creation as well as opportunities for Open Mosaic Habitat creation identified in the boundary of the CCF will follow the completion of construction work and begin alongside CCF commissioning, which is anticipated to result in a delay of two years.

### ONSITE

11.1.8. The post-development habitats expected onsite after construction within the CCF Area and Mitigation and Opportunities Area, are based on the Environmental Proposals set out in this document and are shown as UKHab habitat types in **Figure 17**. The location of this BNG provision is outlined in the schedule in section 11 of this report.

### OFFSITE

11.1.9. Habitat plans for the offsite BNG Opportunity Area are yet to be finalised. Deficits identified by the Metric resulting from construction of the Proposed Scheme have allowed identification of offsite provision requirements to be located at the former Thamesmead Golf Course or an alternative location.

11.1.10. The proposed habitats required comprise:

- Creation of up to 0.88ha of Open Mosaic Habitat of Moderate condition;
- Creation of up to 0.21ha of reedbed habitat of Moderate condition; and
- Enhancement of 7.70ha of neutral grassland from Poor to Moderate condition.

11.1.11. Elements of offsite post-development biodiversity following usage of the BNG Opportunity Area are quantified in Table 5 for area habitats and Habitat creation is detailed in Table 6 which are provided in the Appendix to this Outline LaBARDS. If an alternative area is used to deliver offsite Open Mosaic Habitat compensation (either the total amount required or part of this amount) and offsite BNG, these tables will be updated in the LaBARDS to be submitted to LBB for approval to demonstrate that a 10% overall BNG has been achieved.

11.1.12. For the avoidance of doubt, this Outline LaBARDS does not require that offsite habitat delivery for BNG has to be delivered at the BNG Opportunity Area – alternative proposals may be brought forward to achieve a 10% minimum, including all onsite if this is achievable.

## 11.2. BNG OUTCOME

11.2.1. The overall net change in biodiversity, with the onsite and offsite provision (whether at the BNG Opportunity Area or elsewhere) in the terrestrial and intertidal environments will equate to a minimum of 10.01% for area habitats and over 10% for terrestrial environments when considered in isolation, and 13.71% for watercourses.

11.2.2. Trading rules are satisfied, such that net gain is achieved both within terrestrial parts of the Site and habitats within the River Thames. This result utilises a combination of habitat creation and enhancement within the Site Boundary, at the offsite BNG Opportunity Area (or any other area that is used), and as further habitat improvements proposed to mudflat within the River Thames corridor discussed separately in the **BNG Report Appendix 7.1 (Document Reference 6.3)** and secured through separate DCO Requirement, to achieve a total net gain for biodiversity.

11.2.3. The approximate split at this time of the 10%+ BNG provision between onsite and offsite is 3% onsite and 7% offsite.

# 12. THE DELIVERY MECHANISM/S FOR THE PROPOSALS AND BNG STRATEGY

## 12.1. DELIVERY OF ENVIRONMENT PROPOSAL: ONSITE

12.1.1. The onsite aspects of the proposals are secured by their inclusion within the Order Limits for the Proposed Scheme, and the DCO requiring that the Proposed Scheme is carried out in accordance with the full LaBARDS, which must be in substantial accordance with this outline. As such, the creation and management measures set out in this document are secured through the DCO. This is explained further below.

12.1.2. The construction of the CCF and connecting pipework, will require land that currently forms part of an extant section 106 commitment that led to the establishment of the Crossness LNR. The Applicant proposes to mitigate this loss of land that currently forms part of the LNR, with the expansion of the existing Crossness LNR to encompass Norman Road Field to achieve delivery of an expanded Crossness LNR.

12.1.3. The DCO deals with these matters by:

- abrogating the existing section 106 provisions so they no longer apply within the Order limits;
- formally extending the LNR in legal terms; and
- requiring that the full LaBARDS incorporate an updated management plan based on the detailed design of the full LaBARDS measures.

12.1.4. This is to be supplemented by a Deed of Obligation which provides for relevant funding mechanisms to cover the staffing costs of managing the extended Nature Reserve.

12.1.5. The full LaBARDS(s) submitted prior to the commencement of development shall present an Ecological Monitoring Strategy (EMS) that would establish onsite biodiversity baselines (at the time of submission) and explain how biodiversity would be reassessed in the subsequent years.

12.1.6. The EMS shall include detailed and structured proposals used to establish whether proposed onsite mitigation, compensation and enhancement measures have been effective over a specified period. The EMS shall also be used to provide early warning of when contingencies and/or remedial measures will be triggered in the event that ecological objectives are not being achieved.

12.1.7. The EMS may be a section within the LaBARDS or a separate document. Implementation of the EMS over time will be informed by periodic Ecological Monitoring Reports (EMR) to be submitted to the Council at regular intervals, for

example in years 1, 2, 3, 5 of the development and then every 3 or 5 years. Further detail on the EMR are set out in section 14.

12.1.8. The existing management plan (see Appendix 2) for the Crossness LNR provides a sound framework for future management. The existing LNR management plan identifies aims and objectives and the Applicant's proposals provide opportunities for those remaining objectives to be delivered.

12.1.9. It is proposed that the management plan is replicated and updated for the expanded LNR following engagement with Thames Water, Buglife, graziers and the Friends of Crossness LNR and this will be provided as part of the full LaBARDS for approval. It is intended that the management plan would deliver the required management and maintenance details to deliver the on-site specified mitigation, enhancements and BNG targets set out in this Outline LaBARDS.

12.1.10. A review of the full LaBARDS(s), and any detailed habitat management and monitoring plans derived from it, will be undertaken through engagement with the above parties and LBB not less than every 3 years (or less frequent if agreed by LBB) , for the lifetime of the Proposed Scheme, to ensure that the document remains fit for purpose, as set out in section 14.

12.1.11. The Applicant will be obligated to manage the extended LNR in accordance with the full LaBARDS for the period that is the shorter of the remaining period of the existing Deed of Obligation commitment, or the operational life of the Carbon Capture Facility, unless another arrangement is agreed by LBB.

12.1.12. It is acknowledged that the existing LNR has an existing section 106 commitment for a remaining period of some 80 years which is longer than the current planned design life for the Proposed Scheme. The Deed of Obligation will provide a mechanism for any 'gap' in time between the end of the design life for the scheme and that remaining section 106 period.

12.1.13. The full LaBARDS will set out that the BNG Opportunity Area, or any alternative offsite BNG delivery mechanism should be maintained for 30 years from the date it is put in place.

12.1.14. The inclusion of Norman Road Field, currently under the ownership of Tilfen Land (part of Peabody Trust), supports the provision of habitat mitigation principally comprising the improvement in the condition of existing flood plain grazing marsh from Poor to Moderate, mitigating the physical loss of existing flood plain grazing marsh on the LNR lost as a result of the CCF footprint.

12.1.15. The Crossness LNR land identified within the Order limits that is not affected by the Carbon Capture Facility, has been included to provide opportunities for further enhancement works, including habitat creation/ improvement, ditch works,

relocation/ provision of equine facilities and improved public rights of way connections and to improve interpretation/visitor experience works. It has not been included to provide for habitat mitigation. Details of proposals for this area will be included in the full LaBARDS following additional engagement with Thames Water and Friends of Crossness LNR. This will include arrangements in respect of which each party will practically take on day-to-day maintenance and monitoring responsibility of this land between Thames Water and the Applicant. The Applicant acknowledges however, that it retains overall responsibility for compliance with the full LaBARDS.

12.1.16. The works proposed onsite for the Environmental Proposal are required to be consistent with the approved **Design Principles and Design Code (Document Reference 5.7)**, approved under other DCO Requirements, and the approved surface water drainage strategy for the Proposed Scheme.

## 12.2. DELIVERY OF ENVIRONMENT PROPOSAL: OFFSITE TERRESTRIAL

12.2.1. The elements of the BNG Strategy that are offsite that are required to be delivered through the DCO and details of the legal agreements which underpin its delivery and on-going maintenance will be submitted alongside the full LaBARDS submitted for approval. The Ecological Monitoring Strategy and Ecological Monitoring Reports referred to in sections 12.1 and 14 will also be developed for any offsite delivery of the Environmental Proposals, and submitted in the same way for onsite, as discussed in sections 12.1 and 14. These will be used to establish whether proposed BNG measures have been effective over a specified period.

12.2.2. A number of possible offsite BNG and Open Mosaic Habitat compensation delivery options are available to the Applicant:

- Delivery via habitat creation works at the former Golf Course at Thamesmead in the BNG Opportunity Area. Although not as progressed as had been anticipated, discussions with Peabody are ongoing. The Applicant has provided a schedule of quantified habitat requirements to Peabody to support delivery of the remaining BNG provision to be provided offsite. The proposal is that Peabody would deliver relevant habitats through a coordinated masterplanning process for the former Golf Course, led by their masterplan team working with the community masterplan group as is currently being undertaken, but this continues to be discussed; or
- Delivery of the habitats required at other habitat banks or locations suitable to the habitat. Options as they are currently understood are presented in the Off-Site Ecological Requirements Delivery Options report submitted to the Secretary of State. In summary, options under consideration include::

- utilising biodiversity units from habitat banks operating with the Greater Thames Estuary National Character Area (i.e. the same National Character Area in which the Proposed Scheme is located); and/or
- purchasing biodiversity units from other habitat banks outside the Greater Thames Estuary National Character Area, with the concurrent spatial risk multiplier applied.

12.2.3. Furthermore, if ultimately required for BNG purposes, the Applicant could purchase the necessary statutory credits. However, in accordance with BNG guidance and policy, this would be a last resort.

12.2.4. The Applicant will seek to achieve the identified net gain 'locally' where practicable, following a priority order of:

1. locations within the London Borough of Bexley;
2. locations within the National Character Area;
3. locations further afield;
4. where no specific scheme or location is available, by purchasing biodiversity credits.

12.2.5. The full LaBARDS will provide details of the process the Applicant has gone through in identifying the solution chosen to deliver~~s~~ its offsite requirements, providing justification where this does not fall within the London Borough of Bexley.

## 12.3. DELIVERY OF THE ACCESS AND RECREATION PROPOSALS: INCLUDING PROW ALTERATIONS AND UPGRADES

12.3.1. The Access and Recreation Proposals are set out in section 9 of this document.

12.3.2. Delivery of these proposals within the Order limits will be secured via:

- inclusion in the full LaBARDS, compliance with which is secured via DCO Requirements. This will ensure delivery of all improvements to the amenity of existing public rights of way such as interpretation boards and any new provision of informal/permissive paths and educational facilities. Sufficient land powers have been included in the DCO to facilitate these works; and
- where new PRoW are to be created or diversions are to be put in place, the route of these will be agreed with LBB pursuant to the drafting of the DCO. The DCO provides for this to happen formally and for the necessary modifications to the Definitive Map to be made.

The Access and Recreation Proposals offsite will be secured via the proposed Deed of Obligation. The Applicant would pay an Access Improvements Contribution to LBB for the costs of these works and any associated Statutory Order(s).

# 13. OUTLINE OF REQUIRED WORKS TO DELIVER THE PROPOSALS AND BNG STRATEGY

## 13.1. OVERVIEW

13.1.1. **Table 1** sets out the schedule of management proposals for landscape and habitat works (proposed and existing) across the Site comprising the CCF Area and the expanded Crossness LNR. For ease of reference the field name and area reference plan **Figure 7** is repeated to support the interpretation of the schedule.

13.1.2. Details of the full management practices across the Site and any offsite provision must be set out in any full LaBARDS approved by LBB under DCO Requirement. These will be developed by the Applicant in engagement with the graziers, Thames Water, Friends of Crossness Local Nature Reserve and Buglife in relation to the expanded Crossness LNR, and with Peabody or any other third party provider engaged by the Applicant in respect of offsite provision.

13.1.3. The public rights of way within the Site including the expanded Crossness LNR, will be maintained to accord with LBB requirements and described in the **Design Code (Document Reference 5.7)**. Initial establishment and aftercare works for new planting and habitat creation works will be carried out by an approved landscape contractor in accordance with good horticultural practice for a duration of 5 years and with specific reference to:

- BS 4428: Code of practice for general landscape operations;
- BS 7370: Grounds maintenance;
- BS 8545: Trees: from nursery to independence in the landscape recommendations;
- Common Standards Monitoring Guidance for Lowland Wetland Habitats; and
- Common Standards Monitoring Guidance for Lowland Woodland Habitats.

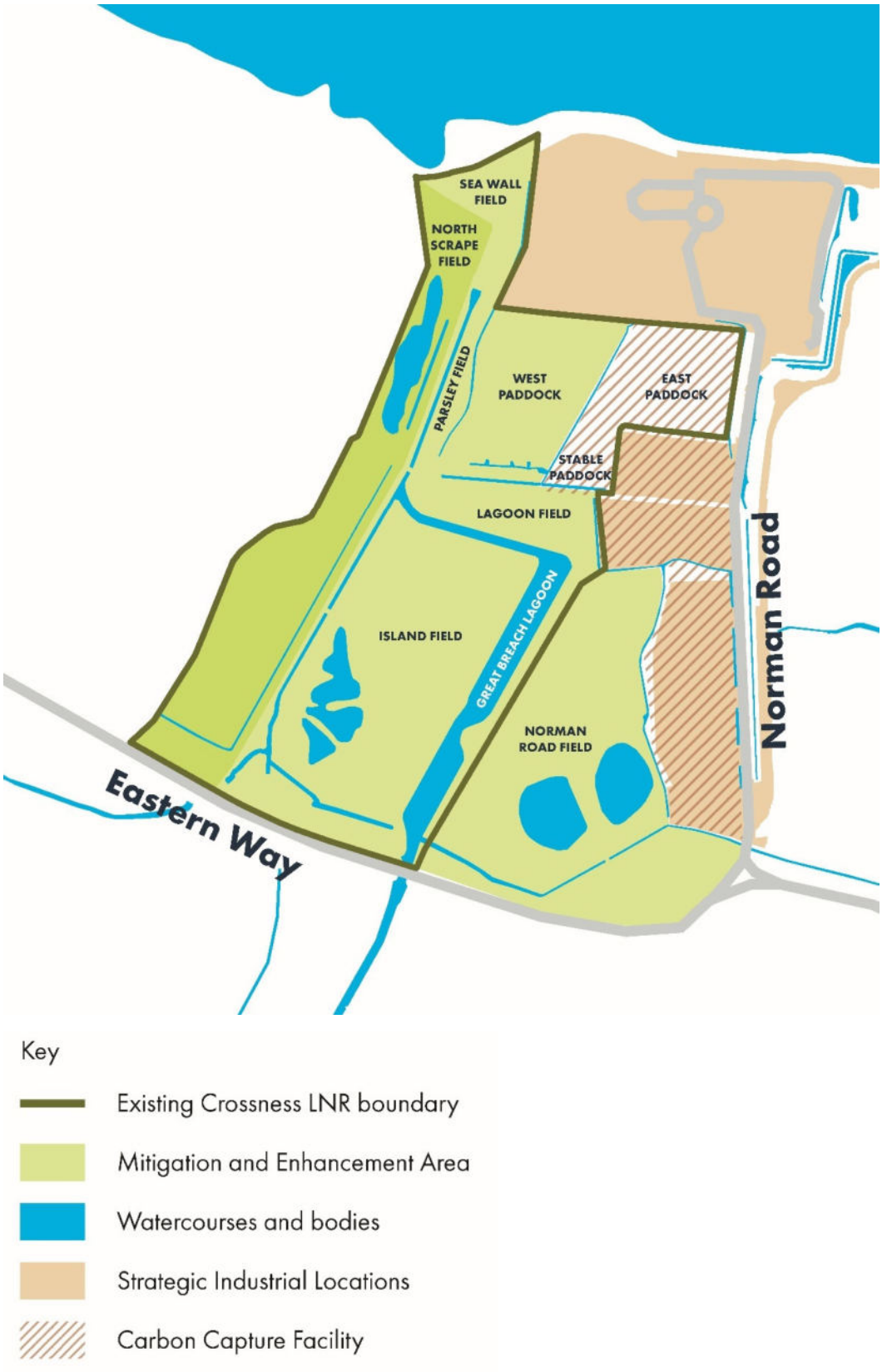


**Figure 7 – Onsite area and field reference plan (repeat)**

**Table 1 - Schedule of management proposals for landscape and habitat works**

| Area | Field | Habitat | Target Condition | Required Characteristics and Management Actions |
|---|---|---|---|---|
| **CCF** | CCF | Lowland Mixed Deciduous Woodland; Creation | Poor | • To be composed of tree species native to lowland England.<br>• Establish and maintain woodland to maturity across the 30-year management period, avoiding significant mortality of planted trees over this period, and re-planting of any gaps that occur.<br>The larger areas of woodland planting will be protected by protective fencing including rabbit proof netting (rather than individual tree guards). The height of the fencing will be a minimum of 1.2m.<br>Tree guards will be used for smaller areas of woodland/ scrub planting.<br>Any stakes, guards and ties will be monitored, replaced and adjusted to ensure tree growth is not adversely affected.<br>Any trees that fail or become damaged or diseased will be removed and replaced in the next planting season with others of similar size and species.<br>Regular checks will be made during the first five years of establishment to replace dead or diseased specimens, control weeds, re-stake plants and check deer/rabbit fencing.<br>Monitoring will follow the Common Standards Monitoring Guidance for Woodland Habitats. This will weight desirable species against the injurious ones. Monitoring results will be recorded and actions agreed on an annual basis to support establishment of diverse woodland and scrub. |

| | | | | |
|---|---|---|---|---|
| | | | | • As trees mature and gain size smaller saplings can be allowed to be shaded out, but a consistent woodland canopy should be maintained.<br>• Poor condition has been assumed due to the limitations of the woodland block sizes and proximity to the working CCF site. No further specific management prescriptions are required, but if possible marginal or understorey vegetation would raise the ecological importance of the woodland. |
| **CCF** | CCF | Neutral Grassland; Creation | Moderate | • Species composition and structure would be based on the specifications provided by the UKHab V2.01 habitat classification system for this habitat type.<br>• Sward height will be managed such that a variable structure is created; at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm, creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.<br>• Cover of bare ground is kept low to between 1% and 5% of the area of each habitat patch.<br>• Physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) will be kept less than 5% of total area, and any invasive non-native plant species (as listed on Schedule 9 of Wildlife and Countryside Act) are prevented from establishing.<br>• Seeding with a broad mix of wildflowers native to lowland England and a cutting regime to maintain them in the sward. |
| **CCF** | CCF | Reedbed; Creation | Moderate | • Species composition and structure based on the specifications provided by the UKHab V2.01 habitat classification system for reedbed, primarily planted with common reed Phragmites australis dominant. |

| | | | | |
|---|---|---|---|---|
| | | | | • Water supplies are of good water quality, with low turbidity and no obvious signs of pollution; this requirement is expected to be met by existing supplies of water at the site.<br>• Cover of scrub and scattered trees maintained at less than 10% of the reedbed (i.e. colonising trees such as willow Salix sp. and bramble Rubus fruticosus agg. to be controlled), with bare ground cover less than 5%.<br>• Invasive non-native plant species (as listed on Schedule 9 of Wildlife and Countryside Act) are prevented from establishing.<br>• The reedbed will have a diverse structure with areas of dense reed and open water. |
| **CCF** | CCF | Ditches; Creation | Poor | • Provide open water throughout the year.<br>• Provide a diverse range of emergent planting, including food plants for water voles such as yellow flag iris Iris pseudacorus (the rhizomes of which a particularly high-quality food for water voles), pendulous sedge Carex pendula and soft rush Juncus effusus. Reedmace Typha latifolia can also be included in the planting mix to provide a diverse structure. Dominance of reeds which may choke the vegetation community shall be controlled through cutting and to maintain open water.<br>• Regular management to remove rubbish and waste that may be dumped into the ditches from Norman Road will be undertaken. |
| **Mitigation and enhancement area** | Norman Road Field | Floodplain Grazing Marsh; Creation and Enhancement | Moderate | • Water supply to Norman Road Field will be modified to increase and retain ground water such that it is near the surface throughout the year.<br>• Species composition and structure based on the specifications provided by the UKHab V2.01 habitat classification system for Floodplain Grazing Marsh. |

| | | | | |
|---|---|---|---|---|
| | | | | • Water supplies are of good water quality, with low turbidity and no obvious signs of pollution; this requirement is expected to be met by existing supplies of water at the site.<br>• Cover of scrub and scattered trees maintained at less than 10% of the reedbed (i.e. colonising trees such as willow Salix sp. and bramble Rubus fruticosus agg. to be controlled), with bare ground cover less than 5%.<br>• Invasive non-native plant species (as listed on Schedule 9 of Wildlife and Countryside Act) are prevented from establishing.<br>• The planting mix will provide a diverse mix of native UK wetland grasses and wildflowers whilst maintaining the composition of botanical community associated with floodplain grazing marsh.<br>• Two ditches will be added as integral parts of the grazing marsh system to manage water supplies linking those on the boundary of the CCF to the Great Breach Dyke. |
| **Mitigation and enhancement area** | Norman Road Field | Reedbed; Creation | Moderate | • Species composition and structure based on the specifications provided by the UKHab V2.01 habitat classification system for reedbed, primarily planted with common reed Phragmites australis dominant.<br>• Water supplies are of good water quality, with low turbidity and no obvious signs of pollution; this requirement is expected to be met by existing supplies of water at the site.<br>• Cover of scrub and scattered trees maintained at less than 10% of the reedbed (i.e. colonising trees such as willow Salix sp. and bramble Rubus fruticosus agg. to be controlled), with bare ground cover less than 5%.<br>• Invasive non-native plant species (as listed on Schedule 9 of Wildlife and Countryside Act) are prevented from establishing. |

| | | | | |
|---|---|---|---|---|
| | | | | • The reedbed will have a diverse structure with areas of dense reed and open water. |
| **Mitigation and enhancement area** | Norman Road Field | Ditches; Creation | Poor | • Poor condition is assumed due to the limitations of the site's location close to several industrial facilities and the need to maintain open water to support other habitats. This would be dependent on the development of an emergent plant community of importance and is not considered feasible.<br>• Provide open water throughout the year.<br>• Provide a diverse range of emergent planting, including food plants for water voles such as yellow flag iris Iris pseudacorus (the rhizomes of which a particularly high-quality food for water voles), pendulous sedge Carex pendula and soft rush Juncus effusus. Reedmace Typha latifolia can also be included in the planting mix to provide a diverse structure.<br>• Invasive non-native plant species (as listed on Schedule 9 of Wildlife and Countryside Act) are prevented from establishing. |
| **Mitigation and enhancement area** | Norman Road Field | Woodland; Enhancement | Moderate | • Selective felling and trimming of trees to promote other gaining mature status to diversity the age structure of the woodland.<br>• Retention of dead wood (as logs from felling or brash piles from trimming works) within the woodland.<br>• Promotion of understorey plants through creation of space and removal of dominant plants such as bramble.<br>• Invasive non-native plant species (as listed on Schedule 9 of Wildlife and Countryside Act) are prevented from establishing. |
| **Crossness LNR** | West Paddock | Floodplain Grazing Marsh; Enhancement | Moderate | • Water supply to the West Paddock will be modified to increase and retain ground water such that it is near the surface throughout the year. |

| | | | | |
|---|---|---|---|---|
| | | | | • Species composition and structure based on the specifications provided by the UKHab V2.01 habitat classification system for Floodplain Grazing Marsh.<br>• Water supplies are of good water quality, with low turbidity and no obvious signs of pollution; this requirement is expected to be met by existing supplies of water at the site.<br>• Cover of scrub and scattered trees maintained at less than 10% of the reedbed (i.e. colonising trees such as willow Salix sp. and bramble Rubus fruticosus agg. to be controlled), with bare ground cover less than 5%.<br>• Invasive non-native plant species (as listed on Schedule 9 of Wildlife and Countryside Act) are prevented from establishing.<br>• The planting mix will provide a diverse mix of native UK wetland grasses and wildflowers whilst maintaining the composition of botanical community associated with floodplain grazing marsh. |

## 13.2. POST DEVELOPMENT DITCH MANAGEMENT FOR WATER VOLES

### METHODOLOGY AND APPROACH TO MANAGEMENT

13.2.1. The plan has been developed broadly following guidelines for management planning published by Countryside Council for Wales (CCW) in its document "A Guide to Management Planning for SSSIs" Alexander, M. (2020). 'A Guide to Management Planning'. WTSWW, Bridgend Wales, UK. This is a practical framework for management plans which focuses on the identification of the key habitat features that could vary over time (e.g. the growth of scrub vegetation, the expansion of reedbeds etc) and cause detrimental impacts on the valuable ecological receptors within a site.

13.2.2. Once the key features have been identified, Limits of Acceptable Change (LAC) are defined for each. LAC can have both upper limit and lower limits and are generally expressed as percentage cover of a site by particular plant species (however they can also be applied to populations of animals within a site). The key feature of LAC is that they should be easily monitored in the field and should not require labour-intensive survey work or scientific investigation. Thus, LAC have been defined for five key water vole habitat features within ditches at the Mitigation and Enhancement Area receptor sites:

- open water within ditches (as opposed to that covered by riparian vegetation);
- depth of available open water (and not clogged by sediment, organic matter etc);
- riparian vegetation cover (including food plants and those used for shelter);
- scrub cover of ditch (which excludes food plants from riparian habitats but may provide shelter); and
- presence of mink.

## 13.3. LIMITS OF ACCEPTABLE CHANGE AND MANAGEMENT ACTIONS

13.3.1. Table X describes the LAC for the five key habitat features identified, and management actions that will be undertaken if these limits are exceeded. All LAC will be monitored by an ecologist/land manager walking the Site and estimating vegetation cover and water depth by eye. Additional accuracy that may be afforded by quadrat mapping of vegetation of measuring depth directly are unlikely to provide additional benefits to determining if management actions are required but will pose additional costs to monitoring. A walkover and estimation of whether LAC have been exceeded provides a sufficient level of accuracy to maintain water vole habitat in a suitable stat

| Key Habitat Feature | Limits of Acceptable Change | Management Actions if LACs Exceeded |
|---|---|---|
| **Open water within ditches** | **Lower limit**: 75% open water/25% emergent vegetation cover.<br>**Upper Limit**: 90% open water/10% emergent vegetation cover. | **Lower limit**: Cut back and dig out vegetation (e.g. reedbed) to return to within LAC limits.<br>**Upper Limit**: Translocate emergent plants from other local ditches or plant new plugs into ditch. Fencing small plots with chicken wire if significant damage by waterfowl is suspected. |
| **Depth of available open water** | **Lower limit**: 1m water depth in centre of channel.<br>**Upper Limit**: Not required; maintain depth greater than 1m. | **Lower limit**: Dig out silt/organic matter from centre of channel.<br>**Upper Limit**: None required (ditch will only fill with material and get shallower). |
| **Riparian vegetation cover** | **Lower limit**: 80% of ditch bank covered by riparian vegetation.<br>**Upper Limit**: Not required; 100% of ditch bank covered by riparian vegetation optimal. | **Lower limit**: Translocate riparian plants from other local ditches or plant new plugs into ditch. Fencing small plots with chicken wire if significant damage by waterfowl is suspected.<br>**Upper Limit**: N/A |

| | | |
|---|---|---|
| **Scrub cover of ditch** | **Lower limit**: 10% of ditch covered or overhung by scrub[1].<br>**Upper Limit**: 25% of ditch covered or overhung by scrub. | **Lower limit**: Plant scrub plants to provide some overhanging vegetation.<br>**Upper Limit**: Cut back scrub reduce amount of overhanging vegetation. |
| **Presence of mink** | **Lower limit**: no lower limit, preferable to have no mink within the Site.<br>**Upper Limit**: mink detected within the Site. | **Lower limit**: None.<br>**Upper Limit**: Trap and destroy mink using mink rafts (see **Paragraph 2.1.25**). |

[1] Some scrub vegetation overhanging the ditch is likely to be of benefit by providing shelter for water voles from aerial predators.

# 14. MONITORING, MANAGEMENT AND MAINTENANCE

## 14.1. PRINCIPLES

14.1.1. The management objectives for onsite habitat and landscape proposals extending across the CCF Area and the Mitigation and Enhancement Area will be set out in the full LaBARDS but will be underpinned by the overarching strategy for the Proposed Scheme, which includes the following principles:

### JOINED UP

14.1.2. An overarching Riverside Campus management body with clear roles and responsibilities will be established. A single management body will be responsible for co-ordination, consistency and single point of contact.

### ONE NATURE RESERVE

14.1.3. The management responsibility for the expanded Crossness LNR will include Thames Water and the Applicant. It is assumed that management activities will be undertaken in conjunction with the Friends of CLNR supported by specialists for defined works based on an agreed management programme and where required.

### QUALITY

14.1.4. The quality and maintenance standards of the landscape, habitats, PRoW and recreation facilities will be defined in the full LaBARDS to ensure the quality of provision is maintained.

### LEADERSHIP

14.1.5. There will be a fully funded warden who will be responsible for community development, engagement and co-ordination between stakeholders and the voluntary sector including the Friends of the CLNR.

### MANAGING FOR POSITIVE OUTCOMES

14.1.6. Management of the Site and expanded LNR will ensure that the key aim of providing an appropriate visual setting for the Riverside Campus, a healthy natural environment for the community and an attractive landscape and recreational setting which will support a range of recreational activities as well as a range of thriving and diverse habitats are achieved. These will be achieved by overseeing and monitoring the regular management and maintenance operations discussed below.

14.1.7. Management would be considered effective if it maintains both the character of habitats in reference to their definition (primarily with reference to the UK Habitats Classification system, which incorporates definitions of Habitats of Principal Importance) and their target condition. Monitoring would assess:

- ditches against the criteria within the Statutory Biodiversity Metric to ensure they are meeting targets detailed, as well as against habitat definitions within the UK Habitats Classification system to check they are not deviating from their desired habitat type;
- plant species diversity in line with expectation of their UK Habitats Classification type; and
- that ground water levels are being maintained at the desired raised level.

## 14.2. MONITORING, MANAGEMENT AND MAINTENANCE REGIME

### ECOLOGICAL MONITORING REPORTS

14.2.1. The full LaBARDS(s) submitted prior to the commencement of development shall present an EMS for the onsite and offsite proposals. Further detail on the EMS and EMR is set out in section 12. References in this section to the EMS and EMR can mean one consolidated EMS and EMR dealing with both onsite and offsite provision, or separate EMS and EMR for each of onsite and offsite provision. The Applicant will confirm the approach to this matter in any full LaBARDS submitted to LBB for approval.

14.2.2. Ecological Monitoring Reports (EMR), which are distinct from the EMS, shall be submitted and approved in writing by LBB, in accordance with the intervals set out in the EMS, and not less than once every 5 years.

14.2.3. These EMR shall provide the results of post-construction monitoring as a ‘snap shot’ at a particular period in time. Each EMR will include a description of the methods used as well as the detailed results of surveys, and interpretation/ assessment of the results including remedial measures or alternative approaches needed in light of any monitoring results. The EMR provides an early warning of when contingencies and/or remedial measures will be triggered in the event that ecological objectives are not being achieved.

14.2.4. The EMR shall highlight where there is a need to undertake review and update any full LaBARDS(s) and EMS. In such instances, any updated LaBARDS and/or EMS shall be submitted with the relevant EMR for approval by LBB.

14.2.5. The EMR shall include details of:

- management and maintenance activities that have taken place during the monitoring period;
- results of monitoring and how these will influence management and maintenance activities going forward;
- recommendations for ongoing management and maintenance including a review of implications for any full LaBARDS(s) and detailed habitat management and monitoring plans derived from it; and

- details and engagement undertaken with stakeholders - Thames Water, Buglife, graziers, LBB and the Friends of Crossness LNR. The report shall confirm it has been reviewed by the stakeholders. Any updates to the full LaBARDS(s) as a result of that review shall be issued to LBB with EMR.

## LNR MANAGEMENT PROGRAMME OF WORKS

14.2.6. Details of management and maintenance procedures in the expanded LNR shall be defined in the submission of the full LaBARDS(s), following engagement with Thames Water, Buglife, graziers, and the Friends of Crossness LNR. These procedures should provide for the following matters.

14.2.7. The management of the Site and expanded LNR will work to a detailed and agreed annual programme of management and maintenance works.

14.2.8. The annual programme of works can be adjusted through the course of any year, if necessary, if conditions require this but should be reviewed not less than every 2 years seeking input from stakeholders including graziers, to ensure the annual maintenance requirements are still appropriate as the planting matures and habitats establish.

14.2.9. Any management and maintenance measures would take into consideration the recommendations set out in the EMS, EMR and Operational Environmental Management Plan secured through DCO Requirement, including seasonal constraints to address any timings of works as a result of wildlife nesting, breeding or emergence that must be strictly adhered to.

14.2.10. The annual programme of works of themselves are not required to be submitted to LBB for approval. These are intended to be operational documents, identifying regular management, maintenance and monitoring activities that will be defined by the full LaBARDS(s), EMS and outcome of the EMR, and subsequently reported on in the EMR (all of which are subject to approval from LBB).

## REVIEW OF FULL LABARDS(S)

14.2.11. Once in place a review of the full LaBARDS(s), incorporating as appropriate any EMS, EMR or programme of works, shall be carried out not less than every 5 years (or less frequent if agreed by LBB), for the lifetime of the Proposed Scheme, to ensure that the document, and the expanded Crossness Local Nature Reserve, remains fit for purpose and delivers on desired landscape, biodiversity, access and recreation outcomes.

14.2.12. This review will be undertaken alongside engagement with Thames Water, Buglife, graziers, LBB and the Friends of Crossness LNR.

14.2.13. Details of the review, and any updates to the full LaBARDS(s) as a result of that review, shall be submitted for approval by LBB.

# Appendices

# APPENDIX 1 - BNG DATA TABLES 1 – 6

**Table 0-1: Onsite Baseline Area Habitats**

| Habitat Type | Area (ha) | Condition | Strategic Significance | % of Site Area |
|---|---|---|---|---|
| | | | | |
| **Reedbeds** | 4.954 | Moderate | Formally identified in local strategy | 6.4 |
| **Other neutral grassland** | 2.197 | Moderate | Area not in local strategy | 2.8 |
| **Other neutral grassland** | 1.538 | Poor | Area not in local strategy | 2.0 |
| **Coastal floodplain and grazing marsh** | 14.429 | Poor | Formally identified in local strategy | 18.7 |
| **Modified grassland** | 1.771 | Poor | Area not in local strategy | 2.3 |
| **Bramble scrub** | 2.238 | N/A | Area not in local strategy | 2.9 |
| **Ponds and Standing Water (Priority Habitat) (Crossness LNR ponds and Waterbodies including Pond 6)** | 2.076 | Good | Formally identified in local strategy | 2.7 |
| **Open Mosaic Habitat on Previously Developed Land** | 0.982 | Poor | Location ecologically desirable but not in local strategy | 1.3 |
| **Developed land; sealed surface (including buildings and hardstanding)** | 9.799 | N/A | Area not in local strategy | 12.7 |
| **Artificial unvegetated unsealed surface (footpaths, gravel surfaces etc)** | 0.176 | N/A | Area not in local strategy | 0.2 |
| **Habitat already offset by Riverside 2** | 2.364 | N/A | Area not in local strategy | 3.1 |
| **Introduced Shrub** | 0.038 | N/A | Area not in local strategy | <0.1 |
| **Lowland mixed deciduous woodland** | 1.479 | Poor | Formally identified in local strategy | 1.9 |
| **Watercourse footprint – Ditches** | 1.193 | N/A | N/A | 1.5 |

| Habitat Type | Area (ha) | Condition | Strategic Significance | % of Site Area |
|---|---|---|---|---|
| | | | | |
| | | | | |
| **Littoral mud** | 6.131 | Moderate | Formally identified in local strategy | 7.9 |
| **Developed land; sealed surface (Middleton Jetty and Belvedere Power Station Jetty (disused) piers/supports)** | 0.218 | N/A | Formally identified in local strategy | 0.3 |
| **Intertidal hard structures (Middleton Jetty and Belvedere Power Station Jetty (disused))** | - | Poor | Formally identified in local strategy | 0.0 |
| **Watercourse footprint – Sub-tidal River Thames** | 25.569 | N/A | N/A | 33.1 |
| | | | | |
| | | | | |
| | | | | |

**Table 0-2: Onsite Baseline Watercourse Habitats**

| Habitat Type | Length (km) | Condition | Strategic Significance | Watercourse Encroachment | Riparian Encroachment |
|---|---|---|---|---|---|
| | | | | | |
| **Ditches** | 4.8 | Poor | Formally identified in local strategy | Minor | Minor/Minor |

| Habitat Type | Length (km) | Condition | Strategic Significance | Watercourse Encroachment | Riparian Encroachment |
|---|---|---|---|---|---|
| | | | | | |

**Table 0-3: Offsite Baseline Area Habitats**

| Habitat Type | Area (ha) | Condition | Strategic Significance | % of Site Area |
|---|---|---|---|---|
| **Reedbeds** | 0.264 | Moderate | Formally identified in local strategy | 1.6 |
| **Modified grassland** | 0.925 | Poor | Formally identified in local strategy | 5.7 |
| **Other neutral grassland** | 7.671 | Poor | Formally identified in local strategy | 46.9 |
| **Other neutral grassland** | 2.219 | Poor | Area/compensation not in local strategy/no local strategy | 13.6 |
| **Bramble scrub** | 0.667 | N/A | Formally identified in local strategy | 4.1 |
| **Mixed scrub** | 1.954 | Poor | Formally identified in local strategy | 11.9 |
| **Mixed scrub** | 0.123 | Poor | Area/compensation not in local strategy/no local strategy | 0.8 |
| **Ponds and standing water (priority habitat)** | 0.262 | Moderate | Formally identified in local strategy | 1.6 |
| **Artificial unvegetated, unsealed surface** | 0.463 | N/A | Area/compensation not in local strategy/no local strategy | 2.8 |
| **Developed land; sealed surface** | 0.397 | N/A | Area/compensation not in local strategy/no local strategy | 2.4 |
| **Other coniferous woodland** | 0.04 | Poor | Formally identified in local strategy | 0.2 |
| **Other woodland; broadleaved** | 1.378 | Poor | Formally identified in local strategy | 8.4 |
| | | | | |

**Table 0-1: Onsite Area Habitats Retained, Enhanced and Lost**

| Habitat Type | Strategic Significance | Area Retained (ha) | Area Enhanced (ha) | Area Lost (ha) | Enhancement Condition |
|---|---|---|---|---|---|
| | | | | | |
| **Reedbeds** | Formally identified in local strategy | 4.581 | 0.000 | 0.373 | N/A |
| **Other neutral grassland (Moderate Condition)** | Area/compensation not in local strategy/no local strategy | 1.532 | 0.000 | 0.665 | N/A |
| **Other neutral grassland (Poor Condition)** | Area/compensation not in local strategy/no local strategy | 1.455 | 0.046 | 0.037 | Moderate |
| **Coastal floodplain and grazing marsh** | Formally identified in local strategy | 5.398 | 6.989 | 2.042 | Moderate |
| **Modified grassland** | Area/compensation not in local strategy/no local strategy | 0.654 | 0.000 | 1.117 | N/A |
| **Bramble scrub** | Area/compensation not in local strategy/no local strategy | 1.333 | 0.000 | 0.905 | N/A |
| **Ponds and standing water (Priority Habitat) (Crossness LNR ponds and Waterbodies including Pond 6)** | Formally identified in local strategy | 2.076 | 0.000 | 0.000 | N/A |
| **Open Mosaic Habitat on Previously Developed Land** | Location ecologically desirable but not in local strategy | 0.000 | 0.000 | 0.982 | N/A |

| Habitat Type | Strategic Significance | Area Retained (ha) | Area Enhanced (ha) | Area Lost (ha) | Enhancement Condition |
|---|---|---|---|---|---|
| **Developed land; sealed surface (including buildings and hardstanding)** | Area/compensation not in local strategy/no local strategy | 9.182 | 0.000 | 0.617 | N/A |
| **Artificial unvegetated unsealed surface (footpaths, gravel surfaces etc)** | Area/compensation not in local strategy/ no local strategy | 0.135 | 0.000 | 0.041 | N/A |
| **Habitat already offset by Riverside 2** | Area/compensation not in local strategy/no local strategy | 0.000 | 0.000 | 2.364 | N/A |
| **Introduced Shrub** | Area/compensation not in local strategy/no local strategy | 0.038 | 0.000 | 0.000 | N/A |
| **Lowland mixed deciduous woodland** | Formally identified in local strategy | 0.481 | 0.998 | 0.000 | Moderate |
| **Watercourse footprint – Ditches** | Formally identified in local strategy | 1.102 | (See **Table** 0-2 ~~**Table** 0-2~~) | 0.091 | (See **Table** 0-2 ~~**Table** 0-2~~) |
| | | | | | |
| | | | | | |
| **Littoral mud** | Formally identified in local strategy | 6.130 | 0.000 | 0.001 | N/A |
| **Developed land; sealed surface (Middleton Jetty, Belvedere Power Station Jetty (disused) and Proposed Jetty piers/supports)** | Area/compensation not in local strategy/no local strategy | 0.218 | 0.000 | 0.000 | N/A |

| Habitat Type | Strategic Significance | Area Retained (ha) | Area Enhanced (ha) | Area Lost (ha) | Enhancement Condition |
|---|---|---|---|---|---|
| **Intertidal hard structures (Middleton Jetty, Belvedere Power Station Jetty (disused) and Proposed Jetty piers/supports)** | Formally identified in local strategy | 0.000 | 0.000 | 0.000 | N/A |
| **Watercourse footprint – Sub-tidal River Thames** | Formally identified in local strategy | 25.569 | 0.000 | 0.000 | N/A |
| | | | | | |
| | | | | | |

**Table 0-2: Onsite Watercourse Habitats Retained, Enhanced and Lost**

| Habitat Type | Length Retained (km) | Length Enhanced (km) | Length Lost (km) | Enhancement Condition |
|---|---|---|---|---|
| **Ditches** | 4.2 | 0.2 | 0.4 | Moderate |
| | | | | |

**Table 0-3: Onsite Area Habitat Creation (Terrestrial and Marine)**

| Habitat Type | Area Created (ha) | Condition | Strategic Significance | Delay in Starting Habitat Creation (Years) |
|---|---|---|---|---|
| **Other neutral grassland** | 1.738 | Moderate | Area/compensation not in local strategy/no local strategy | 2 |
| **Floodplain wetland mosaic and CFGM** | 0.672 | Moderate | Formally identified in local strategy | 0 |
| **Developed land; sealed surface** | 5.365 | N/A - Other | Area/compensation not in local strategy/no local strategy | 0 |
| **Reedbeds** | 0.505 | Moderate | Formally identified in local strategy | 0 |
| **Watercourse footprint – Ditches** | 0.176 | N/A - Other | Formally identified in local strategy | 0 |
| **Lowland mixed deciduous woodland** | 0.738 | Poor | Formally identified in local strategy | 2 |
| **Artificial unvegetated, unsealed surface** | 0.039 | N/A - Other | Area/compensation not in local strategy/no local strategy | 0 |
| **Developed land; sealed surface (Proposed Jetty piling in mudflat)** | 0.001 | N/A - Other | Area/compensation not in local strategy/no local strategy | 0 |
| | | | | |

### Table 0-4: Onsite Watercourse Habitat Creation

| Habitat Type | Length (km) | Condition | Strategic Significance | Watercourse Encroachment | Riparian Encroachment | Delay in Starting Habitat Creation (Years) |
|---|---|---|---|---|---|---|
| **Ditches** | 1.3 | Poor | Formally identified in local strategy | Minor | Minor/Minor | 0 |
| | | | | | | |

### Table 0-5: Offsite Area Habitats Retained, Enhanced and Lost

| Habitat Type | Strategic Significance | Area Retained (ha) | Area Enhanced (ha) | Area Lost (ha) | Enhancement Condition |
|---|---|---|---|---|---|
| **Reedbeds** | Formally identified in local strategy | 0.264 | 0.000 | 0.000 | N/A |
| **Modified grassland** | Formally identified in local strategy | 0.925 | 0.000 | 0.000 | N/A |
| **Other neutral grassland** | Formally identified in local strategy | 1.530 | 6.141 | 0.000 | Moderate |
| **Other neutral grassland** | Area/compensation not in local strategy/ no local strategy | 0.000 | 1.559 | 0.660 | Moderate |
| **Bramble scrub** | Formally identified in local strategy | 0.667 | 0.000 | 0.000 | N/A |
| **Mixed scrub** | Formally identified in local strategy | 1.954 | 0.000 | 0.000 | N/A |

| Habitat Type | Strategic Significance | Area Retained (ha) | Area Enhanced (ha) | Area Lost (ha) | Enhancement Condition |
|---|---|---|---|---|---|
| **Mixed scrub** | Area/compensation not in local strategy/no local strategy | 0.123 | 0.000 | 0.000 | N/A |
| **Ponds and standing water (priority habitat)** | Formally identified in local strategy | 0.262 | 0.000 | 0.000 | N/A |
| **Artificial unvegetated, unsealed surface** | Area/compensation not in local strategy/no local strategy | 0.031 | 0.000 | 0.432 | N/A |
| **Developed land; sealed surface** | Area/compensation not in local strategy/no local strategy | 0.397 | 0.000 | 0.000 | N/A |
| **Other coniferous woodland** | Formally identified in local strategy | 0.040 | 0.000 | 0.000 | N/A |
| **Other woodland; broadleaved** | Formally identified in local strategy | 1.378 | 0.000 | 0.000 | N/A |
| | | | | | |

**Table 0-6: Offsite Area Habitat Creation**

| Habitat Type | Area Created (ha) | Condition | Strategic Significance | Delay in Starting Habitat Creation (Years |
|---|---|---|---|---|
| | | | | |
| **Open Mosaic Habitat on Previously Developed Land** | 0.882 | Moderate | Formally identified in local strategy | 0 |
| **Reedbeds** | 0.210 | Moderate | Formally identified in local strategy | 0 |
| | | | | |

# APPENDIX 2 – CROSSNESS LNR MANAGEMENT PLAN

DECARBONISATION

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