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DWD

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By email: H2Teesside@planninginspectorate.gov.uk

Dear Ms Robbins,

THE H2TEESSIDE PROJECT

APPLICATION FOR DEVELOPMENT CONSENT UNDER SECTION 37 'APPLICATIONS FOR ORDERS GRANTING DEVELOPMENT CONSENT' OF THE PLANNING ACT 2008 FOR A CARBON CAPTURE ENABLED HYDROGEN PRODUCTION FACILITY OF UP TO 1.2 GIGAWATTS THERMAL; GAS, ELECTRICITY AND WATER CONNECTIONS; A HYDROGEN DISTRIBUTION NETWORK; A CARBON DIOXIDE EXPORT PIPELINE; AND ANCILLARY AND ASSOCIATED DEVELOPMENT

LAND WITHIN THE BOROUGH OF REDCAR AND CLEVELAND AND STOCKTON-ON-TEES, TEESSIDE AND WITHIN THE BOROUGH OF HARTLEPOOL, COUNTY DURHAM

Background

We enclose an application (the 'Application') submitted on behalf of H2 Teesside Limited for a Development Consent Order (a 'DCO'), that has been submitted to the Secretary of State (the 'SoS') for the Department for Energy Security and Net Zero ('DESNZ'), under Section 37 of 'The Planning Act 2008' (the 'PA 2008') in respect of the H2Teesside Project (the 'Proposed Development').

The Applicant is H2 Teesside Limited, a bp company. H2 Teesside Limited will be the lead developer of the Proposed Development and bp will be appointed as the operator of the Proposed Development. The Proposed Development will support the decarbonisation of UK-produced natural gas by converting it to low carbon hydrogen in Teesside for use in industrial applications, thus helping to achieve national targets in relation to net zero. It will also contribute to restoring manufacturing jobs in the Tees Valley. The Proposed Development will export carbon dioxide (CO₂) to the Northern Endurance Partnership ('NEP') offshore storage facility via NEP infrastructure on the adjacent Net Zero Teesside ('NZE') site, including the high-pressure compression facility and the CO₂ export pipeline.

The Applicant is seeking development consent for the construction, operation and maintenance of the Proposed Development, including associated development on land within the boroughs of Redcar and Cleveland and Stockton-on-Tees, Teesside and within the borough of Hartlepool, County Durham.



Development consent is required for the Proposed Development as it is the subject of a Direction dated 22 December 2022 made by the SoS under Sections 35(1) and 35ZA of the PA 2008 and other parts of the Proposed Development are associated development. The DCO, if made by the SoS, would be known as 'The H2 Teesside Order' (the 'Order').

Overview of the Proposed Development

The Proposed Development will use natural gas to produce hydrogen (known as 'blue' hydrogen) with the CO₂ created during the hydrogen production processes being captured and compressed for onward transportation and storage, under agreement with NEP. NEP will store the CO₂ securely below ground within the Endurance storage site and other nearby CO₂ stores that NEP holds CO₂ storage licences for. These are located approximately 145 kilometres offshore from Teesside under the North Sea.

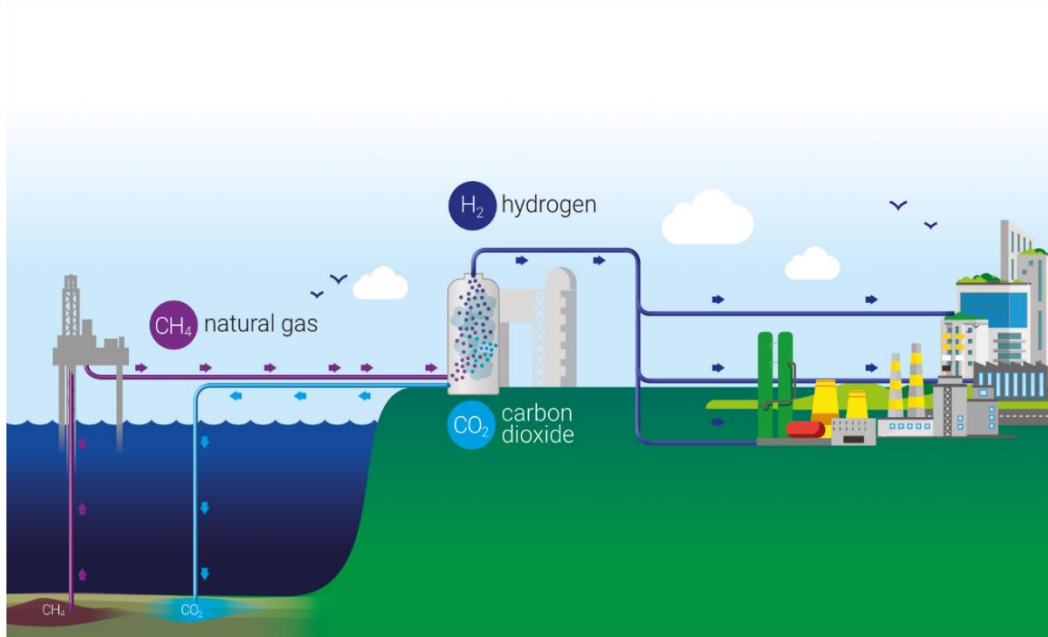
The onshore elements of the NEP infrastructure on Teesside are part of the Net Zero Teesside ('NZN') Project and have been the subject of an application for development consent. The SoS for DESNZ granted the NZT development consent application on 16 February 2024. The NZT DCO came into force on 11 March 2024.

The Proposed Development and NEP form part of the East Coast Cluster ('ECC'). The ECC has been selected as one of the first two carbon capture, usage and storage ('CCUS') clusters to be taken forward by the UK Government. The ECC has the potential to remove almost 50% of the UK's total industrial clusters carbon dioxide emissions, protect thousands of jobs and establish the region as a globally competitive climate friendly hub for industry and innovation. The ECC will include a diverse mix of low-carbon projects, including industrial carbon capture, low-carbon hydrogen production, negative emissions power, and power with carbon capture. In March 2023, the Proposed Development was selected by DESNZ as one of the first three projects to connect to the ECC.

The low-carbon hydrogen produced by the Proposed Development will be supplied via a new hydrogen pipeline network to existing businesses on Teesside. By replacing the use of natural gas, the Proposed Development will help existing heavy industry on Teesside reduce its carbon dioxide emissions, consistent with the Government's objective to decarbonise the UK economy and achieve its legally binding target of net zero greenhouse gas emissions by 2050.

The Proposed Development will be one of the UK's largest blue hydrogen production facilities with a capacity of up to approximately 1.2 gigawatts ('GW') thermal, representing more than 10% of the Government's hydrogen production target of 10 GW by 2030. This equates to the production of approximately 160,000 tonnes of low carbon hydrogen per annum, with approximately two million tonnes of CO₂ being captured and stored each year.

The infographic below provides an overview of the 'blue' hydrogen processes.



Proposed Development Description

The Proposed Development comprises the following main elements:

- **Work Number ('No.') 1** – a hydrogen production facility of up to approximately 1.2 Gigawatts Thermal ('GWth') lower heating value, including two carbon capture enabled hydrogen units each of 600 Megawatts Thermal ('MWth'), including a water and effluent treatment plant; above ground hydrogen storage; administration, control room and stores; gas and power connections, above ground installations and ancillary works.
- **Work No. 2** – a natural gas supply connection for the transport of natural gas to Work No. 1.
- **Work No. 3** – electrical connection works for the import of electricity from the electricity transmission network to Work No. 1.
- **Work No. 4** – water supply connection works to provide cooling and make-up water to Work No. 1.
- **Work No. 5** – wastewater disposal works in connection with Work No. 1.
- **Work No. 6** – a hydrogen distribution network, for the transport of hydrogen gas from Work No. 1, comprising underground and overground pipelines to supply hydrogen to the above ground storage and offtakers across Teesside. The hydrogen pipelines will run up to tie-in points with the relevant offtaker (likely to be, but not necessarily having to be) at the offtakers' site boundaries. Any works beyond this tie-in point will be progressed separately by the relevant offtaker.
- **Work No. 7** – a high pressure carbon dioxide export pipeline for the export of the captured CO₂ from Work No. 1 to the adjacent NEP infrastructure.
- **Work No. 8** – gas connections being works for the transport of oxygen and nitrogen to Work no. 1.
- **Work No. 9** – temporary construction and laydown areas and contractor compounds.

- **Work No. 10** – access and highways improvement works.
- **Work No. 11** – replacement land relating to Work No. 6.

There will also be further development works associated with the above elements of the Proposed Development.

It is envisaged that the hydrogen production facility will be constructed in two phases.

A description of the elements of the Proposed Development and the Works Nos. is set out at Schedule 1 of the draft DCO (Application Document Ref. 4.1). The ancillary and further development required in connection with and subsidiary to the above elements of the Proposed Development is also detailed at Schedule 1 of the draft DCO.

A more detailed description of the Proposed Development and how it will operate is provided at Chapter 4 'Proposed Development' of the Environmental Statement ('ES') Volume I (Document Ref. 6.2) and the areas within which each of the main elements of the Proposed Development are to be built are denoted by the coloured and hatched areas on the Works Plans (Document Ref. 2.4).

The Proposed Development Site

The Proposed Development Site (the 'Site') lies within the administrative boundaries of the boroughs of Redcar and Cleveland south of the River Tees and Stockton-on-Tees north of the Tees on Teesside and within the borough of Hartlepool in County Durham, also north of the Tees.

The Site extends to a total area of approximately 507 hectares ('ha').

The hydrogen production facility and its ancillary development (also referred to as the 'Main Site'), including its carbon capture and compression facilities, will be located on part of the Foundry Site, which forms part of Teesworks, within the borough of Redcar and Cleveland and which is adjacent to the NEP infrastructure. Teesworks is a major brownfield industrial site and Freeport, part of which was formerly occupied by the Redcar Steel Works.

The CO₂ captured from the hydrogen production processes will be transported by pipeline to the NEP infrastructure for onward transport and storage within the Endurance storage site. The Main Site extends to 86 ha.

The natural gas, electrical and water connections would be located to the east and south-east of the Main Site within the borough of Redcar and Cleveland. The hydrogen distribution network would extend either side of the River Tees to several potential industrial offtakers, including north of the Tees into the boroughs of Stockton-on-Tees and Hartlepool.

A more detailed description of the Site and its surroundings is provided at Chapter 3 'Description of the Existing Area' of the ES Volume I (Document Ref. 6.2).

Environmental Impact Assessment

The Proposed Development represents an Environmental Impact Assessment ('EIA') development. The Application, therefore, includes an EES that reports the findings of the EIA undertaken. The EIA has been carried out, and the ES prepared, in accordance with 'The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017'.

The ES comprises the following documents, which form part of the Application submitted to the SoS:

- ES Non-Technical Summary – Document Ref. 6.1.
- ES Volume I (Main Report) – Document Ref. 6.2.
- ES Volume II (Figures) – Document Ref. 6.3.
- ES Volume III (Appendices) – Document Ref. 6.4.

The Application Submission

The Application Guide (Document Ref. 1.2) lists the documents, including the ES, that make up the Application (the ‘Application Submission’) and how these comply with relevant legislative and policy requirements. The Application Guide is a ‘live’ document that will be updated throughout the examination of the Application, as required.

The location of the Site is shown on the Location Plan (Document Ref. 2.1) and the extent of the land for the Proposed Development (the ‘Order Land’), including land over which powers of compulsory acquisition or temporary possession are sought, is shown on the Land Plans (Document Ref. 2.2). The Special Category Land and Crown Land that are within the Site is shown on the Special Category Land and Crown Land Plans (Document Ref. 2.3). The Works Plans (Document Ref. 2.4) show the ‘Order Limits’ and identify the location and areas (the Works Nos. areas) within which each of the main elements of the Proposed Development would be constructed and installed. The extent of the Works Nos. is denoted by the coloured and hatched areas on the Works Plans.

As confirmed above, Schedule 1 of the draft DCO (Document Ref. 4.1) details formal description of the Proposed Development and its elements and identifies the individual Works Nos. for those elements (shown on the Works Plans).

The draft DCO (Document Ref. 4.1) seeks powers of compulsory acquisition of interests and rights in land (including new rights) and powers of temporary possession, both within the Order Land (land within the Order Limits) to enable the Proposed Development to be constructed, operated and maintained. The provisions relating to the acquisition of land and rights in land are set out at Part 5 ‘Powers of acquisition’ (Articles 23X to 38) and Schedules 7 to 9 of the draft DCO.

These provisions relating to compulsory acquisition are explained in the Explanatory Memorandum (Document Ref. 4.2). The Explanatory Memorandum also explains the purpose and effect of each article and schedule of the draft DCO, as required by Regulation 5(2)(c) of ‘The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009’. It justifies the inclusion of relevant articles and requirements, including setting out the legal power, which enables the SoS to include certain provisions. It has been prepared having regard to the advice in PINS Advice Note 13 (Version 3) and has been the subject of a pre-application submission review by PINS.

Information on the interests and rights that exist in relation to the land within the Order Limits is provided by the Book of Reference (Document Ref. 3.1). The justification for the proposed compulsory acquisition of interests and rights in land is set out in the Statement of Reasons (Document Ref. 3.2), with the Applicant’s ability to fund this confirmed in the Funding Statement (Document Ref. 3.3). A Schedule of Negotiations and Powers Sought (Document Ref. 3.4) is also provided, which sets out the current position with regard to negotiations with those from whom the Applicant requires land. This document will be updated throughout the examination of the Application.

The Applicant has consulted on the Proposed Development. This has included two main stages of pre-application consultation. The first was a stage of statutory consultation and publicity in September and October 2023 in accordance with Sections 42, 47 and 48 of the PA 2008. This was followed by a second stage of Section 42 and 48 consultation and also non-statutory community consultation in December 2023 and January 2024 on changes made to the Proposed Development following the first stage of consultation. The Applicant has also undertaken additional Section 42 consultation and non-statutory community consultation during February and early March 2024. The pre-application consultation undertaken and how responses received to that consultation have been considered is documented within the Consultation Report and its appendices (Document Ref. 5.1). The full consultation responses received can be provided to the Planning Inspectorate on request.

The need that exists for the Proposed Development is detailed within the Planning Statement (Document Ref. 5.2) and Need Statement (Document Ref. 5.3). The Planning Statement also considers the compliance of the Proposed Development with the relevant National Policy Statements and other important and relevant matters such as UK energy and climate change policy, other national planning policies and local development plan policy. The assessment of the Proposed Development against relevant policies is set out within the Planning Statement and the Planning Policy Assessment Tables (Document Ref. 5.2.1). The Planning Statement also provides an overview of the benefits and impacts of the Proposed Development and considers its overall acceptability in planning terms.

The design principles that have been applied to the Proposed Development, the approach taken to its design and how the design has evolved are detailed within the Design and Access Statement (Document Ref. 5.4). This document also sets out how the detailed design of the Proposed Development will be secured and provides information on its design and access components.

Schedule 2 of the draft DCO details the 'requirements' that will be used to control the detailed design of the Proposed Development, as well as construction and operational activities to ensure that it remains within the scope of the EIA carried out and does not result in unacceptable impacts. These will require the submission to and approval by the relevant local planning authorities of further details of the Proposed Development.

The Application Documents can be downloaded by PINS using the link to the secure file share site below:

<https://dwd.ctit.co/url/eesyktvtd3ujcgas>

The required application fee of £8,244.00 was paid to PINS by BACS on 5 March 2024.

We look forward to receiving PINS' acknowledgement of receipt of the Application and in due course its decision on acceptance. In the meantime, should you have any questions please do not hesitate to contact Geoff Bullock [REDACTED] [@dwd-ltd.co.uk](mailto:[REDACTED]@dwd-ltd.co.uk) [REDACTED] [REDACTED] or Nathan Cheung [REDACTED] [@dwd-ltd.co.uk](mailto:[REDACTED]@dwd-ltd.co.uk) [REDACTED]

Yours sincerely,



Geoff Bullock
Director - DWD