



# ENVIRONMENTAL STATEMENT: 6.3 APPENDIX 7-3: INFORMATION TO INFORM A HABITAT REGULATIONS ASSESSMENT

DECARBONISATION

**Cory Decarbonisation Project**

**PINS Reference: EN010128**

**March 2024**

**Revision A**

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## ANNEX

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### ANNEX A

Habitats Regulations Assessment Screening (Stage 1) Assessment

## EXECUTIVE SUMMARY

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Cory currently operates an energy from waste facility (EfW) at Belvedere in southeast London, Riverside 1, and is in the process of constructing a second EfW facility, Riverside 2, that is due to be operational in 2026. Both facilities are consented to generate more than 50MW. To support these facilities, Cory is preparing for the submission of a Development Consent Order (DCO) application for with the construction and operation of post combustion carbon capture and storage facilities with the goal of capturing 95% of the flue gas CO<sub>2</sub> from each of Riverside 1 and Riverside 2 (the 'Proposed Scheme'). WSP has been commissioned to support the DCO process through provision of environmental services, including ecological surveys and impact assessment work.

National Network Sites (as defined in this document) are statutory designated sites of importance to nature conservation that are protected by the Conservation of Habitats and Species Regulations 2017 (as amended). Under this legislation 'Competent Authorities' must assess Plans and Projects for their potential to cause 'Likely Significant Effects' (LSE) on, or 'Adverse Effects on Integrity' (AEoI) of National Network Sites both alone and in-combination with other plans and projects. The assessment process is commonly referred to as Habitats Regulations Assessment (HRA).

This report aims to provide the Competent Authority with the information it needs to inform an assessment of LSE associated with the Scheme on National Network Sites and to make an appropriate assessment of the implications of the Proposed Scheme on National Network Sites both alone and in-combination with other plans and projects. HRA proceeds in stages which are described in **Section 2**. This report also determines whether further HRA stages (Stage 3 and 4) need to be applied to achieve compliance with legislation.

A report covering the initial phase of HRA, the Screening Assessment (Stage 1), has been undertaken to identify National Network Sites scoped into the HRA process, and LSE associated with the Proposed Scheme (**Annex A** to this document). Screening identified a single LSE that could potentially affect the Epping Forest Special Area of Conservation (SAC), which was agreed by Natural England. The identified LSE was:

- Operation Phase: Changes in Air Quality

Appropriate Assessment has determined that there would be no adverse effect on the integrity of the four Qualifying Features of Epping Forest SAC. Air quality changes across the five pollutants modelled would be <1.0% (rounded to 1 decimal place), a change classed as 'negligible', alone and in-combination with other plans or projects.

As no adverse effects on integrity have been identified, no further HRA stages are required.

## 1. INTRODUCTION

### 1.1. BACKGROUND

1.1.1 WSP has been instructed by Cory Environmental Holdings Limited (hereafter referred to as the Applicant) to prepare an Information to Inform a Habitat Regulations Assessment: Stage 2 - Appropriate Assessment, 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). The following figures are available in this Environmental Statement (ES):

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

1.1.2 The Applicant intends to construct and operate the Proposed Scheme to be linked with the River Thames. It comprises of the following key components, which are described below, and further detail is provided within **Chapter 2: Site and Proposed Scheme Description (Volume 1)**:

- The Carbon Capture Facility (including its associated Supporting Plant and Ancillary Infrastructure): the construction of infrastructure to capture a minimum of 95% of carbon dioxide (CO<sub>2</sub>) emissions from Riverside 1 and 95% of CO<sub>2</sub> emissions from Riverside 2 once operational, which is equivalent to approximately 1.3Mt CO<sub>2</sub> per year. 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 CO<sub>2</sub> captured as part of the Carbon Capture Facility.
- The Mitigation and Enhancement Area: land identified as part of the **Outline LaBARDS (Document Reference 7.9)** 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 LNR.
- 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.

1.1.3 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)**.

## 1.2. PURPOSE OF THIS REPORT

- 1.2.1 Statutory designated sites of international importance<sup>a</sup>, and by policy extension Ramsar wetland sites, hereafter collectively known as 'National Network Sites', are present in the wider area surrounding the Proposed Scheme, although it is not concurrent or adjacent with any of them. National Network Sites are statutory designated sites of importance to nature conservation that are protected by the Conservation of Habitats and Species Regulations 2017 (as amended)<sup>1</sup>. Under this legislation 'Competent Authorities' must assess Plans and Projects for their potential to cause 'Likely Significant Effects' (LSE) on, or 'Adverse Effects on Integrity' (AEoI) of National Network Sites, both alone and in-combination with other plans and projects. The assessment process is commonly referred to as Habitats Regulations Assessment (HRA).
- 1.2.2 This report aims to provide the Competent Authority with the information it needs to inform an assessment of LSE associated with the Proposed Scheme on National Network Sites and to make an appropriate assessment of the implications of the Scheme on National Network Sites both alone and in-combination with other plans and projects. HRA proceeds in stages which are described in **Section 2**. This report also determines whether further HRA stages (Stage 3 and 4) need to be applied to achieve compliance with legislation.
- 1.2.3 The initial phase of HRA, the Screening Assessment (Stage 1), has been undertaken to identify National Network Sites scoped into the HRA process, and LSE associated with the Proposed Scheme. This can be found in **Annex A**, and its findings are discussed below.

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<sup>a</sup> Special Areas of Conservation (SACs), Special Protection Areas (SPAs).

## 2. HRA PROCESS

### 2.1. HABITATS REGULATIONS ASSESSMENT

- 2.1.1 The NPPF as updated in December 2023<sup>2</sup> defines that any site within the definition at Regulation 8 of the Conservation of Habitats and Species Regulations 2017<sup>1</sup> (hereafter referred to as the Habitats Regulations), including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant Marine Sites as ‘National Network Sites’. The Habitats Regulations also protect a National Site Network of these sites.
- 2.1.2 Maintaining a coherent network of protected sites with overarching conservation objectives is still, following the UK’s departure from the European Union, required in order to:
- fulfil the commitment made by government to maintain environmental protections; and
  - continue to meet the UK’s international legal obligations, such as the Bern Convention, the Oslo and Paris Conventions (OSPAR), Bonn and Ramsar Conventions.
- 2.1.3 The NPPF<sup>2</sup> sets out the Government’s planning policies for England and how these should be applied. It provides a framework within which locally prepared plans for housing and other development (for the purposes of this assessment the Proposed Scheme is considered to be a development) can be produced. It must be taken into account in preparing the development plan and is a material consideration in planning decisions.
- 2.1.4 The NPPF<sup>2</sup> states, in paragraph 187, that listed or proposed Ramsar sites, potential SPA (pSPA), possible SAC (pSAC) and any site identified, or required, as compensatory measures for adverse effects on any of the above should be given the same protection.
- 2.1.5 For the purposes of this HRA, ‘National Network Site’ is used as a collective term to include all relevant designated sites as defined above.
- 2.1.6 Furthermore, NPPF<sup>2</sup> paragraph 188 states that:
- “The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site”.*
- 2.1.7 Regulation 63 (1) of the Habitats Regulations states that: *“A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—*

*(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and*  
*(b) is not directly connected with or necessary to the management of that site,*  
*—must make an Appropriate Assessment of the implications for that site in view of that site’s conservation objectives.”*

2.1.8 Where effects on a National Network Sites are likely to be significant, they must be subject to the second stage of the HRA process, Appropriate Assessment, where they are tested as to whether they would have adverse effect(s) on the “integrity” of the National Network Site. Following this, the Habitat Regulations<sup>1</sup> also make allowance for projects or plans to be completed if they satisfy ‘imperative reasons of overriding public interest (IROPI)’ (being Stages 3 and 4):

*“(a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or*  
*(b) any other reasons which the competent authority, having due regard to the opinion of the appropriate authority [DEFRA, following the UK’s departure from the European Union], consider to be imperative reasons of overriding public interest”.*

2.1.9 Regulations 64 and 68 of the Habitats Regulations<sup>1</sup> regulates such situations.

2.1.10 Although the UK has now left the European Union, Court of Justice of the European Union (CJEU) decisions issued prior to 1<sup>st</sup> January 2021 in respect of the Habitats Regulations remain relevant until subsequent UK court decisions overrule them.

## 2.2. STAGES OF HABITATS REGULATIONS ASSESSMENT

2.2.1 Guidance on the assessment of effects of plans or projects on National Network Sites for NSIP (and Project of National Significance such as the Proposed Scheme) is provided by the Planning Inspectorate’s Advice Note Ten<sup>2</sup> and has been used by this report. This sets out the stepwise approach that should be followed to enable Competent Authorities to discharge their duties under the Habitats Regulations<sup>1</sup>. The process used is usually summarised in four distinct stages of assessment:

- **Screening (Stage 1):** the process to identify the likely effects of a plan or project upon the qualifying features and conservation objectives of a National Network Site, either alone or in combination with other plans or projects and consider whether there will be any LSE. This has been undertaken, with the resulting report included as **Annex A** and summarised below at **Section 2.3**.
- **Appropriate Assessment (Stage 2):** detailed consideration of any LSE and whether they would lead to adverse effects on the integrity of the National Network Site, either alone or in combination with other plans and projects. Where there are adverse effect(s), mitigation may be considered to see whether it is possible to avoid them. Consent may only be granted at this stage if the Appropriate Assessment can conclude beyond reasonable scientific doubt that the plan or project will not have any adverse effect(s) (either alone or in-combination with

other plans or projects). If the mitigation options cannot avoid adverse any effect(s), then development consent can only be given if Stages 3 and 4 are followed.

- **Assessment of Alternative Solutions (Stage 3):** the process which examines alternative ways of achieving the objectives of the plan or project that avoids or have lesser adverse effect(s) on the integrity of the National Network Site(s).
- **Imperative Reasons of Overriding Public Interest (IROPI) (Stage 4):** the assessment where no alternative solutions exist and where adverse effect(s) remain. The assessment considers whether the development is necessary for IROPI and, if so, of the compensatory measures needed to maintain the overall coherence of the site or integrity of the National Network Site(s).

2.2.2 There is no specific definition of what constitutes a LSE, however, case law (European Court of Justice C-127/02<sup>3</sup>) clarified that in the context of an HRA, a LSE is one whose occurrence cannot be excluded based on objective information.

## 2.3. FINDINGS AT THE SCREENING STAGE (STAGE 1)

2.3.1 The Study Area used to identify National Network Sites scoped into the HRA process was defined as a zone of 15km from the Site Boundary, a distance appropriate to encompass possible effect pathways from the Proposed Scheme to National Network Sites. This zone was informed by guidance issued by the Environment Agency<sup>4</sup> in relation to emissions of power generation facilities of 50MW capacity or more, which require a 15km Study Area to account for effects of the emissions plume. This has been taken into account particularly given that the application of the Proposed Scheme is likely to impact the characteristics of the plume arising from the Riverside Campus as compared to the plumes currently arising from Riverside 1 and predicted to arise from Riverside 2 (at the time of writing, construction works for Riverside 2 are being undertaken), and this change will need to be considered as an effect. Both of the Applicant's EfW facilities are consented to generate over 50MW of energy. All National Network Sites within this zone were included and were subject to screening for LSE.

2.3.2 One National Network Site was identified during the Screening stage within the Study Area, Epping Forest SAC, which lies approximately 11.8km to the north of the Site Boundary, across the River Thames. The location of the Epping Forest SAC in relation to the Proposed Scheme is shown in **Figure 7-2: Internationally Important Statutory Designated Sites (Volume 2)**. Description of Epping Forest SAC is found within **Section 3** of this report. It has four qualifying features which are:

- Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrub layer (*Quercion robori-petraeae* or *Ilici-Fagenion*);
- *Lucanus cervus* - stag beetle;
- Northern Atlantic wet heaths with *Erica tetralix*; and
- European dry heaths.



2.3.3 Screening identified one potential LSE relating to this National Network Site as a result of the Proposed Scheme:

- Operation Phase: Changes in Air Quality.

2.3.4 Thus, assessment of this LSE for adverse effects on the integrity of Epping Forest SAC has been undertaken through Appropriate Assessment (HRA Stage 2), the results of which can be found in **Section 3**. This conclusion was agreed by Natural England in pre-application consultation.

## 2.4. ROLE OF MITIGATION

2.4.1 A ruling by the Court of Justice of the European Union (CJEU)<sup>5</sup> requires that mitigation measures tended to avoid or reduce the harmful effects of the plan or project on a National Network Site should not be considered at Stage 1, screening, or as an embedded element of a given project, and this was the approach undertaken by the Applicant for that stage. However, the ruling confirmed that such mitigation measures can be applied at Stage 2 Appropriate Assessment stage.

## 2.5. APPROPRIATE ASSESSMENT (STAGE 2)

### Methodology

2.5.1 The precautionary principle is applied at all stages of the HRA process. This means that projects or plans where effects are considered likely and those where uncertainty exists as to whether effects are likely to be significant must be taken forward to further stages in the HRA process. Appropriate Assessment (Stage 2) follows screening. Any LSE identified within Stage 1 are subject to detailed examination to determine whether they would have adverse effects on the integrity of National Network Sites through inhibiting the success of their conservation objectives, either alone or in combination with other plans or projects.

2.5.2 Examination of the impacts of the LSE is undertaken with regard to the following sources of information to determine whether adverse effects on integrity would occur:

- Natural England Supplementary Advice on Conservation Objectives ('SACO'), where this is available;
- baseline data from environmental surveys and desk-based studies such as modelling work; and
- reasoned argument, professional judgement and experience from similar projects.

2.5.3 Results of the Appropriate Assessment undertaken for the Proposed Scheme are set out in **Section 4**.

## Integrity

2.5.4 The currently applied definition of integrity in relation to National Network Sites comes from the Office of the Deputy Prime Minister (ODPM) Circular 06/2005<sup>6</sup> which states: *“The integrity of a site is the coherence of the site’s ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or populations of species for which the site has been designated”*.

2.5.5 In addition, European Commission guidance<sup>5</sup> on managing Natura 2000 sites emphasises that site integrity involves its ecological structure, function and ecological processes and that the assessment of adverse effects should focus on, and be limited to, the conservation objectives of a given National Network Site.

## Adverse Effects

2.5.6 An adverse effect on a site’s integrity is likely to be one which prevents the National Network Site from making the same contribution to favourable conservation status for the relevant feature as it did at the time of designation. In addition, an adverse effect would be one which caused a detectable reduction of the features for which a site was designated.

2.5.7 The Habitats Directive defines the conservation status of species as ‘favourable’ when:

- population dynamics of the species concerned indicate that it is maintaining itself on a long term basis as a viable component of its natural habitats;
- the natural range of the species is predicted to be maintained for the foreseeable future; and
- there is, and will probably continue to be, a sufficient habitat to maintain its populations on a long term basis.

2.5.8 ‘Favourable’ conservation status of habitats is defined by the Habitats Directive as occurring when:

- its natural range and area covered within that range are stable or increasing; and
- the specific structure and functions which are necessary for its long term maintenance exist and are likely to continue to exist for the foreseeable future.

2.5.9 The European Commission guidance<sup>5</sup> also recommends that, when considering the ‘integrity of the site’, it is important to take account of the possibility that effects can manifest over the short, medium or long term.

2.5.10 Where examination reveals adverse effects on integrity would arise as a result of the Proposed Scheme, options are considered that would avoid or mitigate effects and maintain the integrity of the National Network Site (Epping Forest SAC) and its Qualifying Features.

## 2.6. FURTHER HRA STAGES (STAGE 3 AND 4)

- 2.6.1 Stages 3 and 4 are outside of the purpose of this report as the Appropriate Assessment in **Section 3** concludes that once appropriate mitigation measures have been considered the Proposed Scheme will not have adverse effects (alone or in-combination with other plans or projects) on Epping Forest SAC (the relevant National Network Site) and its Qualifying Features.

### 3. APPROPRIATE ASSESSMENT

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#### 3.1. NATIONAL NETWORK SITE MANAGEMENT STATEMENT

3.1.1 The Proposed Scheme is not directly connected with, or necessary for, the management of Epping Forest SAC. The Proposed Scheme has not been conceived solely to further the conservation of these sites and nor is it essential to the management of this National Network Site.

#### ASSESSMENT OF CHANGES IN AIR QUALITY ON EPPING FOREST SAC

3.1.2 Analysis of operation phase emissions for all designated sites has been undertaken through the approach and modelling as described in **Chapter 5: Air Quality (Volume 1)**.

3.1.3 The operational Proposed Scheme would not lead to changes in local road traffic patterns. However, two sources of air quality change would comprise:

- an increase in vessel movement frequency; and
- changes in characteristics of the emissions plumes released from the Riverside Campus following the installation and operation of the Carbon Capture Facility.

3.1.4 Vessel movements would lead to changes in air quality in the local area only and are therefore irrelevant to Epping Forest SAC, whereas changes in emissions plume characteristics would be transmitted both locally and at distance.

3.1.5 Characteristics of the emissions plumes released from the Riverside Campus will change when the Proposed Scheme is operational. Changes can spread some distance from the Proposed Scheme and ecological features in a wide zone of influence (ZOI) have been assessed for effects changes in airborne ammonia, nitrogen oxides, sulphur dioxides, and for the deposition of nitrogen and acid. Following the approach adopted in **Chapter 5: Air Quality (Volume 1)**, which uses criteria from Environment Agency guidance<sup>3</sup>, where the percentage change in concentration of these pollutants is <1.0% (rounded to 1 decimal place), the change is described as 'negligible' regardless of the concentration. The concentration threshold for all five pollutants modelled was therefore not exceeded at Epping Forest SAC.

3.1.6 Modelling effects of the emissions of other plans or projects is neither practicable nor necessary given the extent of the Study Area (~76,600ha) and the large distance between the Proposed Scheme and Epping Forest SAC (11.8km). The modelled impact of the Proposed Scheme at this distance is imperceptible (<1% of any relevant critical load or critical level). Taking into account the conservatism inherent in the dispersion modelling, these impacts can robustly be considered to be so small that the Proposed Scheme could not reasonably be considered likely to act in-combination with other plans or projects to have an adverse effect on the integrity of Epping Forest SAC.

3.1.7 Thus, changes in air quality at the Proposed Scheme’s operation phase would not lead to adverse effects on any of the Qualifying Features of Epping Forest SAC, either alone or in-combination with the other plans or projects.

3.1.8 As no adverse effects on integrity have been identified, no further HRA stages are required.

### 3.2. HRA INTEGRITY MATRIX

3.2.1 Further to the Planning Inspectorate’s Advice Note Ten<sup>2</sup>, which applies to DCO project, the information in **Section 3** is presented in **Table 3-1** below in the form of an integrity matrix.

3.2.2 The detail in the matrix confirms that the Proposed Scheme does not have an adverse effect on the integrity of the Qualifying Features of Epping Forest SAC.

**Table 3-1: HRA Integrity Matrix 1: Epping Forest SAC**

Name of European Site and Designation: Epping Forest Special Area of Conservation (SAC)		
EU Code: UK0012720		
Distance to the Proposed Scheme: 11.8km		
Likely Significant Effect: Air Quality changes		
National Network Site Features	Adverse Effect on Integrity	
	Construction Phase	Operational Phase
Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrub layer ( <i>Quercion robur-petraeae</i> or <i>Ilici-Fagenion</i> )	N/A (screened out)	No adverse effect on integrity <sup>A</sup>
<i>Lucanus cervus</i> - stag beetle	N/A (screened out)	No adverse effect on integrity <sup>A</sup>
Northern Atlantic wet heaths with <i>Erica tetralix</i> ; and	N/A (screened out)	No adverse effect on integrity <sup>A</sup>
European dry heaths	N/A (screened out)	No adverse effect on integrity <sup>A</sup>
<b>Note:</b> <sup>A</sup> – No adverse effects on integrity have been identified, as detailed in <b>Section 3.1</b> .		

3.2.3 The assessment has determined that the effect likely on the Qualifying Features falls below the concentration threshold for all five pollutants modelled.

## 4. RESULTS OF APPROPRIATE ASSESSMENT AND CONCLUSIONS

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- 4.1.1 One LSE was identified at the screening stage that could potentially affect the Epping Forest SAC. This was:
- Operation Phase: Changes in Air Quality
- 4.1.2 Stage 2 Appropriate Assessment was undertaken to provide the required information for the Competent Authority to make an informed decision on the Proposed Scheme. The Appropriate Assessment has demonstrated that none of the four Qualifying Features receive an adverse effect on their integrity, as air quality changes across the five pollutants modelled would be <1.0% (rounded to 1 decimal place); a change classed as 'negligible'.
- 4.1.3 As no adverse effects on integrity have been identified, alone or in-combination with other plans or projects, no further HRA stages are required.

## 5. REFERENCES

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- <sup>1</sup> HMSO. (2017). 'Conservation of Habitats and Species Regulations 2017' (as amended).
- <sup>2</sup> Planning Inspectorate (2022). 'Advice Note Ten: Habitats Regulations Assessment relevant to nationally significant infrastructure projects'. Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-ten/>
- <sup>3</sup> Judgement of the Court (Grand Chamber). (2004). 'Case C-127 /02, Directive 92/43/EEC -Conservation of natural habitats and of wild flora and fauna'.
- <sup>4</sup> Environment Agency. (2021). 'Air emissions risk assessment for your environmental permit'. Available at: <https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>
- <sup>5</sup> CJEU Judgment. (2013). 'Case C-258/11, Sweetman v. An Bord Pleanála'.
- <sup>6</sup> Office of the Deputy Prime Minister. (2005). 'Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impacts within the Planning System'.

# Annex A

## **HABITATS REGULATIONS ASSESSMENT SCREENING (STAGE 1) ASSESSMENT**





# INFORMATION TO INFORM A HABITAT REGULATIONS ASSESSMENT: STAGE 1 - SCREENING

**DECARBONISATION**

## Cory Decarbonisation Project

**PINS Reference: EN010128**

**March 2024**

Revision A

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## EXECUTIVE SUMMARY

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Cory Environmental Holdings Limited (Cory) is part of the Cory Group, one of the UK's leading resource management companies. Its core activity, recovering energy from residual waste, is undertaken at the Riverside Campus, located adjacent to the River Thames at Belvedere in the London Borough of Bexley (LBB). Riverside 1, an EfW facility generating up to 80.5 megawatt (MW) of electricity, has been operational since 2011. Riverside 2, an EfW facility with a generating capacity of approximately 98MW is currently under construction and anticipated to be operational in 2026.

Cory (hereafter referred to as 'the Applicant') is preparing for the submission of a Development Consent Order (DCO) application for both facilities to be retrofitted with post combustion carbon capture and storage capabilities with the goal of capturing 95% of the flue gas CO<sub>2</sub> from Riverside 1 and Riverside 2 (the 'Proposed Scheme').

Further information is provided in **Chapter 1: Introduction (Volume 1)** and **Chapter 2: Site and Proposed Scheme Description (Volume 1)** of this Environmental Statement (ES). The extent of the Proposed Scheme is referred to as the 'Site Boundary', shown in **Figure 1**. This report supersedes previous versions submitted for consultation since the PEIR stage, by updating details of the Proposed Scheme including the extent of the Site Boundary.

This report comprises a Habitats Regulations Assessment (HRA) screening assessment and has been undertaken with engagement with Natural England and informed by development of the Proposed Scheme. It will be submitted with the DCO application to provide the competent authority with the information it needs to inform an assessment of Likely Significant Effects (LSEs) associated with the Proposed Scheme) on Habitats Sites, to make an appropriate assessment of the implications of the Proposed Scheme (and other schemes that could act in-combination with the Proposed Scheme) on Habitats Sites in view of the sites' conservation objectives, and whether mitigation can offset these effects. The competent authority may agree to the Proposed Scheme only after having ascertained that it will not adversely affect the integrity of the Habitats Sites. This report has determined that further HRA stages need to be applied to achieve compliance with legislation.

One Habitats Site was identified in the Study Area, Epping Forest Special Area of Conservation. The following LSEs were identified:

- Operation Phase: Changes in Air Quality

Stage 2 Appropriate Assessment will be undertaken to provide the required information for the competent authority to make an informed decision on the Proposed Scheme. The Appropriate Assessment process will examine in more detail the LSEs identified above, as well as potential in-combination effects with other schemes, and whether they would lead to adverse effects on the Habitats Site as a result of the Proposed Scheme.

## 1. INTRODUCTION

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### 1.1. BACKGROUND

- 1.1.1. Cory Environmental Holdings Limited (Cory) is part of the Cory Group, one of the UK's leading resource management companies. Its core activity, recovering energy from residual waste, is undertaken at the Riverside Campus, located adjacent to the River Thames at Belvedere in the London Borough of Bexley (LBB). Riverside 1, an EfW facility generating up to 80.5 megawatt (MW) of electricity, has been operational since 2011. Riverside 2, an EfW facility with a generating capacity of approximately 98MW is currently under construction and anticipated to be operational in 2026.
- 1.1.2. Cory (hereafter referred to as 'the Applicant') is preparing for the submission of a Development Consent Order (DCO) application for both facilities to be retrofitted with post combustion carbon capture and storage capabilities with the goal of capturing 95% of the flue gas CO<sub>2</sub> from Riverside 1 and Riverside 2 (the 'Proposed Scheme'). It will be one of the largest carbon capture projects in the UK and will be supported by the use of a new jetty for the onward transportation of the captured carbon.
- 1.1.3. Further information is provided in **Chapter 1: Introduction (Volume 1)** and **Chapter 2: Site and Proposed Scheme Description (Volume 1)** of this Environmental Statement (ES). The extent of the Proposed Scheme is referred to as the 'Site Boundary', shown in **Figure 1**.
- 1.1.4. This report supersedes previous versions submitted for consultation since the PEIR stage, by updating details of the Proposed Scheme including the extent of the Site Boundary.

### 1.2. PURPOSE OF THIS REPORT

- 1.2.1. The Proposed Scheme lies along the southern bank of the River Thames between Crossness Sewage Treatment Works and Crossness Local Nature Reserve to the west, Iron Mountain Records Storage Facility and Asda Belvedere Distribution Centre to the east, with the River Thames to the north and the A2016 to the south. It is located at Norman Road North, Lower Belvedere, London, DA17 6JY (centred on National Grid reference: TQ 4967 8066 and extending to 60.11ha).
- 1.2.2. This report comprises a Habitats Regulations Assessment (HRA) screening assessment and has been undertaken with engagement with Natural England and informed by development of the Proposed Scheme. It will be submitted with the DCO application to provide the competent authority with the information it needs to inform an assessment of Likely Significant Effects (LSEs) associated with the Proposed Scheme) on Habitats Sites, to make an appropriate assessment of the implications of the Proposed Scheme (and other schemes that could act in-combination with the Proposed Scheme) on Habitats Sites in view of the sites' conservation objectives, and whether mitigation can offset these effects. The competent authority may agree to the Proposed Scheme only after having ascertained that it will not adversely affect the integrity of the Habitats Sites.

## 2. DESCRIPTION OF THE PROPOSED SCHEME

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- 2.1.1. The Proposed Scheme has been subject to an Environmental Impact Assessment (EIA) and an Environmental Statement (ES) has been produced describing its likely effects, and mitigation for them, on the environment. **Chapter 2: Site and Proposed Scheme Description (Volume 1)** of the ES provides a detailed description of the Proposed Scheme which has not been reproduced here in its entirety; however, a summary of the key features of the Proposed Scheme are provided below.
- 2.1.2. The UK Government has recognised that the installation of new renewable electricity production can only go ‘so far’ to meet the net zero target and avoid major climate change impacts, with these impacts further heightened in the context of the Intergovernmental Panel on Climate Change (IPCC) 2022 report<sup>a</sup>. As such, a key part of achieving net zero and mitigating the future impacts of climate change is the introduction of carbon capture and storage infrastructure, both to decarbonise existing industrial emitters and to facilitate the provision of negative emissions to offset industries that cannot decarbonise completely. Carbon capture and storage infrastructure is recognised by the Government as key in the net zero transition in the:
- Energy White Paper;
  - Clean Growth Strategy (including its CCS Action Plan);
  - Industrial Decarbonisation Strategy;
  - Draft Overarching National Policy Statement for Energy (EN-1);
  - Draft National Policy Statement for Renewable Energy Infrastructure (EN-3);
  - British Energy Security Strategy; and
  - Powering Up Britain.
- 2.1.3. In this context, it is notable that by 2026 (when Riverside 2 is expected to be operational), the combined emissions of Riverside 1 and Riverside 2 will be responsible for the single largest source of EfW derived CO<sub>2</sub> emissions in the UK, being up to 1.66 million tonnes (Mt) of CO<sub>2</sub> per year. Combined, the facilities of the Riverside Campus are a key CO<sub>2</sub> emitter within the UK.
- 2.1.4. The Carbon Capture and Storage Project will capture up to 95% of these emissions, the equivalent to approximately 1.3Mt CO<sub>2</sub> per year. Furthermore, with the feedstock to Riverside 1 and Riverside 2 comprising approximately 50% biogenic content, the Carbon Capture and Storage Project has the potential to result in net-negative CO<sub>2</sub> emissions, of approximately 0.6Mt per year of CO<sub>2</sub><sup>b</sup>.

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<sup>a</sup> IPCC. (2022). IPCC Sixth Assessment Report. Available at: [REDACTED]

<sup>b</sup> Cory. (2022). ‘Cory Decarbonisation Project Section 35 Request’. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1109718/cory-decarbonisation-project-section-35-request.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1109718/cory-decarbonisation-project-section-35-request.pdf)

- 2.1.5. As such, the Proposed Scheme will be part of a regional effort to enable the decarbonisation of emissions in London and the Southeast of England.
- 2.1.6. The Carbon Capture and Storage facility will broadly consist of the following stages:
- Stage 1 – Flue Gas Supply;
  - Stage 2 – Carbon Capture Plant;
  - Stage 3 – Compression, Conditioning and Liquefaction;
  - Stage 4 – Liquefied CO<sub>2</sub> Buffer Storage; and
  - Stage 5 – Liquefied CO<sub>2</sub> Loading System.
- 2.1.7. It is proposed that the Carbon Capture and Storage facility is a 2-train design with two independent systems for Stages 1 to 3 that could be applied separately to Riverside 1 and 2. The LCO<sub>2</sub> Buffer Storage (Stage 4) and Liquid CO<sub>2</sub> Loading System (Stage 5) shall be common for the Carbon Capture and Storage Project.
- 2.1.8. A new jetty within the River Thames (the Proposed Jetty) is required to export the LCO<sub>2</sub>. The loading platform would be installed in close proximity to the onsite buffer storage. The Proposed Jetty would include pedestrian access and potentially vehicle access.
- 2.1.9. Ancillary infrastructure and equipment likely to be included within the Proposed Scheme are listed in **Chapter 2: Site and Proposed Scheme Description (Volume 1)** of the ES. This includes a backup power supply, for example a battery energy storage system and/or emergency standby generator. The use of a battery energy storage system would also provide resilience to the National Grid and support the movement towards zero-carbon electricity.
- 2.1.10. In addition to the above, there will be consideration of a heat recovery and thermal storage system that will redirect heat produced from the Carbon Capture and Storage processes into the proposed Riverside Heat Network. This approach will benefit the scale and availability of the Riverside Heat Network.

### 3. HRA PROCESS

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#### 3.1. LEGISLATIVE AND PLANNING POLICY CONTEXT

##### HABITATS REGULATIONS ASSESSMENT

- 3.1.1. The Conservation of Habitats and Species Regulations 2017 (as amended, hereafter referred to as the Habitats Regulations) protects a national network of sites within the UK consisting of Special Areas of Conservation ('SAC'; focussed on intrinsically important habitats and biological populations other than birds) and Special Protection Areas ('SPA'; focussed on protecting important bird populations and the habitats that support them). This National Site Network, termed the Natura 2000 network prior to the UK's departure from the European Union, supports and forms part of a wider network of sites within Europe.
- 3.1.2. As a result of the 2019 Habitats Regulations references to Natura 2000 in the 2017 Regulations, and in guidance, are now taken to refer to the 'National Site Network'.
- 3.1.3. Maintaining a coherent network of protected sites with overarching conservation objectives is still required to:
- fulfil the commitment made by government to maintain environmental protections; and
  - continue to meet our international legal obligations, such as the Bern Convention, the Oslo and Paris (OSPAR) Conventions, Bonn and Ramsar Conventions.
- 3.1.4. Regulation 63 (1) of the Habitats Regulations states that '*A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—*
- (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and*
- (b) is not directly connected with or necessary to the management of that site,*
- must make an Appropriate Assessment of the implications for that site in view of that site's conservation objective".*
- 3.1.5. Where effects on a habitats site are likely to be significant, they must be subject to the second stage of the HRA process, Appropriate Assessment. Conservation of Habitats and Species Regulations 2017 (as amended) also make allowance for projects or plans to be completed if they satisfy 'imperative reasons of overriding public interest (IROPI)'<sup>c</sup>. Regulations 64 and 68 cover such situations.

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<sup>c</sup> '*(a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or (b) any other reasons which the competent authority, having due regard to the opinion of the European Commission, consider to be imperative reasons of overriding public interest.*'

3.1.6. Although the UK has now left the European Union, Court of Justice of the European Union (CJEU) decisions issued prior to 1<sup>st</sup> January 2021 remain binding until subsequent UK court decisions overrule them. Further to the case of *Harris v Environment Agency*, it is clear that article 6(2) of the Habitats Directive still continues to take effect.

### **NATIONAL PLANNING POLICY FRAMEWORK 2021 (NPPF)**

3.1.7. The NPPF sets out the Government’s planning policies for England and how these should be applied. It provides a framework within which locally prepared plans for housing and other development (for the purposes of this assessment the Proposed Scheme is considered to be a development) can be produced. It must be considered in preparing the development plan and is a material consideration in planning decisions.

3.1.8. The NPPF (at para 179) states that when considering the conservation and enhancement of the natural environment, with regard to habitats and biodiversity, the Local Planning Authority should:

*“...protect and enhance biodiversity and geodiversity, plans should:*

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
- b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity”.*

3.1.9. Para 181 to 182 of the NPPF states: The following should be given the same protection as habitats sites:

181:

- a) “potential Special Protection Areas and possible Special Areas of Conservation;*
- b) listed or proposed Ramsar sites; and*
- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites”.*

182: *“The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site”.*



## 3.2. STAGES OF HABITATS REGULATIONS ASSESSMENT

3.2.1. Although no clarification has been provided by the UK Government or its agencies (e.g. Natural England) on the applicability of existing guidance following the UK's withdrawal from the European Union (EU), the EU (Withdrawal) Act 2018 likely supports the use of such guidance documents through Section 6(2) which states:

*“[domestic courts and tribunals] may have regard to anything done by the CJEU or another EU entity [i.e. the European Commission] ... so far as it is relevant to any matter before the court or tribunal”*

3.2.2. Thus, existing guidance on the assessment of effects of plans or projects on Natura 2000 sites (now Habitats Sites in the UK) issued by the European Commission<sup>d</sup> has been used by this assessment, alongside guidance issued by the Planning Inspectorate in National Infrastructure Planning Advice Note 10<sup>e</sup> (AN10). These documents set out the step-wise approach which should be followed to enable competent authorities to discharge their duties under the Habitats Regulations. The process used is usually summarised in four distinct stages of assessment which are described below and shown in **Figure 2**.

- **Screening (Stage 1):** the process to identify the likely effects of a plan or project upon the qualifying features and conservation objectives of a Habitats Sites, either alone or in combination with other plans or projects and consider whether there will be a LSE.
- **Appropriate Assessment (Stage 2):** detailed consideration of LSEs and whether they would lead to significant adverse effects on the integrity of the Habitats Sites, either alone or in combination with other plans and projects. Where there are adverse effects, mitigation is considered to offset them. Consent may only be granted at this stage if the Appropriate Assessment can conclude beyond reasonable scientific doubt that the plan or project will not have adverse effects (alone or in-combination with other plans or projects). If the mitigation options cannot avoid adverse effects, then development consent can only be given if Stages 3 and 4 are followed.
- **Assessment of Alternative Solutions (Stage 3):** the process which examines alternative ways of achieving the objectives of the plan or project that avoid or have lesser adverse effects on the integrity of the Habitats Sites.

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<sup>d</sup> European Commission (2018) Managing Natura 2000 Sites: the provisions of Article 6 of the Habitats Directive 92/43/CEE. Brussels: European Commission.

<sup>e</sup> Planning Inspectorate (2022). Advice Note 10: Habitats Regulations Assessment relevant to nationally significant infrastructure projects. Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-ten/>

- **Imperative Reasons of Overriding Public Interest (IROPI) (Stage 4):** the assessment where no alternative solutions exist and where adverse effects remain: an assessment of whether the development is necessary for IROPI and, if so, of the compensatory measures needed to maintain the overall coherence of the site or integrity of the Habitats Sites.

3.2.3. The method for assessing the likely significance of an effect will be based on the environmental sensitivity (or value/importance) of a receptor (the site concerned) and the magnitude of change from baseline conditions. There is no specific definition of what constitutes a LSE, but case law (CJEU C-127/02<sup>f</sup>) clarified that in the context of an HRA, a LSE is one whose occurrence cannot be excluded based on objective information.

3.2.4. The information and conclusions provided by this assessment will be updated and finalised as the Proposed Scheme progresses, with final information to be presented as required by Section 6 of AN10 and its associated template matrices.

### 3.3. SCREENING (STAGE 1)

3.3.1. An initial broad screening of Habitats Sites to investigate the potential for effects pathways linking them the Proposed Scheme has been undertaken and is referred to as 'screening'. The screening process was wide-ranging and took into consideration the sensitivity and mobility of Habitats Site Qualifying Features, e.g. marine mammal and bat species, as well as the nature of the proposed works and working methods.

3.3.2. Its purpose is to identify the likely impacts upon a Habitats Site of a project or a plan, either alone or in combination with other plans or projects and considers whether these impacts are likely to be significant. It will include:

- determining whether the plan is directly connected with or necessary for the management of applicable sites (SAC, SPA, Ramsar);
- describing the project/plan that may have the potential for significant effects upon applicable sites;
- undertaking an initial scoping for potential direct and indirect impacts upon applicable sites;
- assessing the likely significance of any potential effects identified as resulting from these impacts, both alone and in-combination with other plans and projects; and
- excluding sites where it can be objectively concluded that there will be no significant effects.

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<sup>f</sup> CJEU - C-370/12 / Judgment Thomas Pringle v Government of Ireland and Others.

- 3.3.3. Results of the screening assessment are set out in Section 4. It should be noted that due to the early stage of assessment no list of plans or projects that could act in-combination with the Proposed Scheme is available at this time. The assessment in relation to in-combination effects will be undertaken in later versions of this assessment.
- 3.3.4. Following the judgement handed down by the CJEU in Case C-323/17<sup>9</sup>, it is no longer appropriate to consider measures taken specifically to reduce a project's potential impact on European designated sites into account at the screening stage. Accordingly, no reference to mitigation is made, or relied upon, in this screening assessment.

### **3.4. FURTHER HRA STAGES (STAGE 2, 3 AND 4)**

- 3.4.1. Stages 2, 3 and 4 are outside of the purpose of this report, which covers only Stage 1 (screening). The findings of this report will define the scope of the assessment of LSEs through an Appropriate Assessment (Stage 2) if they are identified. The Appropriate Assessment would, where necessary, identify alternative solutions to the Proposed Scheme (Stage 3), and also inform any IROPI arguments at Stage 4 that may be required. If options identified at Stage 2 cannot avoid or mitigate adverse effects, then development consent can only be given if Stages 3 and 4 are followed and passed.

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<sup>9</sup> Case C-323/17 People Over Wind & Peter Sweetman v Coillte Teoranta ('People over Wind').

## 4. IDENTIFICATION OF HABITATS SITES

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### 4.1. STUDY AREA AND SITES IDENTIFIED

- 4.1.1. This defines the geographic limits from the Proposed Scheme used to identify Habitats Sites to be considered within the HRA process and to be screened for LSEs. The Study Area reflects the high sensitivity of qualifying features of Habitats Sites and the fact they often support species that are mobile and widely ranging, such as birds.
- 4.1.2. The principal criterion defining the Study Area is a zone of 15km surrounding the Site Boundary, a distance appropriate to encompass possible effect pathways from the Proposed Scheme to Habitats Sites. This zone has been informed by guidance issued by the Environment Agency in relation to emissions of power generation facilities of 50MW capacity or more, which require a 15km Study Area to account for effects of the emissions plume<sup>h</sup>. This has been taken into account particularly given that the application of the Carbon Capture and Storage Project is likely to impact the characteristics of the plume arising from the Riverside Campus as compared to the plumes currently arising from Riverside 1 and predicted to arise from Riverside 2, and this change will need to be considered as an effect. All Habitats Sites within this zone have been included into this stage of the HRA process and are subject to screening for LSEs.
- 4.1.3. One Habitats Site was identified during the Screening stage within 15km of the Site Boundary, Epping Forest SAC, which lies approximately 11.8km to the north of the Site Boundary, across the River Thames. The location of the Epping Forest SAC is shown within **Figure 3**.

### 4.2. REASONS FOR DESIGNATION

- 4.2.1. Epping Forest SAC is designated on the basis that it supports habitats and populations of species that are of importance at an international/European level. The qualifying features are set out in **Table 4-1**, below.

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<sup>h</sup> Environment Agency (2021). Air emissions risk assessment for your environmental permit. Available at: <https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>.

**Table 4-1: Epping Forest SAC Qualifying Features**

Qualifying Feature	Description <sup>i</sup>
<b>Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrub layer (<i>Quercion robori-petraeae</i> or <i>Ilici-Fagenion</i>)</b>	This Annex I type comprises beech <i>Fagus sylvatica</i> forests with holly <i>Ilex</i> , growing on acid soils, in a humid Atlantic climate. Sites of this habitat type often are, or were, managed as wood-pasture systems, in which pollarding of beech and oak <i>Quercus spp.</i> was common. This is known to prolong the life of these trees.
<b><i>Lucanus cervus</i> - Stag beetle</b>	The stag beetle <i>Lucanus cervus</i> is the UK's largest terrestrial beetle, and amongst the most spectacular, reaching 7cm in length. Larvae develop in decaying tree stumps and fallen timber of broad-leaved trees in contact with the ground, especially of apple <i>Malus spp.</i> , elm <i>Ulmus spp.</i> , lime <i>Tilia spp.</i> , beech <i>Fagus sylvatica</i> and oak <i>Quercus spp.</i> Such timber is an essential feature for conservation of structure and function of the habitat for this species. Development takes around 3-4 years. Adults are active on warm evenings, but probably only the males fly regularly and come readily to lights. Adults have been recorded from May to September or even October, though they are most abundant in early summer.
<b>Northern Atlantic wet heaths with <i>Erica tetralix</i></b>	Wet heath usually occurs on acidic, nutrient-poor substrates, such as shallow peats or sandy soils with impeded drainage. The vegetation is typically dominated by mixtures of cross-leaved heath <i>Erica tetralix</i> , heather <i>Calluna vulgaris</i> , grasses, sedges and <i>Sphagnum</i> bog-mosses.
<b>European dry heaths</b>	European dry heaths typically occur on freely-draining, acidic to circumneutral soils with generally low nutrient content. Ericaceous dwarf-shrubs dominate the vegetation. The most common is heather <i>Calluna vulgaris</i> , which often occurs in combination with gorse <i>Ulex spp.</i> , bilberry <i>Vaccinium spp.</i> or bell heather <i>Erica cinerea</i> , though other dwarf-shrubs are important locally. Nearly all dry heath is semi-natural, being derived from woodland through a long history of grazing and burning.

<sup>i</sup> Joint Nature Conservation Committee. Available at: <https://sac.jncc.gov.uk/habitat/>.

### 4.3. CONSERVATION OBJECTIVES

4.3.1. Conservation objectives for Epping Forest SAC comprise the following:

- maintain or restore the extent and distribution of qualifying habitats and habitats of qualifying species;
- maintain or restore the structure and function (including typical species) of qualifying natural habitats;
- maintain or restore the structure and function of the habitats of qualifying species;
- maintain or restore the supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;
- maintain or restore the populations of qualifying species; and
- maintain or restore the distribution of qualifying species within the site.

### 4.4. SUPPLEMENTARY ADVICE ON CONSERVATION OBJECTIVES

- 4.4.1. In England, the conservation objectives should be read in conjunction with the Supplementary Advice on Conservation Objectives ('SACO') published by Natural England. The supplementary advice sets out how the Conservation Objectives for each qualifying interest can be met, in relation to various different criteria. For example, SACO may set out the population size a qualifying interest species needs to reach in order to meet the Conservation Objective "maintain or restore the populations of qualifying interest species".
- 4.4.2. Where a Conservation Objective is being met, SACO provide advice on how the Conservation Objective can be maintained. Where a Conservation Objective is not being met, SACO provide advice on the steps needed to restore the qualifying interest concerned.
- 4.4.3. Relevant SACO for Epping Forest SAC have been reviewed on the Natural England website<sup>j</sup> and are reported in **Table 4-2** below.

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<sup>j</sup> <https://publications.naturalengland.org.uk/publication/5908284745711616>

**Table 4-2: Epping Forest SAC Supplementary Advice on Conservation Objectives**

Qualifying Interest	Supplementary Advice on Conservation Objectives
<p><b>Northern Atlantic wet heaths with <i>Erica tetralix</i>; wet heathland with cross-leaved heath</b></p>	<p>Supporting processes (on which the feature relies): Air Quality.</p> <p>Restore as necessary, the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this feature of the site on the Air Pollution Information System (APIS)<sup>k</sup>.</p> <hr/> <p>Supporting processes (on which the feature relies): soils, substrate and nutrient cycling.</p> <p>Restore the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the H4010 wet heath habitat.</p> <p><i>‘...further work is likely to be necessary to address the background environmental pressures such as excessive nitrogen deposition and increasing recreational impacts (e.g., excessive dog-waste, intensive mountain-biking etc)...’</i></p>
<p><b>European Dry Heaths</b></p>	<p>Restore as necessary, the concentrations and deposition of air pollutants to, at or below the site-relevant Critical Load or Level values given for this feature of the site on the APIS.</p>
<p><b>Atlantic acidophilous beech forests with <i>Ilex</i> and sometimes also <i>Taxus</i> in the shrub layer (<i>Quercion robur-petraeae</i> or <i>Ilici-Fagenion</i>)</b></p>	<p>Structure and function (including its typical species): Soils, substrate and nutrient cycling.</p> <p>Maintain the properties of the underlying soil types, including structure, bulk density, total carbon, pH, soil nutrient status and fungal: bacterial ratio, to within typical values for the H9120 habitat.</p> <p><i>‘...Threats to the soil quality include:</i></p>

<sup>k</sup> [www.apis.ac.uk](http://www.apis.ac.uk)

Qualifying Interest	Supplementary Advice on Conservation Objectives
	<p><i>(a) Nutrient enrichment from elevated atmospheric nitrogen deposition, sewage spills and excessive dog waste.</i></p> <p><i>(b) Excessive compaction through uncontrolled development, heavy vehicles, intensive footfall and recreational activities.</i></p> <p><i>Pollution from fly-tipping, abandoned vehicles, road run-off and litter, waste from adjacent developments and residential areas.'</i></p> <p>Structure and function (including its typical species):          root zones of ancient trees</p> <p>Maintain roots and good soil structure within and around the root zones of the mature and ancient tree cohort.</p> <p><i>'... Unless carefully managed, activities such as construction, forestry management, mountain biking, and intensive trampling (by grazing livestock and human feet during recreational activity) may all contribute to root damage and excessive soil compaction around ancient trees.'</i></p> <p>Restore as necessary, the concentrations and deposition of air pollutants to at or below the site-relevant Critical Load or Level values given for this H9120 woodland feature of the site on the APIS.</p>
<p><b>Stag beetle</b></p>	<p>Supporting processes (on which the feature and/or its supporting habitat relies): Air quality.</p> <p>Maintain or, where necessary, restore concentrations and deposition of air pollutants to, at or below the site-relevant Critical Load or Level values given for this feature of the site on the APIS.</p>



## 5. SCREENING ASSESSMENT

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### 5.1. HABITATS SITE MANAGEMENT STATEMENT

5.1.1. The Proposed Scheme is not directly connected with, or necessary for, the management of Epping Forest SAC, identified in **Section 4** as within the HRA Study Area. The Proposed Scheme has not been conceived solely to further the conservation of these sites and nor is it essential to the management of this site.

### 5.2. IDENTIFICATION OF IMPACTS

5.2.1. Although the ES identifies a variety of construction phase impacts of the Proposed Scheme, these will all be confined to its local area and not be transmitted over a long distance. Effects of habitat loss and fragmentation, noise and vibration, dust, surface water run-off and lighting associated with the Proposed Scheme would not be transmitted over the 11.8km distance between it and Epping Forest SAC. The large area of urban Greater London in the intervening landscape and lack of hydrological or other connections between the Proposed Scheme and the SAC would act as a barrier to effects of these impacts. Therefore, no construction phase impacts have been identified through the HRA process.

5.2.2. The same conclusion has been adopted for the operation phase where noise and vibration, maintenance activities, surface water run-off and lighting are all considered to be local impacts that would not act at distance. In addition, no impacts on road traffic patterns during construction and operation would occur over the 11.8km distance between the Proposed Scheme and Epping Forest SAC that could lead to effects through air quality changes. Similarly, changes in vessel movement frequency during operation would not lead to air quality changes over the 11.8km distance. Consequently, these are not considered operation phase impacts. However, air quality changes as a result of the Proposed Scheme could occur and act at distance, and thus one impact has been identified for the operation phase:

- Operation Phase: Changes in Air Quality – Air quality changes may result from the Proposed Scheme. Therefore, there is potential for long term impacts within the Site Boundary, immediate surroundings, and further afield such as at Epping Forest SAC.

5.2.3. Any decommissioning would be likely to be completed in less time than the construction of the Proposed Scheme and, whilst the Applicant has no plans to decommission and remove the Proposed Scheme, were it to be removed, it would be likely to require a similar degree of plant, equipment and disturbance to that predicted during construction. Given that the Applicant has no plans to decommission the Proposed Scheme, further consideration of decommissioning is not considered appropriate.

### 5.3. CONSIDERATION OF EFFECTS

- 5.3.1. Relevant threats and pressures identified for Epping Forest SAC, the only Habitats Site in the Study Area, have been considered against impacts of the Proposed Scheme, and information included within Section 2 of this report describing it, to screen for potentially significant effects on Qualifying Features and Conservation Objectives.
- 5.3.2. Results of this screening process are presented in **Table 5-1** (operation phase).

**Table 5-1: Epping Forest SAC; Screening for LSEs at the Proposed Scheme Operation Phase**

<b>Qualifying Feature</b>	<b>Impact</b>	<b>LSE?</b>	<b>Reasoning</b>
<b>Northern Atlantic wet heaths</b>	Changes in air quality	Yes	Air quality changes from changes to the emissions arising from the Riverside Campus as a result of the Carbon Capture and Storage Project may be transmitted to and/or affect disposition levels at Epping Forest SAC. Such operation phase air quality changes represent a likely effect of the Proposed Scheme on northern Atlantic wet heaths during the operation phase and will be taken forward for further consideration at Stage 2.
<b>European dry heaths</b>	Changes in air quality	Yes	Air quality changes from changes to the emissions arising from the Riverside Campus as a result of the Carbon Capture and Storage Project may be transmitted to and/or affect disposition levels at Epping Forest SAC. There may also be emissions from increased levels of vessel movements supplying the Proposed Scheme. Such operation phase air quality changes represent a likely effect of the Proposed Scheme on European dry heaths during the operation phase and will be taken forward for further consideration at Stage 2.
<b>Atlantic acidophilous beech forests</b>	Changes in air quality	Yes	Air quality changes from changes to the emissions arising from the Riverside Campus as a result of the Carbon Capture and Storage Project may be transmitted to and/or affect disposition levels at Epping Forest SAC. Such operation phase air quality changes represent a likely effect of the Proposed Scheme on Atlantic acidophilous beech forests during the operation phase and will be taken forward for further consideration at Stage 2.
<b>Stag beetle</b>	Changes in air quality	Yes	Air quality changes from changes to the emissions arising from the Riverside Campus as a result of the Carbon Capture and Storage Project may be transmitted to and/or affect disposition levels at Epping Forest SAC. Such operation phase air quality changes represent a likely effect of the Proposed Scheme on Stag beetle during the operation phase and will be taken forward for further consideration at Stage 2 at this Habitats Site.

## 6. RESULTS OF SCREENING AND CONCLUSIONS

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- 6.1.1. One LSE was identified which could potentially affect the Epping Forest SAC. This comprises:
- Operation Phase: Changes in Air Quality
- 6.1.2. Stage 2 Appropriate Assessment will be undertaken to provide the required information for the competent authority to make an informed decision on the Proposed Scheme. The Appropriate Assessment process will examine in more detail the LSEs identified above, as well as potential in-combination effects with other schemes, and whether they would lead to adverse effects on Habitats Sites as a result of the Proposed Scheme.
- 6.1.3. LSEs have been identified in the absence of mitigation. A ruling by the Court of Justice of the European Union (CJEU)<sup>1</sup> requires that mitigation measures should only be considered at Stage 2 Appropriate Assessment and not at screening stage or as an embedded element of a project. However, suitable measures to avoid and mitigate LSEs can be applied at Stage 2 Appropriate Assessment stage and LSEs that have been identified could be managed through the application of good working practices that would mitigate for potential adverse effects during the operation stage.

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<sup>1</sup> Case C-258/11, Sweetman v. An Bord Pleanála, CJEU judgment 11 April 2013

# FIGURES



LEGEND:

Site Boundary

Riverside 2

Riverside 1

STATUS: FINAL



Cory Environmental Holdings Ltd

PROJECT: Cory Decarbonisation Project

TITLE: Site Boundary Location Plan

SCALE @A3: 1:12,500	DRAWN: JM	APPROVED: PJ
VERSION: 1	DATE: 01/03/24	DATE: 01/03/24
PROJECT No: 70090329	DRAWING No: Figure 1	

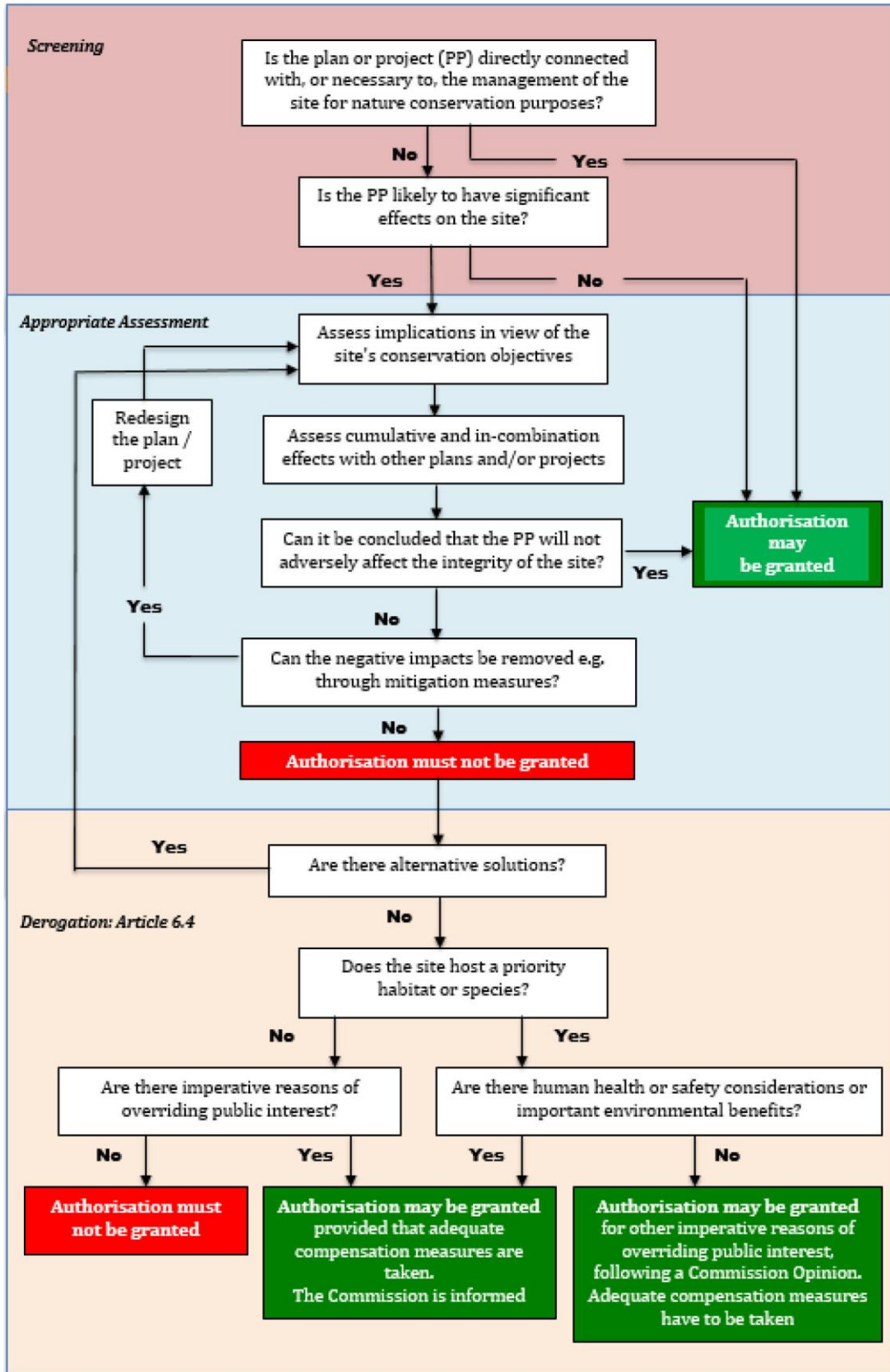
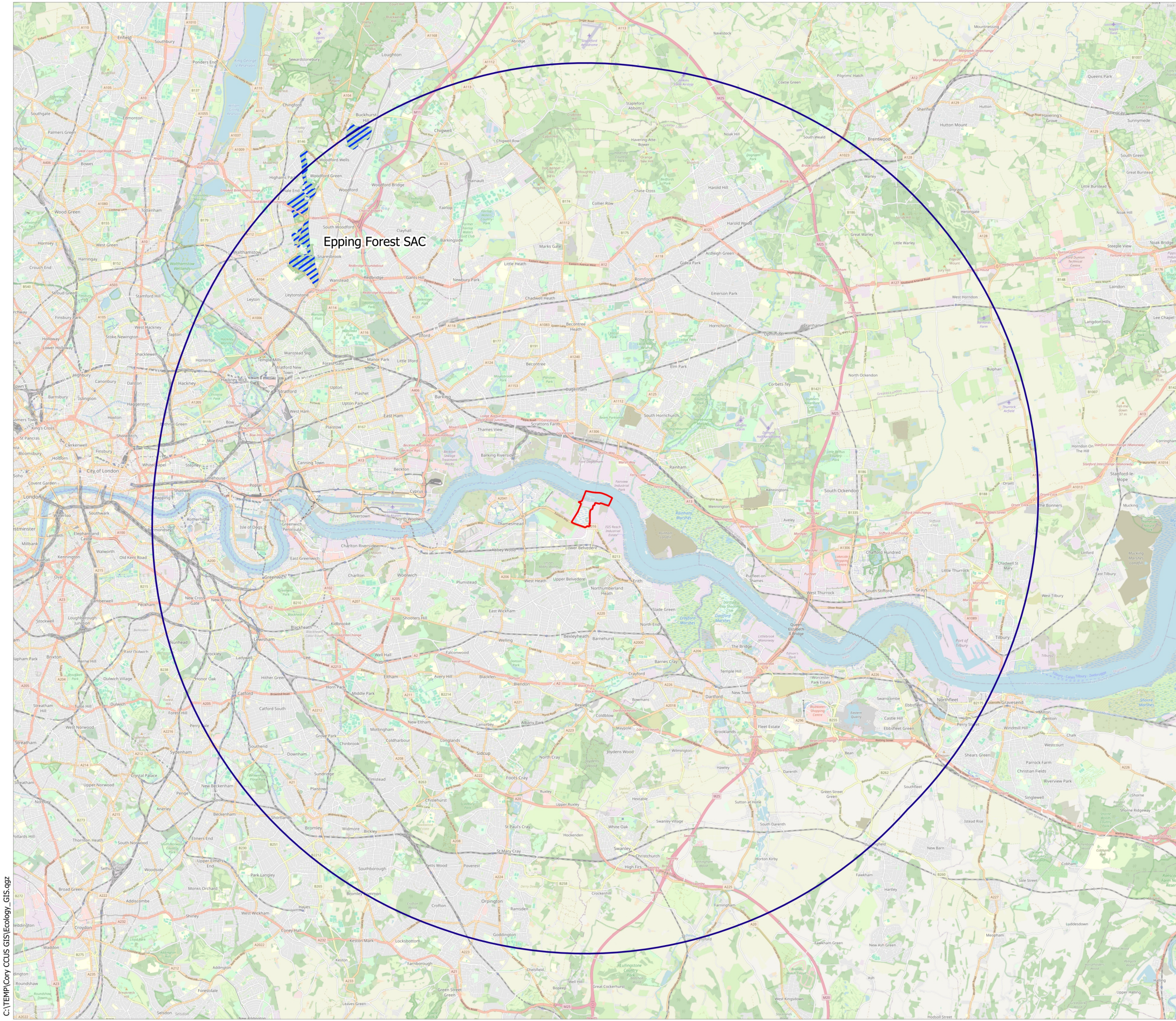


Figure 2 – Outline of the HRA Process



**LEGEND:**

- Site Boundary
- 15km Study Area
- Special Area of Conservation (SAC)

STATUS: **FINAL**



PROJECT: **Cory Environmental Holdings Ltd  
Cory Decarbonisation Project**

TITLE: **National Network Sites Within Study Area: Epping Forest SAC**

SCALE @A3: <b>1:200,000</b>	DRAWN: <b>JM</b>	APPROVED: <b>PJ</b>
VERSION: <b>1</b>	DATE: <b>01/03/24</b>	DATE: <b>01/03/24</b>
PROJECT No: <b>70090329</b>	DRAWING No: <b>Figure 3</b>	





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