H2Teesside Project

Planning Inspectorate Reference: EN070009

Land within the boroughs of Redcar and Cleveland and Stockton-on-Tees, Teesside and within the borough of Hartlepool, County Durham

H2Teesside Order

Document Reference: 5.2 Planning Statement

The Planning Act 2008

Applicant: H2 Teesside Ltd

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GLOSSARY

ABBREVIATION	DESCRIPTION
AGI	Above Ground Installation - installations used to support the safe and efficient operation of a pipeline; above ground installations are needed at the start and end of a cross-country pipeline and at intervals along the route.
AOD	Above Ordnance Datum - a spot height (an exact point on a map) with an elevation recorded beside it that represents its height above a given datum.
APFP Regulations	The Applications: Prescribed Forms and Procedure Regulations 2009.
Applicant	H2 Teesside Limited.
BEIS	Department of Business, Energy and Industrial Strategy - a department of the UK Government (former name for the Department for Energy Security and Net Zero).
CCGT	Combined Cycle Gas Turbine - a highly efficient form of energy generation technology. An assembly of heat engines work in tandem using the same source of heat to convert it into mechanical energy which drives electrical generators and consequently generates electricity.
CCP	Carbon Capture Plant - equipment used to capture carbon dioxide emissions from a power plant or industrial installation.
CCUS	Carbon Capture, Usage and Storage - is group of technologies designed to reduce the amount of carbon dioxide (CO_2) released into the atmosphere from coal and gas power stations as well as heavy industry including cement and steel production. Once captured, the CO_2 can be either re-used in various products, such as cement or plastics (usage), or stored in geological formations deep underground (storage).
CO_2	Carbon Dioxide - an inorganic chemical compound with a wide range of commercial uses.
DAS	Design and Access Statement - a document detailing the design of a proposed development including the design process that has been followed.

DCO	Development Consent Order - a Development Consent Order made by the relevant Secretary of State pursuant to The Planning Act 2008 to authorise a Nationally Significant Infrastructure Project. A DCO can incorporate or remove the need for a range of consents which would otherwise be required for a development. A DCO can also include rights of compulsory acquisition.
DESNZ	Department for Energy Security and Net Zero.
ECC	East Coast Cluster.
EIA	Environmental Impact Assessment - a term used for the assessment of environmental consequences (positive or negative) of a plan, policy, program or project prior to the decision to move forward with the proposed action.
EIA Regulations	The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.
EPC	Engineering, Procurement and Construction.
ES	Environmental Statement - a report in which the process and results of an Environment Impact Assessment are documented.
FEED	Front End Engineering Design - engineering which comes after the conceptual design or feasibility study focusing on the technical requirements and estimated investment cost for the project.
Ha	Hectares - a metric unit of measurement for area. There are 10,000 square metres in a hectares. One hectare is equal to 2.471 acres.
Km	Kilometre - a metric unit of measurement for distance, equal to 1,000 metres.
kV	Kilovolts - a unit of electrical potential. There are 1,000 volts in a kilovolt.
LPA	Local Planning Authority - the planning department within the local authority where a development is situated.
MLWS	Mean Low Water Springs - the height of the mean low water springs is the average height obtained by the two successive low waters during those periods of 24 hours when the range of the tide is at its greatest.
m	Metres - a metric unit of measurement for length, equal to 100 centimetres.
mm	Millimetres - a metric unit of measurement for length. There are 1000 millimetres in a metre and 10 millimetres in a centimetre.
Mt	Million Tonnes - a metric unit of weight.
NIZ	Northern Industrial Zone – part of the South Tees Area/Teesworks area.
NPPF	National Planning Policy Framework- a document setting out the Government's planning policies for England.
NPS	National Policy Statement - a statement produced by Government under the Planning Act 2008 providing the policy framework for Nationally Significant Infrastructure Projects and Projects of National Significance. They include the Government's view of the need for and objectives for the development of Nationally Significant Infrastructure

	Projects and Projects of National Significance in a particular sector such as energy and are used to determine applications for such development.
NSIP	Nationally Significant Infrastructure Project - defined by the Planning Act 2008 and covering projects relating to energy (including generating stations, electric lines and pipelines); transport (including trunk roads and motorways, airports, harbour facilities, railways and rail freight interchanges); water (dams and reservoirs, and the transfer of water resources); waste water treatment plants and hazardous waste facilities. These projects are only defined as nationally significant if they satisfy a statutory threshold in terms of their scale or effect.
NTS	National Transmission System for gas - the gas national grid used to transport natural gas around the UK.
NZT	Net Zero Teesside.
PA 2008	The Planning Act 2008 - setting out the legislative regime for Nationally Significant Infrastructure Projects.
PCC Site	Power, Capture and Compression Site - the part of the Proposed Development Site that will accommodate the Electricity Generating Station, its Carbon Capture Plant and the High-Pressure Compressor Station.
PNS	Projects of National Significance. Projects that are brought into the Planning Act 2008 regime via a Section 35 Direction issued by the Secretary of State. The aspects of the Proposed Development that are the subject of the Section 35 Direction are PNS as no part of those aspects are currently considered to be a NSIP.
PPG	Planning Practice Guidance - supplements the National Planning Policy Framework and provides detailed planning guidance to local planning authorities and applicants in England.
Q2	Quarter 2 - the months of April, May and June in any calendar year.
RBT	Redcar Bulk Terminal - a deep-water marine terminal situated on the South Bank of the River Tees on the North-East coast of the UK.
RCBC	Redcar and Cleveland Borough Council - the Local Planning Authority for part of the Site.
SoS	Secretary of State - the decision maker for DCO applications and head of Government department.
SPD	Supplementary Planning Document - a document that supplements the policies contained in the statutory development plan for the area.
SSI	Sahaviriya Steel Industries - the former owner of part of the former Redcar Steel Works Site.
STBC	Stockton-on-Tees Borough Council - the Local Planning Authority for part of the Site.
STDC	South Tees Development Corporation - a Mayoral Development Corporation responsible for approximately 400 hectares of land south of the River Tees in the borough of Redcar and Cleveland.

2015 Order	The Town and Country Planning (Development Management Procedure) (England) Order 2015 - the Order setting out the requirements for Design and Access Statements under the Town and Country Planning Act regime.

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1.0 EXECUTIVE SUMMARY

1.1.1 This Planning Statement (Document Ref. 5.2) has been prepared on behalf of H2Teeside Limited (the 'Applicant'). It forms part of the application (the 'Application') 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').

1.1.2 Development consent is required for the Proposed Development as it is the subject of a Direction dated 22 December 2022 made by the SoS for DESNZ under Sections 35(1) and 35ZA of the PA 2008.

1.1.3 The Proposed Development will use natural gas to produce hydrogen (known as 'blue' hydrogen) with the carbon dioxide (CO_2) created during the hydrogen production process being captured and compressed for onward transportation and storage, under agreement with the Northern Endurance Partnership (the 'NEP'). NEP will store the CO_2 securely below ground within the Endurance storage site and other nearby CO_2 stores that NEP holds CO_2 storage licences for. These are located approximately 145 kilometres ('km') offshore from Teesside under the North Sea.

1.1.4 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.

1.1.5 The low carbon hydrogen produced by the Proposed Development will be supplied via a new hydrogen pipeline network to existing businesses and industry 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.

1.1.6 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 CO_2 being captured and stored each year.

1.1.7 The Proposed Development Site (the 'Site') lies within the administrative boundaries of Redcar and Cleveland Borough Council ('RCBC'), Stockton-on-Tees Borough Council and Hartlepool Borough Council. It also partly lies within the boundary of the land controlled by the South Tees Development Corporation

('STDC') that is now known as Teesworks and which includes the former Redcar Steel Works complex.

1.1.8 The Hydrogen Production Facility and its ancillary development, including its carbon capture and compression facilities, will be located on the northern part of the Foundry plot, which forms part of Teesworks, within the borough of Redcar and Cleveland. Teesworks is a major brownfield industrial site and Freeport, part of the land which was formerly occupied by the Redcar Steel Works. It will be located adjacent to the NEP infrastructure (the Net Zero Teesside Project). The CO_2 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.

1.1.9 Under the PA 2008 regime, the policy framework for examining and determining applications for development consent is provided by National Policy Statements ('NPSs'). The NPSs are the primary policy used by the relevant SoS to examine and determine DCO applications.

1.1.10 The following NPSs for energy (designated in January 2024) are relevant to the Proposed Development:

- the Overarching NPS for Energy (EN-1) (November 2023);
- the NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (November 2023); and
- the NPS for Electricity Networks Infrastructure (EN-5) (November 2023).

1.1.11 Where a relevant NPS has been designated, Section 104, subsection (2) of the PA 2008 requires the SoS to determine the application for development consent in accordance with the relevant NPSs and appropriate marine policy documents (if any are in place) having regard to any local impact report produced by the relevant Local Planning Authority ('LPA'); any matters prescribed in relation to development of the description to which the application relates; and any other matters which the SoS thinks are both *"important and relevant"* to their decision. This is except to the extent (Section 104, subsection (3)) that one or more of the following (Section 104, subsection (4) to (8)) applies:

- it would lead to the UK being in breach of its international obligations;
- it would lead to the SoS being in breach of any statutory duty that applies to the SoS;
- it would be unlawful by virtue of any enactment;
- it would result in the adverse impacts of the development outweighing the benefits; or
- it would engage any condition that is prescribed for deciding an application otherwise than in accordance with a NPS is met.

1.1.12 The primary purpose of this Planning Statement is to assist the SoS in their assessment of the Proposed Development. This achieved by demonstrating how

the Applicant has taken account of relevant planning policy, notably the NPSs for energy. The Planning Statement sets out how the Proposed Development complies with those policies and any other matters that are important and relevant to the SoS's determination of the Application.

1.1.13 Section 5.0 of the Planning Statement considers recent UK Government energy and climate change policy, including the Ten Point Plan; the Energy White Paper; the Net Zero Strategy; and the British Energy Security Strategy. These documents set out important Government objectives for decarbonising the power and industrial sectors to achieve the net zero by 2050 and are important and relevant considerations to be taken into account in determining the Application.

1.1.14 Section 6.0 (with the Planning Statement – Policy Assessment Tables, Document Ref. 5.2.1) considers the conformity of the Proposed Development against the assessment principles, generic impacts and technology specific considerations of the relevant energy NPSs (EN-1, EN-4 and EN-5) and also against relevant marine policy. It also considers the conformity of the Proposed Development with the National Planning Policy Framework ('NPPF') and local development plan policy.

1.1.15 Section 7.0 of the Planning Statement sets out the key benefits for the Proposed Development, including the 'need' for it in terms of decarbonising industry on Teesside, in addition to its likely significant adverse environmental effects/impacts. Where relevant the Planning Statement cross references or 'signposts' the relevant application documents, such as the Environmental Statement ('ES'), that provide more detail on these matters.

1.1.16 Paragraph 1.3.5 of NPS EN-1 states that where the need for a particular type of energy infrastructure set out at paragraph 1.3.2 is established by the NPS, but that type of infrastructure is outside the scope of one of the technology specific NPSs, EN-1 alone will have effect and be the primary basis for SoS decision making. It goes on to state:

"This will be the case for, but is not limited to, unconventional hydrocarbon extraction sites, hydrogen pipeline and storage infrastructure, Carbon Capture Storage (CCS) pipeline infrastructure and other infrastructure not included in EN-2 or EN-3."

1.1.17 With regard to Section 35 directions, paragraph 1.3.10 of EN-1 states:

"EN-1, in conjunction with any relevant technology specific NPS, will be the primary policy for Secretary of State decision making on projects in the field of energy for which a direction has been given under section 35."

1.1.18 As such, the Application should be determined under EN-1 as per Section 104 of the PA 2008.

1.1.19 Part 3 of EN-1 confirms the 'The need for new nationally significant energy infrastructure projects'. It explains why the Government sees a need for significant amounts of new large-scale energy infrastructure to meet its energy objectives and why it considers the need for such infrastructure is urgent.

1.1.20 Paragraphs 3.2.11 and 3.2.12 of EN-1 confirm that where an energy infrastructure project is not covered by Sections 15 to 21 of the PA 2008, but is considered to be

nationally significant and is subject to Section 35 direction, then the application for development consent would need to be considered in accordance with EN-1:

"In particular: …

where the application is for hydrogen infrastructure … the Secretary of State should give substantial weight to the need established at paragraphs 3.4.12 to 3.4.22 of this NPS …"

1.1.21 EN-1 confirms the need that exists for the delivery of low carbon hydrogen infrastructure in the UK. The Proposed Development responds to that need as it will deliver 1.2 GW of low carbon hydrogen production on Teesside. The urgent need for low carbon hydrogen is not open to debate or interpretation and should be afforded significant weight in the SoS's decision-making.

1.1.22 Section 4.2 of Part 4 of EN-1 set out the Critical National Priority ('CNP') for low carbon infrastructure. Paragraph 4.2.4 confirms that the Government has concluded that there is a CNP for the provision of nationally significant low carbon energy infrastructure. The NPS makes clear that the Proposed Development meets the definition of low carbon energy infrastructure and is CNP infrastructure.

1.1.23 CNP policy is weighed against residual impacts of developments. Paragraph 4.2.15 and Figure 2 of EN-1 confirm that where residual impacts remain after mitigation, those residual impacts are unlikely to outweigh the urgent need for CNP infrastructure, and it is unlikely that consent will be refused on the basis of those impacts. The CNP policy places a clear presumption in favour of granting consent for CNP infrastructure.

1.1.24 The exception to this presumption of consent are residual impacts, which present an unacceptable risk to, or unacceptable interference with, human health and public safety, defence, irreplaceable habitats (impacts on areas covered by the Habitats Regulations or Marine Conversation Zones) or unacceptable risk to the achievement of net zero. The Proposed Development does not engage any of those matters while it will clearly make a positive contribution toward net zero.

1.1.25 As referred to above, the Applicant has provided an assessment of the Proposed Development against relevant NPS policy, including the assessment principles and generic impacts at Parts 4 and 5 of EN-1 and relevant technology specific considerations within EN-4 and EN-5. That assessment has had regard to the findings of the ES and has not identified any overriding conflict with NPS policy. It is considered that the limited significant adverse environmental effects/impacts of the Proposed Development (which are in the main related to the construction phase and therefore temporary) are more than outweighed by the need for and benefits of the Proposed Development and in any event, such impacts would be outweighed by CNP policy and the urgent need for CNP infrastructure.

1.1.26 The Proposed Development has also been assessed against marine policy, including the UK Marine Policy Statement and the North East Marine Plan, as the Proposed Development involves parts of the tidal River Tees. The ES includes a Marine Policy Assessment in accordance with EN-1 (paragraph 4.5.8). The assessment of the

Proposed Development against the MPS and North East Marine Plan has not identified any conflict with relevant marine policies.

1.1.27 As referred to above, Section 104 of the PA 2008 confirms that in determining applications for development consent, the SoS can considers any other matters that they think are important or relevant to their decision. As stated above, in the case of the Proposed Development, the Applicant considers that such matters include recent UK Government energy and climate change policy, which set out important objectives for the production and supply of hydrogen to help decarbonise industry and contribute toward the legally binding target of net zero by 2050. Other matters that the SoS may consider important and relevant include the policies contained within the NPPF and also local development plan policy.

1.1.28 The Applicant has considered energy and climate change policy in detail. The Proposed Development is clearly in accordance with and supports the ambition and key objectives of energy and climate change policy. In particular:

- It will deliver low carbon hydrogen production within what is an emerging CCUS cluster (the East Coast Cluster 'ECC') on Teesside. It will link into the adjacent NEP infrastructure so that the CO_2 created during the hydrogen production process will be captured and compressed for onward transportation and storage.
- It will make an important contribution (1.2 GW) toward the Government's ambition of delivering 10 GW of low carbon hydrogen production by 2030 within one of the UK's major industrial clusters. This is 12% of the 2030 target.
- It is well located to make a significant contribution to industrial decarbonisation on Teesside, being in close proximity to a number of industrial users/offtakers for the low carbon hydrogen that will be produced, with the potential for future expansion. It will support the decarbonisation of industries that are either hard or not possible to electrify.
- It will also contribute to the security of UK energy supplies by providing an alternative low carbon fuel source to imported natural gas.

1.1.29 The contribution that the Proposed Development will make to the delivery of important energy and climate change policy objectives, not least the legally binding target of net zero greenhouse gas emissions by 2050, should be afforded very significant weight by the SoS in determining the Application.

1.1.30 Although EN-1 is the primary policy basis for the determination of the Application by the SoS, the Applicant has provided an assessment of the Proposed Development against the NPPF and local development plan policy. That assessment has not identified any conflict with NPPF or local development plan policy, notwithstanding that where there is a conflict between NPS policy and the NPPF and local development plan policy, the NPS shall take precedence.

1.1.31 With regard to Section 104 subsection (3), granting development for the Proposed Development in accordance with EN-1, would not be in conflict with Section 104 subsections (4) to (8) or engage any condition that is prescribed for deciding an application otherwise than in accordance with a NPS.

1.1.32 As such, there is no reason why the SoS could not determine the Application in accordance with the relevant NPSs.

1.1.33 In addition to contributing toward the need for new hydrogen generating capacity and the delivery of important energy and climate change policy, the Proposed Development has a number of other very clear and substantial benefits, including employment and regeneration, amongst others.

1.1.34 Therefore, given the importance of decarbonising industrial sectors in the UK to meet the legally binding target of net zero by 2050, and the fact that benefits of the Proposed Development substantially outweigh the limited harm that would result from the effects/impacts identified, development consent should be granted by the SoS.

2.0 INTRODUCTION

2.1 Background

2.1.1 This Planning Statement (Document Ref. 5.2) has been prepared on behalf of H2 Teesside Limited. It forms part of the application (the 'Application') 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.

2.1.2 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 (CO_2) to the Northern Endurance Partnership (NEP) offshore storage facility via NEP infrastructure on the adjacent Net Zero Teesside (NZT) site, including the high-pressure compression facility and the CO_2 export pipeline

2.1.3 The Applicant is seeking development consent for the construction, operation, maintenance and decommissioning of the H2Teesside Project, including associated development (together the 'Proposed Development') on land within the boroughs of Redcar and Cleveland and Stockton-on-Tees, Teesside and within the borough of Hartlepool, County Durham.

2.1.4 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. The DCO, if made by the SoS, would be known as 'The H2 Teesside Order' (the 'Order'). A copy of the Direction can be found at Appendix 1.

2.2 The Development Consent Process

2.2.1 Under the PA 2008, development consent can be granted in the form of a DCO for certain types of Nationally Significant Infrastructure Projects ('NSIPs') by the relevant SoS – in the case of energy infrastructure projects, this is the SoS for DESNZ.

2.2.2 However, the Proposed Development does not fall within any of the categories of NSIPs under Section 14 of the PA 2008 as:

- gas production facilities are not mentioned as a category of NSIPs; and
- in respect of the Hydrogen Pipeline Corridor, further to the Energy Act 2023 and recent Government consultations, the Government intends that hydrogen distribution will require a gas transporter licence. As such consideration needs to be given to the Section 14 category of gas transporter pipe-lines, the criteria of which are defined by Section 20 of the PA 2008. The Hydrogen Pipeline

Corridor proposed as part of the Proposed Development does not meet those Section 20 criteria.

2.2.3 It is noted that in the earlier stages of development of the Proposed Development, prior to the Government legislating the Energy Act 2023, the Applicant had also considered the Section 14 category of *"construction of a pipe-line other than by a gas transporter",* being, pursuant to section 21 of the PA 2008, that which would require *"authorisation under … the Pipe-Lines Act 1962"*. According to the Pipe-Lines Act 1962, a cross-country pipeline means a pipeline whose length exceeds, or is intended to exceed 16.093 kilometres ('km') (i.e. 10 miles). At that earlier stage, it was noted that it was likely that the Proposed Development's Hydrogen Pipeline Corridor would meet that distance threshold and thus could potentially be a NSIP, but that this was not definitive.

2.2.4 In light of this, and given the national significance of the Proposed Development and the desire to ensure that all aspects of the Proposed Development could be consented together the Applicant sought direction under Section 35 of the PA 2008 from the SoS for the Hydrogen Production Facility and the Hydrogen Pipeline Corridor (to the extent that the latter is not automatically a NSIP, which further to the Energy Act 2023, is now the entire corridor) to be treated as development for which development consent is required.

2.2.5 On 22 December 2022, the SoS took the decision within the conditions as required by Section 35A of the PA 2008 to issue a Direction in these terms. The other elements of the Proposed Development are being brought forward as 'associated development' to that development.

2.2.6 As a result of the above, the Applicant is required to obtain a DCO to authorise the Proposed Development under the PA 2008. Section 37 governs the form and content of the 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)' (the 'APFP Regulations'), which, amongst other things, state that an application must be accompanied by an Environmental Statement ('ES'), where a development requires an Environmental Impact Assessment ('EIA') (also known as an 'EIA development') under 'The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended)' (the 'EIA Regulations').

2.2.7 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').

2.3 Overview of the Proposed Development

2.3.1 The Proposed Development will use natural gas to produce hydrogen (known as 'blue' hydrogen) with the carbon dioxide (CO_2) created during the hydrogen production process being captured and compressed for onward transportation and storage, under agreement with the Northern Endurance Partnership (the 'NEP').

NEP will store the CO_2 securely below ground within the Endurance storage site and other nearby CO_2 stores that NEP holds CO_2 storage licences for. These are located approximately 145 kilometres ('km') offshore from Teesside under the North Sea.

2.3.2 The onshore elements of the NEP infrastructure on Teesside are part of the Net Zero Teesside ('NZT') 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.

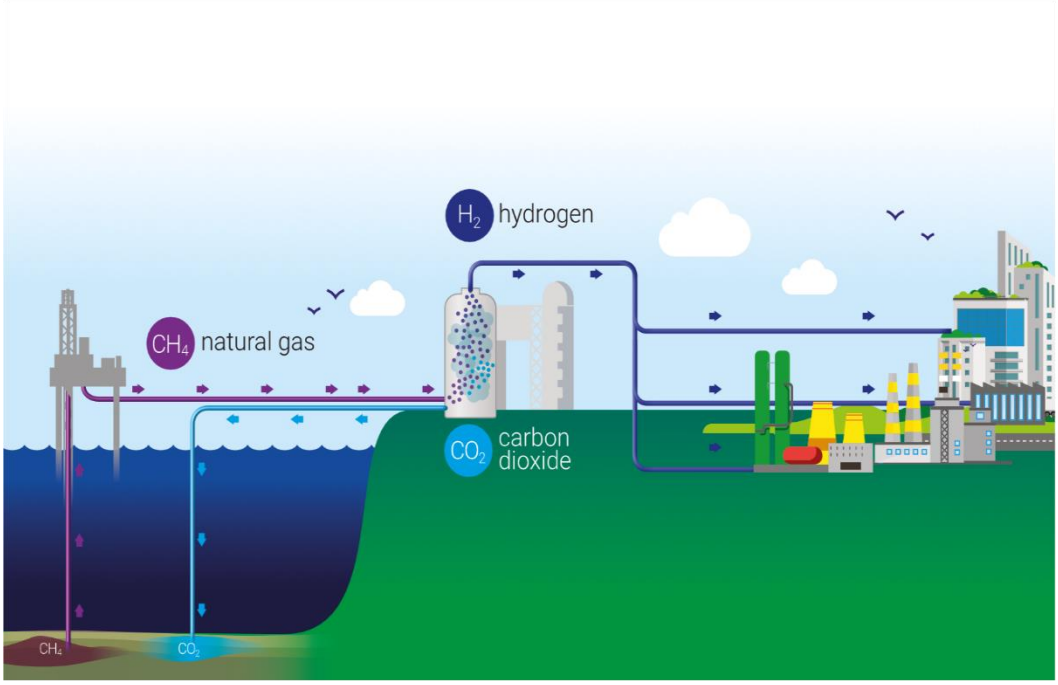
2.3.3 The Proposed Development and NEP form part of the East Coast Cluster ('ECC'). The ECC has been selected as one of the first two carbon capture, usage and storage ('CCUS') clusters to be taken forward by the UK Government. The ECC has the potential to remove almost 50% of the UK's total industrial 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.

2.3.4 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.

2.3.5 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 up to two million tonnes of CO_2 being captured and stored each year.

2.3.6 The infographic below in **Figure 2.1** provides an overview of the 'blue' hydrogen processes.

Figure 2.1: Blue Hydrogen Processes



2.4 Proposed Development Description

2.4.1 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 CO_2 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 providing exchange land for special category land affected by Work No. 6.

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

2.4.3 It is envisaged that the Hydrogen Production Facility will be constructed in two phases.

2.4.4 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.

2.4.5 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).

2.5 The Proposed Development Site

2.5.1 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.

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

2.5.3 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, 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.

2.5.4 The CO_2 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.

2.5.5 The natural gas, electrical and water connections will be located to the east and south-east of the Main Site within the borough of Redcar and Cleveland. The hydrogen distribution network will 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.

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

2.6 The Purpose and Structure of this Document

2.6.1 The primary purpose of this Planning Statement is to assist the Examining Authority ('ExA') and the SoS in their assessment of the Proposed Development by demonstrating how the Applicant has taken account of relevant planning policy, notably the National Policy Statements ('NPSs') for energy, which confirm the need for new energy infrastructure, and the extent to which the Proposed Development complies with the policies within those NPSs; relevant marine policy; as well as any other matters that are *"important and relevant"* to the SoS's determination of the DCO Application. Such matters include UK Government energy and climate change policy, the National Planning Policy Framework ('NPPF') and local development plan policy.

2.6.2 The Planning Statement sets out the key benefits for the Proposed Development, including the 'need' for it in terms of decarbonising industry on Teesside, in addition to its likely significant adverse environmental effects/impacts. Where relevant the Planning Statement cross references or 'signposts' the relevant application documents that provide more detail on these matters. The need for the Proposed Development is set out in detail within the Need Statement (Document Ref: 5.3), which also forms part of the Application.

2.6.3 The Planning Statement is structured as follows:

- **Section 3: Planning History and Local Planning Designations** – provides a brief overview of the planning history and the local planning designations that apply to the Site.
- **Section 4: The Planning Act 2008 and National Policy Statements** – sets out the legislative and policy framework for the consideration of and determination of applications for development consent, notably the NPSs for energy , relevant marine policy and the other matters that are important and relevant to the SoS's decision-making.
- **Section 5: UK Energy and Climate Change Policy** – provides an overview of UK energy and climate change policy that is of relevance to the Proposed Development within the context of this being one of the matters that is important and relevant to the SoS's decision-making and how the Proposed Development contributes toward important energy and climate change policy objectives.
- **Section 6: The Assessment of the Proposed Development Against Policy** – this section and the Planning Statement – Policy Assessment Tables (Document Ref. 5.2.1) provides an assessment of the Proposed Development against relevant policy, notably the NPSs for energy, relevant marine policy, the NPPF and local development plan policy.

- **Section 7: The Benefits and Impacts of the Proposed Development** – identifies the key benefits of the Proposed Development as well as any likely significant adverse effects/impacts and weighs these against each other.
- **Section 8: Conclusions** – sets out the conclusions of the Planning Statement in terms of the overall acceptability of the Proposed Development.

3.0 PLANNING HISTORY AND LOCAL PLANNING DESIGNATIONS

3.1 Introduction

3.1.1 The section provides a brief overview of the planning history and the planning designations, and related local development plan policies, that are of relevance to the Site.

3.2 Planning History

3.2.1 Teesside has a long history of being a location for heavy industry, dating back to the 1870s when steel making first became established on a large scale, to the later development of the chemical industry during the First World War at Billingham. There was further significant expansion of the chemical industry at Billingham in the 1920s and 1930s followed by the development of a major chemicals complex at Wilton from the mid-1940s. Land was reclaimed from the Tees Estuary over the years to accommodate the growth of these and other industries.

3.2.2 The Teesside steel works complex eventually formed a continuous stretch of development along the south bank of the River Tees from Middlesbrough up to Redcar. At the height of production there were 91 blast furnaces within a 10-mile radius of the area. By the late 1970s most of the steel works in the area had been taken over by British Steel Corporation, and only one blast furnace remained in operation. Opened in 1979 and located near the mouth of the River Tees, the Redcar Blast Furnace, which formed part of the wider British Steel Redcar Integrated Steel Works complex, was the second largest in Europe.

3.2.3 Following the privatisation of British Steel Corporation in 1988 to form British Steel Plc (later Corus Group), the Redcar Steel Works were purchased by Thai-based Sahaviriya Steel Industries ('SSI') in 2011 and were reopened in April 2012 after a period of partial mothballing. However, the Steel Works were again mothballed in September 2015 due to poor steel trading conditions and a drop in the price of steel, with the UK arm of SSI going into liquidation shortly after in October 2015.

3.2.4 With the liquidation of SSI, the Redcar Steel Works, including the Redcar Blast Furnace, the Redcar and South Bank Coke Ovens and the Basic Oxygen Steel Plant at Lackenby, closed. The Teesside Beam Mill and some support services still operate at Lackenby.

3.2.5 The former Redcar Steel Works complex (and other land on the south bank of the Tees) came under the control of the South Tees Development Corporation ('STDC') following land acquisitions and a compulsory purchase order (confirmed in 2020) and has been rebranded as 'Teesworks'.

3.2.6 STDC is tasked with regenerating Teesworks and in recent years has brought forward a number of major planning applications for development, including on what is now known as the 'Foundry', upon which the hydrogen production facility will be located (also referred to as the Main Site). A number of enabling works and projects are underway at Teesworks and much of the former Steel Works complex,

including the Blast Furnace, has now been demolished to make way for new developments.

3.2.7 The main planning applications and development proposals that have come forward at Teesworks and within the vicinity of the Site in the last few years includes:

- Teesworks (Long Acres and South Bank) – demolition and engineering operations associated with site remediation/preparation.
- Teesworks (Long Acres) – erection of circa 185,000 sqm of general industrial, storage and distribution and office accommodation and parking.
- Teesworks (South Bank) – erection of circa 420,000 sqm (gross) of general industrial, storage and distribution and office accommodation and parking.
- Teesworks (South Bank) – erection of circa 3,500 sqm of general industrial and storage space, including waste storage area, hardstanding and landscaping works.
- Teesworks (Dorman Point) – erection of circa 140,000 sqms (gross) of general industrial, storage and distribution and office accommodation and parking.
- Teesworks (Lackenby) – erection of circa 93,000 sqms (gross) of general industrial, storage and distribution and office accommodation and parking.
- Teesworks (Foundry) – construction of circa 465,000 sqm (gross) of general industrial, storage and distribution and office accommodation and parking.
- Teesworks (Steel House) – construction of circa 15,800 sqm (gross) of office accommodation and parking.
- Teesworks (Bran Sands) – engineering works for installation of hardstanding platforms and levelling improvement and extension of existing access road.
- Land between Tees Dock Road and A1085 Trunk Road, Lackenby – development of soil treatment area.
- Redcar Bulk Terminal – construction of Redcar Energy Centre and materials recovery facility.

3.2.8 There have also been numerous planning applications associated with engineering operations for site preparation and remediation, access roads and the installation of infrastructure such as electricity substations at Teesworks and within its vicinity.

3.2.9 Further to the above, bp Alternative Energy Investments Limited, will shortly be submitting a planning application for the Hygreen Hydrogen Production Facility Project (an electrolytic hydrogen production facility) on land at the Foundry, Teesworks, adjacent to the Main Site for the Proposed Development.

3.2.10 A number of Nationally Significant Infrastructure Projects ('NSIPs') have been granted development consent by the SoS within the vicinity of the Site in recent years. These are:

- The York Potash Harbour Facilities Project.

- Tees Combined Cycle Power Plant (CCPP).
- The Net Zero Teesside Project.

3.2.11 The Main Site for the Net Zero Teesside Project (the 'NZT Project') is located adjacent to the Foundry at Teesworks, which will accommodate the hydrogen production facility and its carbon capture plant for the Proposed development. As confirmed in Section 2.0, the Proposed Development will export carbon dioxide (CO2) to the Northern Endurance Partnership ('NEP') offshore storage facility via NEP infrastructure on the adjacent NZT site.

3.2.12 The above developments proposals have been taken into account within the assessment of cumulative effects set out at ES Chapter 23 'Cumulative and Combined Effects (ES Volume I, Document Ref. 6.2.23).

3.2.13 An EIA scoping opinion request was submitted to the Planning Inspectorate ('PINS') by Wave Crest Energy on 13 March 2024 in respect of a proposed application for development consent for a liquefied natural gas importation terminal (the Teesside Flexible Regas Port Project) on land north of the River Tees near Seal Sands.

3.2.14 The Teesside Flexible Regas Port Project has not been considered within ES Chapter 23 for the following reasons:

- the project is still only at EIA scoping stage;
- the EIA scoping opinion request was only submitted to PINS on 13 March 2024, less than two weeks prior to the submission of the application for development consent for the Proposed Development; and
- it is acceptable for the Applicant to be able to fix the EIA work for the Proposed Development a reasonable period in advance of the application for development consent being submitted.

3.3 Local Planning Designations

3.3.1 The Site encompasses land within the administrative boundaries of Redcar and Cleveland Borough Council ('RCBC'), Stockton-on-Tees Borough Council ('STBC') and Hartlepool Borough Council ('HBC') on either side of the river Tees.

3.3.2 The Main Site is located within the administrative boundary of RCBC. The Hydrogen Pipeline Corridor and other connections involve crossings of the River Tees and encompass land within the administrative boundaries of RCBC, STBC and HBC.

3.3.3 The relevant development plan documents ('DPDs') and supplementary planning documents for the Proposed Development are as follows:

- Redcar & Cleveland Local Plan and Policies Map (adopted May 2018).
- The South Tees Area SPD (adopted May 2018).
- Stockton-on-Tees Borough Council Local Plan (adopted January 2019).
- The Hartlepool Local Plan (adopted May 2018).
- The Tees Valley Joint Minerals and Waste DPDs (adopted September 2011).

Supplementary Planning Documents

3.3.4 Parts of the Site lie within the boundary of the South Tees Development Corporation ('STDC') area, which is now known as Teesworks. STDC is a Mayoral Development Corporation, established to further the economic development of the South Tees Area through physical, social and environmental regeneration. However, RCBC retains planning powers for the area and continues to act as the LPA in respect of planning policy and development management and the processing and determination of planning applications.

3.3.5 STDC has produced a Master Plan (the 'South Tees Regeneration Master Plan') to provide a flexible framework for the regeneration of the South Tees Area. The Master Plan was prepared throughout 2017 (later revised in 2019) as a supporting vision and development strategy document to inform the preparation of a Supplementary Planning Document ('SPD') by RCBC for the South Tees Area. Following consultation, the Master Plan was launched alongside the South Tees Area SPD, which was formally adopted by RCBC in May 2018. The Master Plan has no formal planning status, however, the South Tees Area SPD is a material planning consideration.

3.3.6 An overview of the above DPDs and the South Tees SPD, in so far as they contain planning allocations/designations (and related policies) of relevance to the Proposed Development is provided below. The Proposed Development is assessed against relevant DPD and SPD policy at Section 6.

The Redcar & Cleveland Local Plan

3.3.7 A large part of the Site, including the whole of the Main Site, is allocated in the Redcar & Cleveland Local Plan as a *'Protected Employment Area'*, which is subject to Policy ED6 'Promoting Economic Growth'. Policy ED6 seeks to promote industry and port related uses within the South Tees Area and states that development proposals should have regard to the South Tees Area SPD and that these will be supported where they positively contribute towards growth and regeneration. It goes on to state that where appropriate, development proposals will need to demonstrate that there will be no adverse effects on the integrity of the Teesmouth and Cleveland Coast Special Protection Area ('SPA') and Ramsar site, or other European designated nature conservation sites. Development proposals will also be encouraged to improve the quality of the environment.

3.3.8 Parts of the Site lie within South Tees Area that is subject to Policy LS4 of the Local Plan. This Policy builds on ED6 and aims to support the delivery of significant economic growth and job opportunities in the area, including encouraging clean and efficient industry to help reduce carbon emissions and the development of carbon capture and storage ('CCS') to decarbonise the local economy. The Policy also seeks to improve the environmental quality of the area and to protect the nearby nature conservation sites.

3.3.9 The Proposed Development is clearly consistent with Policies ED6 and LS4 as it is an industrial form of development that would help decarbonise the local economy,

and reduce carbon emissions, while promoting significant economic growth and job opportunities.

3.3.10 The key planning allocations/designations and related policies that apply to the Site within Redcar and Cleveland are listed below:

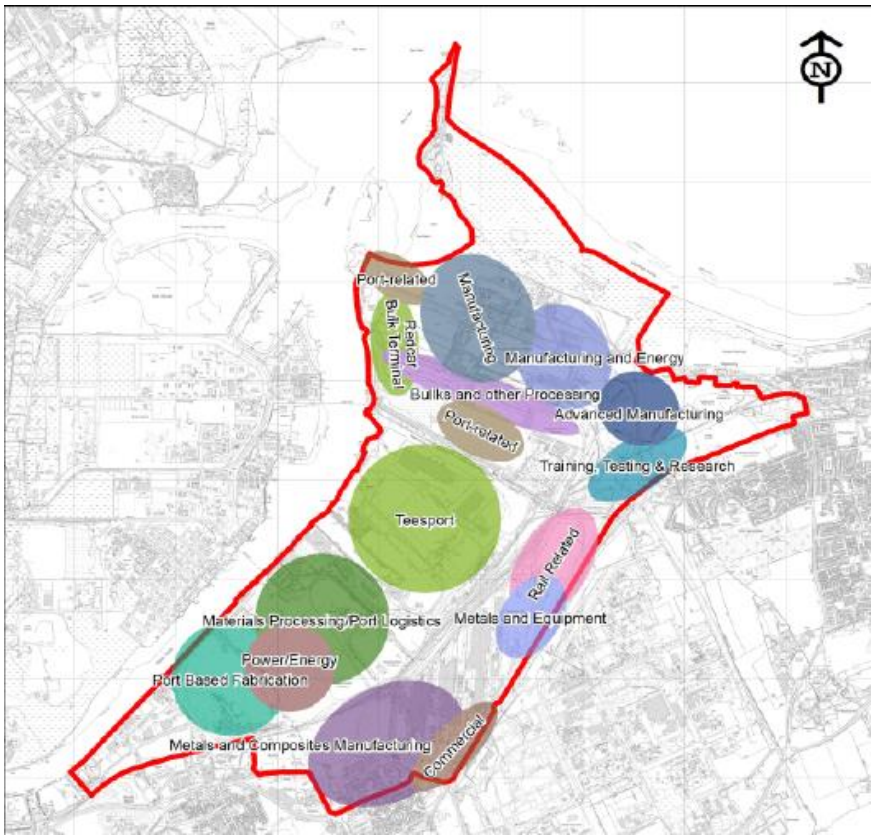
- Development Limits – Policy SD3.
- Protected Employment Area – Policy ED6.
- South Tees Development Corporation Area – Policy LS4.
- 30km wind farm safeguarding area for Durham Tees Valley Airport – Policy SD6.
- Sensitive Landscape Areas – Policy N1.
- Restoration Landscape Areas – Policy N1.
- Strategic Landscape Areas – Policy N2.
- Green Wedge – Policy N2.
- Primary Open Spaces – Policy N3.
- Special Protection Areas (SPAs) – Policy N4.
- Sites of Special Scientific Interest (SSSIs) – Policy N4.
- 6 km Special Protection Area (SPA) Buffer Zone – Policy N4.
- Local Wildlife Sites – Policy N4.
- Marine Dredged Sand and Gravel – Policies MWC4 and MWC5.
- General Location for Large Waste Management Facilities – Policy MWC8.
- South Tees Eco Park – Policies MWP8 and MWP10(b).
- Safeguarded Wharves – Policy MWC11.

3.3.11 The above allocations/designations are shown upon the Policies Map of the Local Plan.

<u>The South Tees Area SPD</u>

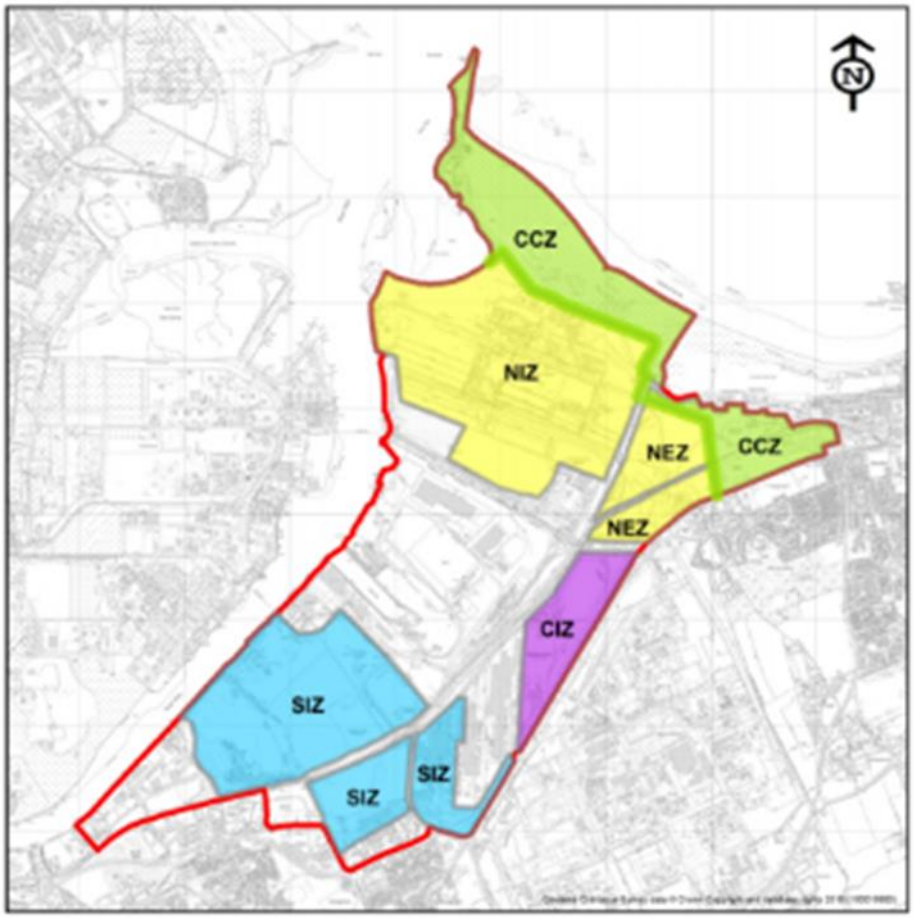
3.3.12 Figure 2 of Chapter 3 of the South Tees Area SPD shows indicative clusters for key industries and processes within the South Tees Area. The Main Site is identified primarily as part of clusters for *'manufacturing*' and *'manufacturing and energy'* and *'port-related uses'*, while within its vicinity clusters are shown for '*port-related uses*', '*Redcar Bulk Terminal*' and *'other processing, advanced manufacturing and training, testing and research'*. The figure is reproduced below (Figure 3.1):

Figure 3.1: Figure 2 of South Tees Area SPD. Clusters of Key industries/processes identified in the South Tees Area SPD



3.3.13 At Chapter 4, the SPD sets out site specific development principles for the five main zones of the South Tees Area (as shown by Figure 6 of the SPD). These are the North Industrial Zone ('NIZ'); North East Industrial Zone ('NEIZ'); Central Industrial Zone ('CIZ'); South Industrial Zone ('SIZ'); and Coastal Community Zone ('CCZ'). The North Industrial Zone, which encompasses the Main Site is identified for development proposals relating to port related industry, major space users/large scale manufacturing, energy innovation, power generation and storage, bulk materials and mineral processing. Figure 6 of the SPD is reproduced below (Figure 3.2):

Figure 3.2: Development Zones identified in the South Tees Area SPD



3.3.14 The SPD also sets out several 'Development Principles' to guide the development of the South Tees Area. Those of particular relevance to the Proposed Development include:

- Development Principle STDC6: Energy Innovation.
- Development Principle STCD7: Natural Environmental Protection and Enhancement.
- Development Principle STDC10: Utilities.
- Development Principle STDC11: North Industrial Zone.

3.3.15 Development Principle STDC6 *'Energy Innovation'* (pages 33 to 34) supports new energy generation within the area, including the promotion of renewable energy and innovative energy projects. STDC11 *'North Industrial Zone'* states (page 49) that STDC will encourage development proposals relating to port related industry, major space users/large scale manufacturing, energy innovation, power generation and storage and bulk materials and processing within this area.

3.3.16 STDC has produced a design guide for Teesworks (the '*Teesworks Design Guide'*) to help inform the design of development proposals within Teesworks. This is a non-statutory document and is not considered further within this Planning Statement,

however, the Applicant has had regard to the Design Guide in the design of the Proposed Development, and this is covered within the Design and Access Statement (Document Ref. 5.3) that forms part of the application for development consent.

Stockton on Tees Borough Council Local Plan

3.3.17 The parts of the Site within the administrative boundary of STBC comprise sections of the Hydrogen Pipeline Corridor. The key planning allocations/designations and related policies within STBC that apply are listed below:

- Development Limits – Policies SD2, SD3, SD4 and SD5.
- General Employment Allocation/Locations – Policies SD4 and EG1.
- Employment Areas/Specialist Use Locations – Policies SD4 and EG4.
- Reserve Housing Land – Policies H1 and H2.
- Durham Tees Valley Airport Safeguarding Area – Policy EG5.
- Internationally Designated Sites (SPAs and Ramsar sites) – Policies SD5 and ENV5.
- Nationally Designated Sites (SSSIs) – Policies SD5 and ENV5.
- Locally Designated Sites (Local Nature Reserves) – Policies SD5 and ENV5.
- Locally Designated Sites (Local Wildlife Sites) – Policies SD5 and ENV5.
- Open Space – Policies SD5 and ENV5.

3.3.18 The above allocations/designations are shown upon an extract of the Policies Map of the Local Plan.

Hartlepool Borough Local Plan

3.3.19 The part of the Site within the administrative boundary of HBC comprises a section of the Hydrogen Pipeline Corridor. The key planning allocations/designations and related policies within HBC that apply are listed below:

- Development Limits – Policies LS1 and RUR2.
- Strategic Gaps – Policy LS1.
- Underground Storage – Policy EMP6.
- Safeguarded Land for Future Road Schemes – Policy INF2.
- Internationally Designated Sites – Policy NE1a.
- Local Wildlife Sites – Policy NE1c.

3.3.20 The above allocations/designations are shown upon an extract of the Policies Map of the Local Plan.

Tees Valley Joint Minerals DPD

3.3.21 The Tees Valley Joint Minerals and Waste DPDs comprise a Minerals and Waste Core Strategy DPD and a Minerals and Waste Policies and Sites DPD. The Joint

Minerals and Waste DPDs were prepared together by RCBC, STBC, HBC and Darlington and Middlesbrough Councils.

3.3.22 The Joint Minerals and Waste DPDs are considered to be of only limited relevance to the Proposed Development, as while some of the Site lies within a 'Minerals Safeguarding Area' ('MSA') and partly within a 'General Location for Large Waste Management Facilities', the Site itself is not subject to any site-specific minerals or waste allocations or policies. The MSA relates to salt and gypsum deep resources.

3.3.23 Much of the Site is or has previously been subject to industrial development or already contains pipelines and utilities corridors. The Main Site is identified for industrial and energy development and the Proposed Development is consistent with that land use allocation. The Proposed Development will would not materially alter or preclude the ability to access minerals for future extraction (there are other sites/locations that could afford access for extraction) or accommodate waste facilities within the wider area (there are site specifically identified for waste facilities and no shortage of industrial premises and sites that would be suitable locations for them). The minerals are at depth and can be extracted by alternative means (e.g. mining or brine solution). Also, part of the resource has already been removed in the past by ICI.

3.3.24 As such, it is not considered that there is any overriding conflict between the Proposed Development and minerals and waste policies and any limited conflict that may exist would be outweighed by the National Policy Statements ('NPSs') for energy, which confirm the urgent need for low carbon energy infrastructure, coupled with the wider benefits of the Proposed Development.

3.3.25 The Proposed Development is assessed against the relevant planning policies of the DPDs and Development Principles of the South Tees SPD at Section 6.0 of this Planning Statement.

4.0 THE PLANNING ACT 2008 AND NATIONAL POLICY STATEMENTS

4.1 Introduction

4.1.1 This section of the Planning Statement sets out the legislative and policy framework for the consideration of and determination of applications for Nationally Significant Infrastructure Projects ('NSIPs') , notably the National Policy Statements for energy, while also identifying the other relevant legislative and policy matters that the SoS may have regard to in determining applications for development consent.

4.2 Legislative and Decision-Making Framework

4.2.1 The main legislative and procedural requirements relating to applications for development consent are set out within the following:

- The Planning Act 2008 (The 'PA 2008').
- The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (The 'AFFP Regulations').
- The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations').

4.2.2 Before a NSIP can proceed, an application for development consent (development consent is granted in the form of a Development Consent Order 'DCO') must be submitted to the relevant SoS pursuant to Section 37 of the PA 2008. The Planning Inspectorate ('PINS') acts on behalf of the relevant SoS – in this case the SoS for DESNZ. PINS is responsible for examining the application and making a recommendation to the SoS who then makes the decision as to whether a DCO should be made authorising the construction, operation and maintenance of the development in question.

4.2.3 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.

4.2.4 As confirmed in Section 2.0, the DCO, if made by the SoS, would be known as 'The H2 Teesside Order' (the 'Order').

4.2.5 Under the PA 2008 regime, the policy framework for examining and determining applications for development consent is provided by National Policy Statements ('NPSs'). The NPSs are the primary policy used by the relevant SoS to examine and determine DCO applications.

4.2.6 The NPSs for energy were first designated in July 2011 by the SoS for the Department for Energy and Climate Change ('DECC'). DECC became part of the Department for Business, Energy & Industrial Strategy ('BEIS') in July 2016, which existed until 2023 when BEIS was split to form the Department for Business and Trade (DBT), the Department for Energy Security and Net Zero ('DESNZ') and the Department for Science, Innovation and Technology ('DSIT').

4.2.7 In December 2020 the Government launched a review of the July 2011 NPSs to ensure that they reflected the legally binding commitment (through the Climate

Change Act 2008 (2050 Target Amendment) Order 2019) to achieve net zero in terms of GHG emissions by 2050 and the Government's energy priorities as set out in the Ten-Point Plan and Energy White Paper. As part of the review, the Government consulted on draft revised NPSs for energy in September 2021.

4.2.8 Following the September 2021 consultation on the draft revised NPSs, the Government published the Net Zero Strategy: Build Back Greener (2021), the British Energy Security Strategy (2022) and then Powering Up Britain (2023). These documents set out several commitments related to energy, planning reform and the NPSs for energy. The Government subsequently made some material updates to the draft revised NPSs for energy and launched a further consultation in March 2023 on those changes, which closed in June 2023.

4.2.9 Following the March 2023 consultation, revised NPSs for energy were published by the Government on 22 November 2023 and were designated (came into force) on 17 January 2024. The revised NPSs are therefore relevant policy for applications for development consent for energy infrastructure submitted and accepted for examination following their designation. The references to the NPSs for energy within this Planning Statement mean the November 2023 NPSs designated on 17 January 2024.

4.2.10 The following NPSs for energy are of relevance to the Proposed Development:

- the Overarching NPS for Energy (EN-1) (November 2023);
- the NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (November 2023); and
- the NPS for Electricity Networks Infrastructure (EN-5) (November 2023).

4.2.11 Where a relevant NPS has been designated, Section 104 of the PA 2008 requires the SoS to determine the application for development consent in accordance with the relevant NPSs and appropriate marine policy documents (if any are in place) having regard to any local impact report produced by the relevant Local Planning Authority ('LPA'); any matters prescribed in relation to development of the description to which the application relates (as set out in the 'The Infrastructure Planning (Decisions) Regulations 2010'); and any other matters which the SoS thinks are both 'important and relevant' to their decision, unless this would:

- lead to the UK being in breach of its international obligations;
- lead to the SoS being in breach of any statutory duty that applies to the SoS;
- be unlawful by virtue of any enactment;
- result in the adverse impacts of the development outweighing the benefits; or
- result in any condition that is prescribed for deciding an application not being in accordance with the NPS.

4.2.12 Where a relevant NPS has not been designated, Section 105 of the PA 2008 applies. That is not the case for the Proposed Development, where a relevant NPS is in place (EN-1), as is confirmed below.

4.3 The Overarching NPS for Energy (EN-1)

4.3.1 Paragraph 1.3.5 of EN-1 states that where the need for a particular type of energy infrastructure set out at paragraph 1.3.2 is established by the NPS, but that type of infrastructure is outside the scope of one of the technology specific NPSs, EN-1 alone will have effect and be the primary basis for SoS decision making. It goes on to state:

"This will be the case for, but is not limited to, unconventional hydrocarbon extraction sites, hydrogen pipeline and storage infrastructure, Carbon Capture Storage (CCS) pipeline infrastructure and other infrastructure not included in EN-2 or EN-3."

4.3.2 As outlined in ES Chapter 1: Introduction (Volume I, Document Ref. 6.2.1), although works to construct the Proposed Development do not fall under the definition of a NSIP for the purposes of the PA 2008, the Applicant sought a direction under Section 35 of the PA 2008 from the SoS for all the Hydrogen Production Facility and any part of the Hydrogen Pipeline Corridor that is not automatically a NSIP to be treated as development for which development consent is required.

4.3.3 On 22 December 2022, the SoS issued a direction under Sections 35(1) and 35ZA of the PA 2008, that the Hydrogen Production Facility and any aspect of the Hydrogen Pipelines Corridor that is not automatically a NSIP should be treated as development for which development consent is required (see Appendix 1 for a copy of the Section 35 Direction for the Proposed Development).

4.3.4 Further to the Energy Act 2023 and recent Government consultations, the Government intends that hydrogen distribution will require a gas transporter licence. As such, consideration needs to be given to the Section 14 category of gas transporter pipelines of the PA 2008, the criteria of which are defined by Section 20 of the Act. The Hydrogen Pipeline Corridor proposed as part of the Proposed Development does not meet those Section 20 criteria, and therefore all aspects of it do not form a NSIP, and therefore fall under the ambit of the Section 35 Direction.

4.3.5 With regard to Section 35 directions, paragraph 1.3.10 of EN-1 states:

"EN-1, in conjunction with any relevant technology specific NPS, will be the primary policy for Secretary of State decision making on projects in the field of energy for which a direction has been given under section 35."

4.3.6 As such, the Application should be determined under EN-1 as per Section 104 of the PA 2008.

4.3.7 Section 2.2 'Net Zero by 2050' of EN-1 confirms the Government's legally binding target (legislated for through the Climate Change Act 2008 (2050 Target Amendment) Order 2019) of achieving net zero in terms of GHG emissions by 2050.

4.3.8 Section 2.3 'Meeting net zero' underlines how the provision of new energy infrastructure will be critical to the UK achieving net zero by 2050. Paragraph 2.3.3 confirms the Government's objectives for the energy system, which are to ensure our supply of energy always remains secure, reliable, affordable and consistent with meeting the UK's target to cut GHG emissions to net zero by 2050. It states that this will require a step change in the decarbonisation of our energy system.

Paragraph 2.3.4 goes on to state that meeting these objectives necessitates a significant amount of energy infrastructure, both large and small-scale. This includes the infrastructure needed to convert primary sources of energy (e.g. wind) into energy carriers (e.g. electricity or hydrogen), and to store and transport these energy carriers into and around the country. It also includes the infrastructure needed to capture, transport and store carbon dioxide (CO_2). It stresses that the requirement for new energy infrastructure will present opportunities for the UK and contributes towards our ambition to support jobs in the UK's clean energy industry and local supply chains.

4.3.9 Paragraph 2.3.6 of EN-1 underlines the need to transform the energy system by:

"… tackling emissions while continuing to ensure secure and reliable supply, and affordable bills for households and businesses. This includes increasing our supply of clean energy from renewables, nuclear and hydrogen manufactured using low carbon processes (low carbon hydrogen), and, where we still emit carbon, developing the industry and infrastructure to capture, transport and store it."

4.3.10 Section 2.6 'Sustainable development' confirms (paragraph 2.6.1) that the Government's wider objectives for energy infrastructure include contributing to sustainable development and ensuring that our energy infrastructure is safe. Paragraph 2.6.2 is clear that sustainable development is relevant not just in terms of addressing climate change, but because the way energy infrastructure is deployed affects the well-being of the environment, society and the economy, for both current and future generations. For example, the availability of appropriate infrastructure supports the efficient working of the market so as to ensure competitive prices for consumers. The regulatory framework also encourages the energy industry to protect the more vulnerable.

4.3.11 Part 3 of EN-1 deals with 'The need for new nationally significant energy infrastructure projects'. It explains why the Government sees a need for significant amounts of new large-scale energy infrastructure to meet its energy objectives and why it considers the need for such infrastructure is urgent. However, it notes at paragraph 3.1.2 that it will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impacts. It goes on to state that these impacts will be minimised by the application of policy set out in Part 4 'Assessment Principles' and Part 5 'Generic Impacts' of the NPS.

4.3.12 Paragraph 3.2.2 of EN-1 confirms that the UK needs a range of different types of energy infrastructure and at paragraph 3.2.3 states that it is for industry to propose new infrastructure within the strategic framework set by the Government. It also states that it is not appropriate for planning policy to set limits on different technologies. Furthermore, paragraphs 3.2.6 to 3.2.8 state that the SoS should assess all applications for development consent for the types of infrastructure covered by EN-1 on the basis that:

- the Government has demonstrated that there is a need for those types of infrastructure which is urgent;
- that substantial weight should be given to that need; and

- that the SoS is not required to consider separately the specific contribution of any individual project to satisfying that need.

4.3.13 Paragraphs 3.2.11 and 3.2.12 together confirm that where an energy infrastructure project is not covered by Sections 15 to 21 of the PA 2008, but is considered to be nationally significant and is subject to a direction under Section 35, then the application for development consent would need to be considered in accordance with EN-1:

"In particular: …

where the application is for hydrogen infrastructure not covered by sections 15-21 of the Planning Act, the Secretary of State should give substantial weight to the need established at paragraphs 3.4.12 to 3.4.22 of this NPS …"

4.3.14 Hydrogen is considered at Section 3.4 '*The need for new nationally significant gas infrastructure*'. As referred to above, the need for low carbon hydrogen infrastructure is set out at paragraphs 3.4.12 to 3.4.22 of EN-1. Paragraph 3.4.12 states:

"There is an urgent need for all types of low carbon hydrogen infrastructure to allow hydrogen to play its role in the transition to net zero."

4.3.15 Paragraph 3.4.13 of EN-1 goes on to state:

"… the government is committed to developing low carbon hydrogen, which will be critical for meeting the UK's legally binding commitment to achieve net zero by 2050, with the potential to help decarbonise vital UK industry sectors and provide flexible deployment across heat, power and transport."

4.3.16 Paragraph 3.4.21 of EN-1 goes on to state that in considering applications for low carbon hydrogen infrastructure, the SoS will expect applicants to consider foreseeable future demand when considering the size and route of their investments. Applicants may propose pipelines with a greater capacity than demand might suggest at the time of consenting. In developing the Hydrogen Pipeline Corridor, the Applicant has allowed for the phased nature of the Proposed Development. Paragraph 3.4.22 of EN-1 confirms that 'to support the urgent need for low carbon hydrogen infrastructure, hydrogen distribution, pipelines and storage, are considered to be [Critical National Priority] CNP infrastructure'.

4.3.17 Section 3.5 of EN-1 deals with 'The need for new nationally significant carbon capture and storage infrastructure'. Paragraph 3.5.1 states:

"There is an urgent need for new carbon capture and storage (CCS) infrastructure to support the transition to a net zero economy."

4.3.18 Paragraph 3.5.2 highlights the Committee on Climate Change's statement that CCS is a necessity and not an option and that:

"CCS infrastructure will also be needed to capture and store carbon dioxide from hydrogen production from natural gas …"

4.3.19 Paragraph 3.5.8 also confirms that 'to support the urgent need for new CCS infrastructure, CCS technologies, pipelines and storage infrastructure are considered to be CNP infrastructure'.

4.3.20 Parts 4 and 5 of EN-1 set out the 'Assessment Principles' and 'Generic Impacts' to be taken into account in respect of applications for energy infrastructure that are covered by the NPS.

4.3.21 Part 4 'Assessment Principles' of EN-1 under 'General Policies Considerations' at paragraph 4.1.3 states that the SoS will start with a presumption in favour of granting development consent for applications covered by the NPSs for energy given the level and urgency of need for such infrastructure. The assessment principles to be taken into account, which are set out in Part 4, include matters such as the critical national priority ('CNP') for low carbon infrastructure; environmental effects; health; marine considerations; environmental and biodiversity net gain; criteria for good design for energy infrastructure; consideration of combined heat and power; carbon capture and storage; climate change adaptation and resilience; network connection; pollution control; safety; hazardous substances; common law nuisance and statutory nuisance; and security considerations.

4.3.22 One of the key assessment principles dealt with in Section 4.2 of Part 4 of EN-1 is the CNP for low carbon infrastructure. Paragraph 4.2.4 confirms that the Government has concluded that there is a CNP for the provision of nationally significant low carbon energy infrastructure. As stated above, paragraphs 3.4.22 and 3.5.8 of EN-1 confirm that hydrogen and CCS infrastructure are considered CNP infrastructure and this is further underlined at paragraph 4.2.5, which states that:

"Low carbon infrastructure for the purposes of this policy means:

- *for other energy infrastructure, fuels, pipelines and storage infrastructure, which fits within the normal definition of "low carbon", such as hydrogen distribution, and carbon dioxide distribution;*
- *for energy infrastructure which is directed into the NSIP regime under section 35 of the Planning Act 2008, and fits within the normal definition of "low carbon", such as interconnectors, Multi-Purpose Interconnectors, or 'bootstraps' to support the onshore network which are routed offshore."* [underlining added]

4.3.23 The Proposed Development is clearly for the provision of nationally significant low carbon infrastructure and is subject to the Section 35 Direction dated 22 December 2022 and, taken with paragraphs 3.4.22 and 3.5.8, demonstrate that all key aspects of the Proposed Development fall under the scope of the CNP policy.

4.3.24 Paragraph 4.2.7 of EN-1 confirms that the CNP policy applies following the normal consideration of the need case, the impacts of the development and the application of the mitigation hierarchy and does not create an additional or cumulative need case or weighting. CNP policy is therefore to be weighed against residual impacts that have been identified. Paragraph 4.2.15 and Figure 2 of EN-1 confirm that where non-Habitats Regulations Assessment ('HRA') or non-Marine Conservation Zone ('MCZ') residual impacts remain after mitigation, those residual impacts are unlikely to outweigh the urgent need for CNP infrastructure, and it is unlikely that

consent will be refused on the basis of those impacts. The CNP policy places as clear presumption in favour of granting consent for CNP infrastructure.

4.3.25 The exception to this presumption of consent are residual impacts, both onshore and offshore, which present an unacceptable risk to, or unacceptable interference with, human health and public safety, defence, irreplaceable habitats or unacceptable risk to the achievement of net zero. Figure 2 of EN-1 goes onto state that:

"The SoS will consider the particular circumstances of any application, but will take as a starting point for decision making that such infrastructure is to be treated as if it has met any test requiring a clear outweighing of harm, exceptionality, or very special circumstances within EN-1, this NPS of any other planning policy."

4.3.26 Paragraphs 4.2.18 and 4.2.19 confirm that any HRA or MCZ residual impacts will be considered under the framework set out in 'The Conservation of Habitats and Species Regulations 2017' (the 'Habitats Regulations') and 'The Marine and Coastal Access Act 2009' ('MCAA 2009') respectively, and where such residual impacts remain, the SoS will consider making a derogation (an exemption) under the relevant legislation.

4.3.27 Paragraph 4.2.21 states:

"For both derogations, the Secretary of State will consider the particular circumstances of any plan or project, but starting from the position that energy security and decarbonising the power sector to combat climate change:

- *requires a significant number of deliverable locations for CNP Infrastructure and for each location to maximise its capacity. This NPS imposes no limit on the number of CNP infrastructure projects that may be consented. Therefore, the fact that there are other potential plans or projects deliverable in different locations to meet the need for CNP Infrastructure is unlikely to be treated as an alternative solution. Further, the existence of another way of developing the proposed plan or project which results in a significantly lower generation capacity is unlikely to meet the objectives and therefore be treated as an alternative solution; and*
- *are capable of amounting to imperative reasons of overriding public interest ('IROPI') for HRAs, and, for MCZ assessments, the benefit to the public is capable of outweighing the risk of environmental damage, for CNP Infrastructure."*

4.3.28 Paragraph 4.2.22 continues by stating:

"For HRAs, where an applicant has shown there are no deliverable alternative solutions, and that there are IROPI, compensatory measures must be secured by the Secretary of State as the competent authority, to offset the adverse effects to site integrity as part of a derogation. For MCZs, where an applicant has shown there are no other means of proceeding which would create a substantially lower risk, and the benefit to the public outweighs the risk of damage to the environment, the Secretary of State must be satisfied that measures of equivalent environmental benefit will be undertaken."

4.3.29 Even where the Habitats Regulations are engaged and development involves a MCZ and there are impacts, EN-1 does recognise that there may imperative reasons of overriding public interest for development to proceed and provides scope for compensatory measures or equivalent environmental benefits to be secured by the SoS to offset adverse effects/harm.

4.3.30 The Proposed Development will not result in significant adverse residual impacts, which present an unacceptable risk to, or unacceptable interference with, human health and public safety, defence or irreplaceable habitats, and that is confirmed by ES Chapter 24 'Summary of Significant Effects' (Document Ref. 6.2.24), while the Proposed Development clearly supports the achievement of net zero. It is also noted that the 'Report to inform Habitats Regulations Assessment' Document Ref. 5.10) confirms that the Proposed Development does not cause any adverse effects to integrity of any internationally or nationally protected nature conservation sites, and it is also the case that the Proposed Development does not affect MCZs in any way.

4.3.31 The CNP policy of the NPS therefore applies fully to the Proposed Development.

4.3.32 Generic impacts (Part 5 of EN-1) are those impacts that arise from the development of all types of energy infrastructure covered by the NPSs for energy. Generic impacts include matters such as air quality and emissions; flood risk; historic environment; landscape and visual; noise and vibration; socio-economic impacts; and traffic and transport.

4.4 The NPS for Natural Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4)

4.4.1 The NPS for Natural Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) is considered to be relevant as the Proposed Development includes pipeline infrastructure, notably a natural gas supply pipeline and hydrogen distribution pipelines. While the natural gas supply pipeline is not development for which development consent is required in its own right, it is associated development for the purposes of Section 115(1)(b) of the PA 2008, and paragraph 1.6.3 of EN-4 recognises that pipelines can be associated development by virtue of their connection with an NSIP. Although the Proposed Development is not a NSIP, but is a project of national significance ('PNS') pursuant to the Section 35 Direction dated 22 December 2022, the same logic (in relation to associated development) is therefore assumed to apply to the Proposed Development, and so EN-4 is considered to be an important and relevant consideration for the determination of the Application.

4.4.2 That EN-4 is important and relevant to the Proposed Development is underlined by paragraph 1.6.6. While stating that the NPS only has effect in relation to natural gas infrastructure and not for hydrogen infrastructure, it goes onto to state that it '*may be part of other matters which the Secretary of State thinks are important and relevant to their decision on applications for hydrogen infrastructure, in which case they would need to take it into account'.*

4.4.3 Section 2 of EN-4 deals with the assessment of and technology-specific information to be taken into account in the consideration of applications for the types of infrastructure covered by the NPS.

4.5 The NPS for Electricity Networks Infrastructure (EN-5)

4.5.1 The NPS for Electricity Networks Infrastructure (EN-5) is also considered to be relevant as the Proposed Development includes electricity grid connection infrastructure. While the electricity grid connection is not development for which development consent is required in its own right, it is associated development for the purposes of Section 115(1)(b) of the PA 2008 and paragraph 1.6.4 of EN-5 states that the NPS will apply to such infrastructure if it constitutes associated development for which consent is sought along with an NSIP. Again, although the Proposed Development is not a NSIP, it is a PNS pursuant to the Section 35 Direction, and so EN-5 is considered to be an important and relevant consideration for the determination of the Application.

4.5.2 As with EN-4, Section 2 of EN-5 deals with the assessment of and technology-specific information to be taken into account in the consideration of applications for or including electricity grid connection infrastructure.

4.5.3 An assessment of the Proposed Development against relevant NPS policy in EN-1, EN-4 and EN-5 is provided at Section 6.0 and in the Policy Assessment Tables (Document Ref. 5.2.1) that sit alongside this Planning Statement.

4.6 Marine Policy Statements & Plans

4.6.1 As stated above, EN-1 confirms that Section 104 of the PA 2008 applies to the Proposed Development, and this requires the SoS to have regard to *"the appropriate marine policy documents"* that are determined in accordance with Section 59 of the MCAA 2009. A number of elements of the Proposed Development involve works within the UK Marine Area within the tidal River Tees. The marine policy documents that are relevant to the Proposed Development for the purposes of Section 104 are the UK Marine Policy Statement (2011) and the North East Inshore and North East Offshore Marine Plan (2021). An overview of the relevant marine policy documents is provided below.

<u>UK Marine Policy Statement (March 2011)</u>

4.6.2 The UK Marine Policy Statement ('MPS'), adopted in March 2011, provides the policy framework for preparing marine plans and taking decisions affecting the marine environment. It has been prepared and adopted for the purposes of Section 44 of the MCAA 2009 and is intended to sit alongside terrestrial consenting regimes, including the PA 2008 regime. The MPS was subject to updates in September 2020 relating to how references to European Union ('EU') law should be interpreted from 1 January 2021 following the UK's withdrawal from the EU.

4.6.3 Chapter 3 sets out the policy objectives for key activities that take place in the marine environment. Section 3.3 deals specifically with 'Energy production and infrastructure development'. Paragraph 3.3.1 notes that a secure, sustainable and

affordable supply of energy is of central importance to the economic and social well-being of the UK. Paragraph 3.3.4 sets out issues that decision makers should consider when examining and determining applications for energy infrastructure. Those of relevance to the Proposed Development, which will connect to a Carbon Capture, Usage and Storage ('CCUS') cluster in Teesside, that should be taken into account include:

- the national level of need for new energy infrastructure, as set out in the Overarching NPS for Energy (EN-1);
- the positive wider environmental, societal and economic benefits of CCUS as a key technology for reducing CO_2 emissions;
- that the physical resources and features that form oil and gas fields or suitable sites for CO_2 storage occur in relatively few locations and need first of all to be explored for and can then only be exploited where they are found; and
- the UK's programme to support the development and deployment of CCUS clusters and, in particular, the need for suitable locations that provide for the permanent storage of CO_2.

North East Inshore and North East Offshore Marine Plan (June 2021)

4.6.4 Marine plans are intended to set out detailed policy and spatial guidance for a particular area. The UK is divided into several marine planning regions with associated plan authorities that are responsible for preparing marine plans. In England, the Marine Management Organisation ('MMO') is the plan authority.

4.6.5 The Site lies partly within the 'North East Inshore Marine Area', which stretches from Flamborough Head in Yorkshire to the Scottish Border. The Plan Area contains three main tidal rivers, including the River Tees.

4.6.6 The North East Marine Plan is intended to provide a strategic approach to decision-making on developments within the Marine Plan area, considering future use and providing a clear approach to managing resources, activities and interactions within the area.

4.6.7 Section 2 of the North East Marine Plan sets out the policies to support the delivery of the Plan objectives. Paragraph 32 confirms that the policies cover a wide range of topics, including activities and uses, economic, social and environmental considerations and cross-cutting issues such as integration of decision-making on land and at sea. The policies are set out in detail in the Technical Annex to the North East Marine Plan.

4.6.8 There are no policies that specifically cover hydrogen production or hydrogen infrastructure, however, Policy NE-CCUS-3 is considered to be of some relevance to the Proposed Development as it supports proposals associated with the deployment of low carbon infrastructure for industrial clusters, such as that being proposed on Teesside as part of the ECC being advanced by the NEP. Policy NE-CCUS-3 states:

"The government identified potential regional clusters which can be utilised for low carbon development in the Delivering clean growth: CCUS Cost Challenge Taskforce report and the subsequent plan, The UK carbon capture, usage and storage (CCUS) deployment pathway: an action plan. NE-CCUS-3 supports the development of low carbon industrial clusters where low carbon infrastructure, including carbon capture, usage and storage technologies could be deployed. Encouraging developments associated with industrial clusters aims to reduce the capital costs of deploying carbon capture, usage and storage, maximising the economies of scale."

4.6.9 The North East Marine Plan also includes policies aimed at managing the impacts of development upon heritage assets (Policy NE-HER-1); seascape and landscape (Policy NE-SCP-1; air quality and emissions (Policy NE-AIR-1); water quality (Policy NE-WQ-1); enhancing biodiversity (Policies NE-BIO-1 to 3) and ensuring that developments demonstrate they are resilient to the impacts of climate change and coastal change (Policy NE-CC-2).

4.6.10 An assessment of the Proposed Development against marine policy is provided in the Policy Assessment Tables (Document Ref. 5.2.1) that sit alongside this Planning Statement and the ES includes a Marine Policy Assessment (ES Appendix 7A, Document Ref. 6.4.6).

4.7 Other matters that are "important and relevant"

4.7.1 As noted above, Section 104 of the PA 2008 sets out the matters that the SoS must have regard to in determining applications for development consent, which can include any other matters which the SoS thinks are *"important and relevant"* to their decision.

4.7.2 In the case of the Proposed Development, the Applicant considers that other matters that are important and relevant to the SoS's decision include recent UK Government energy and climate change policy. These documents set out important Government objectives for the production and supply of hydrogen to help decarbonise industry and contribute toward the legally binding target of net zero by 2050 and are considered at Section 5.0 of this Planning Statement.

4.7.3 Other matters that the SoS may consider important and relevant include the policies contained within the National Planning Policy Framework ('NPPF') and also local development plan policy. The Proposed Development's compliance with the NPPF and local development plan policy is considered at Section 6.0 and the Policy Assessment Tables (Document Ref. 5.2.1).

4.8 Summary

4.8.1 Under the PA 2008 regime, the primary policy framework for examining and determining applications for development consent for energy infrastructure is provided by the NPSs for energy. Section 104 of the PA 2008 requires the SoS to determine such applications in accordance with the relevant NPSs, having regard to a number of specified matters (e.g. appropriate marine policy documents, any local impact report etc.), including any other matters which the SoS thinks are both important and relevant to their decision.

4.8.2 As confirmed above, the Proposed Development is the subject of a Section 35 Direction (dated 22 December 2022), that the Hydrogen Production Facility and any aspect of the Hydrogen Pipelines Corridor that is not automatically a NSIP should be treated as development for which development consent is required. Paragraph 1.3.10 of EN-1 confirms that the NPS, in conjunction with any relevant technology specific NPS, will be the primary policy for SoS decision making on projects in the field of energy for which a direction has been given under Section 35. As such, the Application should be determined under EN-1 as per Section 104 of the PA 2008.

4.8.3 EN-1 confirms the need that exists for developing low carbon hydrogen infrastructure, such as the Proposed Development, to support the transition to a low carbon economy and, in particular, to decarbonise industry thereby contributing to the legally binding target of net zero greenhouse gas emissions by 2050. EN-1 is clear that the SoS should assess applications on the basis that this need and its scale and urgency has been proven and that substantial weight should be given to the contribution that all developments make toward satisfying this need.

4.8.4 EN-1 confirms that to support the urgent need for low carbon hydrogen infrastructure, hydrogen distribution, pipelines and storage the Proposed Development should be considered to be 'Critical National Priority' ('CNP') infrastructure. Significant weight is attached to CNP infrastructure and EN-1 confirms that residual impacts from such development, except where the Habitats Regulations are engaged or development is in a Marine Conservation Zone ('MCZ'), are unlikely to outweigh the urgent need for this type of infrastructure, and it is unlikely that consent will be refused on the basis of those impacts.

4.8.5 EN-1 (paragraph 4.2.21) imposes no limit on the number of CNP infrastructure projects that may be consented. Therefore, where there are residual impacts, the fact that there are other potential plans or projects deliverable in different locations to meet the need for CNP Infrastructure is unlikely to be treated as an alternative solution. Furthermore, the existence of another way of developing the project, which results in a significantly lower capacity is unlikely to meet the objectives of policy and be treated as an alternative solution.

4.8.6 The Proposed Development will not result in significant adverse residual impacts, which present an unacceptable risk to, or unacceptable interference with, human health and public safety, defence or irreplaceable habitats, and that is confirmed by ES Chapter 24 'Summary of Significant Effects' (Document Ref. 6.2.24), while the Proposed Development clearly supports the achievement of net zero.

4.8.7 The Proposed Development's compliance with NPS policy, marine policy and any other matters that may be important and relevant to the determination of the Application, such as Government energy and climate change policy, the NPPF and local development plan policy, are considered at Sections 5.0 and 6.0 of this Planning Statement and also the Policy Assessment Tables (Document Ref. 5.2.1).

5.0 UK ENERGY AND CLIMATE CHANGE POLICY

5.1 Introduction

5.1.1 This section provides an overview of relevant UK energy and climate change policy, which establishes clear objectives for decarbonising power and industry and achieving the Government's legally binding commitment to achieve net zero in terms of greenhouse gas emissions by 2050. This includes the important role that hydrogen coupled with CCUS will play in achieving the transition to a low carbon economy.

5.1.2 The Applicant considers that these matters, within the context of Section 104 of the PA 2008, are important and relevant to the SoS's decision making on the Proposed Development.

5.1.3 Relevant energy and climate change policy includes:

- The Ten Point Plan for a Green Industrial Revolution, 2020.
- The Energy White Paper: Powering out net zero future, 2020.
- Industrial Decarbonisation Strategy, 2021.
- North Sea Transition Deal, 2021.
- UK Hydrogen Strategy, 2021.
- Net Zero Strategy: Build Back Greener, 2021.
- British Energy Security Strategy, 2022.
- Powering up Britain, 2023.
- Carbon Capture, Usage and Storage: a vision to establish a competitive market (2023).

5.1.4 These policy documents are considered below.

5.2 The Ten Point Plan for a Green Industrial Revolution (November 2020)

5.2.1 'The Ten Point Plan for a Green Industrial Revolution – Building back better, supporting green jobs, and accelerating our path to net zero', was published on 18 November 2020 and is aimed at delivering a 'Green Industrial Revolution' in the UK. The plan has a foreword by the Prime Minister stating that the plan will aim to mobilise £12 billion of Government investment and potentially three times as much from the private sector, to create and support up to 250,000 green jobs.

5.2.2 The Introduction to the Ten Point Plan (pages 5 and 6) states:

"We will generate new clean power with offshore wind farms, nuclear plants and by investing up to half a billion pounds in new hydrogen technologies. We will use this energy to carry on living our lives, running our cars, buses, trucks and trains, ships and planes, and heating our homes while keeping bills low. And to the extent that we still emit carbon, we will pioneer a new British industry dedicated to its capture and return to under the North Sea. Together these measures will reinvigorate our

industrial heartlands, creating jobs and growth, and pioneering world-leading SuperPlaces that unite clean industry with transport and power …

"The cumulative effect of this plan will be to reduce the UK emissions by 180 million tonnes of carbon dioxide equivalent (Mt CO2 e) between 2023 and 2032, equal to taking all of today's cars off the road for around two years…."

5.2.3 The 'Ten Points' of the plan are summarised at page 7. Point 2 'Driving the Growth of Low Carbon Hydrogen' is covered at pages 10 to 11 and states (page 10):

"Working with industry the UK is aiming for 5GW of low carbon hydrogen production capacity by 2030. Hubs where renewable energy, CCUS and hydrogen congregate will put our industrial 'SuperPlaces' at the forefront of technological development."

5.2.4 It highlights how 5 gigawatts ('GW') of low carbon hydrogen production by 2030 could see the UK benefit from around 8,000 jobs across its industrial heartlands. This will be supported by a range of measures, including a £240 million Net Zero Hydrogen Fund. It goes on (page 10) to state:

"Producing low carbon hydrogen at scale will be made possible by carbon capture and storage infrastructure, and we plan to grow both of these new British industries side by side so our industrial 'SuperPlaces' are envied around the world."

5.2.5 Point 8 'Investing in Carbon Capture, Usage and Storage' (pages 22 and 23) identifies the ambition to capture 10 Mt of CO_2 a year by 2030 and the Government's commitment to invest up to £1 billion to support the establishment of CCUS in four industrial clusters in areas such as the North East. It goes on to state how CCUS will be developed alongside hydrogen production in these locations.

5.2.6 The Proposed Development will contribute to the Ten Point Plan by delivering low carbon hydrogen at scale within what is an emerging CCUS cluster on Teesside. It will be able to link into the NEP CCUS infrastructure. The CO_2 created during the hydrogen production process will be captured and compressed for onward transportation and storage, under agreement with the NEP, below ground within the Endurance storage site and other nearby CO_2 stores in the North Sea that NEP holds CO_2 storage licences for.

5.3 The Energy White Paper (December 2020)

5.3.1 'The Energy White Paper 'Powering our Net Zero Future' (EWP) was presented to Parliament in December 2020 and builds on the Ten Point Plan. At the core of the EWP is the commitment to tackle climate change and achieve net zero. The EWP seeks to put in place a strategy for the wider energy system that transforms energy, supports a green recovery, and creates a fair deal for consumers (page 4). As with the Ten Point Plan, the EWP confirms the Government's support for new hydrogen technologies and CCUS drawing upon the resources provided by the North Sea.

5.3.2 The Government estimates (page 15) that the measures in the EWP could reduce emissions across power, industry, and buildings by up to 230 Mt CO_2 in the period to 2032 and enable further savings in other sectors such as transport. In doing so, these measures could support up to 220,000 jobs per year by 2030. These figures

include the energy measures from the Ten Point Plan as well as additional measures set out in the EWP. However, the EWP recognises that more will need to be done to meet key milestones on the journey to net zero.

5.3.3 The EWP (pages 16 to 17) provides an overview of the Government's key commitments to put the UK on a course to net zero. These are grouped under several headings and include:

"SUPPORT A GREEN RECOVERY FROM COVID-19 …

Increasing the ambition in our Industrial Clusters Mission four-fold, aiming to deliver four low-carbon clusters by 2030 and at least one fully net zero cluster by 2040.

Investing £1 billion up to 2025 to facilitate the deployment of CCUS in two industrial clusters by the mid-2020s, and a further two clusters by 2030, supporting our ambition to capture 10 Mt per year by the end of the decade.

Working with industry, aiming to develop 5GW of low-carbon hydrogen production capacity by 2030."

5.3.4 Chapter 2 'Power' of the EWP sets out how it is proposed to decarbonise the power sector. This includes a commitment to consult on steps to ensure that new thermal plants can convert to low carbon technologies either through the retrofit of carbon capture plant or *'conversion to firing clean hydrogen'* (page 48).

5.3.5 Chapter 5 'Industrial Energy' sets out the goal for emissions from industry to fall by around 90% from today's levels by 2050. To achieve this (page 118) the Government:

"…will:

- *Create a sustainable future for UK manufacturing industry through improved energy efficiency and the adoption of clean energy technologies.*
- *Establish the UK as a world leader in the deployment of CCUS and clean hydrogen, supporting up to 60,000 jobs by 2030."*

5.3.6 The EWP confirms that manufacturing and refineries, which form the bulk of industrial emissions, still account for around 16% of the UK's GHG emissions. About half of those emissions are concentrated in the UK's six major industrial clusters. This includes Teesside (Figure 8.1, page 121) which accounts for 3.9 Mt CO_2 of emissions (2018 figures).

5.3.7 To transform industrial energy, the EWP (page 122) states that the UK cannot rely on energy efficiency alone to reduce emissions in line with the Government's 2050 goal. Manufacturing industry will also need to capture its carbon for onward transport and storage and switch from using fossil fuels to low-carbon alternatives, such as hydrogen.

5.3.8 To bring about change in industrial energy, the EWP includes a commitment (page 124) to increase the 'Industrial Clusters Mission' to support the delivery of four low-carbon industrial clusters by 2030 and at least one fully net zero cluster by 2040. The EWP states that the Government will focus on the UK's industrial clusters:

"… centres where related industries have congregated and can benefit from utilising shared clean energy infrastructure, such as CCUS and low-carbon hydrogen production and distribution. Decarbonisation in clusters will enable economies of scale, reducing the unit cost for each tonne of carbon abated, while clusters provide high quality jobs which tend to pay above the UK average wage."

5.3.9 The EWP notes (page 124) that many clusters are in regions in need of economic revitalisation and that decarbonising those clusters can act as a driver of prosperity for the surrounding areas. Furthermore, that investments in key technologies like CCUS and hydrogen will be crucial to enhancing local economic growth and creating jobs together with prosperity.

5.3.10 Chapter 5 of the EWP includes a section on 'Clean Hydrogen' (pages 127 to 128). It identifies that hydrogen will be critical in reducing emissions from heavy industry, as well as in power, heat and transport. Clean hydrogen includes using natural gas and capturing the CO_2 by-product with CCUS or using renewable electricity to split water into hydrogen and oxygen. It includes commitments to:

- work with industry to develop 5 GW of low carbon hydrogen production capacity by 2030; and
- create a Net Zero Hydrogen Fund to support low carbon hydrogen production, providing £240 million of capital co-investment out to 2024/25.

5.3.11 The EWP underlines (page 128) that a variety of hydrogen production technologies will be required to satisfy the level of anticipated demand for clean hydrogen by 2050, and that the Government hopes to see 1 GW of hydrogen production capacity by 2025 on route to its 2030 goal.

5.3.12 The Proposed Development is clearly consistent with the commitments within the EWP as it will make a significant contribution to the delivery of low carbon hydrogen at scale, coupled with CCUS, within one of the UK's major industrial clusters.

5.4 Industrial Decarbonisation Strategy (March 2021)

5.4.1 'The Industrial Decarbonisation Strategy' is the first strategy published by a major economy which sets out how industry can be decarbonised in line with net zero, while remaining competitive and without pushing emissions abroad. It builds on the Ten Point Plan and sets out the Government's vision for a prosperous, low carbon UK industrial sector by 2050, and aims to provide industry with the long-term certainty it needs to invest in decarbonisation.

5.4.2 The Ministerial Foreword (page 6) emphasises that the 2020s will be crucial to industrial decarbonisation, with the UK needing to deploy key technologies such as CCUS while beginning the journey of switching from fossil fuel combustion to low carbon alternatives such as hydrogen.

5.4.3 Chapter 1 'Why we need a strategy and our approach' *sets* out the Government's ambition for decarbonising industry in line with net zero. The expectation is that emissions will need to reduce by at least two-thirds by 2035 and by at least 90% by 2050, with 3 Mt CO_2 per annum captured through CCUS and a significant switching

to low carbon fuels such as hydrogen by 2030. Significantly, the Strategy (page 20) recognises that government should play a key role in the delivery of large infrastructure projects for key technologies such as hydrogen networks where there is a sharing of benefits, and the risk or cost is too great for the private sector.

5.4.4 Chapter 2 'Getting investors to choose low carbon' confirms the Government's commitment (Action 2.2) to put in place funding mechanisms to support the deployment and use of CCUS and low carbon hydrogen infrastructure. It states (pages 29-30):

"CCUS will be crucial to reaching net zero, and low carbon hydrogen has the potential to play a key role in enabling the economic transformation of the UK's industrial regions. With both technologies at early stages of development, government will need to play an active role in overcoming market failures; sharing the risk and costs of scaling up deployment of both CCUS and low carbon hydrogen.

…. We have already committed to a £1 billion CCS Infrastructure Fund to provide industry with certainty to deploy CCUS at pace and scale, alongside a £240 million Net Zero Hydrogen Fund. Later [in 2021], we will bring forward further details of the revenue mechanism to support business models for both industrial carbon capture and low carbon hydrogen projects."

5.4.5 With regard to fuel switching (Action 4.2, pages 51 and 52), Chapter 4 of the Strategy confirms that the Government is committed to developing a low carbon hydrogen economy in the UK. The Government sees it as critical to demonstrate fuel switching to hydrogen in industrial sites in parallel to ramping up low carbon hydrogen production.

5.4.6 The Proposed Development is well located to make a major contribution to industrial decarbonisation being within a major industrial cluster on Teesside and in close proximity to a number of potential industrial users/offtakers for the low carbon hydrogen that will be produced.

5.5 North Sea Transition Deal (March 2021)

5.5.1 'The North Sea Transition Deal' is a transformational sector deal for the offshore oil and gas sector in recognition of the key role that it can play in helping the UK meet its net zero commitments. The document recognises (Foreword, page 6) that with declining output of hydrocarbons from the UK Continental Shelf ('UKCS') and a projected decline in domestic demand, there is a clear need for determined action to be taken to build on the proven capabilities and skills within the existing sector to support the transition to net zero. It continues:

"The UK already has the capability and skills within the existing sector to lead in new and emerging energy technologies such as Carbon Capture, Usage and Storage (CCUS) and the hydrogen economy as well as to support the growth of new sectors such as offshore wind…

"Delivering large-scale decarbonisation solutions will strengthen the position of the existing UK energy sector supply chain in a net zero world, securing new high-value

jobs in the UK, supporting the development of regional economies and competing in clean energy export markets."

5.5.2 The Executive Summary (page 8) states that the North Sea Transition Deal is aimed at delivering on the commitments set out in the oil and gas chapter of the EWP and is closely aligned with the Prime Minister's Ten Point Plan. It seeks to do this through the implementation of several commitments and measures, including supporting up to 40,000 direct and indirect supply chain jobs in decarbonising UKCS production and the CCUS and hydrogen sectors.

5.5.3 The North Sea Deal is built on five key outcomes:

- supply decarbonisation;
- CCUS;
- hydrogen;
- supply chain transformation; and
- people and skills.

5.5.4 These are seen as being closely interlinked, meaning that they must be delivered as an integrated whole for the North Sea Transition Deal to achieve its full potential. With regard to hydrogen, it notes (at page 10) that:

"Hydrogen is essential to meeting our net zero commitment in the UK. It could provide a clean source of energy across the economy, from industrial and domestic heat, to heavy transport, and flexible power and energy storage. The UK already has world-leading offshore wind potential and electrolyser capability, alongside unparalleled CCS sites that the UK can maximise to scale up low carbon hydrogen production.

"The hydrogen commitment in the North Sea Transition Deal focuses on creating the economic environment in which low carbon hydrogen production can flourish. This will help unlock billions of pounds of investment from the sector. The oil and gas sector is positioned to enable the production of low-carbon hydrogen at scale as part of a long-term competitive market, supporting the UK's ambition to deliver 5 GW of low carbon hydrogen production capacity by 2030."

5.5.5 The Proposed Development is well placed to support the commitments set out in the North Sea Transition Deal, being able to link into the NEP infrastructure, part of the ECC, which will make use of offshore skills, capabilities and resources.

5.6 UK Hydrogen Strategy (August 2021)

5.6.1 'The UK Hydrogen Strategy' sets out the Government's approach to developing a thriving low carbon hydrogen sector in the UK to meet its ambition for up to 5 GW of low carbon hydrogen production capacity by 2030.

5.6.2 Chapter 1 'The case for low carbon hydrogen' confirms that low carbon hydrogen will be critical for meeting the UK's legally binding commitment to achieve net zero by 2050 and Carbon Budget Six in the mid-2030s. Hydrogen can support the deep decarbonisation of the UK economy, particularly in the 'hard to electrify' UK

industrial sectors, and can provide greener, flexible energy across power, heat and transport (page 7). It goes on (page 8) to state:

"Today most hydrogen produced and used in the UK and globally is high carbon, coming from fossil fuels with no carbon capture; only a small fraction can be called low carbon. For hydrogen to play a part in our journey to net zero, all current and future production will need to be low carbon."

5.6.3 Section 1.3 of Chapter 1 'The UK's hydrogen opportunity' sets out the Government's 'twin track' approach to hydrogen production, which seeks to capitalise on the UK's potential to produce large quantities of both electrolytic 'green' and CCUS enabled 'blue' hydrogen. It states that the UK has the technology, know-how and storage potential to scale up CCUS across the country, unlocking new routes to CCUS-enabled hydrogen production (page 10). It goes on to state:

"Early deployment of CCUS technology and infrastructure will likely be located in industrial clusters. Many of these are in coastal locations, with important links to CO2 storage sites such as disused oil and gas fields. Government aims to establish CCUS in four industrial clusters by 2030 at the latest, supporting our ambition to capture 10 Mt/ CO2 per annum.

"In turn, industrial clusters and wider industry are significant potential demand centres for low carbon hydrogen. Today, numerous industrial sectors from chemicals to food and drink are exploring the role that hydrogen can play in their journey to net zero. UK Research and Innovation's (UKRI's) Industrial Decarbonisation Challenge provides up to £170 million – matched by £261 million from industry – to invest in developing industrial decarbonisation infrastructure including CCUS and low carbon hydrogen."

5.6.4 Figure 1.3 at Chapter 1 of the strategy identifies Teesside as a location for both green and blue (CCUS-enabled) hydrogen production (page 11).

5.6.5 The strategy on page 33 highlights the potential of CCUS-enabled blue hydrogen production, stating:

"Our Hydrogen Production Cost 2021 report suggests that, under central fuel price assumptions, CCUS-enabled methane reformation is currently the lowest cost low carbon hydrogen production technology. Given the potential production capacity of CCUS-enabled hydrogen plants, we would expect this route to be able to deliver a greater scale of hydrogen production as we look to establish a UK hydrogen economy during the 2020s."

5.6.6 The strategy considers the 'Use of hydrogen in industry' (pages 52 and 53) stating:

"It is clear that UK industrial sectors will play a vital role in developing a hydrogen economy over the next decade. Industry produced 16 per cent of UK emissions in 2018, and hydrogen will be critical to decarbonise industrial processes that would be hard to abate with CCUS or electrification. The Industrial Decarbonisation Strategy published earlier this year sets out the policy and technology principles to decarbonise industry by 2050, including the installation of deep decarbonisation infrastructure such as hydrogen and CCUS networks in the 2020s.

"Our industrial heartlands will likely lead the way for large scale low carbon hydrogen supply, and industrial users are expected to provide the most significant new demand for hydrogen by 2030 through industrial fuel switching. Today's hydrogen economy will need to scale up from its current base in the oil refining and chemical sectors, to enter other parts of industry and the wider energy system. We will develop policy to support and deliver this change, and to drive the decarbonisation of existing industrial hydrogen use."

5.6.7 Since the UK Hydrogen Strategy was published, the British Energy Security Strategy (2022) has doubled the UK's hydrogen production ambition from 5 to 10 GW by 2030. This was reflected in the 'Hydrogen Strategy update to the market' issued in December 2022. The update also included the announcement on shortlisted hydrogen projects in the Phase 2 Cluster Sequencing Process (Cluster sequencing Phase-2: shortlisted projects (power CCUS, hydrogen and ICC), August 2022)), which identifies 'bpH2Teesside' as one of the shortlisted projects in the ECC, to have moved to the due diligence stage of the process. The latest Hydrogen Strategy update to the market (August 2023) maintains the ambition and commitment to deliver hydrogen production at scale, including blue hydrogen, and the Proposed Development will make a significant contribution toward that ambition and the delivery of 10 GW by 2030.

5.7 Net Zero Strategy: Build Back Greener (October 2021)

5.7.1 The 'Net Zero Strategy: Build Back Greener' expands on key commitments in the Ten Point Plan and the EWP, and sets out the next steps the Government proposes to take to cut emissions, seize green economic opportunities and leverage further private investment in net zero. The Net Zero Strategy sets an indicative delivery pathway for emission reductions to 2037 by sector. It is intended to put the UK on the path for Carbon Budget Six and ultimately on course for net zero by 2050.

5.7.2 Regarding power, the Net Zero Strategy states that the UK will fully decarbonise its power system by 2035 subject to security of supply. It states that the power system will consist of abundant, cheap renewables, cutting edge new nuclear power stations, underpinned by flexibility including storage, gas with CCUS and hydrogen (page 19).

5.7.3 For industry, the Net Zero Strategy states (page 21) states that it will deliver four CCUS clusters, capturing 20-30 Mt CO_2 across the economy, including 6 Mt CO_2 of industrial emissions, per year by 2030. This will be done by supporting industry to switch to cleaner fuels, such as low carbon hydrogen alongside renewable energy and CCUS. These clusters, including the ECC, which encompasses Teesside, could have the opportunity to access support under the Government's CCUS programme (£1 billion). The Net Zero Strategy also states that the Government has set up the Industrial Decarbonisation and Hydrogen Revenue Support Scheme, providing up to £140 million to fund new hydrogen and industrial carbon capture business models. This is in addition to £240 million Net Zero Hydrogen Fund.

5.7.4 Whilst the Net Zero Strategy was the subject of a successful Judicial Review in 2022, the Court's decision did not quash the Strategy, but instead ordered the

Government to provide an update to the Strategy by the end of March 2023 to add further explanation as to how the Government's aims set out in the Net Zero Strategy would be met. This was done through the publication of 'the Carbon Budget Delivery Plan toward the end of March 2023 (see below).

5.8 British Energy Security Strategy (April 2022)

5.8.1 'The British Energy Security Strategy' ('BESS') was published largely in response to soaring energy prices as a result of a sudden surge in demand following the Coronavirus (COVID-19) pandemic, compounded by the Russian invasion of Ukraine. Much of the focus of the BESS is upon providing financial assistance to families and businesses struggling with higher energy bills. It also looks at improved energy efficiency, reducing the amount of energy the UK needs and addressing the underlying vulnerability to international oil and gas prices by reducing the UK's dependence on imported oil and gas.

5.8.2 Notably, the BESS identifies the importance of low carbon hydrogen, with an increased commitment to achieve up to 10 GW of hydrogen production by 2030, including CCUS-enabled blue hydrogen. The Proposed Development will contribute 1.2 GW of low carbon hydrogen, 12% of the total being targeted.

5.9 Powering Up Britain (March 2023)

5.9.1 On 30 March 2023 the Government published the 'Powering Up Britain' suite of policy documents comprising of 'Powering Up Britain', the 'Powering Up Britain: Energy Security Plan' and 'Powering Up Britain: Net Zero Growth Plan', following the judicial review of the Net Zero Strategy. All three documents provide details of the Government's measures to increase domestic energy production, ensure resilience in the energy supply and achieve net zero.

5.9.2 Regarding hydrogen, the Energy Security Plan sets out the measures to support the development of business models and finance for hydrogen projects, including the launch of Strands 1 and 2 of the Net Zero Hydrogen Fund. It also the shortlisted projects for the first electrolytic hydrogen allocation round. In addition to this, the Government is entering into bilateral negotiations with two CCUS-enabled hydrogen projects.

5.9.3 The Energy Security Plan signals continued support towards the CCUS industry most notably the announcement of eight Track-1 projects across the hydrogen, power, industry, and waste sectors which are progressing towards negotiations. This includes the Proposed Development, a CCUS-enabled hydrogen project, forming part of the ECC. The Energy Security Plan also sets out the proposed reforms to the planning system, including publication of revised NPSs for energy, which have since come into force (January 2024).

5.9.4 The Net Zero Growth Plan sets out the actions by the Government to support the delivery of the hydrogen sector, consolidating measures set out in previous strategy documents such as the ambition to deliver 2 GW of low carbon hydrogen by 2025 and 10 GW by 2030. The Plan also reiterates the measures outlined in the Energy Security Plan.

5.9.5 Also on 30 March 2023, the Government published the Carbon Budget Delivery Plan which fulfils the statutory duties under the Climate Change Act 2008 (Section 14) setting out the Government's proposals and policies to enable carbon budgets to be met, which includes the deployment of the four CCUS clusters by 2030, including the ECC, within which the Proposed Development will be located. Further to this, the Carbon Budget Delivery Plan states that *"The approach set out in our October 2021 plan to deliver net zero, the Net Zero Strategy, remains the right one. The independent Net Zero Review led by Chris Skidmore MP supported this position."*

5.10 Carbon Capture, Usage and Storage: a vision to establish a competitive market (December 2023)

5.10.1 The *'*Carbon Capture, Usage and Storage: a vision to establish a competitive market' (the *'CCS Vision*') was published by DESNZ on 20 December 2023 and details plans for a new competitive market in CCUS to be established by 2035. It sets out how the UK will transition from early projects backed by government support to becoming a competitive market by 2035, meaning UK companies will compete to build carbon capture facilities and sell their services to the world. To achieve this goal, the CCS Vision includes the following measures:

- moving to a competitive allocation process for carbon capture projects from 2027 to speed up the building of the UK's CCUS sector;
- creating the conditions for projects that cannot transport CO_2 by pipeline to enter the market from 2025 onwards, using other forms of transport such as ship, road and rail; and
- establishing a working group led by industry to identify and adopt solutions to reduce the cost of capturing CO_2.

5.10.2 Alongside the CCS Vision, the Government also announced significant progress in delivering on the four announced CCUS clusters, which included agreeing initial commercial terms with the NEP around Teesside and the Humber in respect of the ECC, paving the way for the expansion of the cluster.

5.10.3 The CCS Vision and latest announcement underlines the progress that is being made in delivering the NEP infrastructure and the ECC, which is in turn critical to the delivery of the Proposed Development.

5.11 Summary

5.11.1 The Proposed Development is clearly in accordance with and supports the ambition and key objectives of relevant UK energy and climate change policy. In particular:

- The Proposed Development will deliver low carbon hydrogen production within what is an emerging CCUS cluster (the East Coast Cluster 'ECC') on Teesside. It will link into the NEP infrastructure so that the CO_2 created during the hydrogen production process will be captured and compressed for onward transportation and storage.

- It will make an important contribution (1.2 GW) toward the Government's ambition of delivering 10 GW of low carbon hydrogen production by 2030 within one of the UK's major industrial clusters. This is 12% of the 2030 target.
- The Proposed Development is well located to make a significant contribution to industrial decarbonisation on Teesside, being in close proximity to a number of industrial users/offtakers for the low carbon hydrogen that will be produced, with the potential for future expansion. It will support the decarbonisation of industries that are either hard or not possible to electrify.
- It will also contribute to the security of UK energy supplies by providing an alternative low carbon fuel source to imported natural gas.

5.11.2 The contribution that the Proposed Development will make to the delivery of important energy and climate change policy objectives, not least the legally binding target of net zero greenhouse gas emissions, should be afforded very significant weight by the SoS in determining the Application.

6.0 THE ASSESSMENT OF THE PROPOSED DEVELOPMENT AGAINST PLANNING POLICY

6.1.1 This section of the Planning Statement and the Planning Policy Assessment document (Document Ref. 5.2.1) that sit alongside it, provide an assessment of the Proposed Development against relevant planning policy.

6.1.2 As confirmed in Section 4.0 of this Planning Statement, Section 104 of the PA 2008 requires the SoS to determine applications for development consent in accordance with the relevant NPSs, having regard to a number of specified matters (e.g. appropriate marine policy documents, any local impact report etc.), including any other matters which the SoS thinks are both important and relevant to their decision.

6.1.3 The Proposed Development is the subject of a Section 35 Direction dated 22 December 2022 (Appendix 1). Paragraph 1.3.10 of EN-1 confirms that the NPS, in conjunction with any relevant technology specific NPS, will be the primary policy for SoS decision making on projects in the field of energy for which a direction has been given under Section 35. As such, the Application should be determined under EN-1 as per Section 104 of the PA 2008.

6.1.4 While the primary basis for the determination of the Application is provided by EN-1, the Proposed Development includes a natural gas supply pipeline and an electricity grid connection, which while not development for which development consent is required in their own right, are associated development for the purposes of Section 115(1)(b) of the PA 2008. It is considered that EN-4 and EN-5 are important and relevant consideration for the determination of the Application.

6.1.5 The assessment of the Proposed Development against relevant policy contained in EN-1, EN-4 and EN-5 has been structured so as to follow the relevant 'Assessment Principle' and 'Generic Impact' headings set out in EN-1 and also to take account of the 'Assessment and Technology Specific Considerations' contained within EN-4 and EN-5, where these are not covered by the assessment principles and generic impacts of EN-1.

6.1.6 This section, and the Policy Assessment Tables, also provide an assessment of the Proposed Development again marine policy (a Marine Policy Assessment is included as Appendix 7A in the ES) and the relevant policies contained within the NPPF and the local development plan.

6.2 Conformity with the National Policy Statements

6.2.1 An assessment of the conformity of the Proposed Development with EN-1, EN-4 and EN-5 is provided below in respect of the relevant assessment principles, generic impacts and assessment and technology specific considerations.

Assessment Principles

6.2.2 Part 4 of EN-1 sets out 'General Policies and Considerations' that the SoS should take into account in decision-making on NSIPs, in addition to a number of key

assessment principles that both applicants and the SoS should have regard to in preparing and determining applications for development consent.

6.2.3 The majority of the assessment principles in EN-1 are of relevance to most types of nationally significant energy infrastructure. A number of these are also referred to within EN-4 and EN-5 in relation to the types of technology that are covered by them in 'assessment and technology-specific information' and are also dealt with below and the relevant part of the NPS is referenced.

General Policies and Considerations (EN-1, 4.1)

6.2.4 Paragraph 4.1.3 confirms that given the level and urgency of need for infrastructure of the types covered by the NPSs for energy set out in Part 3 of EN-1 the SoS will start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused. Paragraph 4.1.4 states that the presumption is also subject to the provisions of the PA 2008 (Section 104(3) to (8) referred to at paragraph 1.1.4 of EN-1.

6.2.5 Paragraph 4.1.5 goes on to state that in considering any proposed development, in particular when weighing its adverse impacts against its benefits, the SoS should take into account:

- its potential benefits including its contribution to meeting the need for energy infrastructure, job creation, reduction of geographical disparities, environmental enhancements, and any long-term or wider benefits
- its potential adverse impacts, including on the environment, and including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce, mitigate or compensate for any adverse impacts, following the mitigation hierarchy.

6.2.6 Paragraph 4.1.6 goes on to state that in this context, the SoS should take into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels.

6.2.7 With regard to the above, the Need Statement (Document Ref. 5.3) demonstrates the clear need for the Proposed Development, not just in terms of new low carbon hydrogen production but also contributing toward the decarbonisation of industry on Teesside. Furthermore, Section 5.0 of this Planning Statement has set out how the Proposed Development is in accordance with and supports key UK Government energy and climate change policy and will make a significant contribution toward the legally binding target of net zero greenhouse gas emissions with 2050. Section 7.0 provides an assessment of the key benefits and adverse effects/impacts of the Proposed Development. It shows that the Proposed Development will have a number of very substantial benefits and that these clearly outweigh its limited potential adverse impacts in the planning balance.

6.2.8 Paragraph 4.1.7 states that where the SoS considers that there would still be residual adverse effects after the implementation of mitigation measures, the SoS should weigh those residual effects against the benefits of the proposed

development. For projects which qualify as Critical National Priority ('CNP') infrastructure, which includes hydrogen related infrastructure, it is likely that the need case will outweigh the residual effects in all but the most exceptional cases. Policy relating to CNP infrastructure is considered further below.

6.2.9 Paragraphs 4.1.11 to 4.1.*12 'Other documents' confirm* that the NPSs for energy have taken account of the NPPF and that other matters that the SoS may consider important and relevant to their decision-making may include local development plan documents. However, paragraph 4.1.15 is clear that:

"In the event of a conflict between these documents and an NPS, the NPS prevails for the purpose of Secretary of State decision making given the national significance of the infrastructure."

6.2.10 Paragraphs 4.1.16 to 4.1.18 deal with 'Development consent'. Paragraph 4.1.16 states that the SoS should only impose 'requirements' (similar to planning conditions) in relation to a development consent that are necessary, relevant to planning, relevant to the development to be consented, enforceable, precise and reasonable in all other respects.

6.2.11 The Applicant has proposed a number of requirements at Schedule 2 of the draft DCO (Document Ref. 4.1) that, amongst other matters, are intended to control the detailed design of the Proposed Development in addition to its construction and operation in order to ensure that it accords with the EIA carried out and does not result in unacceptable impacts or effects. In preparing the draft requirements the Applicant has had regard to other relevant recent DCOs and relevant guidance; notably that contained within the NPPF (paragraphs 55 to 56) and the PPG ('Use of planning conditions') and the PINS Advice Note 15 'Drafting Development Consent Orders' (July 2018). The intended purpose of the requirements is explained within the Explanatory Memorandum (Document Ref. 4.2) that forms part of the Application.

6.2.12 Paragraph 4.1.18 states that SoS may consider any development consent obligations (under Section 106 of the Town and Country Planning Act 1990 'TCPA' as amended by Section 174 of the PA 2008) that an applicant agrees with local authorities. Again, these must be necessary, relevant to planning, relevant to the development to be consented, enforceable, precise and reasonable in all other respects (NPPF, paragraphs 57 to 58).

6.2.13 The Applicant's assessment of the Proposed Development, notably through the EIA, has identified some effects that require mitigation. Where possible and feasible the necessary mitigation has either been embedded within the design of the Proposed Development or will be secured by the proposed Requirements. However, the Applicant is keen to secure biodiversity enhancements in the wider Teesside area off-site from the proposed Order Limits (as allowed for by EN-1, paragraph 4.6.11) and is working with stakeholders such as Natural England, the EA and RPSB to develop proposals in this regard. While the Applicant does not propose to quantify these in BNG metric terms at this point in time, it is hoped that such measures, to be secured though a Section 106 development consent obligation, will

be able to demonstrate a wider qualitative net gain overall as a result of the Proposed Development. .

6.2.14 Paragraphs 4.1.19 to 4.1.20 'Early engagement' encourage applicants to engage both before and at the formal pre-application stage with key stakeholders, including statutory consultees. The Applicant has undertaken two main stages of pre-application consultation, in addition to targeted consultation, prior to submitting the Application. There has also been significant engagement with public regulators and statutory consultees in respect of the preparation of the Application, notably the ES. The Consultation Report (Document Ref. 5.1), which forms part of the Application, details the pre-application consultation undertaken by the Applicant and how the Applicant has had regard to that consultation. The ES sets out the engagement that has taken place with statutory consultees.

6.2.15 The 'Financial and technical viability' of energy infrastructure is dealt with at paragraph 4.1.21 to 4.1.22. Paragraph 4.1.21 states that in deciding to bring forward energy infrastructure, the applicant will have made a judgement on its financial and technical feasibility, within the market framework and taking account of government interventions. Paragraph 4.1.22 goes on to state that where the SoS considers that the financial and technical feasibility of the proposal has been properly assessed by the applicant, it is unlikely to be relevant to the SoS's decision-making.

6.2.16 With regard to the above, the Applicant has made a decision to proceed with the Proposed Development based on a number of commercial, financial and technical considerations. This should also be seen in the context of the Proposed Development having been successful in the CCS Clustering process, meaning that Government has already determined that this is a feasible project. Paragraph 3.2.3 at Part 3 of EN-1 confirms that it is not the role of the planning system to deliver specific amounts or limit any form of infrastructure covered by EN-1 and that "…*it is for industry to propose new energy infrastructure that they assess to be viable within the strategic framework set by government.*"

<u>The Critical National Priority for Low Carbon Infrastructure (EN-1, 4.2)</u>

6.2.17 Section 4.2 EN-1 deals with the critical national priority ('CNP') for low carbon infrastructure. Paragraph 4.2.4 confirms that the Government has concluded that there is a CNP for the provision of nationally significant low carbon energy infrastructure.

6.2.18 Paragraphs 3.4.22 and 3.5.8 at Part 3 of EN-1 confirm that hydrogen distribution and CCS infrastructure is considered to be CNP infrastructure and paragraph 4.2.5 confirms that such status can apply to low carbon Section 35 projects. The Proposed Development therefore clearly falls within the definition of such infrastructure.

6.2.19 Paragraph 4.2.7 confirms that the CNP policy applies following the normal consideration of the need case, the impacts of the development and the application of the mitigation hierarchy and does not create an additional or cumulative need case or weighting. CNP policy is to be weighed against residual impacts that have been identified.

6.2.20 Applicants must apply the mitigation hierarchy and demonstrate that it has been applied. They should also seek the advice of the appropriate statutory nature conservation body or other relevant statutory body when undertaking this process. Applicants should demonstrate that all residual impacts are those that cannot be avoided, reduced or mitigated (paragraph 4.2.11). Applicants should also set out how residual impacts will be compensated for as far as possible (paragraph 4.2.12). Where residual impacts relate to HRA or MCZ sites, the applicant must provide a derogation (exemption) case, if required, in compliance with the relevant legislation and guidance.

6.2.21 Paragraph 4.2.14 of EN-1 states that the SoS will consider the impacts and benefits of all CNP infrastructure on a case-by-case basis. The SoS must be satisfied that the applicant's assessment demonstrates that the relevant requirements have been met. Of that is the case and the SoS is satisfied, the CNP presumptions set out below apply.

6.2.22 Paragraph 4.2.15 and Figure 2 of EN-1 confirm that where non-HRA or non-MCZ residual impacts remain after mitigation, those residual impacts are unlikely to outweigh the urgent need for CNP infrastructure, and it is unlikely that consent will be refused on the basis of those impacts. The CNP policy therefore places as clear presumption in favour of granting consent for CNP infrastructure.

6.2.23 The exception to this presumption of consent are residual impacts, both onshore and offshore, which present an unacceptable risk to, or unacceptable interference with, human health and public safety, defence, irreplaceable habitats or unacceptable risk to the achievement of net zero.

6.2.24 As a result, paragraph 4.2.16 and Figure 2 of EN-1 go onto state:

"The SoS will consider the particular circumstances of any application, but will take as a starting point for decision making that such infrastructure is to be treated as if it has met any test requiring a clear outweighing of harm, exceptionality, or very special circumstances within EN-1, this NPS of any other planning policy."

6.2.25 Paragraph 4.2.17 goes onto state that this mean the SoS will take as a starting point that CNP infrastructure will meet the following, non-exhaustive, list of tests:

- where development within a Green Belt requires very special circumstances to justify development;
- where development within or outside a Site of Special Scientific Interest ('SSSI') requires the benefits (including need) of the development in the location proposed to clearly outweigh both the likely impact on features of the site that make it a SSSI, and any broader impacts on the national network of SSSIs;
- where development in nationally designated landscapes requires exceptional circumstances to be demonstrated; and
- where substantial harm to or loss of significance to heritage assets should be exceptional or wholly exceptional.

6.2.26 Paragraphs 4.2.18 and 4.2.19 confirm that any HRA or MCZ residual impacts will be considered under the framework set out in the Habitats Regulations and the MCAA 2009 respectively, and where such residual impacts remain, the SoS will consider making a derogation (an exemption) under the relevant legislation.

6.2.27 Paragraph 4.2.21 states:

"For both derogations, the Secretary of State will consider the particular circumstances of any plan or project, but starting from the position that energy security and decarbonising the power sector to combat climate change:

- *requires a significant number of deliverable locations for CNP Infrastructure and for each location to maximise its capacity. This NPS imposes no limit on the number of CNP infrastructure projects that may be consented. Therefore, the fact that there are other potential plans or projects deliverable in different locations to meet the need for CNP Infrastructure is unlikely to be treated as an alternative solution. Further, the existence of another way of developing the proposed plan or project which results in a significantly lower generation capacity is unlikely to meet the objectives and therefore be treated as an alternative solution; and*
- *are capable of amounting to imperative reasons of overriding public interest ('IROPI') for HRAs, and, for MCZ assessments, the benefit to the public is capable of outweighing the risk of environmental damage, for CNP Infrastructure."*

6.2.28 Paragraph 4.2.22 continues by stating:

"For HRAs, where an applicant has shown there are no deliverable alternative solutions, and that there are IROPI, compensatory measures must be secured by the Secretary of State as the competent authority, to offset the adverse effects to site integrity as part of a derogation. For MCZs, where an applicant has shown there are no other means of proceeding which would create a substantially lower risk, and the benefit to the public outweighs the risk of damage to the environment, the Secretary of State must be satisfied that measures of equivalent environmental benefit will be undertaken."

6.2.29 Even where the Habitats Regulations are engaged and development involves a MCZ and there are impacts, EN-1 does recognise that there may be imperative reasons of overriding public interest for development to proceed and provides scope for compensatory measures or equivalent environmental benefits to be secured by the SoS to offset adverse effects/harm.

6.2.30 The Proposed Development will not result in significant adverse residual impacts, which present an unacceptable risk to, or unacceptable interference with, human health and public safety, defence or irreplaceable habitats, and that is confirmed by ES Chapter 24 'Summary of Significant Effects' (Document Ref. 6.2.24), while the Proposed Development clearly supports the achievement of net zero. It also does not cause adverse effects on integrity of international and nation nature conservation site or impact MCZs. The CNP policy should therefore be applied accordingly.

Environmental Effects/Considerations (EN-1, 4.3)

6.2.31 EN-1 (paragraph 4.3.1) states that all proposals for projects that are subject to 'The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017' (the 'EIA Regulations') must be accompanied by an ES describing the aspects of the environment likely to be significantly affected by the project.

6.2.32 Paragraphs 4.3.2 to sets out the matters to covered in the ES. These include:

- An assessment of the likely significant effects of the proposed development on the environment, covering the direct effects and any indirect, secondary, cumulative, transboundary, short, medium, and long-term, permanent and temporary, positive and negative effects at all stages of the development, and also of the measures envisaged for avoiding or mitigating significant adverse effects.
- As part of considering the potential effects, including benefits, of a development, provide information on its likely significant environmental, social and economic effects, and show how any likely significant negative effects will be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy.
- The ES should cover the environmental, social and economic effects arising from preconstruction, construction, operation and decommissioning of the development.

6.2.33 Paragraph 4.3.9 states that EN-1 does not contain any general requirement to consider alternatives or to establish whether a development represents the best option from a policy perspective, although it notes that there are specific requirements in relation to compulsory acquisition and habitats sites. However, paragraph 4.3.15 does state that applicants are obliged to include in their ES "… *information about the reasonable alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility."*

6.2.34 Paragraphs 4.3.11, 4.3.12 and 4.3.22 deal with the circumstances where developments necessarily incorporate a degree of flexibility in their design and how this should be assessed in environmental terms. Paragraph 4.3.11 acknowledges that it may not be possible at the time of the application for development consent for all aspects of the development to have been settled in precise details. Where this is the case the applicant should explain in the application, which elements of the development have yet to be finalised, and the reasons why this is the case. Paragraph 4.3.12 continues by stating that where details are to be finalised, the ES should, to the best of the applicant's knowledge, assess the likely 'worst-case' environmental, social and economic effects of the development, to ensure that the impacts as it may be constructed have been properly assessed. Paragraph 4.3.22 also acknowledges that the SoS should, given the level and urgency of need for new energy infrastructure, be guided by the following principles when deciding what weight should be given to alternatives:

- the consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner; and
- only alternatives that can meet the objectives of the proposed development need to be considered.

6.2.35 The Applicant has prepared an ES that addresses the requirements of EN-1 and further information on the EIA of the Proposed Development is provided below.

Environmental Statement ('ES')

6.2.36 As confirmed above, the Application includes an ES (Volumes I, II and III) and a Non-Technical Summary (Document Refs. 6.1 to 6.4). In advance of preparing the ES, an EIA scoping opinion was obtained from the SoS (dated 17 May 2023), which is included at ES Appendix 1B: Scoping Opinion (ES Volume III, Document Ref. 6.4.2). The scoping opinion has been taken into account in the preparation of the ES and Chapter 2 'Assessment Methodology' of the ES sets out the approach and methodology that has been adopted for the EIA of the Proposed Development.

6.2.37 The ES includes an assessment of the environmental, social and economic effects of the Proposed Development, including direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and adverse effects for all its stages. It sets out the measures for avoiding, minimising and mitigating significant adverse effects and also identifies the Proposed Development's residual effects.

6.2.38 The environmental topics chapters of the ES (ES Volume I, Chapters 8 to 22) identify the likely significant effects of the Proposed Development in respect of that topic, the mitigation measures (where required) and the residual effects. The topic chapters, in assessing the effects of the Proposed Development, distinguish between the different stages of the Proposed Development (e.g. construction, operation and decommissioning), although the main focus has been upon construction and operation in view of the uncertainties and timescales relating to future decommissioning.

6.2.39 The following environmental topic chapters are included in the ES:

- Chapter 8 'Air Quality'.
- Chapter 9 'Surface Water, Flood Risk and Water Resources'.
- Chapter 10 'Geology, Hydrogeology and Contaminated Land'.
- Chapter 11 'Noise and Vibration'.
- Chapter 12 'Terrestrial Ecology and Nature Conservation'.
- Chapter 13 'Ornithology'.
- Chapter 14 'Marine Ecology and Nature Conservation'.
- Chapter 15 'Traffic and Transportation'.
- Chapter 16 'Landscape and Visual Amenity'.

- Chapter 17 'Archaeology and Heritage'.
- Chapter 18 'Socio-economics and Land Use'.
- Chapter 19 'Climate Change'.
- Chapter 20 'Major Accident Hazards and Disasters'.
- Chapter 21 'Materials and Waste Management'.
- Chapter 22 'Population and Human Health'.

6.2.40 Chapter 23 deals with cumulative and combined effects and Chapter 24 provide a summary of significant effects associated with the Proposed Development.

6.2.41 A summary of the assessments set out in the above chapters, with reference to the combined and cumulative effects of the Proposed Development with other plans and projects, is provided later within this section.

Alternatives

6.2.42 ES Chapter 6 'Need, Alternatives and Design Evolution' (Document Ref. 6.2.6) sets out a summary of the alternatives that have been considered for the Proposed Development and how the design have evolved.

6.2.43 The consideration of alternatives has been undertaken with the aim of avoiding and/or reducing adverse environmental effects (following the mitigation hierarchy of avoid, reduce and, if possible, remedy), while maintaining operational efficiency and cost-effectiveness, considering other relevant matters such as available land and planning policy.

6.2.44 No alternatives to hydrogen production have been considered given the need for the low carbon hydrogen production established by EN-1 and confirmed by Government energy and climate change policy. Different syngas technologies have, however, been evaluated to identify the preferred option for delivering the Hydrogen Production Facility. The proprietary low carbon syngas technology was selected as the preferred delivery method based on improved energy efficiency and carbon capture rate, lower associated emissions and beneficial safety outcomes through a lower operating temperature.

6.2.45 Teesside was selected as the most appropriate location for the Proposed Development due to its incorporation within the ECC as well as the number of potential industrial offtakers to act as customers of the Proposed Development, and the proximity of the NEP high-pressure compression facility and off-shore CO_2 export pipeline to the Endurance Store.

6.2.46 The suitability of this site for the Proposed Development is reflected by the Government choosing the Proposed Development as a chosen anchor 'Capture project' within that Cluster to receive prioritised economic support.

6.2.47 A number of sites within Teesside were then considered by the Applicant for the location of the Hydrogen Production Facility. The analysis of potential sites focused on identifying a site that supports the development of a viable blue hydrogen project, which facilitates industrial connectivity and the path to decarbonisation for

industry on Teesside. Based on this analysis, the Applicant selected the Main Site (part of the Foundry) on part of the former Redcar Steelworks Site (now known as Teesworks).

6.2.48 Section 6.5 of ES Chapter 6 sets out the criteria applied for the site selection process. Section 6.6 provides further information on the assessment criteria that were considered during the evaluation of alternative site layouts.

6.2.49 Due to volume and continuous nature of supply of hydrogen to the offtakers, pipeline delivery has been chosen as the most efficient way of delivery when compared to alternatives such as use of road-based tanker transport.

6.2.50 Section 6.7 of ES Chapter 6 sets out the alternatives selection process and outcomes for the connection corridors. This includes Hydrogen Distribution Corridor, Water Corridors, Electrical Connection Corridor and the CO_2 Export Corridor. The selected routes or current options seek to avoid environmentally sensitive areas and utilise existing established pipeline routes, and/or the least intrusive construction methodologies (e.g. trenchless methods, as opposed to use of open-cut trench techniques) as well as taking into account other factors such as technical and commercial feasibility.

6.2.51 A number of options were considered for the routeing of the Hydrogen Pipeline Corridor (Work No. 6) to potential offtakers. After the preparation of the EIA Scoping Report (presented within Appendix 1A: Scoping Report (ES Volume III, Document Ref 6.4.1), the route options were refined, informed by engineering feasibility work, the outcome of environmental studies and consultation with statutory consultees such as Natural England and the Environment Agency ('EA'). This included the removal of a number of routeing option to the western extent of the Site, and alternate options for the crossing of Greatham Creek and the River Tees.

6.2.52 The alternative options were removed due to proximity to a passenger railway and also, following consultation with the EA and Natural England, to avoid interaction with flood defences and environmentally sensitive areas in North Tees. The southern crossing of the Tees by the Hydrogen Distribution Network (also referred to as the 'Hydrogen Pipeline Corridor') has been removed due to constraints on routeing and constructability issues.

6.2.53 In addition to connections to potential industrial offtakers at Wilton, North Tees, Greatham and Billingham, the Hydrogen Distribution Network is also being routed to provide connections to the existing Gas Transmission System and Gas Distribution Networks. These connections would enable gas blending into the distribution network and transmission system and a connection to Project Union, the future hydrogen transmission system, and East Coast Hydrogen, its first regional development. East Coast Hydrogen is looking to repurpose existing natural gas pipelines in the area to hydrogen service and the applicant is looking to connect to this infrastructure.

6.2.54 The East Coast Hydrogen Project is being developed by a combination of transmission and distribution network operators, which will necessitate

connections to both types of network. Therefore, the Applicant has sought flexibility in how this connection is delivered to connect to those networks, as those operators work with Government to determine the best technical way to deliver a national hydrogen network and blending, and work with the Applicant to identify the best approach that works for them in light of the constraints of each of their networks and existing AGI locations.

6.2.55 As such, the alternative connection locations being explored (and thus require allowance within the DCO for connecting pipeline corridors to them) include:

- National Gas Grid AGI near Billingham Industrial Park – in addition to a connection to a potential offtaker, a connection to this location could also achieve a connection to Project Union and Natural Gas Transmission System;
- National Gas Network natural gas AGI at Cowpen Bewley – a connection to this location would achieve a connection to Project Union, Natural Gas Transmission System, and Natural Gas Distribution Network; and
- Northern Gas Networks AGI off the A178 Seaton Carew Road - a connection to this location would achieve a connection to Natural Gas Distribution Network.

6.2.56 Owing to the different requirements of transmission and distribution system connections, two combinations of these locations are being explored as options for the scheme in addition to the connection Location 1 (Work No. 6A.1) includes as part of the Billingham Industrial connection. These are:

- Option A - comprising a connection at Location 2 (Work No. 6A.2) above; and
- Option B - comprising a connection at Location 3 (Work No. 6A.3) above.

6.2.57 These are represented pictorially in Figure 4-2 (ES Volume II, Document Ref. 6.3.7).

6.2.58 The final choice of approach and selection of options will be determined by the development of the Government's policy in relation to Project Union and hydrogen blending and how the Distribution and Transmission System Operators re-configure their systems to respond to this. The Applicant will keep engaging with the Distribution Network and Transmission System Operators to ensure connectivity to Project Union and the wider UK hydrogen infrastructure to enable the development of this.

6.2.59 The pipeline routeing to the Cowpen Bewley AGI also has a number of social, technical, and ecological constraints, which the Applicant is considering in taking the design of this route forward..

6.2.60 The design and definition of the Proposed Development has continued to evolve since scoping and the publication of the Preliminary Environmental Information Report ('PEIR'), which incorporates responses to consultation responses, ongoing discussions with stakeholders (including landowners), ongoing design work and additional survey information. These changes are summarised in Table 6-1, of ES Chapter 6. This table list the reasons for such changes as well as a comparison of the associated environmental effects, which has in most instances reduced, as a result of the alternative selected.

Design Flexibility/Design Parameters

6.2.61 The Proposed Development will be the largest blue hydrogen production facility in the UK. Although the individual elements of the Proposed Development are well understood, it would be a 'First of a Kind' project in terms of scale, while hydrogen production is a developing area and increasing investment in the sector is resulting in technological advancement. It is important that the detailed design of the Proposed Development is able to take account of that technological advancement, while there are still a number of options being considered for certain elements.

6.2.62 In addition, the design of the Proposed Development needs to allow for the fact it will be delivered in two separate phases (each of 600 MWth). While there could be scope to share plant and infrastructure between the two phases of the Hydrogen Production Facility, this may not be possible for technical and commercial reasons and therefore the design needs to allow for different outcomes.

6.2.63 The Applicant is proposing to deliver the Main Site design through a competitive Front End Engineering Design ('FEED') arrangement. Another key reason for needing to incorporate flexibility in the design and layout of the Proposed Development is that FEED has not taken place and the equipment providers/vendors have not yet to be selected. The Proposed Development will be supported by the Government through various financial mechanisms and as such there is a requirement to provide value for money through a competitive tendering process. Prior to the appointment of an EPC contractor, it is proposed that different consortia will prepare designs for the required plant (each with their own individual sizes, capacities and configurations). A single consortium of companies is expected to be employed at the EPC stage at which time the design will be fixed.

6.2.64 It is anticipated that the completion of the tendering process, including design competition, selection of the EPC contractor and the Applicants' Final Investment Decision ('FID') will take place after development consent has been granted. At the point of submitting the Application, it is therefore not possible to finalise the design of the Proposed Development.

6.2.65 This approach to the design process allows for commercial collaboration and will result in slightly different sizes, capacities and configurations for the plant components.

6.2.66 In view of the above factors, it has been necessary to allow for a degree of flexibility in the design and layout of the Proposed Development. In order to provide sufficient flexibility and ensure a robust Environmental Impact Assessment ('EIA'), the Applicant has therefore adopted the principles of the 'Rochdale Envelope' approach and assessed (as part of the EIA) maximum design parameters for the elements of the Proposed Development where flexibility needs to be retained at the consenting stage. These parameters include:

- Maximum scale parameters (length, height and width) for the main buildings and structures at the Main Site (these maximum parameters are set out in Table 5.1 of the Design and Access Statement, Document Ref. 5.4).

- Maximum limits of deviation within which the various elements of the Proposed Development can be constructed within the Site (these are defined on the Works Plans – Document Ref. 2.4). The Works Plans show a degree of overlap between the various Works Nos. within the Main Site in order to accommodate the different design configurations that are expected.

6.2.67 The approach that has been taken is explained in ES Chapter 4 'Proposed Development' and ES Chapter 6 'Need, Alternatives and Design Evolution'. The maximum dimensions and parameters will be controlled and secured through Article 4 'Development consent etc. granted by this Order', Schedule 16 'Design Parameters' and Requirement 3 'Detailed design' (Schedule 2) of the DCO (Document Ref. 4.1) in addition to the Works Plans (Document Ref. 2.4).

Combined and Cumulative Effects

6.2.68 ES Volume I, Chapter 23 'Cumulative and Combined Effects' (Document Ref. 6.2.23) considers how the effects of the Proposed Development could combine and interact with the effects of other planned and consented developments within the area. The approach to assessing combined and cumulative effects is set out at Section 23.3 of ES Chapter 23.

6.2.69 Each of the technical assessments reported in the ES (ES Volume I, Document tef. 6.2) has identified effects which may occur as result of the Proposed Development. Multiple effects upon one or more common receptors could theoretically interact or combine, to result in a combined effect which is more or less significant than the effects individually. Chapter 23 therefore also considers these effects.

6.2.70 As described in Section 23.3 of the ES, some of the technical assessments have already considered effects that result from the combination or interaction of different types of impacts on individual receptors. For example, the potential for multiple effects to affect the Teesmouth and Cleveland Coast SSSI, SPA and Ramsar sites is considered within Chapter 12 'Ecology and Nature Conservation' and Chapter 13 'Ornithology'. Any effects arising from the interaction of impacts on individual receptors which have already been assessed within the technical assessments of the ES is reported in each technical chapter as required (ES Chapters 8 to 22).

6.2.71 This section considers only those combined effects which have not been identified elsewhere within the technical assessments in the ES. As such, it considers only the potential combined effects on human receptors.

6.2.72 When considering combined effects, the mitigation measures as set out in Chapters 8 to 22, including embedded mitigation measures incorporated into the Proposed Development's design and measures included in the Framework CEMP (Document Ref. 5.12), must be taken into account. Therefore, only residual effects (post-mitigation) are considered in Chapter 23 of the ES.

6.2.73 One potential receptor group is identified for construction, which includes residential receptors located around Grangetown and Middlesbrough, which lie in close proximity to the Hydrogen Pipeline Corridor and the A1085. Potential combined effects for the receptor group are considered to be traffic-related air

quality and noise. Further details on this receptor group are included in Table 23D-14 (ES Appendix 23D: Stage 4 Assessment of Cumulative Effects) (Document Ref. 6.4.40).

6.2.74 The air quality assessment presented in Chapter 8 'Air Quality' identified Negligible traffic-related air quality effects on the receptors located in Grangetown and Middlesbrough. Therefore, it is not considered that there would be any potential for combined effects when considered alongside potential noise impacts, which are Not Significant in the assessment.

6.2.75 Four potential receptor groups were identified for operation, as detailed in ES Table 23D-14 (Appendix 23D: Stage 4 Assessment of Cumulative Effects) and summarised below:

- Receptor group 2: Recreational receptors located at Marine Club and Tingdale Beach Caravan Park, Redcar and South Gare Breakwater.
- Receptor group 3: Recreational receptors located at Cleveland Golf Links and England Coastal Path.
- Receptor group 4: Residential Property Marsh House Farm, Redcar.
- Receptor group 5: Residential Properties located on Broadway West, Redcar.

6.2.76 All of the receptor groups were identified for their potential for combined effects between air quality and either visual or noise effects. However, the air quality assessment presented in ES Chapter 8 identified Negligible effects for all receptors during operation and it is not considered that there is potential for significant combined effects and in any event there are no significant effects predicted at any receptor.

6.2.77 For the cumulative effects assessment, all of the developments identified in ES Appendix 23C: Shortlist of Other Developments within the ZoI (Document Ref. 6.4.39) are considered to have the potential to generate significant cumulative effects when considered alongside the Proposed Development, by virtue of their nature, proximity to the Proposed Development Site and / or temporal scope (i.e. the planned timescales for construction and operation). They have therefore been progressed to Stage 4 of the cumulative effects assessment and have been assessed in relation to each environmental topic included in the ES, with the exceptions of Climate Change, Major Accidents and Disasters, and Materials and Waste. This is set out in ES Appendix 23D (Document Ref. 6.4.40).

6.2.78 The locations of the shortlisted other developments in relation to the Proposed Development are shown on ES Figure 23-3 (Document Ref. 6.3.103). The cumulative effects have been assessed for the construction, operation and decommissioning stages of the Proposed Development.

6.2.79 During the construction stage, the assessment of the potential for cumulative effects has concluded that:

- The risk of cumulative construction dust impacts is Low and considered to be Not Significant.

- For surface water, flood Risk and water resources there would not be any significant cumulative effects anticipated.
- For geology, hydrogeology and contaminated land, no significant cumulative effects to soil resources have been identified. No cumulative effects were identified on geology as none of the developments overlap with designated geological sites and any effects to groundwater will be mitigated for each development as required by legislation and industry standard measures, therefore no cumulative effects are anticipated.
- For noise and vibration, the potential cumulative construction noise effects are not significantly increased compared with the predicted individual effects of the Proposed Development or the other developments. The construction noise level predicted for the Proposed Development during construction of the pipeline, will be for a short period of time. It is considered unlikely that this will be simultaneous with the construction of all the other developments, thus reducing the likelihood of significant cumulative effects.
- The cumulative assessment for ecology and nature conservation has identified a number of other developments in close proximity to the Proposed Development within Teesside with the potential to result in the loss of open mosaic habitat. This in turn could affect the invertebrate assemblage which these habitats supports. This assessment has been conducted in accordance with the principals of the Rochdale Envelope and as such this presents a worst case scenario. However, opportunities will be explored to engage with promoters in the wider Teesside area, as well as STDC in the development of its overarching Mitigation Strategy for Teesworks, in order to identify measures to reduce potential cumulative impacts in the Teesside area."
- For ornithology there is potential for cumulative losses of grassland and open mosaic habitats during the construction phase in the interim period between newly created and restored habitats reaching their target condition, and these would be expected to result in cumulative losses of habitats used by birds on a short term basis during construction. However, this effect is considered to be short term and reversible and is assessed to be Minor Adverse (Not Significant). Effects due to potential interactions with all other developments are expected to be not significant during construction with the appropriate mitigation measures in place as detailed in ES Chapter 13 ‘Ornithology’ (Document Ref. 6.2.13).
- For marine ecology there are no significant potential cumulative effects on any of the receptors assessed.
- For landscape and visual amenity there are no significant potential effects identified on any of the landscape receptors. The cumulative viewpoint assessment identified that Viewpoint 7 (recreational receptors at England Coast Path, Warrenby), and Viewpoint 8 (recreational and residential receptors at Redcar seafront) would be subject to a Moderate Adverse (Significant) cumulative effect as a result of views of the construction of the Proposed Development if concurrent with the construction and operation of a number of

the identified cumulative developments. The cumulative effect is the same overall classification of effect as that for construction of the Proposed Development at these viewpoints in isolation which is assessed to be Moderate Adverse (Significant). As likely significant effects were recorded, the scope for further mitigation measures, such as screen planting, was considered. However, it was concluded that due to the combination of operational constraints, development proximity, and scale of the Proposed Development there is no opportunity to deliver additional mitigation to reduce the significant visual effects for Viewpoints 7 and 8.

- None of the developments identified to be within the ZoI for cultural heritage in Appendix 23B: Assessment of Cumulative Effects – Stages 1-3 (Document Ref. 6.4.38), that have been taken forward to the shortlist, would result in additional physical impacts to the heritage assets considered in ES Chapter 17 'Cultural Heritage' (Document Ref. 6.2.17).
- The potential socio-economics and land use cumulative effects of the Proposed Development has been assessed against a range of receptors being employment opportunities, local housing market and tourist accommodation as well as demographics and community disruption. For employment opportunities the cumulative effects are Major Beneficial (Significant). For local housing and tourist accommodation as well as demographics and community disruption, the potential cumulative effect is Moderate Adverse (Significant). The Applicant is committed to working with the promoters of other schemes to mitigate and reduce the effect of the cumulative construction workforce as far as possible. This includes setting up a working group for the Proposed Development, with the other schemes and local authorities in order to communicate and co-ordinate construction works at the individual developments to reduce any issues created by the additional construction workforce in the vicinity of the respective developments. It is also noted that this assessment has been undertaken on a precautionary basis, which does not allow for potential efficiencies between the projects (such as the use of the same workforce) and assumes project programme crossovers which may not occur.
- The potential cumulative effect on the employment and income human health determinant is Major Beneficial (Significant) whilst the potential cumulative effects on housing as well as the health and social care services for the human health determinant are Moderate Adverse for the construction stage. No other cumulative significant effects are expected against human health determinants.

6.2.80 During the operation stage the assessment of the potential for cumulative effects has concluded that:

- Potential air quality cumulative operational effects on human health and ecological receptors are considered to be Not Significant.
- For surface water, flood risk and water Resources there would not be any significant cumulative effects anticipated.

- It is considered that there are no significant cumulative effects to geology, groundwater receptors or soil resources associated with the operation stage of the Proposed Development.
- The predicted operational sound level for the Proposed Development is more than 10 dB below the cumulative ambient level, so when added onto the cumulative ambient level it will not increase the overall cumulative ambient level. Therefore, this is considered to result in a Not Significant cumulative effect.
- No significant cumulative effects on ecology and nature conservation are considered likely during the operational stage of the Proposed Development.
- No significant cumulative effects on ornithology are considered likely during the operational stage of the Proposed Development.
- No likely significant cumulative effects between the Proposed Development and other developments on marine ecology have been identified, taking into account the mitigation measures to be implemented and the results of modelling.
- The cumulative viewpoint assessment identified that Viewpoint 7 would be subject to a Moderate Adverse (Significant) cumulative effect as a result of views of the operation of the Proposed Development if concurrent with the construction and operation of a number of the identified cumulative developments.
- There is no potential for cumulative effects on heritage assets or their setting during operation of the Proposed Development
- None of the post-mitigation operational effects for the Proposed Development relating to socio-economic and land use are expected to be cumulatively significant. Furthermore, the overall impact is expected to be minimal on employment, land use and community facilities in the Wider Impact Area, with the operational workforce in particular expected to be relatively small in comparison to the Wider Impact Area, and not contribute to a cumulative effect in the ZoI. Therefore, when considering the cumulative operational phase effects in the ZoI, there are not expected to be any significant cumulative operational effects for the Proposed Development.
- During operation, all potential cumulative effects on human health are expected to be negligible except for employment and income which is expected to be Minor Beneficial (Not Significant) and noise and vibration which is expected to be Minor Adverse (Not Significant).

6.2.81 As the Proposed Development has an estimated design life of 25 years (although that duration could be extended based on market conditions and condition of the plant and so the ES does not assume this period), cumulative effects during decommissioning are not considered as it is not possible to predict the developments that would be in progress at that point in time.

Summary of Significant Effects

6.2.82 Chapter 24 of the ES provides a summary of those significant adverse and beneficial environmental effects identified at this stage in the Proposed Development (Document Ref. 6.2.24).

6.2.83 Table 24-1 of Chapter 24 summarises the significant environmental effects of the Proposed Development that have been identified throughout the EIA and makes reference to minor and / or negligible effects in this chapter where a 'Significant' (Moderate or Major) effect has been reduced to a 'Not Significant' effect following mitigation and / or wider contextualisation of the environmental impact.

6.2.84 Table 24-1 also summarises the environmental effects that are identified as 'Significant', following implementation of the embedded mitigation or impact avoidance measures included in the design of the Proposed Development (as detailed in ES Chapters 8 to 23, where relevant). It is only these 'Significant' effects which are described below.

6.2.85 Although a range of potential Major and Moderate Adverse (Significant) effects have been identified for ecology and nature conservation (including aquatic ecology) prior to the implementation of suitable mitigation measures, the residual effects will be reduced to Not Significant through the further development and implementation of suitable mitigation measures. There are however two residual environmental effects during the construction stage that will remain Moderate Adverse (Significant). These residual effects relate to the overall direct loss of woodland habitat (which although compensated for by the replacement Woodland Park provision it is acknowledged that this cannot 'mitigate' the assessed effect), within Cowpen Bewley Local Wildlife Site / Local Nature Reserve and the direct loss of swamp habitat.

6.2.86 For landscape and visual amenity during the construction and decommissioning stages there will be a Moderate Adverse (Significant) residual effect in regards to the impact on recreational users of at Viewpoint 7 (England Coastal Path) and Viewpoint 8 (Redcar seafront). The residual impact on recreation users at Viewpoint 7 will remain Moderate Adverse (Significant) during the operational stage of the Proposed Development.

6.2.87 There will be a residual Moderate Beneficial (Significant) effect during the construction stage in regards to socio-economic and land use through the provision of employment and associated multiplier effects. This beneficial effect will also impact on human health by providing local employment through all the stages of the Proposed Development and therefore, an increase in local income.

6.2.88 For climate change there will be a Beneficial (Significant) effect during the operation stage of the Proposed Development as the production and distribution of Hydrogen will help enable transition to a lower carbon economy.

6.2.89 There is the potential for a Moderate Adverse (Significant) residual effect relating to materials and waste during the construction stage in regards to possible changes in available hazardous landfill void capacity. Although no additional mitigation measures are proposed at this time, it is considered that the current assessment of

the volume of the excavated hazardous materials is very conservative and represent the worst case scenario. As the design progresses, the volumes will be further refined following a confirmatory site investigation undertaken post DCO consent, pursuant to a DCO Requirement 12.

Health (EN-1, 4.4)

6.2.90 Paragraph 4.4.1 of EN-1 highlights that energy infrastructure has the potential to impact on the health and well-being of the population. It notes that access to energy is clearly beneficial to society and to health as a whole, but that the construction of such infrastructure and the production, distribution and use of energy may have negative impacts on some people's health. Direct impacts (paragraph 4.4.2) may include:

- Increased traffic.
- Air or water pollution.
- Dust and odour.
- Hazardous waste and substances.
- Noise.
- Exposure to radiation.
- Increases in pests.

6.2.91 Paragraph 4.4.3 also notes that new energy infrastructure may affect the composition and size of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport, or the use of open space for recreation and physical activity.

6.2.92 Paragraph 4.4.4 states that where the proposed development has an effect on humans, the ES should assess these effects for each element of the development, identifying any potential adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate.

6.2.93 Paragraph 4.4.5 adds that where the impacts of more than one development may affect people simultaneously, the applicant should consider the cumulative impact on health in the ES where appropriate.

6.2.94 ES Chapter 22 'Population and Human Health' (Document Ref. 6.2.22) identifies the potential impacts and effects on human health that have been considered as part of the EIA of the Proposed Development As confirmed above, this chapter considers the findings of several ES chapters including Chapter 8 'Air Quality', Chapter 11 'Noise and Vibration', Chapter 15 'Traffic and Transport', Chapter 18 'Socio-economics and Land Use', Chapter 19 'Climate Change' and Chapter 20 'Major Accidents and Disasters'.

6.2.95 Chapter 22 identifies effects for human health during construction and operation of the Proposed Development.

6.2.96 Section 22.7 of ES Chapter 22 only identifies one specific instance where additional essential mitigation is required to reduce the magnitude of impact of the Proposed Development, which is on the open space, leisure and play health determinant. Apart from this specific instance, not additional mitigation over and above that already identified in Chapters 8, 11, 15, 18, 19 and 20 of the ES has been identified.

6.2.97 The impact on the open space, leisure and health determinant, relates to the loss of open space at Cowpen Bewley Woodland Park, near Billingham, in relation to the Hydrogen Pipeline Corridor and associated AGI infrastructure. The Applicant proposes to mitigate that loss of open space with a replacement area of open space land in the locality, that will be of at least the same size and standard as the land required by the Proposed Development, to be agreed with STBC. This will reduce the magnitude of impact of the Proposed Development on the open space, leisure and play health determinant to Low. Overall, the residual effect of the Proposed Development on open space, leisure, and play from a human health perspective is assessed to be Minor Adverse (Not Significant).

Marine Considerations (EN-1, 4.5)

6.2.98 EN-1 (paragraph 4.5.1) confirms that the UK Marine Policy Statement ('MPS') is the framework for preparing Marine Plans and taking decisions affecting the marine environment as per Section 44 of the Marine and Coastal Access Act 2009 ('MCAA 2009'). Marine plans apply in the 'marine area', which is the area from mean high water springs to the seaward limit of the Exclusive Economic Zone. The 'marine area' also includes the waters of any estuary, river or channel, so far as the tide flows at mean high water spring tide.

6.2.99 Paragraph 4.5.8 states that applicants for development consent must take account of any relevant Marine Plans and are expected to complete a Marine Plan Assessment and use this information to support their application.

6.2.100 Section 104(2)(aa) of the PA 2008 requires the SoS to have regard to any appropriate marine policy documents when making a decision on an application for development consent where an NPS has effect. This will include any Marine Plan which is in effect for the relevant area, or areas where the development crosses the boundary between plan areas (paragraph 4.5.10).

6.2.101 Paragraph 4.5.12 is clear that in event of a conflict between a NPS and any marine planning documents, the NPS prevails for the purposes of decision making.

6.2.102 The Proposed Development involves parts of the tidal River Tees and therefore it is necessary to have regard relevant marine planning documents. These include the MPS and also the North East Inshore and North East Offshore Marine Plan.

6.2.103 Chapter 3 of the MPS sets out the policy objectives for key activities that take place in the marine environment. Section 3.3 deals specifically with 'Energy production and infrastructure development'. Paragraph 3.3.1 notes that a secure, sustainable and affordable supply of energy is of central importance to the economic and social well-being of the UK. Paragraph 3.3.4 sets out issues that decision makers should consider when examining and determining applications for energy infrastructure.

Those of relevance to the Proposed Development, which will connect to a CCUS cluster in Teesside, that should be taken into account include:

- the national level of need for new energy infrastructure, as set out in the Overarching NPS for Energy (EN-1);
- the positive wider environmental, societal and economic benefits of CCUS as a key technology for reducing CO_2 emissions;
- that the physical resources and features that form oil and gas fields or suitable sites for CO_2 storage occur in relatively few locations and need first of all to be explored for and can then only be exploited where they are found; and
- the UK's programme to support the development and deployment of CCUS clusters and, in particular, the need for suitable locations that provide for the permanent storage of CO_2.

6.2.104 In terms of the North East Inshore and North East Offshore Marine Plan, the Site lies partly within the North East Inshore Marine Area, which stretches from Flamborough Head in Yorkshire to the Scottish Border. The Plan Area includes the River Tees.

6.2.105 Section 2 of the North East Marine Plan sets out the policies to support the delivery of the Plan objectives. The policies are set out in detail in the Technical Annex to the North East Marine Plan. There are no policies that specifically cover hydrogen production or hydrogen infrastructure, however, Policy NE-CCUS-3 is considered to be of some relevance to the Proposed Development as it supports proposals associated with the deployment of low carbon infrastructure for industrial clusters, such as that being proposed on Teesside as part of the ECC being advanced by the NEP.

6.2.106 The North East Marine Plan also includes policies aimed at managing the impacts of development upon heritage assets (Policy NE-HER-1); seascape and landscape (Policy NE-SCP-1; air quality and emissions (Policy NE-AIR-1); water quality (Policy NE-WQ-1); enhancing biodiversity (Policies NE-BIO-1 to 3) and ensuring that developments demonstrate they are resilient to the impacts of climate change and coastal change (Policy NE-CC-2).

6.2.107 The Applicant has assessed Proposed Development against marine policy in the Policy Assessment Tables document (Document Ref. 5.2.1) that sit alongside this Planning Statement. In addition, the ES includes a Marine Plan Policy Assessment (Appendix 7A) (Document Ref. 6.4.6).

6.2.108 The Policy Assessment Tables and Marine Plan Policy Assessment do not identify any conflict between the Proposed Development and the objectives of the North East Marine Plan or the policies contained within it.

<u>Environmental and Biodiversity Net Gain (EN-1, 4.6)</u>

6.2.109 Environmental net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Developments should therefore not only avoid, mitigate and compensate harms, following the

mitigation hierarchy, but also consider whether there are opportunities for enhancements (EN-1, paragraph 4.6.1).

6.2.110 Paragraph 4.6.2 of EN-1 confirms that biodiversity net gain ('BNG') is an essential component of environmental net gain. Developments in England should consider and seek to incorporate improvements in natural capital, ecosystem services and the benefits they deliver when planning how to deliver BNG. It confirms that currently BNG policy in England only applies to terrestrial and intertidal components of projects.

6.2.111 Paragraph 4.6.6 states that energy NSIP proposals, whether onshore or offshore, should seek opportunities to contribute to and enhance the natural environment by providing net gains for biodiversity, and the wider environment where possible. BNG should be applied after compliance with the mitigation hierarchy (paragraph 4.6.10).

6.2.112 Paragraph 4.6.11 notes that BNG can be delivered onsite or wholly or partially off-site. Applicants are encouraged to provide details of any off-site delivery of BNG to be set out within the application for development consent. Paragraph 4.6.12 continues by stating:

"When delivering biodiversity net gain off-site, developments should do this in a manner that best contributes to the achievement of relevant wider strategic outcomes, for example by increasing habitat connectivity, enhancing other ecosystem service outcomes, or considering use of green infrastructure strategies. Reference should be made to relevant national or local plans and strategies, to inform off-site biodiversity net gain delivery. If published, the relevant strategy is the Local Nature Recovery Strategy (LNRS). If an LNRS has not been published, the relevant consenting body or planning authority may specify alternative plans, policies or strategies to use."

6.2.113 In addition to delivering biodiversity net gain, developments may also deliver wider environmental gains and benefits to communities relevant to the local area, and to national policy priorities, including reductions in GHG emissions, reduced flood risk, climate change adaptation, or increase access to natural greenspace (paragraph 4.6.13).

6.2.114 Paragraph 4.6.15 of EN-1 states that applications for development consent should be accompanied by a statement demonstrating how opportunities for delivering wider environmental net gains have been considered, and where appropriate, incorporated into proposals as part of good design (including any relevant operational aspects) of the development.

6.2.115 The Applicant notes that the provisions of the Environment Act 2021 relating to BNG for application under the TCPA have now come into force. However, provisions relating to PA 2008 have not yet come into force and are not expected to until at least November 2025. At a national level, this delay reflects the need for the complexities of infrastructure projects and their interaction with the BNG metric to be fully understood by Natural England and developers, acknowledging that they are not the same as blocks of land lost to housing developments.

6.2.116 This is particularly the case for the Proposed Development, with its connections corridors involving a mix of above and underground land requirements for different types of pipelines, but which are also surrounded by a number of existing assets, necessitating differing limits of deviation. The Proposed Development also has a range of 'temporary' land requirements that are shown on the Land Plans (Document Ref. 2.2) but which may not in fact involve habitat loss. As such, the true 'loss' of habitats to the Proposed Development is much less than would actually be the case than simply assuming that the loss includes the entirety of the proposed Order Limits. Natural England is therefore working with the energy and infrastructure industry to consider how best the metric can apply to projects such as the Proposed Development.

6.2.117 A specific additional complexity for the Proposed Development is the Main Site. At the moment the Main Site is the subject of extensive demolition works for the removal of the former Redcar Steelworks and its associated infrastructure; and it is anticipated it will also shortly be subject to extensive remediation activities. The former Steelworks are subject to restoration and habitat establishment requirements, and it is considered likely that this will apply to the remediation works. As such, the ecological baseline position of the Main Site now would, for BNG purposes, be unrealistic in terms of establishing what the 'pre-development' habitat condition should be considered to be for the Main Site.

6.2.118 For these reasons, the Applicant has not submitted a BNG report/assessment as part of its application for development consent. Notwithstanding this, and mindful of the policy imperatives of EN-1, the Applicant is committed to ensuring that the ecological impacts of the Proposed Development are fully mitigated, and where possible given the constraints of the proposed Order Limits and the Main Site more generally, deliver enhancements.

6.2.119 The Applicant's proposals for ecological mitigation and enhancement are set out in Chapter 12 'Terrestrial Ecology and Nature Conservation' (Document Ref. 6.2.12) and in the Outline Landscape and Biodiversity Management Plan ('BLMP') (Document Ref. 5.9). The measures in the latter will be developed into a Full BLMP to reflect the detailed design (and impacts) of the Proposed Development, in substantial accordance with that outline. This is secured by Requirement 4 of the draft DCO (Document Ref. 4.1). Through these measures, the Applicant will be able to deliver a commitment to no net loss, as a minimum.

6.2.120 Furthermore, the Applicant is keen to secure enhancements in the wider Teesside area off-site from the proposed Order Limits (as allowed for by EN-1, paragraph 4.6.11) and is working with stakeholders such as Natural England, the EA and RPSB to develop proposals in this regard. While the Applicant does not propose to quantify these in BNG metric terms at this point in time, it is hoped that such measures, to be secured though a Section 106 development consent obligation, will be able to demonstrate a wider qualitative net gain overall as a result of the Proposed Development.

6.2.121 It is also important to note that the Proposed Development will deliver benefits to wider environmental gains and national policy priorities (EN-1, paragraph 4.6.13),

not least in terms of a significant contributions in GHG emissions by producing and supply low carbon hydrogen to industries on Teesside, thereby helping them to decarbonise.

Criteria for "good design" in energy infrastructure (NPS EN-1, 4.7; EN-4, 2.4 and EN-5, 2.4)

6.2.122 EN-1 (paragraph 4.7.1) recognises that the functionality of buildings and infrastructure, including fitness for purpose and sustainability, are as equally important as visual appearance and aesthetic considerations to design. Paragraph 4.7.2 goes on to state that applying 'good design' to energy NSIPs should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates 'good aesthetic' as far as possible. It is however acknowledged that '*the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of an area'.*

6.2.123 Paragraph 4.7.3 of EN-1 notes that 'good design' is also a means by which many policy objectives in the NPS can be met, for example, the impact sections (of EN-1) show how good design, in terms of siting and use of appropriate technologies can help mitigate adverse impacts such as noise. Applicants should consider how good design can be applied to a project during the early stages if its life cycle (paragraph 4.7.4).

6.2.124 Paragraph 4.7.5 advises that 'design principles' should be established from the outset of the project to guide the development from conception to operation. Paragraph 4.7.6 goes into state:

"Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, land form and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area. Applicants should also, so far as is possible, seek to embed opportunities for nature inclusive design within the design process."

6.2.125 Paragraph 4.7.7 of EN-1 states that applicants must demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected.

6.2.126 The Applicant has prepared a Design and Access Statement (Document Ref. 5.4) and this forms part of the application for development consent. This document sets out the design principles that the Applicant defined at an early stage in the design process (these are based around climate, environment and safety and place and value), the approach taken to the design of the Proposed Development and how that design has developed in the lead up to the submission of the Application.

6.2.127 Paragraph 4.7.10 confirms that in assessing applications, the SoS will need to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be. Paragraph 4.7.11 goes onto state that the SoS should be satisfied that the applicant has considered both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located, any potential amenity benefits, and visual impacts on the landscape or seascape) as far as possible.

6.2.128 Importantly paragraph 4.7.12 underlines that the SoS should:

"…take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy."

6.2.129 EN-4 (paragraph 2.4.2) and EN-5 (paragraph 2.4.2) state that in relation to gas supply and energy infrastructure respectively, applicants should demonstrate good design as per Section 4.7 of EN-1.

6.2.130 Chapter 6 of the ES Volume I 'Alternatives and Design Evolution' (Document Ref. 6.2.6) at Sections 6.4 to 6.7 considers the alternatives that have been examined for the Proposed Development, including alternative technologies, site locations, site layouts and connection routing and corridors. Section 6.9 provides an explanation of the alternative design options and design evolution. The main design changes are summarised at Table 6-1. These in the main relate to the modification of the connections corridors to reduce landtake and environmental effects.

6.2.131 As confirmed above, the Design and Access Statement (Document ref. 5.4) prepared sets out the design principles that the Applicant has applied to the Proposed Development, the approach taken to the design of the Proposed Development and how that design has developed and evolved ahead of the submission of the Application. The DAS also explains the degree of flexibility being sought in the design of the Proposed Development (largely a product of its 'First of a Kind' nature and the need to take account ongoing technological advancement in the hydrogen sector) and sets out the design parameters that have been used for the purposes of the EIA to ensure that its likely significant effects have been robustly assessed. In addition, the DAS sets out the level of design information that is available at the consenting stage and how the detailed design of the Proposed Development will ultimately be controlled and secured.

6.2.132 The primary focus of the DAS is on the Main Site, which will be the location of Work No. 1, the carbon capture enabled hydrogen production facility. This is on the basis that the Main Site will accommodate the Proposed Development's main buildings and structures, while the other main elements of the Proposed Development will primarily encompass the installation of pipelines and cables (which will either be installed below ground or largely within existing infrastructure corridors), temporary construction and laydown areas and limited access and highway works. Those elements largely comprise 'engineering operations' (for which there is no requirement to produce a DAS) and are described in other Application documents,

notably ES Chapters 4 'Proposed Development' and 6 'Alternatives and Design Evolution' and the Pipelines Statement (Document Ref. 5.5).

6.2.133 The topography of the Main Site is relatively flat, with typical ground levels being 6 to 8 metres Above Ordnance Datum ('AOD'). It comprises brownfield former industrial land and was originally used for steel production (as part of the Redcar Steel Works) and accommodated a number of large buildings and structures. It now forms part of the 'Foundry' plot within Teesworks. As of March 2024, most of the buildings and structures, overhead pipes and site infrastructure have been demolished. A combination of hardstandings and road networks remain, surrounded by informal landscaping, mainly grass, with some shrubs, scrub and small trees.

6.2.134 The Main Site very much sits within an industrialised context, but one that is changing with the demolition of the former Steel Works structures, most recently the Blast Furnace. It is relatively remote from residential areas and is not crossed by any Public Rights of Way ('PRoW'), however, a section of the Teesdale Way long distance route runs adjacent to the northern boundary of the Main Site.

6.2.135 The other main part of the Site for the most part comprises the connections corridors. These largely pass through areas of existing and former industrial land, but also some open, undeveloped areas, some of which are used for recreation and some of which are of nature conservation interest. The Applicant has sought to make use of existing pipeline and cable corridors where possible and in more sensitive locations, infrastructure will be installed using specialised construction techniques to minimise impacts and disruption.

6.2.136 The Applicant has adopted a functional approach to the design of the Proposed Development, notably the Main Site, reflective of its function and purpose, the fact that it will sit adjacent to the NEP infrastructure (which is itself functional in appearance), the allocation of the land with the Redcar and Cleveland Local Plan and the South Tees SPD, that the Teesworks Design Guide does not identify the Foundry as a 'Gateway Plot', in addition to the industrial character of the area. The approach to design has also been influenced by technical, engineering, environmental and safety considerations. However, functional design can represent 'good design' and in developing the design of the Proposed Development the Applicant has taken account of the Teesworks Design Guide and the relevant plot typology and sought to minimise impacts upon the surrounding area.

6.2.137 The proposed use of the Main Site is for the production of hydrogen and the capture and compression of the carbon dioxide from this process prior to its transportation offshore for secure storage via the adjacent NEP infrastructure. The proposed use is consistent with what the land is identified for with in the SPD and Design Guide. The use is also consistent with the character of the surrounding area, which is industrial in nature.

6.2.138 The various connection corridors (natural gas, water, electricity, carbon dioxide and hydrogen), which entail engineering works/operations, largely involve existing and former industrial land either side of the River Tees, while the pipelines and cables

will be for the most part installed below ground and within existing infrastructure corridors. The infrastructure required for the connections will not therefore materially alter the use or character of the land to which they relate.

6.2.139 The majority of the main buildings and structures at the Main Site have been grouped together where feasible from a technical and safety perspective in order to consolidate their built form, scale and massing. Consistent with the Teesworks Design Guide and the Large-Scale Industrial Operations typology, the buildings and structures and main process areas are set back from the Site boundaries.

6.2.140 The tallest and most visually prominent buildings and structures of the Proposed Development will be the main flare at up to 108 m in height (Above Ordnance Datum '(AOD')), the Auxiliary Boiler Stack (up to 78 m AOD), CO_2 Absorber Column (up to 56 m AOD), Start-Up Fired Heater Stack (up to 53 m AOD), Air Separation Unit ('ASU') (up to 60 m AOD) and High-Pressure ('HP') and Low -Pressure ('LP') Flash Vessels (up to 58 m AOD). However, some of the tallest structures such as the main flare and boiler and heater stacks, will be relatively slender structures in terms of diameters, limiting their prominence and as confirmed above, buildings and structures will be grouped where possible.

6.2.141 The appearance of the buildings and structures at the Main Site will be in keeping with the industrialised context within which they will sit, with the area already being characterised by large industrial structures and uses. The appearance of the buildings and structures is representative of their function and purpose and will also be in keeping with the proposed design approach to the adjacent NEP infrastructure.

6.2.142 The buildings and structures at the Main Site will be simple and functional in form and detailing, predominantly comprising steel framed enclosures that will be clad in appropriate materials. While the buildings and structures are functional, reflective of their industrial setting and the fact they do not sit on a Gateway Plot or primary route within the Teesworks Site, the decision has been taken to enclose the main items of plant and equipment in line with Design Guide recommendations having regard to the fact they will be visible from South Gare and Coatham Dunes/Sands.

6.2.143 It is envisaged that the external finishes for the buildings and structures at the Main Site will comprise predominantly of metal cladding and concrete. Again, in line with Design Guide, it is proposed that a simple and consistent approach is taken to the materials and colour palette to be employed. There are a number of possible solutions for external finishes, including flat and profiled metal cladding and concrete. Lighter colours such as light greys may be used to soften the appearance of the buildings and structures against the sky and sea. A decision on appropriate external finishes, materials and colours will be made at the detailed design stage with the final details being subject to approval by the relevant LPA in accordance with Requirement 3 'Detailed design' of the draft DCO (Document Ref. 4.1).

6.2.144 In designing the Proposed Development, the Applicants have sought to minimise its landscape and visual effects through the siting and layout of buildings and

structures. Table 16.4 'Landscape Sensitivity Assessment' in ES Volume I Chapter 16 'Landscape and Visual Amenity' (Document Ref. 6.2.16) provides a summary of the sensitivity of each landscape receptor including National and Marine Character Areas as well as Local Landscape Character areas within the vicinity of the Proposed Development. The assessment has determined that the Proposed Development is unlikely to result in significant adverse landscape effects during any of the assessment scenarios.

6.2.145 Chapter 16, specifically the 'visual amenity assessment', does identify that the Proposed Development will result in a small number of recreational receptors associated with the England Coastal Path (Viewpoint 7) and Redcar Seafront (Viewpoint 8) experiencing significant short-term adverse visual effects during the construction stage, as a result of the proximity to the Main Site and the limited intervening vegetation. These effects will also be significant during the operational stage along the England Coastal Path (Viewpoint 7) due to the proximity and prominence of structures associated with the Proposed Development. However, this is an industrial location, which already exhibits large scale industrial development, and for which more development is planned, notably at Teesworks, including the NEP infrastructure. Furthermore, it is considered that the significant benefits of the Proposed Development outweigh its landscape and visual effects.

6.2.146 The approach taken to landscaping at the Main Site has necessarily been influenced by functional and safety requirements. The areas around and between the main buildings and structures will comprise for the most part of hardstanding and crushed stone, with some grassed areas. These areas need to be kept free of planting for safety and security reasons.

6.2.147 The internal access roads and other hardstanding areas (e.g. for parking) will be of concrete or tarmac.

6.2.148 The perimeter areas of the Main Site will offer some opportunities for planting and biodiversity enhancement in line with the Outline Landscape and Biodiversity Management Plan (Document Ref. 5.9). Details of the landscaping will be secured by Requirement 4 'Landscape and biodiversity management plan'.

6.2.149 The Proposed Development also incorporate appropriate access arrangements. The internal access roads within the Main Site will be designed to provide safe access and movement for all vehicle types and users. There will be clear segregation of and demarcation of routes for pedestrians. Where possible, pedestrian routes, parking areas and buildings within the Main Site will be designed to provide for inclusive access. This will need to take account of operational and safety considerations given the nature of the use and operations.

6.2.150 The Proposed Development incorporates a number of measures within its design to ensure that it will be resilient in terms of the effects of climate change as well as contributing to mitigating those effects. ES Chapter 19 'Climate Change' (Document Ref. 6.2.19) includes a Climate Change Resilience Assessment which concludes that no significant resilience risks for the Proposed Development have been identified.

6.2.151 The elements of the Proposed Development that have been considered in the assessment include all infrastructure, plant and machinery, all workers, staff or visitors on-site and materials. Potential climate change impacts, the likelihood and consequences to the construction, operation and decommissioning of the Proposed Development, together with the adaptation methods to increase the resilience of the Proposed Development are detailed in ES Appendix 19A 'Climate Change Resilience Assessment' (Document Ref. 6.4.31).

6.2.152 Furthermore, it should not be overlooked that the Proposed Development will produce low carbon hydrogen with a link to the NEP infrastructure that enables CCS, that will contribute to the decarbonisation of industry on Teesside, which supports climate change objectives and the Government's legally binding target of net zero greenhouse gas emissions by 2050.

6.2.153 The detailed design of the Proposed Development and measures to ensure its resilience to climate changes will be secured by a number of requirements within the draft DCO, including Requirement 3 'Detailed design'; 4 'Landscape and biodiversity management plan'; 6 'External lighting'; 7 'Means of enclosure; 8 'Site security'; 10 'Surface and foul water drainage'; and 11 'Flood risk mitigation'.

6.2.154 It is therefore considered that the Proposed Development represents 'good design' for the purposes of energy infrastructure and policy set out EN-1, EN-4 and EN-5 as well as other planning policy documents and also local design guidelines.

Consideration of Combined Heat and Power ('CHP') (EN-1, 4.8)

6.2.155 EN-1 (paragraph 4.8.1) confirms that Combined Heat and Power ('CHP') is the generation of useable heat and electricity in a single process. It goes onto state that a CHP station may either supply steam direct to customers or capture waste heat for low-pressure steam, hot water or space heating purposes after it has been used to drive electricity generating turbines. The heat can also be used to drive absorption chillers, thereby providing cooling.

6.2.156 Paragraph 4.8.3 states that CHP is technically feasible for many types of thermal generating stations, including nuclear, EfW, BECCS and hydrogen, although the majority of CHP plants in the UK are fuelled by gas.

6.2.157 Paragraph 4.8.8 of EN-1 refers to guidance issued by the then Department for Trade and Industry ('DTI') in 2006 ('Guidance on background information to accompany application under Section 36 of the Electricity Act 1989), and states that will apply to any application to develop a thermal generating station under the PA 2008. It goes into state that applications for thermal stations must either include CHP proposals or contain evidence demonstrating that the possibilities for CHP have been fully explored to inform the SoS's consideration of the application.

6.2.158 Paragraph 4.8.14 states that the SoS should have regard to the DTI 2006 guidance, or any successor to it, when considering the CHP aspect of application for thermal generating stations.

6.2.159 The policy contained within EN-1 on CHP is clearly applies to the consideration/provision of this in relation to thermal generating stations. It does

not refer to other forms of energy infrastructure or place a requirement on applicants for development consent for such infrastructure (other than for thermal generating stations) to consider CHP.

6.2.160 The Proposed Development is for a Hydrogen Production Facility and a Hydrogen Pipeline Corridor and associated development. It does not represent a thermal generating station and as such there is no requirement under NPS policy for the Applicant to consider CHP in relation to the Proposed Development. The application for development consent is not therefore accompanied by a CHP Assessment.

6.2.161 It is relevant to note that energy efficiency and use of heat will be addressed through the environmental permit application for the Proposed Development.

Carbon Capture and Storage ('CCS') (EN-1, 4.9)

6.2.162 EN-1 (paragraph) 4.9.1 clarifies that CCS is a technology that enable carbon dioxide (CO_2) that would otherwise be released to the atmosphere to be captured and permanently stored. It can be applied to any large point source of CO_2, such as thermal generating power station or other industrial processes that are high emitters.

6.2.163 Paragraph 4.9.5 states:

"The government has made its ambitions for CCS clear – committing to providing funding to support the establishment of CCS in at least four industrial clusters by 2030 and supporting, using consumer subsidies, at least one privately financed gas CCS power station in the mid-2020s. In October 2021, the government published its Net Zero Strategy which reaffirmed the importance of deploying CCUS to reaching our 2050 net zero target and also outlines our ambition to capture 20-30Mt of CO2 per year by 2030."

6.2.164 Section 5.0 of this Planning Statement provides an overview of UK energy and climate change policy, including the Net Zero Strategy, and underlines how the Proposed Development will support the delivery of this policy, including the East Coast Cluster (which includes Teesside), the decarbonisation of industry and the Government's legally binding target of net zero by 2050.

6.2.165 Much of the policy contained within EN-1 on CCS is focused on new build thermal generating stations with carbon capture plant ('power CCS'). In this regard, paragraph 4.9.25, which relates to SoS decision making, states that to ensure that no foreseeable barriers exist to retrofitting CCS equipment on combustion generating stations, all applications for new combustion plants, which are of generating capacity at or over 300 MW and of type covered by 'The Carbon Capture Readiness (Electricity Generating Stations) Regulations 2013' should demonstrate that the plant is 'Carbon Capture Ready' ('CCR') before consent may be given. This will involve the applicant submitting a 'Carbon Capture Readiness' ('CCR') Assessment with the application for development consent (paragraphs 4.9.29 to 4.9.30).

6.2.166 The Proposed Development is for a carbon capture enabled Hydrogen Production Facility and Hydrogen Pipeline Corridor. It will be built with carbon capture plant, with the CO_2 captured from the hydrogen production process being conditioned and compressed before being transport to the adjacent NEP infrastructure (the NZT Project), which received development consent on 16 February 2024, before onward transportation by pipeline to the Endurance Store beneath the North Sea.

6.2.167 As the Proposed Development will be built with carbon capture plant and link to a consented CCS project and is not a thermal generating station with a capacity at or over 300 MW, the application for development consent is not accompanied by a CCR Assessment.

6.2.168 Paragraph 4.9.14 acknowledges that carbon capture plant will have noise and vibration impacts and states that the ES should address the impacts arising from the plant as part of the overall development. With regard to this, the Applicant has provided an ES as part of the application for development consent, which set out the assessment of the Proposed Development in environmental terms, including in relation to noise and vibration (ES Chapter 11 'Noise and Vibration) (Document Ref. 6.2.11). ES Chapter 11 confirms that the Proposed Development will not result in significant permanent noise or vibration effects.

Climate Change Adaptation and Resilience (NPS EN-1, 4.10; EN-4, 2.3 and EN-5, 2.3)

6.2.169 EN-1 (paragraph 4.10.8) states that new energy infrastructure will typically need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the direct impacts of climate change, such as site flooding, limited water availability, storms, heatwave and wildfire threats to infrastructure and operations as well as indirect impacts such as access roads or other critical dependencies impacted by flooding, storms, heatwaves or wildfires) impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure.

6.2.170 Paragraph 4.10.9 continues stating that the ES should set out how the development will take account of its impact on climate change. Applicants should assess the impacts on and from their proposed energy project across a range of climate change scenarios (paragraph 4.10.10) and demonstrate that proposals have a high level of climate resilience built-in from the outsets and can be adapted over their predicted lifetimes to remain resilient (paragraph 4.10.11).

6.2.171 EN-4 (paragraph 2.3.4) states that gas pipelines and other infrastructure should be resilient to increased risk of flooding; effects of rising sea levels and increased risk of storm surge; higher temperatures; increased risk of earth movement or subsidence from increased risk of flooding and drought; and any other increased risks identified in the applicant's assessment.

6.2.172 EN-5 (paragraph 2.3.2) refers to the need to consider the effects of flooding, particularly upon substation infrastructure, winds and storms on overhead lines, higher temperatures leading to increased transmission losses and earth movement, or subsidence caused by flooding or drought on underground cables.

6.2.173 ES Chapter 9 considers the effects of the Proposed Development in terms of flooding and the risk of flooding. A Flood Risk Assessment ('FRA') is provided at Appendix 9A of the ES (Document Ref. 6.4.9).

6.2.174 The Main Site and the connection corridors on the south bank of the River Tees are located within Flood Zone 1 (i.e. a low risk of flooding) however, there are some parts of the pipelines which make up the Hydrogen Pipeline Corridor, that fall within Flood Zone 2 (medium risk) and Flood Zone 3 (high risk). As flood risk from fluvial sources (Ordinary Watercourses) on the north bank of the River Tees, between Billingham and Seal Sands, will increase in all climate change scenarios, the Hydrogen Pipeline Corridor will be at risk of flooding over the lifetime of the development.

6.2.175 As the Proposed Development involves land within both Flood Zones 2 and 3, it is necessary to apply the 'Sequential Test' in order to demonstrate that the Applicant has sought to locate it within the areas with the lowest probability of flooding (e.g. Flood Zone 1) when compared to alternative sites. The Applicant's approach to applying the Sequential Test is set out at paragraphs 9A.6.28 to 9A.6.38 of ES Appendix 9A (Document Ref. 6.4.9) and demonstrates that where feasible, development has been located in Flood Zone 1, however, parts of the Hydrogen Pipeline Corridor are, as a necessity located within Flood Zones 2 and 3 because they are connecting to existing offtakers. Furthermore, any construction works within Flood Zones 2 and 3 will be temporary in nature, and any permanent fixtures (required for the life of the Proposed Development) will only comprise a potential above ground installation (AGI) at the eastern end of the Dabholm Gut and include buried pipelines or pipelines fixed to existing pipe-rack infrastructure.

6.2.176 EN-1 paragraph 5.8.9 states that if following the application of the Sequential Test, it is not possible (taking account of wider sustainability objectives) for the development to be located in area of lower flood risk, then the exception Test can be applied. . Table 3 of the Planning Practice Guidance ('PPG') confirms that 'Essential Infrastructure' (which includes essential utility infrastructure, which has to be located in a flood risk area for operational reasons, including Above Ground Installations)) is compatible with the higher risk flood zones (in terms of its flood risk vulnerability) subject to the application of the 'Exception Test'. EN-1 paragraph 5.8.11 states that both elements of the Exception Test will have to be satisfied for development to be consented. To pass the Exception Test it should be demonstrated that:

- the development will provide wider sustainability benefits to the community that outweigh flood risk; and
- the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible will reduce flood risk overall.

6.2.177 Paragraph 5.8.12 of EN-1 states that development should be designed to ensure there is no increase in flood risk elsewhere, accounting for the predicted impacts of climate change throughout the lifetime of the development. There should be no

net loss of floodplain storage and any deflection or constriction of flood flow routes should be safely managed within the site. Mitigation measures should make as much use as possible of natural flood management techniques.

6.2.178 How the Proposed Development satisfies the Exception Test is set out at paragraphs 9A.6.33 to 9.6.37 of ES Appendix 9A. With regard to this:

- The Proposed Development will have very clear wider sustainability benefits to the community. It will provide the low carbon hydrogen that is necessary infrastructure to support the decarbonisation of local industries and also contribute toward the legally binding target of net zero greenhouse gas emissions by 2050. Furthermore, the Proposed Development will have significant economic benefits in terms of safeguarding jobs associated with existing carbon intensive industries of Teesside while creating new jobs and supporting the development of green industries.
- The Main Site comprises previously developed land and the other elements of the Proposed Development, notably the Hydrogen Pipeline Corridor, where feasible, also involves previously developed land and/or existing infrastructure corridors.
- The site-wide FRA undertaken demonstrates that the Proposed Development will be safe from the risk of flooding (through the implementation of various measures, including a Flood Emergency Response Plan) and will not increase the risk of flooding off-site.

6.2.179 It is therefore considered that the Exception Test, to the extent relevant to the Proposed Development, is satisfied.

6.2.180 Requirements 10 and 11 of the draft DCO (Document Ref. 4.1) will secure the details of surface water drainage and flood risk mitigation for the Proposed Development, including temporary measures for the construction phase as well as permanent measures. On top of this, Requirement 11 also provides that the Proposed Development must not be commissioned until a Flood Management Plan has been approved by the relevant planning authority and must be implemented throughout the commissioning and operation. Measures in the Flood Emergency Response Plan will be secured as part of Requirement 15(7) as one of the plans required to be submitted and approved by the relevant planning authority before construction of the Proposed Development may commence. .

6.2.181 ES Chapter 19 'Climate Change' (Document Ref. 6.2.19) provides a broader assessment of the Proposed Development's impact and effects on climate change as well as the impacts and effects of climate change on the Proposed Development itself.

6.2.182 Chapter 19 includes the following:

- A 'Lifecycle Greenhouse Gas' ('GHG') Impact Assessment – an assessment of the potential effects on the climate from GHG emissions arising from the Proposed Development, including how it would affect the ability of the Government to meet its carbon reduction targets.

- A 'Climate Change Resilience Assessment ('CCRA')(ES Appendix 19A, Document Ref. 6.4.31) – a review of the resilience of the Proposed Development to projections for climate change, including how it would be adapted to take account for the projected impacts of climate change.
- An 'In-combination Climate Change Impacts' ('ICCI') Assessment (ES Appendix 19B, Document Ref. 6.4.32) – an assessment of the in-combination effects of a changing climate and the Proposed Development on receptors in the surrounding environment.

6.2.183 The Lifecycle GHG Impact Assessment factors in construction, operational and decommissioning effects. The assessment has adopted a project lifecycle approach to identify hot spots of GHG emissions (i.e. the project stage(s) likely to generate the largest amount of GHG emissions) and enable priority areas for mitigation to be identified.

6.2.184 Tables 19-1, 19-2 and 19-3 of ES Chapter 19 set out the scope of potential GHG emissions sources for the construction, operational and decommissioning stages respectively and also confirm if they were scoped in or out for assessment purposes. For the purposes of determining net changes in GHG emissions as a consequence of the Proposed Development, it is assumed that there are no activities on the Site currently and that the area is fully under hardstanding. The baseline emissions are therefore considered to be zero and all emissions from the Proposed Development are considered as additional. This is considered a conservative worst-case-scenario as approximately 30% of the Proposed Site does not currently consist of hardstanding.

6.2.185 To assist in contextualising the potential emissions of the Proposed Development, projected emissions from the Proposed Development have been compared to the relevant sectoral carbon budget for the fuel supply, power, and domestic transport sectors, up to the end of the 6th Carbon Budget. It is noted that these sectoral budgets are only projections and should not be interpreted as hard sectoral policy targets. This comparison is presented in ES Table 19-11.

6.2.186 Overall, the GHG emissions from the Proposed Development construction are Minor Adverse and Not Significant, whilst the operational emissions are also Minor Adverse and Not Significant when viewing the Proposed Development in isolation.

6.2.187 However, when looking at the low carbon hydrogen that will be produced and its ability to help enable a transition to a lower carbon economy, the Proposed Development is considered Beneficial and Significant due to its reduced footprint vs natural gas or other fuels such as diesel or coal. Overall, the Proposed Development could lead to a saving of up to 39.9 $MtCO_2e$, 60 $MtCO_2e$ or 81 $MtCO_2e$ over the lifetime of the Proposed Development if the hydrogen produced displaces natural gas, diesel (vehicle usage scenario) or industrial coal (steel plant scenario) respectively.

6.2.188 These emissions savings will assist the UK Government in achieving the required emissions reductions required to meet net zero and carbon budgets. Taking the projections (but note, these are not legally binding targets, or commitments) from

the Carbon Budget Delivery Plan, these savings would make up 8% of the projected savings hoped to be achieved from the Government's initiatives in the power sector (such as supporting blue hydrogen projects).

6.2.189 A CCRA has been undertaken for the Proposed Development to identify potential climate change impacts on the Proposed Development and associated receptors, and to consider their potential consequence and likelihood of occurrence, taking account of the mitigation measures incorporated into its design.

6.2.190 The Study Area for the CCRA is the Site itself, including staff and visitors and it considers a 'do something' scenario with the delivery of the Proposed Development, including its construction, operation and decommissioning.

6.2.191 Climate parameters considered in the CCRA during the construction, operation and decommissioning of the Proposed Development include extreme weather events, flood risk, sea level rise, temperature change and rainfall change.

6.2.192 Construction of the Proposed Development is expected to take approximately five years. Construction of Phase 1 is likely to last approximately three years. Phase 2 works will commence thereafter (2028) and last a further two years, with construction expected to be completed by the end of 2030 (please refer to ES Chapter 5 'Construction Programme and Management', Document Ref. 6.2.5) for further detail.

6.2.193 During the operational stage power generation and carbon capture are expected from 2028 for up to 28 years (25 years from completion of Phase 2). Therefore, the CCRA has considered a scenario that reflects a high level of GHG at the 10%, 50% and 90% probability levels up to the 2069 projection to assess the impact of climate change over as much of the lifetime of the Proposed Development as possible.

6.2.194 Full details of design measures embedded in the Proposed Development design that reduce its vulnerability to climate change during the construction and operational stages are detailed within the ES, including Chapter 9 'Surface Water, Flood Risk and Water Resources' and Chapter 10 'Geology, Hydrogeology and Contaminated Land'.

6.2.195 A Decommissioning Environmental Management Plan ('DEMP') would be prepared at the time of decommissioning which will consider potential environmental risks on the Site and contain guidance on how these risks can be removed or mitigated. The DEMP would be secured by Requirement 28 in the draft DCO (Document Ref. 4.1). The DEMP would also include an outline programme of works.

6.2.196 A range of climate change hazards and their potential impact upon the Proposed Development have been identified. The measures embedded within the Proposed Development design as set out in ES Appendix 19A are deemed sufficient to reduce the likelihood or consequence of an impact occurring as a result of these projected climate hazards. As such, no significant resilience risks have been identified.

6.2.197 The ICCI Assessment aims to identify any impact to receptors in the surrounding environment or communities that occur due to the combined impacts of climate change and the construction and operation of the Proposed Development.

6.2.198 The study areas used for the ICCI Assessment comprise the study areas defined in each of the relevant environmental topic chapters (ES Chapters 8 to 22). The ICCA Assessment aims to determine the influence of climate change and related impacts to the identified receptors in each of the assessments in those chapters.

6.2.199 The methodology for determining ICCI effects can be considered the same as the CCRA, though focuses on receptors as identified by the relevant topics as opposed to the Proposed Development itself and the existing and future baseline conditions for the ICCI are the same as those described for the CCRA.

6.2.200 A range of climate change hazards and their potential impact upon the Proposed Development and surrounding receptors have been identified. The measures embedded within the Proposed Development design as detailed in ES Appendix 19B are deemed sufficient to reduce the likelihood or consequence of an impact occurring as a result of these projected climate hazards. As such, no significant resilience risks have been identified.

6.2.201 In summary, no residual significant effects for the construction, operation or decommissioning of the Proposed Development are anticipated following the GHG Impact Assessment, CCRA and ICCI Assessment. A summary of the GHG Impact Assessment is given in Table 19-26 of ES Chapter 19, whilst the CCRA and ICCI Assessment impacts are presented in ES Appendices 19A and 19B respectively.

6.2.202 It is considered that the Proposed Development will not result in or be affected by significant climate changes effects. Furthermore, the Proposed Development has been designed to ensure that it is resilient to the future potential effects of climate change and no significant resilience risks have been identified. The Proposed Development therefore complies with the relevant NPSs on climate change adaptation.

Network Connection (EN-1, 4.11)

6.2.203 EN-1 policy on network connection is focused primarily on the connection of a proposed electricity generating station to the electricity network (paragraph 4.11.1) and is therefore of limited relevance to the Proposed Development.

6.2.204 Paragraph 4.11.4 confirms that transmission network infrastructure, and related network reinforcement and upgrade works, associated with nationally significant now carbon infrastructure is considered as CNP infrastructure. As confirmed above, the Proposed Development, which involves low carbon hydrogen production and supply is CNP infrastructure.

6.2.205 Paragraph 4.11.7 states that wherever reasonably possible, applications for new generating stations and related infrastructure should be contained in a single application to the SoS or in separate applications submitted in tandem, which have been prepared in an integrated way.

6.2.206 Paragraph 4.11.12 states that the SoS should be satisfied that appropriate network connection arrangements are/will be in place for a given project regardless of whether one or multiple (linked) applications are submitted.

6.2.207 While the Proposed Development is not for a generating station, the application for development consent includes not just the Hydrogen Production Facility and Hydrogen Pipeline Corridor, but the developed associated with it, which includes the electricity grid connection. The electricity grid connection works are detailed within the Application and have been assessed as part of the EIA undertaken. Document Ref. 5.7 'Other Consents and Licences Statement' sets out the position with regard to the other consents and agreements required for the electricity grid connection. This document will be updated throughout the examination of the Application.

Pollution Control and Other Environmental Regulatory Regimes (EN-1, 4.12)

6.2.208 Section 4.10 of EN-1 (paragraph 4.12.1) advises that issues relating to discharges or emissions which affect air quality, water quality, land quality or noise and vibration may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes.

6.2.209 Paragraph 4.12.9 states that in considering an application for development consent, the SoS should focus on whether the development itself is an acceptable use of the land, and on the impacts of that use, rather than the control of processes, emissions and discharges themselves. Paragraph 4.12.10 states that the SoS should work on the basis that the relevant pollution control regime and other environmental regulatory regimes will be properly applied and enforced by the relevant regulator.

6.2.210 Paragraph 4.12.13 notes that in considering the impacts of the project, the Secretary of State may wish to consult the regulator on any management plans that would be included in an Environmental Permit application.

6.2.211 Paragraph 4.12.7 advises applicants to make early contact with relevant regulators, such as the EA, to discuss their requirements for Environmental Permits ('EPs') and other consents. This will ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the SoS. Where possible, applicants are encouraged to submit applications for EPs and other necessary consents at the same time as applying to the SoS for development consent.

6.2.212 The 'Other Consents and Licences Statement' (Document Ref. 5.7) lists the additional consents and licences that will be required for the Proposed Development. These are listed at Table 2.1 of the document and include the Environmental Permit for the operation of the Hydrogen Production Facility, which is currently in progress and will be required prior to it becoming operational. The Applicant has also begun engagement with the EA under the enhanced pre-application scheme and is finalising an application for an Environmental Permit anticipated to be submitted in 2024.

6.2.213 Table 2.1 provides information on the status of the applications for consents and licences and the discussions within the relevant stakeholders. The Applicant will update the document throughout the examination of the Application.

6.2.214 It is relevant to mention that the potential pollution effects and impacts of the Proposed Development in terms of air quality, water quality, land quality and noise and vibration have been fully assessed within the ES. Furthermore, Schedule 2 of the draft DCO (Document Ref. 4.1) includes a number of requirements that will control the effects of the Proposed Development in terms of discharges and emissions during construction and operation in order to prevent pollution and safeguard amenity.

Safety (NPS EN-1, 4.13) and Control of Major Accident Hazards (EN-4, 2.6)

6.2.215 EN-1 paragraph 4.13.1 states that the Health and Safety Executive ('HSE') is responsible for enforcing a range of health and safety legislation, some of which is relevant to the construction, operation and decommissioning of energy infrastructure. Applicants should consult with the HSE on matters relating to safety.

6.2.216 Paragraph 4.13.3 confirms that some energy infrastructure will be subject to the 'Control of Major Accident Hazards' ('COMAH') Regulations 2015. These are aimed at preventing major accidents involving dangerous substances and limiting the consequences to people and the environment of any that do occur.

6.2.217 EN-4 (paragraph 2.6.1) highlights that gas supply infrastructure is subject to stringent safety standards under COMAH. EN-4 (paragraphs 2.21.9 – 2.21.14) sets out the requirements for pipeline safety.

6.2.218 The Site falls within the Consultation Distances of a number of major hazard sites and major accident pipelines and also in the vicinity of a licensed explosive site. The Applicant has consulted the operators of the relevant sites and pipelines on the Proposed Development. The Applicant has been engaging with the HSE and has presented a general introduction to the Proposed Development to them as well as the approach to compliance with the Pipeline Safety Regulations ('PSR') and a session focussed on the COMAH Regulations. Feedback received by the Applicant from the HSE is that the current approach to engagement is correct and has been helpful in advancing regulation of the energy transition. The next engagement with the HSE is planned for April 2024.

6.2.219 ES Chapter 20 'Major Accidents and Disasters' (Document Ref. 6.2.20) provides an assessment of the Major Accidents and l Disasters ('MA&D') that have the potential to arise during the construction, operation and decommissioning of the Proposed Development. This includes an assessment of the reasonably foreseeable worst-case environmental consequences/effects (this includes fire/explosions, toxic exposure, noxious substances, storms, climate change, terrorism/arson, earth quakes, lighting, aeroplane/drone impacts and the 'domini' effects from neighbouring facilities), the 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 MA&D hazards and threats relevant to the Proposed Development.

6.2.220 The Proposed Development is anticipated to be subject to the COMAH Regulations 2015. While there is no specific guidance on the approach for undertaking a

MA&ND assessment within an EIA, regard has been had to the COMAH Regulations and there is a considerable amount of information and guidance available to developers on the identification and control of major hazards associated with the storage and use of chemicals and major accident pipelines conveying hazardous fluids. The HSE has published a number of applicable guidance notes, including in relation to the transport of CO_2 by pipeline. At ES Appendix 20C (Document Ref. 6.4.35) an explanation of how that process will take place has been provided to enable understanding of how this dovetails with the assessment in the MA&ND assessment.

6.2.221 The main permanently manned buildings associated with the Proposed Development that can be classified as 'workplaces', will comprise the Administration Block/Control Room and workshop and stores at the Main Site. These buildings will each accommodate less than 100 occupants and have less than three occupied storeys. Any manned buildings on the site will be located, as far as possible, outside of blast zones / toxic zones, based on future consequence modelling conducted to comply with the 'Control of Major Accident Hazards' ('COMAH') Regulations. An occupied buildings assessment will determine the number of occupants in occupied buildings and identify any additional mitigation measures (e.g. blast protection / toxic refuges) as required to reduce the risk to occupants from a major accident to 'As Low As Reasonably Practicable' ('ALARP').

6.2.222 Tables 20-2 and 20-5 of ES Chapter 20 (Document Ref. 6.2.20) provide a list of credible scenarios related to the construction and decommissioning stages of the Proposed Development as well as the potential impacts, embedded mitigation and the tolerability of each scenario taking into account the implementation of the embedded mitigation.

6.2.223 The technology used for the manufacture of hydrogen from natural gas is well established and the equipment to be used will be designed and constructed to precise industry standards. This industry is subject to rigorous safety and environmental regulations, with operators of such facilities required to demonstrate integrity via the submission of Safety Case documentation to comply with regulations including the COMAH Regulations and PSR. The Safety Case will provide all the necessary information to the Competent Authority (the HSE and EA) that the Proposed Development has minimised the risks of operation to ALARP as required by COMAH.

6.2.224 The pipelines forming the Hydrogen Distribution Network associated with the Proposed Development would contain hydrogen being delivered to offtakers within the Teesside area. The distribution network will be ratified as meeting ALARP through achieving COMAH authorisation and Pipeline Safety Regulations approval from the HSE.

6.2.225 The Proposed Development is expected to form part of a cluster of developments operated by bp on or adjacent to the Main Site. These include the NEP infrastructure (the NZT Project) and HyGreen. These establishments are also expected to be COMAH sites (Upper and / or Lower Tier). This may increase the risks or consequences of a major accident due to the domino group effect as

described above, however, the design and construction phases will consider the risk of domino effects and appropriate mitigation measures will be adopted to demonstrate ALARP.

6.2.226 The assessment in ES Chapter 20 concludes that all MA&D Risk Events identified during the construction, operation and decommissioning of the Proposed Development would be Tolerable or Tolerable – if ALARP (Not Significant). These assessments have been undertaken qualitatively at an early stage in the Proposed Development design, prior to the conclusion of a number of quantitative studies, such as Consequence Modelling of loss of containment studies, Fire Hazard Analysis, Explosion Hazard Analysis, Toxic Hazard Analysis and QRA studies. This notwithstanding, it is inherent in the design process that the Proposed Development meet the requirements of COMAH and the Pipeline Safety Regulations such that the operations are considered ALARP by the Competent Authorities (the HSE and the EA). Therefore, the residual effects are Not Significant.

Hazardous Substances (NPS EN-1, 4.14 and EN-4, 2.5)

6.2.227 EN-1, paragraph 4.14.1, confirms that all establishments wishing to hold stocks of certain hazardous substances above a certain threshold need 'Hazardous Substances Consent' ('HSC'). Applicants should consult the HSE at the pre-application stage if a Proposed Development is likely to need such consent.

6.2.228 EN-4 (paragraph 2.5.2) states that all establishments wishing to hold stocks of certain hazardous substances, which include gas, above a threshold quantity must consult the Hazardous Substances Authority (HSA), which is usually the local planning authority, and the HSE at pre-application stage. In the case of natural gas, the threshold is 15 tonnes.

6.2.229 Table 20-3 of Chapter 20 ‘Major Accidents and Disasters’ lists (Document Ref. 6.2.20) the potential hazardous substances present on the Site during the operational phase of the Proposed Development. The Applicant is currently establishing the inventories of these substances to determine whether these are above the controlled quantities, which would necessitate the submission of a Hazardous Substances Consent (‘HSC’) application. Any application would be submitted to the relevant Hazardous Substances Authority. .

6.2.230 A COMAH licence application will be submitted to the HSE prior to construction once the volumes of hazardous substances have been established.

6.2.231 The 'Other Consents and Licences Statement' (Document Ref. 5.7) identifies the additional consents and licences that will be required for the Proposed Development and includes COMAH and HSC.

Common Law Nuisance and Statutory Nuisance (EN-1, 4.15)

6.2.232 Paragraph 4.15.5 of EN-1 states that at the application stage of an energy NSIP, possible sources of nuisance under Section 79(1) of the Environmental Protection Act (EPA) 1990, and how they may be mitigated or limited should be identified by the applicant so that appropriate requirements can be included in any subsequent order granting development consent.

6.2.233 The Applicant has prepared a Statutory Nuisance Statement (Document Ref. 5.6) to comply with Regulation 5(2)(f) of the APFP Regulations, which states that any application for development consent should be accompanied by a statement setting out whether the development could cause a statutory nuisance pursuant to Section 79(1) of the Environmental Protection Act ('EPA') 1990. If such a nuisance could occur, the statement must set out how the applicant proposes to mitigate or limit the effects.

6.2.234 Section 4 of the Statutory Nuisance Statement discusses the nuisance impacts set out in the EPA 1990 in relation to the Proposed Development and summarises the embedded and additional mitigation measures that will be applied to prevent these. The EPA 1990 describes a potential statutory nuisance to be caused by *"any premises in such a state as to be prejudicial to health or a nuisance"* and matters such as smoke; fumes or gases; dust, steam, smell or other effluvia; any accumulation of deposit; animals; insects; artificial light; noise from premises or vehicles or plant; that may be prejudicial to health or a nuisance; and any other matters declared by any enactment to be a statutory nuisance.

6.2.235 Embedded mitigation and appropriate controls for both construction and operation will be secured by requirements within the draft DCO (Document Ref. 4.1). Furthermore, the operation of the Proposed Development would be regulated by the EA through the environmental permit and would undergo regular monitoring and reporting.

6.2.236 As a result, it is not expected that the construction, operation or decommissioning of the Proposed Development would engage Section 79(1) and give rise to any statutory nuisance under the EPA 1990.

Security considerations (EN-1, 4.16)

6.2.237 Paragraph 4.16.1 of EN-1 states that national security considerations apply across all national infrastructure sectors. Paragraph 4.16.4 goes on to state that Government policy is to ensure that, where possible, proportionate protective security measures are designed into new infrastructure developments at an early stage.

6.2.238 Where applications for development consent for infrastructure relate to potentially critical infrastructure, there may be national security considerations, which will be identified to the relevant government department (DESNZ) by the Centre for Protection of National Infrastructure.

6.2.239 The Main Site will be a secure site and the Applicant will consult with the appropriate bodies prior to construction in respect of security considerations and measures. Requirements 6 'External lighting', 7 'Means of enclosure' and 8 'Site security' of the draft DCO (Document Ref. 4.1) will secure various measures, including a written scheme detailing security measures to minimise the risk of crime and ensure that the Proposed Development is secure during its operation.

6.2.240 The Proposed Development therefore accords with the key assessment principles of the energy NPSs.

6.3 Generic Impacts

6.3.1 The 'generic impacts' set out in Part 5 of EN-1 are considered at Table 6.1 within the Planning Policy Assessment document (Document Ref. 5.2.1).

6.3.2 Where the same impacts appear in the 'technology-specific information' parts of EN-4 and EN-5 they are also dealt with in Table 6.1 and the relevant part of the NPS is referenced.

6.3.3 The relevant generic impacts covered by Part 5 of EN-1 and Table 6.1 include:

- Air Quality and Emissions
- Biodiversity and Geological Conservation
- Civil and Military Aviation and Defence Interests
- Dust, Odour, Artificial Light, Smoke, Steam, and Insect Infestation
- Flood Risk
- Historic Environment
- Landscape and Visual
- Land use, Including Open Space, Green Infrastructure, and Green Belt
- Noise and Vibration
- Socio-economic
- Traffic and Transport
- Resource and Water Management
- Water Quality and Mineral Resources

6.3.4 These generic impact sections establish the extent to which applicants should cover each of these issues within their submission and also offer some guidance to decision makers on how each of these issues should be assessed.

6.3.5 The summary of each of the generic impacts below focusses on the general information requirements which should be provided for each matter within application documents. Detail on where these matters are covered within the Applicant documents such as the ES and how the Application complies with each of the relevant generic impact sections of EN-1, EN-4 and EN-5 are set out within Table 6.1 within the Policy Assessment Tables (Document Ref. 5.2.1).

<u>Air Quality and Emissions</u>

6.3.6 EN-1 states that the ES should describe existing air quality concentrations and the relative change in air quality from existing levels; any significant air quality effects, mitigation action taken and any residual effects. In addition, the predicted absolute emissions, concentration change and absolute concentrations as a result of the proposed project, after mitigation should be considered and any potential eutrophication impacts.

6.3.7 The assessment of Air Quality and Emissions compliance with EN-1 is detailed in Table 6.1 of the Policy Assessment Tables.

Biodiversity and geological conservation

6.3.8 EN-1 clarifies that applicants should include appropriate avoidance, mitigation, compensation and enhancement measures as an integral part of the proposed development

6.3.9 EN-4 and EN-5 establish further considerations in relation to biodiversity and geological conservation. Paragraphs 2.21.30 and 2.21.31 of EN-4 explains that the ES must include an assessment of the biodiversity and landscape and visual effects of the proposed route and of the main alternative routes considered.

6.3.10 Section 2.9 of EN-5 of EN-5 considers the effects that electricity network infrastructure can have on biodiversity, especially birds. Paragraph 2.9.6 requires the applicant to consider any such possible impacts, particularly on feeding and hunting grounds, migration corridors and breeding grounds.

6.3.11 The assessment of biodiversity and geological conservation compliance with EN-1, EN-4 and EN-5 is detailed in Table 6.1 of the Policy Assessment Tables.

Civil and Military aviation and defence interests

6.3.12 Section 5.5 of EN-1 notes that civil and military aerodromes and aviation technical sites, as well as other types of defence interests can be affected by new energy developments.

6.3.13 The assessment of Civil and Military aviation and defence interests compliance with EN-1 is detailed in Table 6.1 of the Policy Assessment Tables.

Dust, Odour, Artificial Light, Smoke, Steam and Insect Infestation

6.3.14 Paragraph 5.7.6 of EN-1 provides advice regarding the assessment of the potential construction/demolition, operation and decommissioning impacts on air quality through the release of odour, dust, steam, smoke, artificial light and insect infestation.

6.3.15 It is advised that any assessment of these impacts should describe: the type, quantity and timing of emissions; aspects of the development which may give rise to emissions; premises or locations that may be affected by the emissions; effects of the emissions on identified premises or locations; and measures to be employed in preventing or mitigating the emissions.

6.3.16 The assessment of Dust, Odour, Smoke, Steam and Insect Infestation compliance with EN-1 is detailed in Table 6.1 of the Policy Assessment Tables.

Flood Risk

6.3.17 Paragraph 5.8.13 of EN-1 requires that applications for energy developments of 1 hectare or greater in Flood Zone 1 in England and all proposals for energy developments located in Flood Zones 2 and 3 in England should be accompanied by a Flood Risk Assessment ('FRA').

6.3.18 Similar considerations apply to gas supply pipelines (EN-4, paragraph 2.3.4) and in relation to substations that are vital for the electricity transmission and distribution network (EN-5, paragraph 2.3.2). Applicants should set out how their developments will be resilient to flooding and not result in an increased risk of flooding.

6.3.19 The assessment of Flood risk compliance with EN-1, EN-4 and EN-5 is detailed in Table 6.1 of the Policy Assessment Tables.

Historic Environment

6.3.20 Section 5.9 of EN-1 acknowledges that the construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment, above at and below surface of the ground.

6.3.21 Paragraph 5.9.9 requires applicants to undertake an assessment of any likely significant heritage impacts of the proposed development as part of the EIA and describe these along with how the mitigation hierarchy has been applied in the ES. This should include consideration of heritage assets above, at, and below the surface of the ground.

6.3.22 Paragraph 5.9.10 establishes that as part of the ES the applicant should provide a description of the significance of the heritage assets affected by the proposed development, including any contribution made by their setting. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on their significance.

6.3.23 Paragraph 5.9.11 adds that where it is evaluated that a development site has potential to include heritage assets with archaeological interest, an appropriate desk base assessment should be carried out.

6.3.24 The assessment of Historic Environment compliance with EN-1 is detailed in Table 6.1 of the Policy Assessment Tables.

Landscape and Visual Impacts

6.3.25 Paragraph 5.10.6 of Section 5.10 of EN-1 states that projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.

6.3.26 Paragraph 5.10.16 outlines that the applicant should carry out a landscape and visual impact assessment and report it in the ES, including cumulative effects.

6.3.27 Paragraph 5.10.19 also clarifies that the applicant should consider landscape and visual matters in the early stages of siting and design, where site choices and design principles are being established.

6.3.28 EN-4 and EN-5 briefly cover landscape and visual impacts and establish the following.

6.3.29 EN-4 paragraphs 2.21.26- 2.21.29 notes that the effects of gas supply pipelines on the landscape will generally be temporary and long-term impacts are likely to be limited as the infrastructure is usually buried

6.3.30 EN-5 paragraph 2.9.14 requires applicants to give appropriate consideration to undergrounding electrical connections as a way of mitigating landscape and visual impacts.

6.3.31 The assessment of Landscape and Visual Impacts compliance with EN-1, EN-4 and EN-5 is detailed in Table 6.1 of the Policy Assessment Tables.

Land use including open space, green infrastructure and Green Belt

6.3.32 EN-1 notes at Section 5.11 that as energy infrastructure Proposed Developments will have direct effects on the existing use of the proposed site and may have indirect effects on the use, or planned use, of land in the vicinity for other types of development.

6.3.33 Paragraph 5.11.8 requires the applicants ES to identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing.

6.3.34 The assessment of Land use including open space, green infrastructure and Green belt compliance with EN-1 is detailed in Table 6.1 of the Policy Assessment Tables.

Noise and Vibration

6.3.35 Paragraph 5.12.6 of EN-1 (Section 5.12) states that where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment: a description of the noise generating aspects of the development proposal leading to noise impacts; identification of noise sensitive receptors and noise sensitive areas that may be affected; the characteristics of the existing noise environment; a prediction of how the noise environment will change with the proposed development during the construction period, during the operating life of the infrastructure and at particular times of day. It should also include an assessment of the effect of predicted changes in the noise environment on any noise-sensitive receptors and details of all reasonable steps taken to mitigate and minimise potential adverse effects on health and quality of life.

6.3.36 EN-4 covers noise and vibration impacts at paragraphs 2.21.15-2.21.22 and EN-5 covers noise and vibration impacts at paragraph 2.9.40.

6.3.37 The assessment of Noise and Vibration compliance with EN-1 and EN-4 is detailed in Table 6.1 of the Policy Assessment Tables.

Socio- economic

6.3.38 Paragraph 5.13.1 of EN-1 acknowledges that the construction, operation and decommissioning of energy infrastructure may have socio-economic impacts at local and regional levels.

6.3.39 Paragraph 5.13.2 requires that where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES.

6.3.40 Paragraph 5.13.4 sets out the full list of socio- economic impacts of the Proposed Development that should be considered.

6.3.41 The assessment of Socio-economic compliance with EN-1 is detailed in Table 6.1 of the Policy Assessment Tables.

Traffic and Transport

6.3.42 EN-1 (paragraph 5.14.5) requires the applicant to undertake a transport appraisal if a project is likely to have significant transport implications.

6.3.43 Paragraph 5.14.7 requires that the applicant prepare a travel plan, including demand management and monitoring measures to mitigate transport impacts. Details of proposed measures to improve access by active, public and shared transport should also be addressed.

6.3.44 The assessment of compliance with EN-1 is detailed in Table 6.1 of the Policy Assessment Tables.

Resource and Waste Management

6.3.45 Paragraph 5.15.8 of EN-1 states that the applicant should set out the arrangements that are proposed for managing any waste produced and prepare a report that sets out the sustainable management of waste and use of resources throughout any relevant demolition, excavation and construction activities.

6.3.46 The assessment of Resource and Waste Management compliance with EN-1 is detailed in Table 6.1 of the Policy Assessment Tables.

Water Quality and Resources

6.3.47 Paragraph 5.16.3 of EN-1 (Section 5.16) states that, where a Proposed Development is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment, and how this might change due to the impact of climate change on rainfall patterns and consequently water availability across the water environment, as part of the ES.

6.3.48 EN-4, Section 2.21 deals with water quality and resources relating to gas supply pipelines. It establishes that pipeline impacts could include inadequate or excessive drainage, interference with groundwater flow pathways, mobilisation of contaminants already in the ground, the introduction of new pollutants, flooding, disturbance to water ecology, pollution due to silt from construction and disturbance to species and their habitats. Impacts during construction should be avoided as far as possible through route selection or mitigated if unavoidable and ground should be reinstated after construction.

6.3.49 The assessment of Water quality and resource compliance with EN-1 and EN-4 is detailed in Table 6.1 of the Policy Assessment Tables.

Summary

6.3.50 As set out above, the Planning Policy Assessment document (Table 6.1) draws upon the assessment criteria for each of the generic impacts of energy infrastructure signposting where each assessment criteria is covered within the Application documents. Table 6.1 provides the necessary detail to demonstrate how the Proposed Development complies with the generic impacts sections of NPSs EN-1, EN4 and EN-5.

6.4 Technology specific considerations

6.4.1 The 'technology specific considerations' of relevance to the Proposed Development as set out in EN-1, EN-4 and EN-5 are considered at Table 6.2 within the Policy Assessment Tables (Document Ref. 5.2.1).

6.4.2 Table 6.2 demonstrates that there is no conflict between the Proposed Development and the relevant technology specific considerations set out in the NPSs.

6.4.3 Technology specific considerations covered by Table 6.2 comprise the following:

- Factors influencing site selection by developers
- Pipeline Safety
- Soil and Geology

6.4.4 These technology specific considerations sections establish the extent to which applicants should cover each of these issues within their submission and also offers some guidance to decision makers on how each of these issues should be assessed.

6.4.5 The summary of each of the technology specific considerations below focusses on the general information requirements which should be provided for each matter within application documents. Detail on where these matters are covered within the Applicant documents, such as the ES and how the Application complies with each of the relevant technology specific consideration sections of EN-1, EN-4 and EN-5 are set out within the Policy Assessment Tables.

Factors influencing site selection by developers

6.4.6 EN-1 (paragraph 4.3.15) requires that an applicant must provide information about the reasonable alternatives they have studied. This should include an indication of the main reasons for the applicant’s choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility.

6.4.7 EN-4 (paragraphs 2.2.1 to 2.2.6) sets out various considerations in relation to site selection for gas supply pipelines.

6.4.8 Paragraph 2.2.6 states that it is for applicants to decide what applications to bring forward and the government does not seek to direct applicants to particular sites for gas pipelines.

6.4.9 EN-5 (paragraphs 2.2.1 to 2.2.7) sets out various considerations in relation to the selection of routes and locations for electricity infrastructure. Paragraph 2.2.2 recognises that the general location of such infrastructure is normally determined by the location of the generating station and existing network infrastructure.

6.4.10 The assessment of factors influencing site selection and its compliance with EN-1, EN-4 and EN-5 are detailed in Table 6.2 of the Policy Assessment Tables.

Pipeline Safety

6.4.11 EN-4 (paragraphs 2.21.9-2.21.14) sets out pipeline safety considerations. It is established that pipelines need to comply with the Pipelines Safety Regulations 1996, which requires pipelines to be designed, constructed and operated so that the risks are ALARP.

6.4.12 The assessment of factors influencing pipeline safety and its compliance with EN-4 are detailed in Table 6.2 of the Policy Assessment Tables.

Soil and Geology

6.4.13 Paragraphs 2.21.44 states that applicants should assess the stability of the ground conditions associated with the pipeline route and incorporate the findings of that assessment in the ES (see Section 4.3 of EN-1) as appropriate.

6.4.14 Paragraph 2.21.47- 2.21.49 state that the assessment should cover the options considered for installing the pipeline and weigh up the impacts of the means of installation.

6.4.15 Where the applicant proposes to use 'Horizontal Directional Drilling' ('HDD') as the means of installing a pipeline under an internation or nationally designated nature conservation site and mitigating the impacts, the assessment should cover whether the geological conditions are suitable for HDD.

6.4.16 When considering any application where the pipeline goes under a designated area of geological or geomorphological interest, the applicant should submit details of alternative routes, which either bypass the designated area or reduce the length of pipeline through the designated area to the minimum possible, and the reasons why they were discounted.

6.4.17 The assessment of factors influencing soil and geology and its compliance with EN-1, EN-4 and EN-5 is detailed in Table 6.2 of the Policy Assessment Tables.

Summary

6.4.18 As set out above, Table 6.2 of the Policy Assessment Tables draws upon the assessment criteria for each of the technology specific considerations impacts of energy development signposting where each assessment criteria is covered within the Application documents. The table provides the necessary detail to

demonstrate how the Proposed Development complies with the technology specific sections of NPS EN-1, EN4 and EN-5.

6.5 Marine Policy

6.5.1 The marine policy document that is relevant to the Proposed Development for the purposes of Section 104 is the North East Inshore and North East Offshore Marine Plan.

6.5.2 The marine policy considerations of relevance to the Proposed Development as set out in EN-1, EN-4 and EN-5 are considered at Table 6.3 of the Policy Assessment Tables (Document Ref 5.2.1).

6.5.3 The table provides an assessment on where these matters are covered within the Application documents, such as the ES and how the application complies with each of the marine policy criteria. The ES (Appendix 7A) also includes a Marine Plan Policy Assessment.

6.6 The National Planning Policy Framework ('NPPF')

6.6.1 The National Planning Policy Framework ('NPPF') was introduced in March 2012 and last updated in December 2023. It sets out the Government's planning policies for England. It is a material consideration in planning decisions. Although paragraph 5 of the NPPF confirms that NSIPs (and it is assumed also Projects of National Significance ('PNSs') given the hierarchy in Section 104) are to be determined in accordance with the decision-making framework of the PA 2008 and relevant NPSs, decision-making on such project by the SoS should, in accordance with Section 104, also take account of any other matters which the SoS thinks are both important and relevant, which may include the NPPF.

6.6.2 Section 2 'Achieving sustainable development' confirms (paragraph 7) that the purpose of the planning system is to contribute to the achievement of sustainable development, summarised as *"… meeting the needs of the present without compromising the ability of future generations to meet their own needs."*

6.6.3 Paragraph 8 goes on to identify three overarching objectives to the achievement of sustainable development, which are interdependent and need to be pursued in mutually supportive ways. These are:

- **an economic objective** – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;
- **a social objective** – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

- **an environmental objective** – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

6.6.4 Central to the NPPF is a presumption in favour of sustainable development. This is set out at paragraph 11. For decision-making, this means approving applications that accord with the development plan without delay.

6.6.5 The NPPF is supportive of infrastructure projects. One of the methods of fulfilling the objective of sustainable development listed at paragraph 8 under 'a) an economic objective' is through the *"… provision of infrastructure*."

6.6.6 Paragraph 157 in Section 14 'Meeting the challenge of climate change, flooding and coastal change' states:

"The planning system should support the transition to a low carbon future in a changing climate … it should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure." [underlining added]

6.6.7 Paragraph 163 states that when determining application for renewable and low carbon development, there should be no requirement for applicants to demonstrate the overall need for renewable or low carbon energy and that applications for renewable or low carbon development should be approved if their impacts are (or can be made) acceptable.

6.6.8 NPPF policies of particular relevance to the Proposed Development include:

- Building a strong, competitive economy (Chapter 6).
- Making effective use of land (Chapter 11).
- Meeting the challenge of climate changes, flooding and coastal change (Chapter 14).
- Conserving and enhancing the natural environment (Chapter 15).

6.6.9 A summary of those policies and how the Proposed Development complies with them is provided in the Policy Assessment Tables at Table 6.4. Table 6.4 demonstrates that there is no conflict between the Proposed Development and the key policies contained within the NPPF.

6.7 Local Development Plan Policy

6.7.1 As confirmed in Section 3.0, the relevant development plan documents ('DPDs') for the Proposed Development are:

- The Redcar & Cleveland Local Plan and Policies Map (adopted May 2018).

- The Stockton-on-Tees Borough Council Local Plan and Policies Map (adopted January 2019).
- The Hartlepool Borough Local Plan (adopted May 2018).
- The Tees Valley Joint Minerals and Waste DPDs (adopted September 2011).

6.7.2 RCBC has also produced 'The South Tees Area Supplementary Planning Document' ('SPD') (adopted May 2018). Although this is not a DPD, it is a SPD and a material planning consideration to be taken into account in respect of development proposals being advanced within South Tees Area.

6.7.3 The DPD policies and SPD development principles of most relevance to the Proposed Development are set out and summarised in Table 6.5 of the Policy Assessment Tables (Document Ref. 5.2.1) along with how it complies with those policies. However, given that EN-1, EN-4 and EN-5 provide the primary policy for the determination of the Application, and include detailed assessment criteria and policies for energy NSIPs (which address many of the matters covered by the DPD polices and SPD development principles), a summarised response has been made to each policy.

6.7.4 Table 6.5 demonstrates that there is no conflict between the Proposed Development and relevant polices contained within the DPD or development principles within the SPD.

7.0 SUMMARY

7.1.1 This section of the Planning Statement, in conjunction with Tables 6.1 and 6.2 of the Policy Assessment Tables (Document Ref 5.2.1) has considered the Proposed Development's conformity against the assessment principles, generic impacts and technology specific considerations of the relevant NPSs for energy (EN-1, EN-4 and EN-5). These are the primary basis for the determination of development consent applications for energy infrastructure. The Applicant's assessment has not identified any conflicts with NPS policy.

7.1.2 In addition, Tables 6.3 to 6.5 of the Policy Assessment Tables provides an assessment of the Proposed Development against the North East Marine Plan, the NPPF policies and the local planning policies of the three host local authorities Redcar & Cleveland, Stockton-on-Tees and Hartlepool. The Applicant's assessment has not identified any conflicts with those policies.

7.1.3 Where a relevant NPS has been designated, Section 104(2) of the PA 2008 requires the SoS to determine the application for development consent in accordance with the relevant NPSs and appropriate marine policy documents (if any are in place) having regard to any local impact report produced by the relevant Local Planning Authority ('LPA'); any matters prescribed in relation to development of the description to which the application relates; and any other matters which the SoS thinks are both important and relevant to their decision, unless this would (Section 104(3) to (8)):

- lead to the UK being in breach of its international obligations;
- lead to the SoS being in breach of any statutory duty that applies to the SoS;
- be unlawful by virtue of any enactment;
- result in the adverse impacts of the development outweighing the benefits; or
- result in any condition that is prescribed for deciding an application not being in accordance with the NPS.

7.1.4 As the Proposed Development does not trigger Section 104 subsections (3) to (8) as set out above, the Application should be determined under EN-1 as per Section 104 of the PA 2008.

7.1.5 While the NPPF, local development plan policy and the SPD may be important and relevant, the NPSs for energy are the primary consideration for the determination of the Application and take precedence where there is any conflict with such policies or guidance.

8.0 ASSESSMENT OF THE BENEFITS/ ADVERSE EFFECTS OF THE PROPOSED DEVELOPMENT

8.1 Introduction

8.1.1 This section of the Planning Statement identifies the key benefits of the Proposed Development as well as its likely significant adverse effects/impacts having regard to the planning policy assessment at Section 6.0 and within the Policy Assessment Tables (Document Ref. 5.2.1) and also the findings of the ES (Document Refs. 6.2.1 to 6.2.4).

8.2 Benefits of the Proposed Development

8.2.1 The Proposed Development will have a number of very clear and substantial benefits, which can be summarised as follows:

- The NPSs for energy, notably EN-1 (Part 3), confirm the urgent need that exists for significant amounts of new large-scale energy infrastructure. This includes the need for low carbon energy infrastructure and where the application is for hydrogen infrastructure (EN-1 paragraphs 3.2.11 to 3.2.12) the SoS should give substantial weight to the need established (EN-1 paragraphs 3.4.12 to 3.4.22) for such infrastructure. The need that exists for low carbon hydrogen infrastructure is set out in detail within the Need Statement (Document Ref. 5.3), which forms part of the application for development consent. The Proposed Development responds to that need and will deliver 1.2 GW of low carbon hydrogen production on Teesside. The urgent need for low carbon hydrogen infrastructure is not open to debate or interpretation and should be afforded significant weight in the SoS's decision-making on the Application.
- EN1 (Part 4, Section 4.2) sets out the 'Critical National Priority' ('CNP') for low carbon infrastructure. Paragraph 4.2.4 of the EN-1 confirms that the Government has concluded that there is a CNP for the provision of nationally significant low carbon energy infrastructure. Paragraphs 3.4.22 and 3.5.8 of EN-1 confirm that in order to support the urgent need for it, low carbon hydrogen infrastructure is considered to be CNP infrastructure. CNP policy is to be weighed against the residual impacts of CNP infrastructure and places a clear presumption in favour of granting consent for such infrastructure.
- Recent energy and climate change policy establishes clear objectives for decarbonising the UK's power and industrial sectors in order to help achieve the Government's legally binding commitment to achieve net zero in terms of greenhouse gas emissions by 2050, while promoting economic growth and the development of new green industries. This policy is both important and relevant to the SoS's decision-making in respect of the Proposed Development and should be afforded substantial weight. The Proposed Development will contribute to the objectives of this policy in a number of ways, in particular:
  - It will deliver low carbon hydrogen production within what is an emerging CCUS cluster (the East Coast Cluster 'ECC') on Teesside. It will link into the

adjacent NEP infrastructure so that the CO_2 created during the hydrogen production processes will be captured and compressed for onward transportation and storage.

- It will make an important contribution toward the Government's ambition of delivering 10 GW of low carbon hydrogen production by 2030 within one of the UK's major industrial clusters. The Proposed Development will contribute more than 10% of the 2030 target.
- It is well located to make a significant contribution to supporting industrial decarbonisation on Teesside, being in close proximity to a number of industrial users/offtakers for the low carbon hydrogen that will be produced, with the potential for future expansion in terms of offtakers. It will support the decarbonisation of industries that are either hard or not possible to electrify. The Teesside industrial cluster is tightly packed, making it a good location to decarbonise effectively and efficiently. The low carbon hydrogen produced by the Proposed Development can be transported to customers relatively easily and at low cost.
- The Proposed Development will act as a catalyst for the use of low carbon hydrogen in the Teesside industrial cluster. It has the potential to attract new industries keen to take advantage of the availability of low carbon hydrogen for use as a fuel or feedstock.
- In addition, the Proposed Development will contribute to the security of UK energy supplies by providing an alternative low carbon fuel source to natural gas, much of which is now imported.

- It is notable that the ES (Chapter 24 'Summary of Significant Effects, Table 24-1) (Document ref. 6.2.24) identifies the Proposed Development's contribution during operation in terms of climate change (i.e. contribution toward helping the UK transition to a low carbon economy) as Beneficial (Significant). In this regard, it will deliver substantial greenhouse gas savings.
- The Proposed Development will have substantial benefits for the local and regional economy in terms of employment (direct and indirect) and supply chain opportunities. It is estimated that there would be a peak construction workforce of 1,300 workers. Of these jobs, around 585 are expected to be from the Middlesbrough and Stockton travel to work area ('TTWA'). It is estimated that these 780 net additional construction jobs would generate £38.1m GVA per annum during the construction phase, of which £28.6m will be generated by the 585 jobs in the Middlesbrough and Stockton TTWA. ES Chapter 24 identifies the Proposed Development's contribution to employment and associated multiplier effects and local income during construction as Moderate Beneficial (Significant). During operation, the workforce would be approximately 130 operational workers per day across both Phases 1 and 2. However, as described in the socio-

economic assessment in the ES (ES Chapter 18, Document ref. 6.2.18), the gross operational employment has been assessed to be 58 direct jobs as a worst-case. It is estimated that these 58 net additional operational jobs would generate £2.8 m GVA per annum, of which £2.1m would be generated by the 44 jobs in the Middlesbrough and Stockton TTWA.

- Importantly, by helping local industries to decarbonise their operations through offtake agreements, the Proposed Development will help to safeguard existing jobs and businesses in Teesside. It will also help efforts to attract new businesses to the region who are seeking to utilise low carbon hydrogen produced at scale.
- The Applicant plans to contribute £19.5 million in funding to socio-economic development initiatives in Teesside, with a priority focus in education and skills. This funding will help to inspire the next generation of Science, Technology, Engineering and Maths (STEM) talent, develop future skills to meet the demands of the growing renewable and low carbon sector and ensure local people benefit from near-term job opportunities (Need Statement – section 5.3).
- The Need Statement (Document Ref. 5.3) sets out further information on the economic need for the Proposed Development both nationally and locally, including its economic and social benefits for the local area.
- The Proposed Development will bring back into use previously developed industrial land on Teesside and make a positive contribute to the regeneration of Teesworks in accordance with local development plan policy, the South Tees SPD and the Teesworks Design Guide.
- The Applicant will work to secure biodiversity enhancements, including within the wider Teesside area off-site from the proposed Order Limits and is working with stakeholders such as the EA, Natural England and RPSB to develop proposals in this regard. Whilst the Applicant does not propose to quantify these enhancement in BNG metric terms at this point in time, it is hoped that such measures, to be secured though a Section 106 Agreement, will be able to demonstrate a wider qualitative biodiversity net gain overall as a result of the Proposed Development.

8.3 Likely Significant Adverse Effects/Impacts of the Proposed Development

8.3.1 ES Chapter 24 'Summary of Significant Effects' of ES Volume I, Table 24-1 (Document Ref. 6.2.24) summarises the significant adverse and beneficial environmental effects of the Proposed Development that have been identified following implementation of the embedded mitigation or impact avoidance measures included within the design of the Proposed Development (as detailed in Chapters 8 to 23 of the ES, where relevant). Table 24-1 also sets out any additional mitigation/enhancement and the residual effects after that mitigation/enhancement.

8.3.2 Table 24-1 confirms that the Proposed Development will only result one significant adverse residual effect that is long-term/permanent and direct after mitigation (i.e. for the operational phase). This is relates to (ES Chapter 16 'Landscape and Visual

Amenity') the impact on recreational users at Viewpoint 7, England Coastal Path, during opening, which is assessed as **Moderate Adverse (Significant)**.

8.3.3 Table 24-1 also identifies a cumulative and combined visual effect in respect of Viewpoint 7, which would be impacted by views of the operation of the Proposed Development if concurrent with the construction and operation of a number of the identified cumulative developments. No mitigation proposed as no appropriate mitigation has been identified as available given the scale of the Proposed Development. The effect is assessed as **Moderate Adverse (Significant)**.

8.3.4 EN-1 (paragraph 5.10.5) recognises that "Virtually all nationally significant energy infrastructure projects will have adverse effects on the landscape, …". Paragraph 5.10.13 goes onto state 5.10.13 that "… all proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites …" and paragraph 5.10.14 states that the SoS will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project.

8.3.5 Majority of the construction and decommissioning effects of the Proposed Development are assessed as Negligible (Not Significant) or Minor Adverse (Not Significant). Table 24-1 confirms that there is one Major Adverse (Significant) in relation to the loss of woodland habitats at Cowpen Bewley and a number of Moderate Adverse (Significant) effects relating to the loss of swamp habitat at north of Greatham Creek and at Cowpen Bewley; recreational users of Viewpoint 7 and Viewpoint 8 (Redcar seafront); and landfill void capacity. However, these are short-term effects primarily associated with construction.

8.3.6 In terms of combined and cumulative effects, for construction, a Major Adverse (Significant) effect is identified in terms of construction on ecology; and Moderate Adverse (significant) effects on one noise sensitive receptors, Viewpoints 7 and 8 and socio-economics and health in terms of pressures on the local housing market/accommodation and demand for services and community facilities. Again, these are temporary effects and not permanent.

8.4 Summary and Conclusion

8.4.1 As with all development proposals, it is necessary to assess the Proposed Development in terms of its conformity and compliance with relevant policy and weigh the benefits and significant adverse effects against each other (the 'planning balance').

8.4.2 Sections 4.0 and 6.0 of this Planning Statement (and the Policy Assessment Tables) have considered the Proposed Development's conformity with the relevant NPSs for energy (EN-1, EN-4 and EN-5) and the relevant assessment principles, generic impacts and assessment and technology specific considerations contained within them. The NPSs for energy are the primary basis for the determination of applications for development consent involving energy infrastructure. The Applicant's assessment has not identified any conflicts with relevant NPS policy.

8.4.3 The Applicant has also set out at Section 5.0 how the Proposed Development would contribute toward the important objectives set out in UK energy and climate change policy to achieve the decarbonisation of the power and industrial sectors and achieve net zero in terms of greenhouse gas emissions by 2050. That policy is both important and relevant to decision-making in respect of the Proposed Development and should be afforded substantial weight.

8.4.4 Section 6.0 demonstrates that there is no conflict with NPPF policy or local development plan policy and supplementary guidance, which may also be important and relevant to the SoS's decision-making.

8.4.5 This section of the Planning Statement has set out the very clear and substantial benefits of the Proposed Development – responding to the urgent need for low carbon hydrogen production; the contribution toward energy and climate change policy objectives and net zero by 2050; employment and regeneration, amongst others. In contrast, the long-term, permanent and direct significant effects of the Proposed Development are limited to one viewpoint, which cannot be mitigated due to the nature and scale of the Proposed Development.

8.4.6 Whilst there are cumulative adverse effects to ecology and socio-economics, these are confined to the construction phase and arise predominantly as a result of the Proposed Development forming one part of wider economic and energy development in Teesside that is supported by national and local policy. The Applicant will work with other promoters, STDC and local planning authorities to ensure the Proposed Development plays its part in wider efforts to ensure the benefits of this wider regeneration are delivered sustainably.

8.4.7 These limited impacts cannot outweigh the very substantial benefits of the Proposed Development.

8.4.8 Notwithstanding the above, the Proposed Development is CNP infrastructure, and CNP policy places as clear presumption in favour of granting consent for such infrastructure where residual effects/impacts remain after mitigation. That policy is a further reason why the limited residual effects/impacts of the Proposed Development should be set aside.

8.4.9 The exception to this presumption of consent are residual impacts, which present an unacceptable risk to, or unacceptable interference with, human health and public safety, defence, irreplaceable habitats (impacts on areas covered by the Habitats Regulations or Marine Conversation Zones) or unacceptable risk to the achievement of net zero. The Proposed Development does not engage any of those matters while it will clearly make a positive contribution toward net zero.

8.4.10 Development consent should therefore be granted.

9.0 CONCLUSIONS

9.1.1 The following conclusions can be drawn from this Planning Statement:

- Development consent is required for the Proposed Development as it is the subject of a Direction dated 22 December 2022 made by the SoS for DESNZ under Sections 35(1) and 35ZA of the PA 2008.
- Under the PA 2008 regime, the policy framework for examining and determining applications for development consent is provided by National Policy Statements ('NPSs'). The NPSs are the primary policy used by the relevant SoS to examine and determine DCO applications.
- The following NPSs for energy (designated in January 2024) are relevant to the Proposed Development:
  - the Overarching NPS for Energy (EN-1) (November 2023);
  - the NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (November 2023); and
  - the NPS for Electricity Networks Infrastructure (EN-5) (November 2023).
- Where a relevant NPS has been designated, Section 104(2) of the PA 2008 requires the SoS to determine the application for development consent in accordance with the relevant NPSs and appropriate marine policy documents (if any are in place) having regard to any local impact report produced by the relevant local planning authority; any matters prescribed in relation to development of the description to which the application relates; and any other matters which the SoS thinks are both important and relevant to their decision. Section 104(3) states that the SoS must decide the application in accordance with any relevant NPS, except to the extent that one of more of the following apply (Section 104(4) to (8):
  - lead to the UK being in breach of its international obligations;
  - lead to the SoS being in breach of any statutory duty that applies to the SoS;
  - be unlawful by virtue of any enactment;
  - result in the adverse impacts of the development outweighing the benefits; or
  - any condition that is prescribed for deciding an application otherwise than in accordance with a NPS is met.
- Paragraph 1.3.5 of EN-1 states that where the need for a particular type of energy infrastructure set out at paragraph 1.3.2 is established by the NPS, but that type of infrastructure is outside the scope of one of the technology specific NPSs, EN-

1 alone will have effect and be the primary basis for SoS decision making. It goes on to state:

"This will be the case for, but is not limited to, unconventional hydrocarbon extraction sites, hydrogen pipeline and storage infrastructure, Carbon Capture Storage (CCS) pipeline infrastructure and other infrastructure not included in EN-2 or EN-3."

- With regard to Section 35 directions, paragraph 1.3.10 of EN-1 states:

"EN-1, in conjunction with any relevant technology specific NPS, will be the primary policy for Secretary of State decision making on projects in the field of energy for which a direction has been given under section 35."

- As such, the Application should be determined under EN-1 as per Section 104 of the PA 2008.
- Part 3 of EN-1 confirms the 'The need for new nationally significant energy infrastructure projects'. It explains why the Government sees a need for significant amounts of new large-scale energy infrastructure to meet its energy objectives and why it considers the need for such infrastructure is urgent.
- Paragraphs 3.2.11 and 3.2.12 of EN-1 confirm that where an energy infrastructure project is not covered by Sections 15 to 21 of the PA 2008, but is considered to be nationally significant and is subject to Section 35 direction, then the application for development consent would need to be considered in accordance with EN-1:

"In particular: …

where the application is for hydrogen infrastructure … the Secretary of State should give substantial weight to the need established at paragraphs 3.4.12 to 3.4.22 of this NPS …"

- EN-1 confirms the need that exists for the delivery of low carbon hydrogen infrastructure in the UK. The Proposed Development responds to that need as it will deliver 1.2 GW of low carbon hydrogen production on Teesside. The urgent need for low carbon hydrogen is not open to debate or interpretation and should be afforded significant weight in the SoS's decision-making.
- Section 4.2 of Part 4 of EN-1 set out the Critical National Priority ('CNP') for low carbon infrastructure. Paragraph 4.2.4 confirms that the Government has concluded that there is a CNP for the provision of nationally significant low carbon energy infrastructure and the NPS makes clear that the Proposed Development meets the definition of low carbon energy infrastructure and is CNP infrastructure (namely the Hydrogen Production Facility, the Hydrogen Distribution Network and the CCS facilities).
- CNP policy is weighed against residual impacts of developments. Paragraph 4.2.15 and Figure 2 of EN-1 confirm that where residual impacts remain after mitigation, those residual impacts are unlikely to outweigh the urgent need for CNP infrastructure, and it is unlikely that consent will be refused on the basis of

those impacts. The CNP policy therefore places as clear presumption in favour of granting consent for CNP infrastructure.

- The exception to this presumption of consent are residual impacts, which present an unacceptable risk to, or unacceptable interference with, human health and public safety, defence, irreplaceable habitats (impacts on areas covered by the Habitats Regulations or Marine Conversation Zones) or unacceptable risk to the achievement of net zero. The Proposed Development does not engage any of those matters while it will clearly make a positive contribution toward net zero.
- The Applicant has provided an assessment of the Proposed Development against relevant NPS policy, including the assessment principles and generic impacts at Parts 4 and 5 of EN-1 and relevant technology specific considerations within EN-4 and EN-5. That assessment has had regard to the findings of the ES and has not identified any overriding conflict with NPS policy. It is considered that the limited significant adverse environmental effects/impacts of the Proposed Development (which are in the main related to the construction phase and therefore temporary) are more than outweighed by the need for and benefits of the Proposed Development (set out in Section 7.0) and in any event, such impacts are outweighed by CNP policy and the urgent need for CNP infrastructure.
- The Proposed Development has also been assessed against marine policy, including the UK Marine Policy Statement and the North East Marine Plan, as the Proposed Development involves parts of the tidal River Tees. The ES includes a Marine Plan Policy Assessment in accordance with EN-1 (paragraph 4.5.8). The assessment of the Proposed Development against the MPS and North East Marine Plan has not identified any conflict with relevant marine policies.
- As referred to above, Section 104 of the PA 2008 confirms that in determining applications for development consent, the SoS can include any other matters that they think are important and relevant to their decision. In the case of the Proposed Development, the Applicant considers that such matters include recent UK Government energy and climate change policy, which set out important objectives for the production and supply of hydrogen to help decarbonise industry and contribute toward the legally binding target of net zero by 2050. Other matters that the SoS may consider important and relevant include the policies contained within the NPPF and also local development plan policy.
- The Applicant has considered energy and climate change policy in detail. The Proposed Development is clearly in accordance with and supports the ambition and key objectives of energy and climate change policy. In particular:
  - It will deliver low carbon hydrogen production within what is an emerging CCUS cluster (the East Coast Cluster 'ECC') on Teesside. It will link into the adjacent NEP infrastructure so that the CO_2 created during the hydrogen production process will be captured and compressed for onward transportation and storage.

- It will make an important contribution (1.2 GW) toward the Government's ambition of delivering 10 GW of low carbon hydrogen production by 2030 within one of the UK's major industrial clusters. This is 12% of the 2030 target.
- It is well located to make a significant contribution to industrial decarbonisation on Teesside, being in close proximity to a number of industrial users/offtakers for the low carbon hydrogen that will be produced, with the potential for future expansion. It will support the decarbonisation of industries that are either hard or not possible to electrify.
- It will also contribute to the security of UK energy supplies by providing an alternative low carbon fuel source to imported natural gas.

- The contribution that the Proposed Development will make to the delivery of important energy and climate change policy objectives, not least the legally binding target of net zero greenhouse gas emissions by 2050, should be afforded very significant weight by the SoS in determining the Application). In this regard, it will deliver substantial greenhouse gas savings.
- Although EN-1 is the primary policy basis for the determination of the Application by the SoS, the Applicant has provided an assessment of the Proposed Development against the NPPF and local development plan policy. That assessment has not identified any conflict with NPPF or local development plan policy, notwithstanding that where there is a conflict between NPS policy and the NPPF and local development plan policy, the NPS shall take precedence.
- With regard to Section 104 subsection (3), granting development for the Proposed Development in accordance with EN-1, would not be in conflict with Section 104 subsections (4) to (8) or engage any condition that is prescribed for deciding an application otherwise than in accordance with a NPS.
- As such, there is no reason why the SoS could not determine the Application in accordance with the relevant NPSs.
- The Proposed Development has a number of very clear and substantial benefits – responding to the urgent need for low carbon hydrogen production; the contribution toward energy and climate change policy objectives and net zero by 2050; employment and regeneration, amongst others. In contrast, the long-term, permanent and direct significant effects of the Proposed Development are limited to one viewpoint, which cannot be mitigated due to the nature and scale of the Proposed Development. These limited impacts cannot outweigh the very substantial benefits of the Proposed Development.

9.1.2 Development consent should therefore be granted by the SoS for the Proposed Development.

APPENDIX 1: SECTION 35 DIRECTION DATED 22 DECEMBER 2022

DIRECTION BY THE SECRETARY OF STATE UNDER SECTION 35 OF THE PLANNING ACT 2008 (AS AMENDED) RELATING TO THE H2 TEESSIDE PROJECT

By letter to the Secretary of State received on 5 December 2022, Dalton Warner Davis LLP (DWD) on behalf of H2 Teesside Limited formally requested ("the direction request") that the Secretary of State should exercise the power vested in him under section 35(1) of the Planning Act 2008 (as amended) to direct that the H2 Teesside Project as set out in the direction request be treated as development for which development consent under the Planning Act 2008 is required.

The following two elements of the H2 Teesside Project constitute the "proposed Project" for the purposes of this direction:

- A low carbon hydrogen production plant of up to 1,200 MW thermal (lower heating value) capacity to be developed in two phases – each up to 600 MW; and
- Hydrogen distribution pipelines that do not constitute nationally significant infrastructure projects (NSIPs) under the Planning Act 2008. These will supply hydrogen to various offtakers on Teesside and within the surrounding area, such pipelines to be utilised in association with the hydrogen production plant. The hydrogen pipelines will run up to tie-in points with the relevant off-taker (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 off-taker and are not the subject of this direction.

The Secretary of State is satisfied that:

- The proposed Project is in the field of energy and will be wholly within England and waters adjacent to England up to the seaward limits of the territorial sea and the Renewable Energy Zone when completed;
- The proposed Project is of national significance;
- The proposed Project does not currently fall within the existing definition of a "nationally significant infrastructure project" and it is appropriate, therefore, to consider use of the power in section 35(1) of the Planning Act 2008; and
- the direction request constitutes a "qualifying request" in accordance with section 35ZA(11) of the Planning Act 2008.

Having considered the details of the direction request as set out in DWD's letter on behalf of H2 Teesside Limited of 5 December 2022, the Secretary of State is of the view that the proposed Project is nationally significant for the reasons set out in the Annex below. For the avoidance of doubt, if the hydrogen distribution pipelines do constitute NSIPs, the Secretary of State is satisfied that the hydrogen production plant is still on its own nationally significant.

The Secretary of State considers that, if the details of the proposed Project change, before submitting any application to The Planning Inspectorate, H2 Teesside Limited may wish to seek confirmation from the Secretary of State that the development that is the subject of the proposed application is the same as that for which the Direction is hereby given.

The Secretary of State has taken the decision within the conditions as required by sections 35A of the Planning Act 2008, and issues this Direction accordingly under sections 35(1) and 35ZA of the Planning Act 2008.

THE SECRETARY OF STATE DIRECTS that the proposed Project is to be treated as development for which development consent is required.

The Secretary of State further directs in accordance with sections 35ZA(3)(b) and (5) of the Planning Act 2008 that an application for a consent or authorisation mentioned in section 33(1) or (2) of the Planning Act 2008 or similar to that described in this Direction for the proposed Project is to be treated as a proposed application for which development consent is required.

This Direction is given without prejudice to the Secretary of State's consideration of any application for development consent which is made in relation to the proposed Project.

Signed by

David Wagstaff
Deputy Director, Energy Infrastructure Planning Delivery
For and on behalf of the Secretary of State for Business, Energy and Industrial Strategy

22 December 2022

ANNEX

REASONS FOR THE DECISION TO ISSUE THE DIRECTION

The Secretary of State is of the opinion that the Direction should be issued because:

- The proposed Project is of national significance, taking into account that it is a large-scale hydrogen production facility with a capacity of up to 1,200 megawatts (MW) thermal.

- The proposed Project will play an important role in enabling an energy system that meets the UK's commitment to reduce carbon emissions and the Government's objectives to create a secure, reliable and affordable energy supply for consumers.

- By progressing the proposed Project through the Planning Act 2008 development consent process, it would provide a fixed timescale for determining any application for development consent that might be brought forward and would allow a single assessment process to be utilised by H2 Teesside Limited.