HyNet North West

ENVIRONMENTAL STATEMENT (VOLUME II)

Chapter 1 - Introduction

HyNet Carbon Dioxide Pipeline DCO

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulations 5(2)(a)

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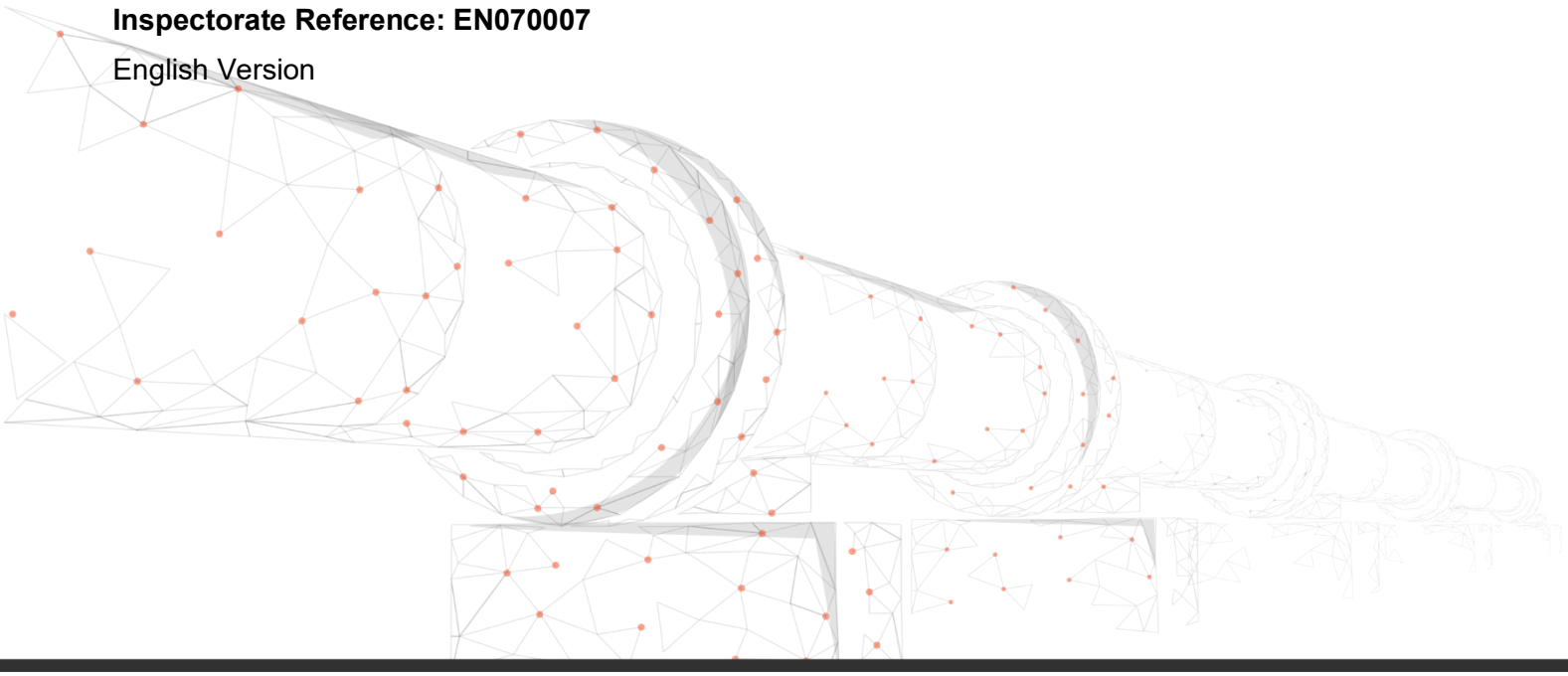

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1. INTRODUCTION

1.1. BACKGROUND

1.1.1. This Environmental Statement (ES) has been prepared by WSP UK Ltd ('WSP') on behalf of Liverpool Bay CCS Limited (the 'Applicant'). The Applicant intends to build a new 36 km underground pipeline for the transport of Carbon Dioxide (CO_2) from Cheshire, England to Flintshire, Wales and associated above ground installations, as well as repurpose a 24 km section of an existing natural gas pipeline for use with CO_2 (the 'DCO Proposed Development').

1.1.2. The DCO Proposed Development will form part of the wider HyNet North West Project (the 'Project')[1]. The aim of the Project is to reduce CO_2 emissions from industry, homes and transport and support economic growth in the North West of England and North Wales. The Project will include infrastructure to produce, store and distribute low carbon hydrogen. The hydrogen is produced from natural gas, with the resultant CO_2 emissions captured and stored.

1.1.3. The DCO Proposed Development includes infrastructure to facilitate the transportation of CO_2 which will be captured from proposed hydrogen production facilities (forming part of the wider Project) and existing industrial sources in the North West of England and North Wales and will be securely stored in depleted oil and gas fields in Liverpool Bay. The DCO Proposed Development will not include the infrastructure to produce hydrogen or to capture and store CO_2 emissions, as these will be subject to separate applications.

1.1.4. The DCO Proposed Development is classified as a Nationally Significant Infrastructure Project (NSIP) and will require a Development Consent Order (DCO) under the Planning Act 2008 (PA2008) (**Ref. 1.1**). It falls under Section 14(1)(g) and Section 21 of the PA2008, as it falls within the definition of a cross-country pipeline (as defined in Section 66 of the Pipelines Act 1962, whereby a pipeline length exceeds 16.093km). As such, the Applicant is required to request a DCO in order to construct and operate the DCO Proposed Development.

[1] The Project is not a single project within the meaning of the Environmental Impact Assessment Regulations. The Project is being developed by the Consortium. The Project includes, but is not limited to, the Carbon Dioxide Pipeline and associated Above Ground Installations (AGIs), Block Valve Stations, Carbon Capture, Carbon Dioxide Storage, the Existing Pipeline Works, Hydrogen Plant, Hydrogen Pipeline and associated AGIs, and Hydrogen Storage.

1.1.5. The Applicant has advised the Secretary of State (SoS) for Business, Energy and Industrial Strategy (BEIS) under Regulation 8(1)(b) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'DCO EIA Regulations") (**Ref. 1.2**) that it proposes to provide an ES in respect of the DCO Proposed Development. The DCO Proposed Development is, therefore, EIA development under Regulation 6 of the DCO EIA Regulations. It is necessary, therefore, for the Applicant to undertake Environmental Impact Assessment (EIA) and prepare an ES in support of the DCO Application.

1.1.6. The DCO Proposed Development comprises:

- A system of pipelines for the conveyance of CO_2, and apparatus and works associated therewith;
- Ancillary works integral to the construction of the Newbuild Carbon Dioxide Pipeline, including Construction Compounds and temporary access tracks; and
- Land required for the construction of the Newbuild Carbon Dioxide Pipeline.

1.1.7. The Application for development consent for the DCO Proposed Development has been submitted to The Inspectorate acting on behalf of the SoS BEIS.

1.1.8. The Department for Energy and Climate Change (now the Department for BEIS) published a number of National Policy Statements (NPSs) in relation to energy infrastructure, which were designated by the SoS for Energy and Climate Change in July 2011.

1.1.9. In the case of the DCO Proposed Development, none of the energy NPSs directly apply. Where this is the case, section 105 of the PA2008 applies and applications will be tested against 'important and relevant' matters, which are typically local adopted planning policies and the National Planning Policy Framework (NPPF). However, the following NPSs will still be important in assessing the DCO Proposed Development:

- Overarching NPS for Energy (EN-1) (**Ref. 1.3**); and
- NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (**Ref. 1.4**).

1.1.10. NPS EN-4 applies to nationally significant infrastructure pipelines which transport natural gas or oil. However, NPS EN-4 notes that the information provided within may also be useful in identifying impacts to be considered in applications for pipelines intended to transport other substances.

1.1.11. In September 2021, BEIS launched a consultation on revisions to five of the energy NPSs (with NPS EN-6 – Nuclear Power Generation excluded from the consultation). The proposed changes to the NPSs are designed to build more flexibility into the national policy framework to reflect the complex future energy generation mix.

1.1.12. Most notably, the draft revision to NPS EN-1 (**Ref. 1.5**) recognises the need for new nationally significant Carbon Capture and Storage (CCS) infrastructure and methods for transporting CO_2, including onshore pipelines. The draft revisions have been considered where applicable; however, as these are only drafts, the 2011 documents remain the most relevant policy. It is not known when the revisions will be published and come into effect. Where revised versions are published before this Application is determined, the Applicant will provide an update considering the provisions of those with regard to this Application and setting out any updates required to the ES to the Examining Authority or SoS as appropriate.

1.1.13. More detail is provided in the **Needs Case for the DCO Proposed Development (Document reference: D.5.5)** and **Planning Statement (Document reference: D.5.4).**

1.2. DEFINITION OF AN EIA

THE EIA PROCESS

1.2.1. EIA is a means of drawing together, in a systematic way, an assessment of a project's likely significant environmental effects. The EIA process helps to ensure that the importance of the predicted effects is considered in the design process and the scope for avoiding, preventing, reducing or, where removing or mitigating effects is not possible, offsetting them, is properly understood by the public and the authority granting consent before it makes its decision.

1.2.2. As defined in full in Regulation 5 of the DCO EIA Regulations, the EIA process consists of the preparation on an ES, the carrying out of consultation, publication, and notification as required.

SCREENING AND SCOPING REPORTS

1.2.3. The DCO Proposed Development has not been subject to an EIA Screening Request or Opinion, as the Secretary of State was notified about the Applicant's intention to produce an ES in accordance with Regulation 8(1)(b) of the DCO EIA Regulations (**Ref. 1.2**).

1.2.4. An EIA Scoping Report and a request for an EIA Scoping Opinion pursuant to Regulation 10 of the DCO EIA Regulations was submitted to The Inspectorate in June 2021, please refer to **Appendix 1.1: EIA Scoping Report** (**Volume III**).

1.2.5. An EIA Scoping Opinion was received from The Inspectorate (on behalf of the SoS) on 14 July 2021; please refer to **Appendix 1.2: EIA Scoping Opinion (Volume III)**. This ES has been prepared in accordance with the Scoping Opinion except where the Project has changed from that described in the Scoping Report. The matters raised have been reviewed and have been taken into consideration in the relevant technical assessments. A table is provided in **Appendix 1.3: EIA Scoping Opinion Responses (Volume III)** that summarises how the scoping responses have been addressed in the ES, including any justification for where the assessment has not followed the scoping opinion. Further details on the EIA Scoping Opinion are set out in **Chapter 5 - EIA Methodology (Volume II)**.

PRELIMINARY ENVIRONMENTAL INFORMATION REPORT

1.2.6. A Preliminary Environmental Information Report (PEIR) was prepared in February 2022 to satisfy the requirements of Regulation 12(2) of the DCO EIA Regulations. In accordance with Regulation 12(2)(b), the PEIR presented "*the information referred to in Regulation 14(2) which… 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)*."

1.2.7. A statutory consultation was held on the PEIR between 9 February and 22 March 2022. Electronic copies of the documents were provided to statutory consultees as required by the DCO EIA regulations. During the consultation, printed copies of the PEIR were made available at four deposit points along the route of the Newbuild Carbon Dioxide Pipeline, and at each of the seven in-person public events. The PEIR was available on the hynethub.co.uk consultation website throughout the consultation period. A non-technical summary of the PEIR was also available in both English and Welsh. Further information on the consultation and its outcome can be found in **HyNet DCO Consultation Report (Document reference: 5.1).**

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1.2.8. The results of the EIA are reported in this ES, which identifies and sets out any likely significant environmental effects, as well as any measures needed to mitigate likely significant adverse environmental effects, taking account of the Mitigation Hierarchy. The Mitigation Hierarchy is to first try to avoid, then prevent and then reduce likely significant adverse effects on the environment and, if possible, offset any likely residual significant adverse effects on the environment. Residual effects are the effects a development is likely to have after mitigation measures are implemented.

1.2.9. This ES is also intended to enable other interested parties who have a role, or wish to participate in the statutory decision-making process, to understand the nature of the DCO Proposed Development.

1.2.10. Residual effects are the effects a development is likely to have after mitigation measures are implemented.

1.2.11. This ES takes account of the potential cumulative effects of the DCO Proposed Development in combination with other relevant, known, proposed or consented schemes, as well as the combined effects resulting from the interrelationship of the various environmental effects caused by the DCO Proposed Development (where the cumulation of these effects results either in a new significant effect or increases the significance of an effect already identified). The potential cumulative effects relating to the wider Project are also assessed in this ES. Refer to **Chapter 19 - Combined and Cumulative Effects (Volume II)** for the full assessment.

1.2.12. The ES is structured as follows:

- Volume I: Non-Technical Summary;
- Volume II: Main Text:
  - Chapter 1 – Introduction;
  - Chapter 2 – The Project;
  - Chapter 3 – Description of the DCO Proposed Development;
  - Chapter 4 – Consideration of Alternatives;
  - Chapter 5 – EIA Methodology;
  - Chapter 6 – Air Quality;
  - Chapter 7 – Climate Resilience;
  - Chapter 8 – Cultural Heritage;
  - Chapter 9 – Biodiversity;
  - Chapter 10 – Greenhouse Gases;
  - Chapter 11 – Land and Soils;
  - Chapter 12 – Landscape and Visual;
  - Chapter 13 – Major Accidents and Disasters;
  - Chapter 14 – Material Assets and Waste;
  - Chapter 15 – Noise and Vibration;
  - Chapter 16 – Population and Human Health;
  - Chapter 17 – Traffic and Transport;
  - Chapter 18 – Water Resources and Flood Risk;
  - Chapter 19 – Combined and Cumulative Effects;

  - Chapter 20 – Summary; and
  - Glossary.
- Volume III: Supporting Technical Appendices; and
- Volume IV: Supporting Figures and Plans.

1.2.13. The ES has been produced in accordance with Regulation 14(2) of the DCO EIA Regulations (**Ref. 1.2**), including all necessary information in order to satisfy Regulation 14(2). Schedule 4 of the DCO EIA Regulations specifies what environmental information must be included in an ES.

1.2.14. Regulation 14(3)(b) (**Ref. 1.2**) requires that an ES must '*include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment'*. A summary of the information required and its location within this ES is given in **Table 1.1** below.

Table 1.1 - Information Provided in the ES

Location in DCO EIA Regulations (Ref. 1-2)	Requirement	Location in ES
Schedule 4 (1)	A description of the development, including in particular: • A description of the location of the development; • A description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases; • A description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; and • An estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases).	**Chapter 3 – Description of the DCO Proposed Development (Volume II)** **Chapters 6-19 (Volume II).**
Schedule 4(2)	A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer which are relevant to the proposed development and its specific characteristics and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.	**Chapter 4 – Assessment of Alternatives (Volume II).**

Location in DCO EIA Regulations (Ref. 1-2)	Requirement	Location in ES
Schedule 4(3)	A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.	**Chapters 6 – 19 (Volume II).**
Schedule 4(4)	A description of the factors specified in regulation 5(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.	**Chapters 6 – 19 (Volume II).**
Schedule 4(5) (a)	A description of the likely significant effects of the development on the environment resulting from, inter alia— the construction and existence of the development, including, where relevant, demolition works;	**Chapters 6 – 19 (Volume II).**
Schedule 4(5) (b)	A description of the likely significant effects of the development on the environment resulting from, inter alia—	**Chapter 9 – Biodiversity (Volume II).**

Location in DCO EIA Regulations (Ref. 1-2)	Requirement	Location in ES
	the use of natural resources in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;	**Chapter 11 – Land and Soils (Volume II).** **Chapter 14 – Material Assets and Waste (Volume II).** **Chapter 18 – Water Resources and Flood Risk (Volume II).**
Schedule 4(5) (c)	A description of the likely significant effects of the development on the environment resulting from, inter alia— the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances and the disposal and recovery of waste;	**Chapter 5 – EIA Methodology (Volume II).** **Chapter 6 – Air Quality (Volume II).** **Chapter 9 – Biodiversity (Volume II).** **Chapter 10 – Greenhouse Gases (Volume II).** **Chapter 12 – Landscape and Visual Impact (Volume II).**

Location in DCO EIA Regulations (Ref. 1-2)	Requirement	Location in ES
		Chapter 14 – Material Assets and Waste (Volume II) **Chapter 15 – Noise and Vibration (Volume II)** **Chapter 16 – Population and Human Health (Volume II)**
Schedule 4(5) (d)	A description of the likely significant effects of the development on the environment resulting from, inter alia— the risks to human health, cultural heritage or the environment (for example due to accidents or disasters);	**Chapters 6 – 19 (Volume II)**
Schedule 4(5) (e)	A description of the likely significant effects of the development on the environment resulting from, inter alia— the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;	**Chapter 19 – Combined and Cumulative Effects (Volume II)**
Schedule 4(5) (f)	A description of the likely significant effects of the development on the environment resulting from, inter alia—	**Chapter 7 – Climate Resilience (Volume II)**

Location in DCO EIA Regulations (Ref. 1-2)	Requirement	Location in ES
	the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change;	**Chapter 10 – Greenhouse Gases (Volume II)**
Schedule 4(5) (g)	A description of the likely significant effects of the development on the environment resulting from, inter alia— the technologies and the substances used;	**Chapters 6 – 19 (Volume II)**
Schedule 4(5)	The description of the likely significant effects on the factors specified in regulation 5(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC(1) and Directive 2009/147/EC(2).	**Chapters 6 – 19 (Volume II)**
Schedule 4(6)	A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	**Chapters 6 – 19 (Volume II)**
Schedule 4(7) (also Reg 14(2) (c))	A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse	**Chapters 6 – 19 (Volume II)**

Location in DCO EIA Regulations (Ref. 1-2)	Requirement	Location in ES
	effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases. 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.	
Schedule 4(8)	A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and / or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to EU legislation such as Directive 2012/18/EU of the European Parliament and of the Council (3) or Council Directive 2009/71/Euratom (4) or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.	**Chapter 13 – Major Accidents and Disasters (Volume II)**
Schedule 4(9)	A non-technical summary of the information provided under paragraphs 1 to 8.	**ES NTS (Volume I)**
Schedule (4)(10)	A reference list detailing the sources used for the descriptions and assessments included in the Environmental Statement.	**Chapters 1 – 20 (Volume II)**

1.3. REFERENCES

- **Ref. 1.1**: Planning Act 2008 (November 2008). Available at: https://www.legislation.gov.uk/ukpga/2008/29/contents.
- **Ref. 1.2**: The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. Available at: https://www.legislation.gov.uk/uksi/2017/572/contents/made.
- **Ref. 1.3**: Overarching National Policy Statement for Energy (EN-1), Department of Energy and Climate Change (July 2011). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf.
- **Ref. 1.4**: Overarching National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), Department of Energy and Climate Change (July 2011). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47857/1941-nps-gas-supply-oil-en4.pdf.
- **Ref. 1.5**: Draft Overarching National Policy Statement for Energy (EN-1), Department for Business, Energy, and Industrial Strategy (September 2021). Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015233/en-1-draft-for-consultation.pdf.