

Net Zero Teesside Project

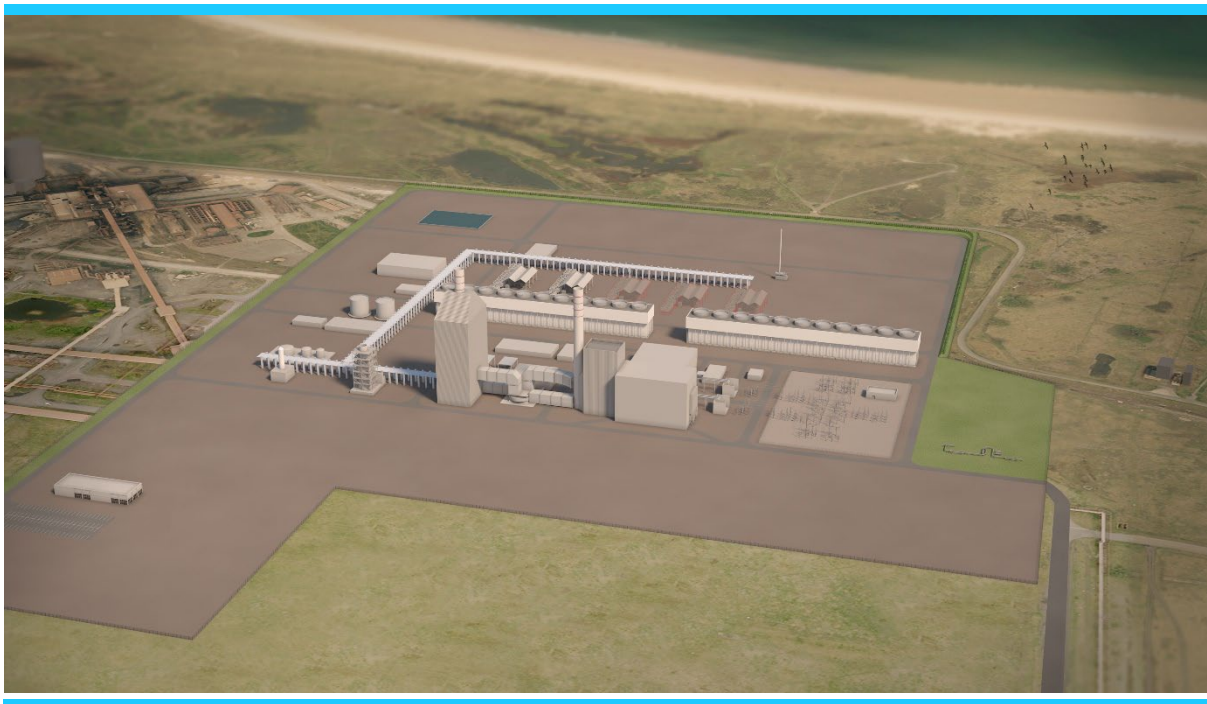
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Land at and in the vicinity of the former Redcar Steel Works site, Redcar and in Stockton-on-Tees, Teesside

The Net Zero Teesside Order

Document Reference: 5.3 – Planning Statement

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 – Regulation 5(2)(q)



Applicants: Net Zero Teesside Power Limited (NZN Power Ltd) & Net Zero North Sea Storage Limited (NZNS Storage 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.
ALARP	As Low As Reasonably Practicable - a term often used in the regulation and management of safety-critical and safety-involved systems. The ALARP principle is that the residual risk shall be reduced as far as reasonably practicable.
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.
Applicants	Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited.
BECCS	Bioenergy with Carbon Capture and Storage
BEIS	Department of Business, Energy and Industrial Strategy - a department of the UK Government.
CCC	The Climate Change Committee – an independent body providing advice to government on building a low-carbon economy and preparing for climate change.
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.
CCR	Carbon Capture Ready - space to be set aside to accommodate future carbon capture equipment.
CCS	Carbon Capture and Storage - technology that can capture carbon dioxide emissions produced from the use of fossil fuels in electricity generation and industrial processes.
CCUS	Carbon Capture, Usage and Storage - is group of technologies designed to reduce the amount of carbon dioxide released into the atmosphere from coal and gas power stations as well as heavy industry including cement and steel production. Once captured, the carbon dioxide can be either re-used in various products, such as cement or plastics (usage), or stored in geological formations deep underground (storage).
CCZ	Coastal Community Zone - part of the South Tees Area/Teesworks area.
CEMP	Construction Environment Management Plan - a plan to outline how a construction project will avoid, minimise or mitigate effects on the environment and surrounding area.
CGS	The Clean Growth Strategy - sets out the aims of the UK Government to deliver increased economic growth while reducing carbon emissions.
CHP	Combined Heat and Power - a process that captures and utilises the heat that is a by-product of the electricity generation process.
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.
DPD	Development Plan Documents - local planning policy documents.
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.
EIIs	Energy intensive industries – an industry which heavily relies on energy inputs to operate.
EPA	The Environmental Protection Act 1990 – an Act of the Parliament of the United Kingdom that defines, within England, Wales and Scotland, the fundamental structure and authority for waste management and control of emissions into the environment.
ES	Environmental Statement – a report in which the process and results of an Environment Impact Assessment are documented.
ESC	Energy Systems Catapult – an organisation set up to accelerate the transformation of the UK’s energy system.
ETI	Energy Technologies Institute – a UK based company formed from global industries and the UK Government.
EWP	The Energy White Paper – a policy paper on energy produced by the Department for Business, Energy and Industrial Strategy.
ExA	Examining Authority – an inspector or panel of inspectors responsible for examining a DCO application on behalf of the relevant Secretary of State.
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.
FID	Final Investment Decision – a financial decision that needs to be made in order to proceed with a project.

FRA	Flood Risk Assessment – a document setting out how a development has taken account of the need to mitigate the risk of flooding.
GHG	Greenhouse Gas – atmospheric gases such as carbon dioxide, methane, chlorofluorocarbons, nitrous oxide, ozone, and water vapour that absorb and emit infrared radiation emitted by the Earth’s surface, the atmosphere and clouds.
Ha	Hectares – a metric unit of measurement for area. There are 10,000 square metres in a hectare. One hectare is equal to 2.471 acres.
NIP	National Infrastructure Plan – setting out government priorities for national infrastructure.
HP	High Pressure.
HRA	Habitats Regulations Assessment – the assessment of the impacts of implementing a plan or policy on a Natura 2000 site required under the Habitats Directive.
HRSG	Heat Recovery Steam Generator – an energy recovery heat exchanger that recovers heat from a hot gas stream. It produces steam that can be used in a process (cogeneration) or used to drive a steam turbine (combined cycle).
HSE	Health and Safety Executive – the body responsible for the encouragement, regulation and enforcement of workplace health, safety and welfare.
ICCI	In-combination Climate Change Impacts – the in-combination effects of a changing climate.
IDS	Industrial Decarbonisation Strategy – a policy paper produced by government on the decarbonisation of UK industry.
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.
M	Metre – a metric unit of measurement for length, equal to 100 centimetres.
MA&ND	Major Accidents and Natural Disasters – potentially significant effects of a development on the environment as a result of its vulnerability

	to, or introduction of, risks of major accidents and/or disasters.
MHCLG	Ministry of Housing, Communities & Local Government – department of the UK government.
MHWS	Mean High Water Springs – the average throughout the year, of two successive high waters, during a 24-hour period in each month when the range of the tide is at its greatest (Spring tides).
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.
Mm	Millimetres – a metric unit of measurement for length. There are 1000 millimetres in a metre and 10 millimetres in a centimetre.
MMO	Marine Management Organisation – an executive, non-departmental body in the UK with the responsibility of licencing, regulating and planning marine activities in the seas around England so that they are carried out in a sustainable way.
MPS	Marine Policy Statement – the framework for preparing Marine Plans and taking decisions affecting the marine environment.
Mt	Million Tonnes – a metric unit of weight.
NE	Natural England – executive non-departmental public body constituted under the Natural Environment and Rural Communities Act 2006 (section 2(1)) to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development.
NEIZ	North East Industrial Zone – part of the South Tees Area/Teesside area.
NGET	National Grid Electricity Transmission Plc.
NIA 18	National Infrastructure Assessment 2018 – analyses the UK’s long-term economic infrastructure needs, outlining a strategic vision over the next 30 years and setting out

	recommendations for how identified needs should be met.
NIC	National Infrastructure Commission – established in 2015 to provide independent, impartial advice on the UK’s long-term infrastructure needs.
NIDP	National Infrastructure Delivery Plan – outlines how the government will support the delivery of key infrastructure projects and programmes between 2016 and 2021.
NIS	National Infrastructure Strategy – sets out the Government’s plans to deliver an infrastructure revolution in the UK, while levelling the country up and achieving its net zero target by 2050.
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. They include the Government’s view of the need for and objectives for the development of Nationally Significant Infrastructure Projects 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.
NZNS Storage	Net Zero North Sea Storage Limited – one of the Applicants.

NZT	Net Zero Teesside – the name of the Proposed Development.
NZT Power	Net Zero Teesside Power Limited – one of the Applicants.
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning – part of BEIS.
Order	The Net Zero Teesside Order – the name of the DCO for the Proposed Development.
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.
PEI Report	The Preliminary Environmental Information Report – an initial statement of the main environmental information available for a study area.
PINS	The Planning Inspectorate – an executive agency of the Department for Communities and Local Government responsible for administering DCO applications on behalf of the relevant Secretary of State.
PPG	Planning Practice Guidance – supplements the National Planning Policy Framework and provides detailed planning guidance to local planning authorities and applicants in England.
Proposed Development	The Net Zero Teesside Project.
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.
SAC	Special Areas of Conservation – High quality conservation sites that are protected under the European Union Habitats Directive, due to their contribution to conserving those habitat types that are considered to be most in need of conservation.
Site	The Proposed Development Site.

SoS	Secretary of State – the decision maker for DCO applications and head of a UK Government department.
SPA	Special Protection Area – strictly protected sites classified in accordance with article 4 of the EC birds directive. Special Protection Areas are Natura sites which are internationally important sites for the protection of threatened habitats and species.
SPD	Supplementary Planning Document – a document that supplements the policies contained in the Development Plan Documents that make up the statutory development plan for an area.
SSI	Sahaviriya Steel Industries – the former owner of part of the former Redcar Steel Works Site.
SSSI	Site of Special Scientific Interest – nationally designated Sites of Special Scientific Interest, an area designated for protection under the Wildlife and Countryside Act 1981 (as amended), due to its value as a wildlife and/or geological 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.
The Applicants	Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited.
UKCS	UK Continental Shelf.

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1.0 EXECUTIVE SUMMARY

- 1.1.1 This Planning Statement has been prepared on behalf of Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited (the 'Applicants'). 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 Business, Energy and Industrial Strategy, under Section 37 of 'The Planning Act 2008' (the 'PA 2008'), for the Net Zero Teesside Project. The Application was submitted to the SoS on 19 July 2021 and was accepted for Examination on 16 August 2021.
- 1.1.2 Since the submission and acceptance of the Application, the Applicants have continued to engage with Interested Parties with a view to addressing matters raised in their Relevant Representations and agreeing common ground, while also continuing with detailed project development. This work identified a number of changes to the Net Zero Teesside Project that would reduce optionality, land take and complexity. A formal change request in respect of the proposed changes was submitted to the Examining Authority ('ExA') on 28 April 2022. The ExA issued a procedural decision on 6 May 2022 accepting the proposed changes into the Examination.
- 1.1.3 This Planning Statement updates the original Planning Statement (July 2021) to take account of a number of changes since the Application was submitted, namely the High Court judgment in EFW Group Limited v Secretary of State for Business, Energy and Industrial Strategy [2021] EWHC 2697 (Admin); the publication of a revised National Planning Policy Framework in 2021; the publication of revised draft National Policy Statements for energy infrastructure in September 2021; and the publication of the Net Zero Strategy in October 2021 and the publication of the British Energy Security Strategy in April 2022. The updated Planning Statement also takes account of the changes made to the Application where relevant.
- 1.1.4 The Applicants are seeking development consent for the construction, operation and maintenance of the Net Zero Teesside Project, including associated development (together the 'Proposed Development') on land at and in the vicinity of the former Redcar Steel Works site, Redcar and in Stockton-on-Tees, on Teesside (the 'Site'). The former Steel Works site, along with other land required for the Proposed Development, lies within the boundary of the land controlled by the south Tees Development Corporation ('STDC'), which is now known as 'Teesworks'.
- 1.1.5 A DCO is required for the Proposed Development as it falls within the definition and thresholds for a 'Nationally Significant Infrastructure Project' (a 'NSIP') under Sections 14(1)(a) and 15 of the PA 2008, associated development under Section 115(1)(b) and by direction under Sections 35(1) and 35ZA of the same Act. The DCO, if made by the SoS, would be known as the 'Net Zero Teesside Order'. A copy of the direction made under Sections 35(1) and 35ZA is provided at **Appendix 1**.
- 1.1.6 The Proposed Development will be the UK's first commercial scale, full chain Carbon Capture, Usage and Storage ('CCUS') project and will initially capture up to 4 million

tonnes (Mt) of carbon dioxide (CO₂) emissions per annum. It will comprise a number of elements, including a new gas-fired electricity generating station with post-combustion carbon capture plant; gas, water and electricity connections (for the generating station); a CO₂ pipeline network (a 'gathering network') for collecting CO₂ from a cluster of local industries on Teesside; a CO₂ compressor station (for the compression of the CO₂) and a CO₂ export pipeline.

- 1.1.7 The CO₂ captured from the electricity generating station and local industries will be compressed and then transported (via the export pipeline) for secure storage within the Endurance saline aquifer located 145 kilometres offshore from Teesside under the North Sea. The export pipeline has the capacity to carry up to 10Mt of CO₂ per annum. The Proposed Development will therefore make a significant contribution toward the UK reaching its greenhouse gas emissions target by 2050.
- 1.1.8 The Site lies within the administrative boundaries of both Redcar and Cleveland Borough Council and Stockton-on-Tees Borough Council. It also partly lies within the boundary of the Teesworks area that is controlled by the STDC. The Site extends to approximately 304 hectares ('ha') in area.
- 1.1.9 Much of the Site comprises previously developed (including part of the former Redcar Steel Works Site) and existing industrial land. It is relatively flat and low-lying and sits at a level of between sea level and approximately 9 metres Above Ordnance Datum. The area surrounding the Site is largely characterised by industrial and commercial uses, although there are open areas of land to the north in the form of South Gare and Coatham Dunes/Sands, which are used for recreational purposes and that are of nature conservation importance. The part of the Site that will accommodate the electricity generating station, its carbon capture plant and the CO₂ compressor station is referred to as the 'Power Capture and Compression' ('PCC') Site.
- 1.1.10 Under the PA 2008 regime, the policy framework for examining and determining applications for development consent is provided by National Policy Statements ('NPSs'). Section 5 of the PA 2008 allows the relevant SoS to designate NPSs setting out national policy in relation to the types of NSIPs listed at Section 14 of the PA 2008. A number of NPSs have been designated in relation to energy infrastructure (NPSs EN-1 to EN-6). Draft revised versions of EN-1 to EN-5 were published for consultation in September 2021, albeit the existing NPSs will remain in force until they are withdrawn or suspended by the SoS.¹
- 1.1.11 Sections 104 and 105 of the PA 2008 relate to the approach to be taken to decisions where an NPS has effect (where Section 104 provides the decision-making

¹ NPS EN-1, EN-2, EN-3, EN-4 and EN-6, para 1.6.1; EN-5, para 1.5.1. Where the existing NPSs have effect, pursuant to the transitional arrangements, they will continue to have effect for the purposes of decision-making on applications made before the new NPSs are designated.

framework) and where no NPS has effect (where Section 105 provides the decision-making framework). Section 104 requires the SoS to determine applications for NSIPs in accordance with the relevant NPSs (where these are in place) and appropriate marine policy documents (if any) 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. It is considered that in the case of the Proposed Development such matters include recent UK Government energy and climate change policy. Section 105 requires the SoS to determine applications having regard to any local impact report prepared by the relevant local planning authority; and matters prescribed in relation to development of the description to which the application relates; and any matters which the SoS thinks are both “*important and relevant*”. While NPSs may not have effect in relation to schemes determined under Section 105, matters incorporated within them are nonetheless likely to constitute important and relevant considerations in determining such applications.

- 1.1.12 The primary purpose of this updated Planning Statement is to assist the Examining Authority and the SoS in their assessment of the Proposed Development by demonstrating how the Applicants have taken account of relevant planning policy, notably the NPS for energy infrastructure (which confirm the need for new electricity generating capacity) and the extent to which the Proposed Development complies with the policies within those NPSs, as well as any other matters that are important and relevant to the SoS’s determination of the Application.
- 1.1.13 The Planning Statement also sets out the key benefits for the Proposed Development, including the ‘need’ for it in terms of decarbonising power and industry on Teesside, in addition to its likely significant adverse environmental effects/impacts, taking account of the EIA that has been undertaken. Where relevant the Planning Statement cross references or ‘signposts’ the relevant application documents that provide more detail on these matters.
- 1.1.14 The relevant energy NPSs and marine policy statements are considered at Section 4 of the Planning Statement. Part 3 of NPS EN-1 ‘The need for new nationally significant energy infrastructure projects’ defines and sets out the ‘need’ for nationally significant energy infrastructure. Paragraph 3.1.1 states that the UK needs all types of energy infrastructure covered by the NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. Paragraph 3.1.2 goes on to state that it is for industry to propose the type of energy infrastructure and that the Government does not consider it appropriate for planning policy to set targets for or limits on different technologies. Notably, paragraph 3.1.3 stresses that the SoS should assess applications for development consent for the types of infrastructure covered by the energy NPSs “...on the basis that the Government has demonstrated that there is a need for those types of infrastructure...” (with the scale and urgency of that need being described in the relevant part of EN-1). Paragraph 3.1.4 confirms that the SoS should give substantial

weight to the contribution that all projects would make toward satisfying this need when considering applications under the PA 2008. As such, EN-1 is clear that the need that exists for new energy infrastructure is not open to debate or interpretation. In any event, and to the extent that the energy NPSs may not have effect in relation to all aspects of the Proposed Development, the Application is accompanied by a Need Statement (Document Ref. 5.2), which explains the need for the Proposed Development by reference to adopted and established Government policy.

- 1.1.15 Section 5 of the Planning Statement considers recent UK Government energy and climate change policy, notably the Clean Growth Strategy; the UK CCUS Deployment Pathway; the Prime Minister’s Ten Point Plan; the Energy White Paper (‘EWP’); the Net Zero Strategy; and the British Energy Security Strategy. These documents set out important Government objectives for decarbonising the power and industrial sectors in order to achieve the legally binding target of net zero by 2050 and are important and relevant considerations to be taken into account in determining the Application. The Proposed Development will make an important contribution toward the delivery of this policy.
- 1.1.16 Section 6 considers the conformity of the Proposed Development against the assessment principles, generic impacts and assessment and technology specific considerations of the relevant energy NPSs (EN-1, EN-2, EN-4 and EN-5). The Applicants’ assessment has not identified any conflicts with NPS policy. Furthermore, Section 6 has demonstrated that there is no conflict between the Proposed Development and NPPF policy or the statutory development plan. An assessment of the Proposed Development’s compliance with the assessment principles and generic and technology specific impacts of the relevant draft revised NPSs for energy infrastructure, against any material changes to relevant assessment principles/impacts from the current NPSs or any relevant new assessment principles/impacts within the draft revised NPSs is provided at **Appendix 3**.
- 1.1.17 The Proposed Development will have a number of very clear and tangible benefits, which can be summarised as follows:
- The energy NPSs, in particular EN-1, confirm the urgent need that exists for developing new nationally significant energy infrastructure, including new gas-fired generating stations with carbon capture. The Proposed Development will provide dispatchable low carbon generating capacity that underpins the security of UK electricity supplies and overall grid stability as the deployment of intermittent renewables increases. EN-1 is clear that the SoS should assess applications for development consent on the basis that the need for new energy infrastructure and its scale and urgency has been proven and that substantial weight should be given to the contribution that all projects will make toward satisfying this need. Although the EWP includes a commitment to review the current suite of energy NPSs, while that review is undertaken, they remain relevant Government policy for the purposes of making decisions on energy NSIPs. The EWP also underlines the need for the energy infrastructure set out in

EN-1. The need that exists for the Proposed Development is set out in detail within the Need Statement (Document Ref. 5.2).

- While the current energy NPSs remain relevant policy, it is considered that the draft revised energy NPSs are “important and relevant” to decision-making in respect of the Proposed Development. Notably, draft NPS EN-1 confirms the pressing need for gas-fired electricity generation with CCS and CCS infrastructure. Draft EN-1 is clear that there is no limitation on the amount of such infrastructure and that it is for the market to decide on what infrastructure is viable to bring forward.
- Recent UK energy and climate change policy has established clear objectives for decarbonising the power and industrial sectors and the transformation of the oil and gas sector in order to 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 decision-making in respect of the Proposed Development and should be afforded substantial weight. The Proposed Development will contribute to these objectives in a number of ways, including:
 - Demonstrating power with CCS/CCUS at a commercial scale by the mid-2020s, which is aligned with the Government commitment to support the delivery of “*at least one power CCUS plant*” by 2030.
 - Developing a CO₂ gathering network on Teesside that will underpin the establishment of a decarbonised industrial cluster (part of the East Coast Cluster) by the mid-2020s by providing the necessary infrastructure to capture CO₂ emission from existing heavy industries with the area, helping to secure their long-term future and contribution to the economy.
 - Providing infrastructure that will support the potential for the future large-scale manufacture of low carbon hydrogen on Teesside, acting as a driver for growth and jobs within the local and regional economy. Blue hydrogen (the use of natural gas to manufacture hydrogen) is likely to be the cheapest source of hydrogen, at least initially, and therefore being able to pair this with CCS/CCUS is critical to delivering low carbon hydrogen production. This will contribute toward the Government’s objective of 10 GW of hydrogen production by 2030.
 - The Proposed Development will initially capture up to 4Mt CO₂ emissions per annum (Teesside alone generates 3.9Mt CO₂ per annum) but there is scope to increase this to 10Mt CO₂ per annum in the future as a result of the sizing of the infrastructure.
 - In line with the Government’s North Sea Deal, the Proposed Development will support the transformation of the oil and gas sector. The development of CCS/CCUS technologies will be able to draw upon the proven capabilities and

skills within this sector, its existing infrastructure and private investment potential, thereby helping to support its supply chain and skilled workforce.

- The Proposed Development will support the delivery of the Government’s Net Zero Strategy and help underpin the British Energy Security Strategy.
 - 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 up to 2,440 net construction jobs (direct and indirect) would be generated per annum over the 48-month construction programme. Jobs during operation are estimated at up to 130 FTE (direct and indirect) with the majority filled by people from the local area. An employment skills and training plan will be implemented in order to maximise the local employment and training opportunities provided by the Proposed Development.
 - The Proposed Development will bring back into use previously developed industrial land on Teesside and make a positive contribution to the regeneration of the Teesworks area.
 - The Proposed Development will be Combined Heat and Power Ready and have the future potential to provide emerging development within the Teesworks area with heat, should viable opportunities be identified.
 - The Proposed Development will also deliver landscape and biodiversity enhancements within the PCC Site and achieve biodiversity net gain.
- 1.1.18 Chapter 25 ‘Summary of Significant Effects’ of ES Volume I, Table 25-1 (Document Ref. 6.2) summarises the significant 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 24 of the ES, where relevant). Table 25-1 also summarises any additional mitigation measures that have been identified in the technical assessments contained in the ES.
- 1.1.19 Table 25-1 confirms that the Proposed Development will only result in a limited number of long-term permanent and direct effects after mitigation. These relate to a viewpoint from the England Coastal Path that runs adjacent to the PCC Site where there will be a moderate adverse (significant) effect in terms of visual impact on recreational users of the Coast Path from the presence of the buildings and structures at the PCC Site. The only other long-term, permanent, direct effect relates the employment generated by the Proposed Development during its operational stages, which is assessed as being a moderate beneficial (significant) effect.
- 1.1.20 Long-term, permanent and direct cumulative and combined effects are limited to a moderate adverse (significant) effect in terms of the visual impact on recreational users of the England Coast Path.
- 1.1.21 With regard to the visual impact on recreational users of the England Coast Path where it runs adjacent to the PCC Site, it is relevant to note that paragraph 2.65 of

NPS EN-2 relating to fossil fuel electricity generation infrastructure, recognises that *“It is not possible to eliminate the visual impacts associated with a fossil fuel generating station.”*

- 1.1.22 The ES Addendum (Document Refs. 7.7, 7.8.1 and 7.8.2) submitted as part of the change request on 28 April 2022, has identified no changes to the significance of effects reported in the original ES.
- 1.1.23 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').
- 1.1.24 The Planning Statement demonstrates that there is no conflict between the Proposed Development and relevant policy, including marine policy, while it will have a number of very clear and substantial benefits – responding to the need for new low carbon electricity generation capacity, contributing toward the delivery of energy and climate change policy, employment, and regeneration, amongst others. In contrast, the long-term, permanent and direct significant effects of the Proposed Development are limited to a moderate adverse effect on users of the England Coast Path where it runs adjacent to the PCC Site. This limited impact does not outweigh the substantial benefits of the Proposed Development and EN-2 recognises that it will not always be possible to eliminate the visual impacts of such infrastructure.
- 1.1.25 In conclusion therefore, given the urgency of the need for new electricity generation capacity (as set out in NPS EN-1), the urgent need for gas-fired electricity generation with CCS and CCS infrastructure (set out in draft EN-1) and the importance of decarbonising the power and industrial sectors in the UK to meet the legally binding target of Net Zero by 2050, it is considered that the benefits of the Proposed Development significantly outweigh the limited harm that would result from the effects identified above and that development consent should be granted.

2.0 INTRODUCTION

2.1 Overview

- 2.1.1 This Planning Statement (Document Ref. 5.3) has been prepared on behalf of Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited (the 'Applicants'). 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 Business, Energy and Industrial Strategy, under Section 37 of 'The Planning Act 2008' (the 'PA 2008') for the Net Zero Teesside Project. The Application was submitted to the SoS on 19 July 2021 and was accepted for Examination on 16 August 2021.
- 2.1.2 Since the submission and acceptance of the Application, the Applicants have continued to engage with Interested Parties with a view to addressing matters raised in their Relevant Representations and agreeing common ground, while also continuing with detailed project development. This work identified a number of changes to the Net Zero Teesside Project that would reduce optionality, land take and complexity. A formal change request in respect of the proposed changes was submitted to the Examining Authority ('ExA') on 28 April 2022. The ExA issued a procedural decision on 6 May 2022 accepting the proposed changes into the Examination.
- 2.1.3 This Planning Statement updates the original Planning Statement (July 2021) to take account of a number of changes since the Application was submitted, namely the High Court judgment in EFW Group Limited v Secretary of State for Business, Energy and Industrial Strategy [2021] EWHC 2697 (Admin); the publication of a revised National Planning Policy Framework in July 2021; the publication of revised draft National Policy Statements for energy infrastructure in September 2021; and the publication of the Net Zero Strategy in October 2021; and the publication of the British Energy Security Strategy in April 2022. The updated Planning Statement also takes account of the changes made to the Application where relevant.
- 2.1.4 The Applicants are seeking development consent for the construction, operation and maintenance of the Net Zero Teesside Project, including associated development (together the 'Proposed Development') on land at and in the vicinity of the former Redcar Steel Works site, Redcar and in Stockton-on-Tees, on Teesside (the 'Site'). The former Steel Works site, along with other land required for the Proposed Development, lies within the boundary of the land controlled by the South Tees Development Corporation ('STDC'), which is now known as 'Teesworks'.
- 2.1.5 A DCO is required for the Proposed Development as it falls within the definition and thresholds for a 'Nationally Significant Infrastructure Project' (a 'NSIP') under Sections 14(1)(a) and 15 of the PA 2008, associated development under Section 115(1)(b) and by direction under Sections 35(1) and 35ZA of the same Act. The DCO, if made by the SoS, would be known as the 'Net Zero Teesside Order' (the 'Order').

A copy of the direction made under Sections 35(1) and 35ZA is provided at **Appendix 1**.

2.1.6 The Proposed Development will be the UK’s first commercial scale, full chain Carbon Capture, Usage and Storage (‘CCUS’) project and will initially capture up to 4 million tonnes (Mt) of carbon dioxide (CO₂) emissions per annum. It will comprise a number of elements, including a new gas-fired electricity generating station with post-combustion carbon capture plant; gas, water and electricity connections (for the generating station); a CO₂ pipeline network (a ‘gathering network’) for collecting CO₂ from a cluster of local industries on Teesside; a CO₂ compressor station (for the compression of the CO₂); and a CO₂ export pipeline.

2.1.7 The CO₂ captured from the electricity generating station and local industries will be compressed and then transported (via the export pipeline) for secure storage within the Endurance saline aquifer located 145 kilometres offshore from Teesside under the North Sea. The export pipeline has the capacity to carry up to 10Mt of CO₂ per annum. The Proposed Development will therefore make a significant contribution toward the UK reaching its greenhouse gas emissions target by 2050.

2.2 The Applicants

2.2.1 NZT encompasses proposals to both decarbonise electricity generation and a cluster of carbon intensive industries on Teesside. In line with the CCUS business models published by BEIS in December 2020, there will be separate entities who will be responsible for:

- electricity generation with post-combustion carbon capture (including the gas, water and electricity connections);
- CO₂ gathering (from industrial emitters), CO₂ compression and CO₂ transportation and storage; and
- industrial (including hydrogen production) carbon capture and connections to the CO₂ gathering network.

2.2.2 The entities are set out in **Table 2.1** below:

Table 2.1 – NZT Entities

Onshore works scope	Partnership	NZT Entity	Within the scope of the DCO Application?
Electricity generating station with post-combustion carbon capture (including the	bp*, and Equinor	Net Zero Teesside Power Limited	Yes

gas, water and electricity connections)			
CO ₂ gathering network, CO ₂ compression and the onshore section of CO ₂ export pipeline	bp*, Equinor, National Grid, Shell and Total	Net Zero North Sea Storage Limited	Yes
Industrial and hydrogen production carbon capture and connection to the CO ₂ gathering network	Individual industrial emitters	N/A	No

*Operator on behalf of the relevant Partnership

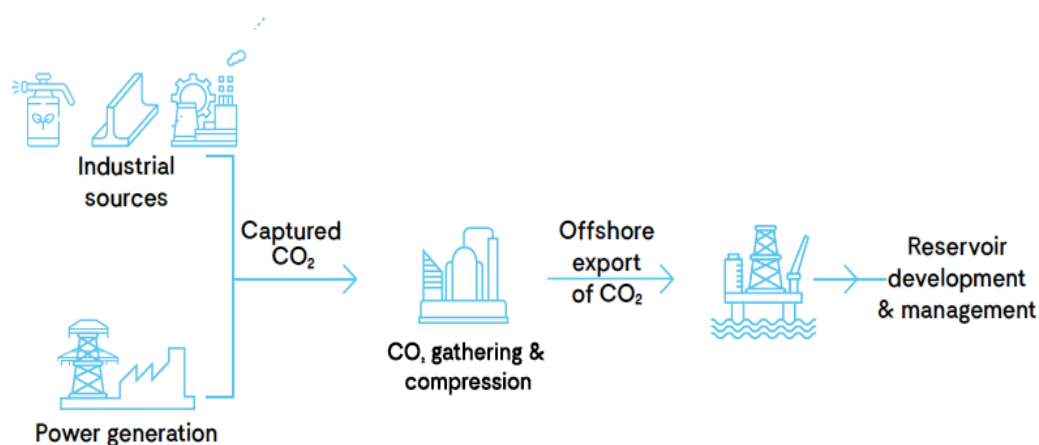
- 2.2.3 NZT is being promoted by Net Zero Teesside Power Limited ('NZT Power') and Net Zero North Sea Storage Limited ('NZNS Storage'). NZT Power and NZNS Storage (together the Applicants for the purposes of the DCO Application) have been incorporated on behalf of bp as operator of the two Partnerships.
- 2.2.4 The electricity generation with post-combustion carbon capture Partnership comprises bp, and Equinor, with bp leading as operator. NZT Power will be responsible for the Proposed Development in so far as it relates to the construction, operation and eventual decommissioning of the electricity generating station together with its carbon capture plant (both within the scope of the DCO Application).
- 2.2.5 The CO₂ gathering network, CO₂ compression and onshore section of CO₂ export pipeline Partnership comprises bp, Equinor, National Grid, Shell and Total, with bp leading as operator. NZNS Storage will be responsible for the Proposed Development in so far as it relates to the construction, operation and eventual decommissioning of the equipment required for the high-pressure compression of CO₂ from the electricity generating station and industrial emitters via the CO₂ gathering network and the onshore section of the CO₂ export pipeline (these are all within the scope of the DCO Application).
- 2.2.6 NZNS Storage will also be responsible for the offshore elements of NZT, comprising the offshore section of the CO₂ export pipeline (below Mean Low Water Springs ('MLWS')) to a suitable offshore geological CO₂ storage site under the North Sea, CO₂ injection wells and associated infrastructure. The offshore elements of NZT (with the

exception of the gas and CO₂ pipeline crossings of the River Tees and the water outfall from the electricity generating station) do not form part of the DCO Application.

2.3 What is Carbon Capture, Usage and Storage?

2.3.1 Carbon Capture, Usage and Storage ('CCUS') is a process that removes CO₂ emissions at source, for example emissions from an electricity generating station or industrial installation, and then compresses the CO₂ so that it can be safely transported to secure underground storage sites. It is then injected into layer of solid rock filled with interconnected pores where the CO₂ becomes trapped and locked in place, preventing it from being released into the atmosphere. **Figure 2.1** below shows what is involved in the process.

Figure 2.1 – CCUS Process



2.3.2 The technologies used in CCUS are proven and have been used safely across the World for many years. Storage sites are located several kilometres underground and are subject to stringent tests to ensure that they are geologically suitable. In the UK, it is expected that the storage sites will be located offshore, in areas such as the North Sea.

2.3.3 CCUS is one of a number of technologies that are crucial to reducing CO₂ emissions and combatting global warming. The UK Government has committed to achieving 'Net Zero' in terms of greenhouse gas emissions by 2050. This is a legally binding target.

2.4 The Site

2.4.1 The Site lies within the administrative boundaries of both Redcar and Cleveland Borough Council and Stockton-on-Tees Borough Council. It also partly lies within the boundary of the Teesworks area that is controlled by the STDC.

- 2.4.2 Most of the Site lies within the administrative area of Redcar and Cleveland Borough Council, although parts of Site (for the electricity generating station's gas supply connection to the National Transmission System for gas and the CO₂ gathering network) cross the River Tees into the administrative area of Stockton-on-Tees Borough Council. At this location the River Tees is tidal. In addition, there are elements of the Site which extend into South Gare, Coatham Sands and the North Sea. Those sections of the Site that are below MLWS are outside the jurisdiction of either local authority being part of the UK marine area.
- 2.4.3 The Site extends to approximately 304 hectares ('ha') in area. Much of it comprises previously developed (including part of the former Redcar Steel Works Site) and existing industrial land, some of which was reclaimed from the Tees Estuary in the late C19th and during the C20th. The Site is relatively flat and low-lying and sits at a level of between sea level and approximately 9 metres ('m') Above Ordnance Datum ('AOD'). The area surrounding the Site is largely characterised by industrial and commercial uses, although there are open areas of land to the north in the form of South Gare and Coatham Sands, which are used for recreational purposes and that are of nature conservation importance.
- 2.4.4 A more detailed description of the Site and its surroundings is provided at Chapter 3 'Description of the Existing Environment' in the Environmental Statement ('ES') Volume I (Document Ref. 6.2).

2.5 The Proposed Development

- 2.5.1 The Proposed Development will work by capturing CO₂ from the electricity generating station in addition to a cluster of local industries on Teesside and transporting it via a CO₂ export pipeline to the Endurance saline aquifer under the North Sea. The Proposed Development will initially capture and transport up to 4Mt of CO₂ per annum, although the CO₂ export pipeline has the capacity to accommodate up to 10Mt of CO₂ per annum thereby allowing for future expansion.
- 2.5.2 The Proposed Development comprises the following elements:
- **Work Number ('Work No.') 1** – a Combined Cycle Gas Turbine ('CCGT') electricity generating station with an electrical output of up to 860 megawatts and post-combustion carbon capture plant (the '**Low Carbon Electricity Generating Station**');
 - **Work No. 2** – natural gas supply connection and Above Ground Installations ('AGIs') (the '**Gas Connection Corridor**');
 - **Work No. 3** – an electricity grid connection (the '**Electrical Connection**');
 - **Work No. 4** – water supply connections (the '**Water Supply Connection Corridor**');
 - **Work No. 5** – waste water disposal connections (the '**Water Discharge Connection Corridor**');

- **Work No. 6** – a CO₂ gathering network (including connections under the tidal River Tees) to collect and transport the captured CO₂ from industrial emitters (the industrial emitters using the gathering network will be responsible for consenting their own carbon capture plant and connections to the gathering network) (the ‘**CO₂ Gathering Network Corridor**’);
 - **Work No. 7** – a high-pressure CO₂ compressor station to receive and compress the captured CO₂ from the Low Carbon Electricity Generating Station and the CO₂ Gathering Network before it is transported offshore (the ‘**HP Compressor Station**’);
 - **Work No. 8** – a dense phase CO₂ export pipeline for the onward transport of the captured and compressed CO₂ to the Endurance saline aquifer under the North Sea (the ‘**CO₂ Export Pipeline**’);
 - **Work No. 9** – temporary construction and laydown areas, including contractor compounds, construction staff welfare and vehicle parking for use during the construction phase of the Proposed Development (the ‘**Laydown Areas**’); and
 - **Work No. 10** – access and highway improvement works (the ‘**Access and Highway Works**’).
- 2.5.3 The Low Carbon Electricity Generating Station (Work No. 1) falls within the definition and thresholds for a NSIP under Sections 14(1)(a) and 15 of the PA 2008.
- 2.5.4 The CO₂ Gathering Network Corridor, including connections under the tidal River Tees (Work No. 6), the HP Compressor Station (Work No. 7) and the CO₂ Export Pipeline (Work No. 8) are the subject of a direction made by the SoS under Sections 35(1) and 35ZA of the PA 2008 (dated 17th January 2020), which confirms that they (the “*Specified Elements*”), together with any matters/development associated with them, are to be treated as development for which development consent is required (in so far as they form a part of the Proposed Development).
- 2.5.5 The Gas Connection (Work No. 2); Electrical Connection (Work No. 3); Water Supply Connection Corridor (Work No. 4); Water Discharge Connection Corridor (Work No. 5); the Laydown Areas (Work No. 9); and the Access and Highway Works (Work No. 10) represent associated development under Section 115(1)(b) of the PA 2008.
- 2.5.6 In view of the High Court judgment in EFW Group Limited v Secretary of State for Business, Energy and Industrial Strategy [2021] EWHC 2697 (Admin), the Applicants consider that it would be prudent for the ExA to consider both Sections 104 and 105 of the PA 2008. The reasons for this are explained further in Section 3 of the Planning Statement. A copy of the judgement is provided at **Appendix 2**.
- 2.5.7 The Low Carbon Electricity Generating Station and the HP Compressor Station will be located on part of the STDC Teesworks area (on part of the former Redcar Steel Works Site). The Low Carbon Electricity Generating Station and the HP Compressor Station are known collectively as the ‘Power, Capture and Compression’ (‘PCC’) Site. The CO₂ Export Pipeline will start in this location before heading offshore. The

various connections for the Low Carbon Electricity Generating Station and the CO₂ Gathering Network will require corridors of land within both Redcar and Stockton-on-Tees, including crossings beneath the River Tees.

- 2.5.8 All of the above elements are included in the scope of the DCO Application, with the exception of the CO₂ Export Pipeline, with only the section of pipeline above MLWS being included. The CO₂ Export Pipeline below MLWS and the CO₂ storage site under the North Sea (the Endurance saline aquifer) are the subject of separate consent and licensing applications, which are supported by an Offshore Environmental Statement.
- 2.5.9 The ancillary development required in connection with and subsidiary to the above elements of the Proposed Development is detailed in Schedule 1 of the draft DCO (Ref. 2.1). A more detailed description of the Proposed Development is provided at Schedule 1 'Authorised Development' of the draft DCO and Chapter 4 'The Proposed Development' in 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. 4.4).
- 2.5.10 The changes that have been made to the Proposed Development and the DCO Application as a result of the change request submitted on 28 April 2022, and accepted into the Examination on 6 May 2022, are described within the ES Addendum (Document Refs. 7.7, 7.8.1 and 7.8.2). There are three main areas of change to the Proposed Development. These are:
- The selection of a Gas Connection route (Work No. 2A).
 - A reduction in the area of the CO₂ Gathering Network route from the north of the River Tees, across the Tees to the PCC Site (Work No. 6).
 - Updates to the land parcels within the Application Site/Order Limits as a result of further pre-front end engineering design construction assessments and landowner discussions.
- 2.5.11 The above have resulted in a total of 13 changes to the Proposed Development. These are described in detail at Chapter 2 'Proposed Development Changes' of the ES Addendum, Volume I.

2.6 The Application and draft DCO

- 2.6.1 The Application Guide (Document Ref. 1.2) lists the documents that make up the DCO Application and how these comply with relevant legislative and policy requirements. The Application Guide is a 'live' document that will be updated throughout the Examination of the Application, as required.
- 2.6.2 Schedule 1 of the draft DCO (Document Ref. 2.1) provides the formal description of the Proposed Development and its elements and identifies the individual Works Numbers ('Works Nos.') for those elements (shown on the Works Plans – Document Ref. 4.4).

- 2.6.3 The Land Plans (Document Ref. 4.2) and Additional Land Plan (Document Ref. 4.2a) show the extent of the land (the ‘Order Land’) over which powers of compulsory acquisition are sought for the Proposed Development, while the Works Plans (Document Ref. 4.4) show the ‘Order Limits’ and identify the location and areas (the Works Nos. areas) within which each of the main elements of the Proposed Development are to be built. The extent of each of the Works Nos. is defined by the coloured and hatched areas on the Works Plans.
- 2.6.4 As stated above, the draft DCO seeks powers of compulsory acquisition of interests and rights in land (including new rights) within the Order limits. The provisions relating to compulsory acquisition are set out at Articles 22 to 36 of the draft DCO. These and other provisions of the draft DCO are explained in the Explanatory Memorandum (Document Ref. 2.2). Information on the interests and rights that exist in relation to the land within the Order limits is provided by the Book of Reference (Document Ref. 3.1) and Supplementary Book of Reference (Document Ref 3.1a). The justification for the proposed compulsory acquisition of interests and rights in land is set out in the Statement of Reasons (Document Ref. 3.2) and Supplementary Statement of Reasons (Document Ref. 3.2a), with the Applicants’ ability to fund this confirmed by the Funding Statement (Document Ref. 3.3) and Supplementary Funding Statement (Document Ref. 3.3a).
- 2.6.5 The draft DCO includes a ‘deemed marine licence’ (Article 37 and Schedule 10) relating to elements of the Gas Connection (Work No. 2) and Water Discharge Connection Corridor (Work No. 5).
- 2.6.6 The Proposed Development represents an Environmental Impact Assessment (‘EIA’) development and therefore the Application includes an Environmental Statement (‘ES’) (Document Refs. 6.1 - 6.4) that reports the findings of the EIA that has been undertaken.
- 2.6.7 The ES comprises a Non-Technical Summary (Document Ref. 6.1) and ES Volumes I, II and III (Document Refs. 6.2 - 6.4). It has not been possible for the Applicants to fix all of the design details of the Proposed Development at this stage, especially given that the Proposed Development is a ‘First of its Kind’ project, and they have therefore sought to incorporate a degree of flexibility within its layout and design. In order to accommodate this flexibility and ensure a robust EIA of the Proposed Development, the Applicants have adopted the ‘Rochdale Envelope’ approach and, where relevant, assessed a number of maximum design parameters.
- 2.6.8 The Applicants have consulted extensively on the Proposed Development. This has included two main stages of pre-application consultation – a stage of non-statutory consultation (Stage 1), followed by a stage of statutory consultation (Stage 2) in accordance with Sections 42, 47 and 48 of the PA 2008. The Applicants undertook some additional pre-application consultation following Stage 2 in accordance with Section 42 as well as a non-statutory Community Update relating to further changes made to the Proposed Development and Site. The pre-application consultation undertaken and how responses received to that consultation have been considered

is documented within the Consultation Report and its Appendices (Document Ref. 5.1).

- 2.6.9 Schedule 2 'Requirements' of the draft DCO contains a number of 'requirements' that would control the detailed design of the Proposed Development in addition to its construction and operation to ensure that it remains within the scope of the EIA carried out and does not result in unacceptable impacts. These would require the submission to and approval by the relevant local planning authorities (Redcar and Cleveland Borough Council and Stockton-on-Tees Borough Council) of further details of the Proposed Development. A number of the requirements must be discharged prior to the commencement of the Proposed Development with others needing to be discharged prior to commissioning or commercial use.
- 2.6.10 As confirmed above, the Applicants submitted a change request in respect of the Proposed Development and the DCO Application on 28 April 2022, which was accepted into the Examination on 6 May 2022. Prior to the submission of the change request, the Applicants consulted on the proposed changes between 10 March and 14 April 2022. The change request was accompanied by a Consultation Statement, documenting the consultation undertaken in respect of the changes and the responses received (Document Ref. 7.6), and ES Addendum and Non-Technical Summary (Document Refs. 7.7, 7.8.1 and 7.8.2) and a number of updated Application Documents.
- 2.6.11 The ES Addendum describes the changes in detail and includes an assessment of the changes. The assessment undertaken has identified no changes to the significance of effects reported in the original ES.

2.7 The Purpose and Structure of this Document

- 2.7.1 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 Applicants have taken account of relevant planning policy, notably the National Policy Statements ('NPSs') for energy infrastructure, which confirm the need for new electricity generating capacity, and the extent to which the Proposed Development complies with the policies within those NPSs, as well as any other matters that are "*important and relevant*" to the SoS's determination of the DCO Application. Such matters include the revised draft NPSs for energy infrastructure, UK Government energy and climate change policy, the National Planning Policy Framework and the statutory development plan.
- 2.7.2 The Planning Statement sets out the key benefits for the Proposed Development, including the 'need' for it in terms of decarbonising electricity generation and industry on Teesside, in addition to its likely significant adverse environmental effects. 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. 5.2), which forms part of the DCO Application.

2.7.3 The Planning Statement is structured as follows:

- **Section 3: Planning History and Local Planning Designations** – provides an 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 DCO applications, notably the current NPSs for energy infrastructure and the other matters that are “*important and relevant*” to the SoS’s decision-making. This section also considers the draft revised NPSs for energy.
- **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** – provides an assessment of the Proposed Development against relevant policy, notably the current NPSs for energy infrastructure, the NPPF and the statutory development plan. An assessment of the Proposed Development against the draft revised NPSs, where relevant, is provided at **Appendix 3**.
- **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 This section provides an overview of the planning history and the planning designations (and related 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 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) is now controlled by STDC following a compulsory purchase inquiry in 2020 and has been rebranded as 'Teesworks'. STDC is now in the process of bringing forward a number of major development proposals on specific sites within the Teesworks area and planning applications have been submitted for a number of these.

3.2.6 The Site and surrounding area has an extensive planning history given the scale of industrial development that has taken place over the years. While much of this is of limited relevance to the Proposed Development, there are a number of major development proposals that warrant consideration, either because they relate to

land within the Site or adjacent to it. Those of particular relevance are detailed in **Table 3.1** below:

Table 3.1 - Relevant Planning History

No.	Application/ proposal	Description	Relationship with Site	Status
1.	York Potash Project - The York Potash Harbour Facilities Order 2016	Installation of wharf/jetty facilities with two ship loaders capable of loading bulk dry material at a rate of 12m tons per annum (dry weight). Associated dredging operations to create berth. Associated storage building with conveyor to wharf/jetty. Including a materials handling facility (if not located at Wilton) served by a pipeline (the subject of a separate application) and conveyor to storage building and jetty.	Located to the south of the PCC Site and crossing parts of the CO ₂ gathering, gas and electrical connection and waste water works corridors.	Approved 20.07.16
2.	York Potash Project - Outline planning permission Ref. R/2017/0906/OOM	Overhead conveyor and associated storage facilities in connection with the York Potash Project.	Located south of the PCC Site and crossing parts of the CO ₂ gathering, gas and electrical connection and waste water works corridors.	Approved 30.04.18
3.	Teesworks (Long Acres and South Bank sites) - Planning permission Ref.	Demolition of structures and engineering operations associated with ground preparation and temporary storage of soils and its final use in	Located east of the PCC Site intersecting with parts of the cooling water, electrical connection and	Approved 27.09.19

	R/2019/0427/ FFM	the remediation and preparation of land for regeneration and development.	waste water works corridors and construction laydown areas (Long Acres) and to the west of the southern section of the electrical connection corridor (South Bank).	
4.	Redcar Bulk Terminal - Planning application Ref. R/2020/0411/ FFM	Construction of the Redcar Energy Centre consisting of a material recovery facility incorporating a bulk storage facility; an energy recovery facility; and an incinerator bottom ash recycling facility along with ancillary infrastructure and landscaping.	Land at Redcar Bulk Terminal to the north-west of the PCC Site.	Approved 27.01.21
5.	Teesworks (South Bank Site) - Outline planning application Ref. R/2020/0357/ OOM	Demolition of existing structures on site and the development of up to 418,000 sqm (gross) of general industry (use class B2) and storage or distribution facilities (use class B8) with office accommodation (use class B1), HGV and car parking and associated infrastructure works all matters reserved other than access.	Located to the west of the southern section of the electrical connection corridor.	Approved 03.12.20
6.	Teesworks (Foundry Site)	Development of up to 464,515qm (gross) of	Located to the immediate west	Approved 02.03.22

	- Outline planning permission Ref. R/2020/0821/ESM	general industry (Use Class B2) and storage or distribution facilities (Use Class B8) with office accommodation (Use Class E), HGV and car parking and associated infrastructure works.	and south of the PCC Site and intersecting with parts of the CO ₂ gathering, gas and electrical connection and waste water works corridors and construction laydown areas.	
7.	Teesworks (Long Acres Site) - Outline planning permission Ref. R/2020/0822/ESM	Development of up to 185,806 sqm (gross) of general industry (Use Class B2) and storage or distribution facilities (Use Class B8) with office accommodation (Use Class E), HGV and car parking, works to watercourses including realignment and associated infrastructure works.	Located to the east of PCC Site intersecting with the cooling water, electrical connection and waste water works corridors and construction laydown areas.	Approved 11.03.22
8.	Teesworks (Steel House Site) - Outline planning application Ref. R/2020/0823/ESM	Development up to 15,794sqm (gross) of office accommodation (Use Class E) and car parking and associated infrastructure works.	Located to the east of the northern section of the electrical connection corridor and intersecting with part of the cooling water connection corridor.	Validated 21.01.21 (decision pending)
9.	Teesworks (Dorman Point Site) - Outline planning application ref. R/2020/0819/ESM	Development of up to 139,353 sqm (gross) of general industry (Use Class B2) and storage or distribution facilities (Use Class B8) with office accommodation	Located immediately to the south-west of the southern section of the electrical connection corridor.	Validated 21.01.21 (decision pending)

		(Use Class E), HGV and car parking, works to watercourse including realignment and associated infrastructure works.		
10.	Teesworks (Lackenby Site) - Outline planning application Ref. R/2020/0820/ESM	Development of up to 92,903sqm (gross) of general industry (Use Class B2) and storage or distribution facilities (Use Class B8) with office accommodation (Use Class E), HGV and car parking and associated infrastructure works.	Located immediately to the south of the southern section of the electrical connection corridor.	Validated 21.01.21 (decision pending)

3.2.7 The above developments have been taken into account within the assessment of cumulative effects set out at Chapter 24 of the ES (Document Ref. 6.2).

3.3 Local Planning Designations

3.3.1 The Site encompasses land within the administrative boundaries of both Redcar and Cleveland Borough Council ('RCBC') and Stockton-on-Tees Borough Council ('STBC') either side of the River Tees. RCBC and STBC represent the 'host local authorities' for the Proposed Development for the purposes of Section 43 of the PA 2008. The development plan documents ('DPDs') produced by RCBC and STBC represent the statutory development plan for the Proposed Development. These include:

- 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 Tees Valley Joint Minerals and Waste DPDs (adopted September 2011).

3.3.2 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 and STBC with Darlington, Hartlepool and Middlesbrough Councils.

3.3.3 Parts of the Site lie within the boundary of the STDC area, which is now known as Teesworks. STDC is a Mayoral Development Corporation, covering over 400 hectares of land south of the River Tees within the administrative boundary of RCBC. The purpose of STDC is 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 Local Planning Authority (the 'LPA') in respect of planning policy and development management and the processing and determination of planning applications.

- 3.3.4 STDC has produced a Master Plan (the 'South Tees Regeneration Master Plan') to provide a flexible framework for the regeneration of the Teesworks/South Tees Area. The Master Plan was prepared throughout 2017 as a supporting visioning 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 South Tees Area SPD is a material planning consideration and represents the formal planning policy interpretation of the Master Plan, which in planning policy terms has no formal status.
- 3.3.5 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.

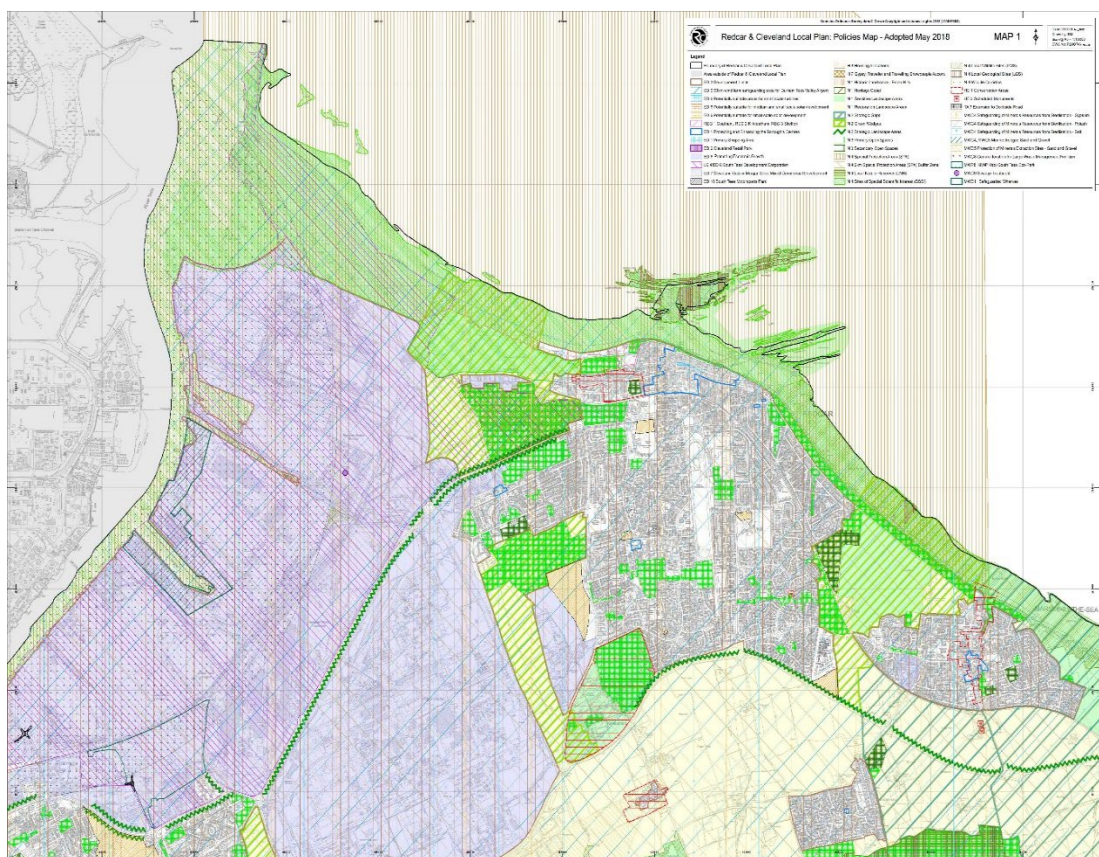
The Redcar & Cleveland Local Plan

- 3.3.6 A large part of the Site, including the whole of the PCC 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, proposals will need to demonstrate that there will be no adverse effects on the integrity of the Teesmouth and Cleveland Coast Special Protection Area and Ramsar site, or other European designated nature conservation sites. Development proposals will also be encouraged to improve the quality of the environment.
- 3.3.7 As stated above, parts of the Site lie within the STDC Teesworks/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. Clearly the Proposed Development is consistent with Policy LS4 as it would help decarbonise the local economy while promoting economic growth and job opportunities.
- 3.3.8 The key planning allocations/designations and related policies that apply to the Site are listed below:
- Development Limits – Policy SD3.

- 30km wind farm safeguarding area for Durham Tees Valley Airport – Policy SD6.
- Protected Employment Area – Policy ED6.
- South Tees Development Corporation Area – Policy LS4.
- Sensitive Landscape Areas – Policy N1.
- Green Wedges & Strategic Landscape Areas – Policy N2.
- Primary Open Areas – Policy N3.
- Teessmouth and Cleveland Coast Special Protection Area 6km Buffer Zone/Ramsar Site & Teessmouth and Cleveland Coast Site of Special Scientific Interest – Policy N4.

3.3.9 The above allocations/designations are shown upon the Policies Map of the Local Plan an extract of which is reproduced below as **Figure 3.1**.

Figure 3.1 – Redcar and Cleveland Policies Map



The South Tees Area SPD

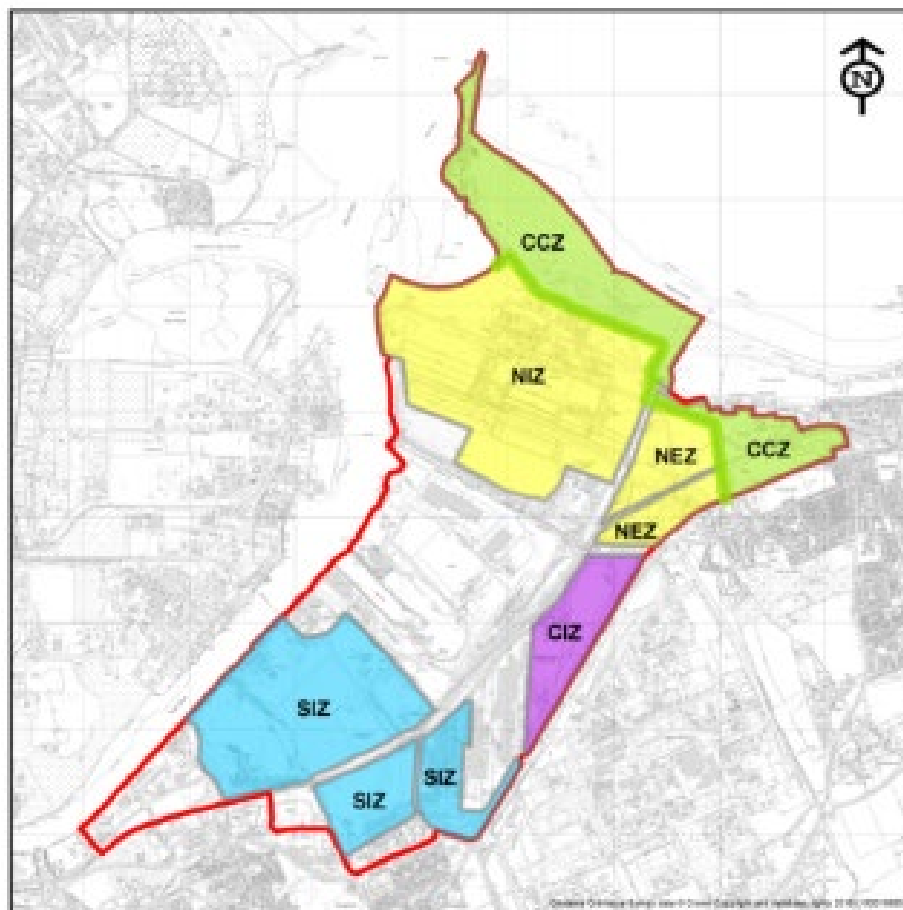
3.3.10 Section 2 of the South Tees SPD sets out the 'Vision' for the Teesworks/South Tees Area, including a number of objectives. Objective 1 is aimed at ensuring strong alignment with the UK Government's Industrial Strategy by shaping regeneration proposals to ensure the Tees Valley can make a contribution to the UK Government's

aspirations for the Northern Powerhouse Initiative. Objective 4 is to (page 10 of the SPD):

“Promote and support development uses aligned with a low carbon, circular economy, while delivering redevelopment within a framework of reduced energy costs and waste minimisation.”

- 3.3.11 Both the above objectives are re-iterated in Development Principle ‘STDC1: Regeneration Priorities’ (page 15 of the SPD). This states that RCBC, in partnership with STDC, will seek to achieve the comprehensive redevelopment of the South Tees Area in order to *“realise an exemplar world class industrial business park”*. It identifies a number of priorities for the Area, including to prioritise uses connected with advanced manufacturing and advanced new technologies and to promote and support uses and infrastructure connected to a low carbon and circular economy. Figure 2 (page 19) shows a location for manufacturing and energy within the South Tees Area that broadly corresponds with that of the PCC Site.
- 3.3.12 Development Principle ‘STDC6: Energy Innovation’ (pages 33 - 34 of the SPD) states that RCBC will, in partnership with STDC and other partners, promote and support the development of new energy generation within the South Tees Area, including renewable energy development and the promotion of other innovative energy projects. Energy generation which contributes to meeting the Area’s assessed energy needs will be supported while all energy development should be appropriately site and designed so as to avoid unacceptable effects. Paragraph 3.49 goes on to state:
- “... provision will include opportunity for the siting of nationally significant energy generators that connect to the grid as well as supporting the Area through private energy supply. Specific requirements relating to these zones are identified within the Site Specific Development Principles.”*
- 3.3.13 Following on from the above, Development Principle ‘STDC10: Utilities’ states that RCBC will support the development of new infrastructure relating to energy generation, including power generation facilities utilising both conventional and renewable resources and CCS.
- 3.3.14 The Proposed Development is consistent with Development Principles STDC1, 6 and 10 as it involves the provision of a nationally significant electricity generating station combined with CCS technology that would support the decarbonisation of power generation and industry on Teesside and is clearly linked to a low carbon and circular economy.
- 3.3.15 Section 4 of the SPD sets out site specific development principles for the five main zones of the South Tees Area. These are the North Industrial Zone; North East Industrial Zone; Central Industrial Zone; South Industrial Zone; and Coastal Community Zone (Figure 6: Development Zones - page 48). The zones are shown in **Figure 3.2** below.

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



- 3.3.16 The North Industrial Zone ('NIZ') comprises the former Redcar Steelworks complex and is subject to Development Principle STDC11. This states that RCBC, in partnership with STDC, will encourage development proposals in this zone relating to port related industry, major space users/large scale manufacturing, energy innovation, power generation and storage, bulk materials and mineral processing. It goes on to state that in accordance with Policy N4 'Biodiversity and Geological Conservation' of the Local Plan, development proposals will need to take account of the need for and definition of a buffer zone to protect existing environmental assets within and adjacent to the NIZ.
- 3.3.17 The PCC Site is located within the NIZ, consistent with Development Principle STDC11, which supports power generation and energy innovation. As confirmed within the Design and Access Statement (Document Ref. 5.4) the siting and layout of the main buildings and structures at the PPC Site is such that these are set back from the boundaries thereby providing a buffer between them and the adjoining environmental assets (e.g. South Gare and Coatham Sands).
- 3.3.18 Parts of the Site also lie within the North East Industrial Zone ('NEIZ') and the Coastal Community Zone ('CCZ'), which are subject to Development Principles STDC12 and

15 respectively. Within the NEIZ, RBC in partnership with STDC will encourage development proposals relating to advanced manufacturing, research and development, testing and laboratory services and industrial and technology training. In the CCZ proposals for environmental enhancement, small-scale leisure and community uses and improved public access will be supported.

- 3.3.19 STDC has produced a design guide for the Teesworks/South Tees Area to help inform the design of development proposals. This is a non-statutory document and is not considered further within this Planning Statement. However, the Applicants have had regard to the design guide in developing the layout and design of the Proposed Development, notably the PCC Site, and this is covered within the Design and Access Statement.

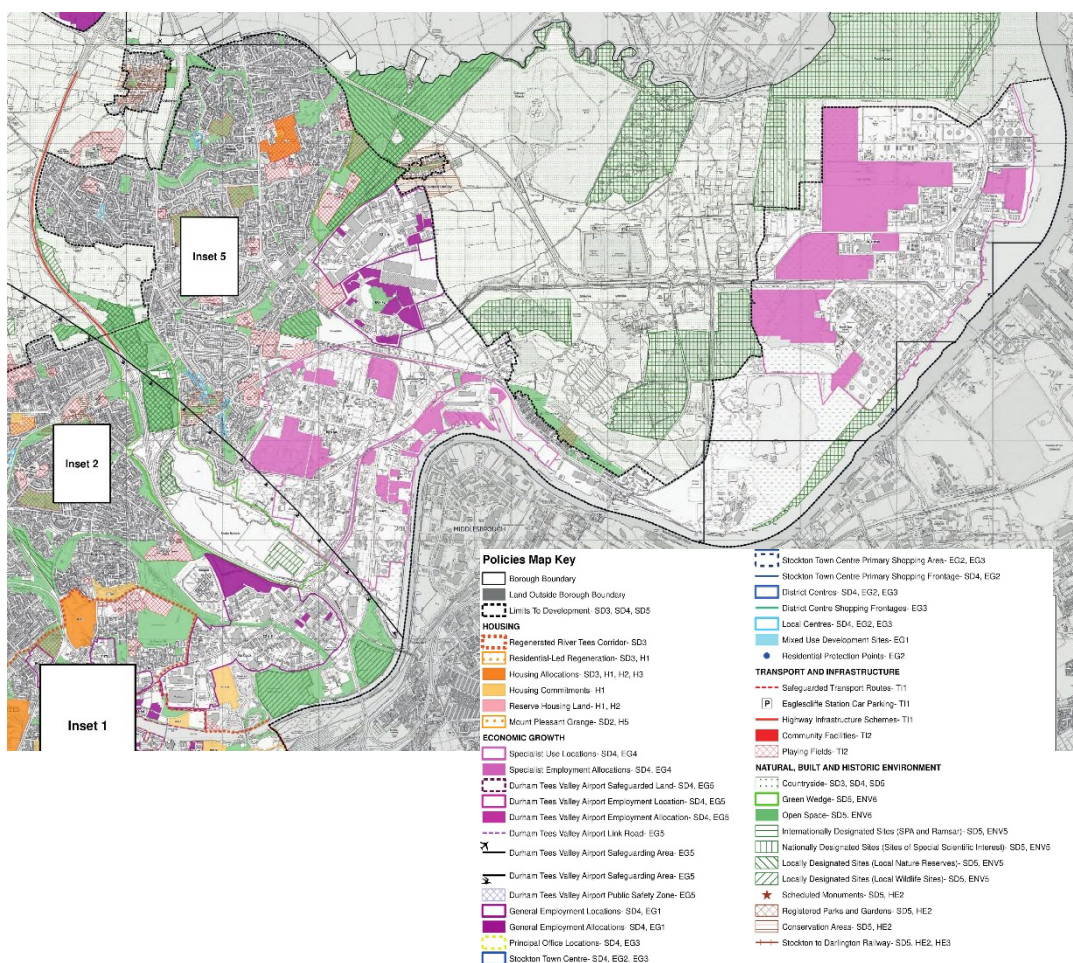
Stockton-on-Tees Borough Council Local Plan

- 3.3.20 The key planning allocations/designations and related policies that apply to the parts of the Site within the administrative boundary of STBC are listed below. The parts of the Site within STBC comprise sections of the CO₂ gathering network and gas connection in addition to the construction laydown areas required to facilitate their installation:

- Development Limits – Policy SD2.
- Specialist Use Locations – Policy EG4.
- Durham Tees Valley Airport Safeguarding Area – Policy EG5.
- Internationally Designated Sites (SPA and Ramsar) & Nationally Designated Sites (SSSIs) – Policy ENV5.

- 3.3.21 The above allocations/designations are shown upon the Policies Map of the Local Plan an extract of which is reproduced below as **Figure 3.3** below.

Figure 3.3 – Stockton-on-Tees Local Plan Policies Map



Tees Valley Joint Minerals and Waste DPDs

3.3.22 The key minerals and waste allocations and related policies that apply to parts of the Site are listed below:

- Safeguarding of Minerals Resources from Sterilisation (Salt & Gypsum) – Policy MWC4.
- General Location for Large Waste Management Facilities – Policy MWC8.
- Safeguarding of Port and Rail Facilities (Marine Dredged Sand & Gravel Safeguarded Wharves – Teesport) – Policy MWC11.

3.3.23 It is not considered that there is any conflict between the Proposed Development and the above minerals and waste policies.

3.3.24 The Proposed Development is assessed against the above and other relevant development plan policies at within Section 6.

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') such as the Proposed Development, notably the National Policy Statements ('NPSs') for energy infrastructure (including the draft revised NPSs), while also identifying the other relevant legislative and policy matters that the Secretary of State ('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 NSIP applications are set out within the following:

- The Planning Act 2008 (the 'PA 2008').
- The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the 'APFP 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, granted ('made') in the form of a 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 BEIS. 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 and operation of the development in question.

4.2.3 Elements of the Proposed Development fall within the definition of a NSIP under Section 14(1)(a) and Sections 15(1) and (2) of the PA 2008, notably the electricity generating station (Work No. 1), which will have a generating capacity of greater than 50 MW output (up to 860 MW). A DCO is therefore required to authorise this element of the Proposed Development in accordance with Section 31 of the PA 2008.

4.2.4 Other elements of the Proposed Development are the subject of a direction made by the SoS under Sections 35(1) and 35ZA of the PA 2008. The Applicants submitted a request for direction under Section 35(1) and 35ZA to the SoS for BEIS on 25 November 2019. This sought a direction from the SoS to confirm that the following elements (the "*Specified Elements*") of the Proposed Development should be treated as development for which development consent is required under the PA 2008 in addition to the electricity generating station (and its associated development). The Specified Elements were defined as follows:

- the CO₂ gathering network (Work No. 6), including the CO₂ pipeline connections from the electricity generating station and industrial facilities on Teesside to transport the captured CO₂ (including connections under the tidal River Tees);
 - the CO₂ gathering/booster station (Work No. 7) (also known as the high-pressure compressor station) to receive captured CO₂ from the electricity generating station and gathering network; and
 - the CO₂ transport pipeline (Work No. 8) for the onward transport of the captured CO₂ to a suitable offshore geological storage site (onshore element only).
- 4.2.5 The SoS issued a direction on the 17 January 2020 which confirmed that the above Specified Elements, together with any matters/development associated with them, are to be treated as development for which development consent is required (in so far as they form a part of the Proposed Development). A copy of the direction made under Sections 35(1) and 35ZA is provided at **Appendix 1**.
- 4.2.6 Section 115(1)(b) of PA 2008 also provides that a DCO can include consent for ‘associated development’, that is, development that is not part of, but is associated with the NSIP. This may be development that supports the construction or operation of the NSIP, which helps to address the impacts of the NSIP or is of a type of development normally brought forward with the particular type of NSIP. The Gas Connection (Work No. 2), Electrical Connection (Work No. 3); Water Supply Connection Corridor (Work No. 4); Water Discharge Connection Corridor (Work No. 5); Laydown Areas (Work No. 9); and Access and Highway Works (Work No. 10); will support the construction and operation of the NSIP and also the Specified Elements and are therefore considered to be associated development for the purpose of Section 115(1)(b) of the PA 2008.
- 4.2.7 In view of the above, the Applicants have therefore submitted an application for development consent to the SoS for the whole of the Proposed Development as set out above (excluding the offshore elements).
- 4.2.8 Under the PA 2008 regime, the policy framework for examining and determining applications for development consent is provided by NPSs. Section 5 of the PA 2008 allows the relevant SoS to designate NPSs setting out national policy in relation to the types of NSIPs listed at Section 14 of the PA 2008. The NPSs are the primary policy used by the relevant SoS to examine and determine applications for NSIPs.
- 4.2.9 Section 104 of the PA 2008 provides that where a NPS has effect, the SoS must determine the application in accordance with the relevant NPSs and appropriate marine policy documents (if any) 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, unless this would:
- lead to the UK being in breach of its international obligations;

- be in breach of any statutory duty that applies to the SoS;
 - be unlawful;
 - result in the adverse impacts of the development outweighing the benefits; or
 - be contrary to any condition prescribing how decisions regarding an NSIP application are to be taken.
- 4.2.10 Section 105 of the PA relates to decision on applications where no NPS has effect, that is, where there is no NPS in place relating to the specific type of development. In such cases, Section 105 states that in deciding the application the SoS must have regard to any relevant 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.
- 4.2.11 A number of NPSs have been designated in relation to energy infrastructure (EN-1 to EN-6) of which those relevant to the Proposed Development are considered later within this section of the Planning Statement. While these NPSs consider carbon capture, they do not specifically contain policies on all of the Specified Elements of the Proposed Development, notably the CO₂ Gathering Network Corridor (Work No. 6). Those elements therefore do not fall within the scope of the NPSs as designated. However, the SoS's section 35 Direction provides in relation to the Specified Elements that *"the Overarching Policy Statement for Energy (EN-1) has effect in relation to an application for development consent under this Direction in a manner appropriately equivalent so far as the considerations and impacts described in EN-1 are relevant to the proposed Development"*. That Direction was made before the High Court handed down judgment in *EFW Group Limited v Secretary of State for Business, Energy and Industrial Strategy* [2021] EWHC 2697 (Admin) in which the Court determined that development subject to a section 35 direction (albeit one that did not specifically direct that the relevant NPS had effect in relation to the proposed development) should be determined pursuant to the decision-making framework in Section 105 of the PA 2008, rather than Section 104. Permission to appeal that judgment was refused by the Court of Appeal in February 2022. In light of the High Court judgment, the Applicants consider that it would be prudent for the ExA to consider both Sections 104 and 105 of the PA 2008. A copy of the judgement is provided at **Appendix 2**.
- 4.2.12 NPS EN-1 and EN-2 have effect in relation to the Low Carbon Electricity Generating Station, which falls within the definition and thresholds under Sections 14 and 15 of the PA 2008, together with its associated development, and is within the scope of the NPSs. The application for development consent for those elements must therefore be assessed and determined pursuant to Section 104, and benefit from the presumption in favour of approval set out in the NPSs.
- 4.2.13 The position in respect of the CO₂ Gathering Network Corridor and its associated development (i.e. the Specified Elements in the Section 35 Direction) now needs to

be considered in light of the *EFW Group Limited* case. NPS EN-1 could only ‘have effect’ in relation to those elements of the application for the purposes of Section 104 insofar as the legal effect of the Section 35 Direction (as set out above) is to bring them within the scope of the NPSs. In the *EFW Group Limited* case, the High Court decided that the Section 35 Direction in question could not have the effect of bringing the development within the scope of NPS EN-1 which has been drafted specifically to apply only to those projects that are within the definition of an NSIP (see paragraph 60 of the Judgment). The relevant Direction in that case did not include an equivalent provision in relation to the NPS to that which has been made here, and therefore the implications of such a provision are not considered in the Judgment.

- 4.2.14 If following the *EFW Group Limited* case the SoS decides that the Direction does not have that intended legal effect, those parts of the application will need to be determined pursuant to section 105. Accordingly, the Applicants consider that it would be prudent for the ExA to consider what its recommendation would be on both bases, so as to enable the SoS to determine the application with the benefit of that advice whichever statutory route he ultimately determines to be appropriate.
- 4.2.15 The Applicants do not consider that the procedural route by which a decision is reached should affect the outcome. Whether the application is determined in accordance with the relevant NPSs or they are treated as important and relevant considerations will not have a material impact on the decision given the established need for and significant public interest benefits of the Proposed Development, the limited adverse impacts and the overall consistency with relevant policy.

4.3 National Policy Statements for Energy Infrastructure

- 4.3.1 As confirmed above, a number of NPSs have been designated in relation to energy infrastructure. These were published in July 2011 by the SoS for the Department for Energy and Climate Change (now BEIS). The designated NPSs include an overarching NPS setting out general policies and assessment principles for energy infrastructure and a number of technology specific NPSs. The NPSs considered to be of relevance to the Proposed Development (and which together provide the primary basis for the SoS’s decision on the Application) are as follows:
- Overarching NPS for Energy (EN-1).
 - NPS for Fossil Fuel Electricity Generating Infrastructure (EN-2).
 - NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4).
 - NPS for Electricity Networks Infrastructure (EN-5).
- 4.3.2 The above energy NPSs are considered later within this section.
- 4.3.3 On 27 June 2019, following advice from The Climate Change Committee (‘CCC’), the UK Government announced a new carbon reduction ‘Net Zero’ target for 2050. This was given effect by an amendment to the Climate Change Act 2008 (the target for

the net UK carbon emissions for 2050 changed from 80% to 100% below the 1990 baseline).

4.3.4 In response to the Net Zero target, the Government's Energy White Paper ('EWP'), published in December 2020, confirmed that the SoS for BEIS has decided that it is appropriate to review the suite of NPSs for energy infrastructure, to ensure that they reflect the policies set out in the EWP, and that the Government continues to have a planning policy framework that can deliver the investment required to build the infrastructure needed for the transition to Net Zero by 2050. Draft revised NPSs for energy infrastructure were published for consultation in September 2021. As yet, no date has been set for the designation of the draft energy NPSs.

4.3.5 While the review of energy NPSs is undertaken, the current suite of NPSs remains relevant Government policy and has effect for the purposes of the PA 2008.² They therefore continue to provide a proper basis on which PINS can examine, and the SoS can make decisions on, applications for energy NSIPs. This has been confirmed in recent SoS decisions, notably that for the Thurrock Flexible Generation Plant DCO (dated 16 February 2022), where the SoS stated:

"National Policy Statements EN-1 (the Overarching National Policy Statement for Energy – "NPS EN-1") and EN-2 (the National Policy Statement for Fossil Fuel Electricity Generating Infrastructure – "NPS EN-2") set out a national need for development of new nationally significant electricity generating infrastructure of the type proposed by the Applicant. NPS EN-1 sets out the assessment of development consent applications for electricity generating infrastructure should start with a presumption in favour of granting consent. The ExA noted the strong need case for electricity generating projects that is set out in NPS EN-1 and NPS EN-2. The Energy White Paper, "Powering our Net Zero Future", which was published on 14 December 2020 announced a review of the suite of energy National Policy Statements but confirmed that the current National Policy Statements were not being suspended in the meantime. The relevant energy National Policy Statements, therefore, remain the basis for the Secretary of State's consideration of the Application." (paragraph 4.2 of the SoS's decision letter) .

4.3.6 Further to the above, the EWP (page 54) states:

"... the need for the energy infrastructure set out in the energy NPS remains, except in the case of coal-fired generation.... Nothing in this white paper should be construed as setting a limit on the number of development consent orders which may be granted for any type of generating infrastructure set out in the energy NPS."

4.3.7 An overview of the current NPSs of relevance to the Proposed Development is provided below.

² See paragraph 1.6.1 of EN-1; EN-2 and EN-4 and paragraph 1.5.1 of EN-5.

Overarching National Policy Statement for Energy (EN-1)

- 4.3.8 Part 2 of EN-1 'Government policy on energy and energy infrastructure development' outlines the policy context for the development of nationally significant energy infrastructure. It confirms the following:
- the Government's commitment to meet its legally binding target to cut greenhouse gas emissions by at least 80% by 2050³ compared to 1990 levels;
 - the need to affect a transition to a low carbon economy so as to reduce greenhouse gas emissions; and
 - the importance of maintaining secure and reliable energy supplies as older fossil fuel generating plants close as a result of the European Union Emissions Trading System ('EU ETS') and the UK moves toward a low carbon economy.
- 4.3.9 Paragraph 2.1.2 highlights that energy is vital to economic prosperity and social well-being and, as such, it is important to ensure that the UK has secure and affordable energy. Furthermore, producing the energy the UK requires and getting it to where it is needed necessitates a significant amount of infrastructure, both large and small scale.
- 4.3.10 Paragraphs 2.2.20 - 2.2.26 of EN-1 deal with the 'security of energy supplies'. Paragraph 2.2.20 states that it is critical that the UK continues to have secure and reliable supplies of electricity as it makes the transition to a low carbon economy. Furthermore, that to manage the risks to achieving security of supply the UK needs:
- Sufficient electricity capacity to meet demand at all times, including a 'safety margin of spare capacity' to accommodate unforeseen fluctuations in supply and demand.
 - Reliable associated supply chains (for example, fuel for power stations) to meet demand as it rises.
 - A diverse mix of technologies and fuels (and fuel supply routes), so that it does not rely on any one technology or fuel.
- 4.3.11 Part 3 of EN-1 'The need for new nationally significant energy infrastructure projects' defines and sets out the 'need' for nationally significant energy infrastructure. Paragraph 3.1.1 states that the UK needs all types of energy infrastructure covered by the NPS in order to achieve energy security at the same time as dramatically reducing greenhouse gas emissions. Paragraph 3.1.2 goes on to state that it is for industry to propose the type of energy infrastructure and that the Government does

³ On 27 June 2019, the 'Climate Change Act 2008 (2050 Target Amendment) Order 2019' came into force. The Order enshrines within UK law, the Government's commitment to achieve 'net zero' in terms of greenhouse gas emissions by 2050. The order amends the previous target (within the Climate Change Act 2008) which was seeking achievement of a reduction in greenhouse gas emissions of 80% by 2050 compared to 1990 levels.

not consider it appropriate for planning policy to set targets for or limits on different technologies.

- 4.3.12 Notably, paragraph 3.1.3 stresses that the SoS should assess applications for development consent for the types of infrastructure covered by the energy NPSs “...on the basis that the Government has demonstrated that there is a need for those types of infrastructure...” (with the scale and urgency of that need being described in the relevant part of EN-1). Paragraph 3.1.4 confirms that the SoS should give substantial weight to the contribution that all projects would make toward satisfying this need when considering applications under the PA 2008. As such, EN-1 is clear that the need that exists for new energy infrastructure is not open to debate or interpretation.
- 4.3.13 Further to paragraph 3.1.3, Section 3.3 of Part 3 of EN-1 sets out a number of key reasons why the Government believes that there is an urgent need for new electricity infrastructure, including:
- Meeting energy security and carbon reduction objectives - the need to ensure there is sufficient electricity generating capacity to meet maximum peak demand, with a safety margin of spare capacity to accommodate unexpectedly high demand and to mitigate risks such as unexpected plant closures and extreme weather events; and a diverse mix of power generation to reduce reliance on any one type of generation or source of fuel or power (EN-1 notes that fossil fuel generation can be brought on line quickly when demand is high and shut down when it is low, thus complementing generation from nuclear and intermittent generation from renewables).
 - The need to replace closing electricity generating capacity – EN-1 identifies that at least 22 GW of existing electricity generating capacity will need to be replaced by 2020, as a result of tightening environmental regulation and aging power stations closing; in addition to this about 10 GW of nuclear generating capacity is expected to close over the next 20 years (by 2030). In response to this, EN-1 identifies a minimum need for 59 GW of new generating capacity over the period to 2025 (paragraph 3.3.23).
 - The need for more electricity capacity to support the increased supply from renewables - decarbonisation of electricity generation is reliant on a dramatic increase in the amount of renewable energy, however, some renewable sources (such as wind, solar and tidal) are intermittent and cannot be adjusted to meet demand. As a result, the more renewable generating capacity the UK has, the more generation capacity it will require overall to provide back up at times when the availability of renewable sources is low; as such EN-1 (paragraph 3.3.11) recognises that there will still be a role for fossil fuel generation, notably gas-fired generation, to provide a cost-effective means of 'back up' at short notice.
 - Future increases in electricity demand - even with major improvements in overall energy efficiency, it is expected that demand for electricity will increase, as significant sectors of energy demand (such as industry, heating and transport)

switch from being powered by fossil fuels to using electricity. As a result of this, total electricity consumption could double by 2050 and, depending upon the choice of how electricity is supplied, total capacity may need to more than double to be sufficiently robust to all weather conditions.

- 4.3.14 Following on from paragraph 3.1.3, paragraphs 3.3.15 - 3.3.24 of EN-1 deal with the urgency of the need for new electricity generating capacity. Paragraph 3.3.15 states that in order to secure energy supplies that enable the UK to meet its climate change obligations to 2050, there is an urgent need for new energy infrastructure to be brought forward as soon as possible.
- 4.3.15 Box 2.1 of EN-1 (after paragraph 2.2.24) highlights the continuing role of natural gas in safeguarding the security of the UK's electricity supplies as we move to a low carbon economy. It notes that gas will continue to play an important role thanks to its diverse sources of supply and relatively low greenhouse gas emissions compared to other fossil fuels. For example, it produces around half as much carbon dioxide per unit of electricity generated compared to coal and with the planned closure of coal-fired power stations in the UK by 2025, the gas-fired power stations are expected to plug some of the gap in electricity generation, security and flexibility. EN-1 suggests the share of natural gas as part of UK primary energy demand will fall from 41% in 2010 to around 33% by 2020 but is then likely to rise again, potentially to around 36% by 2025, as coal-fired power stations close (paragraph 3.8.1). It goes on to state that new fossil fuel power stations must be constructed and operate in line with increasingly demanding climate change goals.
- 4.3.16 Paragraphs 3.6.4 - 3.6.7 of EN-1 relate specifically to Carbon Capture and Storage ('CCS'). They explain the role CCS can have in meeting emissions targets while also maintaining security of supply (allowing gas-fired power stations to provide flexible low carbon electricity generation) and that CCS has the potential to reduce carbon emissions by up to 90%. Paragraph 3.6.4 notes that while there is a high level of confidence that the technology involved in CCS will be effective, as the complete chain of CCS has yet to be demonstrated at commercial scale on a power station, there is a lack of knowledge about the future deployment of CCS in the economy. Paragraph 3.6.6 states that in order to support the delivery of CCS policy, the Government will require all new fossil fuel generating stations at or above 300 MW to be Carbon Capture Ready ('CCR').
- 4.3.17 Paragraph 3.6.8 of EN-1 further underlines the need for new fossil fuel generation with CCS:
- "It is important that such fossil fuel generating capacity should become low carbon, through development of CCS, in line with carbon reduction targets. Therefore there is a need for CCR fossil fuel generating stations and the need for the CCS demonstration projects is urgent." [underlining added]*
- 4.3.18 Section 3.8 of EN-1 'The need for nationally significant gas infrastructure' is relevant as it highlights (paragraph 3.8.1) that although the UK's reliance on fossil fuels will

fall, the transition will take some time, and gas will continue to play an important part in the Country's fuel mix for many years to come. The continued need for gas-fired generation to form part of the energy mix, albeit with CCS, in order to ensure security and flexibility of electricity supplies, is recognised in more recent government policy, notably the Energy White Paper ('EWP'), December 2020.

- 4.3.19 Clearly one of the main objectives, and a key benefit of the Proposed Development, is to demonstrate flexible, dispatchable gas-fired generation with CCUS at a commercial scale in the UK. Furthermore, it meets the requirement for new fossil fuel generating station at or above 300 MW to be CCR, being part of a full chain CCUS project, with CO₂ emissions being captured from day one of the commercial operation of the Low Carbon Electricity Generating Station. The Proposed Development would therefore help underpin the security of UK electricity supplies while supporting the transition to a low carbon economy and the achievement of the Government's Net Zero by 2050 target.
- 4.3.20 Part 4 of EN-1 sets out a number of 'assessment principles' that must be taken into account by applicants and the SoS in preparing and determining applications for nationally significant energy infrastructure. General points include (paragraph 4.1.2) the requirement for the SoS, given the level and urgency of need for the infrastructure covered by the energy NPSs, to start with a presumption in favour of granting consent for applications for energy NSIPs. This presumption applies unless any more specific and relevant policies set out in the relevant NPS clearly indicate that consent should be refused or any of the considerations referred to in Section 104 of the PA 2008 (noted above – paragraph 4.2.9) apply.
- 4.3.21 Section 6 of this Planning Statement demonstrates that there is no conflict between the Proposed Development and relevant policies in the NPSs and that none of the considerations set out in Section 104 of the PA 2008 apply.
- 4.3.22 Paragraph 4.1.3 states that in considering any application for development consent, and 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 and any long-term or wider benefits; and
 - its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.
- 4.3.23 Paragraph 4.1.4 continues by stating that within this context the SoS should take into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels.
- 4.3.24 Other assessment principles include the matters to be covered within any Environmental Statement ('ES'); the Habitats and Species Regulations; the consideration of alternatives; criteria for 'good design'; grid connection; consideration of Combined Heat and Power ('CHP'); consideration of CCS and CCR;

climate change adaptation; pollution control and environmental regulatory regimes; safety; hazardous substances; health; common law and statutory nuisance and security, amongst others.

- 4.3.25 Part 5 of EN-1 deals with the ‘Generic Impacts’ of energy infrastructure. These include impacts that occur in relation to all or most types of energy infrastructure in addition to others that may only be relevant to certain technologies. Paragraph 5.1.2 stresses that the list of impacts is not exhaustive and that applicants should identify the impacts of their projects in the ES in terms of both those covered by the NPSs and others that may be relevant. Generic impacts include land use; socio-economics; air quality and emissions; noise and vibration; dust, odour, artificial light, steam and smoke; traffic and transport; civil and military aviation; biodiversity and geological conservation; historic environment; landscape and visual; water quality and resources; flood risk and waste, amongst others. In relation to each of the generic impacts listed within Part 5, guidance is provided on how the applicant should assess these within their application and also the considerations that the SoS should take into account in decision-making.
- 4.3.26 In addition to the assessment principles and generic impacts covered by EN-1, NPSs EN-2, EN-4 and EN-5 set out the factors (e.g. those influencing site selection) and ‘assessment and technology specific’ considerations to be taken into account in the preparation and assessment of applications for fossil fuel generating stations, gas pipelines and electricity network infrastructure, including relevant environmental matters. These are considered below.
- 4.3.27 The Proposed Development’s compliance with the assessment principles and generic and technology specific impacts of the relevant NPSs is considered in Section 6 of this Planning Statement.

National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2)

- 4.3.28 EN-2 is one of the suite of technology specific NPSs that sit under EN-1. It deals specifically with fossil fuel infrastructure, including gas-fired generating stations.
- 4.3.29 EN-2 reiterates the vital role fossil fuel generating stations will play in providing reliable electricity supplies and a secure and diverse mix as the UK makes its transition towards a secure decarbonised electricity system. It also restates from EN-1 the Government policy that all new gas-fired generating stations should be CCR (paragraph 2.3.4).
- 4.3.30 Part 2 of EN-2 deals with the assessment of and technology-specific information relevant to fossil fuel generating stations. This includes the factors influencing site selection (e.g. land use, transport infrastructure, water resources and grid connection); climate change adaptation; consideration of good design and also the potential impacts of generating stations to be taken into account in the preparation and consideration of the application for development consent. Potential technology-specific impacts include air emissions; landscape and visual; noise and vibration and water quality and resources. It is notable in respect of landscape and visual impacts

that EN-2 (paragraph 2.6.5) acknowledges that it is not possible to eliminate such impacts entirely due to the scale of the buildings and structures associated with generating stations and that mitigation will therefore need to be aimed at reducing visual intrusion in the landscape and minimising impacts on visual amenity as far as reasonably practicable.

National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4)

- 4.3.31 EN-4 is relevant to the Proposed Development as natural gas will be used as the fuel for the operation of the electricity generating station and the Proposed Development includes a gas supply pipeline. The Gas Connection is ‘associated development’ as defined by Section 115 of the PA 2008.
- 4.3.32 Paragraph 1.1.1 (Part 1) states that the efficient import, storage and transmission of natural gas is crucial to meeting the UK energy needs during the transition to a low carbon economy. It notes that we cannot achieve national objectives relating to security of supply without enabling investment in new infrastructure.
- 4.3.33 Part 2 of EN-4 deals with assessment and technology-specific information, including consideration of climate change adaptation and good design and other factors that are relevant to gas pipelines and supply infrastructure. Key technology specific considerations for gas pipelines include proximity to sensitive land uses (e.g. residential development and schools) when planning routes; pipeline safety; noise and vibration; biodiversity; landscape and visual; water quality and resources; and soils and geology.

National Policy Statement for Electricity Networks Infrastructure (EN-5)

- 4.3.34 EN-5 is also relevant to the Proposed Development as it includes a new electrical connection between the Low Carbon Electricity Generating Station and the National Electricity Transmission System for the export of electricity. As with the Gas Connection, the Electrical Connection is ‘associated development’.
- 4.3.35 Part 2 of EN-5 deals with assessment and technology-specific information relating to electrical grid connection infrastructure. This includes factors influencing site selection, general assessment principles for electricity networks, climate change adaptation and consideration of good design. Part 2 also identifies a number of potential impacts for consideration, including biodiversity and geological conservation, landscape and visual, noise and vibration and electric and magnetic fields.

4.4 Draft Revised National Policy Statements for Energy Infrastructure

- 4.4.1 As confirmed above, draft revised NPSs for energy infrastructure were published by the Government for consultation in September 2021. As yet, no date has been set for the designation of the revised energy NPSs.
- 4.4.2 While the current suite of NPSs for energy infrastructure remain relevant Government policy and have effect for the purposes of the PA 2008, the Applicants

consider that the draft revised NPSs are a matter that is important and relevant to the SoS's decision-making on the Application. The following draft revised NPSs are considered to be of relevance to the Proposed Development:

- Draft Overarching National Policy Statement for Energy (EN-1).
- Draft National Policy Statement for Natural Gas Electricity Generating Infrastructure (EN-2).
- Draft National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4).
- Draft National Policy Statement for Electricity Networks Infrastructure (EN-5).

4.4.3 Paragraph 1.3.2 of draft EN-1 sets out the thresholds for NSIPs in the energy sector. It confirms that the PA 2008 defines (subject to exceedance of the relevant thresholds) electricity generating stations; large gas reception and liquified natural gas facilities and underground gas storage facilities; cross-country gas and oil pipelines and Gas Transporter pipelines; and above ground electric lines at or above 132kV, as being NSIPs.

4.4.4 Significantly, paragraph 1.3.3 of draft EN-1 states that where the need for a particular type of energy infrastructure set out in 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 will have effect alone and will be the primary basis for the SoS's decision making. It goes onto state that:

"This will be the case for, but is not limited to, hydrogen pipeline and storage infrastructure, Carbon Capture Storage (CCS) pipeline infrastructure and other forms of low carbon generation infrastructure not included in EN-2 or EN-3."

4.4.5 While at paragraph 1.6.2 draft EN-1 states that the 2021 amendments to the NPSs will only have effect in relation to applications for development consent accepted for examination after the designation of those amendments, paragraph 1.6.3 goes onto state that the draft NPSs are potentially capable of being important and relevant considerations in the decision-making process.

4.4.6 Part 2 of draft EN-1 outlines the policy context for the development of nationally significant energy infrastructure. Paragraph 2.1.2 states that to produce enough energy required for the UK and ensure it can be transported to where it is needed, a significant amount of infrastructure is needed at both local and national scale.

4.4.7 Section 2.2 confirms the Government's legally binding target of achieving net zero in terms of greenhouse gas emissions by 2050. 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, while maintaining adequate, secure and reliable energy supplies and supporting economic growth. Paragraph 2.3.3 states:

"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 them into and around the country. It also includes the infrastructure needed to capture, transport and store carbon dioxide. 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."

- 4.4.8 Draft EN-1 therefore underlines the importance of technologies such as carbon capture and storage in decarbonising power generation and industry in order to achieve Net Zero by 2050.
- 4.4.9 Section 2.4 of draft EN-1 deals with decarbonising the power sector. Paragraph 2.4.4 highlights that the Government is developing business models to incentivise the deployment of CCUS facilities in the UK and that it will put in place a commercial framework which will enable developers to finance the construction and operation of power and industrial CCUS facilities. The Proposed Development involves both power and industrial CCUS facilities and in October 2021 it was selected by Government, as part of the East Coast Cluster, as one of the first two 'Track 1' low-carbon industrial clusters to be taken forward as part of its CCUS cluster sequencing process.
- 4.4.10 Part 3 of draft EN-1 covers 'The need for new nationally significant energy infrastructure projects'. It sets out why the Government sees a need for significant amounts of new large-scale energy infrastructure to meet its energy objectives and why it considers that the need for such infrastructure will often be urgent (paragraphs 3.1.1 and 3.1.2). It goes on to state that *"The Secretary of State should give substantial weight to consideration of need. The Secretary of State is not required to consider separately the specific contribution or any individual projects to satisfying the need established in this NPS."*
- 4.4.11 Section 3.2 provides guidance on SoS decision-making. Paragraph 3.2.1 confirms that the Government's objectives for the energy system are to ensure that supplies of energy always remain secure, reliable, affordable and consistent with net zero emissions by 2050. It goes on to state that the UK needs a range of different types of energy infrastructure to meet these objectives, including the infrastructure described in draft EN-1 as well as new and emerging technologies (paragraphs 3.2.1 and 3.2.2). It makes clear (paragraph 3.2.3) that new coal or large-scale oil-fired electricity generation is not consistent with the transition to Net Zero and not included in the draft NPS.
- 4.4.12 Consistent with the current NPSs, draft EN-1 states (paragraph 3.2.4) that it is for industry to propose new energy infrastructure (with the exception of coal and oil-fired generation) within the strategic framework provided by government, and that the Government does not consider it appropriate for planning policy to set limits on different technologies. Furthermore (paragraph 3.2.5):
- "The Secretary of State should therefore assess all applications for development consent for the types of infrastructure covered by the energy NPSs on the basis that*

the government has demonstrated that there is a need for those types of infrastructure, as described for each of them in this Part.”

- 4.4.13 Paragraph 3.2.6 confirms that Part 3 of draft EN-1 identifies the level of need for new energy infrastructure. In relation to the weight to be given that that need, the SoS has determined that substantial weight should be given to this need when considering applications for development consent under the PA 2008.
- 4.4.14 Draft EN-1 states (paragraph 3.2.7) that it, along with any technology specific energy NPSs, sets out policy for nationally significant energy infrastructure covered by Sections 15 to 21 of the PA 2008.
- 4.4.15 Paragraph 3.2.9 confirms 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, there is a power under Section 35 for the SoS, on request, to give a direction that a development should be treated as a nationally significant infrastructure project for which development consent is required. This could include novel technologies or processes which may emerge during the life of this NPS. In these circumstances any application for development consent would need to be considered in accordance with this NPS. Notably, paragraph 3.2.9 goes into states that:
- “... where the application is for CCS 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 3.5.1 to 3.5.7 of this NPS.”*
- 4.4.16 In considering ‘The need for new electricity generating capacity’, draft EN-1 confirms that there is an urgent need for new electricity generating capacity (paragraph 3.3.20). The role of gas-fired plants with CCS in meeting this need is recognised at paragraph 3.3.37:
- “Gas-fired plants with CCS can provide reliable low carbon generation capacity and are intended to reduce emissions compared to unabated gas-fired plants by 90% or more. Plants equipped with post-combustion CCS could provide flexible generation that is able to ramp up or down to meet demand, however, the technology is not currently suited to providing fast-start peaking capacity and has not been deployed in the UK to date. Although the barriers to deployment are commercial rather than technical, deployment of power CCS is reliant on the availability of infrastructure for the transportation and storage of CO₂. Its potential will become clearer by 2030 by which time we expect at least one power CCS plant to be operational.”*
- 4.4.17 The Proposed Development includes a gas-fired electricity generating station that will be fitted with post-combustion carbon capture plant and connected to CCS infrastructure. As confirmed above, it has been selected by Government, as one of the first two ‘Track 1’ low-carbon industrial clusters to be taken forward as part of its CCUS cluster sequencing process.
- 4.4.18 The urgency of need for new electricity infrastructure is set out a paragraphs 3.3.59 - 3.3.65 of draft EN-1. Paragraph 3.3.60 confirms that the Government has committed to reduce GHG emissions by ~78% by 2035 under carbon budget 6.

According to the Impact Assessment for this carbon budget this could lead to a 40-60% increase in demand from electricity by 2035, most of which will need to be low carbon. Paragraph 3.3.61 continues stating that:

“Given this need for new electricity infrastructure and the time it takes for electricity NSIPs to move from design conception to operation, there is an urgent need for new (and particularly low carbon) electricity NSIPs to be brought forward as soon as possible, given the crucial role of electricity as the UK decarbonises its economy.”

- 4.4.19 Paragraph 3.3.62 is clear in stating that it is not the Government’s intention to propose limits on any new electricity infrastructure that can be consented in accordance with the energy NPSs, nor it is the role of the planning system to deliver specific amounts or limit any form of electricity infrastructure covered by the NPSs. Furthermore, a large number of consented projects can help deliver an affordable electricity system, by driving competition and reducing costs within and amongst different technology and infrastructure types. Paragraph 3.3.65 goes onto state that within the strategic framework established by government, it is for industry to propose the specific types of development that they assess to be viable.
- 4.4.20 Section 3.5 of draft EN-1 deals with ‘The need for new nationally significant carbon capture and storage infrastructure’. Paragraph 3.5.1 makes clear that new CCS infrastructure will be needed to ensure the transition to a net zero economy and that as well as its role in reducing emission from gas-fired electricity generation, it will also be needed to capture and store CO₂ emissions from industrial processes, hydrogen production from natural gas and the use of bioenergy. The Proposed Development will capture emission from both power generation and industry on Teesside and also has the potential to do so from future hydrogen productions. It will therefore contribute toward the transition to a Net Zero economy.
- 4.4.21 Paragraph 3.5.3 states that there do not appear to be any realistic alternatives to new CCS infrastructure for delivering Net Zero by 2050. Paragraphs 3.5.4 - 3.5.7 set out why CCS is needed:
- BEIS analysis suggest that gas-fired electricity generation with CCS is required to deliver an affordable, reliable electricity system that is consistent with climate change targets.
 - CCS is fundamental to the deep decarbonisation of energy intensive industries such as chemical and cement plants and refineries. Alternative methods of decarbonising industry include improving energy efficiency, electrification of heat, and fuel switching to hydrogen or biomass as fuel or feedstock. However, these alternatives are limited as many of the emissions are process emissions, and as a result, CCS is essential for decarbonising energy intensive industry, either on its own or in combination with other measures.
 - CCS is needed to enable domestic production of low carbon hydrogen from natural gas (‘blue hydrogen’) as well as unlocking the potential use of biomass for low carbon hydrogen production with negative emissions. While hydrogen can

be produced from water using electrolysis ('green hydrogen') without CCS, the Government's view is that both forms of hydrogen are needed to achieve the scale of low carbon hydrogen needed for Net Zero.

- 4.4.22 Paragraphs 3.5.8 and 3.5.9 deal with 'Bringing forward CCS infrastructure projects'. As with electricity infrastructure, these paragraphs make clear that it is not the role of the planning system to deliver or limit specific amounts of CCS infrastructure and it is for industry to propose the specific types of developments that they assess to be viable. The SoS should therefore act in accordance with the policy set out at Section 3.2 of the NPS when assessing proposals for new CCS NSIPs.
- 4.4.23 An updated suite of technology specific draft revised NPSs were published alongside draft NPS EN-1.
- 4.4.24 Draft EN-2 deals with gas-fired electricity generating infrastructure, not fossil fuel generating infrastructure in general, reflecting Government policy in draft EN-1 (paragraph 3.2.3) that new coal or large-scale oil-fired electricity generation is not consistent with the transition to Net Zero.
- 4.4.25 Draft EN-4 continues to deal with gas supply infrastructure and gas and oil pipelines. Paragraph 1.6.2 recognises that pipelines could be carrying different types of gas but states that the NPS only has effect for those nationally significant infrastructure pipelines which transport natural gas or oil. Paragraph 1.6.5 states that while the guidance in the NPS does not have effect for CCS infrastructure, it may contain information that is important and relevant to the SoS's decision on applications for CCS infrastructure.
- 4.4.26 Draft EN-5 continues to deal with electricity networks infrastructure.
- 4.4.27 Part 4 of draft EN-1 sets out the 'assessment principles' that must be taken into account by applicants and the SoS in preparing and determining applications for nationally significant energy infrastructure. Part 5 deals with the 'Generic Impacts' of energy infrastructure. These include impacts that occur in relation to all or most types of energy infrastructure.
- 4.4.28 In addition to the assessment principles and generic impacts set out in draft EN-1, draft NPSs EN-2, EN-4 and EN-5 set out the factors and 'assessment and technology specific' considerations to be taken into account in the preparation and assessment of applications for different types of energy infrastructure technologies.
- 4.4.29 An assessment of the Proposed Development's compliance with the assessment principles and generic and technology specific impacts of the relevant draft revised NPSs for energy infrastructure, against any material changes to relevant assessment principles/impacts from the current NPSs or any relevant new assessment principles/impacts within the draft revised NPSs is provided at **Appendix 3**.

4.5 Marine Policy

UK Marine Policy Statement (March 2011)

- 4.5.1 As noted at paragraph 4.2.9, Section 104 of the PA 2008 requires the SoS to have regard to "...the appropriate marine policy documents..." relevant to the NSIP. A number of elements of the Proposed Development involve works within the UK Marine Area (within or under the tidal River Tees and also within the North Sea).
- 4.5.2 The appropriate marine policy documents are defined at Section 59 of 'The Marine and Coastal Access Act 2009'. These include any marine policy statement which is in effect and to the extent that a decision relates to a marine plan area, any marine plan which is in effect for that area (Section 59(3) and (5)).
- 4.5.3 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 Marine and Coastal Access Act 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 EU law should be interpreted from 1 January 2021 following the UK's withdrawal from the EU.
- 4.5.4 Chapter 2 of the MPS outlines the vision for the UK marine area, the high-level approach to marine planning and general principles for decision making covering economic, social and environmental considerations. It also covers detailed considerations relevant to developments such as marine ecology and biodiversity; air quality; noise; water quality and resources; seascape; historic environment; climate change adaptation and mitigation; and coastal change and flooding.
- 4.5.5 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 maker should take into account when examining and determining applications for energy infrastructure. Those of relevance to the Proposed Development include:
- The national level of need for energy infrastructure, as set out in the Overarching National Policy Statement for Energy (EN-1).
 - The positive wider environmental, societal and economic benefits of low carbon electricity generating and CCS/CCUS as key technologies for reducing carbon dioxide emissions.
 - That the physical resources and features that form oil and gas fields or suitable sites for carbon dioxide 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.

- The UK's programme to support the development and deployment of CCS/CCUS and in particular the need for suitable locations that provide for the permanent storage of carbon dioxide.
- 4.5.6 Paragraph 3.3.6 recognises that in some parts of the UK power stations may be sited in coastal locations and will have an important contribution to play in the UK's energy mix. It notes that the construction, operation or decommissioning of power stations may have impacts on the local marine environment through the construction of plants and associated development. There may also be impacts from abstraction and discharge of cooling water during operation. It refers to more detail on the impacts and specific measures and actions to avoid or minimise adverse impacts, including those on marine ecology, being contained within the NPSs, including EN-2 in respect of fossil fuel generating stations.
- 4.5.7 Paragraphs 3.3.31 to 3.3.35 deal with CCS/CCUS. Paragraph 3.3.31 recognises that fossil fuels will remain an important source of electricity generation for the foreseeable future and that to comply with the UK's legally binding carbon reduction commitments virtually all fossil fuel generation will eventually need to be fitted with technology that captures carbon dioxide and permanently stores it deep underground. It goes on to state that this will generate considerable volumes of carbon dioxide and that the UK offshore area is thought to be one of the most promising hub locations in Europe for the permanent storage of carbon dioxide.
- 4.5.8 The significant climate change and economic benefits of CCS/CCUS to the UK are set out at paragraph 3.3.34. Removing carbon dioxide emission from electricity generation will considerably reduce the potential for further acidification of the marine environment, while CCS/CCUS is estimated to be worth up to £3 billion a year to the UK economy by 2030, sustaining up to 100,000 jobs.
- North East Inshore and North East Offshore Marine Plan (June 2021)
- 4.5.9 Marine plans are intended to set out detailed policy and spatial guidance for a particular area. The UK is divided into a number of 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. Marine plans are a material consideration.
- 4.5.10 The Site lies within the 'North East Inshore Marine Area', which stretches from Flamborough Head in Yorkshire to the Scottish Border. The Plan Area has three main tidal rivers, including the River Tees.
- 4.5.11 The North East Marine Plan is intended to provide a strategic approach to decision-making, considering future use and providing a clear approach to managing resources, activities and interactions within the area. In referring to Teesside, Tyneside and Wearside (paragraph 14), the Plan identifies that there are future opportunities for CCUS using existing oil and gas infrastructure.
- 4.5.12 The Plan contains a number of policies (Table 2). There are no specific policies on gas-fired generating stations.
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- 4.5.13 Policy NE-INF1 supports appropriate land-based infrastructure which facilitates marine activity and vice versa.
- 4.5.14 Policy NE-CCUS-2 supports CCUS proposals incorporating the re-use of existing oil and gas infrastructure. However, the Policy is clear that this does not mean that proposals that do not incorporate the re-use of infrastructure will be disadvantaged or rejected and that the re-use of infrastructure may not be a viable or realistic option.
- 4.5.15 Policy NE-CCUS-3 supports proposals associated with the deployment of low carbon infrastructure for industrial clusters such as that being proposed on Teesside as part of the East Coast Cluster being advanced by the Northern Endurance Partnership. The policy 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.

The Energy Technologies Institute Strategic UK CCS Appraisal provides a comprehensive review of likely carbon dioxide storage sites in the UK. Figure 1 - Map of UK offshore infrastructure and potential carbon dioxide storage sites from the Department of Business Energy and Industrial Strategy consultation on Carbon capture, usage and storage (CCUS) projects: re-use of oil and gas assets shows the Teesside and Humberside (Easington / Dimlington) areas of existing industrial infrastructure, and potential storage sites which would support Industrial Clusters in the north east marine plan areas.

Supporting development associated with industrial clusters also aims to enhance connectivity between marine operations and land infrastructure, which will ensure that opportunities for carbon capture, usage and storage are realised. This policy will also benefit employment in coastal communities near industrial clusters, supporting the NE-INF1 and NE-EMP-1 policies.

As carbon capture, usage and storage are at the early stages of deployment in the UK, the government guidance may change over the lifetime of the North East Marine Plan. This policy should be considered alongside the most recent government guidance, reflecting the current approach to the deployment of carbon capture, usage and storage.”

- 4.5.16 The DCO Application covers the works down to Mean Low Water Springs ('MLWS') and seeks a Deemed Marine Licence as part of the DCO for the works below Mean High Water Springs ('MHWS') within the foreshore area and the tidal River Tees.

4.5.17 The offshore works are subject to a separate consent application regulated by the Offshore Petroleum Regulator for the Environment ('OPRED'), which is part of BEIS. The Applicants also require a carbon dioxide appraisal and storage licence from the North Sea Transition Authority for the use of the Endurance Store. In addition to the storage licence, the Applicants must obtain a grant of the appropriate rights to use the Store from The Crown Estate. The Applicants are managing all of the consents and licences, as a whole to ensure that the consenting for the full chain CCUS is obtained in a timely manner. It is anticipated that the relevant offshore consents and licences will be obtained by July 2023.

4.5.18 The Proposed Development is consistent with policy contained within the UK Marine Policy Statement and the North East Marine Plan, notably policies NE-CCUS-2 and NE-CCUS-3 both of which are supportive of the deployment of CCS/CCUS on Teesside and in the UK Marine Area.

4.6 Other matters that are "important and relevant"

4.6.1 As noted above, Sections 104 and 105 of the PA 2008 set 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.

4.6.2 In the case of the Proposed Development, the Applicants consider that other matters that are important and relevant to the SoS's decision include the relevant extant and draft revised energy NPSs; recent UK Government energy and climate change policy, notably the Clean Growth Strategy; the UK CCUS Deployment Pathway; the Ten Point Plan; the EWP; the Net Zero Strategy; and the British Energy Security Strategy, amongst others. These documents set out important Government objectives for decarbonising the power and industrial sectors (in order to achieve Net Zero by 2050) and are considered in detail at Section 5.

4.6.3 Other matters that the SoS may consider important and relevant include the policies contained within the National Planning Policy Framework ('NPPF'), July 2021 also the statutory development plan. The Proposed Development's compliance with relevant NPPF and development plan policy is also considered at Section 6.

4.7 Summary

4.7.1 Under the PA 2008 regime, the primary policy framework for examining and determining applications for development consent is provided by NPSs. Section 104 of the PA 2008 requires the SoS to determine applications for NSIPs in accordance with the relevant NPSs, where these are in place, 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.

4.7.2 Section 105 relates to where there is no NPS in place for the type of development set out in the application. In such cases, Section 105 requires the SoS to weigh the

benefits of the application against its adverse impacts, again subject to any specified matters and any other matters which are both important and relevant.

- 4.7.3 A number of NPSs have been designated in relation to energy infrastructure (EN-1 to EN-6). While these NPSs consider carbon capture they do not specifically consider all of the Specified Elements of the Proposed Development (as set out in the Section 35 Direction dated 17 January 2020), notably the CO₂ gathering network. This raises the question of which section (Sections 104 or 105) of the PA 2008 the Proposed Development should be determined under.
- 4.7.4 There are relevant NPSs in place for elements of the Proposed Development, including the Low Carbon Electricity Generating station (EN-1 and EN-2) and the associated development (EN-1, EN-4 and EN-5). While EN-1 does not contain policy specifically on the need for CO₂ gathering networks, it does have policy on carbon capture (carbon capture readiness and carbon capture and storage) as well as on the environmental impacts of development, which are considered to be important and relevant.
- 4.7.5 As explained in Section 4.2 above, NPS EN-1 and EN-2 have effect in relation to the Low Carbon Electricity Generating Station, which (together with its associated development) must therefore be assessed and determined pursuant to Section 104, and benefits from the presumption in favour of approval in the NPS.
- 4.7.6 In light of the High Court judgment in the EFW Group Limited case, there is some uncertainty as to whether NPS EN-1 has effect in relation to the CO₂ Gathering Network Corridor and its associated development (i.e. the Specified Elements in the Section 35 Direction). Accordingly, the Applicants consider it would be prudent for these elements to be assessed and a recommendation made pursuant to both Sections 104 and 105.
- 4.7.7 Ultimately, the Applicants do not consider that the procedural route by which a decision is reached should affect the outcome. Whether the Application is determined in accordance with the relevant NPSs or they are treated as important and relevant considerations will not have a material impact on the decision given the need for and significant public interest benefits of the Proposed Development, the limited adverse impacts and the overall consistency with relevant policy.
- 4.7.8 The energy NPSs, in particular EN-1, confirm the need that exists for developing new nationally significant energy infrastructure, including new gas-fired generating stations with CCS/CCUS in order to underpin the security of UK electricity supplies (providing flexible back-up generation to renewables) and support the transition to a low carbon economy. EN-1 makes 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 development make toward satisfying this need. Although the EWP includes a commitment to review the current suite of energy NPSs, while that review is undertaken, they remain relevant Government policy for the purposes of making decisions on energy NSIPs. The EWP also underlines the need for the energy infrastructure set out in the energy NPSs.

- 4.7.9 One of the main objectives, and a key benefit of the Proposed Development, is to demonstrate flexible, dispatchable gas-fired generation with CCS/CCUS at a commercial scale in the UK. It meets the requirement for new fossil fuel generating stations at or above 300 MW to be CCR, being part of a full chain CCUS project, with CO₂ emissions being captured from day one of the commercial operation of the electricity generating station. The Proposed Development would therefore help underpin the security of UK electricity supplies while supporting the transition to a low carbon economy and the achievement of the Government's Net Zero by 2050 target. As such, it accords with a key policy objective of EN-1 (and the EWP), to deliver new low carbon electricity generating capacity.
- 4.7.10 The Proposed Development's compliance with NPS policy and the assessment principles and generic and technology specific impacts of the relevant NPSs is dealt with at Section 6 of this Planning Statement.
- 4.7.11 The draft revised NPSs for energy infrastructure confirm the need for gas-fired electricity generating and CCS infrastructure and state that that need is urgent. As confirmed above, an assessment against the revised draft NPSs is provided at **Appendix 3**.
- 4.7.12 In terms of marine policy, the Proposed Development is consistent with policy contained within the UK Marine Policy Statement and the North East Marine Plan, both of which are supportive of the deployment of CCS/CCUS in the UK Marine Area.
- 4.7.13 Any other matters that are "*important and relevant*" to the determination of the DCO Application include recent UK Government energy and climate change policy, the NPPF and the statutory development plan. UK Government energy and climate change policy, and how the Proposed Development would contribute toward its delivery, is considered in detail at Section 5 of this Planning Statement. The Proposed Development's compliance with relevant NPPF and development plan policy is also considered at Section 6.

5.0 UK ENERGY AND CLIMATE CHANGE POLICY

5.1 Introduction

5.1.1 This section provides an overview of recent and relevant UK energy and climate change policy, which establishes clear objectives for decarbonising the power and industrial sectors and achieving the Government's legally binding commitment to achieve Net Zero in terms of greenhouse gas emissions by 2050. This includes a number of national infrastructure plans and assessments; the Clean Growth Strategy; the UK CCUS Deployment Pathway; the Ten Point Plan; the Energy White Paper; the Industrial Decarbonisation Strategy; the Net Zero Strategy; and the British Energy Security Strategy, amongst others. The Applicant considers that these matters, within the context of Section 104 of the PA 2008, are "relevant and important" to the SoS's decision making on the Proposed Development.

5.2 National Infrastructure Plans and Assessments

National Infrastructure Plan (HM Treasury, 2014)

- 5.2.1 The National Infrastructure Plan was published by the Conservative/Liberal Democrat Coalition Government in December 2014 (the 'NIP 14'). It builds upon the first NIP that was published in 2010. The NIP 14 sets out an ambitious vision for the UK's infrastructure, reinforcing the government commitment to investing in infrastructure and improving its quality and performance.
- 5.2.2 Chapter 1 of the NIP 14 sets out the strategy for infrastructure. Paragraph 1.1 emphasises the strong case for infrastructure investment and that this has a significant positive effect on output, productivity, and growth rates, being a key driver for jobs throughout the economy. The Executive Summary highlights the economic benefits of infrastructure investment, including:
- for every £1 billion spent on infrastructure investment, 5,000 construction jobs could be supported as well as many more indirectly in design, engineering and planning; and
 - for every £1 spent on infrastructure construction there is an increase of £2.84 in overall economic activity.
- 5.2.3 Chapters 3 to 13 of the NIP 14 deal with different infrastructure sectors. Chapter 8 covers 'Energy'. It reports on the progress made since 2010, with 20 GW of new electricity capacity created (enough for 23 million homes), much of it being low carbon or renewable. However, a key objective of the NIP 14 in terms of energy investment (paragraph 8.1) is to *"...reduce carbon emissions in order to mitigate climate change and meet legally binding targets."*
- 5.2.4 Paragraph 8.3 states that large-scale investment in gas and low-carbon electricity generation is vital in order to replace ageing energy infrastructure, maintain secure energy supplies and meet legally binding environmental targets. Around £100 billion

of investment is estimated to be required in electricity generation and networks by 2020. Paragraph 8.5 continues:

“As legacy coal, gas and nuclear power stations come offline, they will increasingly be replaced with a combination of renewable energy, new nuclear power and fossil fuel power stations fitted with Carbon Capture and Storage (CCS) technology. New gas plant is also needed as a vital backup for less flexible renewable generation and to ensure that the system can meet peak electricity demand. Demand for gas to supply heat to homes and businesses will also remain significant for some time to come.” [underlining added]

- 5.2.5 The NIP 14 therefore recognises the continuing need for new low carbon gas-fired power stations to provide back-up to less flexible renewable generation. The provision of such infrastructure is critical to ensuring that the National Grid can meet peak electricity demand as the amount of renewable generation increases.
- 5.2.6 At paragraph 8.28 the NIP 14 sets out the Government’s Top 40 ‘Priority Investments’ to support its objectives for the energy sector. Alongside increased generation from renewables and new nuclear these include more electricity generation from gas and the deployment of carbon capture and storage (‘CCS’).
- 5.2.7 The Proposed Development would contribute to the delivery of the NIP 14 and in particular the objectives for the energy sector, through the deployment of the Low Carbon Electricity Generating Station with CCP, forming part of a full chain CCUS project. The Proposed Development will therefore assist with moves to decarbonise the power sector, while ensuring the security of electricity supplies.

National Infrastructure Delivery Plan 2016-2021 (The Infrastructure and Ports Authority, 2016)

- 5.2.8 The National Infrastructure Delivery Plan (2016 - 2021) (the ‘NIDP’) was published in March 2016 by The Infrastructure and Projects Authority reporting to HM Treasury and Cabinet Office and builds upon the NIP 14. The NIDP brings together the Government’s plans for economic infrastructure over a five-year period (2016 - 2021) with those to support the delivery of housing and social infrastructure. The Executive Summary (page 7) states that:

“This is reflected by the government’s commitment to invest over £100 billion by 2020-21, alongside significant ongoing private sector investment in our infrastructure.”

- 5.2.9 The NIDP (Chapter 1, paragraphs 1.3 - 1.4) highlights the importance of establishing the right framework to deliver infrastructure. This means having organisations with a clear purpose and clear responsibilities that can work together to plan the development of UK infrastructure. It goes on to state:

“1.3 ... To support this, the government has set up 2 new bodies – the Infrastructure and Projects Authority and an independent National Infrastructure Commission – to ensure the right infrastructure projects are identified and delivered successfully.”

1.4 These organisations are complementary and together will ensure a comprehensive approach to infrastructure planning across both the relatively short term (to 2020-21) and the very long terms (to 2050), through the National Infrastructure Assessment.”

- 5.2.10 Chapter 5 of the NIDP deals with ‘Energy’ and sets out the key projects and programmes in this sector over the period 2016 - 2021 (paragraph 6.28). It identifies the continuing importance of gas in heating our homes (and that UK gas supplies are amongst some of the cheapest and most secure in Europe) and the need for new high efficiency Combined Cycle Gas Turbine (‘CCGT’) technology to come forward.
- 5.2.11 Chapter 13 deals with ‘Regional Infrastructure’ and sets out (paragraphs 13.19 - 13.20) the Government’s ‘Northern Powerhouse’ plan to boost the economy across the North of England, with £19 billion of investment in infrastructure planned by 2020-21. With regard to Teesside, it is relevant to note that Table 13.C ‘Devolved Powers within the Northern Powerhouse’, confirms that the Government is committed to “... *working with Tees Valley to explore how it can continue to develop its industrial carbon capture and storage proposals towards deployment of this infrastructure for its industrial sites in the 2020s...*”.
- 5.2.12 The Proposed Development would facilitate industrial carbon capture on Teesside through the development of the CO₂ Gathering Network providing the opportunity for local industries to decarbonise their operations.

National Infrastructure Assessment (The National Infrastructure Commission, 2018)

- 5.2.13 The National Infrastructure Commission (the ‘NIC’) was established in 2015 to provide independent, impartial advice on the UK’s long-term infrastructure needs.
- 5.2.14 In the National Infrastructure Assessment (the ‘NIA 18’), published in July 2018, the NIC has looked across different infrastructure sectors and came to independent conclusions based on the best available evidence. The foreword to the NIA 18 (page 3) confirms that it sets out a clear, long term strategy for the UK’s economic infrastructure from 2020 to 2050, providing long term clarity for industry and the supply chain.
- 5.2.15 The NIA 18 sets out a number of recommendations (page 5) and the Government has committed to respond to the NIC’s recommendations and to adopt agreed recommendations as government policy. One of the key themes is ‘Low cost, low carbon’ with the NIA 18 stating (page 9) that the UK can and should have low cost and low carbon electricity, heat and waste.
- 5.2.16 The ‘Low cost, low carbon’ theme is dealt with in detail at Chapter 2 of the NIA 18. There is only limited consideration of CCS in the NIA 18 and that largely relates to an acknowledgement (page 38) that such infrastructure will not be built by the private sector without some form of government support. Figure 2.3 (page 43) summarises the NIC’s analysis of CCS. This recognises that, as well as reducing power sector emissions, CCS has several other potential uses, including the reduction of emissions from industrial processes, combining it with biomass combustion to create negative

emissions and the manufacture of low carbon hydrogen. With regard to this, it is important to note that a key element of the Proposed Development is to facilitate the decarbonisation of industry on Teesside through the development of the CO₂ Gathering Network, which will also support the future production of low carbon hydrogen.

Net Zero - Opportunities for the power sector (National Infrastructure Commission, 2020)

- 5.2.17 In March 2020, the NIC published a report entitled 'Net Zero - Opportunities for the power sector' (the 'Net Zero Report'), responding to the Government's decision in June 2019 to legislate for a Net Zero greenhouse gas emissions target for the whole economy by 2050, and taking account of the recommendations set out in the NIA 18.
- 5.2.18 The Net Zero Report details work that looks at the total electricity costs of delivering a Net Zero compatible electricity system by 2050. Two different electricity demand scenarios are examined. One involving the electrification of heating and the other hydrogen for heating. Additionally, the Net Zero Report considers the impact that either hydrogen or bioenergy could have if deployed in the power sector (Executive Summary - page 7).
- 5.2.19 The NIC's latest analysis demonstrates that, if deployed, hydrogen, either generated from electrolyzers using curtailed generation or gas reforming (hydrogen generated from natural gas) with CCS, has the potential to materially reduce the costs of highly renewable electricity mixes in the UK. Furthermore, if bioenergy with CCS ('BECCS') is deployed in the power sector, it is likely to displace other baseload technologies such as nuclear. The NIC go on to refer to the findings of the CCC that BECCS is likely to be needed to generate negative emissions (Executive Summary - page 9).
- 5.2.20 The NIC's analysis of 2050 generation and capacity mixes has not significantly changed in light of the Government's Net Zero target. It states that the same technologies, in broadly similar quantities, are still likely to be needed in the long term. This includes at least 18 Gigawatts of gas with CCS needed by 2050 across all scenarios. The Net Zero Report does though note that by 2050, gas will primarily play a peaking role in the electricity system and that residual emissions from not capturing 100% of the CO₂ is likely to limit its role in providing bulk baseload generation in a Net Zero power system, unless high capture rates are achieved (pages 18 - 19 including Figures 5 and 6).
- 5.2.21 Further to the above, the Net Zero Report finds that deploying hydrogen turbines at scale to generate electricity, to complement renewable technologies, significantly reduces overall system costs. Across three different levels of renewable penetration, savings of between 10 and 30% are seen (page 23 - Figure 10). This assumes the use of turbines using hydrogen from gas reforming paired with CCS, which is likely to be the cheapest source of hydrogen (compared to electrolysis) and consistent with economy wide decarbonisation (page 37). The Net Zero Report states that this could displace many other non-renewable forms of generation, including nuclear and gas with CCS (page 23).

5.2.22 'Net Zero – Opportunities for the power sector' therefore highlights the potential future role of CCS in decarbonising the power sector by capturing CO₂ from new gas-fired generation while also decarbonising industry supporting the generation of hydrogen and decarbonising industry generally. The Proposed Development will put this into practice on Teesside.

5.3 The Clean Growth Strategy (HM Government, 2017)

5.3.1 The 'Clean Growth Strategy - Leading the way to a low carbon future', was published by the Department for BEIS in October 2017 (and amended in April 2018). The Clean Growth Strategy (the 'CGS') sets out the aims of the Government to deliver increased economic growth while reducing carbon emissions. It estimates that the low carbon economy could grow 11% per year between 2015 and 2030, four times faster than the projected growth of the economy as a whole.

5.3.2 The Executive Summary (page 9) confirms that for the UK to achieve its fourth and fifth carbon budgets (2023 - 2027 and 2028 - 2032) it will be necessary to drive a significant acceleration in the pace of decarbonisation. The Executive Summary sets out a number of key policies and proposals (pages 12 - 16) relating to 'Improving Business and Industry Efficiency'. These include to:

"4. Publish joint industrial decarbonisation and energy efficiency action plans with seven of the most energy intensive industrial sectors;

5. Demonstrate international leadership in carbon capture usage and storage (CCUS), by collaborating with our global partners and investing up to £100 million in leading edge CCUS and industrial innovation to drive down costs.

6. Work in partnership with industry, through a new CCUS Council, to put us on a path to meet our ambition of having the option of deploying CCUS at scale in the UK, and to maximise its industrial opportunity.

7. Develop our strategic approach to greenhouse gas removal technologies, building on the Government's programme of research and development and addressing the barriers to their long-term deployment."

5.3.3 Chapter 3 (page 47) of the CGS sets out the Government's approach and states:

"...we must create the best possible environment for the private sector to innovate and invest. Our approach will mirror that of our Industrial Strategy: building on the UK's strengths ...; improving productivity across the UK; and ensuring we are the best place for innovators and new business to start up and grow. We are clear about the need to design competitive markets and smart regulation to support entrepreneurs and investors who will develop the new technologies at the scale we need."

... we are laying the groundwork for major decisions in the areas where we face greatest uncertainty and challenge: in how we work with industry to make carbon capture, usage and storage (CCUS) a viable future option."

5.3.4 Page 49 of the CGS goes on to state that:

“We want to use the power of Government to support innovation in a low carbon economy using all the tools available to us, including market design, taxation and regulation, as well as investment in our education systems, our science base and innovative companies. Our aim is to become one of the best places in the world for low carbon innovation.”

5.3.5 Chapter 3 of the CGS ‘Our Clean Growth Strategy’ sets out the various projects that have been announced as part of the ‘BEIS Energy Innovation Programme’ (page 50). This includes up to £20 million of investment in a carbon capture and utilisation demonstration programme.

5.3.6 The Proposed Development accords with the Government’s approach set out above, in particular, removing uncertainty and working with industry to make CCUS a viable future option.

5.3.7 Chapter 4 of the CGS deals with different sectors of the UK economy, including at pages 61 - 71, a section on ‘Improving Business and Industry Efficiency and Supporting Clean Growth’. Page 62 states (as at the time the CGS was prepared) that business and industry account for approximately 25% of the UK’s emissions and 50% of its electricity use.

5.3.8 This section of Chapter 4 sets out various policies and proposals to increase energy efficiency in business and industry. However, it is acknowledged (page 64) that energy intensive industries will require steps beyond energy efficiency:

“Out to 2030, this will require industry to make progress in switching from fossil fuel use to low carbon fuels such as sustainable biomass, in line with broader Government priorities in delivering on clean air, and clean electricity. Beyond 2030, this switching will need to substantially increase in scale and be coupled with the deployment of new technologies, for example, carbon capture, usage and storage (CCUS). Over the course of this Parliament, we will therefore also develop a framework to support the decarbonisation of heavy industry.” [underlining added]

5.3.9 Figure 17 ‘Carbon reduction opportunities across industry (2050)’ (page 65) confirms that the deep decarbonisation of industry will need to go beyond energy efficiency and highlights the significant contribution that CCUS could make toward decarbonisation.

5.3.10 Page 69 deals with CCUS in detail. Its states:

“There is a broad international consensus that carbon capture, usage and storage (CCUS) has a vital future role in reducing emissions. This could be across a wide range of activities such as producing lower-emission power, decarbonising industry where fossil fuels are used and/or industrial processes as well as providing a decarbonised production method for hydrogen which can be used in heating and transport. This makes CCUS a potentially large global economic opportunity for the UK. The International Energy Agency estimates there will be a global CCUS market with over £100 billion – with even a modest share of this global market, UK GVA could increase between £5 billion and £9 billion per year by 2030.”

5.3.11 The Proposed Development will contribute to the achievement of carbon budgets. It would serve as a demonstration that CCUS can be delivered at a commercial scale in the UK in connection with both power generation and industry. Furthermore, it will have the potential to encourage further similar development in the future, thereby contributing to the wider decarbonisation of power generation and industry within the UK. The CGS (page 70) confirms that the Government will set up a new Ministerial-led CCUS Council with industry to review progress and priorities. Furthermore, that Government will continue to work with ongoing initiatives, including in locations such as Teesside, to test the potential for development of CCUS industrial decarbonisation clusters. It goes on to state (page 71) that:

“The Government will spend up to £100 million from the BEIS Energy Innovation Programme to support Industry and CCUS innovation and deployment in the UK including £20 million of funding available for a carbon capture and utilisation demonstration programme to invest in new innovative technologies that capture and utilise carbon dioxide.”

5.3.12 Pages 93 - 101 of Chapter 4 cover ‘Delivering Clean, Smart, Flexible Power’. The overriding objective is to deliver a reduction in emissions from the power sector. Page 96 states that in order to achieve this it will be necessary to continue to bring down the costs of low carbon generation from renewables and nuclear and ensure that the UK can deploy CCUS at scale during the 2030s. Page 101 reiterates that Government’s commitment to supporting CCUS innovation and deployment through the BEIS Energy Innovation Programme.

5.3.13 The Proposed Development will clearly contribute to the delivery of the CGS in terms of the Government’s objective to decarbonise both the power and industrial sectors. Furthermore, it is particularly well located to support the creation of an industrial decarbonisation cluster given the concentration and proximity of major energy intensive industry on Teesside.

5.4 Clean Growth - The UK Carbon Capture Usage and Storage deployment pathway - An Action Plan (HM Government, 2018)

5.4.1 ‘Clean Growth - The UK Carbon Capture Usage and Storage deployment pathway - An Action Plan’ (the ‘Action Plan’) was published by the Government in November 2018. The Executive Summary (pages 5 and 6) confirms that the Government’s vision is for the UK to become a global leader in CCUS. The Action Plan is aimed at enabling the development of the first CCUS facility in the UK, with commissioning in the mid-2020s, which would support the ambition of being able to deploy CCUS at scale during the 2030s, subject to the costs coming down sufficiently. It states (page 6):

“Through our Clean Growth Strategy we re-affirmed our commitment to the domestic deployment of CCUS subject to cost reductions. This Plan sets out our next steps to progress this commitment.”

- 5.4.2 The Action Plan states that this can only be achieved through close Government and industry partnership (page 14) and that CCUS is thought to be central to a least cost energy system decarbonisation pathway to 2050. It goes on to state (page 14) that:
- “The Committee on Climate Change (CCC) stresses the importance of CCUS to “achieving an 80% emissions reduction at lowest cost, as well as its crucial role in enabling deeper emissions reduction beyond that”. Modelling by the Energy Systems Catapult (ESC) for the Energy Technologies Institute (ETI) supports the conclusion by the CCC that energy system decarbonisation could be up to fifty per cent cheaper by 2050 if CCUS is deployed at scale, and conclude that delaying deployment beyond the 2020s will increase the risks of decarbonising the UK’s energy system. Both the CCC and ETI analysis concludes that initial deployment is required during the 2020s in order to have the option of deploying at scale during the 2030s, and in particular to keep open the option of UK CCUS deployment towards the levels both state are required in 2050. This timeline was endorsed by the CCUS Cost Challenge Taskforce, and the conclusion was also reached by the Parliamentary Advisory Group on CCS. A key message from all these independent bodies is that deployment of CCUS during the 2020s is essential to unlock the greatest opportunities for cost reduction.”*
- 5.4.3 Teesside, with its concentration of heavy industry, including chemicals and access to North Sea storage, is identified as one of the key potential locations for CCUS (page 16), building on the work undertaken to date by the Teesside Collective. At page 27 ‘Delivering our 2030s ambition’ reference is made to CCUS being central to the long-term competitiveness of areas such as Teesside.
- 5.4.4 At page 32 ‘Industrial decarbonisation with CCUS’ the Action Plan highlights the importance of CCUS in decarbonising energy intensive industries (EIs), including iron and steel, cement, chemicals, and oil refining. It goes on to state:
- “Some of these industries produce volumes of emissions from chemical processes, in addition to combustion of fossil fuels, for example, up to 70% of emissions from cement production are from the process of producing cement, rather than from energy use. These emissions cannot be abated by fuel switching or electrification.*
- Overall, CCUS could provide 37% of the total abatement potential in EIs by 2050. A recent study by McKinsey on decarbonising EIs showed that where carbon dioxide storage sites are accessible, CCUS is the lowest-cost decarbonisation option at current commodity prices. CCUS also enables the large-scale use of hydrogen as an industrial fuel, which the recent CCC and Element Energy reports have indicated could be one cost-effective pathway to industrial decarbonisation.”*
- 5.4.5 The Action Plan (pages 35 to 37) also highlights the role of CCUS in decarbonising electricity generation, alongside an expansion of other forms of low and zero-carbon power generation to achieve “deep decarbonisation” of the UK power sector.
- 5.4.6 The Proposed Development is consistent with the vision and ambition of the Action Plan. Furthermore, Teesside, with its concentrations of heavy industries, particularly within the chemicals sector, and its proximity to North Sea storage, is identified as a potential key location for the deployment of CCUS at scale.
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5.5 'Net Zero' by 2050 (HM Government, 2019)

- 5.5.1 On 27 June 2019, the 'Climate Change Act 2008 (2050 Target Amendment) Order 2019' came into force. The Order enshrines within UK law, the commitment to achieve Net Zero in terms of greenhouse gas emissions by 2050. The Order amended the previous target (within the Climate Change Act 2008) which was seeking achievement of a reduction in greenhouse gas emissions of 80% by 2050 compared to 1990 levels.
- 5.5.2 The commitment to achieve Net Zero by 2050 was based on the recommendations of the CCC set out in its report 'Net Zero - The UK's Contribution to Stopping Global Warming' (May, 2019) (the 'CCC Report'). The CCC Report is clear that if this target is to be achieved greenhouse gas emissions will need to be offset by schemes that are capable of taking away large amounts of emissions from the atmosphere. The CCC Report identifies CCUS as having a key role to play in mitigating greenhouse gas emissions.
- 5.5.3 The Executive Summary to the CCC Report (page 12) states that the Net Zero target cannot be met simply by adding mass removal of CO₂ on to existing plans for the previous target of an 80% reduction by 2050 compared to 1990 levels. It highlights that CCUS is crucial to the delivery of zero greenhouse gas emissions and that it is of strategic importance to the economy. However, it raises concern that CCUS has barely started in the UK and that of the 43 large-scale CCUS projects operating in the World, none are in this Country.
- 5.5.4 The CCC Report is very clear that the remaining greenhouse gas emissions in the UK must be offset by removing CO₂ and permanently sequestering it through technologies such as CCUS. The important role of CCUS is also stressed in terms of capturing the CO₂ from non-renewable electricity production, industry and the production of hydrogen (given the ambition to move to a hydrogen economy that is seen as critical to achieving net zero) (page 23). The scenarios considered involve the aggregate annual capture and storage of 75 - 175Mt CO₂ in 2050, which would require major CO₂ transport and storage infrastructure servicing at least five clusters. The CCC Report concludes that CCUS is a necessity for the UK not an option.
- 5.5.5 The Proposed Development will facilitate and service a decarbonised cluster on Teesside, with the ability to capture 4Mt CO₂ per annum initially but with the scope to increase this to 10Mt CO₂ per annum in the future.

5.6 Reducing UK emissions: 2020 Progress Report to Parliament (The Climate Change Committee ('CCC'), June 2020)

- 5.6.1 The CCC is an independent, statutory body that was established under the Climate Change Act 2008. The purpose of the CCC is to advise the UK and devolved governments on emissions targets and to report to Parliament on progress made in reducing greenhouse gas emissions and preparing for and adapting to the impacts of climate change.

- 5.6.2 The CCC issued its latest progress report ‘Reducing UK emissions: 2020 Progress Report to Parliament’, in June 2020 (the ‘Progress Report’). The Progress Report (required under the Climate Change Act 2008) provides an annual review of UK progress in reducing greenhouse gas (‘GHG’) emissions. This followed a May 2020 update published on the CCC’s website, which raised concerns over the UK’s ability to meet its Fourth (2023 - 27) and Fifth (2028 - 32) Carbon Budgets (despite these being set against the previous target of an 80% reduction in emissions by 2050) and stressed the need, in view of the more challenging net zero target, for progress on emissions reductions to be accelerated.
- 5.6.3 Much of the Progress Report focuses on providing advice to government on delivering a recovery from Covid-19 that both accelerates the transition to Net Zero and strengthens the UK’s resilience to the impacts of climate change, while driving new economic activity. The Executive Summary (page 13) raises concern that over the past 12 months government has not made the policy progress that the CCC called for in 2019 and it highlights the importance of the Energy White Paper (‘EWP’), including measures to expand supplies of low-carbon power, encourage a resilient and flexible energy system and provide enduring market mechanisms to drive investment in low-carbon industrial technologies and industrial sectors.
- 5.6.4 At page 18 the Executive Summary calls for the National Infrastructure Strategy to set a vision for infrastructure development over the next 30 years consistent with net zero and that important priorities should include *“hydrogen production and carbon storage infrastructure”*. It goes on to state that policy announcements have been piecemeal and slow. The Government has consulted on mechanisms to incentivise CCS and announced a £250m ‘Clean Steel Fund’:
- “However, coverage of these policies is far too narrow and progress has been too slow, as has delivery of the existing £600m capital funds for decarbonising manufacturing. There is still no strategic approach to drive change at the required scale and pace.”* (page 19)
- “A funding mechanism is needed for the operational costs of demonstration and early deployment of industrial electrification and hydrogen use as well as carbon capture and storage (CCS). Faster deployment of announced funds would support jobs, skills and the recovery, while enabling crucial progress on decarbonisation.”* (page 21)
- 5.6.5 The Executive Summary sets out the CCC’s recommendations by government department. Table 4 sets out recommendations for BEIS. At page 28 these cover CCS and include:
- Choosing a preferred funding model and mechanism for delivering CO₂ infrastructure – by 2020.
 - Planning for carbon capture plant to be operational at multiple clusters – by the mid-2020s.
 - Supporting business models for CCS designed for use in industry, electricity and hydrogen production and GHG removals – by 2020/ongoing.

- 5.6.6 Table 4 (page 31) also recommends that BEIS delivers plans to decarbonise the power sector and develops a strategy for low-carbon hydrogen use (across power, industry, transport and buildings), production and infrastructure, aiming for large scale hydrogen trials to begin in the early 2020s.
- 5.6.7 Chapter 1 of the Progress Report 'A review of the climate challenge after COVID-19' sets out 'Medium-term milestones' at Table 1.1 (pages 57 and 58) to be on track for Net Zero emissions, which include the following where there is a role for CCS:
- "Industry – CO₂ transport and storage infrastructure operational, and hydrogen available, at multiple industrial clusters by the mid-2020s.*
- "Hydrogen – ... demonstrate that hydrogen production with CCS can be sufficiently low-carbon to play a significant role."*
- "Greenhouse gas removals – Initial deployment of engineered greenhouse gas removals (e.g. BECCS in power generation, hydrogen production, industry and/or aviation fuel production), driven by incentives and enabled by CO₂ infrastructure development."*
- 5.6.8 Chapter 2 'Progress since 2008' (page 68) highlights that while in the power sector there has been an increase in generation from low-carbon sources over the decade, deployment of CCS technologies as a means of decarbonising industry has remained limited. CCS (page 80) is seen as a key pillar in achieving Net Zero, and the Progress Report stresses that significant progress is required in the 2020s to get on track to meeting the target by 2050. It goes on to state that CCS is yet to be developed at scale in the UK and that it must be a priority progress area for the 2020s.
- 5.6.9 Chapter 4 'Progress on emissions, indicators and policy in the last year' at Table 4.2 (pages 114 - 115) again highlights concerns over the lack of progress by the UK Government in terms of setting out a preferred mechanism for CO₂ transport and storage infrastructure and a plan to enable multiple CCS facilities to be operational by the mid-2020s. The Progress Report, however, welcomes (page 117) the commitment by the Government to the £800m CCS Infrastructure Fund to establish CCS in at least two industrial clusters, as well as the £250m Clean Steel Fund adding to support of around £600m for industrial decarbonisation.
- 5.6.10 Chapter 5 'Planning a resilient recovery' (page 141) refers to how the CCC reconvened its Expert Advisory Group on the Costs and Benefits of Net Zero in May 2020 to consider the macroeconomics of the Covid-19 pandemic and the role of climate change measures in supporting a recovery. The Group was clear that climate change policy should play a central role in efforts to rebuild from Covid-19 and set out a range of short and long-term measures to achieve this. This includes a recommendation (page 142) that investments in low-carbon and climate adaptation infrastructure are at the heart of measures to restore economic growth and that this (page 142 - Box 5.4). At pages 152 key priorities for infrastructure investments are identified as including:

“... new hydrogen and carbon capture and storage (CCS) infrastructure which will be needed to support the next phase of the net-zero transition.”

5.6.11 Chapter 6 ‘What is needed now - UK climate policy’ sets out the CCC’s view on priorities for the UK Government in terms of achieving net zero. These include (page 167) showing clear leadership on CCUS and hydrogen with concrete and funded plans for deploying CCUS in the mid-2020s and developing a strategy for low-carbon hydrogen production and use. Page 181 goes on to state that UK industry can be decarbonised to near-zero emissions without offshoring and that government must implement an approach to incentivise industries to reduce emissions through energy and resource efficiency, fuel switching and CCS, amongst other measures.

5.6.12 The Progress Report sets out a number of priorities for the Energy White Paper (‘EWP’) (page 184), including that:

“Carbon Capture and Storage is a necessity, not an option, for the UK’s net-zero objectives. Plans should be delivered for CCS to be operational at multiple industrial clusters from the mid-2020s, with ambition for scaling up infrastructure beyond this.

Low-carbon hydrogen is critical to achieving Net Zero, and needs to be deployed at scale during the 2020s. Given the potential of the fuel across multiple sectors, a cross-cutting vision and strategy for a hydrogen economy will be required from Government, with production and use starting from the early 2020s. Risk sharing mechanisms for the first users and producers of low-carbon hydrogen are likely to be required, in order to develop a market for low-carbon hydrogen.”

5.6.13 It is therefore clear that CCS/CCUS is at the heart of the CCC’s priorities and recommendations for government. The Proposed Development is consistent with these priorities and recommendations. It will deliver the UK’s first major power project with CCS/CCUS and the first decarbonised industrial cluster on Teesside, both by the mid-2020s (broadly in line with the timescales recommended by the CCC), while also ensuring the necessary infrastructure is in place to support the production of low-carbon hydrogen.

5.7 The Ten Point Plan for a Green Industrial Revolution (HM Government, November 2020)

5.7.1 ‘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, with the foreword by the Prime Minister stating that the Ten Point 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.

5.7.2 The Introduction to the Ten Point Plan (pages 5 - 6) states that:

“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...”

5.7.3 The ‘Ten Points’ of the Plan are summarised at page 7 of the document. Those of particular relevance to the Proposed Development are:

- Point 2 – Driving the Growth of Low Carbon Hydrogen.
- Point 8 – Investing in Carbon Capture, Usage and Storage (CCUS).

5.7.4 Point 2 ‘Driving the Growth of Low Carbon Hydrogen’ is covered at pages 10 - 11 of the Ten Point Plan. It highlights how hydrogen could provide a clean source of fuel and heat for our homes, transport and industry and recognises the potential role of CCUS in hydrogen production (by capturing the CO₂ created when using natural gas to create hydrogen). It refers to an aspiration to create “hubs” where renewable energy, CCUS and hydrogen congregate that will put our industrial “SuperPlaces” at the forefront of technological development. It goes on to state that:

“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’ [Teesside is identified as a key location for green industries and technology] are envied around the world.”

5.7.5 Point 8 ‘Investing in Carbon Capture, Usage and Storage (CCUS)’ is dealt with at pages 22 - 23 of the Ten Point Plan. The Ten Point Plan states that CCUS will be an exciting new industry to capture the carbon we continue to emit and revitalise the birthplaces of the first Industrial Revolution. It states that the Government’s ambition is to capture 10Mt of CO₂ a year by 2030, the equivalent of four million cars’ worth of annual emissions. It goes on to set out the Government’s commitment to invest up to £1 billion to support the establishment of CCUS in four industrial clusters, creating SuperPlaces in areas such as the North East, the Humber, North West, Scotland and Wales. The Government will also bring forward details in 2021 of a revenue mechanism to bring through private sector investment into industrial carbon capture and hydrogen projects via our new business models to support these projects.

5.7.6 The Ten Point Plan (page 24) highlights the function and necessity of CCUS in achieving a green economy and the Government’s commitment to establish CCUS in two industrial clusters by the mid-2020s:

“CCUS technology captures carbon dioxide from power generation, low carbon hydrogen production and industrial processes, storing it deep underground where it cannot enter the atmosphere. This technology will be globally necessary, but no one country has yet captured the market. The UK has an unrivalled asset – our North Sea, that can be used to store captured carbon under the seabed. Developing CCUS infrastructure will contribute to the economic transformation of the UK’s industrial regions, enhancing the long-term competitiveness of UK industry in a global net zero economy. It will help decarbonise our most challenging sectors, provide low carbon power and a pathway to negative emissions. We will establish CCUS in two industrial

clusters by mid 2020s, and aim for four of these sites by 2030, capturing up to 10 Mt of carbon dioxide per year. Developed alongside hydrogen, we can create these transformative “SuperPlaces” in areas such as the heart of the North East, the Humber, North West and in Scotland and Wales. Our £1 billion CCUS Infrastructure Fund will provide industry with the certainty required to deploy CCUS at pace and at scale. These clusters will be the starting point for a new carbon capture industry, which could support up to 50,000 jobs in the UK by 2030, including a sizeable export potential. Alongside this, we will bring forward details in 2021 of a revenue mechanism to bring through private sector investment in industrial carbon capture and hydrogen projects, to provide the certainty investors require.”

5.7.7 The Proposed Development will establish CCUS within an industrial cluster on Teesside. It will not only capture CO₂ from industrial emitters and power generation but, as referred to above, will also support the future development of hydrogen production on Teesside. It will therefore support delivery of Points 2 and 8 of the Ten Point Plan and the creation of the type of “hub” or “SuperPlace” envisaged by the Plan where renewable energy, CCUS and hydrogen technologies will congregate and generate significant numbers of jobs.

5.8 National Infrastructure Strategy: Fairer, faster, greener (HM Treasury, November 2020)

5.8.1 The National Infrastructure Strategy (the ‘NIS’) was published on 25 November 2020, only a week after the Prime Minister’s Ten Point Plan. The NIS sets out the Government’s plans to deliver an infrastructure revolution in the UK, while “*levelling the country up*” and achieving its Net Zero target by 2050. It also provides the Government’s formal response to the National Infrastructure Commission’s recommendations on infrastructure provision in their National Infrastructure Assessment (July 2018).

5.8.2 Chapter 2 ‘Levelling up the whole of the UK’ (page 27) highlights how the Government wants to use infrastructure to unite and level up the UK by prioritising those areas that have received the least support in the past and to create “regional powerhouses”. One of the measures identified to achieve this, is backing new green growth clusters in traditional industrial areas such as Teesside, with investment in CCS, offshore wind, port infrastructure and low-carbon hydrogen production.

5.8.3 A key theme of the NIS is ‘Decarbonising the economy and adapting to climate change’ and this is dealt with at Chapter 3. The Government identifies that (page 48) new technologies and skills will need to be developed to continue decarbonising and recognises that it will have a role to play in driving both the development and deployment of such technologies, including:

“Carbon Capture and Storage to remove up to 90% of the carbon dioxide emissions from gas-fired power stations and industrial factories, including those making hydrogen, as well as to support greenhouse gas removal technologies to offset some emissions from the hardest to decarbonise sectors.”

Investment in these areas, where the UK has competitive advantage, can create the knowledge and skills needed for a green industrial revolution, driving leadership in the industries of the future, reducing national and global emissions, as well as providing the platform for significant economic growth. Where these investments are brought together to create place-based industrial clusters they can transform local economies, creating productive jobs, developing specialist skillsets, and attracting private investment. For example, the North East of England could become a home of choice for companies delivering carbon capture and storage; making hydrogen power a part of daily life; and designing, building and maintaining offshore wind turbines."
[underlining added]

- 5.8.4 The future role of CCS in contributing to the Net Zero target is further underlined in Chapter 3 (pages 50 - 53). In terms of power, it is recognised that even by 2050, given the intermittent nature of renewables, there will still be a requirement for more reliable sources of power, from nuclear or power stations that burn hydrogen or gas with CCS. Power stations with CCS could provide valuable low carbon electricity when renewables are not generating by capturing the emissions from biomass or gas-fired generation. CCS is also seen as essential to decarbonising large parts of industry, producing low carbon hydrogen and in delivering GHG removal technologies permanently locking away CO₂.
- 5.8.5 Importantly (page 53), the NIS recognises that CCS/CCUS technology has not yet been delivered at scale and that there is a key role for government to play in bringing this forward. Consistent with the Ten Point Plan, it therefore sets out the Government's increased ambition to support CCS with £1 billion of funding (up from £800m) to bring forward four CCS clusters by the end of the decade, with construction to begin on two by the mid-2020s with the aim of capturing 10Mt of CO₂ a year by 2030.
- 5.8.6 The Proposed Development is clearly in line with the Government's ambitions to see the development of CCS/CCUS in the power and industrial sectors and the production of hydrogen as part of decarbonised clusters in locations such as the North East by the mid-2020s.

5.9 The Energy White Paper (HM Government, December 2020)

- 5.9.1 'The Energy White Paper – Powering our Net Zero Future' ('EWP'), was presented to Parliament in December 2020 and builds on the Prime Minister's Ten Point Plan. At the core of the EWP is the commitment to achieve Net Zero and tackle climate change. 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 CCUS (drawing upon the resource provided by the North Sea) and new hydrogen technologies.
- 5.9.2 The Government estimates (Introduction, page 15) that the measures in the EWP could reduce emissions across power, industry and buildings by up to 230Mt CO₂ 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.

- 5.9.3 The EWP (pages 16 - 17) provides an overview of the Government's key policies and commitments to put the UK on the course to Net Zero. These are grouped under a number of headings, including 'Transform Energy', 'Support a Green Recovery from Covid-19' and 'Creating a Fair Deal for Consumers'. Those of particular relevance to the Proposed Development are:

"TRANSFORM ENERGY

Supporting the deployment of CCUS in four industrial clusters including at least one power CCUS project, to be operational by 2030 and putting in place the commercial frameworks required to help stimulate the market to deliver a future pipeline of CCUS projects.

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 10Mt per year by the end of the decade.

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

- 5.9.4 Chapter 2 of the EWP deals with 'Power' with the stated goal being to use electricity to enable the transition away from fossil fuels and decarbonise the economy cost-effectively by 2050. Figure 3.2 'Electricity demand, Net Zero scenarios' (page 42) highlights how electricity demand could double by 2050 as electricity replaces the use of petrol and diesel in transport and to some extent, gas for heating. This would require a four-fold increase in clean electricity generation with the decarbonisation of electricity being required to underpin the delivery of the Net Zero target.

- 5.9.5 Despite the push to increase clean electricity generation and decarbonise the power sector, the EWP states that the Government is not targeting a particular generation mix by 2050 and its view remains that the electricity market should determine the best solutions for very low emissions and reliable supply, at a low cost to consumers (page 42). While the EWP (page 43) states that a low-cost, Net Zero consistent system is likely to be composed predominantly of wind and solar, in order to ensure the system is reliable, it needs to be complemented by technologies which provide power, or reduce demand, when the wind is not blowing or the sun does not shine. This includes gas with CCS and short-term dispatchable generation providing peaking capacity, which can be flexed as required.

- 5.9.6 Figure 3.4 of the EWP (page 44) details different potential electricity mixes to 2050 and it is notable that gas with CCS is an important component of those mixes. Furthermore, linked to the commitment to support the deployment of at least one power CCUS project, the EWP (page 47) recognises that:

“In the power sector, gas-fired generation with CCUS can provide flexible, low-carbon capacity to complement high levels of renewables. These characteristics mean that deployment of power CCUS projects will play a key role in the decarbonisation of the electricity system at low cost.”

We will support at least one power CCUS plant to come forward and be operational by 2030 and will put in place a commercial framework which will enable developers to finance the construction and operation of a power CCUS plant and stimulate a pipeline of projects. This will enable at least one power CCUS project to be developed in one of the four industrial clusters as part of our mission to decarbonise them ...”

- 5.9.7 Chapter 3 ‘Energy System’ of the EWP addresses ‘The Role of Natural Gas’ in a Net Zero world (page 84). It confirms that natural gas currently represents almost 30% of final energy consumption and 40% of electricity generation (page 84) and notes that we will continue to rely on natural gas for some years, even as we work to largely eliminate carbon emissions from the energy system, including those from gas. It goes onto state:

“We will therefore make sure the natural gas markets and networks evolve in a way which enables continued investment and ensure secure supplies but also promotes the use of low-carbon options, wherever possible. This will reduce emissions now and help build the networks of the future which will need to accommodate technologies such as hydrogen and Carbon Capture, Usage and Storage. We will need investment in the gas network to support the ambition set out in the Prime Minister’s Ten Point Plan for a potential Hydrogen Town before the end of the decade.”

- 5.9.8 The challenge of decarbonising industry is covered at Chapter 5 ‘Industrial energy’ of the EWP, in particular, the need for emissions from industry to fall by around 90% from today’s levels by 2050 if the Net Zero target is to be met (page 118). The EWP (page 120) highlights how about half of all emissions from manufacturing and refining are concentrated in the UK’s major industrial clusters (Figure 8.1). These “hubs” are seen as critical drivers of local and regional economic activity and a vital component of the UK’s national economy. This includes Teesside with 3.9Mt CO₂ emissions per annum. It goes on to state (page 122):

“Improved efficiency in the energy performance of buildings and industrial processes will lay the groundwork for the transformation of industrial energy. But we cannot rely on energy efficiency alone to reduce emissions in line with our 2050 goal. Manufacturing industry will need to capture their carbon for onward storage and switch from using fossil fuels to low-carbon alternatives.” [underlining added]

- 5.9.9 The actions identified by the EWP to decarbonise industrial emissions (page 124) include to, in line with Ten Point Plan, increase the ‘Industrial Clusters Mission’ to support the delivery of four low-carbon 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."

- 5.9.10 The EWP notes (page 124) that many clusters are located 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.
- 5.9.11 CCUS is dealt with in detail at pages 125 and 126. The EWP confirms that the deployment of CCUS is fundamental to the decarbonisation of energy intensive industries such as steel, cement, oil refining and chemicals. It highlights the role of CCUS in helping secure the long-term future of these industries and enabling the production of low-carbon hydrogen at scale. It reaffirms the Government's commitment to invest £1 billion (up from the £800m promised in the CCS Infrastructure Fund) 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 its ambition to capture 10Mt CO₂ emissions per year by the end of the decade. It stresses how the UK is in a strong position to become a global technology leader in CCUS with the potential to store 78 billion tonnes of CO₂. Deployment of CCUS could create new markets for UK businesses, at home and abroad, as other countries look to meet their emissions reduction commitments and could support 50,000 jobs in UK by 2030.
- 5.9.12 The important supporting role of CCUS in the production of clean hydrogen is underlined at pages 127 and 128 of the EWP.
- 5.9.13 The Proposed Development will help deliver key Government policies and commitments on CCUS and hydrogen set out in the EWP. It combines power with CCUS at commercial scale, and with its industrial CO₂ gathering network, will provide the necessary infrastructure to make a low-carbon industrial cluster on Teesside a reality by the mid-2020s. The Proposed Development will also help create the right conditions to support the production of low-carbon hydrogen on Teesside and act as a driver for growth and jobs within the local and regional economy.

5.10 Industrial Decarbonisation Strategy (HM Government, March 2021)

- 5.10.1 The Industrial Decarbonisation Strategy (the 'IDS') is the first strategy published by a major economy which sets out how industry can 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.

- 5.10.2 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.
- 5.10.3 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 CO₂ per annum captured through CCUS and a significant switching to low carbon fuels by 2030. Significantly, the IDS (page 18) recognises that government should play a key role in the delivery of large infrastructure projects for key technologies such as CCUS and hydrogen networks where there is a sharing of benefits and the risk or cost is too great for the private sector.
- 5.10.4 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 that (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 will bring forward further details of the revenue mechanism to support business models for both industrial carbon capture and low carbon hydrogen projects."*
- 5.10.5 Chapter 4 'Adopting low-regret technologies and building infrastructure' sets out support for the deployment of CCUS on industrial sites in clusters to capture and store around 3Mt CO₂ per annum by 2030 as well as increasing amounts of fuel switching to low carbon hydrogen during the 2020s. The aim (page 48) is by the mid-2020s that there will be two industrial clusters connected to CCUS infrastructure, with another two clusters by 2030, as well as low carbon fuels being tested and adopted across many industrial users.
- 5.10.6 Chapter 4 confirms (page 48) that the UK's six industrial clusters (Teesside alone accounts for 3.9Mt CO₂ per annum mainly from chemicals), account for half of industrial emissions and are well placed for early deployment of low carbon infrastructure as costs and risk can be shared between multiple industrial sites. The aim (Action 4.1, page 51) is to support deployment of CCUS on industrial sites in clusters to capture and store around 3Mt CO₂ per annum by the mid-2020s and between 8 -14 Mt CO₂ per annum by 2050. Chapter 4 stresses that without CCUS
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emissions from current industrial processes cannot be reduced to levels consistent with Net Zero. Reference is made to the Government plans for where and when infrastructure should be built, with the potential approach to this detailed in the CCUS Cluster Sequencing Consultation (February 2021). This sets out a potential two-phase process. The first phase would determine which cluster locations would be prioritised; the second phase would allocate CCUS programme support, including the CCS Infrastructure Fund and revenue support, to individual projects within the clusters. The IDS confirms that this approach will be refined in response to consultation feedback.

- 5.10.7 With regard to fuel switching (Action 4.2, pages 51 and 52), the Chapter 4 of the IDS 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.
- 5.10.8 Chapter 6 'Accelerating innovation of low carbon technologies' recognises (Action 6.2, page 71) the need for government support to accelerate progress in demonstrating CCUS from a wide range of industrial sources.
- 5.10.9 Chapter 8 'Levelling up' (Action 8.1, page 84) highlights the significant potential, particularly across the UK's industrial clusters, to create new jobs through the deployment of low carbon infrastructure and technologies.
- 5.10.10 The Proposed Development clearly supports a number of the key actions set out in the IDS, not least to decarbonise one of the UK's industrial clusters and capture and store around 3Mt of industrial CO₂ emissions per annum by the mid-2020s, rising to between 8 -14 Mt CO₂ per annum by 2050.

5.11 North Sea Transition Deal (Department for Business, Energy & Industrial Strategy and OGUK, March 2021)

- 5.11.1 The North Sea 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 meets 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."

5.11.2 The Executive Summary (page 8) states that the North Sea 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 does this through the implementation of a number of 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.

5.11.3 The Deal is built on five key outcomes. These are seen as being closely interlinked, meaning that they must be delivered as an integrated whole for the Deal to achieve its full potential. These include:

- CCUS – a commitment to deploy two CCUS clusters by the mid-2020s and a further two by 2030. This commitment aims to unlock investment of £2-3 billion in CCUS transport and storage infrastructure from the sector to underpin widespread roll out. The sector's experience and capabilities offshore will enable efficiencies and cost reductions to be achieved as new CCUS projects are executed.
- Hydrogen – this is essential to meet the net zero commitment. The UK has unparalleled CCS sites that it can maximise to scale up low hydrogen production. 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 gigawatts of low carbon hydrogen production capacity by 2030 supporting up to 8,000 jobs.
- Supply chain transformation – the Deal will focus on supporting the transformation of the oil and gas supply chain to service low-carbon energy sectors. The UK's energy supply chain should be competitively positioned to seize the opportunities present by offshore electrification, CCUS and hydrogen both in the domestic market and internationally.
- People & skills – the Deal will support up to 40,000 high-quality direct and indirect supply chain jobs. Many of the skills present in the oil and gas sector are transferable across the wider energy sector. Offshore renewables, as well as the future CCUS and hydrogen industries will rely heavily on many of the current skillsets in the oil and gas industry.

5.11.4 The Proposed Development clearly aligns with the commitments and intended outcomes of the North Sea Transition Deal. It is being promoted by a partnership of companies that have significant experience in the oil and gas sector and who are able to draw upon their offshore capabilities and skills in delivering CCUS at scale on Teesside, which in turn would support the potential for low carbon hydrogen production in the area. The Proposed Development will therefore, consistent with the Deal, make a positive contribution to the transformation of the oil and gas sector.

5.12 Net Zero Strategy: Build Back Greener (HM Government, October 2021)

5.12.1 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 into Net Zero. The Strategy sets an indicative delivery pathway for emissions reductions to 2037 by sector. It is intended to put the UK on the path for Carbon Budget 6 and ultimately on course for Net Zero by 2050.

- 5.12.2 With regard to power, the 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, can be underpinned by flexibility including storage, gas with CCS and hydrogen (page 19).
- 5.12.3 For industry, the Strategy states (page 21) that it will deliver four CCUS clusters, capturing 20-30 Mt CO₂ across the economy, including 6 Mt CO₂ 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 East Coast Cluster, which includes Teesside, could have the opportunity to access support under the Government's CCUS programme (£1 billion). The Government has also 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.
- 5.12.4 The package of measures in the Net Zero Strategy are aimed at supporting up to 190,000 jobs by the middle of the 2020s and up to 440,000 jobs by 2030. These jobs will contribute to the wider ambition of 2 million green jobs by 2030 (page 43).

5.13 British Energy Security Strategy (Department for Business, Energy and Industrial Strategy, April 2022)

- 5.13.1 The British Energy Security Strategy (the 'Energy Strategy') was published in April 2022 largely in response to soaring energy prices as a result of a sudden surge in demand following the COVID-19 pandemic, compounded by the Russian invasion of Ukraine. Much of the focus of the Energy Strategy is upon providing financial assistance to families and businesses struggling with higher energy bills, but it also looks at improved energy efficiency, reducing the amount of energy we need and addressing the underlying vulnerability to international oil and gas prices by reducing the UK's dependence on imported oil and gas.
- 5.13.2 The Energy Strategy states that the transition away from oil and gas depends on how quickly the UK can roll out new renewables and other low carbon technologies. It highlights that the Ten Point Plan and Net Zero Strategy are driving unprecedented private sector investment of £100 billion by 2030 in new British industries, including offshore wind and supporting around 480,000 clean jobs by the end of the decade.
- 5.13.3 The Energy Strategy sets out the delivery so far on the Ten Point Plan. This includes investing in CCUS, with £1 billion in public investment committed to decarbonise industrial clusters and the announcement of the first two clusters in Teesside, the Humber and Merseyside. In addition, the Government has launched Phase 2 of the Industrial Energy Transformation Fund, allocating £60M to decarbonisation

technologies, with a further £100M to be delivered in May and October 2022. The Energy Strategy also identifies the importance of hydrogen, with an increased commitment to achieve up to 10 GW of hydrogen production by 2030, including 'blue hydrogen' from natural gas, which requires CCUS.

5.14 Summary

5.14.1 Recent UK energy and climate change policy has established clear objectives for decarbonising the power and industrial sectors and the transformation of the oil and gas sector in order to achieve the Government's legally binding commitment to achieve net zero in terms of greenhouse gas emissions by 2050. This policy is both important and relevant to decision-making in respect of the Proposed Development.

5.14.2 It is evident from the Applicants' review of energy and climate change policy that the Government sees CCS/CCUS as playing a key role in delivering the commitment of Net Zero by 2050 and also in helping to deliver energy security. In particular:

- The Government and the CCC have confirmed that new gas-fired generating capacity with CCS/CCUS will be required to provide vital back-up to intermittent renewable generation so as to ensure the security of UK electricity supplies and that the system can meet peak electricity demand. The Government has also committed to support the delivery of "at least one power CCUS plant" by 2030.
- The deployment of CCS/CCUS technology is seen as fundamental to the decarbonisation of the UK's energy intensive heavy industries such as steel, cement, oil refining and chemicals and securing the long-term future of these industries within the wider economy. Teesside alone generates 3.9Mt CO₂ emissions per annum.
- The Government has committed to invest £1 billion to facilitate the deployment of CCS/CCUS in two industrial clusters by the mid-2020s, and a further two clusters by 2030, so as to support its ambition to capture 10Mt CO₂ emissions per year by the end of the decade. Teesside, with its concentration of heavy industries, including chemicals and access to North Sea storage sites, is identified as one of the key potential locations for a decarbonised industrial cluster.
- There is Government support for the large-scale manufacture of hydrogen (up to 10 GW by 2030) for use in the power sector and for domestic heating, including a £240 million fund. Blue hydrogen (using natural gas) is likely to be the cheapest source of hydrogen, at least initially, compared to green hydrogen (using electrolysis). Pairing blue hydrogen production with CCS/CCUS is critical to delivering low carbon hydrogen production.
- The Government seeking to transform the oil and gas sector through the development of technologies such as CCS/CCUS and low carbon hydrogen production. These technologies will be able to draw upon the proven capabilities and skills within the oil and sector, its existing infrastructure and private investment potential, thereby helping to support its supply chain and skilled workforce.

- 5.14.3 The Proposed Development will contribute toward the delivery of key energy and climate change policy objectives – most importantly Net Zero by 2050. It includes a Low Carbon Electricity Generating Station with CCS/CCUS at commercial scale, while importantly the CO₂ Gathering Network and other CO₂ infrastructure will underpin the establishment of a decarbonised industrial cluster on Teesside by the mid-2020s. This will not only facilitate the decarbonisation of existing heavy industries in the area, capturing 4Mt CO₂ per annum with the scope to increase this to 10Mt CO₂ per annum in the future, but also provide the infrastructure to support the potential for the future large-scale manufacture of low carbon hydrogen, acting as a driver for growth and jobs within the local and regional economy. Furthermore, it will make a very positive contribution to the transformation of the oil and gas sector in the North Sea.
- 5.14.4 The Proposed Development is clearly in accordance with current and emerging UK energy and climate change policy and this should be afforded significant weight in the determination of the Application.
- 5.14.5 The need for the Proposed Development that is set out in UK energy and climate change policy is also underlined in the draft revised NPSs that have been considered in Section 4 of this Planning Statement.

6.0 THE ASSESSMENT OF THE PROPOSED DEVELOPMENT AGAINST POLICY

6.1 Introduction

- 6.1.1 This section provides an assessment of the Proposed Development against policy, notably the relevant NPSs, given that Section 104 of the PA 2008 requires the SoS to determine applications for NSIPs in accordance with the relevant NPSs and for the purposes of Section 105, matters contained within the NPSs are likely to be important and relevant to the decision. Whatever the legal effect of the Section 35 Direction, it is clear from the Direction that the SoS considers that NPS EN-1 to be an important and relevant consideration which should provide the primary policy basis for assessing and determining the application for the Specified Elements insofar as the considerations and impacts described in EN-1 are relevant to the Proposed Development.
- 6.1.2 The assessment of the Proposed Development against the NPSs 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-2, EN-4 and EN-5 in relation to fossil fuel generating stations, gas supply infrastructure and gas and oil pipelines and electricity transmission infrastructure, where these are not covered by the assessment principles and generic impacts of EN-1. Each heading references the relevant part or section of the NPSs.
- 6.1.3 An assessment of the Proposed Development's compliance with the assessment principles and generic and technology specific impacts of the relevant draft revised NPSs, against any material changes to the relevant principles/impacts from the current NPSs or any relevant new principles/impacts within the draft revised NPSs is provided at **Appendix 3**.
- 6.1.4 Although the focus of this section is principally upon conformity with the NPSs (as these are the primary basis for decisions on NSIPs by the SoS); the Applicants have also had regard to the compliance of the Proposed Development with relevant policies contained within the NPPF and the statutory 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-2, 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 points' 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-2, 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 therefore also dealt with below and the relevant part of the NPS is referenced.

General Points (EN-1, 4.1)

6.2.4 EN-1 'General points' (paragraph 4.1.2) reiterates the urgency of the 'need' for the types of infrastructure covered by the energy NPSs and again confirms that the SoS should start with a presumption in favour granting development consent for energy NSIPs.

6.2.5 Paragraph 4.1.3 goes on to state that in considering applications for energy NSIPs, and in particular, when weighing their adverse impacts against their benefits, the SoS should consider:

- the potential benefits including the contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and
- the potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts.

6.2.6 Paragraph 4.1.4 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. 5.2) demonstrates the clear need for the Proposed Development, not just in terms of providing new electricity generating capacity but also contributing toward the decarbonisation of power and industry on Teesside. Furthermore, Section 5 of this Planning Statement sets out how the Proposed Development is in accordance with key UK Government energy and climate change policy and will help deliver Government's Net Zero by 2050 commitment. Section 7 of the Planning Statement provides an assessment of the key benefits and adverse impacts of the Proposed Development. It shows that the Proposed Development will have a number of substantial benefits and that these clearly outweigh its adverse impacts.

6.2.8 Paragraph 4.1.5 confirms that matters that the SoS may consider both "*important and relevant*" to decision making on energy NSIPs. However, in the event of a conflict between these or any other documents and an NPS, the NPS prevails. In the case of the Proposed Development, it is considered that UK Government energy and climate change policy is particularly important and relevant to the determination of the DCO Application. That policy sets out a number of key objectives for achieving Net Zero by 2050, including the decarbonisation of the power and industrial sectors and production of cleaner fuels such as hydrogen – the Proposed Development will make a very significant contribution to all of these.

- 6.2.9 It is considered that the draft revised NPSs are important and relevant to the Application. These are considered at Section 4 and an assessment of the Proposed Development against the draft revised NPSs is provided at **Appendix 3**. Draft NPS EN-1 confirms the need for gas-fired electricity generation with CCS and CCS infrastructure.
- 6.2.10 The NPPF and the statutory development plan may also be important and relevant to the Application. Compliance with the NPPF and local development plan policies is considered later within this section.
- 6.2.11 Paragraph 4.1.7 confirms that the SoS should only impose 'requirements' (similar to planning conditions) in relation to a development consent where these satisfy relevant guidance and are necessary, relevant to planning, relevant to the development to be consented, enforceable, precise and reasonable in all other respects.
- 6.2.12 The Applicants have proposed a number of requirements within the draft DCO (Document Ref. 2.1) 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 Applicants have had regard to other relevant recent DCOs and relevant guidance; notably that contained within the NPPF (paragraphs 55 - 58) and the PPG ('Use of planning conditions') and the PINS Advice Note 15 'Drafting Development Consent Orders' (July 2018). The requirements are listed at Schedule 2 of the draft DCO and their intended purpose is set out within the Explanatory Memorandum (Document Ref. 2.2).
- 6.2.13 Paragraph 4.1.8 states that SoS may take into account any development consent obligations (under Section 106 of the TCPA 1990 as amended by Section 174 of the Act) that an applicant agrees with local authorities. To be required development consent obligations must satisfy broadly similar tests to requirements; they must be relevant to planning, necessary to make the development acceptable in planning terms, directly related to the development, fairly and reasonably related in scale and kind to the development and reasonable in all other respects (NPPF - paragraphs 203-206 and the PPG 'Planning obligations').
- 6.2.14 The Applicants' assessment of the Proposed Development, notably through the EIA, has identified some effects that require mitigation. However, the necessary mitigation has either been embedded within the design of the Proposed Development or will be secured through the proposed DCO requirements and therefore, taking into account the tests in the NPPF and PPG, at this stage of the application process, no mitigation has been identified by the Applicants, the host local authorities (RCBC and STBC) or other consultees or stakeholders that would require a development consent obligation in order to make the Proposed Development acceptable in planning terms. The Commitments Register (ES Volume

III, Appendix 25A (Document Ref. 6.4) confirms how the mitigation and commitments set out in the ES will be secured.

6.2.15 Paragraph 4.1.9 confirms that in bringing forward energy infrastructure, the applicant will have made a judgement as to its financial and technical feasibility. It goes on to state that where the SoS considers, based on the information provided in the application, that financial and technical feasibility have been properly assessed, they are unlikely to be relevant to the SoS's decision-making.

6.2.16 With regard to the above, the Applicants have made a decision to proceed with the Application based on a number of commercial and financial considerations. Paragraph 3.3.6 of EN-1 states that *"...it is for industry to propose the specific types of development that they assess to be viable..."* within the framework established by the Government. The Funding Statement (Document Ref. 3.3) confirms that the Applicants are able to fund any compulsory acquisition that is required to deliver the Proposed Development.

Environmental Statement (EN-1, 4.2)

6.2.17 EN-1 (paragraph 4.2.1) states that NSIPs that are subject to the European EIA Directive (to be read now as referring to the EIA Regulations) must be accompanied by an ES describing the aspects of the environment likely to be significantly affected by the Proposed Development. It highlights that the European EIA Directive specifically refers to effects on human beings, fauna, flora, soil, water, air, climate, the landscape, material assets and cultural heritage and the interaction between them. It goes on to state that the assessment of effects in the ES should cover direct and indirect effects, both permanent and temporary, cumulative effects, positive and negative effects and measures for avoiding or mitigating significant adverse effects.

6.2.18 Paragraphs 4.2.2 - 4.2.11 provide further guidance on the matters that should be covered within the ES for the purposes of SoS decision making.

6.2.19 The Application includes an ES – Volumes I, II and III (Document Refs. 6.2 - 6.4) and a Non-Technical Summary (Document Ref. 6.1). In advance of preparing the ES, a 'Scoping Opinion' was obtained from PINS (dated 2 April 2019), which is provided at ES Volume III, Appendix 1B (Document Ref. 6.4.2). The scope and coverage of the ES has taken account of the Scoping Opinion and ES Volume I Chapter 2 'Assessment Methodology' (Document Refs. 6.2) sets out the approach and methodology that has been adopted for the EIA of the Proposed Development.

6.2.20 As required by EN-1, the ES for the Proposed Development includes the following:

- 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 negative effects for all its stages (e.g. construction, operation, decommissioning) as well as significant residual effect and also the measures envisaged for avoiding and mitigating any significant adverse effects. The approach and methodology taken

to the assessment of environmental effects is set out at ES Volume I Chapter 2 'Assessment Methodology'. Furthermore, the technical chapters of the ES (ES Volume I, Chapters 8 - 25 identify the likely significant effects of the Proposed Development, the mitigation measures (where required) and the residual effects. The ES, in the assessment of effects, distinguishes between the different stages of the Proposed Development. The following technical chapters are included in the ES:

- Chapter 8 'Air Quality'
 - Chapter 9 'Surface Water, Flood Risk and Water Resources'
 - Chapter 10 'Geology and Hydrogeology'
 - Chapter 11 'Noise and Vibration'
 - Chapter 12 'Terrestrial Ecology and Nature Conservation'
 - Chapter 13 'Aquatic Ecology'
 - Chapter 14 'Marine Ecology and Nature Conservation'
 - Chapter 15 'Ornithology'
 - Chapter 16 'Traffic and Transportation'
 - Chapter 17 'Landscape and Visual Amenity'
 - Chapter 18 'Archaeology and Cultural Heritage'
 - Chapter 19 'Marine Heritage'
 - Chapter 20 'Socio-economics and Tourism'
 - Chapter 21 'Climate Change'
 - Chapter 22 'Major Accident Hazards and Natural Disasters'
 - Chapter 23 'Population and Human Health'
 - Chapter 24 'Cumulative and Combined Effects'
 - Chapter 25 'Summary of Significant Effects'
- An explanation of the elements of the Proposed Development where it has not been possible to fix details in advance of the submission of the Application and where flexibility is required (given that it is a 'First-of-its-Kind' project), and the approach that has been taken to assessing the effects that may result. In this respect, the Applicants have adopted the principles of the 'Rochdale Envelope' and assessed through the EIA maximum 'worst case' dimensions and design parameters. Where this approach has been applied it is explained in each relevant chapter of ES Volume I. The approach that has been taken is explained at ES

Volume I, in Chapters 4 'The Proposed Development' and 6 'Alternatives and Design Evolution'. The maximum dimensions and parameters would be controlled and secured through Article 4 'Development consent etc. granted by this Order', Schedule 15 'Design Parameters' and Requirement 3 'Detailed design' (Schedule 2) of the DCO (Document Ref. 2.1) in addition to the Works Plans (Document Ref 4.4).

- Information on the likely significant social and economic effects of the Proposed Development is provided at ES Volume I, Chapter 20 'Socio-economic and Tourism'. This includes the benefits of the Proposed Development in terms of employment generation both through direct employment and wider benefits for the economy. It is estimated that up to 2,440 net construction jobs (direct and indirect) would be generated per annum of which 1,220 are expected to be from the local area (the Middlesbrough and Stockton TTWA). Jobs during operation are estimated at up to 130 FTE (direct and indirect) with the majority (110) filled by people from the local area. No significant adverse effects in terms of socio-economics or tourism are predicted during the construction, maintenance, operation of decommissioning of the Proposed Development, and as such, no mitigation is required. It is considered that the Proposed Development will have an overall positive effect on the local area. The draft DCO includes a requirement (Requirement 30) that will secure an employment and skills plan, to be agreed with RCBC and STBC, to maximise the local employment and training opportunities provided by the Proposed Development.
- ES Volume I, Chapter 24 'Cumulative and Combined Effects' 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 cumulative and combined effects is set out at Section 24.3 of Chapter 24. The assessment of combined effects has considered the potential effects of minor significance and above identified within each of the technical assessments reported in Chapters 8 - 23, to interact and combine to affect common receptors, and has concluded that there is potential for the following significant combined effects:
 - moderate adverse combined effects on high value/sensitivity (human) receptors in the vicinity of York Road, Redcar Seafront and the England Coastal Path as a result of evening and night-time noise level effects and visual effects during construction. This is considered to be a worst-case assessment; and
 - moderate adverse effects on users of local businesses, tourism amenities and public rights of way, in the vicinity of South Gare Breakwater and the beach, as a result of short-term, temporary impacts on high value / sensitivity receptors and moderate visual effects during construction.
- The assessment of cumulative effects has considered other developments within 15km of the PCC Site. The potential for cumulative effects to arise, from one or several of these developments in combination with the Proposed Development

has been assessed. Through consideration of the available information for each of the identified developments, it has been concluded there is the potential for:

- significant beneficial cumulative socio-economic effects due to the Proposed Development together with the other developments;
 - a potential moderate adverse cumulative effect upon water quality in Tees Bay due to sediment mobilisation during construction; this effect is no greater than that for the Proposed Development in isolation, and there will be no other significant cumulative effects relating to water, flood risk and water resources;
 - a minor adverse (not significant) cumulative noise effect upon one NSR (NSR3) during the construction phase of the Proposed Development, compared to a negligible adverse effect for the Proposed Development in isolation. A potential worst-case moderate adverse (significant) cumulative effect on residential receptors during CO₂ venting; this is the same significance of effect as that for the Proposed Development alone; all other cumulative noise effects will be of the same magnitude and significance as those for the Proposed Development in isolation;
 - significant, moderate adverse cumulative visual effects would occur at viewpoint 5 (recreational receptors at South Gare Breakwater), viewpoint 8 (recreational and residential receptors at Redcar seafront) and viewpoint 7 (recreational receptors on the England Coast Path, Warrenby) during construction of the Proposed Development, if this is concurrent with the construction and operation of the identified cumulative developments; these effects are no greater than for the Proposed development in isolation; and
 - the Redcar Flats LCTr and the Coastal Fringe LCT are predicted to experience significant cumulative effects during construction; this is the same effect as that for the Proposed Development in isolation and reduces to not significant levels opening (Year 1) and operation (Year 15). The remaining identified LCTr, LCA and LCT are not predicted to experience any significant cumulative effects.
- There will be no significant cumulative effects on air quality, terrestrial ecology, aquatic ecology, marine ecology, ornithology, archaeology and cultural heritage, marine heritage or geology and hydrogeology.
- 6.2.21 An ES Addendum (Document Refs. 7.7, 7.8.1 and 7.8.2) was submitted as part of the change request submitted to the ExA on 28 April 2022 and was accepted into the Examination on 6 May 2022. The ES Addendum describes and assesses the changes made to the Application. The ES Addendum has identified no changes to the significance of effects reported in the original ES.
- 6.2.22 As confirmed above, the draft DCO at Schedule 2 includes appropriate requirements to control and secure the details of the Proposed Development that are still to be finalised to ensure that it will be constructed in accordance with the EIA that has been undertaken. The Commitments Register (ES Volume III, Appendix 25A,

Document Ref. 6.4) confirms how the mitigation and commitments set out in the ES will be secured.

Habitats Regulations (NPS EN-1, 4.3)

- 6.2.23 EN-1 (paragraph 4.3.1) confirms that prior to granting development consent, the SoS must, under the Habitats Regulations, consider whether the Proposed Development may have a significant effect on a European site, or any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans and Proposed Developments. EN-1 continues that the applicant should seek the advice of Natural England ('NE') and provide the SoS with such information as may be reasonably required to determine whether an 'Appropriate Assessment' is required.
- 6.2.24 The Applicants have prepared a Habitats Regulations Assessment ('HRA') Report for the Proposed Development (Document Ref. 5.13). The Proposed Development Site (the 'Site') lies directly adjacent to (and involves land within) the Teesmouth and Cleveland Coast Special Protection Area ('SPA') and Ramsar Site, which is designated for both breeding birds and non-breeding birds, which visit the SPA/Ramsar between autumn and spring. The SPA and Ramsar have recently been extended to include the dunes and pools immediately north-east of the PCC Site. These areas have been included due to overwintering bird usage. As likely significant effects on the SPA/Ramsar cannot be ruled at the screening stage, the HRA Report includes an Appropriate Assessment and considers in combination effects. The preparation of the HRA Report has been the subject of consultation and discussions with Natural England.
- 6.2.25 The Appropriate Assessment is provided at Section 6 of the HRA Report and considers the impacts of noise disturbance (construction and decommissioning), atmospheric pollution (operation) and water quality (construction, operation and decommissioning) on the Teesmouth and Cleveland Coast SPA/Ramsar; atmospheric pollution (operation) on the North York Moors Special Area of Conservation ('SAC')/SPA; and disturbance in functionally linked habitats (construction and decommissioning) on the Southern North Sea SAC. The Appropriate Assessment takes account of the mitigation measures that would be implemented during the relevant stages of the Proposed Development. In combination effects of the Proposed Development with other plans and projects – those posing linking impact pathways to the same European sites as the Proposed Development – are addressed at Section 7.
- 6.2.26 The HRA concludes that following amendments made to the design of the operational development (the PCC Site) to reduce ammonia emissions, it is concluded that with the identified mitigation measures in place to address construction/decommissioning noise and construction, operational and decommissioning water quality impacts on the Teesmouth and Cleveland Coast SPA/Ramsar, there will be no adverse effect on the integrity of any European site either alone or in combination with other plans and projects.

Alternatives (NPS EN-1, 4.4)

- 6.2.27 Paragraph 4.4.1 confirms that as in any planning case, the relevance or otherwise to the decision-making process of the existence (or alleged existence) of alternatives to a Proposed Development is in the first instance a matter of law, which falls outside the scope of the NPS. It goes on, however, to state that from a policy perspective there is no general requirement to consider alternatives or to establish whether a NSIP represents the best option, except that:
- Applicants are obliged to include in their ES, as a matter of fact, information about the main 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.
 - In some cases, there are specific legislative requirements, notably under the Habitats Directive, for the SoS to consider alternatives. These should be identified in the ES by the applicant.
 - In some circumstances, the relevant energy NPSs may impose a policy requirement to consider alternatives – EN-1 does in Sections 5.3, 5.7 and 5.9 in relation to avoiding significant harm to biodiversity and geological conservation interests, flood risk and development within nationally designated landscapes, respectively.
- 6.2.28 Information relating to the main alternatives that the Applicants have considered in relation to the Proposed Development are set out at ES Volume I Chapter 6, 'Alternatives and Design Evolution'. The alternatives that have been considered include:
- alternative technologies;
 - alternative sites; and
 - alternative layouts within the Site.
- 6.2.29 Section 6.3 of Chapter 6 deals with the consideration of alternative technologies. It confirms that the need for a low carbon electricity generating station was identified as essential to the Proposed Development at an early stage, not only because of the recognised need to decarbonise the power sector in order to meet national carbon budgets and Net Zero by 2050, but also to deliver dispatchable low carbon generation to complement the increased penetration of renewable sources onto the UK supply network. Low carbon electricity generation also provides an anchor to enable investment in the proposed carbon transport and storage infrastructure to facilitate the capture of CO₂ from industrial sources. A high efficiency CCGT plant was therefore selected.
- 6.2.30 Section 6.3 goes onto confirm that while various low carbon solutions are being developed in the UK for electricity generating stations, the most mature low carbon technology for large scale electricity generation is post-combustion carbon capture.

Therefore, this technology was selected to minimise the technology risks associated with the Proposed Development.

- 6.2.31 A final decision has not yet been made on the choice of EPC contractor or vendor for the CCGT plant and CCP and this is unlikely to be made until the end of the 'Front End Engineering Design' ('FEED') stage (FEED is not due to commence until late 2021). For this reason it has been necessary to incorporate a degree of flexibility within the Application and therefore the Applicants have adopted the principles of the 'Rochdale Envelope' and assessed through the EIA maximum 'worst case' dimensions and design parameters for the Proposed Development.
- 6.2.32 The consideration of alternative locations is set out in Section 6.4. The key criteria for the selection process included an east coast location (due to the proximity of potential storage sites in the North Sea); proximity to the coast to minimise the onshore section of the high pressure CO₂ export pipeline; avoidance of residential areas; proximity to industrial emitters that could connect into the CO₂ gathering network; proximity to necessary connections, including gas network, electricity transmission network and water supply; sufficient space, including for future expansion; the use of brownfield land where possible; access to an industrial deep water jetty to facilitate the delivery of abnormal loads and minimisation of environmental effects and risks.
- 6.2.33 Teesside performed well against these criteria and was selected as the preferred location. Within Teesside a number of sites were assessed and shortlisted before the former Redcar Steel Works Site (now Teesworks) was selected. Key factors in its selection included the proximity to the North Sea for CO₂ transport; relative remoteness from residential properties; proximity to required connections; the availability of brownfield land and being accessible to port facilities for the import of construction materials and large items.
- 6.2.34 Sections 6.5 to 6.7 sets out the reasons for the selection of the PCC Site within the Teesworks area and how the various connection corridors for the Proposed Development were evaluated and selected. This includes an explanation of the design process, including the alternative design options considered and design changes. The main design changes that have been made are summarised at Table 6-2.
- 6.2.35 With regard to the specific legislative requirements to consider alternatives, notably under the Habitats Regulations, the Applicants have undertaken a HRA as the Site lies directly adjacent to (and involves land within) the Teesmouth and Cleveland Coast SPA/Ramsar Site and Site of Scientific Interest ('SSSI'). The HRA (which includes an Appropriate Assessment) concludes that there will be no adverse effects on the integrity of any European site either alone or in combination with other plans and projects. As such there is no requirement to consider alternatives to the Proposed Development under the Habitats Regulations as it will not adversely impact upon the SPA/Ramsar/SSSI.

- 6.2.36 EN-1 does include a policy requirement to consider alternatives (Sections 5.3, 5.7 and 5.9) in relation to avoiding significant harm to biodiversity and geological conservation interests, flood risk and development within nationally designated landscapes. Paragraph 5.3.7 of EN-1 states that as a general principle, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives; where significant harm cannot be avoided, then appropriate compensation measures should be sought.
- 6.2.37 The potential effects of the Proposed Development biodiversity and ecology are assessed in detail within Chapters 12 'Terrestrial Ecology and Nature Conservation', 13 'Aquatic Ecology', 14 'Marine Ecology and Nature Conservation' and 15 'Ornithology'. The conclusions of these assessments are that taking account of mitigation there will be no significant adverse effects upon species or habitats. Potential effects on ecology during construction will be managed through the implementation of the measures that will be set out in the Landscape and Biodiversity Protection Plan and the Construction Environment Management Plan ('CEMP') secured by Requirements 4 and 16 of the draft DCO (Document Ref. 2.1). Furthermore, proposed measures to achieve biodiversity enhancements are set out within the Indicative Landscape and Biodiversity Strategy (Document Ref. 5.12). The details proposals for biodiversity enhancement relating to the Proposed Development will be set out in the Landscape and Biodiversity Management and Enhancement Plan (also secured by Requirement 4).
- 6.2.38 Chapter 10 'Geology and Contaminated Land' confirms that there are no designated geological interest features within the Site boundary or in its vicinity.
- 6.2.39 Paragraph 5.7.13 of EN-1 states that the consideration of alternative sites is relevant to the application of the 'Sequential Test' in relation to flood risk, with the preference in the first instance to locate development within Flood Zone 1, the zone of least probability of tidal or fluvial flooding.
- 6.2.40 Chapter 9 of ES Volume I 'Surface Water, Flood Risk and Water Resources, considers the effects of the Proposed Development in terms of flooding and the risk of flooding. A site-wide Flood Risk Assessment ('FRA') is provided at Appendix 9A of ES Volume III (Document Ref. 6.4).
- 6.2.41 The PCC 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 Site that fall within Flood Zone 2 (medium risk) and Flood Zone 3 (high risk). Only construction works on parts of the Gas Connection, Water Discharge Connection, CO₂ Gathering Network Corridor and CO₂ Export Pipeline will be carried out in or under land in Flood Zones 2 and 3. These works will be temporary in nature and will involve either the construction of underground tunnels/pipelines or the installation of pipes on existing/extended pipe racks in existing service corridors. Where tunnels or borings are proposed, the launch and receiving areas are all outside Flood Zone 3, except for the receiving pit for the Horizontal Directional

Drilling ('HDD') crossing of the River Tees required for Option 2 for the CO₂ Gathering Network at the mouth of the Dabholm Gut, which may be located in Flood Zone 3.

6.2.42 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 Applicants have sought to locate it within the areas with the lowest probability of flooding (e.g. Flood Zone 1) when compared to alternative sites. The Applicants' approach to applying the Sequential Test is set out at paragraphs 9.6.16 to 9.6.30 of Appendix 9A of the ES and demonstrates that where feasible, development has been located in Flood Zone 1, however, parts of the connection corridors are, as a necessity located within Flood Zones 2 and 3 because they are connecting to existing infrastructure and industrial sites. The assessment demonstrates that the level of flood risk associated with the Proposed Development is similar to that at potential alternative locations for the development in Teesside. 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'. NPS EN-1 (paragraph 5.7.16) states that all three elements of the Exception Test need to be satisfied for consent to be granted. For the Exception Test to be passed:

- it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk;
- the project should be on developed or previously developed land or, if it is not on previously developed land, that there are no reasonably alternative sites on developable previously developed land subject to any exceptions set out in the technology-specific NPSs; and
- a FRA must demonstrate that the project will be safe, without increasing flood risk elsewhere and, where possible, will reduce flood risk overall.

6.2.43 How the Proposed Development satisfies the Exception Test is set out at paragraphs 9.6.31 to 9.6.39 of Appendix 9A of the ES. With regard to this:

- The Proposed Development will have very clear wider sustainability benefits to the community. It will contribute to the security of electricity supplies and by providing low carbon generation and the necessary infrastructure to decarbonise local industries it will help support the transition to Net Zero 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 such as hydrogen production.
- The PCC Site comprises previously developed land and the other elements of the Proposed Development, notably the connection corridors where feasible, involve previously developed land and/or existing infrastructure corridors.

- The site-wide FRA undertaken demonstrates (see Section 9.9 of the FRA) 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.
- 6.2.44 It is therefore considered that the Exception Test, to the extent relevant to the Proposed Development, is satisfied.
- 6.2.45 The assessment of flood risk impacts and effects during construction is also set out in Chapter 9 of the ES. These have been informed by the site-wide FRA. The main risk during construction is considered to be that to construction workers. Table 9-19 provides the summary of key flood risks to the Proposed Development. It confirms that the risk of flooding from tidal, fluvial and surface water are low or very low, from groundwater medium, drainage infrastructure low to medium and artificial sources low. Section 9.10 sets out how residual flood risks and off-site impacts will be mitigated during both construction and operation.
- 6.2.46 The Applicant's environmental consultants discussed the FRA with the Environment Agency ('EA') prior to the submission of the Application. Following a review of the FRA in early July 2021, the Case Officer at the EA (in an email dated 7 July) confirmed that the EA is satisfied that the FRA aligns with its understanding of flood risk at the Site and within the surrounding area and that:
- "The conclusions appear to reflect the appropriate vulnerability/flood zones classifications for the proposed development. We will review the CEMP once published to ensure that appropriate flood risk mitigation measures have been considered. Overall, we do not consider flood risk to be a significant issue for the proposed development."*
- 6.2.47 Requirements 11 and 12 of the draft DCO 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, while further mitigation measures will be secured through the final Construction Environmental Management Plan ('CEMP') (Requirement 16 of the draft DCO).
- 6.2.48 Paragraph 5.9.10 of EN-1 indicates that the consideration of alternatives can also be relevant where development involves land that is subject to national landscape designations, such as National Parks or Areas of Outstanding Natural Beauty
- 6.2.49 ES Volume I Chapter 17 'Landscape and Visual Amenity' confirms that the Site is not subject to any national landscape designations, neither are there any within the immediate vicinity of the Site. As such, there is no requirement to consider alternatives from a landscape perspective.
- 6.2.50 The Applicant's consideration of alternatives in relation to the Proposed Development, as set out in the ES, is therefore considered to be both appropriate and proportionate.

Criteria for "good design" in energy infrastructure (NPS EN-1, 4.5; EN-2, 2.3.15-2.3.16; EN-4, 2.3 and EN-5, 2.5)

- 6.2.51 EN-1 (paragraph 4.5.1) recognises that the functionality of buildings and infrastructure, including fitness for purpose and sustainability, are as equally important as visual appearance and aesthetic considerations. It 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."*
- 6.2.52 Paragraph 4.5.2 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.
- 6.2.53 Paragraph 4.5.3 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. In doing so, it goes on to state that the SoS should be satisfied that:
- "...the applicant has taken into account 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) as far as possible. 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, landform 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."*
- 6.2.54 Paragraph 4.5.4 stresses the importance of applicants being able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved. However, it also makes clear that in considering applications, 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.
- 6.2.55 EN-2 (paragraph 2.3.16) states that in relation to fossil fuel generating stations, applicants should demonstrate good design particularly in respect of landscape and visual amenity and in the design of the Proposed Development to mitigate impacts such as noise and vibration, transport impacts and air emissions.
- 6.2.56 EN-4 (paragraph 2.3.1) states that in relation to gas infrastructure, applicants should demonstrate good design as per section 4.5 of EN-1.
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- 6.2.57 EN-5 (paragraph 2.5.2) states that proposals for electricity network infrastructure should demonstrate good design in their approach to mitigating the potential adverse impacts that can be associated with overhead lines.
- 6.2.58 Chapter 6 of the ES Volume I 'Alternatives and Design Evolution' (Document Ref. 6.2) at Sections 6.4 to 6.7 considers the alternatives that have been examined for the Proposed Development, including alternative technologies, locations, sites and connection routing and corridors. Section 6.7 provides an explanation of the design process, including the alternative design options and design changes. The main design changes are summarised at Table 6-2. These in the main have related to the refinement of the Site boundary, notably the connection corridors but have also included changes to the PCC Site in terms of the number of CCGT trains and high-pressure compressors.
- 6.2.59 The Applicants have prepared a 'Design and Access Statement' ('DAS') (Document Ref. 5.4) that forms part of the DCO Application. The DAS explains where the Applicants are seeking flexibility in the design of the Proposed Development 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. The DAS also sets out how the design of the Proposed Development has evolved during the pre-application stage, the level of design information that is available at the consenting stage and how detailed design will ultimately be controlled and secured. In addition, it sets out how good design principles have been included within the Proposed Development
- 6.2.60 The main focus of the DAS is upon the PCC Site that will accommodate the Low Carbon Electricity Generating Station, its CCP and the HP Compressor Station. This is because the PCC Site will be the location of the main buildings and structures and the other works that form part of the Proposed Development primarily involve the installation of pipelines and cables, which are for the most part below ground and/or within existing infrastructure corridors. Those works therefore comprise engineering works, which are more appropriately covered in other Application documents, notably the ES (Document Refs. 6.1 to 6.4) and the Electricity Grid Connection Statement (Document Ref. 5.5) and the Gas Connection and Pipelines Statement (Document Ref. 5.6), rather than the DAS.
- 6.2.61 The PCC Site sits within an industrialised context, with the Redcar Blast Furnace and Coke Ovens still dominating the landscape. The surrounding area is very much dominated by industrial land uses, including port related uses, with the nearest residential area being Dormanstown, approximately 1.4 km to the south-east. There are undeveloped areas nearby that are used by the local community and are of environmental importance, notably South Gare and Coatham Dunes/Sands. A section of the England Coast Path runs across this area along the PCC Site's eastern and southern boundaries.
- 6.2.62 The various connection corridors for the Proposed Development for the most part pass through areas of former and existing industrial land, with the exception of the

connections that cross the River Tees and the CO₂ Export Pipeline which crosses South Gare and Coatham Dunes/Sands.

- 6.2.63 The proposed use of the PCC Site is for power generation and the capture and compression of CO₂ prior to this being exported offshore. That use is consistent with the allocation of the land within the Local Plan and also the uses identified as appropriate to what is known as the Northern Industrial Zone ('NIZ') within the South Tees Area SPD and the Teesworks Design Guide. Furthermore, the PCC Site corresponds with the specific zone identified for NZT within the Teesworks Design Guide.
- 6.2.64 The most visually prominent components of the Proposed Development will be the Absorber Tower and Stack, Heat Recovery Steam Generator ('HRSG') and associated Stack and Gas Turbine Hall at the PCC Site. The main buildings and structures at the PCC Site will be grouped together where feasible from a technical and safety perspective to consolidate their built form. The buildings and structures will be set well within the Site to accommodate the requirements for stand-off distances, infrastructure connections, utilities and access roads. This is something that is recognised with the Teesworks Design Guide as often being necessary in relation to large scale industrial and infrastructure development.
- 6.2.65 The appearance of the buildings and structures at the PCC Site will be in keeping with the industrialised context within which they will sit, with the area already being characterised by large industrial structures, including on the former Redcar Steel Works complex and other industrial sites within the surrounding area. The appearance of the buildings and structures is representative of their function and purpose, a characteristic recognised as a primary driver behind the design code of typology of 'Large-scale Industrial Operations' (including major energy generation) within the Teesworks Design Guide. The appearance of the buildings/structures is also consistent with the fact that the PCC Site is not identified as a Gateway Plot or a primary route within the Teesworks Site.
- 6.2.66 The buildings and structures at the PCC 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.
- 6.2.67 The various connections – the gas, water, electricity grid, CO₂ gathering and export will primarily comprise pipelines and cables which for the most part will be installed below ground or upon existing pipe-racking and existing and proposed structures within existing infrastructure corridors. The exception to this are buildings and structures of relatively limited scale within the Gas Above Ground Installations ('AGIs'), a new NZT electrical substation at Tod Point adjacent to the existing National Grid Electricity Transmission Plc ('NGET') Tod Point Substation (the 'New Tod Point

Substation') and northern and southern extensions to the existing NGET Tod Point Substation (the 'Existing Tod Point Substation')-The infrastructure required for the connections will not therefore be highly visible, nor alter the use or character of the land to which they relate. The approach that has been taken to selecting the various connections corridors (in accordance EN-4, paragraphs 2.19.7 to 2.19.10 and EN-5, Section 2.2) has been to maintain separation from and limit effects upon sensitive receptors such as residential properties and areas of amenity of nature conservation value and minimise as far as possible the crossings of roads, railways and watercourses.

- 6.2.68 The landscape and visual effects of the Proposed Development are considered at Table 6.1 'Generic Impacts' later within this section. This includes a summary of the findings of ES Volume I Chapter 17 'Landscape and Visual Amenity'. Although Chapter 17 does identify that the Proposed Development will result in some limited landscape and visual effects it notes that the Applicants have sought to minimise landscape and visual effects through consolidating the built form at the PCC Site where possible, with the main buildings and structures set well back from the site boundaries and EN-2 (paragraph 2.65) does recognise that *"It is not possible to eliminate the visual impacts associated with a fossil fuel generating station."* Furthermore, appropriate materials and colours will be selected for the external finishes of the buildings/structures in order to minimise effects and the details of these will be secured by Requirement 3 'Detailed design' of the draft DCO (Document Ref. 2.1). It is also considered that the significant benefits of the Proposed Development outweigh any limited landscape and visual effects.
- 6.2.69 The approach taken to landscaping at the PCC Site has 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. The internal access roads and other hardstanding areas (e.g. for parking) will be of concrete or tarmac. However, the perimeter areas of the PCC Site will be landscaped and there will be opportunities for planting and biodiversity enhancement in line with the Indicative Landscape and Biodiversity Strategy (Document Ref. 5.12) that has been developed by the Applicants. Details of the landscaping will be secured by Requirement 4 'Landscape and biodiversity protection management and enhancement'.
- 6.2.70 The Proposed Development also incorporates appropriate access arrangements. The internal access roads within the PCC 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 PCC 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.
- 6.2.71 Further to the above, 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. This includes appropriate flood risk mitigation and landscaping and biodiversity enhancement. Neither should it be overlooked that the Proposed Development will not only capture emissions from the Low Carbon Electricity Generating Station but also provide infrastructure to assist in decarbonising industry on Teesside. Paragraphs 6.2.88 to 6.2.107 later within this section provide a summary of the findings of Chapter 21 'Climate Change' of ES Volume I and confirm that that the Proposed Development will not result in significant climate changes effects and that the NZT project as a whole could result in a net reduction in CO₂ emissions from current levels, with a beneficial effect on annual UK carbon emissions.

- 6.2.72 The detailed design of the Proposed Development will be secured by a number of requirements within Schedule 2 of the draft DCO, notably Requirement 3 'Detailed Design'; 4 'Landscape and biodiversity protection management and enhancement'; 6 'External Lighting'; and 8 'Means of enclosure'.
- 6.2.73 It is therefore considered that the Proposed Development represents 'good design' for the purposes of energy infrastructure and policy set out EN-1, EN-2, EN-4 and EN-5, other planning policy documents and also local design guidelines.

Consideration of combined heat and power ('CHP') (NPS EN-1, 4.6; and EN-2, 2.3.2-2.33)

- 6.2.74 EN-1 (paragraph 4.6.1) confirms that CHP is the generation of useable heat and electricity in a single process. 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.
- 6.2.75 Paragraph 4.6.2 goes on to state that CHP is technically feasible for all types of thermal generating stations. To be economically viable (paragraph 4.6.5) as a CHP plant, a generating station needs to be located close to industrial or domestic customers with heat demands. The distance will vary according to the size of the generating station and the nature of the heat demand. The provision of CHP is most likely to be cost-effective and practical where it is included as part of the initial design and is part of a mixed-use development.
- 6.2.76 Paragraph 4.6.6 of EN-1 states that "*...under Guidelines issued by DECC (then DTI) in 2006 [the Combined Heat and Power (CHP) Guidance], any application to develop a thermal generating station under Section 36 of the Electricity Act 1989 must either include CHP or contain evidence that the possibilities for CHP have been fully explored to inform the [Secretary of State]'s consideration of the application,*" and that the, "*...same principle applies to any thermal power station which is subject to an application for development consent under the Planning Act 2008.*" It continues that the SoS should have regard to DECC's guidance or any successor to it when considering the CHP aspects of applications for thermal generating stations. Since the publication of the DECC Guidance, in 2013 the Environment Agency ('EA') has

- published its own 'CHP Ready Guidance for Combustion and Energy from Waste Plants'.
- 6.2.77 Where CHP is not feasible, paragraphs 4.6.8 and 4.6.9 emphasise the need for applicants to demonstrate how the design of the development provides for the future provision of CHP (i.e. that it is 'CHP Ready')
- 6.2.78 EN-2 (paragraphs 2.3.2 to 2.3.3) reiterates the requirement of EN-1 for applications for generating stations to either include CHP or present evidence in the application that the possibilities for CHP have been fully explored.
- 6.2.79 The Applicants have assessed the feasibility of CHP in accordance with EN-1, EN-2 and the EA's guidance. This assessment is reported within the 'Combined Heat and Power ('CHP') Assessment' (Document Ref. 5.8).
- 6.2.80 The CHP Assessment demonstrates that the Applicants have explored the potential for the Low Carbon Electricity Generating Station to operate in CHP mode (i.e. exporting heat to off-site users). In order to examine the CHP potential, the use of Best Available Techniques ('BAT') for the Proposed Development has been demonstrated by applying the three 'BAT Tests' outlined in the EA's guidance. Use of CHP is limited in the case of the Proposed Development due to its intended role as a dispatchable CCGT plant that operates intermittently. In addition, the electricity and steam demand required by the CCP is deliberately provided from the CCGT so as to maximise heat integration between the two components. Therefore, there is less residual heat available for export from the Proposed Development to third party users than would be the case from a CCGT operating without carbon capture.
- 6.2.81 Nevertheless, following an assessment of the feasibility for heat extraction, three potential heat loads capable of producing hot water for district heating were identified. From these loads, there is approximately up to 45MWth and 94MWth of heat available from the Low Carbon Electricity Generating Station running at minimum electrical power (part load) and maximum electrical power (full load) respectively.
- 6.2.82 The CHP Assessment has indicated that there are a number of potential heat users within a 15km radius of the PCC Site. These include three potential heat demand clusters at South Bank, Kirkleatham and Redcar. There are also a number of developments being advanced within the Teesworks area that could be future heat users.
- 6.2.83 Taking account of economic factors and commercial risks and based on the intended dispatchable role of the Low Carbon Electricity Generating Station, none of these three heat clusters have been considered viable for the beneficial use of available heat from the Proposed Development. However, it is considered that there is future potential to provide Teesworks with available waste heat as the peak heat demand lies within the CHP envelope of the Proposed Development and the Teesworks area is adjacent to the PCC Site, reducing the cost of the necessary heat distribution pipework.

6.2.84 As the Teesworks developments are not yet built (still being at planning stage), CHP is not proposed to be installed from the outset, however, the PCC Site will be designed so as to be 'CHP Ready' with sufficient space allocated for the future retrofit of a heat offtake within its footprint should that be required. Furthermore, Requirement 26 at Schedule 2 of the draft DCO (Document Ref. 2.1) will secured a periodic review of the feasibility of CHP infrastructure being implemented.

6.2.85 It has therefore been demonstrated that the Proposed Development will be CHP Ready.

Carbon Capture Readiness ('CCR') (NPS EN-1, 4.7 and EN-2, 2.3.4-2.3.5)

6.2.86 Paragraph 4.7.10 of EN-1 states that to ensure that no foreseeable barriers exist to retrofitting carbon capture and storage ('CCS') equipment on combustion generating stations, all applications for new combustion plant which are of generating capacity at or over 300 MW should demonstrate that the plant is CCR before consent may be given. Furthermore, that in order to provide assurance that a generating station is CCR, applicants will need to demonstrate that their proposal complies with the following:

- that sufficient space is available on or near the site to accommodate carbon capture equipment in the future;
- the technical feasibility of retrofitting their chosen carbon capture technology;
- that a suitable area of deep geological storage offshore exists for the storage of captured CO₂ from the proposed combustion station;
- the technical feasibility of transporting the captured CO₂ to the proposed storage area; and
- the economic feasibility within the combustion station's lifetime of the full CCS chain, covering retrofitting, transport and storage.

6.2.87 EN-2, paragraph 2.3.5 states that the SoS should impose requirements on any consent requiring operators to retain control of sufficient additional space for carbon capture plant, retain their ability to build this plant on the space in the future and submit update reports periodically on retrofitting carbon capture plant.

6.2.88 The Proposed Development is a carbon capture enabled electricity generating station and is itself part of the development of a CCUS cluster to enable the capture and storage of captured CO₂ from other emitters (including industrial emitters) on Teesside, therefore CCS is essential to and fundamental to the Proposed Development. Nevertheless, for completeness, Application includes a 'Carbon Capture Readiness ('CCR') Assessment' (Document Ref. 5.7) to demonstrate that it is technically feasible to incorporate carbon capture technology within the Proposed Development and that it is 'Carbon Capture Ready' ('CCR') in accordance with 'The Carbon Capture Readiness (Electricity Generating Stations) Regulations 2013'. The CCR Assessment has been produced in accordance with the requirements of the Department of Energy and Climate Change guidance 'Carbon Capture Readiness

(CCR) – A Guidance Note for Section 36 Electricity Act 1989 consent applications’ (November 2009).

6.2.89 The CCR Assessment confirms the following:

- The PCC Site provides sufficient space for CCP taking account of a technical assessment of available technology.
- The proposed CO₂ storage site (the Endurance saline aquifer) has sufficient capacity to accept CO₂ from the Proposed Development over its design life. The CO₂ will be transported to the storage site via pipeline and a separate but related consent for the routing, construction and operation of the offshore pipeline is being progressed by Northern Endurance Partnership.
- The economic viability of power with CCUS has been demonstrated through the ‘System Value to the UK Power Market of Carbon Capture and Storage’ report published by NZT (June 2020). The analysis estimated that inclusion of power with CCUS in the UK market could reduce the total UK system cost of reaching net zero by 2050 by £19bn versus a system without power with CCUS. Specific project terms will be negotiated following a successful application in line with the BEIS cluster selection process and based on the Dispatchable Power Agreement as described by BEIS in its report ‘An update on business models for Carbon Capture, usage and Storage’ (December 2020).

6.2.90 The Proposed Development will be constructed with CCP from the outset and forms part of a full chain CCUS project. It is therefore CCR in accordance with the CCR regulations and guidance. In view of this, the need for periodic reviews of the Proposed Development’s CCR and the feasibility of CCS/CCUS it not considered to be necessary.

Climate change adaptation (NPS EN-1, 4.8; EN-2, 2.3.13-2.3.14; EN-4, 2.2 and EN-5, 2.4)

6.2.91 EN-1 (paragraph 4.8.5) states that new energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change, such as potential for increased flooding, when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure. The ES should set out how the NSIP will take account of its impact on climate change. While not required by the EIA Directive, this information will be needed by the SoS.

6.2.92 EN-2 (paragraph 2.3.13) notes that as fossil fuel generating stations are likely to be proposed for coastal or estuarine sites and climate change is likely, for example, to increase risks from flooding or rising sea levels; applicants should in particular set out how the proposal would be resilient to coastal changes and increased risk from tidal and storm surge; the effects of higher temperatures, including higher temperatures of cooling water, and increased risk of drought leading to a lack of available cooling water. These matters should be assessed in the ES (EN-2, paragraph 2.3.14).

- 6.2.93 EN-4 (paragraph 2.2.2) 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.
- 6.2.94 EN-5 (paragraph 2.4.1) 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.
- 6.2.95 The assessment of flood risk impacts and effects from the Proposed Development has already been considered at paragraphs 6.2.39 to 6.2.44, which confirm (taking account of Chapter 9 'Surface Water, Flood Risk and Water Resources' and the site-wide FRA), that the risks during construction and operation are low with appropriate mitigation.
- 6.2.96 Chapter 21 'Climate Change' of ES Volume I provides a broader assessment of the Proposed Development's impact on climate change, notably, greenhouse gas emissions. With regard to this, it should be noted that Proposed Development is part of a full chain CCUS project that will capture up to 95% of the emissions from the electricity generating station while also providing the infrastructure to facilitate industrial emitters on Teesside in capturing and storing their CO₂ emissions.
- 6.2.97 Chapter 21 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.
 - An 'In-combination Climate Change Impacts' ('ICCI') assessment – an assessment of the in-combination effects of a changing climate and the Proposed Development on receptors in the surrounding environment.
 - A 'Climate Change Resilience' ('CCR') review – 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.
- 6.2.98 The capture and storage of industrial emissions has not been factored into the above assessments and review as industrial emitters will be responsible for their own CCP and connections to the CO₂ Gathering Network.
- 6.2.99 The Lifecycle GHG impact assessment factors in construction, operational and decommissioning effects. It also factors in different scenarios for the operation of the Low Carbon Electricity Generating Station. The worst-case uncaptured CO₂ emissions from these scenarios has been used to inform the total GHG calculations. These emissions are detailed in in Chapter 21.

- 6.2.100 Paragraph 21.3.46 of Chapter 21 confirms that the GHG avoidance of the Proposed Development is based on the CCS/CCUS elements being operational. Using the worst-case emissions scenario, unabated CO₂ emissions from the Low Carbon Electricity Generating Station could amount to an average of more than 2M tCO₂ per year, or 50M tCO₂ over the 25-year design life of the Proposed Development. With carbon capture technology, up to 95% of these emissions will be captured, geo-sequestered and not released into the atmosphere.
- 6.2.101 Table 21-13 compares the carbon intensity of the Proposed Development (both with and without carbon capture) with other forms of generation. Unabated the Low Carbon Electricity Generating Station will be slightly lower than the average gas-fired power plant. Using CCP and 95% capture rates it will have a carbon intensity of 20.7 tCO₂ per GWh, significantly less than the grid average emission in 2020 of 198 tCO₂ per GWh.
- 6.2.102 Emissions associated with the Proposed Development have been examined for their significance against the UK Carbon Budgets (paragraph 21.3.67 at Chapter 21). These emissions are detailed in Table 21-14. Paragraph 21.3.66 confirms that Table 21-14 assumes four years of construction occurring across the 3rd and 4th UK carbon budgets, two years of operations occurring during the 4th carbon budget and five years during the 5th and 6th carbon budgets. The percentage contribution of emissions from the Proposed Development to the respective carbon budgets are less than 0.001%, 0.03%, 0.08% and 0.14% respectively.
- 6.2.103 The magnitude of impact of the Proposed Development (paragraph 21.3.1) is therefore considered 'low' against the current UK carbon budgets. The significance of effects is considered as 'minor adverse' (Table 21-7). As such, the operation of the Proposed Development is not expected to affect the UK in terms of meeting its current Carbon Budgets. Furthermore, (paragraph 21.3.68) the GHG assessment concludes that once neighbouring industries are connected to the CO₂ gathering network and CO₂ can be captured from these sources, it is envisaged that the NZT project as a whole could result in a net reduction in CO₂ emissions from current levels, with the objective of achieving Net Zero status for the Low Carbon Electricity Generating Station and connected industrial emitters with a beneficial effect on annual UK carbon emissions.
- 6.2.104 The ICCI assessment considers the ways in which climate change (e.g. extreme weather events, sea level rises) will influence the significance of the impact of the Proposed Development on receptors in the surrounding environment. The assessment considers the existing and projected future climate conditions on the location. The types of impacts and effects that may occur during construction, operation and decommissioning, and the significance of these are described in Section 21.5 and Table 21-30 taking account of relevant mitigation.
- 6.2.105 Table 21-30 identifies two potentially significant ICCIs. These both relate to increasing winter rainfall combined with existing flood risk at the Site. Paragraph 21.4.49 states that the development of a Flood Emergency Response Plan, supported

by the results and recommendations of the Flood Risk Assessment is considered sufficient to address the significant ICCIs.

- 6.2.106 Section 21.5 of Chapter 21 details the CCR Review that has been undertaken for the Proposed Development. Again, this considers the construction, operational and decommissioning effects of the Proposed Development. The assessment seeks to identify potential climate change impacts and the potential consequence and likelihood or occurrence, taking account of measures incorporated into the design of the Proposed Development. Table 21-33 sets out the scope of the assessment, which covers extreme weather events, precipitation, temperature, sea level rise, sea temperature and wind.
- 6.2.107 The CCR Review includes all infrastructure and assets associated with the Proposed Development and assesses the resilience against both gradual climate change and the risks associated with an increased frequency of severe weather events. The potential impacts and effect of projections for climate change to the Proposed Development are detailed in Table 21-37. Paragraph 21.5.42 summarises the findings of Table 21-37 and states that while a range of climate change hazards and their potential impact upon the Proposed Development have been identified, the embedded design measures are deemed sufficient to reduce the likelihood or consequence of an impact occurring as a result of projected climate hazards and therefore no significant resilience risks have been identified.
- 6.2.108 Section 21.6 reports on residual climate change effects. These are confined to GHG emissions – there will be some residual GHG emissions without offsetting of these by the capture of CO₂ emissions from industrial facilities on Teesside, however, this will result in a minor effect and is not significant.
- 6.2.109 Details of flood risk mitigation will be secured by Requirement 12 ‘Flood risk mitigation’ of the draft DCO and Requirement 11 will secure details of surface and foul water drainage (taking account of flood risk mitigation).
- 6.2.110 It is therefore considered that the Proposed Development will not result in or be affected by significant climate changes effects. Indeed, once neighbouring industries are connected to the CO₂ Gathering Network and CO₂ can be captured from these sources, it is envisaged that the NZT project as a whole could result in a net reduction in CO₂ emissions from current levels, with a beneficial effect on annual UK carbon emissions. 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 NPSs on climate change adaptation.

Grid connection (NPS EN-1, 4.9; and EN-2, 2.2.10 - 2.2.11)

- 6.2.111 EN-1 (paragraph 4.9.1) states that the connection of a generating station to the electricity network is an important consideration for applicants. It is for the applicant to ensure there will be the necessary infrastructure and capacity within the transmission and distribution network to accommodate the electricity generated.

While it is not necessary for an applicant to have received or accepted a formal grid connection offer at the time of submitting an application for a DCO and this is at the applicant's risk, the SoS will want to be satisfied that there is no obvious reason why a grid connection would not be possible.

- 6.2.112 EN-2 (paragraphs 2.2.10 - 2.2.11) highlights that the technical feasibility of the export of electricity from a generating station is dependent on the capacity of the grid network together with the voltage and distance of the connection. Furthermore, applicants will usually have assured themselves that a viable connection existing before submitting an application for a DCO and where they have not done so they take a commercial risk. Even if the precise route of a connection has not been identified, in accordance with Section 4.9 of EN-1 any application must include information on how the generating station is to be connected and whether there are any particular environmental issues likely to arise from that connection.
- 6.2.113 The Application includes an 'Electricity Grid Connection Statement' (Document Ref. 5.5) in order to satisfy the requirements of APFP Regulation 5(2)(p) and 6(1)(a)(i) and Section 4.9 of EN-1. The Electricity Grid Connection Statement sets out the proposed grid connection option, including who will be responsible for designing and constructing the grid connection, including substation infrastructure, as well as demonstrating that there is no reason why the connection is not possible.
- 6.2.114 The Electrical Connection will be between the substation on the PCC Site and National Grid Electricity Transmission Plc's ('NGET') Tod Point Substation. NGET has confirmed that there is sufficient capacity at the existing Tod Point Substation to accommodate the export of electricity from the Low Carbon Electricity Generating Station and a connection offer has been agreed between NGET and the Applicants.
- 6.2.115 The Electrical Connection will comprise a 275kV single circuit cable and control system cables from a substation at the 'Low Carbon Electricity Generating Station Substation' on the PCC Site to the New NZT Tod Point Substation to the west of and adjacent to the Existing NGET Tod Point Substation and from the New Tod Point Substation to the Existing Tod Point Substation. The Existing Tod Point Substation will also be extended by NGET to the north and south to facilitate the Electrical Connection. The cables will be installed below ground along most of the connection corridor. No new overhead lines are proposed. The cables will be installed using an open cut method to a depth of at least 1.1m. A number of special crossings will be required on the route of the Electrical Connection across the Teesworks area. In addition to open cut these will require auger boring or above ground supports on existing or proposed structures (e.g. rail bridges).
- 6.2.116 The selected EPC contractor will be responsible for undertaking the detailed design work for and the installation of the underground cables and the construction of the New NZT Tod Point Substation. NGET will be responsible for the extension of the Existing Tod Point Substation, including adding two new circuit breaker bays to facilitate the connection. NGET has confirmed that no wider upgrades are required to support the Proposed Development.

6.2.117 The connection agreement with NGET provides the necessary rights for the Applicants to connect to the Existing Tod Point Substation. The Applicants have agreed rights of construction and access at the Existing Tod Point Substation and are in discussions with the relevant landowners to secure the necessary rights to install the cables between the PCC Site and Tod Point. An update on discussions will be provided early in the Examination stage.

6.2.118 It is considered that the Electricity Grid Connection Statement demonstrates that it is feasible to connect the Low Carbon Electricity Generating Station to the National Electricity Transmission System and that there is no impediment to the grid connection being provided.

Pollution control and other environmental regulatory regimes (NPS EN-1, 4.10)

6.2.119 Section 4.10 of EN-1 (paragraph 4.10.1) 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.

6.2.120 Paragraph 4.10.3 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. 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.

6.2.121 Paragraph 4.10.5 notes that many developments covered by EN-1 will be subject to the Environmental Permitting ('EP') regime. Paragraph 4.10.6 advises applicants to make early contact with relevant regulators, such as the EA, to discuss their requirements for 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.

6.2.122 The 'Other Consents and Licences' document (Document Ref. 5.10) lists the additional consents and licences that will be required for the Proposed Development. These are listed at Table 2.1 and included the Environmental Permit (in principle) for the operation of the Low Carbon Electricity Generating Station, which was submitted to the Environment Agency ('EA') in October 2021. Extensive discussions have been held between the Applicants and the EA regarding the approach to permitting of what is a 'First of its Kind' development, including the appraisal of Best Available Techniques. Table 2.1 provides information on the status of the applications for consents and licences and the discussions within the relevant stakeholders. The Applicants' will continue to update the document throughout the pre-examination and examination stages for the Application.

6.2.123 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 EIA undertaken. Furthermore, Schedule 2 of the draft DCO (Document Ref. 2.1) 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, 4.11) and Control of Major Accident Hazards (EN-4, 2.5)

6.2.124 EN-1 paragraph 4.11.1 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.

6.2.125 Paragraph 4.11.2 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.

6.2.126 EN-4 (paragraph 2.5.1) highlights that gas supply infrastructure is subject to stringent safety standards under COMAH.

6.2.127 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 Applicants have consulted the operators of the relevant sites and pipelines on the Proposed Development taking account of advice received from the Health and Safety Executive ('HSE') in its response (dated 9 September 2020) to the Section 42 Stage 2 consultation.

6.2.128 Chapter 22 'Major Accidents and Natural Disasters' of ES Volume I provides an assessment of the Major Accidents and Natural Disasters ('MA&ND') 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&ND hazards and threats relevant to the Proposed Development.

6.2.129 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 operation of gas-fired generating stations, 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 carbon capture technology and the transport of CO₂ by pipeline.

- 6.2.130 The main permanently manned buildings associated with the Proposed Development that can be classified as ‘workplaces’, comprise the Administration Block, Control Room and Warehouse/Workshop at the PCC Site. These buildings will each accommodate less than 100 occupants and have less than three occupied storeys. The buildings will be located in the south-west part of the PCC Site, which lies outside the Inner Consultation Zone of any of the Consultation Distances associated with the hazardous installations and pipelines within the vicinity of the Site. On that basis, it is understood that the HSE’s land use planning advice on the Proposed Development would be ‘Do Not Advise Against’ as the working population is below the relevant threshold.
- 6.2.131 It is relevant to note that CO₂ is not flammable and will not support combustion and compared with many other materials conveyed via major pipelines in the UK, such as natural gas and ethylene, the risks to human health and the environment from events such as explosion are relatively low. However, as the concentration of CO₂ in ambient air or water rises, the hazardous effects on people and the environment increase. The key risks to people relate to the potential of CO₂ to act as a toxic material by inhalation or as an asphyxiant at certain concentrations where it displaces oxygen in air to dangerously low levels. High levels of dissolved CO₂ in water can also result in impacts from acidification and subsequent effects on shell-forming species.
- 6.2.132 Tables 22-2 and 22-3 list the potential MA&ND relevant to the construction and operation of the Proposed Development and the storage and handling of potentially hazardous substances present on the Site. The tables provide an assessment of risk, taking account of mitigation measures and confirms whether the risk has been mitigated to ‘As Low As Reasonably Practicable’ (‘ALARP’) and if the tolerability of risk is acceptable.
- 6.2.133 Section 22.7 assesses the potential for major accidents associated with CO₂ releases. Paragraph 22.7.8 notes that the Proposed Development has been deliberately sited so as to maximise the distance from sensitive receptors and other industrial operations.
- 6.2.134 Section 22.8 assesses the major accident hazard sources that could be a source of, or increase the risk of, a major accident and/or domino effect. Paragraph 22.8.1 states that no neighbouring installations have been identified that could be the source of, or increase the risk or consequences of, a major accident and/or domino effect, and while there are several nearby installations that could be affected by a major accident associated with the Proposed Development, it has been deliberately sited to minimise such an effect. Furthermore, where the CO₂ Export Pipeline or other connections run close to existing gas pipelines, additional measures such as

thickened pipe walls will be used where appropriate to minimise the risk of any domino effect with existing infrastructure in the event of a failure.

6.2.135 The assessment conclusions are set out at paragraphs 22.9.1 to 22.9.5. The principal conclusions drawn are as follows:

- The potential MA&NDs identified that could be applicable to the Proposed Development include fires, explosions and the release of CO₂. These incidents have an extremely low probability of occurrence but could have significant impacts on people and the environment without mitigation.
- Teesside is a long established location for power generation and heavy industry. Consequently, the hazards associated with such uses are well understood by plant operators and controlled by the regulatory authorities (the HSE and EA) and the Applicants will draw on this and their own expertise of designing, building and operating potentially hazardous installations to reduce the risk of major accidents occurring to be ALARP.
- The engineering design of the Proposed Development will incorporate the appropriate standards, proven design methods and control measures necessary to reduce the risks of such accidents to an acceptable level (i.e. ALARP) – the standard expected by the regulatory authorities.
- The Proposed Development will require appropriate consents to be in place for its operation including a COMAH licence and Environmental Permit, and these regulatory controls will stipulate a number of requirements that must be demonstrated to prevent or minimise the effects of major accidents.
- With the implementation of regulatory requirements and the mitigation set out in Tables 22-2 and 22-3, the MA&ND risks are considered to have been mitigated to 'tolerable' or 'tolerable if ALARP' and therefore the effects are considered as 'not significant' for both construction and operation.

6.2.136 At this stage no secondary mitigation measures (i.e. additional to the embedded mitigation within the Proposed Development) has been identified as being required to further mitigate any significant effects for MA&ND. Furthermore, detailed emergency plans will be produced for the Proposed Development in accordance with the Environmental Permit and all applicable Regulations. No residual effects have been identified.

Hazardous Substances (NPS EN-1, 4.12 and EN-4, 2.4)

6.2.137 EN-1, paragraph 4.12.1, 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.

6.2.138 EN-4 (paragraph 2.4.1) states that in the case of gas supply infrastructure the Health and Safety Executive (HSE) will advise the SoS on risks.

- 6.2.139 There will be a number of hazardous and potentially harmful substances that will be present on the PCC Site and other parts of the Proposed Development. The Applicants are 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, likely to be RCBC and possibly also STBC.
- 6.2.140 As confirmed above, a COMAH licence application will be submitted to the HSE prior to construction once the volumes of hazardous substances have been established.
- 6.2.141 The 'Other Consents and Licences' document (Document Ref. 5.10) identifies the additional consents and licences that will be required for the Proposed Development and includes the COMAH and HSC applications.

Health (NPS EN-1, 4.13)

- 6.2.142 Section 4.13 of EN-1 highlights that energy production has the potential to impact on the health and well-being of the population (paragraph 4.13.1) and that where a NSIP has the potential to result in effects on human beings, the ES should assess those effects for each element of the development, identifying any adverse health impacts and measures to avoid, reduce or compensate the impacts as appropriate (paragraph 4.13.2).
- 6.2.143 Chapter 23 'Population and Human Health' of ES Volume I considers the potential effects of the Proposed Development upon the health and wellbeing of the local community. The Chapter is a summary, highlighting key aspects relevant to population and human health from the technical assessments completed and presented within Chapters 8 'Air Quality', 9 'Hydrology and Water Resources', 10 'Geology and Hydrogeology', 11 'Noise and Vibration', 16 'Traffic and Transport' and 20 'Socio-economics and Tourism'. The Chapter also considers the effects of Electric and Magnetic Fields ('EMFs').
- 6.2.144 An assessment of the Major Accidents and Natural Disasters that have the potential to arise during the construction and operation of the Proposed Development is provided at Chapter 22 'Major Accidents and Natural Disasters' of ES Volume I. Chapter 22 has already been referred to at paragraphs 6.2.120 to 6.2.132 above in relation to 'Safety and Control of Major Accident Hazards'.
- 6.2.145 The potential impacts and effects identified from the Proposed Development on health and wellbeing include:
- Emissions to air – may affect air quality with consequential health effects (see Chapter 8 'Air Quality', ES Volume I) which could lead to a further deterioration in the local health figures outlined in Tables 23-4 and 23-5. However, the embedded mitigation outlined within Chapter 8 means the construction effects of the Proposed Development are predicted to be not significant at all human health receptors. Operational effects caused by emissions from the Absorber, including N-amine emissions are not predicted to produce a significant adverse effect on

human health based on the stack height selected and the emission levels to be achieved from the CCGT plant.

- Increase in traffic – could lead to severance of communities, reduction in pedestrian amenity, increase in fear and intimidation of pedestrians, and reduction in highway safety; potentially increasing the local road injuries and deaths figure outlined in Table 23-5. Significant effects are not predicted based on the volume of traffic required for the construction of the Proposed Development (see Chapter 16 ‘Traffic and Transport’, ES Volume I) and through the use of appropriate travel plans for construction workers and HGVs. As stated in Chapter 16, the traffic and transport effects from construction, operation and decommissioning are predicted to be negligible adverse and there will be no impacts of any significance to any of the road sections assessed.
- Noise emissions – may result in adverse effects on nearby sensitive receptors (see Chapter 11 ‘Noise and Vibration’, ES Volume I) without adequate mitigation such as use of enclosures, design of plant and temporary or local screening of Noise Sensitive Receptors. As stated in Chapter 11, the residual noise effects of the Proposed Development are predicted to be of up to minor adverse and not significant for the construction, operation and decommissioning phases.
- Land/groundwater contamination or mobilisation of existing land contaminants – may result in human contact and associated adverse health impacts, (see Chapter 10 ‘Geology, Hydrogeology and Contaminated Land’, ES Volume I) potentially leading to a deterioration in the local health figures outlined in Tables 23-4 and 23-5 unless correctly identified and managed during the construction of the Proposed Development. Chapter 10 confirms that the potential geological, hydrogeological and contamination related impacts associated with the Proposed Development are likely to be up to minor adverse during construction, and minor adverse for operation and decommissioning and not significant.
- Emissions to water – may result in adverse effects on local water quality with potential consequential adverse health effects (see Chapter 9 ‘Surface Water, Flood Risk and Water Resources’, ES Volume I) potentially leading to a deterioration in the local health figures outlined in Tables 23-4 and 23-5 unless embedded design measures prevent contamination of water resources. Chapter 9 confirms that construction there are predicted minor adverse effects on water quality in the Tees Bay which are not significant.
- Socio-economics and tourism – the construction and operation of the Proposed Development may result in effects on the economy and tourism (see Chapter 20 ‘Socio-Economics and Tourism, ES Volume I) potentially leading to changes in the socio-economic indices and mental health figures for the local area outlined in Table 23-6. During construction, there is predicted to be a major (significant) beneficial effect from employment and there are no adverse effects predicted that are classified as greater than minor adverse. During operation, the largest beneficial effect predicted is a moderate (significant) beneficial effect from

employment and there are no adverse effects predicted that are classified as greater than negligible adverse.

- 6.2.146 Chapter 23 does not identify the need for any additional mitigation over and above that already identified Chapters 8, 9, 10, 11, 16 and 20.
- 6.2.147 Significant residual effects are predicted in relation to socio-economics and tourism, with a major (beneficial) effect from the employment generated during the four year construction programme and a moderate (beneficial) effect in terms of the creation of jobs during operation.
- 6.2.148 Chapter 23 assesses the potential effects of EMFs on human health and wellbeing during operation as neutral on the basis that the Electrical Connection is separated from residential areas by a distance of over 500m and will be buried.
- 6.2.149 The Applicants submitted a draft of Chapter 23 to Public Health England ('PHE') on 1 April 2021 for review. A response was received from PHE on 29 April 2021. The response mentioned that emissions to air from the operation of the Low Carbon Electricity Generating Station, particularly nitrogen oxides, had previously been identified as a potential concern (within the PEI Report) but had not been detailed in the 'Likely Impacts and Effects' section. The response also noted that the assessment of public health impacts from the electrical connection within the draft Chapter as neutral due to the separation from residential properties and the method of installation (below ground).
- 6.2.150 In response to the comments received from PHE, the text of Chapter 23 was updated to include specific text air quality impacts in the 'Likely Impacts and Effects' section (see above) rather than just a cross-reference to Chapter 8.

Common law nuisance and statutory nuisance (NPS EN-1, 4.14)

- 6.2.151 Paragraph 4.14.2 of EN-1 states that it is very important 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 are considered by the SoS so that appropriate requirements can be included in any subsequent order granting development consent.
- 6.2.152 The Applicant has prepared a Statutory Nuisance Statement (Document Ref. 5.9) that identifies the matters set out at Section 79(1) of the EPA in respect of statutory nuisance and considers if the Proposed Development could result in a nuisance and the measures, where relevant, to prevent and mitigate such nuisance occurring. Section 4 provides an assessment of the potential for nuisance taking account of the assessments undertaken for the EIA. The matters considered include the condition/state of premises; smoke; fumes or gases; dust, steam, smell or other effluvia; accumulations or deposits; keeping of animals; insects; artificial light; noise; and any other matter declared by enactment to be statutory nuisance. A number of matters are not relevant to the Proposed Development and are more relevance to other form of infrastructure (e.g. insects in respect of waste facilities).

6.2.153 Taking account of mitigation no statutory nuisance effects are considered likely to occur as a result of the Proposed Development. Mitigation is both embedded within the design of the Proposed Development and mitigation and controls will be secured during both construction and operation by a number of requirements (Schedule 2 of the draft DCO – Document Ref. 2.1). Furthermore, the operation of the Proposed Development would be regulated by the EA through environmental permitting would undergo regular monitoring and reporting.

Security considerations (NPS EN-1, 4.15)

6.2.154 Paragraph 4.15.1 states that national security considerations apply across all national infrastructure sectors. Paragraph 4.15.2 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.

6.2.155 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 (BEIS) by the Centre for Protection of National Infrastructure.

6.2.156 The PCC Site will be a secure site and the Applicants will consult with the appropriate bodies prior to construction in respect of security considerations and measures. Requirement 9 of the draft DCO (Document Ref. 2.1) secures the submission of a written scheme detailing security measures to minimise the risk of crime to the relevant planning authority for approval.

6.2.157 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 4 of EN-1 are considered below in **Table 6.1**. Where the same impacts appear in the 'technology-specific information' parts of EN-2, EN-4 and EN-5 they are also dealt with below and the relevant part of the NPS is referenced.

Table 6.1 – Generic Impacts

Generic Impact	Summary	Assessment
<p>Air quality and emissions (EN-1, 5.2 and EN-2, 2.5)</p>	<p>EN-1 acknowledges that air quality and emissions are likely to be a key area of concern when assess the development of generating stations. Paragraph 5.2.4 of the NPS EN-2 states:</p> <p><i>“Emissions from combustion plants are generally released through exhaust stacks. Design of exhaust stacks, particularly height, is the primary driver for the delivery of optimal dispersion of emissions and is often determined by statutory requirements.”</i></p> <p>Paragraphs 5.2.6 and 5.2.7 of EN-1 set out the requirements for applicants to assess issues relating to air quality and emissions as part of an ES.</p> <p>EN-1 states that the ES should describe:</p> <p>any significant air emissions, their mitigation and any residual effects distinguishing between the Proposed</p>	<p>Chapter 6 ‘Air Quality’ of ES Volume I addresses the potential air quality effects of the Proposed Development during construction, operation and decommissioning. The Chapter considers the potential effect on identified human health and ecological receptions in terms of dust generation during construction; emissions from mobile plant during construction; emission from road traffic during construction and operation; and process emissions from the operational Proposed Development.</p> <p>No Air Quality Management Areas (‘AQMA’) have been declared for the Site or the surrounding areas. The nearest AQMA is outside the Study Area (paragraphs 8.3.2 to 8.3.6 of Chapter 8), approximately 19km south-east of the Site, in Staithes, and is designated for the exceedance of the 24-hour PM₁₀ limit value. Based on Defra forecast models and local authority monitoring data, no exceedances of the EU standards have been identified as a result of emissions from the Low Carbon Electricity Generating Station.</p> <p>The impact of emissions from the Proposed Development on sensitive ecological receptors are quantified within the assessment in two ways – as direct impacts arising due to increases in atmospheric pollutant concentrations, assessed against defined ‘critical levels’; and as indirect impacts arising through deposition of acids and nutrient nitrogen to the ground surface, assessed against defined ‘critical loads’.</p>

Generic Impact	Summary	Assessment
	<p>Development stages and taking account of any significant emissions from any road traffic generated by the Proposed Development; the predicted absolute emission levels of the proposed Development, after mitigation methods have been applied; existing air quality levels and the relative change in air quality from existing levels; and and potential eutrophication impacts.</p> <p>Paragraph 5.2.9 states that air quality considerations will be given substantial weight where a Proposed Development would lead to deterioration in air quality in an area, or leads to a new area where air quality breaches any national air quality limits. Air quality considerations will also be important where substantial changes in air quality levels are expected, even if this does not lead to any breaches of national air quality limits.</p>	<p>Table 8-6 lists the identified human and ecological receptors that could potentially be impacted by the Proposed Development in air quality terms.</p> <p>During construction emissions will be controlled by a number of measures implemented through the CEMP (secured by Requirement 16). These are set out at paragraphs 8.5.2 and 8.5.3 of Chapter 8. For operation, the Proposed Development will be designed such that that process emissions to air comply with the ELV requirements specified in the IED, or, if tighter, the LCP BRef. This will be regulated by the EA through the Environmental Permit required for the operation of the electricity generating station. As appropriate, additional ELVs will be defined within the Environmental Permit for any other pollutant species emitted from the Proposed Development that isn't covered by the IED or LCP BRef.</p> <p>Section 8.6 sets out the likely air quality impacts and effects for the Proposed Development. In terms of construction as follows:</p> <ul style="list-style-type: none"> • Dust – unmitigated dust impacts are considered to be 'low to medium risk' for human health receptors, and 'medium to high risk' for ecological receptors. Therefore, mitigation measures appropriate to the scale of perceived risk would be applied through the CEMP. • Traffic – the air quality effects of construction traffic on human and ecological receptors are assessed as negligible and not significant. • Site plant – due to the phased nature of the construction works and the controls that will be applied through the CEMP air quality effects from site plant are also assessed as negligible and not significant.

Generic Impact	Summary	Assessment
	<p>Paragraph 5.2.10 requires decisions to take account of any relevant statutory air quality limits. Where the limits would be breached, developers should work with the relevant authorities to secure appropriate mitigation measures to allow the proposal to proceed.</p> <p>Consideration should be given to whether mitigation measures are needed for both operational and construction emissions. A construction management plan may help codify mitigation.</p> <p>EN-2 (paragraph 2.5.5) confirms that the applicant should carry out an assessment as required by EN-1, consulting the Environment Agency ('EA') and other statutory consultees. Paragraph 2.5.6 goes on to state that in considering whether to grant consent, the SoS should take account of likely environmental impacts resulting from air emissions and that in the case of</p>	<p>In terms of operation, the dispersion modelling carried out has been based on conservative assumptions. The results of the operation impact assessment for human health are set out at Table 8-10 with those for ecological receptors at Table 8-11.</p> <p>The impacts of all pollutant species released from the operational Proposed Development are predicted to result in negligible adverse effects at all receptors within the Study Area. The impact of NO₂, CO, NH₃ and amines can therefore be considered to be not significant at all human health receptors.</p> <p>In terms of ecological receptors, the most impacted ecological receptor as a result of emissions from the Proposed Development is the Teesmouth and Cleveland Coast SPA/Ramsar/SSSI, which is located adjacent to the PCC Site. However, the annual average impact of NO_x is under the threshold to be determined not significant (70%). The annual average impacts of NH₃ is also below the 70% threshold and therefore can be considered not significant.</p> <p>The daily NO_x concentration cannot be considered insignificant, given that the PC is greater than the 10% screening criteria, however the PEC of 59.7% indicates that, in addition to background NO_x levels, the PC is unlikely to result in an exceedance of the daily critical level and therefore it is considered that the predicted daily NO_x impacts are not significant.</p> <p>N-amine levels – formed either within the absorber before being emitted to atmosphere or formed within the atmosphere from the degradation of amines</p>

Generic Impact	Summary	Assessment
	<p>SOX, NOX or particulates it follows the advice in EN-1 on interaction with the EA’s regulatory processes.</p>	<p>that are emitted – have been assessed using detailed modelling and chemistry algorithms and considering a range of potential emission and formation scenarios. The assessment concludes that no significant air quality effects are predicted as a result of the emissions from the Proposed Development.</p> <p>No additional mitigation has been identified as necessary for the construction, operational or decommissioning phases of the Proposed Development beyond the embedded mitigation measures proposed.</p>
<p>Biodiversity and geological conservation (EN-1, 5.3; EN-4 2.21; and EN-5, 2.7)</p>	<p>Paragraph 5.3.18 of EN-1 states that during construction appropriate mitigation measures should be included to ensure that activities will be confined to the minimum areas required for the works and to ensure that the risk of disturbance or damage to species is minimised.</p> <p>Paragraph 5.3.18 of EN-1 also states that, during operation, appropriate mitigation measures should be included to ensure that the risk of disturbance or damage to species is minimised. Development should aim to avoid significant harm to biodiversity and geological conservation interests</p>	<p>The Applicants have undertaken a HRA as the Site lies directly adjacent to (and involves land within) the Teesmouth and Cleveland Coast SPA/Ramsar Site. The HRA (which includes an Appropriate Assessment) concludes that there will be no adverse effects on the integrity of any European site either alone or in combination with other plans and projects. As such there is no requirement to consider alternatives to the Proposed Development as it will not adversely impact upon the SPA/Ramsar.</p> <p>The potential effects of the Proposed Development on biodiversity and ecology are assessed in detail within Chapters 12 ‘Terrestrial Ecology and Nature Conservation’, 13 ‘Aquatic Ecology’, 14 ‘Marine Ecology and Nature Conservation’ and 15 ‘Ornithology’ of ES Volume I. The surveys that have informed the assessments are contained within ES Volume III. The conclusions of the assessments covered in these chapters are as follows:</p> <ul style="list-style-type: none"> • Terrestrial ecology – no likely significant effects with implementation of appropriate mitigation and monitoring.

Generic Impact	Summary	Assessment
	<p>through mitigation and consideration of reasonable alternatives.</p> <p>EN-4 (Section 2.21) considers the effects of gas pipelines on biodiversity. It notes that many effects will be temporary in nature and that applications should include proposals for the reinstatement of the pipeline route to its original state as close as possible.</p> <p>EN-5 (Section 2.7) considers the effects that electricity network infrastructure can have on biodiversity, especially birds. Paragraph 2.7.2 requires the applicant to consider any such possible impacts, particularly on feeding and hunting grounds, migration corridors and breeding grounds.</p>	<ul style="list-style-type: none"> • Aquatic ecology – no likely significant effects on species or habitats taking account of mitigation. • Marine ecology – no significant adverse effects taking account of mitigation. • Ornithology – no significant effects predicted to occur. <p>Potential effects on ecology during construction will be managed through the implementation of the measures that will be set out in the Landscape and Biodiversity Protection Plan and the CEMP that will be secured by Requirements 4 and 16 of the draft DCO (Document Ref. 2.1). An Ecological Clerk of Works would be present during construction as appropriate to supervise and instruct the implementation of the mitigation measures in the CEMP. Furthermore, options to achieve benefits for biodiversity as a direct consequence of the Proposed Development are set out within the Indicative Landscape and Biodiversity Strategy (Document Ref. 5.12). The detailed proposals for biodiversity enhancement relating to the Proposed Development will be set out in the Landscape and Biodiversity Management and Enhancement Plan (also secured by Requirement 4).</p> <p>Chapter 10 ‘Geology and Contaminated Land’ confirms that there are no geological interest features within the Site boundary or in its vicinity (e.g. Geological SSSIs). Furthermore, there are no recorded Regionally Important Geological Sites or Locally Important Geological Sites within the Site boundary. Effects upon geology (Table 10-16) . The effects on geology taking account of mitigation will be limited and not significant.</p>

Generic Impact	Summary	Assessment
Civil and military aviation and defence interests (EN-1, 5.4)	EN-1, Section 5.4 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.	<p>The Applicants consulted the Civil Aviation Authority ('CAA'), Defence Infrastructure Organisation ('DIO') and NATS on the proposed Development. A response was received from the DIO dated 14.09.20 confirming that the Site is outside any Ministry of Defence safeguarding areas and that the DIO had no safeguarding objections. A response was received from NATS dated 17.12.20 confirming that it has no safeguarding objections.</p> <p>The Site lies within the 30km wind farm safeguarding area for Durham Tees Valley Airport (shown on the Policies Map of the RCBC Local Plan), however, this is not considered relevant to the Proposed Development.</p> <p>Requirement 27 'Aviation warning lighting' of the draft DCO requires details of aviation warning lighting to be submitted to the relevant local planning authority prior to the commencement of development and for the authority to consult the CAA on those details. The aviation warning lighting must be installed and operated in accordance with the approved details.</p> <p>Requirement 28 'Air safety' requires relevant details to be sent to the Defence Geographic Centre of the MoD prior to the commencement of development so that the Site can be charted for aviation purposes.</p>
Dust, odour, artificial light, smoke and	NPS EN-1 acknowledges that the construction/demolition, operation and decommissioning of energy	Chapter 8 'Air Quality' includes an assessment of dust impacts from construction. It confirms that unmitigated dust impacts are considered to be 'low to medium risk' for human health receptors, and 'medium to high risk' for

Generic Impact	Summary	Assessment
steam (EN-1, 5.6 and EN-2, 2.8)	<p>infrastructure has the potential to affect air quality through the release of odour, dust, steam, smoke and artificial light.</p> <p>Paragraph 5.6.5 of EN-1 provides advice regarding the assessment of these impacts. It is advised that the assessment should describe:</p> <ul style="list-style-type: none"> • 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. <p>Paragraph 5.6.7 of EN-1 states that, in decision making, the SoS should be</p>	<p>ecological receptors. Appropriate mitigation measures will be applied through the CEMP (Requirement 16). No other dust impacts are predicted.</p> <p>Odour, artificial light, smoke and steam are dealt with in the Statutory Nuisance Statement (Document Ref. 5.9), which identifies the matters set out at Section 79(1) of the EPA in respect of statutory nuisance and considers if the Proposed Development could result in a nuisance and the measures, where relevant, to prevent and mitigate such nuisance occurring.</p> <p>Section 4 of the Statutory Nuisance Statement provides an assessment of the potential for nuisance taking account of the assessments undertaken for the EIA. The matters considered include the condition/state of premises; smoke; fumes or gases; dust, steam, smell or other effluvia; accumulations or deposits; keeping of animals; insects; artificial light; noise; and any other matter declared by enactment to be statutory nuisance. A number of matters are not relevant to the Proposed Development and are more relevance to other form of infrastructure (e.g. insects in respect of waste facilities).</p> <p>Taking account of mitigation no statutory nuisance effects are considered likely to occur as a result of the Proposed Development. Mitigation is both embedded within the design of the Proposed Development and mitigation and controls will be secured during both construction and operation by a number of requirements (Schedule 2 of the draft DCO – Document Ref. 2.1). These include Requirement 6 ‘External lighting’; 16 ‘Construction environmental management plan’; 20 ‘Construction hours’; 21 ‘Control of noise and vibration – construction’; 22 ‘Control of noise- operation’; 24 ‘Waste management on</p>

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	<p>satisfied that an assessment of the potential effects in respect of artificial light, dust, odour, smoke and steam has been carried out; and be satisfied that all reasonable steps have been taken to minimise any detrimental impacts.</p>	<p>site – construction wastes’; and 25 ‘Restoration of land used temporarily for construction’. Furthermore, the operation of the Proposed Development would be regulated by the EA through environmental permitting would undergo regular monitoring and reporting.</p>
<p>Flood risk (EN-1, 5.7; EN-4, 2.2.2-2.2.3; and EN-5, 2.4.1)</p>	<p>Paragraph 5.7.4 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’).</p> <p>Similar considerations apply to gas supply pipelines (EN-4, paragraph 2.2.2) and in relation to substations that are vital for the electricity transmission and distribution network (EN-5, paragraph 2.4.1). Applicants should set out how their developments will be resilient to flooding and not result in an increased risk of flooding.</p>	<p>Chapter 9 of ES Volume I ‘Surface Water, Flood Risk and Water Resources, considers the effects of the Proposed Development in terms of flooding and the risk of flooding. A site-wide Flood Risk Assessment (‘FRA’) is provided at Appendix 9A of ES Volume III (Document Ref. 6.4).</p> <p>The PCC 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 Site that fall within Flood Zone 2 (medium risk) and Flood Zone 3a (high risk). Only construction works on parts of the Gas Connection, Water Discharge Connection, CO₂ Gathering Network Corridor and CO₂ Export Pipeline will be carried out in or under land in Flood Zones 2 and 3a. These works will be temporary in nature and will be involve either the construction of underground tunnels/ pipelines, the use of existing tunnels or the installation of pipes on existing/extended pipe racks in existing service corridors. Where tunnels or borings are proposed, the launch and receiving areas are all outside Flood Zone 3, except for the receiving pit for the Horizontal Directional Drilling (‘HDD’) crossing of the River Tees required for one option for the routeing of the CO₂ Gathering Network at the mouth of the Dabholm Gut, which may be located in Flood Zones 2 or 3a.</p>

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		<p>As the Proposed Development involves land within both Flood Zones 2 and 3a, it is necessary to apply the ‘Sequential Test’ in order to demonstrate that the Applicants have sought to locate it within the areas with the lowest probability of flooding (e.g. Flood Zone 1). The Applicants’ approach to applying the Sequential Test is set out at paragraphs 9.6.16 to 9.6.30 of Appendix 9A of the ES and demonstrates that the where feasible development has been located in Flood Zone 1, however, parts of the connection corridors are, as a necessity located within Flood Zones 2 and 3. 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 electricity generating stations and grid and primary substations) is compatible with the higher risk flood zones (in terms of its flood risk vulnerability) subject to the application of the ‘Exception Test’. NPS EN-1 (paragraph 5.7.16) states that all three elements of the Exception Test need to be satisfied for consent to be granted. For the Exception Test to be passed:</p> <ul style="list-style-type: none"> • it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk; • the project should be on developable, previously developed land or, if it is not on previously developed land, that there are no reasonably alternative sites on developable previously developed land subject to any exceptions set out in the technology-specific NPSs; and • a FRA must demonstrate that the project will be safe, without increasing flood risk elsewhere and, where possible, will reduce flood risk overall.

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		<p>How the Proposed Development satisfies the Exception Test is set out at paragraphs 9.6.31 to 9.6.39 of Appendix 9A of the ES. With regard to this:</p> <ul style="list-style-type: none"> • The Proposed Development will have very clear wider sustainability benefits to the community. It will contribute to the security of electricity supplies and by providing low carbon generation and the necessary infrastructure to decarbonise local industries it will help support the transition to Net Zero 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 such as hydrogen production. • The PCC Site comprises previously developed land and the other elements of the Proposed Development, notably the connection corridors where feasible, involve previously developed land and/or existing infrastructure corridors. • The site-wide FRA undertaken demonstrates (see Section 9.9 of the FRA) 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. <p>It is therefore considered that the Exception Test is satisfied.</p>

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		<p>The assessment of flood risk impacts and effects during construction is also set out in Appendix 9A to the ES. These have been informed by the site-wide FRA. The main risk during construction is considered to be that to construction workers. Table 9-19 in Chapter 9 of the ES provides the summary of key flood risks to the Proposed Development. It confirms that the risk of flooding from tidal, fluvial and surface water is low or very low, from groundwater medium, drainage infrastructure low to medium and artificial sources low. Section 9.10 in Chapter 9 of the ES sets out how residual flood risks and off-site impacts will be mitigated during both construction and operation.</p> <p>Requirements 11 and 12 of the draft DCO 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, while further mitigation measures will be secured through the final Construction Environmental Management Plan ('CEMP') (Requirement 16 of the draft DCO).</p>
<p>Historic environment (EN-1, 5.8)</p>	<p>Section 5.8 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.</p> <p>Paragraph 5.8.8 requires applicants to provide a description of the significance</p>	<p>The potential impact of the Proposed Development upon the historic environment is considered at Chapter 18 'Archaeology and Cultural Heritage' and 19 'Marine Heritage' of ES Volume I.</p> <p>Chapter 18 deals with cultural heritage and archaeology in respect of the onshore elements of the Proposed Development. This includes archaeology, built heritage and historic landscapes and assesses the potential effects of the Proposed Development during construction, operation and decommissioning.</p>

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	<p>of the heritage assets affected by the proposed development and the contribution of their setting to that significance.</p> <p>Where a development site affects, or possibly includes heritage assets with an archaeological interest, the applicant should carry out an appropriate desk-based assessment.</p> <p>The extent of the impact of the proposed development on the significance of any heritage asset affected should be able to be adequately understood from the application documents.</p> <p>Paragraph 5.8.11 states that the SoS should assess the significance of any heritage asset that may be affected by the proposed development, taking account of:</p> <ul style="list-style-type: none"> evidence provided with the application; 	<p>There are limited heritage assets within the boundary of the PCC Site, although the adjacent Redcar Blast Furnace, which lies adjacent to the PCC Site, is identified as a heritage asset of at least medium value due to its historical, architectural and industrial interest. The construction effect on the setting of this asset is assessed to be neutral. Operational and decommissioning effects of the Proposed Development are also judged to be neutral. This is with the exception of the ancillary structures associated with the Blast Furnace that will be removed. However, these are considered to be of low value and mitigation is proposed in the form of a programme of research and building recording in advance of demolition.</p> <p>In terms of other heritage assets and archaeology, effects are assessed to be neutral. This is with the exception of a WWI rifle range within the water infrastructure (outfall) and CO₂ export pipeline corridors that is considered to be of medium value. For this asset mitigation by design is recommended by employing trenchless techniques to install the pipelines.</p> <p>It is proposed that the scope of mitigation is discussed with and approved by the Archaeological advisors to RCBC. The methodologies will be set out in a Written Scheme of Investigation (WSI), which will be submitted to RCBC for approval. The WSI will be secured by Requirement 14 'Archaeology' of the draft DCO (Document Ref. 2.1).</p> <p>The potential impact of the Proposed Development upon marine heritage is considered at Chapter 19 'Marine Heritage' of ES Volume I. This relates works</p>

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	<ul style="list-style-type: none"> any designation records; the Historic Environment Record; the heritage assets themselves; the outcome of consultations with interested parties; and where appropriate, expert advice. 	<p>associated within the potential replacement of the existing water abstraction infrastructure in the Tees Estuary and the CO₂ Export Pipeline.</p> <p>No designated marine assets are identified within the Site, although there are a large number of undesignated assets, including wrecks.</p> <p>Based on the worst-case scenario of the existing water infrastructure (outfall) being replaced the effect on marine heritage during construction is assessed as negligible and therefore not of significance, while there will be no physical impact on any assets during operation or decommissioning.</p>
<p>Landscape and Visual (EN-1, 5.9, EN-2, 2.6; EN-4, 2.21; and EN-5, 2.8)</p>	<p>Section 5.9 of EN-1 states that adverse landscape and visual effects may be minimised through appropriate siting of infrastructure, materials and design, and landscaping schemes.</p> <p>Paragraph 5.9.15 states that the SoS should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits of the proposed development.</p> <p>Paragraph 5.9.17 states that the SoS should consider the design of the development, taking account of</p>	<p>ES Volume I Chapter 17 'Landscape and Visual Amenity' confirms that the Site is not subject to any national landscape designations, nether are there any within the immediate vicinity of the Site. As such, there is no requirement to consider alternatives from a landscape perspective.</p> <p>The landscape and visual assessment is based on a study area for the PCC Site of 10km (based on the visibility of the largest structure – the Absorber stack) and for the connection corridors 2km and the basis that significant effects are unlikely beyond these distances.</p> <p>The assessment has determined that the Proposed Development is likely to result in significant short-term adverse landscape effects during construction within the Redcar Flats LCTr due to the close proximity of the Proposed Development and the extent of widespread views available. Impacts within</p>

Generic Impact	Summary	Assessment
	<p>environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.</p> <p>Paragraph 5.9.18 recognises that all proposed energy infrastructure is likely to have visual effects for receptors around proposed sites; however, in determining proposals, a judgement is to be made as to whether the visual effects on sensitive receptors outweigh the benefits of the development.</p> <p>Section 2.6 of EN-2 sets out the landscape and visual considerations in relation to fossil fuel generating stations, recognising that many of the main structures (e.g. boiler and turbine halls and emissions stacks) are large and will have an impact upon the surrounding landscape and visual amenity. Paragraph 2.6.3 states that applicants should include a Landscape and Visual Impact Assessment ('LVIA')</p>	<p>Redcar Flats LCTr would reduce to not significant during opening and operation.</p> <p>The assessment has determined that a small number of recreational receptors - South Gare Breakwater (Viewpoint 5), England Coastal Path (Viewpoint 7) and Redcar seafront (Viewpoint 8) - are likely to experience significant short-term adverse effects during construction as a result of the close distance to the PCC Site and limited intervening vegetation. The impact on receptors at South Gare Breakwater (Viewpoint 5) and Redcar Seafront (Viewpoint 8) would reduce to not significant during operation; however, effects would remain significant during operation along the England Coastal Path (Viewpoint 7) due to the close proximity and prominence of the buildings and structures at the PCC Site.</p> <p>In designing the Proposed Development, the Applicants have sought to minimise its landscape and visual effects. This has included seeking to consolidate the built form at the PCC Site where possible, with the main buildings and structures set well back from the site boundaries. Appropriate materials and colours will also be selected used for the external finishes of the buildings/structures in order to minimise landscape and visual effects and the details of these will be secured through Requirement 3 'Detailed design' of the draft DCO.</p> <p>Notwithstanding the above, paragraph 2.65 of NPS EN-2 recognises that <i>"It is not possible to eliminate the visual impacts associated with a fossil fuel generating station."</i></p>

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	<p>as part of the ES and consider the design of the plant and materials to be used, including the visual impact of the stack. In terms of SoS decision-making, paragraph 2.6.5 highlights that it is not possible to eliminate the visual impacts associated with fossil fuel generating stations and so the focus should be on minimising impacts as far as it reasonably practicable.</p> <p>EN-4 paragraphs 2.21.1 and 2.21.2 note 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. Impacts are likely to include limitations on the ability to replant landscape features such as hedgerows or deep-rooted trees over or adjacent to the pipeline and the structures/indication points necessary to identify the pipeline route and provide it with service access.</p>	<p>It is considered that the significant benefits of the Proposed Development outweigh its limited landscape and visual effects.</p> <p>Requirement 4 'Landscaping and biodiversity protection and management and enhancement' of the draft DCO will secure the details of landscaping associated with the Proposed Development.</p>

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	<p>EN-5 paragraph 2.8.4 requires applicants to give appropriate consideration to undergrounding electrical connections as a way of mitigating landscape and visual impacts.</p>	
<p>Land use including open space, green infrastructure and Green Belt (EN-1, 5.10)</p>	<p>EN-1 notes at Section 5.10 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.</p> <p>Paragraph 5.10.3 recognises that it may not be possible for many forms of energy infrastructure to be sited on previously developed land, while paragraph 5.10.5 requires applicants to assess the effects of the proposed development on existing land uses at and near the site.</p> <p>Paragraph 5.10.9 requires applicants to safeguard any mineral resources on the</p>	<p>Much of the Site comprises existing or former industrial land. The PCC Site is located on part of the former Redcar Steel Works Site while the connection corridors largely follow existing pipeline corridors that cross existing or former industrial land. The routing of the connection corridors has sought to avoid sensitive receptors and minimise impacts on these. Section 6.7 of Chapter 6 ‘Design Evolution and Alternatives’ of ES Volume I sets out the approach that has been taken to the routing of the connection corridors.</p> <p>The Proposed Development will not have any permanent effects upon green infrastructure or open space and does not involve any Green Belt land. Water connection corridors and the CO₂ Export Pipeline will cross Coatham Dunes/Sands. However, it is proposed to use horizontal direction drilling techniques for the installation of this infrastructure in order to minimise impacts on and disruption to this area which is used for recreation purposes and is of nature conversation value.</p> <p>Sand and gravel, limestone, potash, salt, gypsum/anhydrite and coal are widespread across the Tees Valley. These minerals resources are both shallow and deep and in many cases are subject to safeguarding in the Joint Minerals</p>

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	<p>proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place.</p> <p>Paragraph 5.10.9 states mitigation measures should be considered for development affecting green infrastructure to ensure the connectivity of the green infrastructure network is maintained.</p>	<p>and Waste DPD. Much of the Site is identified as being within an area that is identified for salt and gypsum.</p> <p>The Proposed Development will not sterilise local mineral resources, notably salt and gypsum. These mineral resources are present at depth below the PCC Site and parts of the connection corridors. Some of these areas, including the PCC Site already covered by existing industrial development. The Proposed Development does not therefore alter or preclude the ability to access these minerals for future extraction. It is therefore considered that the risk to mineral resources considered is negligible (Chapter 10 'Geology and Hydrogeology, ES Volume I). Notwithstanding this, it is considered that the need for the Proposed Development and the benefits that it will bring outweigh any minerals considerations.</p>
<p>Noise and vibration (EN-1, 5.11; EN-2, 2.7; EN-4, 2.20; and EN-5, 2.9)</p>	<p>EN-1 (Section 5.11) requires a noise assessment for development that is likely to cause noise impacts through operational use and proximity to noise sensitive receptors.</p> <p>Paragraph 5.11.8 of EN-1 requires demonstration of good design through selection of the quietest cost-effective plant available; containment of noise within buildings wherever possible; optimisation of plant layout to</p>	<p>The potential noise and vibration effects of the Proposed Development are assessed within Chapter 11 'Noise and Vibration' of ES Volume I.</p> <p>Chapter 11 assesses the potential impact of a number of sources of noise and vibration during construction, operation and decommissioning. It takes into account various proposed mitigation measures for the different stages including design and impact avoidance. The residual effects, taking account of mitigation, are set out at Table 11-35 'Summary of Effects'. With mitigation, construction effects on receptors are reduced to either minor adverse or less or negligible adverse or less. There would be a moderate/minor adverse effect or less during commissioning on a number of residential receptors due to CO₂</p>

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	<p>minimise noise emissions and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission.</p> <p>Paragraph 5.11.9 goes on to state that developments should:</p> <ul style="list-style-type: none"> • avoid significant adverse impacts on health and quality of life from noise; • mitigate and minimise other adverse impacts on health and quality of life from noise; and, • where possible contribute to improvements to health and quality of life through the effective management and control of noise. <p>EN-2, Section 2.7 covers noise and vibration in relation to fossil fuel generating stations. Paragraph 2.7.2 confirms that the ES should include a noise assessment, while paragraph</p>	<p>venting, however, this would be planned and temporary. The operation of the PCC Site on residential receptors is found to be minor adverse or less.</p> <p>The CEMP, which is secured by Requirement 16 of the draft DCO (Document Ref. 2.1) will include a number of measures to control noise and vibration effects during construction. Further controls on noise and vibration will be provided by Requirements 20 ‘Construction hours’; 21 ‘Control of noise and vibration – construction’; and 22 ‘Control of noise – operation’.</p>

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	<p>2.7.3 states that the SoS should be satisfied that noise will be adequately mitigated through requirements. Furthermore, consideration should be given to the extent that operational noise will be controlled by the EA.</p> <p>EN-4, Section 2.20 deals with the noise and vibration effects of gas supply pipelines. Paragraphs 2.20.2-2.20.3 note that there will be noise and possibly vibration effects during the construction phase and also possibly during commissioning as a result of drying after hydrotesting and using air compressors. A new gas pipeline (paragraph 2.20.4) may require an above ground installation. These may be located in quiet rural areas and therefore the control of noise from these facilities is likely to be an important consideration. Paragraph 2.20.7 outlines mitigation measures for pipelines and AGIs, including, amongst others:</p>	

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	<ul style="list-style-type: none"> • screening or enclosure of compressors and pumps; • use of sound attenuators on ventilation systems; • acoustic lagging of pipework; and • not impact piling such as auger boring. <p>EN-5 (paragraph 2.9.11) requires relevant assessment methodologies to assess the noise impacts from the proposed electricity network infrastructure. It goes on to state that (paragraph 2.9.12) mitigation measures that should be followed, including the positioning of lines to help mitigate noise through:</p> <ul style="list-style-type: none"> • ensuring that the appropriately sized conductor arrangement is used to minimise potential noise; • quality assurance through manufacturing and transportation to avoid damage to overhead line 	

Generic Impact	Summary	Assessment
	<p>conductors which can increase potential noise effects; and</p> <ul style="list-style-type: none"> ensuring that conductors are kept clean and free of surface contaminants during stringing/installation. 	
<p>Socio-economic (EN-1, 5.12)</p>	<p>Paragraph 5.12.1 of EN-1 acknowledges that the construction, operation and decommissioning of energy infrastructure may have socio-economic impacts at local and regional levels.</p> <p>Paragraph 5.12.3 states that the assessment within the ES should consider all relevant socio-economic impacts.</p> <p>Paragraph 5.12.6 confirms that SoS will have regard to the potential socio-economic impacts of new energy infrastructure.</p>	<p>Chapter 20 ‘Socio-economic and Tourism’ of ES Volume I provides an assessment of the Proposed Development in terms of employment generation both through direct employment and wider benefits for the economy. It is estimated that up to 2,440 net construction jobs (direct and indirect) would be generated per annum of which 1,220 are expected to be from the local area (the Middlesbrough and Stockton TTWA). Jobs during operation are estimated at up to 130 FTE (direct and indirect) with the majority (110) filled by people from the local area. No significant adverse effects in terms of socio-economics or tourism are predicted during the construction, maintenance, operation of decommissioning of the Proposed Development, and as such, no mitigation is required. It is considered that the Proposed Development would have an overall positive effect on the local area. The draft DCO includes a requirement (Requirement 30) that would secure an employment and skills plan, to be agreed with RCBC and STBC, to maximise the local employment and training opportunities provided by the Proposed Development.</p>

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	<p>Paragraph 5.12.9 states that it should be considered whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of a development.</p>	
<p>Traffic and transport (EN-1, 5.13; EN-2, 2.2.5-2.2.6)</p>	<p>EN-1 (paragraph 5.13.3) states that if a Proposed Development is likely to have significant transport implications, the applicant's ES should include a transport assessment, using the NATA/WebTAG methodology stipulated in Department for Transport guidance, or any successor to such methodology.</p> <p>Applicants should also consult the Highways England and highway authorities as appropriate on the assessment and mitigation.</p> <p>Paragraph 5.13.4 requires applicants to prepare a travel plan including demand management measures to mitigate transport impacts.</p>	<p>Chapter 16 'Traffic and Transport' of ES Volume I addresses the potential effects of the Proposed Development on traffic and transport. The Chapter has been informed by a Transport Assessment ('TA') within ES Volume III (Appendix 16A). The scope of the TA has taken into account comments received from Highways England ('HE') and junction modelling has also been discussed and agreed with HE. ES Volume III also includes a Framework Construction Workers Travel Plan (Appendix 16B) and a Framework Construction Traffic Management Plan (Appendix 16C). The assessment has been prepared on a worst-case and makes no allowance for the delivery of construction materials of items of plant or equipment by water or rail. However, the Site does have access to water and rail facilities and it is expected that the appointed contractor will review options for the use of these modes when sourcing construction materials and in particular for the delivery of Abnormal Indivisible Loads to the Site.</p> <p>Section 16.6 of Chapter 16 provides the assessment of likely impacts and effects. The main impact will be during the construction phase that will last for around 48 months. Traffic during the operational phase will be much lower and relate to the operational staff accessing the site, HGV traffic generated by</p>

Generic Impact	Summary	Assessment
	<p>Paragraph 5.13.6 also requires applicants to include mitigation measures to sufficiently reduce the impact on transport infrastructure to acceptable levels.</p> <p>EN-2 (paragraph 2.2.5) states new fossil fuel generating stations need to be accessible for the delivery and removal of construction materials, fuel, waste and equipment and for employees, while paragraph 2.2.6 notes that the Government supports the multi-modal transportation of materials by water or rail where possible.</p>	<p>deliveries of operational and maintenance plant and equipment and period maintenance activities, when a number of contractors will be on site.</p> <p>The residual effects for the construction, operational and decommissioning stages of the Proposed Development (taking account of mitigation) are predicted to be negligible adverse (not significant).</p> <p>The additional traffic due to Proposed Development construction activities will result in small, temporary increases of traffic flows, including HGVs, on the roads leading to the Site. In line with the significance criteria presented in Chapter 16 and in the TA, the effects of construction traffic on all road sections and junctions are anticipated to be negligible and therefore not significant. Notwithstanding this, a number of traffic management measures will be implemented during the construction stage to minimise traffic impacts upon the local road network (see Section 16.5 of Chapter 16).</p> <p>The generation of traffic during operation will be minimal when compared to the construction phase. Therefore, operational phase traffic effects are also considered to be negligible (not significant).</p> <p>The generation of traffic during future decommissioning is expected to involve traffic movements associated with the removal (and recycling, as appropriate) of material arising from demolition and potentially the import of materials for land restoration and re-instatement. However, the effects of decommissioning traffic would be no greater than that of the construction traffic and are, therefore, anticipated to be negligible (not significant). A Decommissioning</p>

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		<p>Traffic Management Plan would be implemented during the decommissioning phase to control the impact and routing of HGVs.</p> <p>Requirements 18 and 19 of the draft DCO will secure a Construction Traffic Management Plan (CTMP) and Construction Workers Travel Plan (CWTP), both of which form part of the proposed mitigation for traffic and transport effects.</p>
<p>Waste management (EN-1, 5.14)</p>	<p>Section 5.14 of EN-1 acknowledges that all large infrastructure Proposed Developments are likely to generate hazardous and non-hazardous waste. Paragraph 5.14.6 requires applicants to produce a Site Waste Management Plan ('SWMP') and states that the applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal.</p> <p>Paragraph 5.14.6 states the SoS should be satisfied that:</p> <ul style="list-style-type: none"> waste will be properly managed, both on and off site; 	<p>The Applicants will require that the appointed contractor produces and maintains a final CEMP to control site activities to minimise any impact on the environment. The final CEMP will include industry best practice measures, and specific measures set out in the ES in accordance with the Framework CEMP (Volume III – Appendix 5A).</p> <p>In order to manage and monitor waste generated on the Site during construction, a Framework Site Waste Management Plan (SWMP) has also been developed as part of the Framework CEMP, which allows for waste streams to be estimated and monitored and goals set with regards to the waste produced. The SWMP will require that the contractor segregates waste streams on-site, prior to them being taken to a waste facility for recycling or disposal. All waste removal from the Site will be undertaken by licensed waste carriers and taken to permitted waste facilities.</p> <p>The final CEMP and SWMP will be secured by Requirements 16 and 24 of the draft DCO.</p>

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	<ul style="list-style-type: none"> • can be dealt with appropriately by the available waste infrastructure; and • adequate steps have been taken to minimise the volume of waste. 	
<p>Water quality and resources (EN-1, 5.15; EN-2, 2.10; and EN-4 2.22)</p>	<p>EN-1 (Section 5.15) states that, where a Proposed Development is likely to have effects on water quality and resources an assessment should be undertaken of the impacts of the Proposed Development.</p> <p>Paragraph 5.15.6 states that the SoS should be satisfied that Proposed Developments have regard to the River Basin Management Plans and meet the requirement of the Water Framework Directive and related directives, including those on priority substances and groundwater.</p> <p>Paragraph 5.15.9 states that the risk of impacts on the water environment can be reduced through careful design to</p>	<p>The impact of the Proposed Development upon water quality and resources is considered at Chapter 9 ‘Surface Water, Hydrology and Flood Risk’ of ES Volume I. A summary of the residual effects on water resources in provided at Section 9.9 and Table 9-19.</p> <p>A short-term and localised moderate (significant) effect has been identified to water quality (mobilisation of fine sediment) in Tees Bay due to the potential works to install an outfall head (if the existing water discharge pipeline and outfall needs repairs). This effect would be temporary, very localised and will not cause a failure against WFD classifications or objectives given the large scale of this waterbody and the temporary nature of the works. There is not expected to be any long-term effect given the brevity of the impact. In the event that the existing outfall cannot be used, a replacement outfall will be constructed. It has been determined that this would be constructed along the same route as the CO₂ Export Pipeline so as to minimise disturbance of the SPA/Ramsar/SSSI.</p> <p>A potential moderate adverse (significant) temporary and localised effect could occur to water quality in Tees Bay and Tees Estuary relating to accidental</p>

Generic Impact	Summary	Assessment
	<p>facilitate adherence to good pollution control practice.</p> <p>EN-2 (paragraphs 2.2.7 - 2.2.9) notes that generating stations, in particular coal-fired stations, have very high-water demands, which means that preferred site locations are likely to be coastal or alongside large rivers to extract sufficient water.</p> <p>EN-4, Section 2.22 deals with water quality and resources relating to gas supply pipelines. It notes (paragraph 2.22.2) that the construction of pipelines creates corridors of surface clearance and excavation that can potentially affect watercourses, aquifers, water abstraction and discharge points, areas prone to flooding and ecological receptors. Pipeline impacts could include inadequate or excessive drainage, interference with groundwater flow pathways, mobilisation of contaminants already in the ground,</p>	<p>spillages given that they are to be worked on directly. There could also be a significant moderate adverse effect on Belasis Beck if work is required to the pipe bridge over that watercourse. However, it is proposed that a programme of water quality monitoring is undertaken during construction to identify any pollution, and remedial measures implemented.</p> <p>With appropriate monitoring (outlined in Section 9.7 of Chapter 9), it is considered that the significance of effect can reasonably be lowered to slight adverse (not significant) for these three waterbodies.</p> <p>All other residual effects are considered to be neutral to slight (not significant), provided that the embedded mitigation measures set out in Chapter 9 are implemented.</p> <p>Requirement 11 'Surface and foul water drainage' of the draft DCO secures details of temporary surface water and drainage systems, including means of pollution control for the construction phase of the Proposed Development in accordance with the CEMP. The CEMP is secured by Requirement 16. Requirement 13 secures details of a scheme to deal with the contamination of ground water, which is likely to cause significant harm to person or pollution of controlled waters or the environment.</p>

Generic Impact	Summary	Assessment
	<p>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.</p> <p>Mitigation measures (paragraph 2.22.6) to protect the water environment may include techniques for crossing rivers and managing surface water before and after construction, including restoring vegetation and using sustainable drainage systems to control run-off.</p>	

6.3.2 Table 6.1 therefore demonstrates that there is no conflict between the Proposed Development and the relevant generic impacts within the energy NPSs.

6.4 Technology specific considerations

6.4.1 The technology specific considerations of relevance to the Proposed Development that are contained within EN-2, EN-4 and EN-5 (and that have not already been addressed in Table 6.1 above) are considered in **Table 6.2** below.

Table 6.2 – Technology Specific Considerations

Consideration	Summary	Assessment
<p>Factors influencing site selection by developers (EN-2, 2.2, EN-4, 2.19, & EN-5, 2.2)</p>	<p>EN-2, paragraph 2.2.2, notes that fossil fuel generating stations have large land footprints and will therefore only be possible where the applicant is able to acquire a suitably sized site. The site will also need to be big enough for CCS. Depending on the processes (paragraph 2.2.3) fossil fuel generating station may require storage and use of hazardous substances, which may have an impact on potential land use in the vicinity. Development of a CHP facility may also have implications for the size of site (paragraph 2.2.4).</p> <p>EN-2, paragraph 2.2.5, states that fossil fuel generating stations need to be accessible for the delivery of construction materials, fuel, waste and equipment and for employees. Government policy encourages multi-modal transport and materials may be transported by rail and water where possible. This will however be</p>	<p>Chapter 6 ‘Design Evolution and Alternatives’ sets out the process that was followed in selecting the Site, including the decisions made regarding the routing of the various connection corridors.</p> <p>The key locational criteria used in the selection process included an east coast location (due to the proximity of potential storage sites in the North Sea); proximity to the coast to minimise the onshore section of the CO₂ Export Pipeline; avoidance of residential areas; proximity to industrial emitters that could connection into the CO₂ Gathering Network; proximity to necessary infrastructure connections, including gas network, electricity grid and water supply; sufficient space, including for future expansion; the use of brownfield land where possible; and minimisation of environmental effects and risks.</p> <p>Teesside performed strongly against these criteria and was selected as the preferred location. Within Teesside a number of sites were assessed and shortlisted before the former Redcar Steel Works Site was selected. Key factors in its selection again included the proximity to the North Sea for CO₂ transport; relative remoteness from residential properties; proximity to required connections; the availability of brownfield land; and being accessible to port facilities for the import of construction materials and large items.</p>

Consideration	Summary	Assessment
	<p>determined by the economics of the proposed development (paragraph 2.2.6).</p> <p>EN-2 (paragraphs 2.2.7 - 2.2.9) also highlights a number of matters relating to the demand that fossil fuel generating stations may place on water resources and access to water supplies.</p> <p>EN-4 (paragraphs 2.19.7 - 2.19.10) sets out various considerations in relation to site selection for gas supply pipelines. Paragraphs 2.19.8 and 2.19.9 list examples of various land uses and engineering works which could be constraints. These include proximity to existing and planned residential areas; schools and hospitals; railway and road crossings; main river and watercourse crossings; and environmentally sensitive areas. When choosing a pipeline route, applicants should seek to avoid or minimise adverse effects from usage below the surface (paragraph 2.19.10). Where it is not</p>	<p>The connection corridors have been progressively refined to minimise impacts on residential and ecological receptors, land interests and recreational and amenity areas. The final connection corridors (as detailed within the Application) largely follow existing connection corridors that cross existing and former industrial land. Where sensitive areas cannot be avoided – for instance the water connection corridors and CO₂ Export Pipeline crossing Coatham Dunes/Sands – specialist techniques, such as HDD will be used, to minimise impact on and disruption to the area.</p>

Consideration	Summary	Assessment
	<p>possible to avoid below ground works mitigation measures may include protection or diversion of underground services, horizontal directional drilling ('HDD') and re-routing.</p> <p>EN-5 (paragraphs 2.2.1 - 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.</p>	
<p>Pipeline Safety (EN-4, 2.19.4 - 2.19.6)</p>	<p>Pipelines need to comply with the Pipelines Safety Regulations 1996, which requires pipelines to be designed, constructed and operated so that the risks are as low as is reasonably practicable ('ALARP').</p>	<p>The various pipelines will be manufactured and installed so as to fully comply with the Pipeline Safety Regulations 1996 and all other relevant standards in order to that risks are ALARP. Chapter 22 'Major Accidents and Natural Disasters' confirms that where the pipelines run close to existing gas pipelines and pipelines carrying hazardous substances, additional measures such as thickened pipe walls will be used where appropriate to minimise the risk of any domino effect with existing infrastructure in the event of a failure.</p>
<p>Soil and Geology (EN-4, 2.23)</p>	<p>Paragraphs 2.23.2 – 2.23.4 state that applicants should assess the stability of</p>	<p>Chapter 10 'Geology and Hydrogeology' of ES Volume I considers the potential effects of the Proposed Development upon geology and soils. As</p>

Consideration	Summary	Assessment
	<p>the ground conditions associated with the pipeline route and incorporate the findings of that assessment in the ES (see Section 4.2 of EN-1) as appropriate.</p> <p>The assessment should cover the options considered for installing the pipeline and weigh up the impacts of the means of installation.</p> <p>Where the applicant proposes to use HDD as the means of installing a pipeline under a National or European Site and mitigating the impacts, the assessment should cover whether the geological conditions are suitable for HDD.</p> <p>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</p>	<p>confirmed above, the Site does not contain any areas that are designated at a national, regional or local level in terms of geological interest.</p> <p>The Chapter does not identify any particular issues in terms of soils or geology. The PCC Site and the connection corridors largely consist of made ground or are in industrial use. Soils are recorded as Grade 4 or 5 and are Non-agricultural/urban and therefore the impact from any loss as a result of construction is considered negligible.</p> <p>The majority of impacts relating to geology, hydrogeology and contaminated land that are expected to arise as a result of the Proposed Development are anticipated to occur during the remediation and construction works. A Ground Investigation will be carried out to inform the assessment of ground conditions and design and installation of pipelines. Further assessment of any existing contamination will be risk based.</p> <p>Effects are reported at Tables 10-16 and 10-17 of Chapter 10. The majority of effects on geology, minerals, soils, groundwater, contamination (inclusive of embedded mitigation) are shown to be neutral, slight (adverse) or slight/moderate (adverse).</p> <p>Mitigation and best practice measures during construction will be secured through the CEMP (Requirement 16 of the draft DCO).</p> <p>The approach that has been taken to the routing of the various connection corridors has been to avoid and minimise impacts on sensitive receptors and</p>

Consideration	Summary	Assessment
	<p>length of pipeline through the designated area to the minimum possible, and the reasons why they were discounted.</p> <p>Applicants should consult with the relevant statutory consultees at an early stage.</p>	<p>other features such as heritage assets. Chapter 6 'Design Evolution and Alternatives' provides an explanation of the design process that has been followed in relation to the connection corridors and the decisions that have been made (the main design changes are summarised at Table 6-2).</p> <p>In the case of the CO₂ and water corridors, the decision has been made to employ HDD techniques in order to minimise impacts upon Coatham Dunes/Sands and the protected nature conservations sites (SPA/Ramsar/SSSI). Due to the proximity of and extent of the SPA/Ramsar/SSSI it is has not been feasible to select alternative routes to bypass them.</p> <p>Notwithstanding the above factors, the HRA undertaken by the Applicants (which includes an Appropriate Assessment) concludes that there will be no adverse effects on the integrity of any European site either alone or in combination with other plans and projects.</p>
<p>Electric and Magnetic Fields (EMFs) (EN-5, 2.10)</p>	<p>Paragraph 2.10.13 states the applicant should consider the following factors in relation to EMFs:</p> <ul style="list-style-type: none"> height, position, insulation and protection (electrical or mechanical as appropriate) measures subject to ensuring compliance with the Electricity 	<p>Chapter 23 'Population and Human Health' (Section 23.3) of ES Volume I considered EMFs.</p> <p>The risks associated with EMF have been derived considering the advice provided by Public Health England (PHE) in their response issued by PINS with the EIA Scoping Opinion (02.04.19). Additionally, the Electric and Magnetic Fields and Health website has been used in order to gather information on the EMF risks associated with the types of infrastructure proposed. ICNIRP</p>

Consideration	Summary	Assessment
	<p>Safety, Quality and Continuity Regulations 2002;</p> <ul style="list-style-type: none"> • that optimal phasing of high voltage overhead power lines is introduced wherever possible and practicable in accordance with the Code of Practice to minimise effects of EMFs; and • any new advice emerging from the Department of Health relating to Government policy for EMF exposure guidelines. 	<p>guidelines have been used as the reference for the recommended limits of exposure of the general public, following current government policy. The assessment of potential EMF related effects does not follow the ‘standard’ EIA methodology of identifying the sensitivity of receptors and magnitude of effects to classify the effect using a matrix. Rather, all human receptors located within the electrical field are identified and, with reference to the identified impact avoidance measures, effects are qualitatively either considered to be significant or not significant, based on professional judgement.</p> <p>The DECC Voluntary Code of Practice on compliance with EMF guidelines (DECC, 2012) advises that the Energy Networks Association (ENA) will maintain a publicly available list of types of equipment where the design is such that it is not capable of exceeding the ICNIRP exposure guidelines on its website. This obligation is set out on the industry website (www.emfs.info).</p> <p>The nearest residential receptors are over 500m from the Electrical Connection corridor at Warrenby (Marsh House Farm) and Dormanstown (housing on Broadway West).</p> <p>High-voltage underground cables can produce higher magnetic fields directly above them than an overhead line would produce at ground level, because the physical distance from the underground cable is smaller. However, the field falls more rapidly with distance to the sides, and they produce no external electric field. Such cables are not normally located beneath buildings (Energy Networks Association, 2012).</p>

Document Reference: 5.3

Consideration	Summary	Assessment
		<p>As a result of the type and location of the 275kV electrical connection (routed underground) and its distance from residential areas, the effect during operation on public health will be neutral and no formal assessment of risks for the connection of the Low Carbon Electricity Generating Station to the National Electricity Transmission System is required.</p>

6.4.2 It has therefore been demonstrated in Table 6.2 that there is no conflict between the Proposed Development and the relevant technology specific considerations set out in the NPSs.

As confirmed above, an ES Addendum (Document Refs. 7.7, 7.8.1 and 7.8.2) was included as part of the change request submitted to the ExA on 28 April 2022, which was accepted into the Examination on 6 May 2022. The ES Addendum describes and assesses the changes made to the Application. The ES Addendum has identified no changes to the significance of effects reported in the original ES. As such, there is no change to the assessment of the Proposed Development within Tables 6.1 and 6.2.

6.5 The National Planning Policy Framework (Ministry of Housing, Communities & Local Government, July 2021)

6.5.1 The National Planning Policy Framework ('NPPF'), introduced in March 2012 (updated July 2021), 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 are to be determined in accordance with the decision-making framework of the PA 2008 and relevant NPSs, decisions on NSIPs should also take account of any other matters that are "*relevant*", which may include the NPPF. The NPPF is supported by the Planning Practice Guidance (PPG), which provides more detailed guidance on various aspects of planning.

6.5.2 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*". 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.

- 6.5.3 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.
- 6.5.4 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".
- 6.5.5 Paragraph 152 in Section 14 'Meeting the challenge of climate change, flooding and coastal change' states that:
- "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]*
- 6.5.6 Paragraph 158 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.
- 6.5.7 NPPF policies of particular relevance include building a strong, competitive economy, promoting sustainable transport, achieving well-designed places, meeting the challenge of climate change, flooding and coastal change, conserving and enhancing the natural environment and conserving and enhancing the historic environment. A summary of those policies and how the Proposed Development complies with them is provided in **Table 6.3** below.

Table 6.3 – NPPF Policies

NPPF Ref.	Policy Summary	Assessment
<p>Chapter 6 Building a strong, competitive economy</p>	<p>Confirms that the Government is committed to securing economic growth and productivity and allowing each area to build on its strengths, counter any weaknesses and address the challenges of the future. Paragraphs 81 and 82 make it clear that the planning system should do all it can to support sustainable economic growth though, amongst other measures, planning proactively and removing barriers to investment such as a lack of infrastructure.</p>	<p>The Proposed Development will contribute toward sustainable economic development by providing new low carbon electric generating capacity, for which there is a confirmed need, thereby contributing toward the security of electricity supplies, while helping safeguard jobs in existing carbon intensive industries (enabling them to decarbonise) as well as creating opportunities for emerging green industries such as hydrogen production. The Proposed Development will also create significant employment opportunities during its construction and operational phases.</p>
<p>Chapter 9 Promoting sustainable transport</p>	<p>Aimed at facilitating more sustainable transport choices so as to contribute to wider sustainability and public health objectives. Paragraph 110 states that in assessing sites for applications it should be ensured that appropriate opportunities to</p>	<p>The main potential impact of the Proposed Development on transport will be during the construction phase. The assessment of traffic and transport in the ES is based on a worst-case scenario (all transport by road, including construction materials) but demonstrates traffic and transport effects during construction will be acceptable and will not adversely impact on the highway network. The transport effects during operation would be limited. The Applicants have submitted a framework Construction Traffic Management Plan (CTMP) and a framework Construction Workers Travel Plan (CWTP) with the Application. These</p>

	<p>promote sustainable transport modes can be – or have been – taken up, safe and suitable access to the site can be achieved for all users and any significant impacts from the development on the transport network or on highway safety can be cost effectively mitigated to an acceptable degree. Paragraph 113 states that all developments that generate significant amounts of movement should be required to provide a travel plan and should be supported by a transport statement or assessment and these should consider the opportunities to make use of sustainable transport modes.</p>	<p>include measures to manage and minimise transport impacts during construction. The final CTMP and CWTP will be secured by requirements within the draft DCO and implemented by the appointed contractor(s).</p>
<p>Chapter 11 Making effective use of land</p>	<p>Aimed at promoting the effective use of land, including by (paragraph 120c) giving substantial weight to the use of suitable brownfield land.</p>	<p>Much of the Site involves former or existing industrial and previously developed land. The PCC Site comprises part of the former Redcar Steel Works Site. The connection corridors have been routed where practicable to utilise brownfield land and existing pipeline/cable routes and so minimise environmental impacts. The Proposed Development, notably the location and extent of the PCC Site (and its use) is consistent with the planned redevelopment of the South Tees Area/Teesworks as set out in the South Tees SPD. The Proposed Development therefore makes effective use of land.</p>

<p>Chapter 12 Achieving well-designed places</p>	<p>Deals with the matter of design in the built environment. Paragraph 126 confirms that the Government attaches great importance to good design which is a key aspect of sustainable development. Paragraph 130 goes on to state that design quality should be considered throughout the evolution of individual proposals and applicants should work closely with those affected.</p>	<p>The design of the Proposed Development is appropriate in terms of its context and setting, which is very much industrial, and it incorporates the principles of 'good design' at set out in the Design and Access Statement.</p> <p>The buildings and structures will be set well within the PCC Site boundaries in accordance with the Teesworks Design Guide. The appearance of the buildings and structures will be consistent with the 'Large-scale Industrial Operations' (including major energy generation) typology identified within the Teesworks Design Guide and the use of materials will reflect the design Guide. The appearance of the buildings/structures is also consistent with the fact that the PCC Site is not identified as a Gateway Plot or a primary route within the Teesworks area. The PCC Site will also incorporate appropriate landscaping and access arrangements.</p> <p>The various connections will comprise primarily of pipelines and cables, which will for the for the most part be installed below ground or upon existing pipe-racking and structures within existing infrastructure corridors. The infrastructure required for the connections will not therefore be highly visible, nor alter the use or character of the land to which they relate. The approach that has been taken to selecting the various connections corridors has been to maintain separation from and limit effects upon sensitive receptors such as residential properties and areas of amenity of nature conservation value and minimise as far as possible the crossings of roads, railways and watercourses.</p> <p>The detailed design of the Proposed Development will be secured by a number of requirements within the draft DCO.</p>
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<p>Chapter 14 Meeting the challenge of climate change, flooding and coastal change</p>	<p>Focuses upon adapting to and mitigating the effects of climate change. Paragraph 152 highlights that planning plays a key role in helping shape places to secure radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of renewable and low carbon energy.</p> <p>Paragraph 159 warns that inappropriate development in areas at risk of flooding should be avoided but where it is necessary the development should be made safe for its lifetime without increasing flood risk elsewhere. If it is not possible for development to be located in zones with a lower risk of flooding the exception test may have to be applied.</p>	<p>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. This includes appropriate flood risk mitigation and landscaping and biodiversity enhancement. Neither should it be overlooked that the Proposed Development will not only capture emissions from the Low Carbon Electricity Generating Station but also provide infrastructure to assist in decarbonising industry on Teesside. The ES (Chapter 21 'Climate Change') confirms that the Proposed Development will not result in significant climate changes effects and that the NZT Project as a whole could result in a net reduction in CO₂ emissions from current levels, with a beneficial effect on annual UK carbon emissions.</p>
<p>Chapter 15</p>	<p>Aimed at protecting and enhancing value landscapes,</p>	<p>The ES demonstrates that the Proposed Development will not result in unacceptable impacts on the natural environment, in terms of matters such as</p>

<p>Conserving and enhancing the natural environment</p>	<p>recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital, minimising impacts on and providing net gains for biodiversity and preventing new and existing development from contributing to, being put at unacceptable risk from or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability.</p>	<p>ecology/nature conservation, landscape, and water quality, amongst others. ecology.</p> <p>The Proposed Development will make use of brownfield land and the Application proposes proportionate measures in respect of contaminated land. The draft DCO includes a requirement (Requirement 13) to secure a scheme to deal with the contamination of land, including groundwater, upon which the EA must be consulted.</p> <p>The HRA undertaken confirms that Proposed Development will not adversely affect the integrity of any European sites either alone or in combination with other plans and projects. Furthermore, the assessments in the ES confirm that impacts upon the natural environment, taking account of mitigation, are either not significant or can be reduced to acceptable levels. The Application also includes proposals for landscape and biodiversity enhancement.</p>
<p>Chapter 16 Conserving and enhancing the historic environment</p>	<p>Seeks to conserve heritage assets so that they can be enjoyed for their contribution to the quality of life of existing and future generations. Paragraph 194 states that where a development proposal includes, or has potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based</p>	<p>There are limited heritage assets within the boundary of the Site. The Redcar Blast Furnace lies adjacent to the PCC Site and the CO₂ and water discharge (replacement outfall) connection corridors include remains of a WWI rifle range. These assets are not designated assets and are of medium value. The ES assesses the effects on the setting of the Blast Furnace as being neutral while appropriate mitigation is included within the Application in respect of the WWI rifle range (use of trenchless construction techniques). Furthermore, no significant impacts are identified in terms of any marine heritage.</p>

Document Reference: 5.3

	assessment and, where necessary, a field evaluation.	
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6.5.8 Table 6.3 demonstrates that there is no conflict between the Proposed Development and the key policies contained within the NPPF. The ES Addendum has identified no changes to the significance of effects reported in the original ES and therefore there is no change to the assessment in Table 6.3.

6.6 Statutory Development Plan Policy

6.6.1 As confirmed in Section 3, the statutory development plan for the Proposed Development comprises the following development plan documents ('DPDs'):

- 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 Tees Valley Joint Minerals and Waste DPDs (adopted September 2011).

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

6.6.3 The DPD and SPD policies of most relevance to the Proposed Development are set out and summarised in **Table 6.4** below along with how it complies with those policies. However, given that EN-1, EN-2, 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 and SPD policies), a summarised response has been made to each policy.

Table 6.4 – Statutory Development Plan Policies

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
SD1	RCBC Local Plan	Sustainable Development	When considering development proposals, the Council will take a positive approach reflecting the presumption in favour of sustainable development within the NPPF. Developments should improve the economic, social and environmental conditions of the area.	The Proposed Development is consistent with the principles of sustainable development. It will bring brownfield land back into beneficial use, contributing toward the regeneration of the South Tees Area/Teesworks. It will contribute to the decarbonisation of Teesside in line with the Government’s legally binding target of Net Zero by 2050 and create significant employment opportunities. The ES has demonstrated that the Proposed Development it will not result in unacceptable impacts on the environment and it includes appropriate mitigation and control measures.
SD2	RCBC Local Plan	Locational Policy	Development will be directed to the most sustainable locations in the Borough. The majority of development will be focused in the urban and coastal areas.	The Proposed Development is consistent with the Locational Policy in that it involves the redevelopment of brownfield industrial land within the South Tees Area/Teesworks. The routing of the connection corridors has sought to avoid and minimise impacts on sensitive receptors and areas of high environmental value and for the most part the follow existing pipeline/cable routes and involve existing or former industrial land.

Document Reference: 5.3

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			Priority will be given to brownfield land in sustainable locations that is not of high environmental value.	
SD3	RCBC Local Plan	Development Limits	Within development limits, development will be supported, subject to meeting other policies in the Local Plan. Development beyond development limits will be to specific circumstances such as where the development requires a countryside location due to technical or operational reasons or it involves the redevelopment of brownfield land that is not of high environmental value.	As confirmed above, the Proposed Development involves the redevelopment of brownfield land. Much of the Site lies within areas of the Borough that are identified as suitable for energy and industrial use. Any development outside the Development Limits of the Borough is required for operational and technical reasons (to provide connections for the Proposed Development) and the Applicants have sought to minimise impacts and appropriate mitigation and control measures are included.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
SD4	RCBC Local Plan	General Development Principles	<p>In assessing the suitability of a site or location, development will be permitted where it meets the requirements of the Locational Policy and will not have a significant adverse effect on amenity; result in unacceptable loss or significant adverse effect on the environment; avoids locations that put the environment or human health or safety at unacceptable; or results in adverse effects on nature conservation sites, amongst other matters. All development must be designed to a high standard.</p>	<p>As confirmed above, the Proposed Development is consistent with the Locational Policy. Furthermore, a comprehensive EIA of the Proposed Development has been undertaken, which demonstrates that it will not result in unacceptable impacts on nature conservation (the HRA confirms no adverse effects on the integrity of European sites), human health or safety. Furthermore, the design of the Proposed Development is appropriate in terms of its context and setting and it incorporates the principles of 'good design'.</p>

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
SD6	RCBC Local Plan	Renewable and Low Carbon Energy	Renewable and low carbon energy schemes will be supported and encouraged, and will be approved where their impact is, or can be made, acceptable. In determining applications for renewable and low carbon energy and associated infrastructure matters that will be taken into account include the scale of the development, impact on residential amenity, environmental impacts, the sensitivity of the landscape, airport and military considerations and the cumulative	The Proposed Development is entirely consistent with the policy to support renewable and low carbon energy within the area. It will provide a low carbon electricity generating station and a CO ₂ gathering network that will support the decarbonisation of power generation and industry. The EIA confirms that the Proposed Development will not result in unacceptable impacts and any cumulative effects will be limited and outweighed by its substantial benefits.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			impact of proposals, amongst other matters.	
SD7	RCBC Local Plan	Flood and Water Management	<p>Development in areas at risk of flooding will only be granted where it meets the sequential and exception tests, will be safe and does not increase flood risk elsewhere.</p> <p>Development will be expected to be designed to mitigate and adapt to climate change. A flood risk assessment will be required.</p>	<p>The EIA has assessed flood risk and water management and includes a Site-wide FRA. The PCC Site lies within Flood Zone 1 although there are parts of the Site that lie within Flood Zones 2 and 3. The Applicants have applied the Sequential Test to site selection and have sought to locate the elements of the Proposed Development within Flood Zone 1 where possible. Furthermore, the Proposed Development is 'Essential Infrastructure' and can be appropriate to those higher risk flood zones subject to satisfying the Exception Test.</p> <p>The Proposed Development will have very clear wider sustainability benefits to the community. It will contribute to the security of electricity supplies and provide infrastructure to decarbonise local industries while providing significant employment and economic benefits. Furthermore, the FRA demonstrates that the Proposed Development will be safe from the risk of flooding and will not increase the risk of flooding off-site. It is therefore considered that the Exception Test is satisfied.</p>
ED6	RCBC Local Plan	Promoting Economic Growth	Policy ED6 confirms that land and buildings within existing employment areas shown on the Policies	The Proposed Development is consistent with the land uses that are identified as appropriate for the area (including the South Tees Area) covered by Policy ED6. As will be demonstrated below the Applicants have had regard to the South Tees Area SPD and there will be no adverse effects on the nearby protected nature conservation sites.

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			<p>Map will continue to be developed and safeguarded for employment uses. It goes onto state that specialist uses, including energy and heavy processing industries and port logistics will be focused in the South Tees Area, Wilton International and Skinningrove. In these areas proposals falling within Use Classes B1, B2, B8 and suitable employment related sui generis uses will be supported. Proposals in the South Tees Area should have regard to the South Tees Area SPD. Proposals will need to demonstrate that there</p>	

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			<p>will be no adverse effects on the integrity of the nearby protected nature conservation sites. Proposals will be encouraged to improve the quality of the environment.</p>	
LS4	RCBC Local Plan	South Tees Spatial Strategy	<p>The Spatial Strategy includes the South Tees Development Corporation area, Wilton International, Teesport and the South Tees Industrial Estates and Business Parks. The Policy aims to support the delivery of significant economic growth and job opportunities in this area, including encouraging clean and efficient industry to</p>	<p>The Proposed Development will support the delivery of the Spatial Strategy for the South Tees Area. It will regenerate brownfield land, deliver CCS/CCUS infrastructure helping to decarbonise the local economy and create jobs. It will also contribute to the environmental quality of the area by bringing derelict land back into beneficial use and through the incorporation of landscape and biodiversity measures. The ES (and HRA) confirm that it will not result in adverse effects on the nearby protected nature conservation site or other nature conservation interests.</p>

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			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.	
N1	RCBC Local Plan	Landscape	Policy N1 seeks to protect and enhance the Borough's landscapes. Development proposals will be considered within the context of the Landscape Character Assessment, the Landscape Character SPD and the	The Site is not subject to any national landscape designations, neither are there any within the immediate vicinity of the Site. Furthermore, the Proposed Development will not result in the loss of features that are important to the local landscape. The PCC Site will require the clearance and redevelopment of part of the derelict Redcar Steel Works Site but will not impact on features such as the Blast Furnace, while the routing of the connection corridors has sought to avoid and minimise impacts on sensitive receptors and areas of high environmental value and for the most part the follow existing pipeline/cable routes and involve existing or former industrial land.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			<p>Historic Landscape Characterisation. Proposals will not be permitted where they would lead to the loss of features important to the character of the landscape, its quality and distinctiveness, unless its benefits clearly outweigh landscape considerations.</p>	<p>Chapter 17 of the ES provides an assessment of landscape and visual effects. It has identified a number of limited effects at three viewpoints mainly as a result of the scale of the buildings and structures at the PCC Site. The Applicants have sought to minimise landscape and visual effects by consolidating the built form at the PCC Site where possible, with the main buildings and structures set well back from the site boundaries. Appropriate materials and colours will also be selected used for the external finishes of the buildings/structures in order to minimise effects further. However, is not possible to entirely hide or screen such infrastructure and this is recognised in the NPSs (EN-2, paragraph 2.65).</p>
N2	RCBC Local Plan	Green Infrastructure	<p>The Council will aim to protect and enhance the green infrastructure network. Opportunities to incorporate green infrastructure into development proposals should be sought. Green infrastructure includes strategic green</p>	<p>The Proposed Development will not result in any permanent impact upon or loss of green infrastructure, green wedges, open spaces, water courses or public rights of way within the area. The Proposed Development does include proposals for landscape and biodiversity enhancement.</p>

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			infrastructure corridors, strategic gaps, green wedges, open spaces, strategic landscape areas, heritage assets, public rights of way and beck valleys and watercourses. Where there is a loss of green infrastructure the principle of 'net gain' should apply.	
N3	RCBC Local Plan	Open Space and Recreation	Seeks to protect open space and recreation facilities from development.	As confirmed above, the Proposed Development will not result in any permanent impact upon or loss of open space. It is proposed to use HDD techniques in locations such as Coatham Dunes/Sands for the installation of the CO ₂ Export Pipeline and water discharge (replacement outfall) connections in order to minimise impacts and disruption during construction.
N4	RCBC Local Plan	Biodiversity and Geological Conservation	Seeks to protect and enhance the Borough's biodiversity and geological resources.	The ES has assessed the potential impact of the Proposed Development upon habitats and species, including terrestrial ecology, aquatic ecology, ornithology and marine ecology. Taking account of mitigation no unacceptable impacts have been identified. Furthermore, the HRA that

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			<p>Development should avoid detrimental impacts on biodiversity and geodiversity whether individual or cumulative. Where this is not possible mitigation, or compensation must be provided.</p> <p>Development proposals will be considered in accordance with the status of biodiversity and geodiversity sites within the hierarchy. Priority will be given to the protection of internationally important sites such as the Teesmouth and Cleveland Coast SPA/Ramsar and the North York Moors SPA and SAC. Development</p>	<p>has been undertaken confirms that there will be no adverse effects upon the Teesmouth and Cleveland Coast SPA/Ramsar, the North York Moors SAC/SPA other European sites of SSSIs. The Proposed Development also incorporates landscape and biodiversity enhancement measures and will achieve 'net gain' in terms of biodiversity at the PCC Site.</p> <p>The Proposed Development does not raise any issues in terms of geological conservation as there are no nationally, regionally or locally designated geological interest features within the Site.</p>

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			<p>that is not directly related to the management of such sites and which is likely to have a significant effect upon them will be subject to an Appropriate Assessment.</p> <p>Development that will have an adverse impact on nationally important sites such as SSSI will not be allowed unless the benefits of the development outweigh the impacts; no reasonable alternatives are available; and mitigation, or where necessary compensation, is provided for the impact. The Policy also seek to safeguard</p>	

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			locally important nature conservation sites. Wherever possible, development should provide 'net gains' in the value of biodiversity.	
HE2	RCBC Local Plan	Heritage Assets	Seeks to protect designated heritage assets and their settings as well as non-designated heritage assets of archaeological interest.	There are limited heritage assets within the boundary of the Site. The Redcar Blast Furnace lies adjacent to the PCC Site and there is a WWI rifle range within the CO ₂ Export Pipeline and water discharge (replacement outfall) connection corridors. These assets are not designated assets and are of medium value. The ES assesses the effects on the setting of the Blast Furnace as being neutral while appropriate mitigation is included within the Application in respect of the WWI rifle range (use of trenchless construction techniques). Furthermore, no significant impacts are identified in terms of any marine heritage. The draft DCO includes a requirement to secure an appropriate archaeological Written Scheme of Investigation prior to construction.
TA1	RCBC Local Plan	Transport and New Development	The Council and its partners will ensure that the transport requirement of new development,	The assessment of traffic and transport in the ES is based on a worst-case scenario (all transport by road, including construction materials). It demonstrates traffic and transport effects during construction will be acceptable and will not adversely impact on the highway network. The transport effects during operation would be limited. Framework CTMP

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			<p>commensurate to the scale and type of development, are taken into account and seek to promote sustainable travel to minimise environmental impacts and support residents' health and wellbeing. The Council will support the preparation and implementation of travels plan to encourage the use of sustainable modes.</p>	<p>and CWTPs will form part of the Application. These include measures to manage and minimise transport impacts during construction. The final CTMP and CWTPs will be secured by requirements within the draft DCO and implemented by the appointed contractor(s). The Applicants are also investigating, and are in discussion with relevant parties, over the use of port and rail facilities for the delivery of construction materials and large items during the construction phase.</p>
STDC1	South Tees Area SPD	Regeneration Priorities	<p>The Council in partnership with STDC will seek to achieve the comprehensive development of the South Tees Area in order to realise an exemplar world class</p>	<p>The Proposed Development is consistent with the policy objectives to achieve the comprehensive redevelopment of the South Tees Area/Teesworks. The PCC Site is located on land (within the Northern Industrial Zone 'NIZ') that is identified for energy uses and industry. In formulating their proposals the Applicants have had regard to the South Tees SPD and emerging Teesworks proposals in order to minimise impact and ensure that the comprehensive development of the area is delivered.</p>

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			industrial business park. This will include prioritising uses connected with advanced manufacturing and new technologies; promoting and supporting uses and infrastructure connected to a low carbon economy; focusing on high-skilled employment opportunities; protecting heritage assets; improving connectivity and environmental quality. Piecemeal development will be resisted.	

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
STDC4	South Tees Area SPD	Economic Development Strategy	The Council in partnership with STDC will support economic development of the South Tees Area for specialist industries and other industries which would benefit from a location in this area in accordance with Local Plan Policies ED6 and LS4.	As confirmed above, the Proposed Development is consistent with the land uses that are covered by Policy ED6. It is also in line with Policy LS4 as it will regenerate brownfield land, deliver CCS/CCUS infrastructure helping to decarbonise the local economy and create jobs and contribute toward improving the environmental quality of the area.
STDC6	South Tees Area SPD	Energy Innovation	The Council in partnership with STDC will promote and support the development of new energy generation in the South Tees Area, including renewable energy development and the promotion of other innovative energy projects. All energy	The development of a project that involves power with carbon capture and CO ₂ infrastructure to facilitate the transport and storage of power and industrial emissions is fully in accordance with STDC6. Furthermore, the PCC Site involves land (within the NIZ) that is identified in the South Tees SPD (and the Teesworks Design Guide) for energy use. The EIA for the Proposed Development demonstrates that it will not result in unacceptable effects on amenity or the environment.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			<p>generation should be appropriately sited and designed in order to avoid unacceptable adverse environmental or amenity impacts.</p>	
STDC7	South Tees Area SPD	Natural Environmental Protection and Enhancement	<p>Seeks to protect and, where appropriate, enhance designated and non-designated sites of biodiversity and geodiversity interest and value. All development proposals will be required to comply with Local Plan Policy N4 which seeks to protect the internationally and national designated nature conservation sites within the area. The provision of green infrastructure will be</p>	<p>The ES/HRA confirms that the Proposed Development will not result in adverse effects on the integrity of European sites. Furthermore, that it will not result in unacceptable impacts on other nature conservation interests. The Proposed Development will not result in any permanent impact upon or loss of green infrastructure or open space. As confirmed above, it is proposed to use HDD techniques in locations such as Coatham Dunes/Sands for the installation of water connections and the CO₂ Export Pipeline in order to minimise impacts and disruption during construction. The Proposed Development also incorporates landscape and biodiversity enhancement proposals.</p>

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			<p>supported in accordance with Local Plan Policy N2. Proposals will be required to have regard to forthcoming biodiversity and open space strategies.</p>	
STDC8	South Tees Area SPD	Preserving Heritage Assets	<p>The Council in partnership with STDC will seek to identify those industrial assets which it is appropriate and viable to retain as part of the development of an industrial heritage trail. Development proposals that will affect a designated or non-designated heritage asset or its setting should be in</p>	<p>As confirmed above, there are limited heritage assets within the boundary of the Site. The Redcar Blast Furnace lies adjacent to the PCC Site and there is a WWI rifle range within the CO₂ export pipeline and water discharge (replacement outfall) connection corridors. These assets are not designated assets and are of medium value. The ES assesses the effects on the setting of the Blast Furnace as being neutral while appropriate mitigation is included within the Application in respect of the WWI rifle range (use of trenchless construction techniques).</p>

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			accordance with Local Plan Policy HE2.	
STDC10	South Tees Area SPD	Utilities	The development of new infrastructure relating to energy generation will be supported, including power generation facilities utilising both conventional and renewable resources and Carbon Capture and Storage ('CCS').	The Proposed Development is consistent with STDC10 as it involves power generation and CCS infrastructure.
STDC11	South Tees Area SPD	North Industrial Zone	Will encourage development proposals relating to port related industry, major space users/large scale manufacturing, energy innovation, power generation and storage , bulk materials and mineral processing.	The Proposed Development is appropriate in terms of the types of uses that are identified for the NIZ. The layout of the PCC Site is such that the main buildings and structures are set well back from the boundary, providing a buffer between then and South Gare and Coatham Dunes/Sands. The Proposed Development is also designed to mitigate the risk of flooding, which is low risk for the PCC Site in any case.

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			<p>The potential for an open space recreation and heritage area within the North Industrial Zone ('NIZ') and incorporating the Redcar Blast Furnace is being explored. Development proposals should be in accordance with Local Plan Policy N4 and the requirements of the forthcoming biodiversity strategy, which will consider the need for a buffer zone to protect the existing environmental assets within and adjacent to the North Industrial Zone. Proposals should also take account of flood risk in accordance</p>	

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			with Local Plan Policy SD7.	
STDC12	South Tees Area SPD	North East Industrial Zone	Will encourage development proposals relating to advanced manufacturing, research and development, testing and laboratory services and industrial and technology training. Proposals should accord with Local Plan Policies N4 and SD7.	The Proposed Development involves some connection within the North East Industrial Zone (water, electricity grid). The routing of these has sought to reduce any impact upon available land and emerging development proposals. Any impacts will be largely confined to the construction phase and temporary in nature.
STDC15	South Tees SPD	Coastal Community Zone	The Council in partnership with STDC will support proposals for environmental enhancement, small-scale leisure and community uses and improved public access subject to compliance	The Coastal Community Zone covers South Gare and Coatham Dunes/Sands. The Proposed Development requires the installation of the CO ₂ Export Pipeline and a potential water discharge connection (replacement outfall) across this area. However, in order to minimise impacts and disruption during construction it is proposed to use HDD techniques.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			with Local Plan Policies N4, SD7 and HE2. Opportunities for renewable energy generation and energy storage will be explored.	
SD1	STBC Local Plan	Presumption in favour of Sustainable Development	When considering development proposals, the Council will take a positive approach reflecting the presumption in favour of sustainable development within the NPPF.	As confirmed above, the Proposed Development is consistent with the principles of sustainable development by reusing brownfield land and supporting the decarbonisation of power and industry on Teesside.
SD2	STBC Local Plan	Strategic Development Needs	In order to provide sufficient employment sites to meet existing needs and new investment the Policy allocates land for employment, including	The CO ₂ Gathering Network and parts of the Gas Connection will cross areas of land that are identified for employment use. However, the routing largely follows existing pipeline corridors and as such there will be no material permanent impact on the availability of employment land in Stockton-on-Tees.

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			120 hectares for specialist uses, including the chemical and process industry, energy generation, waste processing, port-related uses and other uses, which demonstrate operational benefits to the North and South Tees Cluster.	
SD4	STBC Local Plan	Economic Growth Strategy	Economic development needs will be directed to appropriate locations to ensure the delivery of sustainable economic growth. The Policy states that The Seal Sands, North Tees and Billingham Chemical Complex areas are the main growth areas for a	The development of a CO ₂ Gathering Network in this part of Stockton-on-Tees is consistent with Policy SD4 as it will provide the infrastructure for a number of industries in this area to transport their captured CO ₂ emissions for secure storage offshore.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			range of specialist uses, including energy generation and carbon capture and storage, which have operational benefits for the cluster.	
SD5	STBC Local Plan	Natural, Built and Historic Environment	Seeks to conserve and enhance the natural, built and historic environment and meet the challenge of climate change, flooding and coastal change through a variety of methods, including supporting proposals for renewable and low carbon energy.	The Proposed Development involves low carbon energy and infrastructure to capture CO ₂ emissions from industry. It will not result in unacceptable impacts on the natural or historic environment or increase the risk of flooding.
SD6	STBC Local Plan	Transport and Infrastructure Strategy	Seeks to promote and deliver a sustainable transport network.	A CTMP and a CWTP will be implemented during the construction phase to manage traffic and transportation effects. Any operational traffic will be negligible given that only the CO ₂ Gathering Network and parts of the Gas Connection will be located within Stockton-on-Tees.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
SD7	STBC Local Plan	Sustainable Design Principles	Development proposals should be designed to the highest possible standard, taking into consideration the context of the surrounding area, including matters such as landscape character and the need to protect and enhance ecological and green infrastructure networks and assets.	The design of the Proposed Development is appropriate in terms of its context and setting, which is very much industrial, and it incorporates the principles of 'good design'. The elements of the Proposed Development within Stockton-on-Tees are limited to the CO ₂ Gathering Network and parts of the Gas Connection. These will for the most part be installed below ground, use existing tunnels, or be upon existing pipe-racking and structures within existing infrastructure corridors. They also primarily cross existing or former industrial land. The connections will not therefore be highly visible, nor alter the use or character of the land to which they relate. The approach that has been taken to selecting the various connections corridors has been to maintain separation from and limit effects upon sensitive receptors such as residential properties and areas of amenity of nature conservation value and minimise as far as possible the crossings of roads, railways and watercourses.
EG4	STBC Local Plan	Seal Sands, North Tees and Billingham	Development proposals for emerging specialist sectors will be directed to available sites and expansion land in Billingham Chemical Complex, North Tees and Seal Sands. It will need to be	The CO ₂ Gathering Network and parts of the Gas Connection will cross areas of land that are identified by Policy EG4. However, the routing largely follows existing pipeline corridors and as such there will be no material permanent impact on the area of the availability of land for expansion or specialist sectors. There will be no adverse effects upon the integrity of the protected nature conservation sites.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			demonstrated that development would not adversely impact on the protected nature conservation sites within the area.	
EG5	STBC Local Plan	Durham Tees Valley Airport	Within the safeguarded area surrounding the Airport (identified on the Policies Map) it will be necessary to consult the operator of the Airport on relevant development proposals.	Due to the nature of the infrastructure within this area (pipelines) it is not considered that there are any implications for Durham Tees Valley Airport.
T11	STBC Local Plan	Transport Infrastructure	Seeks to promote and deliver a sustainable transport network. Requires development proposals to be accompanied by an assessment of transport impacts and	As referred to above, a CTMP and a CWTP will be implemented during the construction phase to manage traffic and transportation effects. Any operational traffic will be negligible given that only the CO ₂ Gathering Network and parts of the Gas Connection will be located within Stockton-on-Tees.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			promote the use of sustainable modes through travel plans.	
ENV1	STBC Local Plan	Energy Efficiency	The Council will encourage all development to minimise the effects of climate change and will require all major development to demonstrate how it will contribute to the greenhouse gas emission reduction targets set out in the Stockton-on-Tees Climate Change Strategy 2016.	The Proposed Development will capture emissions from the Low Carbon Electricity Generating Station and provide infrastructure to assist in decarbonising industry on Teesside. It therefore has the potential to make a significant contribution toward the reduction in CO ₂ emissions from current levels with a beneficial effect on annual UK carbon emissions.
ENV2	STBC Local Plan	Renewable and Low Carbon Energy Generation	The Council encourages and supports the local production of energy from renewable and low carbon sources to help reduce carbon	Please refer to the response above in respect of Policy ENV1.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			emissions and contribute towards the achievement of renewable energy targets.	
ENV4	STBC Local Plan	Reducing and Mitigating Flood Risk	All new development will be directed toward the areas of lowest flood risk and where it is proposed in Flood Zones 2 and 3 it must satisfy the sequential and exception tests and be supported by a flood risk assessment demonstrating it will be safe and not increase the risk of flooding.	There are parts of the Site that lie within Flood Zones 2 and 3. However, the Proposed Development is 'Essential Infrastructure' and can be appropriate to those zones subject to satisfying the Exception Test. That test is satisfied on the basis that the Proposed Development will have very clear wider sustainability benefits to the community. It will contribute to the security of electricity supplies and provide infrastructure to decarbonise local industries while providing significant employment and economic benefits. Furthermore, the FRA demonstrates that the Proposed Development will be safe from the risk of flooding and will not increase the risk of flooding off-site.
ENV5	STBC Local Plan	Preserve, Protect and Enhance Ecological Networks,	Seek to protect and enhance the biodiversity and geological resources within the Borough.	The ES and HRA confirm that the Proposed Development will not result in adverse effects on the integrity of the European sites or on other nature conservation interests. The Proposed Development includes landscape and biodiversity enhancement measures.

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
		Biodiversity and Geodiversity	This includes the protection, and where appropriate, enhancement of internationally designated nature conservation sites, nationally and locally designated sites. Development proposals should seek to achieve net gains in biodiversity wherever possible.	
ENV7	STBC Local Plan	Ground, Air, Water, Noise and Light Pollution	Development proposals that may cause pollution will be required to incorporate measures to prevent or reduce pollution so as not to cause unacceptable impacts on residential amenity or the character and appearance of the	The EIA of the Proposed Development has considered its potential impacts in terms of air quality, noise and vibration, ground conditions, water and human health. Taking account of mitigation, the EIA has not identified any unacceptable impacts in respect of any of these assessment areas. The draft DCO includes a number of requirements that will secure various controls and measures to prevent any harmful effects. This includes securing the approval of a lighting strategy to control any potential sources of light pollution.

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			surrounding area of environment. Development will not be permitted if it is considered that it will result in unacceptable effect on human health or the environment.	
HE2	STBC Local Plan	Conserving and Enhancing Stockton's Heritage Assets	Development proposals should conserve and enhance heritage assets, including their setting, in a manner appropriate to their significance. This includes assets the Council has identified on a local listed, which are considered as having local heritage significance.	No designated heritage assets have been identified within Stockton-on-Tees. The CO ₂ Gathering Network and the parts of the Gas Connection corridor in Stockton largely follow existing pipeline corridors that cross existing or former industrial land. As such, no significant heritage effects are predicted. The draft DCO includes a requirement to secure an archaeological Written Scheme of Investigation prior to construction.

Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
MWC4	Minerals & Waste DPDs	Safeguarding of Mineral Resources from Sterilisation	Within minerals safeguarding areas, non-minerals development will only be permitted if it would not sterilise or prejudice future extraction of the resource; the mineral will be extracted prior to development; or the need for the development outweighs the need for the mineral resource.	The Proposed Development will not sterilise local mineral resources (salt and gypsum). These mineral resources are present at depth below the PCC Site and parts of the connection corridors. Some of these areas, including the PCC Site already covered by existing industrial development. The Proposed Development does not therefore alter or preclude the ability to access these minerals for future extraction. Notwithstanding this, it is considered that the need for the Proposed Development and the benefits that it will bring outweigh any minerals considerations.
MWC8	Minerals & Waste DPDs	General Locations for Waste Management Sites	Allocations and development proposals for large waste management facilities should be located in areas such as south of the River Tees (e.g. around Teesport). In determining the	The Proposed Development does not preclude waste management facilities from locating within the South Tees Area. The PCC Site occupies land that is identified for energy infrastructure in the South Tees SPD and specifically for the NZT Project in the Teesworks Design Guide. There is a significant amount of land available within the wider South Tees Area for other uses including waste management.

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Policy No.	Policy Document	Policy Title	Summary of Policy	Assessment
			suitability of sites within such areas, consideration will be given to the potential impact of the protected nature conservation sites.	
MWC11	Minerals & Waste DPDs	Safeguarding of Port and Rail Facilities	Development which is proposed on or in the vicinity of certain safeguarded port and rail facilities (e.g. Tees Dock) will only be permitted where it would not prejudice the transportation of minerals and resources and waste materials by water and rail.	The nearest safeguarded facility to the Proposed Development is Tees Dock, located to the south-west of the PCC Site. The use of this facility for the movement and storage of minerals will not be prevented by the Proposed Development.

6.6.4 Table 6.4 demonstrates that there is no conflict between the Proposed Development and relevant policies contained within the DPD or the South Tees SPD. The ES Addendum has identified no changes to the significance of effects reported in the original ES and therefore there is no change to the assessment in Table 6.4.

6.7 Summary

6.7.1 This section of the Planning Statement has considered the Proposed Development's conformity against the assessment principles, generic impacts and assessment and technology specific considerations of the relevant energy NPSs (EN-1, EN-2, EN-4 and EN-5). These are the primary basis for the determination of development consent applications for energy infrastructure. The Applicants' assessment has not identified any conflicts with NPS policy.

6.7.2 An assessment of the Proposed Development's compliance with the assessment principles and generic and technology specific impacts of the relevant draft revised NPSs for energy infrastructure, against any material changes to relevant assessment principles/impacts from the current NPSs or any relevant new assessment principles/impacts within the draft revised NPSs is provided at **Appendix 3**.

6.7.3 It has demonstrated that there is no conflict with NPPF policy, the statutory development plan or the South Tees SPD.

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

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

7.1 Introduction

7.1.1 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 policy assessment within Section 6 and the EIA that has been undertaken.

7.2 Benefits of the Proposed Development

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

- The energy NPSs, in particular EN-1, confirm the urgent need that exists for developing new nationally significant energy infrastructure, including new gas-fired generating stations with carbon capture. The Proposed Development will provide dispatchable low carbon generating capacity that underpins the security of UK electricity supplies and overall grid stability as the deployment of intermittent renewables increases. EN-1 is clear that the Secretary of State ('SoS') should assess applications for development consent on the basis that the need for new energy infrastructure and its scale and urgency has been proven and that substantial weight should be given to the contribution that all projects will make toward satisfying this need. Although the Energy White Paper ('EWP') includes a commitment to review the current suite of energy NPSs, while that review is undertaken, they remain relevant Government policy for the purposes of making decisions on energy NSIPs. The EWP also underlines the need for the energy infrastructure set out in EN-1. The need that exists for the Proposed Development is set out in detail within the Need Statement (Document Ref. 5.2).
- While the current energy NPSs remain relevant policy, it is considered that the draft revised energy NPSs are "important and relevant" to decision-making in respect of the Proposed Development. Notably, draft NPS EN-1 confirms the pressing need for gas-fired electricity generation with CCS and CCS infrastructure. Draft EN-1 is clear that there is no limitation on the amount of such infrastructure and that it is for the market to decide on what infrastructure is viable to bring forward.
- Recent UK energy and climate change policy has established clear objectives for decarbonising the power and industrial sectors and the transformation of the oil and gas sector in order to 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 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, including:

- Demonstrating power with CCS/CCUS at a commercial scale by the mid-2020s which is aligned with the Government commitment to support the delivery of “at least one power CCUS plant” by 2030.
- Developing a CO₂ gathering network on Teesside that will underpin the establishment of a decarbonised industrial cluster (part of the East Coast Cluster) by the mid-2020s by providing the necessary infrastructure to capture CO₂ emission from existing heavy industries with the area, helping to secure their long-term future and contribution to the economy.
- Providing infrastructure that will support the potential for the future large-scale manufacture of low carbon hydrogen on Teesside, acting as a driver for growth and jobs within the local and regional economy. Blue hydrogen (the use of natural gas to manufacture hydrogen) is likely to be the cheapest source of hydrogen, at least initially, and therefore being able to pair this with CCS/CCUS is critical to delivering low carbon hydrogen production. This will contribute toward the Government’s objective of 10 GW of hydrogen production by 2030.
- The Proposed Development will initially capture up to 4Mt CO₂ emissions per annum (Teesside alone generates 3.9Mt CO₂ per annum) but there is the scope to increase this to 10Mt CO₂ per annum in the future as a result of the sizing of the infrastructure.
- In line with the North Sea Deal, the Proposed Development will support the transformation of the oil and gas sector. The development of CCS/CCUS technologies will be able to draw upon the proven capabilities and skills within the oil and gas sector, its existing infrastructure and private investment potential, thereby helping to support its supply chain and skilled workforce.
- The Proposed Development will support the delivery of the Government’s Net Zero Strategy and help underpin the British Energy Security Strategy.
- 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 up to 2,440 net construction jobs (direct and indirect) would be generated per annum over the 48-month construction programme. Jobs during operation are estimated at up to 130 FTE (direct and indirect) with the majority filled by people from the local area. An employment skills and training plan will be implemented in order to maximise the local employment and training opportunities provided by the Proposed Development.
- 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 Proposed Development will be CHP Ready and have the future potential to provide emerging development within the Teesworks area with heat.

- The Proposed Development will also deliver landscape and biodiversity enhancements and achieve biodiversity net gain within the PCC Site.

7.3 Likely Significant Adverse Effects/Impacts of the Proposed Development

7.3.1 Chapter 25 'Summary of Significant Effects' of ES Volume I, Table 25-1 (Document Ref. 6.2) summarises the significant 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 24 of the ES, where relevant). Table 25-1 also summarises any additional mitigation measures that have been identified in the technical assessments contained in the ES.

7.3.2 Table 25-1 confirms that the Proposed Development will only result in a limited number of long-term permanent and direct effects after mitigation. These relate to a viewpoint from the England Coastal Path that runs adjacent to the PCC Site where there will be a moderate adverse (significant) effect in terms of visual impact on recreational users of the Coast Path from the presence of the buildings and structures at the PCC Site. The only other long-term, permanent, direct effect relates the employment generated by the Proposed Development during its operational stages, which is assessed as being a moderate beneficial (significant) effect.

7.3.3 Long-term, permanent and direct cumulative and combined effects are limited to a moderate adverse (significant) effect in terms of the visual impact on recreational users of the England Coast Path.

7.3.4 With regard to the visual impact on recreational users of the England Coast Path where it runs adjacent to the PCC Site, it is relevant to note that paragraph 2.65 of NPS EN-2 relating to fossil fuel electricity generation infrastructure, recognises that *"It is not possible to eliminate the visual impacts associated with a fossil fuel generating station."*

The ES Addendum (Document Refs. 7.7, 7.8.1 and 7.8.2) submitted as part of the change request to the ExA on 28 April 2022, and accepted into the Examination on 6 May 2022, describes and assesses the changes made to the Application. The ES Addendum has identified no changes to the significance of effects reported in the original ES.

7.4 Summary

7.4.1 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').

7.4.2 Sections 4 and 6 of this Planning Statement have considered the Proposed Development's conformity with the relevant energy NPSs (EN-1, EN-2, EN-4 and EN-5) and the relevant assessment principles, generic impacts and assessment and technology specific considerations contained within them. The energy NPSs are the

primary basis for the determination of applications for nationally significant energy infrastructure as defined at Sections 15 to 21 of the PA 2008. The Applicants' assessment has not identified any conflicts with relevant NPS policy.

- 7.4.3 NPS EN-1 and EN-2 have effect in relation to the Low Carbon Electricity Generating Station, which falls within the definition and thresholds under Sections 14 and 15 of the PA 2008, together with its associated development, and is within the scope of the NPSs. The application for development consent for those elements must therefore be assessed and determined pursuant to Section 104, and benefits from the presumption in favour of approval set out in the NPSs.
- 7.4.4 In respect of the CO₂ Gathering Network Corridor and its associated development (i.e. the Specified Elements in the Section 35 Direction), NPS EN-1 could only 'have effect' in relation to those elements for the purposes of Section 104 insofar as the legal effect of the Section 35 Direction is to bring them within the scope of the NPSs. If following the EFW Group Limited case the SoS decides that the Section 35 Direction does not have that legal effect, those parts of the application will need to be determined pursuant to Section 105. The Applicants therefore consider that it would be prudent for the ExA to consider what its recommendation would be on both bases (Sections 104 and 105), so as to enable the SoS to determine the Application with the benefit of that advice, whichever statutory route he ultimately determines to be appropriate.
- 7.4.5 The Applicants have also set out at Section 5 how the Proposed Development would contribute toward the objectives set out in recent UK energy and climate change policy to achieve the decarbonisation of the power and industrial sectors. That policy is both "*important and relevant*" to decision-making in respect of the Proposed Development and should be afforded substantial weight.
- 7.4.6 Section 6 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.
- 7.4.7 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 new low carbon electricity generation capacity and CCS infrastructure, 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 a moderate adverse effect on users of the England Coast Path where it runs adjacent to the PCC Site (the site of the Low Carbon Electricity Generating Station). This limited impact cannot outweigh the substantial benefits of the Proposed Development and it is relevant to note that EN-2 recognises that it will not always be possible to eliminate the visual impacts of energy infrastructure such as generating stations.
- 7.4.8 The Applicants do not consider that the procedural route by which a decision is made by the SoS (Section 104 of 105 or both) should affect the outcome. Whether the

Application is determined in accordance with the relevant NPSs or they are treated as important and relevant considerations will not have a material impact on the decision given the urgency of the need for and significant public interest benefits of the Proposed Development, its limited adverse impacts and overall consistency with relevant policy. Development consent should therefore be granted.

8.0 CONCLUSIONS

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

- There is an urgent ‘need’ for new dispatchable low carbon electricity generating capacity in the UK. That need is confirmed in NPS EN-1 and within recent UK energy and climate change policy. That need is not open to debate or interpretation and should be afforded substantial weight in decision-making. Furthermore, the energy NPSs are the primary basis for the determination of development consent applications for energy infrastructure.
- While the current energy NPSs remain relevant policy, it is considered that the draft revised energy NPSs are important and relevant to decision-making in respect of the Proposed Development. Notably, draft NPS EN-1 confirms the pressing need for gas-fired electricity generation with CCS and CCS infrastructure.
- Recent UK energy and climate change policy has established clear objectives for decarbonising the power and industrial sectors and the transformation of the oil and gas sector in order to 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. CCS/CCUS is an important component in delivering these objectives. This policy is both important and relevant to decision-making in respect of the Proposed Development and should also be afforded substantial weight.
- The Proposed Development will contribute toward the urgent need for new low carbon generating capacity and CCS infrastructure in the UK and the delivery of energy and climate change policy.
- Importantly, the Proposed Development will deliver the infrastructure to underpin the creation of a decarbonised industrial cluster on Teesside (part of the East Coast Cluster) in line with Government policy and the Industrial Decarbonisation Strategy. It will also support the potential future production of low carbon hydrogen with the Government’s ambition being for 10 GW of hydrogen production by 2030.
- The Proposed Development has been assessed against the relevant energy NPSs (EN-1, EN-2, EN-4 and EN-5) and the relevant assessment principles, generic impacts and assessment and technology specific considerations within them, in addition to the NPPF and the local development plan. The Applicants’ assessment has not identified any conflicts with relevant policy. Furthermore, the Proposed Development is consistent with policy contained within the UK Marine Policy Statement and the North East Marine Plan, both of which are supportive of the deployment of CCS/CCUS in the UK Marine Area.
- In addition to contributing toward the need for new low carbon 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.

- The significant adverse effects/impacts of the Proposed Development are limited to a moderate adverse effect on users of the England Coast Path where it runs adjacent to the PCC Site. This limited impact cannot outweigh the substantial benefits of the Proposed Development and EN-2 recognises that it will not always be possible to eliminate the visual impacts of such infrastructure.

8.1.2 The Applicants do not consider that the procedural route by which a decision is made by the SoS (Section 104 of 105 of the PA 2008 or both) should affect the outcome of the Application. Whether the Application is determined in accordance with the relevant NPSs or they are treated as important and relevant considerations will not have a material impact on the decision given the urgency of the need for and significant public interest benefits of the Proposed Development, its limited adverse impacts and overall consistency with relevant policy. Development consent should therefore be granted.

APPENDIX 1: SECTION 35 DIRECTION



Department for
Business, Energy
& Industrial Strategy

Geoff Bullock
Partner
DWD
6 New Bridge Street
London
EC4V 6AB

**Department of Business,
Energy and Industrial Strategy**

1 Victoria Street
London SW1H 0ET

www.gov.uk/beis

By e-mail only: [REDACTED]

Your ref: 13626
Our ref:

17 January 2020

Dear Mr Bullock,

NET ZERO TEESSIDE PROJECT: REQUEST FOR DIRECTION UNDER SECTION 35 OF THE PLANNING ACT 2008

Thank you for your letter of 25 November 2019 to the Secretary of State on behalf of Oil and Gas Climate Initiative Climate Investment Holdings LLP (“the Applicant”) requesting that she should exercise powers under section 35 of the Planning Act 2008 (“the Direction request”) to direct that certain specified elements of the proposed Net Zero Teesside Project, as set out in the Direction request, should be treated as development for which development consent is required.

The Secretary of State requested supplementary information from the Applicant on 20 December 2019 to assist in deciding whether to give the Direction sought. Further information was received from the Applicant on 24 December 2019.

In light of the information contained in the Direction request and in the Applicant’s supplementary information provided on 24 December 2019, I can confirm that the Secretary of State has agreed to the request for a Direction to be made. A signed Direction to that effect is attached. The 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 Net Zero Teesside Project.

The Direction will be published on the Planning Inspectorate’s web page for the Net Zero Teesside Project (or the “Teesside Cluster Carbon Capture and Usage Project” as is

currently displayed on the web-site). I will also arrange for publication of the Direction on the “Energy Infrastructure Development Applications: decision page” on the GOV.UK web-site¹.

Yours sincerely

GARETH LEIGH
Head of Energy Infrastructure Planning

¹ <https://www.gov.uk/government/collections/energy-infrastructure-development-applications-decisions>

DIRECTION BY THE SECRETARY OF STATE UNDER SECTION 35 OF THE PLANNING ACT 2008 RELATING TO THE PROPOSED NET ZERO TEESSIDE PROJECT

By letter to the Secretary of State for Business, Energy and Industrial Strategy received on 25 November 2019, Oil and Gas Climate Initiative Climate Investment Holdings LLP (“the Applicant”) formally requested that the Secretary of State should exercise the power vested in her under section 35 of the Planning Act 2008 (“the Act”) to direct that certain elements of the proposed Net Zero Teesside project (“the proposed Project”) specified in the letter (“the Specified Elements”) should be treated as development for which development consent under the Act is required. The Specified Elements of the proposed Project are:

- A CO₂ gathering network, including the CO₂ pipeline connections from the proposed Combined Cycle Gas Turbine electricity generating station and industrial facilities on Teesside to transport the captured CO₂ (including the connections under the tidal River Tees);
- A CO₂ gathering/booster station to receive captured CO₂ from the gathering network; and
- A CO₂ transport pipeline for the onward transport of the captured CO₂ to a suitable offshore geological storage site. [This does not include the complete connection to the offshore storage site itself.]

The Secretary of State requested supplementary information from the Applicant on 20 December 2019 to assist in deciding whether to give the Direction sought. Further information was received from the Applicant on 24 December 2019.

The Secretary of State is satisfied that:

- The proposed Project is in the field of energy and will be wholly within England or waters adjacent to England out to the seaward limits of the territorial sea;
- The Specified Elements of the proposed Project do not currently fall within the existing definition of a “nationally significant infrastructure project” as defined in the Act and it is, therefore, appropriate to consider use of the power in section 35 of the Act; and,
- The Applicant’s request constitutes a “qualifying request” in accordance with section 35ZA (11) of the Act.

Having considered the details of the Applicant’s proposals as set out in its letters of 25 November 2019 and 24 December 2019, the Secretary of State is of the view that the Specified Elements form part of the proposed Project which is nationally significant, for the reasons set out in the Annex below.

The Secretary of State has taken the decision within the conditions as required by sections 35A(2), (4) and (5) of the Act, and issues this Direction accordingly under sections 35(1) and 35ZA of the Act.

In deciding to issue this Direction, the Secretary of State considers that, while the Direction under section 35 of the Act in respect of the Specified Elements of the proposed Project is granted, it would only apply to the Specified Elements in so far as they form part of the Net Zero Teesside project which includes a generating station that is a nationally significant infrastructure project as defined in the Act and as described in the Applicant's letter of 25 November 2019.

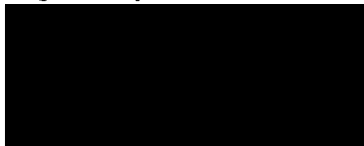
THE SECRETARY OF STATE DIRECTS that, subject to the proviso in the preceding paragraph, the Specified Elements, together with any matters/development associated with them, are to be treated as development for which development consent is required.

The Secretary of State further directs in accordance with sections 35ZA(3)(b) and (5) of the Act that:

- an application for a consent or authorisation mentioned in section 33(1) or (2) of the Act for development identified in, or similar to that described in, the request to the Secretary of State for Business, Energy and Industrial Strategy for a Direction under Section 35 of the Planning Act 2008 made by Oil and Gas Climate Initiative Climate Investment Holdings LLP is to be treated as a proposed application for which development consent is required;
- the Overarching Policy Statement for Energy (EN-1) has effect in relation to an application for development consent under this Direction in a manner appropriately equivalent so far as the considerations and impacts described in EN-1 are relevant to the proposed Development.

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

A black rectangular box redacting the signature of Gareth Leigh.

Gareth Leigh
Head of Energy Infrastructure Planning
For and on behalf of the Secretary of State for Business, Energy and Industrial Strategy

17 January 2020

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 Specified Elements of the proposed Project when taken together with the other elements of the proposed Project as defined in the letter of 25 November 2019 are of national significance; and
- by progressing the proposed Project through the Planning Act 2008 development consent process, it would provide the certainty of a single, unified, consenting process for the whole project within fixed timescales.

APPENDIX 2: EFW GROUP LIMITED V SECRETARY OF STATE FOR BEIS JUDGEMENT

EFW Group Limited v Secretary of State for Business, Energy and Industrial Strategy



No Substantial Judicial Treatment

Court

Queen's Bench Division (Administrative Court)

Judgment Date

8 October 2021

Case No: CO/1160/2021

High Court of Justice Queen's Bench Division

[2021] EWHC 2697 (Admin), 2021 WL 04691068

Before: The Honourable Mr Justice Dove

Date: 08/10/2021

Hearing dates: 13th and 14th July 2021

Representation

Michael Humphries QC and Mark Westmoreland Smith (instructed by Keystone Law) for the Claimant.
Ned Westaway (instructed by Government Legal Department) for the Defendant.

Approved Judgment

Mr Justice Dove:

1. This is an application for judicial review pursuant to [section 118 of the Planning Act 2008](#) ("the 2008 Act") seeking to quash the defendant's decision dated 19th February 2021. The application before the defendant included two separate and discrete proposals. The first proposal was for the Wheelebrator Kemsley North ("WKN") and the second was for the Wheelebrator Kemsley K3 ("K3"), both of which were proposals for energy from waste described in greater detail below. Whilst the name of the claimant company changed between the determination of the application and the commencement of these proceedings nothing turns on the fact that the claimant's name has altered.

The Facts

2. The claimant is the developer and operator of a pre-existing waste-to-energy plant at Kemsley, Kent which was granted planning permission on 14th June 2019 and has been fully built out ("the Kemsley plant"). It supplies heat to an adjacent paper mill, and has permitted capacity of up to 49.9MW with a waste throughput of 550,000 tonnes per annum. It was commissioned in July 2020.

3. The claimant contemplated two further development projects. Firstly, K3, which amounted to a proposal to increase the generating capacity of the consented Kemsley plant from 49.9MW to 75MW, and increase the total waste tonnage throughput from 550,000 to 657,000 tonnes per annum. This project simply involved an increase in the permitted capacities of the facility and did not require any physical works in order to achieve them. The second proposal was WKN, which was a new waste-

to-energy facility capable of processing 390,000 tonnes of waste and generating 42MW of electricity. WKN was intended to supply energy to the adjacent paper mill when the Kemsley plant was offline for maintenance and was designed to be combined heat and power ("CHP") ready in order to take advantage of any future developments. The K3 project fell within the definition of a nationally significant infrastructure project ("NSIP") as defined by [section 15 of the 2008 Act](#) (which is dealt with in greater detail below), on the basis that the final capacity for the Kemsley plant following the consenting of the K3 proposal would lead to a generating station which had a capacity in excess of 50MW. The WKN project did not satisfy that criterion and therefore did not fall within the definition of an NSIP.

4. As part of the preparation of the application for the projects, on 1st June 2018 the claimant wrote to the defendant to request that the defendant exercise the power under [section 35 of the 2008 Act](#) to direct that the WKN facility be treated as a development for which development consent is required, and thereby bring it within decision-making processes of the [2008 Act](#). The [section 35](#) application explained that the WKN proposal was "an entirely stand-alone facility, and not an extension to [the Kemsley plant]". Given the close physical proximity between the K3 and the WKN proposals, on the basis that they were proposed to be developed on adjacent sites, the application emphasised the added efficiency to the decision-making process which would arise were they to be considered as part of the same application for a Development Consent Order ("DCO") for both proposals.

5. On 27th June 2018 the defendant granted the [section 35](#) application. In doing so the defendant noted that the development did not currently fall within the definition of an NSIP and therefore it was appropriate to consider use of the power in [section 35 of the Act](#). The defendant was satisfied, on the basis that the WKN proposal sat on the same site as two significant applications, including the K3 proposed application, that cumulatively the developments located on the same site could "comprise a significant facility of national sustainable energy supply". The defendant directed that an application for the form of development described in the request of 1st June 2018 was to be treated as a proposed application for which a DCO was required, and that any consultation carried out prior to the date of the [section 35](#) direction was to be treated as complying with the consultation requirements under the [2008 Act](#) notwithstanding that it had been carried out prior to the date of the direction.

6. On 11th September 2019 the claimant applied for a DCO in relation to both the K3 and the WKN projects. Although, as noted above, the projects were separate and distinct, in the application they were combined, as anticipated by the [section 35](#) application, within an application for a single DCO. Pursuant to [section 55 of the 2008 Act](#) the application was accepted for examination on 8th October 2019. The examination began on 19th February 2020 and concluded on 19th August 2020.

7. The examination proceeded in the form of a series of written exchanges provided in accordance with a structure of eight Deadlines for the submission of material. One of the issues which the examination addressed was the question of whether or not there was sufficient waste arising in order to support the proposed facilities whilst complying with principles of the waste hierarchy and the proximity principle. Participants in the examination included Kent County Council ("KCC") who are the waste planning authority for the area within which the proposals lie. KCC, assisted by BPP Consulting, who had provided them with advice in relation to the Early Partial Review of the Kent Minerals and Waste Local Plan ("the EPR"), presented submissions to the examination at the stage of Deadline 1 contending that there was no robust evidence to justify the need for the facilities in terms of the availability of appropriate waste to support the proposed energy from waste capacity. KCC contended that whilst the claimant's evidence in relation to additional suitable waste capacity produced in support of the application stated it lay within a range of 495,540 tonnes per annum and 840,463 tonnes per annum, BPP Consulting had undertaken a sensitivity analysis using the Environment Agency's WDI 2018 data and the claimant's methodology and found that the range actually fell between -760,390 tonnes per annum and -373,473 tonnes per annum.

8. At Deadline 3 of the examination, the claimant submitted evidence disputing the validity of the sensitivity analysis produced by KCC and BPP Consulting. The claimant indicated that it had tried to replicate the BPP Consulting figures but was unable to do so. The claimant produced its own table which reproduced the two original analyses, firstly, produced by the claimant in support of the application and, secondly, produced by KCC at Deadline 1, and then added a further calculation

based on the WDI 2018 data that showed a remaining level of need ranging between 306,554 tonnes per annum and 680,032 tonnes per annum. Whilst this showed a reduction over the original calculation supporting the application, the claimant contended that there was still a substantial need for residual waste treatment capacity even after both of the proposals had been consented.

9. Immediately after Deadline 3, on 23rd April 2020, the Inspector's report on the examination of the EPR was published. As the name of the document implied, the EPR contained a number of proposals to modify the Kent Minerals and Waste Local Plan adopted in 2016, including KCC's position that it was no longer proposed to produce a Waste Sites Plan following a reassessment of the need for waste facilities over the plan period. The evidence base for the EPR included a further assessment of need. The EPR Inspector set out the essence of that exercise and the conclusions arising in the following terms:

"20. The Capacity Requirement for the Management of Residual Non-Hazardous waste (CRRNH) has assessed the need for provision for residual non-hazardous waste arising in Kent, including Local Authority Collected Waste (LACW) and Commercial and Industrial (C&I) waste, as well as some waste originating from London. The calculation of need takes into account revised recycling rates which are based on government guidance and the actual rates achieved. The forecast requirement is based on continuing reductions in landfill.

21. The CRNNH considers the capacities of existing consented facilities and the extent to which they would satisfy identified need. A permitted facility at Barge Way has not been built. Irrespective of whether there is any uncertainty as to whether that facility will be provided, the strategy for waste management capacity does not depend on its provision. Waste arisings are forecast for intervals of 5 years up to the end of the Plan period in 2030/31. The proposed diversion of LACW and C&I waste from landfill is greater than that in the KMWLP. The proportions of those waste streams that are to be subject to other recovery instead of recycling/composting are greater in the EPR than in the KMWLP, taking into account the re-assessed recycling rates.

22. Since the adoption of the KMWLP, a significant new waste recovery facility has been built at Kemsley and is being commissioned. This provides capacity of 525,000 tonnes per annum (tpa). Policy CSW7 of the KMWLP identifies a recovery requirement of 562,500 tpa but this requirement has been re-assessed in the CRRNH having regard to the revised recycling rates and revised figures for diversion of waste from landfill.

23. Table 9 of the CRRNH shows that there is no gap in capacity for other recovery treatment of residual non-hazardous waste throughout the Plan period and demonstrates that the Kemsley facility together with the existing Allington facility will provide a surplus of other recovery capacity. On this basis there is no need to allocate sites. However, Policies CSW6 and CSW7 provide flexibility in that they are permissive policies that would allow for other recovery facilities to be developed should they be required."

10. In its response at Deadline 4, KCC did not submit any further calculation in response to that produced by the claimant, but placed reliance on the endorsement by the EPR Inspector of the data reports produced to support the EPR by KCC in the form of the CRRNH. In response to earlier submissions made by KCC the examining authority ("ExA") requested a copy of the representations made on behalf of the claimant to the EPR examination in support of the contention that the EPR was unsound.

11. In the claimant's response at Deadline 5, the claimant again noted that KCC had offered no explanation for its position beyond reliance upon the EPR Inspector's report. The claimant noted that the EPR report was very short and made no mention

of third-party submissions, appearing to take the CRRNH at face value. The claimant made the observation that it was reasonable to assume that the inspector had not considered the analysis of empirical data in relation to need and waste available for incineration in detail at the examination of the EPR.

12. Within the material related to Deadline 5 and Deadline 7, KCC provided the claimant's representations to the EPR, and also made further submissions in relation to waste types and waste data addressing the potential available feedstock for the facilities. Within their Deadline 8 submissions the claimant pointed out that they had responded to the submissions made in Deadline 5 by KCC, and consistently demonstrated throughout their representations to the examination of the DCO that the level of fuel of an appropriate character available to the proposed development would be sufficient to demonstrate a need for both of the proposed developments and indeed still leave even further available capacity for the recovery of waste.

13. By contrast, in its Deadline 8 representations, KCC contended that they had undertaken further analysis of the claimant's data during the course of the examination and discovered that the quantity of waste reported as going to landfill that was suitable for incineration was a good deal less than the claimant had claimed. KCC submitted that no compelling evidence had been presented by the applicant to address their doubts in relation to the suitability or combustibility of the waste targeted by the proposals in the applicant's assessment, and that given the EPR had been found to be sound, on the basis that its waste needs assessment was robust, there was clearly insufficient need to support the additional capacity proposed.

14. At Deadline 8 the final version of the Statement of Common Ground ("the SOCG") was provided to the examination. Within the matters that were agreed in the SOCG the following appeared:

"2.2.3 ...

(b) KCC has undertaken an Early Partial Review (EPR) of the Kent Minerals and Waste Local Plan (KMWLP), which has been found sound with the addition of main modifications. The parties agree that the relevant local waste plan would be the Kent Minerals and Waste Local Plan Early Partial Review, should that be adopted by the KCC prior to the application being determined. In advance of adoption, increasing weight ought to be given to the EPR, given it has now been approved by the Examining Inspector."

15. The SOCG also recorded matters which were not agreed. These matters included the relevance of national policy statements ("NPSs") to WKN. The claimant's position was that policies in NPS EN-1 and EN-3 (see below) were both "important and relevant" to the decision to be made in relation to WKN, firstly, because it was very close to having a capacity which would require it to be an NSIP, and, secondly, because its function, scale, and the nature of its impact was similar to that of K3. Further, it had been accepted by the defendant as being of national significance through the [section 35](#) direction. KCC, by contrast, contended that the parts of the application which were not an NSIP should be determined in accordance with the development plan, and that those parts of the application included the expansion of waste throughput at K3 as well as the construction and operation of WKN.

16. On the 19th November 2020 the ExA completed his report, which contained a recommended decision, and it was passed to the defendant. The report is a lengthy and detailed document, and for present purposes what follows is a summary of those aspects of the report pertinent to this challenge. Within section 3 of the report, the "Legal and Policy Context", the ExA noted the provisions of [sections 104 and 105 of the 2008 Act](#) (which are set out in detail below), and that in essence [section 104](#) applies to applications for a DCO where an NPS has effect, and [section 105](#) applies to decisions where no NPS has effect.

Where [section 104](#) is in play, then by virtue of [section 104\(3\)](#) the application must be determined "in accordance with any relevant national policy statement", subject to a number of limited exceptions. By contrast, [section 105](#) prescribes matters to which the defendant is to have regard to when making a decision without the statutory presumption set out in [section 104\(3\)](#). The ExA noted that the WKN proposal fell short of the threshold for it to be examined as an NSIP, a position which the ExA concluded was not altered by virtue of the [section 35](#) direction. The ExA noted that neither NPS EN-1 nor EN-3 were worded to include a project subject to a [section 35](#) direction. That said, the ExA noted that although the WKN did not meet the threshold for an NSIP, nonetheless the matters in NPS EN-1 and EN-3 could be taken into account in determining the WKN proposal to the extent that those matters were both important and relevant to the defendant's decision. Thus, the ExA concluded that whilst in relation to the K3 proposal the NPSs formed the primary policy context for the examination given the statutory duty imposed by [section 104 of the 2008 Act](#), with respect to the WKN proposal the following was noted:

"3.3.4 In relation to the WKN Proposed Development the NPSs are important and relevant matters to take into account in the view of the ExA, however the statutory duties as to the applicability of the NPSs do not apply in the same way as for development which is a nationally significant infrastructure project. The primary policy context is nevertheless found in the PA2008, namely s105 which requires the SoS to have regard to LIRs, matters prescribed by regulations in relation to development of the description to which the application relates; and other matters considered important and relevant which will include so far as relevant, the NPSs."

17. The section went on to assess the relevant policy framework and reached conclusions in relation to the applicable policy. In relation to NPS EN-1 and EN-3, the ExA concluded that the need for the K3 proposal was established through the NPSs, whereas the WKN proposal generally conformed to high-level policy in NPS EN-1 and EN-3. In relation to the development plan, at paragraph 4.6.4 of the report the ExA recorded as follows:

"4.6.4 There are no issues arising from development plan policies that necessarily conflict with relevant policy directions arising from NPSs. Whilst NPSs are the primary source of policy for a decision on an NSIP under PA2008 such as Project K3, development plan policies take precedence for a decision on Project WKN. None of the development plan policies indicate against the directions set in NPS EN-1 or NPS EN-3 and it follows that effect can be given to all relevant development plan policies in a manner which reinforces and adds local context and detail to NPS compliance where the NPSs apply."

18. Within this section the ExA set out the competing contentions in relation to whether or not there was a need for the facility in terms of available waste suitable for incineration. The concern raised by KCC was that if there were not adequate quantities of waste arising within their administrative area this would undermine the waste hierarchy and lead to a diversion of waste into Kent, with the potential to undermine wider regional planning objectives and the proximity principle. The ExA introduced his conclusions in relation to the planning issues for the examination by noting as follows:

"4.10.96 In terms of the core decision-making section of NPS EN-3 (paragraph 2.5.70) it must be clear, with reference to the relevant waste strategies and plans, that the proposed waste combustion generating station would be in accordance with the waste hierarchy and of an appropriate type and scale so as not to prejudice the achievement of local or national waste management targets in England. I am not satisfied that this is the case with reference to the WKN Proposed Development

because the increase in capacity which it would bring about would significantly increase the capacity gap already identified by KCC. For such provision to be made at this time for an additional 390,000 tonnes of waste per annum over the 50-year lifetime of the development would present a significant risk to meeting the waste hierarchy objectives set out in KMWLP as revised by the EPR, by pulling Kent waste that might otherwise be recycled down the hierarchy.

4.10.97 The EPR of the KMWLP has been found sound and the supporting Waste Needs Assessment is taken to be robust, and the arisings and forecasts are now reflected in the most recent Authority Monitoring Report released by KCC. Applying an assessment based on these values to the Proposed Development, the ExA is satisfied that the need for the additional capacity proposed to maintain net self-sufficiency in Kent throughout the Plan period while making reduced provision for London's waste, does not exist."

19. In relation to the principles of local policy, and the EPR in particular, the ExA noted that the adverse effects of creating a waste management facility that would be likely to draw waste in from further afield than Kent would include locking waste into feeding the plant that might otherwise be recycled, contrary to the waste hierarchy, as well as undermining the viability of more locally-based solutions which would accord better with the proximity principle. The ExA noted the strategy in the EPR to meet the area's objectively assessed needs. The ExA noted it was an important consideration that the EPR had dispensed with the preparation of a Waste Sites Plan, and that the purpose of this and the other provisions of the EPR were to avoid over provision of other recovery capacity which could discourage the development of recycling and composting capacity further up the waste hierarchy.

20. The ExA went on to consider the energy production issues and noted the following in that connection:

"4.10.120. Generally, the power produced by both projects would be a benefit to be considered in the overall planning balance.

4.10.121. However in the case of the WKN Proposed Development, the electricity generation is allied to the sourcing of some 390,000 tpa of waste fuel which is a significant amount in itself, the composition of which should be scrutinised to see whether overall the proposed generation is justified by reference to such matters as the biogenic to fossil carbon ratio and its energy content, the confidence that can be placed on the assumed biogenic content, comparisons with other methods of electricity generation, and whether avoided emissions from landfill would actually materialise. Within that process, consideration of harm to KCC's strategy that underpins its WLP is not excluded."

21. The ExA then went on to consider the provisions of the Kent Minerals and Waste Local Plan Policy CSW4 and need and local capacity issues. The ExA's conclusions in relation to this issue were as follows:

"4.10.122. I am not persuaded that even assuming 65% recycling is achieved (which is acknowledged to be a higher target than is set out in the KMWLP or EPR) there remains a need for the Proposed Developments in particular Project WKN. The WHFAA [APP-086] sets out in Table ES2 Summary of Fuel Availability Assessment and sensitivities, a projected surplus in the remaining

fuel available in the Study Area compared to future capacity likely to be delivered, including taking account of both projects within the Proposed Development.

4.10.123. There is an obvious difference between the lower and upper estimates. This is predominantly due to the substitution of shortlisted waste types disposed to landfill rather than all Household/Industrial/Commercial (HIC) waste disposed to landfill. Clearly in my view the use of the former category is more appropriate since, as is clarified in the WHFAA, the HIC category in the WDI contains certain waste types that would be inappropriate for combustion in the Proposed Development, the use of which would result in an over-estimation of available fuel. Thus, under the WHFAA ones arrives at a remaining level of fuel availability to the tune of 992,540 tpa, which would be taken up by the Proposed Development leaving a shortfall in capacity of facilities equivalent to processing the remaining figure of 495,540 tpa.

4.10.124. However KCC's alternative calculation, based on the same methodology, including an allowance of 27% recycling to achieve the CEP 2035 target, and using the EA's WDI 2018 data as set out in [AS-010] would result in fuel availability of between 420,000tpa and 123,500tpa, which latter figure takes account of shortlisted waste types disposed to landfill within Study Area. Applying the proposed capacity of both projects within the Proposed Development, one arrives at negative figures whether shortlisted waste types or HIC waste disposed of to landfill are applied, indicating a surplus capacity of facilities in the Study Area. I find it significant that KCC's waste needs assessment has underpinned the EPR under which the development of increased waste recovery capacity follows a sustainable pattern of waste management to achieve overall net self-sufficiency, an approach found to be sound in the Examination of the EPR [REP4-016].

...

4.10.126. Turning to the Applicant's criticism of the Inspector's EPR Report [REP4-016] there is no reason to suppose that the Inspector did not properly examine the evidence on the capacity requirement for non-hazardous waste. The Applicant made several representations against the proposed changes in the EPR based on the evidence and appeared at the examination hearings to convey these objections to the Inspector. I asked for these representations which were supplied in full [REP5-040]. They clearly show that the Applicant was critical of the evidence base underpinning the EPR, however the Applicant accepted (p2 [REP5-040], that its own representations were:

"not submitted as in-depth need assessments for waste management in Kent; this is a task for KCC in preparing its development policy plan."

...

4.10.128. Paragraph 23 of the Inspector's Report [REP4-016] accepts that the "CRRNH" (Capacity Requirement for the Management of Non-Hazardous Waste) shows that there is no gap in capacity for other recovery treatment of residual non-hazardous waste throughout the Plan period and demonstrates that the "Kemsley facility" (ie the Consented K3 Facility) together with the existing Allington facility will provide a surplus of other recovery capacity. Paragraph 23 ends:

4.10.129. "*Policies CSW6 and CSW7 provide flexibility in that they are permissive policies that would allow for other recovery facilities to be developed should they be required*". (My emphasis).

4.10.130. I also note that the BPP report, Waste Topic Report 8 concluded the following on the need for Energy from Waste (EfW) capacity: "... sufficient sites should be identified such that new capacity in EfW could be provided for an additional 562,000 tpa. However, only 437,500 tpa new

EfW capacity should be permitted until monitoring indicates that the provision of only this amount of EfW capacity would result in non-hazardous landfill capacity in Kent being used up before the end of the plan period. This will need one site to be identified in Kent that would not need to be developed until the long term, if at all." This conclusion underpins Policies CSW7 and CSW8 of KMWLP.

4.10.131. KCC's analysis and data are also more focussed on the particular geographical source of waste accepted at locations to which waste is removed as well as a more localised approach to investigating capacity, which in my view is more important to analysing the geographical need for EfW additional waste treatment capacity. It was found to be sound by the EPR Inspector.

4.10.132. On balance I prefer KCC's assessment in KCC WNA 2018, Capacity Requirement for the Management of Residual Non-Hazardous Waste [REP4-020] of fuel availability and future capacity likely to be delivered, to that of the Applicant. This does not imply that in general future treatment capacity would no longer be necessary, however in the case of the WKN Proposed Development to grant consent for an additional 390,000 tpa throughput would in my judgment seriously undermine the local and regional strategy for managing waste development in Kent and the south east region. This would be contrary to KMWLP Policies CSW2, CSW4, CSW6, CSW7 and CSW8."

22. The ExA's overall conclusions in relation to waste hierarchy issues in respect of both of the proposals were expressed in the following terms:

"Overall conclusions as to waste hierarchy related matters: K3

4.10.139. The evidence underpinning the KCC's revised development plan policies which was independently compiled, points to a capacity gap which at both the upper and lower ranges of estimates, produces a negative level of need to manage waste fuel available in Kent, even taking into account the capacities of the Proposed Development. This would be contrary to the Waste Needs Assessment produced by KCC to support the EPR which has now been found sound by the examining Inspector. This evidence base found no need exists in Kent for additional capacity for the Plan period.

4.10.140. However, although the Applicant's position is that both Project K3 and Project WKN are important, relevant and appropriate infrastructure projects that would meet net zero emissions goals and ensure waste is managed efficiently, there are differences between the two. Project K3 is a CHP facility, connected to the Kemsley Paper Mill with the benefits of increased heat export. That the WKN Proposed Development would provide a sustainable source of steam/heat to local customers for industry and housing within the area is uncertain as there is no clear agreement with any customer for this purpose, except perhaps arguably with DS Smith for the very limited occasions when K3 is undergoing maintenance. Therefore, whilst the benefits of co-location of both facilities to provide steam to the paper mill, remain unclear, increased weight should be given to the K3 Proposed Development in this respect.

4.10.141. The need for infrastructure covered by NPS EN-3 is assumed and must be accorded significant weight. Further, the increased capacity provided by the K3 Proposed Development would be a more modest increase than that of Project WKN, therefore the risk of prejudice to the principles of proximity and net self-sufficiency in local and regional strategies and plans is reduced. The ability to generate additional electricity without change to its design or increase in throughput would be an additional benefit.

Overall conclusion as to waste hierarchy related matters: Wkn

4.10.142. The generation of 42MW electricity would be a significant benefit having regard to the need for all types of infrastructure set out in NPS EN-1, although the energy generated would be partially renewable at best.

4.10.143. However, the Applicant has not provided a robust argument that justifies a concentration of a new waste management facility that would increase the capacity gap at this time. Although put forward as a regional facility, given that the waste recovery capacity is well catered for by the Consented K3 Facility and the EfW facility located at Allington, there is no proven need for the plant to be located in Kent. An alternative location outside Kent where the heat produced can be more effectively utilised, would appear to better serve the strategic purposes of member authorities of SEWPAG in order to comply with the aims set out in their respective WLPs, and in particular the KMWLP. Therefore, in this respect I find the WKN Proposed Development inconsistent with the KMWLP and EPR. Such a finding would be in accordance with upholding the role of the planning system as found in NPS EN-1 to provide a framework which permits construction of what Government as well as the market identify as the type of infrastructure needed "in the places where it is acceptable in planning terms (paragraph 2.2.4)".

4.10.144. Further, the introduction of additional Other Recovery capacity of the scale proposed at this time with respect to the WKN Proposed Development would put at risk achievement of the revised recycling and composting targets in the revised KMWLP which would also be in conflict with National Planning Policy for Waste."

23. In section 6 of the report the ExA set out the conclusions reached in relation to the DCO application. So far as relevant to this case those conclusions were as follows:

"6.2. Considerations in the Overall Planning Balance*Application of Npss and development plan to the Proposed Development*

6.2.1. The designated National Policy Statements (NPSs) NPS EN-1 and NPS EN-3 provide the primary basis for the Secretary of State (SoS) to make decisions on development consent applications for energy based Nationally Significant Infrastructure Projects (NSIPs) in England, which includes the K3 Proposed Development.

6.2.2. In terms of Project WKN the NPSs may be considered "alongside" other national and local policies, however as the adopted local plan for waste matters, I consider the development plan and in particular the Kent Minerals and Waste Local Plan (KMWLP) to be the primary policy against which this element of the Proposed Development should be determined. The presumption in favour of determining the application in accordance with the NPS is absent here although the relevant NPSs are important and relevant matters to be considered.

6.2.3. I disagree with the Applicant's response [REP5-011] to ExQ3.6.2 [PD-014] that EN-1 and EN-3 are so germane to the assessment of the WKN Proposed Development that it would be irrational not to give them primacy for the reasons they give. As to the reasons given for this proposition, the NPPF is not dispositive of the issue, and the s35 direction does not override s105(2) (c) PA2008. S105 PA2008 does not stipulate that the NPSs take precedence viz a viz local plan policies (although as The Queen (oao David Gate on behalf of Transport Solutions For Lancaster

and Morecambe) v The Secretary of State for Transport v Lancashire County Council [2013] EWHC 2937 (*Admin*) would suggest they are capable of being important and relevant matters).

6.2.4. The Applicant suggested further in its reply [REP5-011] to ExQ3.6.2 [PD-014], that local plan policies would otherwise take precedence by default. Indeed, whatever the reason behind the lack of definitive statutory or judicial clarity over the issue, it would be sensible in my view to apply the statutorily adopted development plan as the primary consideration to a project that, but for the s35 Direction, would have fallen to be considered on that basis.

6.2.5. That said, conclusions on the case for development consent set out in the application are reached in the context of the policies contained in the NPSs, according to how important and relevant are the matters contained therein.

Need for and benefits of the Proposed Development

Project K3

6.2.11. In relation to NPS EN-1 and NPS EN-3 which apply to the K3 Proposed Development I find that the need for infrastructure covered by these national policies is assumed and must be accorded significant weight. The recovery of energy from the combustion of waste forms an important element of waste management strategies in England. Furthermore, the ability to generate an increased amount of electricity without change to the design of the Consented K3 Facility is an additional benefit, as is the potential to generate that amount without necessarily increasing the throughput of waste feedstock. The adverse impacts as a result of increase in throughput are considered separately.

6.2.12. Although there are marked uncertainties as to what if any net carbon benefit would be achieved by comparison to other forms of waste management, it is reasonable to assume that it would perform better in Greenhouse Gas (GHG) emission terms than had it not been linked to an integrated CHP facility to serve the adjoining DS Smith Paper Mill. This is a further positive benefit that would align with the aspirations of NPS EN-1 and EN-3.

Project WKN

6.2.13. Although the need for the WKN Proposed Development is not established through either NPS EN-1 or EN-3, the generation of up to 42MW of electricity would be in accordance with those national policies and would be a benefit as such. As a fossil fuel generated supply, it could be brought online quickly when demand is high and shut down when demand is low, but the supply generated is not significantly high and the benefits would therefore be limited.

6.2.14. The economic impacts of the Proposed Development would be an additional acknowledged benefit, principally in the form of the anticipated job creation of up to 482 staff during the construction period and between 35 to 49 staff once the WKN Proposed Development is operational and would be a positive factor in support of the WKN Proposed Development.

6.2.15. Achievement of R1 recovery status is not guaranteed and would only be a positive factor insofar as the SoS considers it likely that R1 status would be achieved. The energy produced from the biomass fraction of waste is regarded as renewable under EN-3 although there is uncertainty as to the proportion of waste fuel that would be derived from this component.

6.2.16. However, recognising that EfW facilities have an important role to play in waste management, the key important and relevant matter contained in the relevant NPSs as far as concerns the WKN Proposed Development, is under EN-3: whether, with reference to the relevant waste strategies and plans, the proposed waste combustion generating station would be in accordance with the waste hierarchy and of an appropriate type and scale so as not to prejudice the achievement of local or national waste management targets in England.

6.2.17. I find on this issue that, as described in Chapter 4 and summarised further below, it has not been demonstrated that there is a need for the Proposed Development having regard to the WPA's Need Assessments and other evidence that has underpinned the formulation of KCC's revised development plan. The statutorily adopted development plan and relevant policies discussed, form part of the overall planning system adverted to in NPS EN-3, the role of which is to identify the types of infrastructure needed in the places where it is acceptable in planning terms.

Conformity with the Development Plan

6.2.18. As a preliminary matter it should be noted that it is likely that a final decision on adoption of the changes proposed by the EPR will have been taken by KCC at some point after the close of the Examination (see p2 KCC Closing Statement [REP8-016] which referred to its proposed meeting on 10 September 2020). Therefore, the SoS may wish to consider whether to confirm with KCC whether the changes discussed in this Report have been incorporated into the development plan and have now attained the same status as other development plan policies.

6.2.19. Both the K3 and the WKN Proposed Development would be in conflict with fundamental policies of the development plan, namely KMWLP Policy CSW6 which requires it to be: "demonstrated that waste will be dealt with further up the hierarchy...and where such uses are compatible with the development plan" and Policy CSW7 which would be permissive of new capacity to manage waste "provided that: 1. it moves up the Waste Hierarchy".

6.2.20. In addition, KMWLP Policy CSW4 as revised through the EPR, incorporates revised targets for management of waste in Kent, however waste recovery capacity is sufficiently met by the Consented K3 Facility and the EfW facility at Allington, and there is no proven need for the plant to be located in Kent. This presents a serious risk of prejudice to the principles of proximity and net self-sufficiency which underpin Policy CSW4, and the wider regional strategy in SEWPAG's Memorandum of Understanding (MoU)/"Statement of Common Ground" would clearly be undermined through any significant increase in the capacity gap located in Kent.

6.2.21. The weight attached to the harm thereby caused is however assessed in light of the specific circumstances pertaining to each of the two projects. The increased capacity provided by the K3 Proposed Development would be markedly less than that of Project WKN.

...

Waste Hierarchy

6.2.25. The evidence underpinning KCC's revised development plan policies which was independently compiled, points to a capacity gap which at both the upper and lower ranges of estimates, produces a negative level of need to manage waste fuel available in Kent, even taking into account the capacities of the Proposed Development. This would be contrary to the Waste Needs Assessment produced by KCC to support the EPR which has now been found sound by the examining Inspector. This evidence base found no need exists in Kent for additional capacity for the Plan period.

6.2.26. Therefore the Proposed Development would be in conflict with KMWLP Policy CSW6 which requires it to be: "demonstrated that waste will be dealt with further up the hierarchy...and where such uses are compatible with the development plan" and Policy CSW7 "provided that: 1. it moves up the Waste Hierarchy".

6.2.27. However, although the Applicant's position is that both Project K3 and Project WKN are important, relevant and appropriate infrastructure projects that would meet net zero emissions goals and ensure waste is managed efficiently, there are differences between the two. Project K3 is a CHP

facility, connected to the Kemsley Paper Mill with the benefits of increased heat export. That the WKN Proposed Development would provide a sustainable source of steam/heat to local customers for industry and housing within the area is uncertain as there is no clear agreement with any customer for this purpose, except perhaps arguably with DS Smith for the very limited occasions when K3 is undergoing maintenance.

6.2.28. Therefore, whilst the benefits of co-location of both facilities to provide steam to the paper mill, remain unclear, increased weight should be given to the K3 Proposed Development in this respect.

6.2.29. The need for infrastructure covered by NPS EN-3 is assumed and must be accorded significant weight. Further, the increased capacity provided by the K3 Proposed Development would be a more modest increase than that of Project WKN, therefore the risk of prejudice to the principles of proximity and net self-sufficiency in local and regional strategies and plans is reduced. The ability to generate additional electricity without change to its design or increase in throughput would be an additional benefit.

6.2.30. As to the WKN Proposed Development, the generation of 42MW electricity would be a benefit having regard to the need for all types of infrastructure set out in NPS EN-1, although the energy generated would be partially renewable at best.

6.2.31. However, the Applicant has not provided a robust argument that justifies a concentration of a new waste management facility that would increase the capacity gap at this time. Although put forward as a regional facility, given that the waste recovery capacity is well catered for by the Consented K3 Facility and the EfW facility located at Allington, there is no proven need for the plant to be located in Kent. An alternative location outside Kent where the heat produced can be more effectively utilised, would appear to better serve the strategic purposes of member authorities of SEWPAG in order to comply with the aims set out in their respective WLPs, and in particular the KMWLP.

6.2.32. Therefore, I find that the WKN Proposed Development would be inconsistent with the KMWLP and EPR. Such a finding would be in accordance with upholding the role of the planning system as found in NPS EN-1 to provide a framework which permits construction of what Government as well as the market identify as the type of infrastructure needed "in the places where it is acceptable in planning terms (paragraph 2.2.4)."

6.2.33. Further, the introduction of additional Other Recovery capacity of the scale proposed at this time with respect to the WKN Proposed Development would justifiably put at risk achievement of the revised recycling and composting targets in the revised KMWLP which would also be in conflict with National Planning Policy for Waste.

...

6.3. Overall Conclusions on the Planning Balance

...

Project K3

6.3.4. The public benefits of the Proposed Development can be identified in the context of NPS EN-1's recognition of the need for energy generating infrastructure and the presumption in favour of granting consent for energy NSIPs whilst recognising that Energy from Waste (EfW) facilities play a vital role in providing reliable energy supplies.

6.3.5. The potentially adverse impacts of Project K3 and the concerns raised in submissions on the application have been considered. The ES identifies that the practical effect of the K3 Proposed Development would have no significant effects from construction, operation and decommissioning activities on the environment, or that the potentially significant effects identified can be mitigated as far as practicable by the package of controls that are appropriately secured in the Recommended DCO.

6.3.6. I have found that, as with the WKN Proposed Development the Applicant has not provided a sufficiently robust assessment of fuel availability in relation to assessed capacity in facilities for its treatment. Nevertheless, taking account of the positive benefits of Project K3 as described above, and mindful of the limited harms identified, I find that it would generally accord with the waste hierarchy and would be of an appropriate type and scale so as not to significantly prejudice the achievement of local or national waste management targets. Therefore, all harmful effects would be within the scope envisaged in the relevant NPSs as policy compliant.

6.3.7. In conclusion, I find that the identified harms in relation to the K3 Proposed Development would be outweighed by the benefits from the provision of energy to meet the need identified in NPS EN-1 and by the other benefits of the application as summarised above.

6.3.8. No HRA effects have been identified and there is no reason for HRA matters to prevent the making of the Order.

6.3.9. For the reasons set out in the preceding chapters and summarised above, I conclude that the K3 Proposed Development is acceptable, and that development consent should be granted therefor. This conclusion is taken forward in light of identified minor changes required to the DCO, described in Chapter 7 below.

Project WKN

6.3.10. Although the need for the WKN Proposed Development is not established through either NPS EN-1 or EN-3, the generation of up to 42MW of electricity would be in accordance with those national policies and would be of some benefit. In addition, there would be some positive economic advantages through job creation during the construction and operational phases of the facility.

6.3.11. However, the prospect of Project WKN becoming a viable CHP facility is uncertain. The lack of a clear and immediate sustainable source of steam/heat to local customers contrasts unfavourably with Project K3. With no guaranteed heat offtake, the proposed incineration would not qualify as Good Quality CHP. In my view this is an important and relevant factor to weigh in the balance, not least having regard to the need to transition to a low-carbon electricity market, as underlined by the UNFCCC Paris Agreement and the June 2020 Progress Report which indicates that plants without CHP should not be regarded as supplying renewable energy.

6.3.12. Moreover, the Applicant's assessment of fuel availability in relation to assessed capacity for its treatment, compares unfavourably with the Waste Planning Authority's own assessments of need and capacity that underpin its strategy in revising targets within the KMWLP which aim to ensure that new facilities demonstrate that waste will be dealt in a manner that clearly moves its management further up the waste hierarchy. Therefore, the WKN Proposed Development would be in conflict with key policies of KMWLP including Policy CSW4, Policy CSW6 and Policy CSW7.

6.3.13. I have had regard to the other benefits of the WKN Proposed Development set out by the Applicant that may comply with other provisions of the development plan including both the Swale Local Plan and KMWLP. However my conclusion is that the provision of too much waste capacity in conflict with the waste hierarchy, represented by the WKN Proposed Development, is a serious conflict that would result in conflict with the development plan as a whole, the adverse impacts arising from which in my view would clearly outweigh the benefits of the facility.

6.3.14. It would also be in conflict with National Planning Policy for Waste (NPPW) which expects applicants to demonstrate that waste disposal facilities not in line with the Local Plan, would not undermine its objectives through prejudicing movement up the waste hierarchy. The WKN Proposed Development is a non-NSIP proposal and where the NPSs do not apply as such, the more recent NPPW that sets out detailed waste planning policies should in my view carry considerable weight.

6.3.15. I have had regard to NPS EN-1 at paragraph 5.2, that CO2 emissions are not reasons to place more restrictions on projects in the planning policy framework than are set out in the energy NPSs. However, as I have found that there is no need for the WKN Proposed Development, the GHG emissions would be an additional harm that would result, whether or not a conclusion could have been reached as to any net carbon benefit that would result.

6.3.16. To conclude, I find that the identified harms in relation to the WKN Proposed Development would outweigh its benefits from the provision of energy and by the other benefits of the application as summarised above.

6.3.17. For the reasons set out in the preceding chapters and summarised above, I therefore conclude that the WKN Proposed Development should not proceed at this time, and that development consent should not be granted, therefore.

6.3.18. However, should the SoS consider that the advantages of Project WKN outweigh the harm caused by the adverse effects as I have described, and is minded to grant consent, then consideration should be given to the Alternative Recommended DCO set out at Appendix E, which is the subject of minor changes required to the Applicant's Preferred DCO, and as described in Chapter 7 below."

24. In the light of these conclusions the ExA's recommendation was that a DCO should be granted in respect of the K3 proposal, but that the WKN proposal ought to be refused.

25. On 19th February 2021, having considered the report of the ExA the defendant issued his decision. Having set out the provisions of [sections 104 and 105 of the 2008 Act](#) and the approach taken to them by the ExA the defendant observed as follows:

"4.6 The Secretary of State takes the view that the Application should be treated as a whole and determined under [section 104 of the Planning Act 2008](#). This section, and [section 105](#) would seem to be mutually exclusive and it would not be correct to determine different parts of the Application under different provisions. It is also noted that WKN is a type of generating station which would generally fall to be considered under EN-3 had it met the 50MW threshold by itself and was directed into the [Planning Act](#) regime on the basis of its combined significance with the WK3 project. In any event, the Secretary of State does not consider that determining the whole application under [section 104](#) has a material impact on the overall outcome in this case. [Section 104\(2\)\(d\) of the 2008 Act](#) enables the Secretary of State to give consideration to any important and relevant matters appropriate to this aspect of the application as fully considered by the ExA."

26. In relation to the waste hierarchy and fuel availability the defendant set out a summary of the issues considered by the ExA, and then provided a summary of the ExA's conclusions together with the conclusions of the defendant as follows:

" *Wheelabrator Kemsley K3* [ER.4.10.139 et seq]

4.18 While Kent County Council submits that there is no need in Kent for additional waste capacity for the period of the Kent Minerals and Waste Local Plan (up to 2030) and that neither WK3 nor WKN should benefit from the National Policy Statements' presumption in favour of energy development infrastructure, the Applicant submits that both projects are important and relevant to meeting a number of critical national needs including on net zero and waste management. The ExA notes that WK3 would, in addition to generating electricity, also provide steam and heat to local customers which is a factor in its favour. The ExA's overall conclusion is that the need for WK3 should carry significant weight in the decision-making process and the small increase in the proposed generating capacity with related increase in waste throughput would not prejudice the principles of sourcing waste locally and aiming for self-sufficiency.

Wheelabrator Kemsley North [ER 4.10.142 et seq]

4.19 The project would contribute 42MW of electricity to the electricity grid. Whilst noting this, the ExA states that the Applicant has not provided robust arguments to support the new plant and that there is no proven need for it to be located in Kent. WKN would be inconsistent with the Kent Mineral and Waste Local Plan and the revisions to it that were the result of the 'Early Partial Review' carried out on the Plan. (The Early Partial Review is an independent report carried out by the Planning Inspectorate which checks whether local plans are 'sound'.) The ExA considered that WKN did not accord with paragraph 2.5.70 of NPS EN-3 as it was not in compliance with the Kent Minerals and Waste Local Plan and there was no evidence provided as to why an exception should be made. Following on from that, WKN would not satisfy the statement in paragraph 2.2.4 of NPS EN-1 that the planning system should provide a framework which permits the construction of the infrastructure needed in the place where it is acceptable in planning terms. Finally, the ExA noted that WKN would be in conflict with the National Planning Policy for Waste because it would put at risk the achievement of revised recycling and composting targets in the Kent Minerals and Waste Local Plan.

4.20 The Secretary of State sees no reason to disagree with the ExA's conclusions in this matter."

27. The decision then records the defendant's conclusion that in relation to the various environmental and infrastructural issues considered by the ExA there was no reason to depart from the ExA's conclusions, nor any new information which justified a different approach. The defendant's decision then turns to the consideration of the planning balance and the conclusions of the defendant in that respect are set out as follows:

"6. The Secretary of State's Consideration of the Planning Balance

6.1 All nationally significant energy infrastructure developments will have some potential adverse impacts. In the case of WK3 and WKN, most of the potential impacts have been assessed by the ExA as being acceptable subject in some cases to suitable mitigation measures being put in place to minimise or avoid them completely. As set out above, the ExA determined that consent should be granted for WK3 only. The adverse impacts for the WK3 project did not outweigh the significant weight attaching to the need case established by the National Policy Statements.

6.2 However, the ExA's consideration of all the issues, particularly in respect of arguments about where the incineration of waste stood in the waste hierarchy and how this related to adopted policies in relevant local plans, led to the conclusion that WKN, while offering some benefits (particularly from the 42MW of electricity that would be generated), did not accord with the relevant provisions in the National Policy Statements, the National Planning Policy Framework and in relevant local plans. The ExA recommended, therefore, that WKN should not benefit from the grant of consent.

6.3 As set out in above, [sections 104 and 105 of the Planning Act 2008](#) set out the procedures to be followed by the Secretary of State in determining applications for development consent where National Policy Statements have and do not have effect. In both cases, the Secretary of State has to have regard to a range of policy considerations including the relevant National Policy Statements and development plans and local impact reports prepared by local planning authorities in coming to a decision. However, for applications determined under [section 104](#), the primary consideration is the policy set out in the National Policy Statements, while for applications that fall to be determined under [section 105](#), it is local policies which are specifically referenced although the National Policy Statements can be taken into account as 'important and relevant considerations'.

6.4 The Secretary of State adopts a different approach to the ExA's in this matter and is of the view that the whole application (including the benefits and impacts of WKN) fall to be considered under [section 104 of the Planning Act 2008](#). This means that in the consideration by the Secretary of State, more weight has been given to the National Policy Statements. However, the Secretary of State does not consider that this different approach to the planning process results in a different conclusion to that reached by the ExA, namely that development consent should not be granted for WKN and that the benefits of WKN are outweighed by the non-compliance with policies elsewhere, in particular, the policies regarding compliance with the NPS EN-1 and the policies referencing both the waste hierarchy and local waste management plans in NPS EN-3.

6.5 The determination of applications for development consent for nationally significant infrastructure projects is a balancing exercise and the weight afforded to different elements of the matrix of impacts and benefits may affect the overall conclusion. The ExA identifies that there are undoubtedly concerns that WKN would have adverse impacts on local and regional targets for moving waste up the waste hierarchy. As noted, the ExA has had regard to these matters in framing its recommendation. However, the Secretary of State is not bound to follow that recommendation if he feels that the evidence presented to him can support a different conclusion.

6.6 The Secretary of State has considered the arguments in the ExA Report together with the strong endorsement of developments of the type that is the proposed Development. He notes the ExA's comments that WK3's anticipated provision of steam to nearby industrial facilities are a further benefit in its favour. He considers that the overall planning balance supports the grant of consent for the increase in generating capacity and an increase in waste-fuel throughput at WK3. As noted, whilst taking a different approach to the application of [sections 104 and 105 of the Planning Act 2008](#) and consequently to the application of the planning balance in considering WKN, the Secretary of State nevertheless agrees with the ExA's conclusion that even though there are benefits from WKN, these do not outweigh the adverse impacts. The Secretary of State does not, therefore, consider that development consent should be granted for WKN."

28. The ultimate decision of the defendant was, therefore, that although he approached the decisions on the basis that [section 104 of the 2008 Act](#) applied to both the elements of the application, as distinct from the approach taken by the ExA (namely that K3 fell to be assessed under [section 104 of the 2008 Act](#) and WKN fell to be considered under [section 105 of the 2008 Act](#)), the substance of the decision which he reached would be the same, namely that a DCO should be granted for K3 but refused for WKN.

The Proceedings

29. The claimant brought these proceedings within the prescribed timescales and challenged the defendant's decision on the basis that, having correctly concluded that the application should be determined under [section 104](#) because [sections 104 and 105 of the 2008 Act](#) were mutually exclusive, the defendant had failed to appreciate the fundamental difference that this made to decision-making, and ought to have unpicked the conclusions of the ExA prior to seeking to reach his own decision within the context of a different statutory framework. In particular, the decision failed to give effect to the conclusion that [section 104](#) applied to the application as a whole in a variety of ways, which included a failure to properly reflect the presumption in favour of granting consent to applications falling within [section 104](#) which accorded with NPS policies, in particular in the event of conflict with development plan policies. Other instances of the differences between the decision-making frameworks of [sections 104 and 105 of the 2008 Act](#) were also relied upon.

30. Four grounds of challenge were, and still are, advanced. Ground 1 is the failure to give proper effect to [section 104](#) in the decision-making process and, in particular, the failure to give primacy to the relevant NPSs in accordance with [section 104\(3\)](#). It is alleged that the defendant allowed the primacy of the NPSs to be overtaken by the application of the development plan's policies as an important and relevant consideration: the adoption of the conclusions of the ExA in their entirety, which were predicated upon primacy of the development plan policies not the NPS, demonstrates the defendant's error in this respect.

31. Ground 2 is the contention that the defendant failed to determine whether or not the WKN proposal complied with the NPSs judged as a whole, in particular, again, by adopting the ExA's conclusions which were made in the context of [section 105 of the 2008 Act](#), without considering any conflict with the NPSs which the ExA found in the light of the [section 104](#) duty to consider whether the application was in accordance with the NPS "judged as a whole". Ground 3 is the failure of the defendant to give adequate reasons in the context of his disagreement with the ExA. Ground 4 is the contention that the defendant failed to comply with the requirements of fairness: in the light of the fact that the defendant was proposing to make a decision on a different statutory footing to that which had been reached by the ExA, it was incumbent upon him to go back to the parties and invite their comments on the effect of such a change of approach.

32. In responding to the claim the defendant, having reflected on the position, concluded that the better view was that [section 105 of the 2008 Act](#) applied to WKN rather than [section 104](#) and, therefore, that these sections were not mutually exclusive. In effect, therefore, the defendant conceded that he was at least arguably wrong in law to have solely applied [section 104 of the 2008 Act](#) to the whole application, and the approach of the ExA to these provisions was correct. However, the defendant went on to submit that this was not a material error of law, because in reality whilst the defendant had given more weight to the NPSs than the ExA in favour of the WKN proposal and the consideration of need, there was nothing to suggest that the defendant had in fact directly applied the policy provisions from NPS EN-1 or EN-3 to the WKN proposal, and therefore he had undertaken a lawful exercise in planning judgment. Further, it was submitted by the defendant that any legal error that may have occurred did not cause the claimant any prejudice and no relief should be granted as a matter of discretion. Further detailed submissions were advanced in relation to the claimant's grounds which it is unnecessary to rehearse fully at this point in the judgment.

The Law

33. The [2008 Act](#) established a bespoke statutory code for addressing the granting of consent to certain types of project identified as NSIPs. It is an essential feature of the [2008 Act](#) that a key part of the process for considering NSIPs is, as will have been gathered from the facts of the present case, the designation of NPSs. [Section 5 of the 2008 Act](#) gives power to the defendant to designate an NPS for the purposes of the [2008 Act](#) if it is issued by the defendant and "sets out national policy in relation to one or more specific descriptions of development". [Section 5\(3\)](#) provides that prior to the designation of a statement as an NPS the defendant must carry out a sustainability appraisal of it, and [section 5\(4\)](#) provides that both specified consultation requirements and Parliamentary endorsement, in the form of the statement being approved by the House of Commons, have to be complied with prior to it being designated. [Section 5\(5\)](#) provides that an NPS may, in particular, set out in respect of a particular description of development "the amount, type or size of development of that description which is appropriate nationally or for a specified area".

34. NSIPs are defined by [section 14 of the 2008 Act](#), and for present purposes they include, by virtue of [section 14\(1\)\(a\)](#), a project consisting of "the construction or extension of a generating station" and, by virtue of [section 15\(1\)\(c\)](#) such a project achieves NSIP status if the generating station when constructed or extended is expected to have a capacity of more

than 50MW. [Section 31 of the 2008 Act](#) provides that consent under the [2008 Act](#) is required for development to the extent that it is, or forms part of, an NSIP.

35. As set out above, the defendant made a direction under [section 35 of the 2008 Act](#) in relation to the WKN proposal. [Section 35 of the 2008 Act](#) provides as follows:

"35 Directions in relation to projects of national significance

(1) The Secretary of State may give a direction for development to be treated as development for which development consent is required. This is subject to the following provisions of this section and [section 35ZA](#) .

(2) The Secretary of State may give a direction under subsection (1) only if –

(a) the development is or forms part of –

(i) a project (or proposed project) in the field of energy, transport, water, water waste or waste, or

(ii) a business or commercial project (or proposed project) of a prescribed description,

(b) the development will (when completed) be wholly in one or more of the areas specified in subsection (3), and

(c) the Secretary of State thinks the project (or proposed project) is of national significance, either by itself or when considered with –

(i) in a case within paragraph (a)(i), one or more other projects (or proposed projects) in the same field;

(ii) in a case within paragraph (a)(ii), one or more other business or commercial projects (or proposed projects) of a description prescribed under paragraph (a)(ii)."

36. [Sections 104](#) and [105](#) , as alluded to above, relate to the approach to be taken to decisions where an NPS has effect (when [section 104](#) provides the decision-making framework) and where no NPS has effect (where [section 105](#) provides the decision-making framework). These sections, so far as material to the issues in the present case, provide as follows:

"104 Decisions in cases where national policy statement has effect

(1) This section applies in relation to an application for an order granting development consent if a national policy statement has effect in relation to development of the description to which the application relates.

(2) In deciding the application the Secretary of State must have regard to –

(a) any national policy statement which has effect in relation to development of the description to which the application relates (a "relevant national policy statement"),

...

(b) any local impact report (within the meaning given by section 60(3) submitted to the Secretary of State before the deadline specified in a notice under section 60(2),

(c) any matters prescribed in relation to development of the description to which the application relates, and

(d) any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision.

(3) The Secretary of State must decide the application in accordance with any relevant national policy statement, except to the extent that one or more of subsections (4) to (8) applies.

(4) This subsection applies if the Secretary of State is satisfied that deciding the application in accordance with any relevant national policy statement would lead to the United Kingdom being in breach of any of its international obligations.

(5) This subsection applies if the Secretary of State is satisfied that deciding the application in accordance with any relevant national policy statement would lead to the Secretary of State being in breach of any duty imposed on the Secretary of State by or under any enactment.

(6) This subsection applies if the Secretary of State is satisfied that deciding the application in accordance with any relevant national policy statement would be unlawful by virtue of any enactment.

(7) This subsection applies if the Secretary of State is satisfied that the adverse impact of the proposed development would outweigh its benefits.

(8) This subsection applies if the Secretary of State is satisfied that any condition prescribed for deciding an application otherwise than in accordance with a national policy statement is met.

...

105 Decisions in cases where no national policy statement has effect

(1) This section applies in relation to an application for an order granting development consent (if [section 104](#) does not apply in relation to the application).

(2) In deciding the application the Secretary of State must have regard to –

(a) any local impact report (within the meaning given by section 60(3) submitted to the Secretary of State before the deadline specified in a notice under section 60(2),

(b) any matters prescribed in relation to development of the description to which the application relates, and

(c) any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision."

37. The effect of the statutory provisions is to create a separate statutory regime in relation to certain identified types of project, freestanding from other statutory regimes of development control. Projects that are within the scope of the regime created by the 2008 Act require a DCO before they can be implemented. As set out above, a key feature of the regime created by the 2008 Act is the NPS, a form of policy designated pursuant to a specific statutory process which includes Parliamentary approval. The NPS is key to the 2008 Act's regime, as NPSs play an important role in the determination of applications for NSIPs. As Holgate J observed in paragraph 46 of his judgment in *R (Client Earth) v Secretary of State for Business, Energy and Industrial Strategy* [2020] EWHC 1303 (Admin); [2020] PTSR 1709, the content and merits of an NPS are the responsibility of the defendant who, in that connection, is accountable to Parliament. The statutory process of designation, alongside the statutory prescription of those matters which may be part of an NPS, underline the national character of such policy statements.

38. An important part of the significance of the NPS is the role that it plays under section 104 of the 2008 Act in the determination of DCO applications in respect of applications for which the NPS has effect. By virtue of section 104(2) the defendant "must have regard" to any NPS which has effect in relation to the development. As Holgate J observed in paragraph 48 of *Client Earth*, section 104(3) goes further in requiring that the defendant "must decide the application in accordance with any relevant national policy statement except to the extent that one or more of subsections (4) to (8) applies". As was observed in the claimant's submissions, this decision-making framework is akin to that created in relation to planning permissions by section 38(6) of the Planning and Compulsory Purchase Act 2004. Obviously, in the context of the 2008 Act's regime there are the specific caveats contained within section 104(4) to (8), but the claimant was correct to observe that section 104(3) creates a form of presumption in favour of a DCO which is in accordance with relevant NPSs.

39. In addition to these matters it is also to be noted that in the case of *R (Gate) v Secretary of State for Transport* [2013] EWHC 2937 (Admin) Turner J observed in relation to a challenge to a highway scheme for which there was no directly relevant NPS that, as a matter of the statutory construction of section 105(2)(c) of the 2008 Act, as well as common sense, a decision-maker is not precluded from taking into account matters incorporated within an NPS in determining an application to which section 105 applies, so long as they are both important and relevant to the decision under consideration. Turner J found there had been no legal error in that case arising from the ExA referring to NPSs in respect of ports and nuclear power generation where both a port and two nuclear power stations were matters of relevance to the decision being made (see paragraphs 55 to 58 of the judgment).

40. In relation to the claimant's grounds with respect to the defendant's reasons, it is to be noted that section 116 of the 2008 Act creates a requirement for the defendant to provide reasons when making a decision on a DCO application. In respect of the quality of those reasons, the claimant relies upon the well-known summary of the applicable legal principles contained within the speech of Lord Brown at paragraphs 35-36 in *South Bucks DC v Porter (No 2)* [2004] UKHL 33; [2004] 1 WLR 1953.

41. Turning to the requirements of fairness, whilst it is to be noted that a duty to reconult the parties is provided by rule 19 of the Infrastructure Planning Examination Procedure Rules 2010, the circumstances giving rise to that duty do not apply in the present case, as the difference from the ExA arising in the defendant's decision did not relate to either a matter of fact, or any new evidence or new matter of fact, which gave rise to the defendant's reasons for disagreeing with the ExA. Rather, the claimant relies upon the principles of fairness within a process of this kind which was set out by the Court of Appeal in the case of *Hopkins Developments Ltd v SSCLG* [2014] EWCA Civ 470; [2014] PTSR 1145, in particular at paragraph 62.

Relevant Policy

42. There are two NPSs that are particularly relevant for the purposes of these proceedings. The first is EN-1, entitled Overarching National Policy Statement for Energy. It is important to appreciate that the document was published in July 2011, at which time the arrangements under the 2008 Act for decision-making were different from those at present. The version of the 2008 Act in force at that time provided that decisions on NSIPs were to be examined and determined by the Infrastructure Planning Commission ("the IPC"). The NPS notes at paragraph 1.3.1 that at the time of it being designated there were proposals in what was then the Localism Bill (which subsequently became the Localism Act 2011) proposing to abolish the IPC. Prior to the reforms of the Localism Act 2011, decisions where NPSs had effect were determined by the IPC pursuant to section 104 of the 2008 Act; where decisions were taken in relation to projects where there was not a designated NPS having effect, the decisions pursuant to section 105 of the 2008 Act were taken by the defendant. The reforms brought both types of decisions before the defendant for determination. Against that background, in paragraph 1.1.1 of the NPS it explains that the NPS has effect "on the decisions by the Infrastructure Planning Commission (IPC) on applications for energy developments that fall within the scope of the NPSs". At paragraph 1.4.1 the NPS explains that it is part of a suite of NPSs dealing with energy and climate change. At paragraph 1.4.2 the NPS points out that the Act empowered the IPC

to examine applications and make decisions on NSIPs in relation to energy generating stations generating more than 50MW of power which were onshore. This NPS is therefore only of application to proposals falling within the statutory definition of an energy NSIP.

43. Part 4 of EN-1 sets out Assessment Principles. In particular, so far as relevant to the present decision, these principles are expressed as follows:

"4.1.2 Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the IPC should 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. The presumption is also subject to the provisions of the [Planning Act 2008](#) referred to at paragraph 1.1.2 of this NPS.

...

4.1.5 The policy set out in this NPS and the technology-specific energy NPSs is, for the most part, intended to make existing policy and practice of the Secretary of State in consenting nationally significant energy infrastructure clearer and more transparent, rather than to change the underlying policies against which applications are assessed (or therefore the "benchmark" for what is, or is not, an acceptable nationally significant energy development). Other matters that the IPC may consider both important and relevant to its decision-making may include Development Plan Documents or other documents in the Local Development Framework. In the event of a conflict between these or any other documents and an NPS, the NPS prevails for purposes of IPC decision making given the national significance of the infrastructure."

44. The other relevant NPS is EN-3 which is entitled National Policy Statement for Renewable Energy Infrastructure. This was designated in July 2011 at the same time as EN-1. In paragraph 1.2.1 of the document it explains that this NPS, alongside EN-1, provides "the primary basis for decisions of the Infrastructure Planning Commission (IPC) on applications it receives for nationally significant renewable energy infrastructure". That relationship is emphasised in paragraph 1.3.1 in terms of the need and urgency for new energy infrastructure to be consented in order to make a contribution to sustainable development and to mitigate and adapt to climate change. EN-1 noted the need for specific technologies including the infrastructure to which EN-3 relates. At paragraph 1.8.1 the NPS points out that it covers renewable energy projects such as energy from biomass and/or waste in excess of 50MW. At paragraph 1.8.2 the NPS states that it "does not cover other types of renewable energy generation that are not at present technically viable over 50MW onshore". Paragraph 2.1.2 observes that reading EN-3 and EN-1 together, the position for the IPC is that they "should act on the basis that the need for infrastructure covered by this NPS has been demonstrated".

45. Amongst the matters covered by the NPS in relation to biomass/waste impacts is the issue of waste management. The NPS notes that waste combustion generating stations need not disadvantage reuse or recycling initiatives where the proposed development accords with the waste hierarchy. In this connection it provides the following in relation to IPC decision-making:

"2.5.70 The IPC should be satisfied, with reference to the relevant waste strategies and plans, that the proposed waste combustion generating station is in accordance with the waste hierarchy and of an appropriate type and scale so as not to prejudice the achievement of local or national waste management targets in England and local, regional or national waste management targets in Wales. Where there are concerns in terms of a possible conflict, evidence should be provided to the IPC by the applicant as to why this is not the case or why a deviation from the relevant waste strategy or plan is nonetheless appropriate and in accordance with the waste hierarchy."

46. In terms of development plan policy, as noted above, reference in the decision-making process was made to the Kent Minerals and Waste Local Plan 2013-2030 which was adopted in September 2020 in an amended form as a result of the EPR process. Particular reference within the decision-making process was made to policies CSW6 and CSW7 which provide as follows:

"Policy CSW 6

Location of Built Waste Management Facilities

Planning permission will be granted for proposals that:

- a. do not give rise to significant adverse impacts upon national and international designated sites, including Areas of Outstanding Natural Beauty (AONB), Sites of Special Scientific Interest (SSSI), Special Areas of Conservation (SAC), Special Protection Areas (SPAs), Ramsar sites, Ancient Monuments and registered Historic Parks and Gardens. (See Figures 4, 5 & 6).
- b. do not give rise to significant adverse impacts upon Local Wildlife Sites (LWS), Local Nature Reserves (LNR), Ancient Woodland, Air Quality Management Areas (AQMAS) and groundwater resources. (See Figures 7, 8, 10 & 15)
- c. are well located in relation to Kent's Key Arterial Routes, avoiding proposals which would give rise to significant numbers of lorry movements through villages or on unacceptable stretches of road.
- d. do not represent inappropriate development in the Green Belt.
- e. avoid Groundwater Source Protection Zone 1 or Flood Risk Zone 3b
- f. avoid sites on or in proximity to land where alternative development exists/has planning permission or is identified in an adopted Local Plan for alternate uses that may prove to be incompatible with the proposed waste management uses on the site.
- g. for energy producing facilities - sites are in proximity to potential heat users.
- h. for facilities that may involve prominent structures (including chimney stacks)- the ability of the landscape to accommodate the structure (including any associated emission plume) after mitigation.
- i. for facilities involving operations that may give rise to bioaerosols (e.g. composting) to locate at least 250m away from any potentially sensitive receptors.

Policy CSW 7

Waste Management for Non-hazardous Waste

Waste management capacity for non-hazardous waste that assists Kent in continuing to be net self-sufficient while providing for a reducing quantity of London's waste, will be granted planning permission provided that:

1. it moves waste up the hierarchy,
2. recovery of by-products and residues is maximised
3. energy recovery is maximised (utilising both heat and power)
4. any residues produced can be managed or disposed of in accordance with the objectives of Policy CSW 2
5. sites for the management of green waste and/or kitchen waste in excess of 100 tonnes per week are Animal By Product Regulation compliant (such as in vessel composting or anaerobic digestion)
6. sites for small-scale open composting of green waste (facilities of less than 100 tonnes per week) that are located within a farm unit and the compost is used within that unit.

Where it is demonstrated that waste will be dealt with further up the hierarchy, or it is replacing capacity lost at existing sites, facilities that satisfy the relevant criteria above on land in the following locations will be granted consent, providing there is no adverse impact on the environment and communities and where such uses are compatible with the development plan:

1. within or adjacent to an existing mineral development or waste management use
2. forming part of a new major development for B8 employment or mixed uses
3. within existing industrial estates
4. other previously developed, contaminated or derelict land not allocated for another use
5. redundant agricultural and forestry buildings and their curtilages

Proposals on greenfield land will only be permitted if it can be demonstrated that there are no suitable locations identifiable from categories 1 to 5 above within the intended catchment area of waste arisings. Particular regard will be given to whether the nature of the proposed waste management activity requires an isolated location."

Submissions and Conclusions

47. As set out above, the claimant's ground 1 is the contention that the defendant failed to properly apply [section 104 of the 2008 Act](#) . As will be apparent from the history of both the decision-making and also the submissions in these proceedings, there is clearly a preliminary issue arising in relation to the question of whether or not [section 104 and section 105 of the 2008 Act](#) are mutually exclusive, or whether it is appropriate, as the ExA did, to apply those sections differentially where there are two freestanding and distinct projects within the scope of a single application for a DCO and the NPSs apply to one of those projects but not the other.

48. The claimant contends that, in principle, the defendant was correct in making his decision by applying [section 104 of the 2008 Act](#) to the application as a whole. The claimant advances this position on the basis of two principal lines of argument. The first is that the mutual exclusivity arises from the specific language of the statute. Both [section 104 and section 105 of the 2008 Act](#) refer to those sections applying "in relation to an application for an order granting development consent" (emphasis added). Thus, it is clear from the language of the legislation itself that where there is an application for which the NPS has effect it is to be decided within the [section 104](#) framework.

49. Furthermore, the claimant submits that this language is to be contrasted with the language of [section 14 of the 2008 Act](#) which defines an NSIP in terms of being "a project", consisting of one of the types of infrastructure identified within [section 14\(1\)](#) . The selection of the word "application" in [section 104 and 105 of the 2008 Act](#) is clear and deliberate, and has the effect of attracting the [section 104](#) decision-making framework to applications like the present where there is more than one free-standing development or proposal comprised within the same application, albeit that one of those projects or developments is not one which falls within the definition of an NSIP for which an NPS has effect.

50. The second line of argument pursued by the claimant places reliance upon the [section 35](#) direction which was given in the present case. The claimant submits that when [section 35 of the 2008 Act](#) provides that the defendant "may give a direction for development to be treated as development for which development consent is required" this is in the first place a reference back to [section 31 of the 2008 Act](#) , which provides as follows:

"31 When development consent is required

Consent under [this Act](#) ("a development consent") is required for development to the extent that the development is or forms part of a nationally significant infrastructure project."

51. The claimant contends that when [section 35\(1\) of the 2008 Act](#) describes the effect of the direction as being that development subject to the direction is "to be treated as development for which development consent is required" it means what it says. In other words, the effect of the [section 35](#) direction is to lift the development proposed into [section 31](#) , and thereafter to bring it within scope of [section 104 of the 2008 Act](#) , on the basis that it is to be treated as NSIP development. Thus, reading all of these provisions together, and observing the subtlety in the statutory language, where as here there are two projects falling within an application, and one of them falls within the definition of an NSIP, and the other does not but has been subject to a [section 35](#) direction, then the application containing these two projects requires each of them to be determined applying the framework provided by [section 104 of the 2008 Act](#) .

52. Finally, the claimant contends that in effect the position for which the defendant argues reads words into [section 104 of the 2008 Act](#) , by treating it as if it included words to apply the provisions of section 104 to part only of an application.

53. As set out above, although the defendant disagreed with the ExA and approached his decision on the basis that [sections 104 and 105 of the 2008 Act](#) are mutually exclusive, the position which he now adopts is that the ExA was correct to apply [section 104 and section 105](#) separately to the individual standalone proposals comprised within the application. The analysis presented in the defendant's submissions commences from the observation that the [2008 Act](#) creates a specific and bespoke

statutory framework for approving particular kinds of development within what was intended to be a streamlined process of determination. A key feature of this bespoke statutory framework is the NPS which, pursuant to the broadly drafted provisions of [section 5 of the 2008 Act](#), is specified in advance and has a special status and a particular process to produce it including Parliamentary approval.

54. Against this background the defendant submits, firstly, that the starting point for addressing the question of whether [section 104](#) applies is to examine whether an NPS applies to the project which is being evaluated. In this case a clear policy choice was made in the designation of the NPS that it should only apply to projects fulfilling the statutory definition of an NSIP, and therefore that it cannot apply to the WKN proposal. Once that is understood, if [section 104 of the 2008 Act](#) were to be deployed to determine the WKN proposal this would have the effect, in practice, of expanding the application of the NPS to a scale of project for which it had never been intended. Such an approach would be quite inconsistent with the centrality of the NPS within the statutory framework devised by the [2008 Act](#). As noted above, the contents of an NPS are not open to question within the decision-making process, and that includes the thresholds adopted for the application of the NPS in the policy.

55. Furthermore, the defendant submits that the [section 35](#) direction in the present case does not assist the claimant. When [section 35](#) speaks of treating the proposal as an NSIP that does not and could not have the effect of altering the terms of the NPS policy framework and the choices which have been made in designating the scale of proposals to which it will apply: it cannot give rise to an assumption that the proposal is bigger than in fact it is. The reference to [section 31](#) is also contended to be of no avail to the claimant. [Sections 31 and 35](#) are in a different part of the 2008 Act, [Part 4, to the part of the Act](#) containing [sections 104 and 105](#), namely Part 6, and the purpose of [section 35](#) is simply to bring qualifying proposals for which a direction is granted within the 2008 Act's decision-making processes.

56. In short, the defendant submits that [sections 104 and 105 of the 2008 Act](#) are mutually exclusive on the basis that the language of [section 104](#) precludes its application to a proposal such as WKN which does not fall within the scale of projects to which the NPS specifically applies. This is as a result of the clear intention to be derived from the structure of the [2008 Act](#) which places the NPS at the heart of the statutory framework as well as ensuring that NPSs are only applied within their identified scope. The defendant submits that [section 105\(1\)](#) can, in the context of the intent of the statutory framework, be read more broadly as including "where" or "to the extent that" [section 104](#) does not apply to the proposal and so as to be consonant with the statutory purpose.

57. In my view the ExA was correct in his approach to [sections 104 and 105 of the 2008 Act](#) in the context of the present proposals. Clearly there is no dispute, firstly, that it is possible to include more than one project or development within the same application for a DCO and, secondly, that the K3 Project was one for which the NPS had effect, and therefore to which [section 104](#) applied. Whilst I can see the force in the submissions of the claimant in relation to the use of the word "application" in both [sections 104 and 105](#), the use of this word needs to be understood in the context of the statutory framework as a whole.

58. To suggest that by incorporating a project in respect of which the NPS has no effect within an application for a separate free-standing project which does fall within the scope of an NPS it is possible effectively to enlarge the scope of the NPS so as to include a project to which it was not designed to apply would clearly run contrary to the overall statutory scheme. That overall statutory scheme places the NPS at the heart of the decision-making process, and prescribes specific procedures, including endorsement by Parliament, prior to its designation. The contents of the NPS cannot be questioned in the decision-making process: so much is made clear in sections such as [section 106\(1\)](#) which applies in the decision-making context, and which entitles the defendant to disregard representations which "relate to the merits of policy set out in a national policy statement". Similar provisions are contained in [section 87\(3\)](#) respecting like representations to the ExA, and [section 94\(8\)](#) in relation to like representations made at hearings. It would be inconsistent with the centrality of the NPS within the statutory decision-making framework for its scope to be enlarged and its provisions bypassed by the manner in which an application has been formulated.

59. Whilst specific circumstances of the kind presented by the application in the present case may not have been directly foreseen by those framing the [2008 Act](#), it is clear that the overarching approach of the legislation is that decisions should be reached in relation to proposals for development in respect of which an NPS has effect deploying the framework within [section 104 of the 2008 Act](#), whereas proposals for development within the statutory framework's decision-making process for which there is no applicable NPS having effect are to be decided pursuant to the framework provided by [section 105 of the 2008 Act](#). Such an approach clearly reflects the language of [section 104\(1\)](#) which refers to an NPS having effect "in relation to development of the description to which the application relates". It is less consistent with a literal reading of [section 105\(1\)](#), but when that text is placed in the context of the purpose and structure of the legislation as a whole, it is clear that [section 105\(1\)](#) should be interpreted as applying to those discrete elements of an application which comprise proposals for development for which no NPS which has effect. I accept the submission of the defendant that [section 105 of the 2008](#)

[Act](#) should be interpreted as applying to free-standing parts of an application to the extent that "[section 104](#) does not apply in relation to the application". Such an approach reflects the purpose and intent of the legislation without unduly disturbing the effect of the statutory language. Thus, the ExA was correct to take the approach which he did.

60. The question arises as to whether or not the [section 35](#) direction which was made in relation to WKN has the effect of bringing it within the scope of the decision-making framework pursuant to [section 104](#). In my view it does not. I am unable to accept the submission that the terms of [section 35\(1\)](#) have the effect of turning a project or development which does not fall within the definition of NSIPs provided within [sections 14 and 15 of the 2008 Act](#) into a project which has such a designation. The words "be treated as development for which development consent is required" simply have the effect of making the proposed development subject to the decision-making framework contained within the provisions of the [2008 Act](#). They do not change the understanding of the proposal as not being within the definition of an NSIP, any more than they change the physical nature of what is comprised within the development. More particularly, they cannot have the effect of altering the scope of an NPS which has been drafted specifically to apply only to those projects that are within the definition of an NSIP.

61. There are clear advantages of the [2008 Act](#) incorporating a provision like [section 35](#), both procedurally in terms of the economy of dealing with projects which are not NSIPs alongside those which are leading to more efficient decision-making, as well as enabling a project of national significance which does not fulfil the definition of an NSIP to take advantage of the DCO regime, for instance in the form of the exemptions from other consenting processes comprised within [section 33 of the 2008 Act](#). It is pertinent to the understanding of the intention of [section 35](#) that it appears in the same Part of the [2008 Act](#) as [section 31](#) and [33](#) which all refer to the requirement for development consent, rather than that part of the [Act](#) containing [sections 104](#) and [105](#) which deals with the processes of deciding applications.

62. The cross reference made by the claimant to [section 31 of the 2008 Act](#) does not assist. It is clear that the purpose of [section 35](#) is not to make a project which is not and does not form part of an NSIP into an NSIP. Its purpose is more modest, namely to enable the defendant to bring within the scope of the 2008 decision-making framework projects which satisfy the requirements of [section 35\(2\)](#), and are of a particular type of infrastructure which either by themselves or when considered with other specified types of project are of national significance. They are then able to take advantage of the streamlined decision-making processes as well as the available exemptions from other consenting regimes.

63. In the light of these conclusions it is clear that the defendant clearly did misdirect himself when issuing his decision in relation to the WKN project in relation to the statutory framework for determining that part of the application which related to it. [Section 104](#) did not apply to the WKN project, unlike the K3 project, and the defendant ought to have assessed the WKN project deploying the [section 105](#) decision making framework. In the light of these conclusions, albeit contrary to the claimant's submissions on the preliminary issue, the clear outcome is that the defendant has reached a decision incorporating a misdirection and an error of law. The defendant, however, contends that the error of law is not material and that relief should be refused as a matter of discretion. These are matters which are returned to below, following consideration of the claimant's grounds.

64. To deal with the balance of ground 1, it is contended on behalf of the claimant that the defendant ought, in applying [section 104](#), to have accorded primacy to the NPS, accepted that need had been demonstrated for the WKN and, to the extent necessary, have unpicked the conclusions of the ExA in order to reach a lawful decision. In effect, this ground is predicated on the basis that the defendant was right to apply the [section 104](#) decision-making framework to the WKN project, but that he failed to faithfully apply that framework in practice. In reality, in the light of the conclusions in relation to the applicability of [section 105](#) to the WKN project this ground no longer arises. The claimant's ground 2 is similarly predicated upon the WKN proposal needing to be evaluated against the decision-making framework in [section 104 of the 2008 Act](#). For the reasons which have been explained that is not the case. There was no need for the presumption in favour of the proposal pursuant to [section 104\(3\)](#) to be applied, nor was the NPS the primary decision-making tool in the assessment of the application, against which the WKN proposal was required to be judged as a whole. Although within ground 2 the claimant complains that the defendant found a conflict with the waste hierarchy provisions of paragraph 2.5.70 (by adopting the ExA's conclusions in that regard) but failed to judge that conflict against the NPS taken as a whole, in the light of the conclusion that [section 104](#) did not apply to the appraisal of the merits of the WKN proposal there is no substance in this criticism.

65. Turning to ground 3 the claimant's contentions in relation to the failure to give reasons relate, firstly, to the failure of the defendant, when purporting to consider the WKN proposal within the context of [section 104](#), to properly analyse the weight to attach to the need established through the NPS for the electricity which it would generate and the benefit that would bring. Adoption of the ExA's conclusions, forged through the application of [section 105 of the 2008 Act](#) was inappropriate, and the difference between the ExA and the defendant was not properly explained. Again, in the light of the conclusions reached as to the applicable decision-making framework these criticisms are to some extent moot. They are criticisms which

do not arise since the defendant was wrong to have sought to reach his decision by solely applying the framework derived from [section 104 of the 2008 Act](#).

66. Further criticisms of the reasons provided by the ExA, giving rise to errors on behalf of the defendant, relate to, firstly, what is said to be a muddling or conflation of the issues in relation to electricity generation and the waste hierarchy. The claimant contends that in the ExA's report, in particular for example at paragraphs 6.2.11 and following, the reasoning of the ExA conflates two separate issues, namely energy need on the one hand, and compliance with the waste hierarchy or the need for further waste facilities on the other. This muddling of the benefits arising from meeting the need for further sustainable energy generation, with the impact on the waste hierarchy of the proposal occurs again in paragraphs 4.18–4.20 of the defendant's decision to accept the conclusions of the ExA on these matters.

67. Having examined these paragraphs, and the ExA's report as a whole, I am not satisfied that there is any legitimate complaint in relation to the reasons that are provided by the ExA in connection with these issues. It is important, obviously, for the ExA's report to be read in its entirety. Further, both in paragraphs 6.2.13–6.2.17, 6.2.25–6.2.33 as well as in paragraphs 6.3.10–6.3.17, the conclusions of the ExA are clear in relation to the benefit to be recognised from the energy generated by the WKN proposal but also (and bearing in mind the differences in the increase in capacity between the K3 proposal and the WKN proposal) the impact of the WKN proposal upon the interests of the waste hierarchy. The reflection of these conclusions in the decision letter again clearly identifies the assessments in relation to electricity generation and impact on the waste hierarchy. The issues are not in my judgment muddled: it was necessary in terms of the applicable policy for the ExA and the defendant to form conclusions in relation to the benefits of energy generation as well as any impact on the waste hierarchy since both are material issues in relation to the operation of the proposed facility. Both the ExA and defendant undertook an analysis of these considerations and then brought them into their analysis of the planning balance. The conclusions arrived at in the decision-making process with respect to these issues are clearly spelt out. They are treated separately, as they should be and as the policy framework required, in the light of the fact that they are both individual elements of the overall planning appraisal as well as integrally related to the operation of the facility which is under consideration.

68. The second aspect of the reasoning with which the claimant takes issue is that pertaining to the dispute set out above in respect of waste arisings and the availability of fuel for the application proposals. It is contended on behalf of the claimant that there was a clear issue joined between itself and KCC in relation to the volumes of waste arising which fell to be considered when examining the availability of fuel for the proposal. It is said by the claimant that the ExA, and thereafter the defendant, provided no reasons which grappled with this difference in the figures, nor did the ExA or the defendant provide any understanding as to why the claimant's analysis of the waste arisings had been rejected.

69. I am unable to accept these criticisms. In my view the basis upon which the ExA reached his interconnecting conclusions about, firstly, the evidence in relation to available waste as fuel, secondly, the conclusions to be drawn from this evidence as to the proposal's impact on the waste hierarchy and, therefore, thirdly, the relationship between the proposals and the policies of the EPR and NPS EN-3 at paragraph 2.5.70 are all clearly expressed. In respect of the competing positions as to volumes of waste, and the available capacity of additional waste fuel, paragraphs 4.10.122–4.10.132 of the ExA's report quoted above provide clearly articulated conclusions resolving the issues. The ExA explains why he prefers the KCC assessment, noting that the EPR inspector had accepted KCC's consultant's analysis as a sound evidence base for the revised plan. These paragraphs also explain the relationship between these conclusions and, alongside paragraphs 4.10.139–4.10.144, their impact in relation to the merits of the WKN project upon the interests of the waste hierarchy. Subsequent paragraphs within the ExA's analysis of the overall planning balance further reflect these conclusions and explain them. In my judgment this material is more than adequate to clearly explain the reasons for the ExA's conclusion that the KCC assessment was to be preferred to that of the claimant, as well as the further consequences for the assessment of the merits of the WKN project against the relevant planning policies.

70. Ground 4 is the contention that in the light of the difference between the approach of the ExA and that of the defendant, fairness required the defendant to return to the parties for submissions on the impact that this change of approach would have upon the decision-making process. In particular, the claimant contends that submissions would have been made on the primacy of the NPS within the [section 104](#) decision-making framework, together with the establishment by the NPS of the need for the electricity which was being generated. Further submissions could have been made on matters covered by [section 104\(7\) of the 2008 Act](#) on how these issues should be weighed in the overall balance to determine the merits of the proposal.

71. In my judgment, the difficulty with this submission is that it is necessary for the claimant, in reliance upon the principles of procedural fairness set out in *Hopkins Developments Ltd*, to establish there has been any relevant or material prejudice as a result of the failure to reconsult. As set out above, there was no requirement pursuant to the 2010 Rules to revert to the

parties in these circumstances. The reality is that all of the matters which the claimant contends would have been raised upon the matter being referred back to them are matters which were already before the defendant: the claimant had emphasised the importance of the benefits arising from electricity generation at the WKN proposal, and the importance of the policies contained in the NPS. In any event, these matters pertained to the application by the defendant of the [section 104](#) decision-making framework which for the reasons already given was not the correct approach to reaching a decision in connection with the WKN proposal. I do not consider, therefore, that there is any substance in the claimant's ground 4.

Relief

72. The defendant contends that the claimant should be deprived of relief, in particular in relation to the quashing of the decision, either in so far as it relates to the WKN proposal, or in its entirety. In order to evaluate this submission, it is important to start with the error of law which has been identified. In this case the error of law is the application by the defendant of [section 104 of the 2008 Act](#) to both the K3 and WKN proposals whereas, in accordance with the findings set out above, the defendant should have applied [section 105 of the 2008 Act](#) to the WKN proposal. Since this is an application for judicial review the framework for considering this submission is set out in [section 31\(2A\) of the Senior Courts Act 1981](#), and amounts to the question of whether or not it was highly likely that the outcome would not have been substantially different.

73. The approach to this question has been the subject of consideration in a number of cases in recent years and it is important to observe that it sets a high threshold to be overcome before relief can be withheld. It is less strict than that which applies in statutory reviews which requires that the court be satisfied that the decision would have been the same (see *Simplex GE (Holdings) Limited v Secretary of State for the Environment* [2017] PTSR 1041), albeit as Coulson LJ observed in the recent case of *R (on the application of Hudson) v Royal Borough of Windsor and Maidenhead* [2021] EWCA Civ 592 at paragraph 80, the precise formulation of the test whether in the terms of the [section 31\(2A\)](#) test, or the alternative test derived from the *Simplex* case that the decision would inevitably have been the same, may not matter in practice, save in a very unusual case.

74. The court must be cautious about straying into assessing the merits of the application in evaluating this question, which is the reserve of the defendant as decision-maker. This point has been observed in several of the relevant authorities dealing with the discretion to withhold relief both under [section 31\(2A\)](#) and also the *Simplex* jurisdiction: see *SSCLG v South Gloucestershire Council* [2016] EWCA Civ 74 at paragraph 25 and *R(Plan B Earth) v Secretary of State for Transport* [2020] PTSR 1446 at paragraph 273 for instance. Obviously, the proper evaluation of the question posed by [section 31\(2A\)](#) is one which will vary from case to case and no single analysis will be capable of resolving all of the many scenarios which courts will have to address. In addressing the question in the present case I have found the following approach helpful.

75. As the *South Gloucestershire* case demonstrates, it is useful, firstly, to clearly identify the error of law infecting the decision, and secondly, those findings or elements of the decision-making process or of the decision itself which are untainted by illegality. This can then enable an analysis of the decision to be undertaken which properly tests the proposition that the decision would have been the same, or would not have been likely to be substantially different. The *South Gloucestershire* case is a helpful illustration of the necessary analysis: in that case the Inspector's error related to the absence of a five-year housing land supply, but Lindblom LJ was satisfied that so strong were the considerations in favour of the grant of permission that even had the Inspector taken into account, as he should have done, that the local planning authority could demonstrate a five-year housing supply, he would still have granted consent as he did in the decision under challenge: see paragraph 26 of the judgment in particular.

76. In considering these questions in relation to the present case it is important to observe, firstly, that the contentions of the claimant in relation to any error of law in the ExA's report have not been upheld. Secondly, in relation to the waste hierarchy and fuel availability, the Secretary of State adopted the ExA's conclusions. He also adopted the ExA's conclusions in relation to all of the other environmental and infrastructure considerations which were examined, and in paragraphs 4.18-4.20 accepted the overall conclusions reached by the ExA in relation to each of the individual proposals. The defendant noted at paragraph 4.6 his view that determining the whole application under [section 104 of the 2008 Act](#) did not have a material impact on the overall outcome in relation to the case. This observation is further justified at paragraphs 6.4-6.6 in which the defendant explains that whilst taking a different approach to the ExA and, as a result of considering both projects under [section 104 of the 2008 Act](#) according "more weight" to the NPS, nevertheless his balancing of the issues did not result in a different conclusion to that which was reached by the ExA, namely, that the benefits of the WKN project were outweighed by its non-compliance with policies in NPS EN-1 and EN-3 related to the issues associated with the waste hierarchy and local waste management plan policies.

77. The effect of the defendant's conclusions set out above is that the defendant's assessment of the planning balance did not favour the grant of consent for the WKN project whether it was considered under [section 104 of the 2008 Act](#) (with

the additional weight being afforded to the NPS in assessing the merits), or whether it was assessed under [section 105 of the 2008 Act](#) . It follows that on the basis of the defendant's assessment, the overall outcome of the application would have been the same even if he had adopted the decision-making framework contained within [section 105 of the 2008 Act](#) . That assessment is unsurprising because, as the defendant's reasons explain, even applying greater weight to the NPS as required by [section 104 of the 2008 Act](#) , and adopting a more favourable approach to the balance than that afforded by the ExA, the adverse impacts of the WKN proposal would still outweigh its benefits. It follows that the decision of the defendant would have been the same, and certainly the outcome would not have been substantially different, without commission of the error of law which has been identified in his decision, and therefore I have formed the view that the claimant is not entitled to relief by way of the quashing of the decision.

Conclusions

78. For the reasons set out above whilst I am satisfied that there was an error of law in the defendant's decision in relation to the application, in the very particular circumstances of this case I do not consider that the claimant is entitled to relief on the basis that the decision would have been the same, and certainly unlikely to have been substantially different, even if the error of law had not been committed by the defendant.

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IN THE COURT OF APPEAL, CIVIL DIVISION

REF: CA-2021-003180



R (EFW Group Ltd) –v– Secretary of State for Business etc

CA-2021-003180

ORDER made by the Rt. Hon. Lord Justice Lewison

On consideration of the appellant's notice and accompanying documents, but without an oral hearing, in respect of an application for permission to appeal

Decision: REFUSED

An order granting permission may limit the issues to be heard or be made subject to conditions

Reasons

1. The ExA and the SofS considered the application on different legal bases, yet both came to the conclusion that the planning balance led to the refusal of the DCO in relation to the WKN project. The judge held that even without the legal error which he found the SofS to have made, the outcome would not have been substantially different. That was the reason why he refused relief; and it is not specifically addressed in the grounds of appeal or the skeleton argument. In fact the SofS considered the application on a basis that was more favourable to the Appellant than the basis adopted (correctly in the judge's view) by the ExA. Yet the SofS still refused the DCO in relation to the WKN project.
2. Whatever is the correct interaction between s 104 and s 105, a direction under s 35 cannot change the size or scope of the particular project under consideration. The WKN project was too small to count as a NSIP (Planning Act 2008 s 15 (2) (c)), and whether it was part of single application or a separate application cannot change that. Any deeming provision (such as a direction under s 35) applies only to the extent that it serves the statutory purpose for which it has been enacted; and cannot be applied so as to produce absurd or anomalous results: see *Fowler v HMRC* [2020] 1 WLR 2227. Changing the scope of a project by means of a direction under s 35 would be such a result.
3. The judge was right to stress the centrality of the NPS to the statutory regime and to the Parliamentary approval that it required. A direction under s 35 (or the making of a single application for more than one project), where the project in question falls outside the scope of an NPS, would cut cross that central feature of the regime.
4. The Appellant's interpretation of section 105 is unduly literal; and runs counter to the purpose of the legislation.
5. Any presumption in favour of development under para 4.1.2 of NPS EN-1 is subject to s 104 (3). That, in turn, provides that the SofS must decide any application in accordance with any relevant NPS unless (among others) s 104 (7) applies. The SofS concluded, as a matter of planning judgment, that the adverse impacts of the proposed development would outweigh its benefits; and accordingly s 104 (7) applied. His reasons for doing so are adequate and intelligible.
6. The judge considered the argument about common law fairness and held that all relevant issues were already before the SofS; and that, therefore, there was no need to revert to the Appellant. That was a value judgment with which an appeal court is unlikely to disagree.
7. In short, the judge's reasoning is clear, cogent, and correct. An appeal would have no real prospect of success.

Information for or directions to the parties

Mediation: Where permission has been granted or the application adjourned:

Does the case fall within the Court of Appeal Mediation Scheme (CAMS) automatic pilot categories (see below)? Yes/No (delete as appropriate)

Pilot categories:

- | | |
|--|--|
| <ul style="list-style-type: none">• All cases involving a litigant in person (other than immigration and family appeals)• Personal injury and clinical negligence cases;• All other professional negligence cases;• Small contract cases below £500,000 in judgment (or claim) value, but not where principal issue is non-contractual; | <ul style="list-style-type: none">• Boundary disputes;• Inheritance disputes.• EAT Appeals• Residential landlord and tenant appeals |
|--|--|

If yes, is there any reason not to refer to CAMS mediation under the pilot? Yes/No (delete as appropriate)

If yes, please give reason:

Non-pilot cases: Do you wish to make a recommendation for mediation? Yes/No (delete as appropriate)

Where permission has been granted, or the application adjourned

- a) time estimate (excluding judgment)
- b) any expedition

Signed:

Date: BY THE COURT

21 February 2022

Notes

- (1) Rule 52.6(1) provides that permission to appeal may be given only where –
 - a) the Court considers that the appeal would have a real prospect of success; or
 - b) there is some other compelling reason why the appeal should be heard.
- (2) Where permission to appeal has been refused on the papers, that decision is final and cannot be further reviewed or appealed. See rule 52.5 and section 54(4) of the Access to Justice Act 1999.
- (3) Where permission to appeal has been granted you must serve the proposed bundle index on every respondent within 14 days of the date of the Listing Window Notification letter and seek to agree the bundle within 49 days of the date of the Listing Window Notification letter (see paragraph 21 of CPR PD 52C).

Case Number: **CA-2021-003180**

APPENDIX 3: ASSESSMENT OF THE PROPOSED DEVELOPMENT AGAINST DRAFT REVISED NATIONAL POLICY STATEMENTS

Appendix 3 – Assessment against draft revised NPSs for Energy Infrastructure

An assessment of the Proposed Development’s compliance with the assessment principles and generic and technology specific impacts of the relevant draft revised NPSs for energy infrastructure, against any material changes to relevant assessment principles/impacts from the current NPSs or any relevant new assessment principles/impacts within the draft revised NPSs is provided below.

Assessment Principle/Generic Impact/Technology Specific Impact	Summary	Assessment
Marine Considerations (draft EN-1, 4.4)	Applicants for development consent will need to take account of any relevant Marine Plans.	<p>The Site lies within the ‘North East Inshore Marine Area’, which stretches from Flamborough Head in Yorkshire to the Scottish Border. The Plan Area has three main tidal rivers, including the River Tees.</p> <p>The North East Marine Plan is intended to provide a strategic approach to decision-making, considering future use and providing a clear approach to managing resources, activities and interactions within the area. In referring to Teesside, Tyneside and Wearside (paragraph 14), the Plan identifies that there are future opportunities for CCUS using existing oil and gas infrastructure.</p> <p>The Plan contains a number of policies (Table 2). There are no specific policies on gas-fired generating stations.</p> <p>Policy NE-INF1 supports appropriate land-based infrastructure which facilitates marine activity and vice versa.</p> <p>Policy NE-CCUS-2 supports CCUS proposals incorporating the re-use of existing oil and gas infrastructure. However, the Policy is clear that this does not mean that proposals that do not incorporate the re-use of infrastructure</p>

Assessment Principle/Generic Impact/Technology Specific Impact	Summary	Assessment
		<p>will be disadvantaged or rejected and that the re-use of infrastructure may not be a viable or realistic option.</p> <p>Policy NE-CCUS-3 supports proposals associated with the deployment of low carbon infrastructure for industrial clusters such as that being proposed on Teesside as part of the East Coast Cluster being advanced by the Northern Endurance Partnership. The policy states:</p> <p><i>“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.</i></p> <p><i>The Energy Technologies Institute Strategic UK CCS Appraisal provides a comprehensive review of likely carbon dioxide storage sites in the UK. Figure 1 - Map of UK offshore infrastructure and potential carbon dioxide storage sites from the Department of Business Energy and Industrial Strategy consultation on Carbon capture, usage and storage (CCUS) projects: re -use of oil and gas assets shows the Teesside and Humberside (Easington / Dimlington) areas of existing industrial infrastructure, and potential storage</i></p>

Assessment Principle/Generic Impact/Technology Specific Impact	Summary	Assessment
		<p><i>sites which would support Industrial Clusters in the north east marine plan areas.</i></p> <p><i>Supporting development associated with industrial clusters also aims to enhance connectivity between marine operations and land infrastructure, which will ensure that opportunities for carbon capture, usage and storage are realised. This policy will also benefit employment in coastal communities near industrial clusters, supporting the NE -INF1 and NE -EMP -1 policies. As carbon capture, usage and storage are at the early stages of deployment in the UK, the government guidance may change over the lifetime of the North East Marine Plan. This policy should be considered alongside the most recent government guidance, reflecting the current approach to the deployment of carbon capture, usage and storage.”</i></p> <p>The DCO Application covers the works down to Mean Low Water Springs ('MLWS'), with the offshore works being the subject of a separate consent application regulated by the Offshore Petroleum Regulator for the Environment ('OPRED), which is part of BEIS. A Deemed Marine Licence is being sought as part of the DCO for the works within the Marine Area, including the area between Mean High Water Springs ('MHWS') and MLWS and parts of the tidal River Tees.</p> <p>The Proposed Development is consistent with policy contained within the UK Marine Policy Statement and the North East Marine Plan, notably policies NE-CCUS-2 and NE-CCUS-3 both of which are supportive of the deployment of CCS/CCUS on Teesside and in the UK Marine Area.</p>

Assessment Principle/Generic Impact/Technology Specific Impact	Summary	Assessment
Environmental and Biodiversity Net Gain (draft EN-1, 4.5 & draft EN-5, 2.8)	Applicants should not just look to mitigate direct harms to the environment, but also consider whether there are opportunities for enhancements. Biodiversity Net Gain ('BNG') is an essential component of environmental net gain.	<p>Options to achieve benefits for landscape and biodiversity as a direct consequence of the Proposed Development are set out within the Indicative Landscape and Biodiversity Strategy (Document Ref. 5.12). The proposals are also shown on the Landscaping and Biodiversity Plan (Document Ref. 4.15). Section 5 of the Strategy sets out the approach to landscape and biodiversity enhancement. With regard to biodiversity, the Applicants have used the calculator tool and metric published by Natural England (2019) to establish the position with regard to biodiversity loss/net gain. Habitats created will include wildflower grassland, native scrub and a pond for freshwater and/or wetland flora and fauna, amongst other habitat creation measures. The biodiversity calculations are set out at Appendix 4 of the Strategy, which confirms that a 'net gain' will be achieved. The detailed proposals for landscape and biodiversity enhancement relating to the Proposed Development will be set out in the Landscape and Biodiversity Management and Enhancement Plan also secured by Requirement 4 of the draft DCO.</p> <p>The Proposed Development will therefore deliver environmental and biodiversity net gain.</p>
Carbon Capture and Storage (CCS), draft EN-1, 4.8 - paras 4.8.4 and 4.8.5)	Applications should set out the type of capture technology that it is proposed to use (e.g. pre-combustion capture; post-combustion capture; or oxy-fuel combustion).	The Application documents confirm that the Proposed Development incorporates post-combustion carbon capture technology. The EIA for the Proposed Development has been based on the deployment of post-combustion carbon capture technology.

Assessment Principle/Generic Impact/Technology Specific Impact	Summary	Assessment
Carbon Capture and Storage (CCS), draft EN-1, 4.8 - paras 4.8.6 - 4.8.8)	Development consent applications for power CCS projects should include detail of how the captured CO ₂ is intended to be transported and stored, how cumulative impacts will be assessed and whether any necessary consents, permits and licences have been obtained.	<p>The DCO Application covers the works down to Mean Low Water Springs ('MLWS') and seeks a Deemed Marine Licence as part of the DCO for the works below Mean High Water Springs ('MHWS') within the foreshore area and the tidal River Tees.</p> <p>The offshore works are subject to a separate consent application regulated by the Offshore Petroleum Regulator for the Environment ('OPRED'), which is part of BEIS. The Applicants also require a carbon dioxide appraisal and storage licence from the North Sea Transition Authority for the use of the Endurance Store. In addition to the storage licence, the Applicants must obtain a grant of the appropriate rights to use the Store from The Crown Estate. The Applicants are managing all of the consents and licences, as a whole to ensure that the consenting for the full chain CCUS is obtained in a timely manner. It is anticipated that the relevant offshore consents and licences will be obtain by July 2023.</p> <p>Chapter 24 of ES Volume I, 'Cumulative and Combined Effects' (Document Ref. 6.2.24) provides an assessment of the combined and cumulative effects of the Proposed Development with the offshore works.</p>
Greenhouse Gas Emissions (draft EN-1, 5.3 & draft EN-2, 2.5)	All proposals for energy infrastructure should include a carbon assessment as part of their ES. This should include a whole life carbon assessment showing construction, operational and decommissioning carbon impacts	Chapter 21 'Climate Change' of ES Volume I provides a broader assessment of the Proposed Development's impact on climate change, notably, greenhouse gas emissions. With regard to this, it should be noted that Proposed Development is part of a full chain CCUS project that will capture up to 95% of the emissions from the electricity generating station while also

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		<p>providing the infrastructure to facilitate industrial emitters on Teesside in capturing and storing their CO₂ emissions.</p> <p>Chapter 21 includes the following:</p> <ul style="list-style-type: none"> • 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. • An 'In-combination Climate Change Impacts' ('ICCI') assessment – an assessment of the in-combination effects of a changing climate and the Proposed Development on receptors in the surrounding environment. • A 'Climate Change Resilience' ('CCR') review – 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. <p>The capture and storage of industrial emissions has not been factored into the above assessments and review as industrial emitters will be responsible for their own CCP and connections to the CO₂ Gathering Network. The Lifecycle GHG impact assessment factors in construction, operational and decommissioning effects. It also factors in different scenarios for the operation of the Low Carbon Electricity Generating Station. The worst-case</p>

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		<p>uncaptured CO₂ emissions from these scenarios has been used to inform the total GHG calculations. These emissions are detailed in in Chapter 21.</p> <p>Paragraph 21.3.46 of Chapter 21 confirms that the GHG avoidance of the Proposed Development is based on the CCS/CCUS elements being operational. Using the worst-case emissions scenario, unabated CO₂ emissions from the Low Carbon Electricity Generating Station could amount to an average of more than 2M tCO₂ per year, or 50M tCO₂ over the 25-year design life of the Proposed Development. With carbon capture technology, up to 95% of these emissions will be captured, geo-sequestered and not released into the atmosphere.</p> <p>Table 21-13 compares the carbon intensity of the Proposed Development (both with and without carbon capture) with other forms of generation. Unabated the Low Carbon Electricity Generating Station will be slightly lower than the average gas-fired power plant. Using CCP and 95% capture rates it will have a carbon intensity of 20.7 tCO₂ per GWh, significantly less that the grid average emission in 2020 of 198 tCO₂ per GWh.</p> <p>Emissions associated with the Proposed Development have been examined for their significance against the UK Carbon Budgets (paragraph 21.3.67 at Chapter 21). These emissions are detailed in Table 21-14. Paragraph 21.3.66 confirms that Table 21-14 assumes four years of construction occurring across the 3rd and 4th UK carbon budgets, two years of operations occurring during the 4th carbon budget and five years during the 5th and 6th carbon budgets. The percentage contribution of emissions from the</p>

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		<p>Proposed Development to the respective carbon budgets are less than 0.001%, 0.03%, 0.08% and 0.14% respectively.</p> <p>The magnitude of impact of the Proposed Development (paragraph 21.3.1) is therefore considered 'low' against the current UK carbon budgets. The significance of effects is considered as 'minor adverse' (Table 21-7). As such, the operation of the Proposed Development is not expected to affect the UK in terms of meeting its current Carbon Budgets. Furthermore, (paragraph 21.3.68) the GHG assessment concludes that once neighbouring industries are connected to the CO₂ gathering network and CO₂ can be captured from these sources, it is envisaged that the NZT project as a whole could result in a net reduction in CO₂ emissions from current levels, with the objective of achieving Net Zero status for the Low Carbon Electricity Generating Station and connected industrial emitters with a beneficial effect on annual UK carbon emissions.</p> <p>The ICCI assessment considers the ways in which climate change (e.g. extreme weather events, sea level rises) will influence the significance of the impact of the Proposed Development on receptors in the surrounding environment. The assessment considers the existing and projected future climate conditions on the location. The types of impacts and effects that may occur during construction, operation and decommissioning, and the significance of these are described in Section 21.5 and Table 21-30 taking account of relevant mitigation.</p>

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		<p>Table 21-30 identifies two potentially significant ICCIs. These both relate to increasing winter rainfall combined with existing flood risk at the Site. Paragraph 21.4.49 states that the development of a Flood Emergency Response Plan, supported by the results and recommendations of the Flood Risk Assessment is considered sufficient to address the significant ICCIs.</p> <p>Section 21.5 of Chapter 21 details the CCR Review that has been undertaken for the Proposed Development. Again, this considers the construction, operational and decommissioning effects of the Proposed Development. The assessment seeks to identify potential climate change impacts and the potential consequence and likelihood or occurrence, taking account of measures incorporated into the design of the Proposed Development. Table 21-33 sets out the scope of the assessment, which covers extreme weather events, precipitation, temperature, sea level rise, sea temperature and wind.</p> <p>The CCR Review includes all infrastructure and assets associated with the Proposed Development and assesses the resilience against both gradual climate change and the risks associated with an increased frequency of severe weather events. The potential impacts and effect of projections for climate change to the Proposed Development are detailed in Table 21-37. Paragraph 21.5.42 summarises the findings of Table 21-37 and states that while a range of climate change hazards and their potential impact upon the Proposed Development have been identified, the embedded design measures are deemed sufficient to reduce the likelihood or</p>

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		<p>consequence of an impact occurring as a result of projected climate hazards and therefore no significant resilience risks have been identified.</p> <p>Section 21.6 reports on residual climate change effects. These are confined to GHG emissions – there will be some residual GHG emissions without offsetting of these by the capture of CO₂ emissions from industrial facilities on Teesside, however, this will result in a minor effect and is not significant.</p>
Biodiversity and Geological Conservation (draft EN-1, 5.4)	Applicants should show how their proposals can contribute toward Biodiversity Net Gain ('BNG') in line with the ambition to set out in the 25 Year Environment Plan (5.4.4).	<p>Options to achieve benefits for biodiversity as a direct consequence of the Proposed Development are set out within the Indicative Landscape and Biodiversity Strategy (Document Ref. 5.12). The proposals are also shown on the Landscaping and Biodiversity Plan (Document Ref. 4.15). Section 5 of the Strategy sets out the approach to landscape and biodiversity enhancement. The Applicants have used the calculator tool and metric published by Natural England (2019) to establish the position with regard to biodiversity loss/net gain. Habitats created will include wildflower grassland, native scrub and a pond for freshwater and/or wetland flora and fauna, amongst other habitat creation measures. The biodiversity calculations are set out at Appendix 4 of the Strategy, which confirms that a 'net gain' will be achieved. The detailed proposals for biodiversity enhancement relating to the Proposed Development will be set out in the Landscape and Biodiversity Management and Enhancement Plan also secured by Requirement 4 of the draft DCO.</p> <p>The Proposed Development will therefore deliver BNG.</p>

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Land Rights and Land Interests (draft EN-5, 2.3)	In order to be able to lawfully install, inspect, maintain, repair, adjust, alter, replace or remove an electricity line (above or below ground), its related equipment, and or/its associated mitigation scheme, developers must i) own the land on, over, or under which the relevant activity is to take place; or ii) hold sufficient rights over or interest in that land (typically in the form of an easement); or iii) have permission for the activity from the present owner or occupier of that land (typically in the form of a wayleave).	The Applicants are engaged with various Interest Parties and other landowners in order to secure the necessary land interests and rights for the Proposed Development. An update on the status of negotiations has been provided at Deadline 1 of the Examination (Document Ref. 9.5). This document will be updated throughout the Examination process.
Sulphur Hexafluoride (draft EN-5, 2.14)	Applicants should at the design phase of the process consider carefully whether the proposed development could avoid the use of Sulphur Hexafluoride ('SF6') as it is an extraordinarily potent greenhouse gas. Applicants should demonstrate why alternatives to SF6 are technically infeasible or require bespoke components that are grossly disproportionate in terms of cost.	The Applicants will during the detailed design phase of the Proposed Development endeavour to minimise the use of SF6 in switchgear in systems up to 66kV. It is anticipated that some SF6 switchgear will be used on the NZT Project's main extra high voltage ('EHV') connection systems (which is at 275kV), and where air insulated switchgear is unsuitable or impractical, due to the fact that there is at present no technically proven and commercially available alternative on the market. Any EHV system which, following design assessments, utilises SF6 will include gas monitoring and controls meeting all applicable design standards and regulations.

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	<p>Where SF6 must be used, Applicants should design a plan for the monitoring and control of fugitive SF6 emissions consistent with the F-gas Regulation and its successors.</p>	