



**Application for a Development
Consent Order
The Net Zero Teesside Project
Local Impact Report**

**Redcar and Cleveland Borough Council
LPA Ref: R/2021/0630/LAC
PINS Ref: EN010103**

1. Executive Summary

- 1.1 An application has been made to the Planning Inspectorate for the development of A full chain carbon capture, utilisation and storage ('CCUS') project, comprising a CO2 gathering network, including CO2 pipeline connections from industrial facilities on Teesside to transport the captured CO2 (including the connections under the tidal River Tees); a combined cycle gas turbine ('CCGT') electricity generating station with an abated capacity circa 850 gigawatts output (gross), cooling water, gas and electricity grid connections and CO2 capture; a CO2 gathering/booster station to receive the captured CO2 from the gathering network and CCGT generating station; and the onshore section of a CO2 transport pipeline for the onward transport of the captured CO2 to a suitable offshore geological storage site in the North Sea on land at and in the vicinity of the former Redcar Steel Works site, Redcar and in Stockton-on-Tees, on Teesside. The former steel works site, along with other land required for the proposed development, lies within the boundary of the land controlled by the South Tees Development Corporation (STDC), which is now known as Teesworks
- 1.2 The Council is a statutory consultee on this Nationally Significant Infrastructure Project and this report constitutes the Council's response to the Planning Inspectorate.

2. Application Type

- 2.1 Application for Development Consent Nationally Significant Infrastructure Project

3. Description of Development

- 3.1 The proposed works identified in Schedule 1 of the Draft DCO are set out below and are what the Local Authority have based this report on:

Work No. 1 – an electricity generating station fuelled by natural gas and with a gross output capacity of up to 860 megawatts (MWe) comprising—

(a) Work No. 1A – a combined cycle gas turbine plant, comprising—

- (i) a gas turbine;
- (ii) a steam turbine;
- (iii) a heat recovery steam generator (HRSG);
- (iv) gas and steam turbine buildings;
- (v) gas turbine air intake filters;
- (vi) selective catalytic reduction equipment;
- (vii) HRSG stack;
- (viii) a transformer;
- (ix) deaerator and feed water pump buildings;
- (x) chemical sampling / dosing plant;
- (xi) demineralised water treatment plant, including storage tanks;

- (xii) electrical substation, including electrical equipment, buildings and enclosures;
- (xiii) gas reception facility, including gas supply pipeline connection works, gas receiving area, gas pipeline internal gauge receiver for pipe inspection, emergency shutdown valves, gas vents and gas metering, and pressure reduction equipment;
- (xiv) auxiliary boiler and emissions stack; and
- (xv) continuous emissions monitoring system;

(b) Work No. 1B – CCGT and CCP cooling and utilities infrastructure, comprising—

- (i) mechanical draft cooling towers;
- (ii) cooling water pumps, plant and buildings;
- (iii) cooling water dosing and sampling plant and buildings;
- (iv) standby diesel generator and emissions stack;
- (v) diesel fuel storage tanks and unloading area;
- (vi) fire and raw water storage tanks;
- (vii) chemical storage facilities;
- (viii) wastewater treatment plant and building; and
- (ix) effluent, stormwater and firewater retention ponds;

(c) Work No. 1C – carbon capture plant, comprising—

- (i) flue gas pre-treatment plant and blower;
- (ii) carbon dioxide absorption column and associated stack
- (iii) carbon dioxide stripper and solvent regenerator;
- (iv) carbon dioxide conditioning and compression equipment; and
- (v) ancillary equipment, including pumps, chemical storage and pipework;

(d) Work No. 1D – administration, control room and stores, comprising—

- (i) administration and control buildings; and
- (ii) workshop and stores buildings; and

(e) Work No. 1E – ancillary works in connection with Work Nos. 1A, 1B, 1C and 1D—

- (i) ancillary plant, buildings, enclosures and structures;
- (ii) pipework, pipe runs and pipe racks;
- (iii) firefighting equipment, buildings and distribution pipework;
- (iv) lubrication oils storage facilities;
- (v) permanent plant laydown area for operation and maintenance activities; and
- (vi) mechanical, electrical, gas, telecommunications and water networks, pipework, cables, racks, infrastructure, instrumentation and utilities, including connections between Work Nos. 1A, 1B, 1C and 1D and parts of Work Nos. 2A, 3, 4, 5, 6, 7 and 8.

Work No. 2 – a gas connection, being works for the transport of natural gas to Work No. 1A, comprising—

(a) Work No. 2A – underground high pressure gas pipeline, comprising—

- (i) an underground high-pressure gas supply pipeline of up to 600 millimetres nominal bore diameter;
- (ii) cathodic protection posts;

- (iii) marker posts; and
 - (iv) underground electrical supply cables, transformers and control systems cables; and
- (b) Work No. 2B – above ground installations connecting Work No. 2A to the National Transmission System, comprising—
- (i) a compound for National Grid Gas plc's apparatus, comprising—
 - (aa) an offtake connection from the National Transmission System;
 - (bb) above and below ground valves, flanges and pipework;
 - (cc) remotely operated valve and valve bypass;
 - (dd) an above or below ground pressurisation bridle;
 - (ee) instrumentation and electrical kiosks; and
 - (ff) telemetry and communications equipment;
 - (ii) compounds for the undertaker's apparatus, comprising—
 - (aa) above and below ground valves, flanges and pipework;
 - (bb) isolation valves;
 - (cc) pipeline inline gauge launching facility;
 - (dd) instrumentation and electrical kiosks; and
 - (ee) telemetry and communications equipment; and
 - (iii) in connection with Work No. 2B, access works, vehicle parking, electrical and telecommunications connections, surface water drainage, security fencing and gates, closed circuit television cameras and columns.

Work No. 3 – works for the export of electricity from Work No. 1A to the National Grid Electricity Transmission system, comprising—

- (a) Work No. 3A – an electrical connection from Work No. 1A to Work No. 3B, comprising 275 kilovolt underground and overground electrical cables and control systems cables, and the connection between Work No. 3B and the National Grid Tod Point substation; and
- (b) Work No. 3B – a new electrical substation at Tod Point, including electrical equipment, buildings, enclosures and extension works at the National Grid substation.

Work No. 4 – water supply connection works to provide cooling and make-up water to Work No. 1, comprising up to two water pipelines of up to 1100 millimetres nominal bore diameter from the existing raw water main.

- Work No. 5 – wastewater disposal works in connection with Work No. 1, comprising—
- (a) Work No. 5A – repair and upgrade of the existing water discharge infrastructure to the Tees Bay; or
 - (b) Work No. 5B – a new water discharge pipeline to the Tees Bay; and
 - (c) Work No. 5C – up to two new wastewater pipelines between Bran Sands Wastewater Treatment Plant and Work No. 1.

Work No. 6 – a carbon dioxide gathering network, comprising underground and overground pipelines of up to 550 millimetres nominal bore diameter for the transport of carbon dioxide to Work No. 7 in the area shown on the works plans for Option 2 (horizontal directional drilling) or Option 3 (Sembcorp Tunnel).

Work No. 7 – a high pressure carbon dioxide compression station, comprising—

- (a) inlet metering;
- (b) compression facilities;
- (c) electrical connection and substation; and
- (d) mechanical, electrical, gas, telecommunications, pipework, cables, racks, infrastructure, instrumentation and utilities, including connections between Work No. 7 and Work Nos. 1A, 1B, 1C, 1D, 6 and 8.

Work No. 8 – high pressure carbon dioxide export pipeline corridor, comprising an overground and underground pipeline of up to 800 millimetres nominal bore diameter and associated power and fibre-optic cables.

Work No. 9 – temporary construction and laydown areas, comprising hardstanding, laydown and open storage areas, contractor compounds and construction staff welfare facilities, gatehouse and weighbridge, vehicle parking and cycle storage facilities, internal roads and pedestrian and cycle routes, security fencing and gates, external lighting including lighting columns, and, closed circuit television cameras and columns, comprising—

- (a) Work No. 9A – Teesworks laydown;
- (b) Work No. 9B – Navigator Terminal and Seal Sands laydown;
- (c) Work No. 9C – INEOS laydown;
- (d) Work No. 9D – Saltholme laydown;
- (e) Work No. 9E – Saltholme laydown; and
- (f) Work No. 9F – Haverton Hill laydown.

Work No. 10 – access and highway improvements, comprising works to create, improve, repair or maintain access roads, haul roads and access points.

In connection with and in addition to Work Nos. 1 to 10, further development including—

- (a) surface water drainage systems, storm water attenuation systems including storage basins, oil water separators, including works to existing drainage systems; 39
- (b) electrical, gas, potable water supply, carbon dioxide, foul water drainage and telecommunications infrastructure connections and works, and works to alter the position of services and utilities connections;
- (c) hardstanding and hard landscaping;
- (d) soft landscaping, including embankments and planting;
- (e) biodiversity enhancement measures;
- (f) security fencing, gates, boundary treatment and other means of enclosure;
- (g) external lighting, including lighting columns;

- (h) gatehouses;
- (i) closed circuit television cameras and columns and other security measures;
- (j) site establishment and preparation works, including—
 - (i) site clearance (including vegetation removal, demolition of existing buildings and structures);
 - (ii) earthworks (including soil stripping and storage and site levelling) and excavations;
 - (iii) remediation works;
 - (iv) the creation of temporary construction access points;
 - (v) the alteration of the position of services and utilities; and
 - (vi) works for the protection of buildings and land;
- (k) temporary construction laydown areas and contractor facilities, including—
 - (i) materials and plant storage and laydown areas;
 - (ii) generators;
 - (iii) concrete batching facilities;
 - (iv) vehicle and cycle parking facilities;
 - (v) pedestrian and cycle routes and facilities;
 - (vi) offices and staff welfare facilities;
 - (vii) security fencing and gates;
 - (viii) external lighting;
 - (ix) roadways and haul routes;
 - (x) wheel wash facilities; and
 - (xi) signage;
- (l) vehicle parking and cycle storage facilities;
- (m) accesses, roads and pedestrian and cycle routes; and
- (n) tunnelling, boring, piling and drilling works and management of arisings, and to the extent that it does not form part of such works, further associated development comprising such other works as may be necessary or expedient for the purposes of or in connection with the relevant part of the authorised development and which fall within the scope of the works assessed in the environmental statement.

4. Applicant

4.1 Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited

5. Environmental Impact Assessment

5.1 The submission has been supported by an Environmental Impact Assessment. The Council has been involved in discussions with the applicant with regard to the scope of the EIA.

6. Council Position

6.1 The full response to the consultation is set out below in sections 8 and 9. The sections include the comments received from consultees within the Council and their context with regard to National and Local Policy.

7. Key Planning Policies

7.1 National Planning Policy

National Planning Policy Framework (NPPF)
National Policy Statements:

7.2 Local Planning Policy

The Development Plan comprises of the Redcar and Cleveland Local Plan (2018)

The key policies within the Local Plan are considered to be:

Policy SD3 – Development Limits
Policy ED6 – Protecting Employment Areas
Policy LS4 – South Tees Spatial Strategy
Policy N1 - Landscape
Policy N3 – Open Space and Recreation
Policy N4 – Biodiversity and Geological Conservation

Landscape Character Supplementary Planning Document
South Tees Supplementary Planning Document

8. Consultation Replies

8.1 The Council along with a wide range of other internal stakeholders have been involved over the past couple of years with discussions with the applicant. The pre-application discussions have included; level of detail and scope of the community involvement and the scope of the Environmental Impact Assessment.

8.2 Summary of consultation responses received

Redcar and Cleveland Borough Council Engineers

Appendix 16a Transport Assessment

Various sites. Our area includes the Power, Capture and Compression site and the Combined Cycle Gas Turbine Electricity Generating Station which will be served from Steel House HGV via Tees Dock Road (construction phase).

Once operational there could be a maximum of approximately 60 full-time staff working in three shifts at the power station (06:00 – 14:00 hours, 14:00 – 22:00 hours and 22:00 – 06:00 hours). In addition, there would be around 40 corporate staff based at the site working normal office hours (09:00 – 17:00 hours). Plus, up to 200 staff for up to 3 months during outages about every 5 years. About 10 HGV/day in operational phase.

Decommissioning arrangements to be arranged near the time.

We require an employee travel plan for permanent & temporary

We require formal monitoring of the employee travel plan with further mitigation measures to be introduced in consultation with us as required

Junction appraisal

Steel House Roundabout 2024 with committed development & construction under 0.85 RFC

Westgate Roundabout 2024 with committed development & construction under 90% DOS except for A1053 ahead left movement (right hand lane) in pm peak at 92.9% an increase of 0.3% over committed development.

Greystones not modelled as >30 vehicles/peak hour as agreed by National England.

We need a revised signalling plan to be implemented at Westgate Roundabout & further analysis of Kirkleatham Lane Signals to prove sufficient capacity.

Appendix 16b Construction Worker Travel Plan

NZT (planninginspectorate.gov.uk)

Car parking at Steel House with onward bus shuttle to site. (areas north of River to have on site car parking for 120 workers at 60 vehicles).

1 car per 2 workers with car sharing website. Contractors to arrange minibuses to site from accommodation or central points, cycle storage & lockers for employees to store equipment. Projection max +315 vehicles inbound 0600 to 0700 with staggered return during evening (+810 vehicles each day based on assumptions about car sharing 80% with 2 people & works minibuses 20% with 7 people). 1,750 workers at peak from month 16 to 27 of which 148 are expected to come from the east turning right at Steel House.

If the CWTP is delivered in full this will be acceptable to us (re employee travel plan measures).

We require formal monitoring of the CWTP with further mitigation measures to be introduced in consultation with us as required

Appendix 16c Construction Traffic Management Plan

NZT DCO 6.4.38 ES Vol III Appendix 16C Framework Traffic Management Plan (planninginspectorate.gov.uk)

Construction HGV traffic to be routed via A66 or A174(T) & A1053 via Tees Dock Road. M-F 0700 to 1900 & Sat 0700 to 1300. Wheel wash & warning signage. Abnormal Indivisible Loads via sea (40 ship movements). Formal liaison process.

If the CTMP is delivered in full this will be acceptable to us (re employee travel plan measures).

We require formal monitoring of the CTMP with further mitigation measures to be introduced in consultation with us as required

Redcar and Cleveland Borough Council LLFA

The LLFA have reviewed the information submitted and can confirm that Kinkerdale Beck, Dabholme Beck, The Mill Race, Mill Lade, Ash Gill, Mains Dike and the Fleet have all had issue with flooding and flooded both residential areas as well as a number of businesses within the corridors identified in the planning application. There are also a number of structures and perched pipes that prevent the efficient flow/discharge of water throughout these watercourse named above.

The proposed development may provide the opportunity to look to improve these issues should works pass through/adjacent to these corridors. The Dabholm Gut area is the primary area for flooding and existing infrastructure restrictions that need to be addressed with landowners under their riparian ownership.

Volume III Appendix 9A FRA details an outline drainage strategy, a project specific drainage strategy will be secured by a requirement of the DCO. In addition, the LLFA would also expect the FRA to fully consider the potential impacts of the Gas Connection, Electrical Connection, Onshore CO2 Transport Pipeline, CO2 Gathering Network and Water Connection Corridors.

9.8 Management of surface water from the site – 9.8.19 stipulates that an uncontrolled/unrestricted discharge rate from all sites to Tees Bay (main river). This is supported by policy SD7 of the RCBC local plan. However, should a discharge corridor not form part of the final drainage strategy proposal, the development must comply with the additional requirements of SD7 for Brownfield development with a minimum of 50% betterment in run off from site.

Appropriate mitigation measures to be considered, to ensure no increase in flood risk within the locality are detailed in section 9.9.13. The LLFA request that consideration be given to and included in detailed design and layout.

Furthermore, the applicant would also be required to apply and have approved by the LLFA any Ordinary Water Consents which may be necessary.

Redcar and Cleveland Borough Council Environmental Protection (Nuisance and Contamination)

Contaminated Land

I note that Chapter 10 Geology provides a Preliminary Sources Study Report which collates geotechnical and geo-environmental information for the Proposed Development, present a summary of that information and identify possible geotechnical and geo-environmental development constraints as supporting information for Chapter 10: Geology, Hydrogeology and Contaminated Land.

The report considers previous investigations carried out within the boundaries of the site and various corridors, however this is currently a desk based study and no walkover has been carried out. The operation of the project will be regulated under the Environmental Permitting Regulations for Prevention of emissions to the environment. Contamination is a specific requirement of the Environmental Permit for the operation of the Proposed

Development. The report states that, it will be designed so that it will not create any new areas of ground contamination or pathways to receptors as a result of construction or operation and on decommissioning the site will be brought back to previous baseline levels.

At the time of writing no scheme specific ground investigation (GI) has been undertaken. This is scheduled to be undertaken in Q2/Q3 2021.

Recommendations for further works and further site investigation works are made in Appendix 10A annex A which will update the preliminary risk assessment and conceptual model throughout the process.

For the purposes of a planning application Appendix 10A is satisfactory to act as a desk based study required for validation purposes, although consideration should be given to the mitigation of odorous emissions and potentially contaminated dust during further GI works and remedial earthworks to protect both onsite and offsite receptors.

Appendix 10C Contaminated Land Environmental Risk Assessment reviews and Risk Evaluates the Potential Pollutant Linkages and suggests on the CPP/Tarmacadam sites that the risk to ground workers from asbestos is high and moderate for site users, and similarly the risk is high to ground workers and moderate to site users from acids and alkalis, coal tar volatile organic compounds.

I would request that consideration to any future site investigation includes sampling of the boundary to assess if there will be any on/off site migration of contamination (for the purpose of the baseline environmental permit and characterisation of the site); and will it be dealt with to ensure the footprint is not or does not become impacted during operation both on and off site through migration of contaminants?

To ensure full characterisation of the site the standard Contaminated Land Condition should be applied to any planning permission granted.

Noise and Vibration

Chapter 11 considers noise and vibration from construction, operation and decommissioning of the project.

The cumulative effects of noise associated with the Proposed Development and other committed developments in the vicinity and the impacts of noise on residential and other human receptors are assessed

Construction And Demolition Noise

Indicative construction and demolition noise levels were calculated using the procedures for prediction of construction noise set out in BS5228-1:2009+A1:2014.

The report states that at this stage in the project design development, before the appointment of a construction contractor, site specific details regarding the construction activities, programme and numbers and types of construction plant are unavailable. Therefore, detailed construction noise predictions cannot be undertaken.

However, the report states that indicative construction noise predictions have been undertaken using the calculation methods set out in BS 5228, based upon construction information from other power and pipeline construction projects. In addition, indicative calculations have been undertaken for works associated with the CO2 Gathering Network, Gas Connection, CO2 Export Pipeline and Electrical Connection, as well as for the decommissioning phase

The Nearest Noise Sensitive Receptor is Marsh Farm Warrenby which is approximately 650m from the development boundary.

For the assessment of Construction Vibration further assessment is scoped out due the significant distance from the PCC Site to residential and industrial NSRs (a minimum distance of 650m), and therefore no significant vibration (medium or high magnitude impacts) is expected.

For vibration impacts on buildings due to the CO2 Gathering Network and Gas Connection Corridor may be closer to the industrial receptors, vibration on these receptors is assessed.

Measures to control and mitigate construction/demolition noise will be implemented during the construction phase with embedded mitigation to be included in a Construction Environmental Management Plan (CEMP) including setting out provisions to ensure that the noise and vibration impacts relating to construction activities are reduced as far as reasonably practicable possible, noted in para 11.52

To assist in the preparation of the CEMP, a detailed noise and vibration assessment will be undertaken once the contractor is appointed in order to identify specific noise and vibration mitigation measures for the Proposed Development (including construction traffic)

The report states that no significant effects are predicted for construction on and away from the PCC Site.

Assessment of Operational Noise

The assessment of operational noise levels has been based on a noise propagation model developed using the noise modelling software CadnaA 2021

Sound emission data for key sound emitting plant/ buildings within the CCGT component of Proposed Development (turbine halls, heat recovery steam generator (HRSG), peaking plant) have been taken from the Kings Lynn and Eggborough Power Station Environmental Statements (ES) data. The Kings Lynn site included significant embedded mitigation; therefore, it has been necessary to adjust the data to represent an unmitigated scenario for this assessment. Through comparison and correlation with data from other current CCGT projects, the CCGT plant sound power levels have been increased for this project by 7 dB LA, to allow modelling of the specific conditions and layout of an unmitigated scenario of the Site.

Based upon the predicted noise levels from the noise model, an assessment of potential noise impact at nearby NSRs has been undertaken using the guidance in BS 4142 (BSI, 2014c).

Q it is not entirely clear where the unmitigated scenario with an increase of 7dBA comes from. Please provide details of how this figure was arrived at from the other CCGT plants to verify this level increase?

Figure 11.5 shows predicted operational Noise levels which indicates NSR4 Marsh Farm to receive 41dBA from operational noise, 2 dB above the measured background level, however the BS4142 assessment suggests that at NSR 4 during the day and night the indicative rating level is 5 dB above the background sound level. Predicted effects are therefore initially categorised as minor adverse, before consideration of context, and before the addition of any specifically designed acoustic mitigation.

The report states that on the basis of the above and the BS 4142 rating level being at the LOAEL (no greater than +5 dB excess of rating level over background sound level) effects of minor adverse or less (not significant) are expected.

I would disagree with para 11.6.58 that many residents in the local communities are already accustomed to an industrial sound environment. The site has been closed since 2014 and previous to that, both the LA and EA were in receipt of noise complaints. The development should operate without any impact on the local environment and residents.

The report considers cumulative effects of both simultaneous construction and operation of proposed developments within the vicinity.

The report states as a worst-case assumption, the construction phase producing the highest construction noise levels for each development occurring simultaneously is shown in Table 11-30. In practice this is unlikely to occur for prolonged periods, or at all.

The report states that at the detailed design stage, the existing noise model will be refined, and additional acoustic assessment will be undertaken in consultation with the designers to further optimise the noise emissions from the Proposed Development, where possible. The findings of the further assessment will inform the design to ensure that rating levels meet with a target of no greater than +5 dB above the representative background sound level at each NSR. This would result in a low magnitude of impact and an overall minor adverse effect at worst, based upon the context of the environment.

As well as further detailed noise assessment I would recommend that validation of modelled noise outputs are carried out during construction and commissioning to ensure the design criteria is met.

Air Quality

Chapter 8 discusses impacts on air quality from the construction and operation of the project. Preliminary Environmental Information (PEI) Report has been produced to address the potential air quality effects of the Proposed Development which include:

- *dust generation during construction;*
- *emissions from mobile plant during construction;*
- *emissions from road traffic during construction and operation; and*
- *process emissions from the operational Proposed Development.*

The operation of the project will be regulated under the Environmental Permitting Regulations for Prevention of emissions to the environment which will be issued by the Environment Agency.

Appendix 8A: Air Quality – Construction Assessment

This considers the impact of emissions during the construction, commissioning, and decommissioning of the Proposed Development on local air quality and considers the following construction activities proposed:

- Earthworks (soil stripping, spoil movement and stockpiling);*
- Construction (including on-site concrete batching); and*
- Trackout (HGV movements on unpaved roads and offsite mud on the highway).*

The risk assessment for construction dust indicates that there would be a low risk of unmitigated dust impacts on human health (PM10) and a low to medium risk of dust impacts on dust soiling from unmitigated earthworks, construction and track out activities

Construction Traffic Assessment

The impacts of emissions from construction traffic is likely to result in insignificant effects, given the magnitude of change is considered to be negligible where human receptors are present

Chapter 8 and associated appendix 8A construction phase concludes that the proposed construction and demolition works has shown that without mitigation there could be a short-term low to medium impact of dust emissions associated with the construction phase on human health and a potential high impact on the ecological receptors, with a significant effect.

However, appropriate mitigation measures for managing these risks will be set out in the outline CEMP and will be in accordance with the IAQM guidance. They will be formalised through the CEMP to be prepared by the construction contractor. Through implementation of these measures, no significant dust effects are predicted on any sensitive receptors.

It should be noted from Chapter 10 Geology and Contaminated Land, that the site is contaminated with asbestos amongst other contaminants. This should be accounted for particularly at the Earthworks (soil stripping, spoil movement and stockpiling) stage and included within any CEMP with appropriate monitoring for groundworkers and offsite receptors

Also, any HGVs leaving the site with contaminated materials should be appropriately covered to minimise spillage and emissions of odorous waste.

Air Quality – Operational Phase

Chapter 4 Proposed Development states that the design of the Proposed Development is not yet finalised and will not be completed until the detailed design stage. However, the final design will be within the parameters assessed within this ES which will be retained in order to allow construction of the Proposed Development to progress from Q3 2022.

Table 4-1 provides the Maximum Design Parameters

The final stack height for the operational Proposed Development is still to be determined, however the results reported in this assessment are considered to be associated with the lowest stack height that could be used, if the maximum building heights used the assessment are representative of the final design, and therefore represent a worst case.

However, Appendix 8B states that the main reported emissions for the Proposed Development have been modelled at a carbon capture plant absorber stack height of 115 m above finished ground level, with an internal stack diameter of 6.6 m. It is considered that 115m is the stack height that would result in not significant impacts at human health and ecological receptors, with the current model input parameters and therefore has been used in the assessment

The report states annual and hourly average predicted concentrations of ammonia that occur anywhere as a result of the Proposed Development represent less than 1% of the relevant AQALs and therefore can be considered to be insignificant and the annual average predicted concentration of amines that occurs anywhere as a result of the Proposed Development represent less than 1% of the relevant AQAL at all locations and therefore can be considered to be insignificant/ negligible.

Yet chapter 4 states that there is uncertainty in the level of potential ammonia emission, the design of the CCP may include provision for an acid wash to remove ammonia from the absorber stack gas if required. - it is not sure whether this will be a localised problem or on a wider scale and when this provision will occur at the detailed design stage or on commissioning?

It appears from the report, emissions of ammonia and use of amine solution and amine breakdown compounds that odorous emissions could potentially cause an impact on the environmental receptors, I note that this is not mentioned in any supplementary assessment.

I would recommend adopting a precautionary approach and add a condition that a final air quality assessment to include an odour assessment should be submitted in order to assess the impact of the development once the detailed design stage is finalised.

Redcar and Cleveland Borough Council Business Engagement Team

Should this project be approved, it's positive impact will reach far beyond the borders of Redcar and Cleveland and the wider Tees Valley. NZT Carbon Capture Utilisation and Storage (CCUS) plans will make our communities cleaner, safer and healthier whilst making our region a global centre of excellence for hydrogen and carbon capture technology. Carbon capture is not just important for meeting our ambitious target for the UK to be net zero by 2050, its essential for decarbonising our world-leading processing and chemicals industries and safeguarding thousands of skilled, well-paid jobs in the process.

The project will bring back into use brownfield land within the Teesworks site, bringing welcome business rates income to deliver much needed services to local residents and businesses. This project will be significant in Tees Valley and help local industries to reduce their carbon costs and meet ambitious climate change commitments as we move to a greener future.

Maximising local labour and skills will be key and this is highlighted within the application's Environmental Statement. During construction, NZT could support £370 million in direct GVA and 4,500 direct jobs annually from 2024 to 2028, reaching a peak of £450 million in direct GVA and 5,500 direct jobs in 2025. Many of the permanent jobs will be highly skilled, which is crucially important as we seek to replace the well-paid skilled jobs lost at SSI in 2015. There is also an opportunity for targeted recruitment, safeguarding well paid jobs locally and offering opportunity to highly skilled personnel currently employed at power and industrial facilities around the world, who wish to return to work in Tees Valley.

From an Economic Growth perspective, we welcome this proposal which would positively contribute towards key local growth and regeneration priorities in creating new well-paid jobs and transforming some of our world-leading businesses to take a huge stride towards our ambitions to become carbon-neutral.

Our Routes to Employment Team are eager to promote and support delivery of the job opportunities and upskilling programmes this significant investment will bring to local residents whilst our Business Growth Team are proactively engaging with local businesses to raise awareness of NZT including promotion of supply chain events organised in the area and how local businesses can get involved and benefit. We are in direct contact with NZT and welcome this positive partnership approach, providing opportunity to engage and facilitate introductions to develop relationships which will support the delivery of the CCUS infrastructure needed to decarbonise our borough and beyond.

This significant project sends out a very strong message that Redcar and Cleveland is a beacon for investment and will encourage more businesses to consider our borough as a prime location for future investment.

9. Key Issues

9.1 The key issues in relation to the onshore elements of the project are considered to be:

- Policy Context
- Sustainability
- Landscape and Visual Impact
- Biodiversity and Ecology
- Highways
- Residential Amenity
- Environmental Protection
- Drainage and Flood Risk
- Socio-economics
- Conditions

Policy Context

9.2 An updated version of The National Planning Policy Framework (NPPF) was published by the Ministry of Housing, Communities and Local Government in June 2019. The NPPF sets out the Government's planning policies for England and how these are to be applied. Paragraph 5 confirms that the NPPF does not contain specific policies for NSIP developments and that these should be determined in accordance with the decision making framework set out in the Planning Act 2008 and relevant national policy statements for major infrastructure.

9.3 The relevant development plan is the Redcar and Cleveland Local Plan 2018. The Local Plan also contains an associated Policies Map.

Sustainability

9.4 The relevant policy within the Local Plan regarding sustainability is SD1 (Sustainable Development). The proposed development is considered to exhibit sustainable credentials. The application is considered to have the potential to provide economic, social and environmental benefits, consistent with the wider policy objectives that promote sustainable development.

9.5 The development through its location and proximity to rail, port and bus services has the potential to built upon sustainable modes of transport during both construction and operational phases of development.

Landscape and Visual Impact

9.6 A Landscape and Visual Impact assessment has been submitted as part of the Environmental Statement. The assessment has been undertaken with reference to Guidelines for Landscape and Visual Impact Assessment (GVLIA 3) and Technical Guidance Note 06/2019. The assessment methodology is considered to be appropriate for the proposed development project.

9.7 The Council acknowledge that a series of viewpoints have been analysed as part of the assessment. The viewpoints have been assessed through the characterisation of the view and through the provision of photomontages as well as plans outlining the potential bulk of the development within the view from the specific viewpoint. It is considered that that viewpoints considered provide a representative assessment of the proposed development.

9.8 With regard to visual effects resulting from the development within Redcar and Cleveland, the ES at para 17.7.2 acknowledges that there is the potential for Significant Adverse effects to be experienced from three viewpoints, these being; Viewpoint 5 (South Gare Breakwater) during the construction phase, Viewpoint 7 (England Coast Path, Warrenby) during construction, opening and operation phase and Viewpoint 8 (Redcar Seafront) during the construction phase.

9.9 The Council notes the applicants reference at para 17.7.3 with regard to the position within section 2.65 of NPS EN-2 relating to visual impacts of generating stations and the impact on landscapes and visual amenity. While it is recognised that mitigation for such developments is changeling, it is agreed that an appropriate mechanism for minimising adverse impacts is through the appropriate siting of infrastructure, including the use of suitable materials (including colour). This is considered to be able to be provided through Requirement 3 as set out in the draft DCO.

Biodiversity and Ecology

9.10 The application includes assessment of ecological matters within the Environmental Statement including the provision of a Habitat Regulations Assessment. The assessments are expected to have been prepared in an appropriate manner in consultation with the relevant consultees.

9.11 The Local Authority do not employ an ecologist to assess the submitted information and therefore rely on the responses from both local and national stakeholders with regard to biodiversity and ecological issues including the use of suitable requirements through the DCO.

Highways

9.12 The Highway Authority, Redcar and Cleveland Borough Council have considered the impact on the proposals on the local highway network during construction, operation and decommissioning.

9.13 The Highway Authority recognise that power, capture and compression site and the Combined Cycle Gas Turbine Electricity Generating Station which will be served from Steel House HGV via Tees Dock Road (construction phase) are present within the boundaries of Redcar and Cleveland.

9.14 Once operational there could be a maximum of approximately 60 full-time staff working in three shifts at the power station (06:00 – 14:00 hours, 14:00 – 22:00 hours and 22:00 – 06:00 hours). In addition, there would be around 40 corporate staff based at the site working normal office hours (09:00 – 17:00 hours). Plus, up to 200 staff for up to 3 months during outages about every 5 years. About 10 HGV/day in operational phase. It is considered that the impacts resulting from these movements can be managed through the implementation of an employee travel plan as required by Requirement 19 of the draft DCO.

9.15 Consideration has been given to junction capacity in the vicinity of the site. The Highway Authority note the Environmental Statement states Steel House Roundabout 2024 with committed development & construction under 0.85 RFC, Westgate Roundabout 2024 with committed development & construction under 90% DOS except for A1053 ahead left movement (right hand lane) in pm peak at 92.9% an increase of 0.3% over committed development. Notwithstanding the information within the Environmental Statement, the Highway Authority have advised that a revised signalling plan be implemented at the Westgate Roundabout and further analysis be provided in relation to Kirkleatham Lane signals to prove there is sufficient capacity.

9.16 The Highway Authority note that a Construction Worker Travel Plan (CWTP) has been prepared in support of the application. It is considered that should the CWTP be implemented in its entirety then the content of it is acceptable with regard to employee travel measures subject to suitable monitoring.

9.17 The Highway Authority also note the preparation of a Construction Traffic Management Plan (CTMP). It is considered that should the CTMP be implemented in its entirety then the content is acceptable subject to suitable monitoring.

Residential Amenity

9.18 Policy SD3 of the Local Plan is relevant when considering the impact of proposals on surrounding areas, including residential amenity.

- 9.19 The number of residential properties affected by the construction activities is considered to have been minimised due to the proposed location of the development. The construction activities will be managed by the implementation of suitable working practices as required through Requirements 16 of the draft DCO.
- 9.20 The nearest noise sensitive receptor to the site is Marsh Farm at Warrenby which is approx. 650m from the development boundary. Consideration has been given to the impacts of vibration and noise associated with construction activities on the closest receptors. Measures to control impacts resulting from the development process are to be built into the Construction Environmental Management Plan (CEMP) as required through the Requirements in the DCO.

Environmental Protection

Contamination

- 9.21 The relevant policy within the Local Plan is SD4. The information within the ES has been considered by the Council's environmental protection team who have provided a detailed response set out above in the document. In summary given the works that have been undertaken to date mainly involve desk based assessment, it is considered that further GI works will be necessary and should be secured by way of conditions/requirements through the DCO. It is acknowledged that this is proposed to be secured by Requirement 13 of the draft DCO.

Noise and Vibration

- 9.22 Consideration has been given to noise and vibration during the construction, operation and decommissioning of the project. These assessments have also included cumulative assessment of other committed developments in the vicinity of the site and their associated impacts.
- 9.23 The submitted information within the ES states that indicative construction noise predictions have been undertaken using the calculation methods set out in BS5228, based upon construction information from other power and pipeline construction projects, due to the final design and construction contractor not being finalised. In addition, indicative calculations have been undertaken for works associated with the CO2 Gathering Network, Gas Connection, CO2 Export Pipeline and Electrical Connection, as well as for the decommissioning phase. It is noted that suitable mitigation for construction and demolition noise will be implanted through the proposed Construction Environmental Management Plan that will be secured through Requirement 16 of the draft DCO.
- 9.24 The submitted information within the ES states that indicative operational noise has been calculated from the Kings Lynn and Eggborough Power Station Environmental Statements (ES) data. Assumptions have been made with regard to embedded mitigation in these developments that has been stripped out to provide a worst case scenario. It is however not entirely clear where the unmitigated scenario with an increase of 7dBA comes from and therefore further details of how this figure was arrived at from the other CCGT plants is requested to verify this level of increase.

9.25 Notwithstanding the information that has been provided in support of the application in terms of construction and operational noise assessment it is considered that a further detailed noise assessment should be undertaken that validates the modelled noise outputs to ensure the design criteria are met.

Drainage and Flood Risk

9.26 The LLFA have reviewed the submitted information within the ES. The LLFA have confirmed that Kinkerdale Beck, Dabholme Beck, The Mill Race, Mill Lade, Ash Gill, Mains Dike and the Fleet have all had issue with flooding and flooded both residential areas as well as a number of businesses within the corridors identified in the submission. The proposed development however does have the potential to provide an opportunity to improve these issues should any of the required works be in proximity to the drainage corridors.

9.27 The LLFA note the intention for uncontrolled/unrestricted discharge rates from the site(s) into the Tees Bay. While this position is supported by Policy SD7 of the Local Plan, should this solution not be achievable through the final design solution, the development may be required to comply with other requirements set out in Policy SD7 of the Local Plan requiring brownfield development to provide a minimum of 50% betterment in runoff from the site.

9.28 The LLFA also note mitigation measures that are set out within section 9.9.13 of the ES and request that these are considered and provided where possible in any future detailed design and layouts of the development.

9.29 The applicant is also made aware by the LLFA of the requirement to apply to and have approved any Ordinary Water Consents which may be necessary when carrying out any approved works.

Socio Economics

9.30 The Local Authority consider that the project will bring back into use brownfield land within the Teesworks site, bringing welcome business rates income to deliver much needed services to local residents and businesses. This project will also be significant in Tees Valley and help local industries to reduce their carbon costs and meet ambitious climate change commitments.

9.31 The Local Authority also recognise that the proposal would positively contribute towards key local growth and regeneration priorities in creating new well-paid jobs and transforming some of our world-leading businesses to take a huge stride towards our ambitions to become carbon-neutral.

9.32 The Council's Routes to Employment Team are eager to promote and support delivery of the job opportunities and upskilling programmes this significant investment will bring to local residents whilst our Business Growth Team are proactively engaging with local businesses to raise awareness of NZT including promotion of supply chain events organised in the area and how local businesses can get involved and benefit. We are in direct contact with NZT and welcome this positive partnership approach, providing opportunity to engage and facilitate introductions to develop relationships

which will support the delivery of the CCUS infrastructure needed to decarbonise our borough and beyond.

10. Conditions/Requirements

10.1 The Local Planning Authority recognise their responsibility for the discharge and enforcement of the Requirements contained within the Development Consent Order.

10.2 The conditions/requirements that form part of the Development Consent Order set out within Schedule 2 of the draft DCO. The Local Authority intended to continue working with the applicant and the examining authority in reaching agreement in the wording of relevant requirements.

11. Conclusions

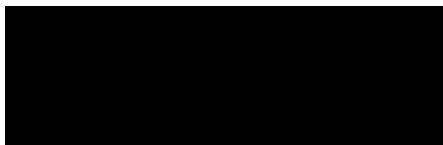
11.1 The proposed development is considered to provide a number of positives/benefits as set out above. The infrastructure will be sited within an industrial landscape, which is likely to continue to evolve with developments across the Teesworks site.

11.2 A number of controls are considered to be proposed through the Requirements of the draft DCO. These will continue to evolve and develop during the consideration of the application process.

11.3 The Local Authority have worked with the applicant in advance of the application being submitted and continue to be in dialogue with regard to the formation of a Statement of Common Ground and the continued discussions around the draft Requirements.

11.4 There continue to be a number of unresolved issues as set out above in the document, however it is hoped that these will be addressed through further discussions within the applicant throughout the application process.

Signed for and on behalf of RCBC:

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Claire Griffiths
Development Services Manager