

ENVIRONMENTAL STATEMENT (VOLUME II)

CHAPTER 1 – INTRODUCTION

Padeswood Carbon Dioxide Spur Pipeline Proposed Development

Town and Country Planning Act 1990

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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') to accompany a Planning Application for consent to construct a new carbon dioxide pipeline in Flintshire, Wales and an associated Above Ground Installation (AGI) in line with the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 ("EIA Regulations").
- 1.1.2. The new carbon dioxide pipeline will connect the Castle Cement Limited's (trading name of Heidelberg Materials UK) Padeswood Carbon Capture and Storage Project (the 'Padeswood Carbon Capture and Storage (CCS) Project') located in Padeswood, Flintshire to Northop Hall AGI (the 'Padeswood Carbon Dioxide Spur Pipeline Proposed Development').
- 1.1.3. The Padeswood Carbon Dioxide Spur Pipeline Proposed Development (Padeswood Spur Pipeline Proposed Development) will form part of the wider HyNet Project (the 'Project'). The aim of the Project is to reduce carbon dioxide emissions from industry and transport, and support economic growth in the North West of England and North Wales.
- 1.1.4. The operational elements of the Padeswood Spur Pipeline Proposed Development do not include infrastructure to capture and store carbon dioxide emissions and these are subject to separate applications. The operational elements of the Padeswood Spur Pipeline Proposed Development only include infrastructure to facilitate the transportation of carbon dioxide which will be captured from the Padeswood CCS Project, transported to Northop Hall AGI, which connects into the Main Onshore Carbon Dioxide Pipeline (consented by the HyNet Carbon Dioxide Pipeline Development Consent Order 2024) and then securely stored in the existing depleted oil and gas fields in Liverpool Bay.
- 1.1.5. The Padeswood Spur Pipeline Proposed Development is classified as 'major' development (as defined by the Town and Country Planning (Development Management Procedure) (Wales) Order 2015 and will require the submission of an application under The Town and Country Planning Act 1990 (as amended). The Padeswood Spur Pipeline Proposed Development also falls within the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (the "EIA Regulations"), (HM Government, 2017) which require an

Environmental Statement (ES) to be prepared and submitted with the Planning Application.

1.1.6. The Planning Application will seek approval for the Construction, Operation and end of life Decommissioning of the following key elements which form the Padeswood Spur Pipeline Proposed Development, as described further in **Chapter 3 – Description of the Padeswood Spur Pipeline Proposed Development (Document Reference: PW.3.2.3)**:

- The Padeswood AGI, which will be situated at Padeswood CCS Project in Padeswood, Flintshire;
- Padeswood Carbon Dioxide Spur Pipeline (Padeswood Spur Pipeline), which will run from Padeswood AGI to the Northop Hall AGI;
- Additional equipment at Northop Hall AGI; and
- Temporary Construction Compound(s) and associated accesses.

1.2. DEFINITION OF AN EIA

THE EIA PROCESS

1.2.1. ‘Environmental Impact Assessment’ (EIA) is a means of drawing together an assessment of a project’s likely significant environmental effects. This helps to ensure that the importance of the predicted environmental 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. The full assessment is reported in an ES, which will be submitted alongside the Planning Application.

1.2.2. The aim of EIA is to:

“Protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision-making process” and “ensure that the public are given early and effective opportunities to participate in the decision-making procedures.” (DLUHC, 2020)

1.2.3. As defined in full in Regulation 4 of the EIA Regulations the EIA process consists of the preparation of an ES, the carrying out of consultation, publication and notification as required.

1.3. REQUIREMENT FOR EIA

- 1.3.1. The EIA Regulations set out the requirements for when an EIA should be undertaken for a development. In accordance with Regulation 5(2)(a) of the EIA Regulations, the Padeswood Spur Pipeline Proposed Development is EIA development, and this ES has been produced.

SCREENING AND SCOPING REPORTS

- 1.3.2. The Padeswood Spur Pipeline Proposed Development has not been subject to an EIA Screening Request or Opinion. This is because the Padeswood Spur Pipeline Proposed Development is classed as EIA development, and this ES has been produced in accordance with Regulation 5(2)(a) of the EIA Regulations.
- 1.3.3. An EIA Scoping Report (**Appendix 1-1, Document Reference: PW.3.3.1.1**) and request for a Scoping Opinion was submitted to Flintshire County Council (FCC) on 26 March 2024 under the EIA Regulations. The submission confirmed that the Applicant intends to submit a Planning Application, and that the Padeswood Spur Pipeline Proposed Development will be subject to an EIA.
- 1.3.4. An EIA Scoping Opinion was received from FCC on 8 May 2024 (refer to **Appendix 1-2, Document Reference: PW.3.3.1.2**). This ES had been prepared in accordance with the Scoping Opinion (Appendix 1.2), except where the Padeswood Spur Pipeline Proposed Development has changed from that described in the Scoping Report. The matters raised in the Scoping Opinion (**Appendix 1-2, Document Reference: PW.3.3.1.2**) have been reviewed and have been taken into consideration in the relevant technical assessments. **Appendix 1-3 Scoping Opinion Responses (Document Reference: PW.3.3.1.3)** provides a response to all comments received within the Scoping Opinion and summarises how these have been addressed in this ES, including any justification for where the assessment has not followed the Scoping Opinion where applicable. Further details on the EIA Scoping Opinion are set out in **Chapter 5 – EIA Methodology (Document Reference PW.3.2.5)**.

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- 1.3.5. 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. As defined in the Glossary (Volume II), 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 adverse effects on the

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

- 1.3.6. 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 Padeswood Spur Pipeline Proposed Development.
- 1.3.7. This ES takes account of the potential cumulative effects of the Padeswood Spur Pipeline 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 Padeswood Spur Pipeline Proposed Development (where the cumulation of these effects results either in a new significant effect or increases the significance of an effect already identified). Refer to **Chapter 18 - Combined and Cumulative Effects (Document Reference PW.3.2.18)** for the full assessment.
- 1.3.8. The ES is structured as follows:
- Volume I: Non-Technical Summary (NTS)
 - Volume II: Main Text
 - ~ Chapter 1 – Introduction
 - ~ Chapter 2 – The Project
 - ~ Chapter 3 – Description of the Padeswood Spur Pipeline 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 Amenity
 - ~ Chapter 13 – Major Accidents and Disasters
 - ~ Chapter 14 – Noise and Vibration
 - ~ Chapter 15 – Population and Human Health
 - ~ Chapter 16 – Traffic and Transport
 - ~ Chapter 17 – Water Environment and Flood Risk
 - ~ Chapter 18 – Combined and Cumulative Effects

- ~ Chapter 19 – Summary of Likely Significant Effects; and
- ~ Glossary.

- Volume III: Supporting Technical Appendices
- Volume IV: Supporting Figures and Plans

- 1.3.9. It should be noted that some technical topic numbers have changed since the production of the Scoping Report in March 2024.
- 1.3.10. This ES has been produced in accordance with the EIA Regulations including in particular the prescribed requirements of Schedule 4. This includes all necessary information to satisfy Schedule 4, which specifies what environmental information must be included in an ES.
- 1.3.11. Regulation 17(3)(b) of the EIA Regulations 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

EIA Regulations Reference	Requirement	Location in ES
Schedule 4(1)	<p>Description of the development, including in particular—</p> <p>(a) a description of the location of the development;</p> <p>(b) 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;</p> <p>(c) 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;</p> <p>(d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, oil and subsoil pollution, noise, vibration, light) and quantities and types of waste produced during the construction and operational phases.</p>	<p>Chapter 3 - Description of the TCPA Proposed Development</p> <p>Chapters 6-18 (Volume II)</p>
Schedule 4(2)	<p>A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the applicant or appellant 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.</p>	<p>Chapter 4 - Consideration of Alternatives (Volume II)</p>
Schedule 4(3)	<p>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</p>	<p>Chapters 6 – 18 (Volume II)</p>

Schedule 4(4)	A description of the factors specified in regulation 4(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 – 18 (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 – 18 (Volume II)
Schedule 4(5) (b)	A description of the likely significant effects of the development on the environment resulting from, inter alia, the use of natural resources in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;	Chapter 9 - Biodiversity (Volume II) Chapter 11 - Land and Soils (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 6 - Air Quality (Volume II) Chapter 9 - Biodiversity (Volume II) Chapter 10 - Greenhouse Gases (Volume II) Chapter 12 - Landscape and Visual Impact (Volume II) Chapter 14 - Noise and Vibration (Volume II) Chapter 15 - 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 – 18 (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 18 - 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, 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 7 - Climate Resilience (Volume II) 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 – 18 (Volume II)
Schedule 4(5)	A description of the likely significant effects on the factors specified in regulation 4(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 European Union of Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC and Directive 2009/147/EC.	Chapters 6 – 18 (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	Chapters 6 – 18 (Volume II)

	deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	
Schedule 4(7)	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 effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.	Chapters 6 – 18 (Volume II)
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 European Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of the 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 – 19 (Volume II)

REFERENCES

DLUHC. (2020). *Environmental Impact Assessment Guidance*. Retrieved from gov.uk: <https://www.gov.uk/guidance/environmental-impact-assessment#:~:text=The%20aim%20of%20Environmental%20Impact,the%20likely%20significant%20effects%2C%20and>

HM Government. (2017). *The Town and Country Planning (Environmental Impact Assessment (Wales) Regulations 2017*.