Connah's Quay Low Carbon Power

Environmental Statement Volume II
Chapter 1: Introduction

Planning Inspectorate Reference: EN010166
Document Reference: EN010166/APP/6.2.1
Planning Act 2008 (as amended)
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(a)
Revision 00

August 2025

Prepared for:
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1. Introduction

1.1 Overview

1.1.1 This Environmental Statement (ES) has been commissioned by Uniper UK Limited (hereafter referred to as the 'Applicant') to support an application (the Application) to be made to the Secretary of State for Energy Security and Net Zero (SoS). The Applicant is seeking a Development Consent Order (DCO) for the construction, operation (including maintenance) and decommissioning of a proposed low carbon Combined Cycle Gas Turbine (CCGT) Generating Station fitted with Carbon Capture Plant (CCP) (the 'Connah's Quay Low Carbon Power (CQLCP) Abated Generating Station') and supporting infrastructure (collectively 'the Proposed Development') on land at, and in the vicinity of, the existing Connah's Quay Power Station (Kelsterton Road, Connah's Quay, Flintshire, CH6 5SJ), North Wales (the 'Proposed Development Site').

1.1.2 This ES presents:

- a description of the Proposed Development Site (hereafter referred to as the 'Order limits');
- a description of the Proposed Development;
- a description of the alternatives considered;
- the likely environmental effects of its construction, operation (including maintenance) and decommissioning;
- measures to avoid or reduce such effects; and
- a summary of the remaining significant residual effects.

1.1.3 The Order limits and its surroundings are described in **Chapter 3: Location of the Proposed Development** (**EN010166/APP/6.2.3**); and the Proposed Development is described in **Chapter 4: The Proposed Development** (**EN010166/APP/6.2.4**).

1.1.4 This chapter is supported by the following figures in **ES Volume III** (**EN010166/APP/6.3**):

- **Figure 1-1: Location of the CQLCP Abated Generating Station**;
- **Figure 1-2: Site Location Plan**; and
- **Figure 1-3: Proposed Development Interface with HyNet CO_2 Pipeline Project.**

1.1.5 This chapter is also supported by the following appendices in **ES Volume IV (EN010166/APP/6.4)**:

- **Appendix 1-A: Scoping Report**;
- **Appendix 1-B: Scoping Opinion**; and
- **Appendix 1-C: Statement of Competence**.

1.2 The Applicant

1.2.1 The Applicant is a UK-based company, wholly owned by Uniper SE (Uniper) through Uniper Holding GmbH. Uniper is a European energy company with global reach and activities in more than 40 countries. With around 7,500 employees, the company makes an important contribution to security of supply in Europe, particularly in its core markets of Germany, the UK, Sweden, and the Netherlands. In the UK, Uniper owns and operates a flexible generation portfolio of power stations, a fast-cycle gas storage facility and two high pressure gas pipelines, from Theddlethorpe to Killingholme and from Blyborough to Cottam.

1.2.2 Uniper is committed to investing around €8 billion (~£6.9 billion) in growth and transformation projects by the early 2030s and aims to be carbon-neutral by 2040. To achieve this, the company is transforming its power plants and facilities and investing in flexible, dispatchable power generation units. Uniper is one of Europe's largest operators of hydropower plants and is helping further expand solar and wind power, which are essential for a more sustainable and secure future. Uniper is gradually adding renewable and low-carbon gases such as biomethane to its gas portfolio and is developing a hydrogen portfolio with the aim of a long-term transition. The company plans to offset any remaining carbon dioxide (CO_2) emissions by high-quality CO_2-offsets.

1.3 What is Carbon Capture and Storage?

1.3.1 Carbon capture and storage (CCS) is a key part of the process to reduce carbon emissions in energy generation. It involves the removal and capture of CO_2 from power plant emissions, transporting it away to be securely stored underground, often in aquifers or depleted oil and gas fields.

1.3.2 CCUS also refers to carbon capture and storage but with the 'U' referring to utilisation of the captured CO_2. Captured CO_2 can be used for a variety of industrial purposes, such as the production of synthetic fuel and low carbon building materials, or in the food and beverage industry.

1.4 The Proposed Development

1.4.1 The detailed design of the Proposed Development is subject to ongoing technical studies and review to provide flexibility and to align with the current grid connection. The Proposed Development would comprise up to two CCGT with CCP units (and supporting infrastructure) achieving a net electrical output capacity of more than 350 megawatts (MW; referred to as MWe for electrical output) and up to a likely maximum of 1,380 MWe (with CCP operational) onto the national electricity transmission network.

1.4.2 Through a carbon dioxide (CO_2) pipeline, comprising existing elements to be repurposed and new elements, the Proposed Development would make use of the CO_2 transport and storage network that will be owned and operated by Liverpool Bay CCS Limited, the onshore pipeline for which is currently under development as part of the HyNet Carbon Dioxide Pipeline project (Ref 1-1) (referred to as the 'HyNet CO_2 Pipeline Project'). The CO_2 transport and storage network will transport CO_2 captured from existing and new industries

in North Wales and North-West England to be permanently stored in depleted offshore gas reservoirs in Liverpool Bay.

1.4.3 The Applicant will continue to be responsible for the operation (including maintenance) of the existing natural gas transmission pipeline immediately upstream of the Proposed Development from the existing Burton Point above ground installation. There are no modifications proposed to this pipeline as part of the Proposed Development.

1.4.4 For the purposes of the electrical connection, National Grid Electricity Transmission plc (NGET), which builds and maintains the electricity transmission networks, is responsible for the operation and maintenance of the existing 400 kV NGET substation.

1.4.5 A description of the Proposed Development, including details of maximum parameters, is set out in **Chapter 4: The Proposed Development** (**EN010166/APP/6.2.4**). At this stage in the development, the design of the Proposed Development incorporates a necessary degree of flexibility, to allow for ongoing design development. **Chapter 2: Assessment Methodology** (**EN010166/APP/6.2.2**) provides further information on the Rochdale Envelope approach has been applied within the Environmental Impact Assessment (EIA).

1.5 Proposed Development Interface with HyNet CO_2 Pipeline Project

1.5.1 Given the proximity to the HyNet CO_2 Pipeline Project, the Applicant proposes to connect the Proposed Development with the HyNet CO_2 Pipeline Project, which received development consent in March 2024, and the EIA has been undertaken on this basis.

1.5.2 The Applicant is fully committed to building a low carbon power station, subject to securing the necessary development consent. The Applicant would be responsible for the construction, operation (including maintenance) and decommissioning of the CQLCP Abated Generating Station within the Proposed Development, including equipment required on-site for the capture of CO_2 emissions from the generating station, and supporting infrastructure such as the cooling water intake and outfall.

1.5.3 Liverpool Bay CCS Limited would be responsible for:

- the construction, operation (including maintenance) and decommissioning of the Proposed CO_2 Connection pipeline;
- the maintenance and operation of the Repurposed CO_2 Connection pipeline; and
- the construction, operation (including maintenance) and decommissioning of the HyNet CO_2 Pipeline Project and overall transport and storage network downstream of the Proposed Development.

1.5.4 It is expected that this downstream transport and storage network will be operational prior to the operation of the Proposed Development. **Figure 1-3: Proposed Development Interface with HyNet CO_2 Pipeline Project**

(**EN010166/APP/6.3**) illustrates the location of the Proposed Development in relation to the downstream HyNet CO_2 Pipeline Project which terminates at the Point of Ayr Gas Terminal.

1.5.5 Liverpool Bay CCS Limited have an existing economic license to develop and operate the transport and storage network, which is regulated by Ofgem. The relationship between the Applicant and Liverpool Bay CCS Limited for the above activities, where required, would be governed by a published Network Code.

1.6 The Development Consent Process

1.6.1 The Proposed Development falls within the definition of a 'nationally significant infrastructure project' (NSIP) under Section 14(1)(a), 15(1) and 15(3A) of the Planning Act 2008 (the '2008 Act') (Ref 1-2) as a generating station in Wales with a capacity of more than 350 MW.

1.6.2 Because the Proposed Development constitutes an NSIP project, the Applicant is required to seek a DCO to construct and operate the Proposed Development, under Section 31 of the 2008 Act. Section 37 of the 2008 Act also governs the form, content and accompanying documents that are required as part of a DCO application. The requirements are implemented through The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (Ref 1-3) (hereafter referred to as the 'APFP Regulations') which state that a DCO application must be accompanied by an ES, where a development is considered to be 'EIA development' under The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 1-4) ('the EIA Regulations').

1.6.3 The Application for development consent for the Proposed Development has been submitted to the Planning Inspectorate (PINS) acting on behalf of the SoS. Subject to the Application being accepted, PINS will then examine it and make a recommendation to the SoS, who will then decide whether to grant development consent. The acceptance, examination, recommendation and decision stages are subject to fixed timescales and the decision is therefore anticipated to fall within Q3 2026.

1.7 Environmental Impact Assessment Regulations

1.7.1 Regulation 3(1) of the EIA Regulations defines the meaning of 'EIA development' (with reference to Schedules 1 and 2 to the EIA Regulations). Schedule 1 to the EIA Regulations, which describes developments for which an EIA is necessary, includes "*thermal power stations and other combustion installations with a heat output of 300 megawatts or more*." EIA is compulsory for Schedule 1 developments given the type and/or the scale of the development is likely to have the potential for significant effects on the environment.

1.7.2 Given its capacity and the nature of the proposed activities, the Proposed Development therefore constitutes an 'EIA development' and, as such, the Applicant has notified the SoS in writing under Regulation 8(1)(b) of the EIA Regulations that it intends to provide an ES in respect of the Proposed Development as part of the Application.

EIA Scoping Process

1.7.3 The purpose of the EIA Scoping process is to provide a framework for identifying the potential environmental impacts arising from the Proposed Development, establishing the likely significant environmental effects and distinguishing the priority issues to be addressed within the ES. An EIA Scoping Report and a request for an EIA Scoping Opinion pursuant to Regulation 10 ('Application for scoping opinion') of the EIA Regulations was submitted to PINS on 8 February 2024.

1.7.4 The EIA Scoping Report (**Appendix 1-A, EN010166/APP/6.4**) was developed in reference to standard guidance and industry practice and was informed by the EIA team's experience of working on a number of similar projects.

1.7.5 The EIA Scoping Report set out:

- details of the Proposed Development and its location;
- a summary of alternatives considered;
- a summary of existing and future baseline conditions;
- an outline of the likely environmental effects of the Proposed Development;
- a description of the matters to be scoped in and out of the EIA;
- proposed assessment methods; and
- the proposed structure of the ES.

1.7.6 The SoS's Scoping Opinion was received by the Applicant on 20 March 2024 and is presented within **Appendix 1-B: EIA Scoping Opinion** (**EN010166/APP/6.4**). The matters raised have been reviewed and taken into consideration in the relevant technical assessments as described in **Chapters 8 to 24** (**EN010166/APP/6.2**). Further details on the EIA Scoping Opinion are set out in **Chapter 2: Assessment Methodology** (**EN010166/APP/6.2.2**) and within **Appendix 2B: EIA Scoping Opinion Response** (**EN010166/APP/6.2.4**).

The Preliminary Environmental Information Report

1.7.7 Following completion of the EIA Scoping process and further evolution of the design of the Proposed Development, a Preliminary Environmental Impact (PEI) Report (Ref 1-5) was published for formal (statutory) consultation (pursuant to Sections 42, 47 and 48 of the Planning Act 2008) on the Proposed Development between 8 October 2024 and 19 November 2024, to satisfy the requirements of Regulation 12 and Regulation 13 of the EIA Regulations. 'Preliminary environmental information' is defined in the EIA Regulations as:

- *"information referred to in Regulation 14(2) which:*
  - *(a) has been compiled by the applicant; and*
  - *(b) is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development)."*

1.7.8 PINS Advice Note 7 (EIA: Process, Preliminary Environmental Information, and Environmental Statements) (Ref 1-6) notes: "*A good PEI document is one that enables consultees (both specialist and non-specialist) to understand the likely environmental effects of the Proposed Development and helps to inform their consultation responses on the Proposed Development during the pre-application stage*."

1.7.9 In order to enable consultees to understand the likely environmental effects of the Proposed Development, the PEI Report presented preliminary findings of the environmental assessments undertaken up to that point, and included consideration of matters raised in the EIA Scoping Opinion (**Appendix 1-B: EIA Scoping Opinion** (**EN010166/APP/6.4**)). Together with ongoing discussion and meetings, this allowed consultees the opportunity to provide informed comments on the Proposed Development, the assessment process, and preliminary findings prior to the finalisation of the Application submission and this ES. The Applicant sought the views of consultees on the information contained within the PEI Report, and there was an opportunity within the process up to submission of the Application to have regard to comments received.

1.7.10 The **Consultation Report** (**EN010166/APP.5.1**) describes the approach taken, and the outcomes of consultation and wider stakeholder engagement activities throughout the pre-application stage. The ES technical chapters, **Chapters 8 to 24** (**EN010166/APP/6.2**), include a summary of relevant consultation and a description of how this has influenced the design of the Proposed Development and approach to the EIA for each topic.

1.8 The Environmental Statement

1.8.1 The ES is submitted as part of the suite of documents accompanying the Application. The information presented in the ES describes the findings of the EIA. The EIA adopts a realistic worst-case assessment basis, based on the Proposed Development design and adopting the principles of the Rochdale Envelope, wherever specific details cannot yet be fixed for the Proposed Development. The detailed design of the Proposed Development would adhere to the parameters set out within this ES and the **Design Principles** (**EN010166/APP/7.8**) as secured by Requirement 3 of the **Draft DCO** (**EN010166/APP/3.1**). This is detailed further in **Chapter 4: The Proposed Development** (**EN010166/APP/6.2.4**).

1.8.2 **Table 1-1** identifies where the information defined by Regulation 14(2) can be found within this ES. It should be noted that relevant information may be found in ES Volume I (Non-Technical Summary), ES Volume II (technical chapters), ES Volume III (figures accompanying the ES) and/or ES Volume IV (technical appendices accompanying the ES) and in other documents (as referenced) accompanying the Application.

Table 1-1: Location of information required by Regulation 14(2) within this ES

Specified information	Where information is provided (within this ES unless otherwise stated)
a) A description of the proposed development comprising information on the site, design, size and other relevant features of the development.	**Chapter 3: Location of the Proposed Development** (**EN010166/APP/6.2.3**), **Chapter 4: The Proposed Development** (**EN010166/APP/6.2.4**), **Chapter 5: Construction Programme and Management** (**EN010166/APP/6.2.5**); and **Chapter 6: Project Alternatives** (**EN010166/APP/6.2.6**). Supporting figures and appendices to these chapters (**EN010166/APP/6.3** and **EN010166/APP/6.4**).
b) A description of the likely significant effects of the proposed development on the environment.	'Assessment of Likely Impacts and Effects' sections of **Chapters 8** to **24 (EN010166/APP/6.2**). **Chapter 25: Summary of likely Significant Residual Effects** (**EN010166/APP/6.2.25**).
c) A description of any features of the proposed development, or measures envisaged in order to avoid, prevent, or reduce and, if possible, offset likely significant adverse effects on the environment.	**Chapter 4: The Proposed Development** (**EN010166/APP/6.2.4**). 'Development Design and Embedded Mitigation' and 'Additional Mitigation and Enhancement Measures' sections of **Chapters 8** to **23** (**EN010166/APP/6.2**).
d) a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main	**Chapter 6: Project Alternatives** (**EN010166/APP/6.2.6**).

Specified information	Where information is provided (within this ES unless otherwise stated)
reasons for the option chosen, taking into account the effects of the development on the environment.	
e) A non-technical summary of the information referred to in subparagraphs (a) to (d)	**ES Volume I: Non-Technical Summary** (**NTS**) (**EN010166/APP/6.1**).
f) Any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affects.	Baseline conditions relevant to each assessment are described in the 'Baseline Conditions' sections of **Chapters 8** to **23** (**EN010166/APP/6.2**). **Chapter 2: Assessment Methodology** (**EN010166/APP/6.2.2**). Assessment methods are described in 'Assessment Methodology' and 'Assessment of Likely Impacts and Effects' sections of **Chapters 8** to **23** (**EN010166/APP/6.2**). Any limitations and/ or difficulties with the assessments are described in 'Assessment Assumptions and Limitations' sections of **Chapters 8** to **23** (**EN010166/APP/6.2**). **Framework Construction Environmental Management Plan** (**CEMP**) (**EN010166/APP/6.5**). **Framework Construction Traffic Management Plan** (**CTMP**) (**EN010166/APP/6.6**). **Framework Construction Worker Travel Plan** (**CWTP**) (**EN010166/APP/6.7**). **Outline Landscape and Ecological Management Plan** (**LEMP**) (**EN010166/APP/6.9**). **Appendix 4-A: Operation and Maintenance Mitigation Register** (**EN010166/APP/6.4**).

1.8.3 The structure of this ES reflects the assessment topics agreed through the EIA Scoping process.

1.8.4 **ES Volume I** (**EN010166/APP/6.1**) is the Non-Technical Summary (NTS) – The NTS document provides a concise summary of the key findings of the ES in a non-technical language.

1.8.5 **ES Volume II** (**EN010166/APP/6.2**) forms the main body of the ES and is structured as follows:

- **Chapter 1** (**EN010166/APP/6.2.1**) – an introduction to the ES and Proposed Development which also providing a summary of where information is located within the ES;
- **Chapter 2** (**EN010166/APP/6.2.2**) – a summary of the approach to the EIA, including details of consultation and technical engagement undertaken for the Proposed Development;
- **Chapters 3 to 6** (**EN010166/APP/6.2.3 to 6.2.6**) – a description of the Order limits, surroundings and Proposed Development, including likely construction methods, timescales and alternatives;
- **Chapter 7** (**EN010166/APP/6.2.7**) – an overview of the legislation, planning and other policy relevant to the Proposed Development and the ES;
- **Chapters 8 to 23** (**EN010166/APP/6.2.8 to 6.2.23**) – assessments of the likely significant environmental effects of the Proposed Development in relation to the environmental topics scoped into the EIA;
- **Chapter 24** (**EN010166/APP/6.2.24**) – assessment of potential inter-relationships between the topics covered in **Chapters 8 to 23** (**EN010166/APP/6.2**) (combined effects), and between the Proposed Development and other planned developments in the surrounding area (cumulative effects); and
- **Chapter 25** (**EN010166/APP/6.2.25**) – provides a summary of the residual significant effects remaining following the implementation of mitigation.

1.8.6 **ES Volume III** (**EN010166/APP/6.3**)**: Figures** – Figures are provided, where required, to accompany each chapter of **ES Volume II - EN010166/APP/6.2** to aid readers understanding.

1.8.7 **ES Volume IV** (**EN010166/APP/6.4**): **Technical Appendices** are provided, where required, providing supporting information for each chapter of **Volume II - EN010166/APP/6.2**.

1.8.8 The Application is accompanied by a number of documents that this ES references and should be read in conjunction with including:

- **Outline LEMP** (**EN010166/APP/6.9**);
- **Report to Inform Habitats Regulations Assessment** (**EN010166/APP/6.12**);
- **Framework CEMP**(**EN010166/APP/6.5**);

- **Lighting Strategy** (**EN010166/ APP/7.11**);
- **Framework CTMP** (**EN010166/ APP/6.6**);
- **Framework CWTP** (**EN010166/APP/6.7**);
- **Curlew Mitigation Strategy** (**EN010166/APP/6.13**); and
- **Offsite Net Benefit for Biodiversity and Green Infrastructure Statement** (**EN010166/APP/6.14**).

1.9 Statement of Competence

1.9.1 AECOM has been awarded the EIA Quality Mark from the Institute of Sustainability and Environmental Professionals (ISEP), formally the Institute of Environmental Management and Assessment (IEMA), demonstrating competency in ES preparation.

1.9.2 As required under Regulation 14(4)(b) of the EIA Regulations, an ES must be accompanied by a statement outlining the relevant expertise or qualifications of those involved in its preparation. A statement of competence of the EIA coordinators and the technical specialists that have provided expert input the ES is included as **Appendix 1-C: Statement of Competence** (**EN010166/APP/6.4**).

References

Ref 1-1 His Majesties Stationary Office (HMSO (2024). The Hynet Carbon Dioxide Pipeline Order 2024 [online]. Available at https://www.legislation.gov.uk/uksi/2024/436/contents (Accessed 27/01/2025).

Ref 1-2 HMSO (2008). Planning Act 2008 [online]. Available at: https://www.legislation.gov.uk/ukpga/2008/29/contents (Accessed 27/01/2025).

Ref 1-3 The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (SI 2009/2264). London: HMSO [online]. Available at: https://www.legislation.gov.uk/uksi/2009/2264/made (Accessed 27/01/2025).

Ref 1-4 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/572). London: HMSO [online]. Available at: https://www.legislation.gov.uk/uksi/2017/572/contents/made (Accessed 27/01/2025).

Ref 1-5 AECOM (2024). Connah's Quay Preliminary Environmental Information Report.

Ref 1-6 Planning Inspectorate (2020). Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements [online]. Available at: Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements - GOV.UK (Accessed 27/01/2025).