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7. Legislative and Planning Policy Context

7.1 Introduction

7.1.1 This chapter of the Environmental Statement (ES) provides an overview of the legislative and policy context that is relevant to the Proposed Development. The chapter is structured as follows:

- Section 7.2 details the legislative and decision-making framework set out in the Planning Act 2008.
- Section 7.3 provides an overview of the National Policy Statements (and marine policy) of most relevance to the Proposed Development. These include the Overarching NPS for Energy (EN-1); the NPS for Fossil Fuel Electricity Generating Infrastructure (EN-2); the NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4); and the NPS for Electricity Networks Infrastructure (EN-5).
- Section 7.4 provides an overview of recent UK Government energy and climate change policy which establishes clear objectives for decarbonising the power and industrial sectors and achieving the legally binding commitment to achieve 'net zero' in terms of greenhouse gas emissions by 2050. These include a number of national infrastructure plans and assessments; the Clean Growth Strategy; the UK Carbon Capture Utilisation and Storage (CCUS) Deployment Pathway; the Ten Point Plan; and the Energy White Paper, amongst others.
- Section 7.5 provides an overview of the National Planning Policy Framework (NPPF) and the policies contained within it that apply to the Proposed Development.
- Section 7.6 details the local planning policies and guidance considered to be of most relevance to the Proposed Development. This includes the local development plans of Redcar and Cleveland Borough Council (RCBC) and Stockton-on-Tees Borough Council (STBC) and the South Tees Area Supplementary Planning Document (SPD).

7.1.2 Figure 7-1: Local Plan Areas (ES Volume II, Document Ref. 6.3) presents the policies within the local plan areas STBC and RCBC within and around the Site boundary.

7.1.3 Each technical chapter of the ES refers to the policies and guidance that are relevant to the assessment of the environmental effects reported within that chapter.

7.2 Legislative and Decision-making Framework

7.2.1 Elements of the Proposed Development fall within the definition of a Nationally Significant Infrastructure Project (NSIP) under Section 14(1)(a) and Sections 15(1) and (2) of the Planning Act 2008 (PA 2008), notably the

gas-fired electricity generating station, which will have a generating capacity of greater than 50 MW output. As such, a Development Consent Order (DCO) is required to authorise this part of the Proposed Development in accordance with Section 31 of the PA 2008.

7.2.2 Section 115 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 normally brought forward with the particular type of NSIP (here the electricity generating station). The proposed gas, water and electricity connections would support the operation of the generating station and are therefore considered to be associated development for the purposes of Section 115 of the PA 2008.

7.2.3 A request for direction under Section 35 of the PA 2008 was made to the Secretary of State (SoS) for Business, Energy and Industrial Strategy (BEIS) on the 25th 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 CO_2 Gathering Network, including the CO_2 pipeline connections from the gas-fired power station and industrial facilities on Teesside to transport the captured CO_2 (including connections under the tidal River Tees);
- the CO_2 Compression Station to receive captured CO_2 from the generating station and gathering network; and
- the CO_2 Export Pipeline for the onward transport of the captured CO_2 to a suitable offshore geological storage site (landward element only).

7.2.4 The SoS issued a direction on the 17th January 2020 which confirmed that 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).

7.2.5 An application for development consent for the Proposed Development is therefore being submitted to the Planning Inspectorate (PINS). PINS will be responsible for examining the application and making a recommendation to the SoS who will then take the decision as to whether a DCO should be made authorising the construction, operation and maintenance of the Proposed Development. Under the PA 2008 regime, the policy framework for examining and determining applications for a DCO is provided by National Policy Statements (NPSs). Section 5 of the PA 2008 allows the SoS to designate NPSs setting out national policy in relation to the types of NSIPs listed at Section 14 of the PA 2008.

7.2.6 The NPSs are the primary policy used by the SoS to examine and determine applications for NSIPs. Section 104 of the PA 2008 requires the SoS to determine applications for NSIPs in accordance with the relevant NPSs and appropriate marine policy documents (if any) 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.

7.2.7 The Energy White Paper (EWP) (December, 2020) confirms that the SoS has decided that it is appropriate to review the suite of energy NPSs, to ensure that they reflect the policies set out in the EWP, and that the UK Government continues to have a planning policy framework which can deliver the investment required to build the infrastructure needed for the transition to net zero. The EWP confirms that the Government aims to designate updated NPS by the end of 2021.

7.2.8 While the review is undertaken, the current suite of NPSs remains relevant Government policy and has effect for the purposes of the PA 2008. They therefore continue to provide a proper basis on which PINS can examine, and the SoS can make decisions on, applications for development consent. The EWP further states:

"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."

7.2.9 The NPSs that are considered to be of most relevance to the Proposed Development are as follows:

- Overarching NPS for Energy (EN-1) (Department of Energy and Climate Change (DECC), 2011a);
- NPS for Fossil Fuel Electricity Generating Infrastructure (EN-2) (DECC, 2011b);
- NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (DECC, 2011c); and
- NPS for Electricity Networks Infrastructure (EN-5) (DECC, 2011d).

7.2.10 The above energy NPSs, so far as they are relevant to the Proposed Development, are considered further later within this chapter.

7.2.11 In making decisions on NSIPs, the PA 2008 also states that the SoS must have regard to any local impact report submitted by a relevant local authority, any relevant matters prescribed in relation to the NSIP and any other matters that the SoS thinks are both *"important and relevant"*. In the case of the Proposed Development, other matters that are important and relevant may include recent and relevant UK Government energy and climate change

policy, including national infrastructure plans and assessments; the Clean Growth Strategy; the UK CCUS Deployment Pathway; the Ten Point Plan; and the EWP, amongst others. These documents set out important Government objectives for decarbonising the power and industrial sectors in addition to the Government's target (enshrined in law) of achieving net zero in terms of greenhouse gas emissions by 2050.

7.2.12 Other matters that the SoS thinks are both important and relevant may include the policies within the NPPF (February 2019) (paragraph 5 of the NPPF is clear that it does not contain specific policies for NSIPs and these are to be determined in accordance with the decision-making framework set out in the PA 2008 and relevant NPSs, as well as any other matters that are important and relevant, which may include the NPPF itself) and local development plan documents.

7.3 National Policy Statements

Overarching National Policy Statement for Energy (EN-1) (DECC, 2011a)

7.3.1 Part 2 of EN-1 sets out 'Government policy on energy and energy infrastructure development'. It confirms the following:

- the Government's commitment to meet its legally binding target to cut greenhouse gas emissions by at least 80% by 20501 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.

7.3.2 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. Notably, paragraph 3.1.3 stresses that the SoS should assess applications for DCOs 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.

7.3.3 Paragraphs 3.6.4 - 3.6.7 relate to Carbon Capture and Storage (CCS) specifically. It explains the role CCS can have in meeting emissions targets whilst also maintaining security of supply and that CCS has the potential to reduce carbon emissions by up to 90%. Paragraph 3.6.4 notes that whilst

[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 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.

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.

7.3.4 In order to develop greater knowledge and information regarding CCS, paragraph 3.6.5 explains that the Government is leading international efforts to develop CCS including by supporting commercial scale demonstration projects, which are a priority for UK energy policy. The projects are intended to demonstrate the full chain of CCS involving the capture, transport and storage of carbon dioxide in the UK. Paragraph 3.6.5 states the examining authority *"should take account of the importance the Government places on demonstrating CCS, and the potential deployment of this technology beyond the demonstration stage, in considering applications for consent of CCS projects and associated infrastructure".*

7.3.5 In order to support the delivery of CCS policy, the Government has placed a condition on the consenting of new fossil fuel generating stations (EN-1, paragraph 3.6.6); that all commercial scale (at or above 300 MWe) combustion generating stations have to be constructed to be Carbon Capture Ready (CCR). The Proposed Development complies with this condition and is CCR.

7.3.6 Paragraph 3.6.8 again emphasises the need for new fossil fuel generation in order to secure consistency of energy supply as a back-up when generation from renewable generating capacity is intermittent and to help with the transition to low carbon electricity generation. In particular:

"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]

7.3.7 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 and 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.

7.3.8 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 apply. There is no conflict with relevant policies in the NPSs and none of the considerations set out in Section 104 of the PA 2008 apply. The Proposed

Development's compliance with NPS and other policy is considered in the Planning Statement (Document Ref. 5.3).

7.3.9 Paragraph 4.1.3 goes on to state that in considering any project, 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.

7.3.10 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.

7.3.11 Other assessment principles include the matters to be covered within any ES, the Habitats and Species Regulations; the consideration of alternatives; criteria for 'good design'; consideration of Combined Heat and Power; consideration of CCS and CCR, climate change adaptation and grid connection, amongst others.

7.3.12 Paragraph 4.7.1 states that carbon capture technologies are able to remove up to 90% of the carbon dioxide that would otherwise be released to the atmosphere and offers the opportunity for fossil fuels to continue to be an important element of a secure and diverse low carbon energy mix.

7.3.13 Paragraph 4.7.4 states that the Government has taken a number of steps to facilitate and encourage the demonstration of CCS technology and that the demonstration programme was extended to include gas-fired generating stations.

7.3.14 Paragraph 4.7.7 states that the most likely method for transporting captured carbon dioxide is through pipelines that will be located both onshore and offshore. It notes that there are currently no carbon dioxide pipelines in the UK and considerable future investment in pipelines will be required for the purpose of the demonstration programme.

7.3.15 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.

National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2) (DECC, 2011b)

7.3.16 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 electricity generating infrastructure.

7.3.17 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).

7.3.18 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 impacts include, air emissions, landscape and visual, noise and vibration and water quality and resources, amongst others. It is notable in respect of landscape and visual impacts, EN-2 (paragraph 2.6.5) acknowledges that it is not possible to eliminate such impacts due to the scale of the buildings and structures associated with the generating station 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) (DECC, 2011c)

7.3.19 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 therefore a gas pipeline is required. The gas connection will be included with the Application as 'associated development' as defined by Section 115 of the PA 2008.

7.3.20 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.

7.3.21 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. It also covers other technologies that are not relevant to the Proposed Development such as gas import terminals, gas reception facilities and storage.

National Policy Statement for Electricity Networks Infrastructure (EN-5) (DECC, 2011d)

7.3.22 EN-5 is of some relevance to the Proposed Development as it includes a new electricity grid connection between the electricity generating station and the National Grid (for the export of electricity). As with the gas connection, the electricity grid connection is 'associated development' as defined by Section 115 of the PA 2008.

7.3.23 Part 2 of EN-5 deals with assessment and technology-specific information relating to 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 conversation, landscape and visual, noise and vibration and electric and magnetic fields.

Marine Policy

UK Marine Policy Statement (March 2011)

7.3.24 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 below MHWS within the North Sea). These include the, Water Supply and Discharge Connections, CO_2 Export Pipeline and the Natural Gas Connection and CO_2 Gathering Network (River Tees Crossing).

7.3.25 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).

7.3.26 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.

7.3.27 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.

7.3.28 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 carbon capture and storage 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 Carbon Capture and Storage ('CCS') and in particular the need for suitable locations that provide for the permanent storage of carbon dioxide.

7.3.29 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.

7.3.30 Paragraphs 3.3.31 to 3.3.35 deal with CCS. Paragraph 3.3.21 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 onto 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.

7.3.31 The significant climate change and economic benefits of CCS 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 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 Marine Plan (January 2020)

7.3.32 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.

7.3.33 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.

7.3.34 The consultation on the draft North East Marine Plan ran from 14th January to 20th April 2020. This was the final stage of statutory public consultation on the Plan prior to it being submitted to the SoS for Environment, Food and Rural Affairs for adoption. Once published as a Consultation Draft, Marine Plans become a material consideration.

7.3.35 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.

7.3.36 The Plan contains a number of policies (Table 2). There are no specific policies on gas-fired generating stations. Policy NE-INF1 supports appropriate land-based infrastructure which facilitates marine activity and vice versa. 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.

7.4 UK Government Energy and Climate Change Policy

7.4.1 An overview of recent and relevant UK Government energy and climate change policy is provided below.

National Infrastructure Plans & Assessments

National Infrastructure Plan (HM Treasury, 2014)

7.4.2 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.

7.4.3 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.

7.4.4 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."*

7.4.5 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]

7.4.6 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.

7.4.7 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.

7.4.8 The Proposed Development would contribute to the delivery of the NIP 14 and in particular the objectives for the energy sector, including the deployment of new low carbon gas-fired power stations fitted with CCS technology. The Proposed Development would 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)

7.4.9 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 and 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."

7.4.10 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 onto 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."

7.4.11 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.

7.4.12 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,"*

National Infrastructure Assessment (The National Infrastructure Commission, 2018)

7.4.13 The National Infrastructure Commission (the 'NIC') was established in 2015 to provide independent, impartial advice on the UK's long-term infrastructure needs.

7.4.14 In the National Infrastructure Assessment (the 'NIA'), published in July 2018, the NIC has looked across different infrastructure sectors and come 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.

7.4.15 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.

7.4.16 The 'Low cost, low carbon' theme is dealt with in detail at Chapter 2 of the NIA 18. There is only limited consideration of carbon capture and storage (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. The NIA 18 recognises that there are several potential uses for CCS, 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.

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

7.4.17 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.

7.4.18 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 with could have if deployed in the power sector (Executive Summary - page 7).

7.4.19 The NIC's latest analysis demonstrates that, if deployed, hydrogen, either generated from electrolysers 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 Committee for Climate Change (CCC) that BECCS is likely to be needed to generate negative emissions (Executive Summary - page 9).

7.4.20 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 capacity 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 CO_2 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).

7.4.21 Further to the above, the Net Zero Report finds that deploying hydrogen turbines at scale to generate electricity, as a complement to 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).

7.4.22 'Net Zero – Opportunities for the power sector' therefore highlights the potential future role of CCS in decarbonising the power sector by capturing CO_2 from new gas-fired generation while also supporting the generation of hydrogen and decarbonising industry generally.

The Clean Growth Strategy (HM Government, 2017)

7.4.23 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.

7.4.24 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."

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."

7.4.25 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."

7.4.26 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.

7.4.27 The Proposed Development would accord with the Government's approach set out above, in particular, removing uncertainty and working with industry to make CCUS a viable future option.

7.4.28 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.

7.4.29 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]

7.4.30 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.

7.4.31 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."

7.4.32 The Proposed Development would 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 would 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 carbonisation 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."

7.4.33 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.

7.4.34 The Proposed Development would clearly contribute to the delivery of the CGS in terms of the Government's objective to decarbonise both the power and industrial sectors. Furthermore, the Proposed Development is particularly well located to support industrial decarbonisation given the concentration of major energy intensive industry on Teesside.

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

7.4.35 '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 goes on to state (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."

7.4.36 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 (ET) 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."

7.4.37 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.

7.4.38 At page 32 ('Industrial decarbonisation with CCUS') the Action Plan highlights the importance of CCUS in decarbonising energy intensive industries (EIIs), 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 EIIs by 2050. A recent study by McKinsey on decarbonising EIIs 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."

7.4.39 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.

7.4.40 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 is proximity to North Sea storage, is identified as a potential key location for the deployment of CCUS at scale.

'Net Zero' by 2050 (HM Government, 2019)

7.4.41 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.

7.4.42 The commitment to achieve net zero by 2050 was based on the recommendations of the Climate Change Committee (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. CCC Report identifies CCUS as having a key role to play in mitigating greenhouse gas emissions.

7.4.43 The Executive Summary to the CCC Report (page 12) states that the net zero target cannot be met simply by adding mass removal of CO_2 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.

7.4.44 The CCC Report is very clear that the remaining greenhouse gas emissions in the UK must be offset by removing CO_2 and permanently sequestering it through technologies such as CCUS. The important role of CCUS is also stressed in terms of capturing the CO_2 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 CO_2 in 2050, which would require major CO_2 transport and storage infrastructure servicing at least five clusters. The CCC Report concludes that CCUS is a necessity for the UK not an option.

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

7.4.45 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.

7.4.46 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 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.

7.4.47 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 changes, whilst 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.

7.4.48 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 onto state that policy announcements have been piecemeal and slow. The Government has consulted on mechanisms to incentivise carbon capture and storage (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)

7.4.49 The Executive Summary sets out the CCC's recommendations by government department. Table 4 sets out recommendations for the Department of Business, Energy and Industrial Strategy (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.

7.4.50 Table 4 (page 31) also recommends that BEIS delivers plans to decarbonise the power system 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.

7.4.51 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 – CO_2 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 CO_2 infrastructure development."

7.4.52 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 onto 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.

7.4.53 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 CO_2 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.

7.4.54 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 adaption 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."

7.4.55 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.

7.4.56 The Progress Report set out a number of priorities for the 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."*

7.4.57 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 as it would deliver the UK's first decarbonised industrial cluster on Teesside by the mid-2020s, whilst also ensuring the infrastructure is in place to support the production of low-carbon hydrogen.

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

7.4.58 'The Ten Point Plan for a Green Industrial Revolution – Building back better, supporting green jobs, and accelerating out 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.

7.4.59 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 carrying 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…"

7.4.60 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)."

7.4.61 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 CO_2 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."

7.4.62 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 CO_2 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. We will 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.

7.4.63 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."

7.4.64 The Proposed Development would establish CCUS within an industrial cluster on Teesside. It would not only capture CO_2 from industrial emitters and power generation but, as referred to above, would also support the future development of hydrogen production on Teesside. It would 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.

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

7.4.65 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).

7.4.66 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.

7.4.67 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]

7.4.68 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 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 CO_2.

7.4.69 Importantly (page 53), the NIS recognises the 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 CO_2 a year by 2030.

The Energy White Paper (HM Government, December 2020)

7.4.70 '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.

7.4.71 The Government estimates (Introduction, page 15) that the measures in the EWP could reduce emissions across power, industry and buildings by up to 230Mt CO_2 in the period to 2032 and enable further savings in other sectors such as transport. In doing so, these measures could support up to 220,000 jobs per year by 2030. These figures include the energy measures from the Ten Point Plan as well as additional measures set out in the EWP. However, the EWP recognises that more will need to be done to meet key milestones on the journey to Net Zero.

7.4.72 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****."*

7.4.73 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.

7.4.74 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.

7.4.75 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 …"

7.4.76 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."

7.4.77 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 CO_2 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]

7.4.78 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."

7.4.79 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.

7.4.80 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 CO_2 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 CO_2. 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.

7.4.81 The important supporting role of CCUS in the production of clean hydrogen is underlined at pages 127 and 128 of the EWP.

7.4.82 The Proposed Development would clearly 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 CO_2 gathering network, would provide the necessary infrastructure to make a low-carbon industrial cluster on Teesside a reality by the mid-2020s. The Proposed Development would 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.

Industrial Decarbonisation Strategy (HM Government, March 2021)

7.4.83 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.

7.4.84 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.

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

7.4.86 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."

7.4.87 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 CO_2 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.

7.4.88 Chapter 4 confirms (page 48) that the UK's six industrial clusters (Teesside alone accounts for 3.9Mt CO_2 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 CO_2 per annum by the mid-2020s and between 8 -14 Mt CO_2 per annum by 2050. Chapter 4 stresses that without CCUS emissions from current industrial processes cannot be reduced to levels consistent with Net Zero. Reference is made to government planning 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.

7.4.89 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.

7.4.90 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.

7.4.91 Chapter 8 'Levelling up' (Action 8.1, page 84) highlights the significant potential, particular across the UK's industrial clusters, to create new jobs through the deployment of low carbon infrastructure and technologies.

7.4.92 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 CO_2 emissions per annum by the mid-2020s, rising to between 8 -14 Mt CO_2 per annum by 2050.

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

7.4.93 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:

7.4.94 "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.

7.4.95 … 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."

7.4.96 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.

7.4.97 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 of 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.

7.4.98 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 would therefore, consistent with the Deal, make a positive contribution to the transformation of the oil and gas sector.

7.5 National Planning Policy Framework (Ministry of Housing, Communities & Local Government, June 2019)

7.5.1 An updated version of the NPPF was published by the Ministry of Housing, Communities & Local Government (MHCLG) in June 2019. The NPPF sets out the Government's planning policies for England and how these are to be applied. The NPPF is supported by the Planning Practice Guidance (PPG), which provides more detailed guidance on various aspects of planning.

7.5.2 Paragraph 5 confirms that the NPPF does not contain specific policies for NSIPs and that these are to be determined in accordance with the decision-making framework set out in the PA 2008, related regulations and the relevant NPSs, as well as any other matters that are considered to be relevant. Such matters may include the NPPF.

7.5.3 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 and safe built environment, 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 contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

7.5.4 Central to the NPPF is 'a presumption in favour of sustainable development'. This is highlighted at Paragraph 11. For decision-making, this means approving applications that accord with the development plan without delay.

7.5.5 The NPPF is supportive of infrastructure projects. One of the methods of fulfilling the objective of sustainable development listed at paragraph 8 is through the *"provision of infrastructure"*.

7.5.6 Paragraph 148 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]

7.5.7 Paragraph 154 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 in application submission and that applications for renewable or low carbon development should be approved if their impacts are (or can be made) acceptable.

7.6 Local Planning Policy

7.6.1 The Proposed Development Site (the Site) encompasses land within the administrative boundaries of both RCBC and STBC either side of the River Tees. RCBC and STBC represent the 'host local authorities' for the Proposed Development under 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).

7.6.2 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.

7.6.3 Parts of the Site also lie within the boundary of the South Tees Development Corporation (STDC), 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 area through physical, social and environmental regeneration, however, RCBC retains planning powers for the STDC area and continues to act as Local Planning Authority (LPA) in respect of planning policy and development management and the processing and determination of planning applications.

7.6.4 STDC has produced a Master Plan (the 'South Tees Regeneration Master Plan') to provide a flexible framework for the regeneration of the South Tees

(the STDC) area. The Master Plan was prepared throughout 2017 as a supporting visioning and development strategy document to inform the preparation of a 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 adopted 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.

7.6.5 An overview of the DPDs and the South Tees SPD, including the designations and policies of most relevance to the Proposed Development is provided below. The DPDs and SPD are considered in more detail with the Planning Statement (Document Ref. 5.3), including the Proposed Development's compliance with those policies.

Redcar and Cleveland Local Plan (RCBC, May 2018)

7.6.6 The following Redcar and Cleveland Local Plan designations apply to all or part of the Site. These policy designations are identified on Figure 7-1: Local Plan Areas of the Policies Map.

- Development Limits (SD3);
- 30km wind farm safeguarding area for Durham Tees Valley Airport;
- Protected Employment Areas (ED6);
- South Tees Development Corporation (LS4);
- Sensitive Landscape Areas (N1);
- Green Wedges & Strategic Landscape Areas (N2);
- Primary Open Areas (N3); and
- Teesmouth and Cleveland Coast Special Protection Area (SPA) 6km Buffer Zone/Ramsar Site & Site of Special Scientific Interest (SSSI) (N4).

7.6.7 A summary of the key policies relevant to the Site is provided in Table 7-1 below. This also includes key policies from the South Tees SPD.

Table 7-1: Redcar and Cleveland Local Plan & South Tees Area SPD– Key Policies

Policy No.	Policy Title	Summary of Policy
SD1	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.
SD2	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. Priority will be given to brownfield land in sustainable locations that is not of high environmental value.
SD 3	Development Limits	Within development limits, development will be supported, subject to meeting other policies in the Local Plan.

Policy No.	Policy Title	Summary of Policy
SD 4	General Development Principles	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.
SD 6	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 impact of proposals, amongst other matters.
SD7	Flood and Water Management	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. Development will be expected to be designed to mitigate and adapt to climate change. A flood risk assessment will be required.
ED6	Promoting Economic Growth	Policy ED6 confirms that land and buildings within existing employment areas shown on the Policies 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 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.
LS 4	South Tees Spatial Strategy	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 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	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 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.
N2	Green Infrastructure	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

Policy No.	Policy Title	Summary of Policy
		includes strategic green 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	Open Space and Recreation	Seeks to protect open space and recreation facilities from development.
N4	Biodiversity and Geological Conservation	Seeks to protect and enhance the Borough's biodiversity and geological resources. Development should avoid detrimental impacts on biodiversity and geodiversity whether individual or cumulative. Where this is not possible mitigation, or compensation must be provided. 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 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. 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 locally important nature conservation sites. Wherever possible, development should provide 'net gains' in the value of biodiversity.
HE2	Heritage Assets	Seeks to protect designated heritage assets and their settings as well as non-designated heritage assets of archaeological interest.
TA1	Transport and New Development	The Council and its partners will ensure that the transport requirement of new development, 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.
STDC1	South Tees SPD – Regeneration Priorities	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 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.
STDC4	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.
STDC6	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 generation should be

Policy No.	Policy Title	Summary of Policy
		appropriately sited and designed in order to avoid unacceptable adverse environmental or amenity impacts.
STDC7	Natural Environmental Protection and Enhancement	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 supported in accordance with Local Plan Policy N2. Proposals will be required to have regard to forthcoming biodiversity and open space strategies.
STDC8	Preserving Heritage Assets	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 accordance with Local Plan Policy HE2.
STDC10	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').
STDC11	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 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 with Local Plan Policy SD7.
STDC12	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.
STDC15	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 with Local Plan Policies N4, SD7 and HE2. Opportunities for renewable energy generation and energy storage will be explored.

Stockton-on-Tees Borough Council Local Plan (STBC, January 2019)

7.6.8 The following Stockton-on-Tees Borough Council Local Plan designations apply to all or part of the Site. These policy designations are identified on Figure 7-1: Local Plan Areas.

- Development Limits (SD2);
- Specialist Use Locations (EG4);
- Durham Tees Valley Airport Safeguarding Area (EG5); and

- Internationally Designated Sites (SPA and Ramsar) & Nationally Designated Sites (SSSIs) (ENV5).

7.6.9 A summary of the key policies relevant to the Site is provided in Table 7-2 below.

Table 7-2: Stockton-on-Tees Borough Council Local Plan - Key Policies

Policy No.	Policy Title	Summary of Policy
SD1	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.
SD2	Strategic Development Needs	In order to provide sufficient employment sites to meet existing needs and new investment the Policy allocates land for employment, including 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	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 range of specialist uses, including energy generation and carbon capture and storage, which have operational benefits for the cluster.
SD5	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.
SD6	Transport and Infrastructure Strategy	Seeks to promote and deliver a sustainable transport network.
SD7	Sustainable Design Principles	Development proposals should be designed to the highest possible standard, taking into consideration the context if the surrounding area, including matters such as landscape character and the need to protect and enhance ecological and green infrastructure networks and assets.
EG4	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 demonstrated that development would not adversely impact on the protected nature conservation sites within the area.
EG5	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.
T11	Transport Infrastructure	Seeks to promote and deliver a sustainable transport network. Requires development proposals to be accompanied by an assessment of transport impacts and promote the use of sustainable modes through travel plans.
ENV1	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.

Policy No.	Policy Title	Summary of Policy
ENV2	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 emissions and contribute towards the achievement of renewable energy targets.
ENV4	Reducing and Mitigating Flood Risk	All new development will be directed toward the areas o lowest flood risk an 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.
ENV5	Preserve, Protect and Enhance Ecological Networks, Biodiversity and Geodiversity	Seeks to protect and enhance the biodiversity and geological resources within the Borough. 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	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 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	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.

Tees Valley Joint Minerals and Waste DPD (September 2011)

7.6.10 The following Joint Minerals and Waste DPD allocations and related policies apply to parts of the Site:

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

7.6.11 A summary of the policies is provided in Table 7-3 below.

Table 7-3: Joint Minerals and Waste DPD - Key Policies

Policy No.	Policy Title	Summary of Policy
MWC4	Safeguarding of Minerals 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.

Policy No.	Policy Title	Summary of Policy
MWC8	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 suitability of sites within such areas consideration will be given to the potential impact of the protected nature conservation sites.
MWC11	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.

7.7 Conclusions

7.7.1 The NPSs form the primary basis for decisions by the SoS on applications for NSIPs. The energy NPSs confirm the urgent need for energy infrastructure, in particular, low carbon and renewable electricity generating capacity, to assist in affecting the transition of the UK to a low carbon economy, meeting emissions targets and enhancing the security of energy supplies, amongst other objectives. This includes generation from gas using CCS/CCUS. There is a presumption in favour of granting consent for energy NSIPs. The Proposed Development accords with the energy NPSs in terms of the objectives of delivering more low carbon electricity generating capacity while ensuring the security of electricity supplies.

7.7.2 In addition to defining the need for new energy infrastructure, the NPSs provide detailed guidance on the matters to take into account when both preparing and assessing applications for NSIPs. This covers a number of key assessment principles as well as a range of generic impacts, some of which are common to most energy infrastructure, as well as others that may only be relevant to certain technologies. These have been taken into account in carrying out the EIA for the Proposed Development.

7.7.3 In making decisions on NSIPs, the SoS must have regard to any other matters that he/she considers are both important and relevant which, for the Proposed Development, may include the UK Government energy and climate change policy set out in this chapter. Such matters may also include the NPPF and relevant local development plan policy. In broad terms the policies contained within these documents support the delivery of more energy infrastructure, notably, local policies promote power generation and the development of carbon capture and storage at appropriate strategic locations.

7.7.4 The Proposed Development will support the delivery of UK Government energy and climate change policy. It will clearly help deliver key Government policies and commitments on CCS/CCUS and hydrogen. It combines power with CCUS at commercial scale, and with its industrial CO_2 gathering network, will provide the necessary infrastructure to make a low-carbon industrial cluster on Teesside a reality. 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. Furthermore, it will make a major contribution toward

the Government's target (enshrined in law) of achieving net zero in terms of greenhouse gas emissions by 2050.

7.7.5 The Planning Statement (Document Ref. 5.3) that forms part of the Application provides and assessment of the Proposed Development against NPS policy and relevant NPPF and local development plan policies. It also sets out how the Proposed Development will contribute toward important Government energy and climate change policy objectives.

7.8 References

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