DELEGATED ASSESSMENT

Application no: PA/2023/421

Proposal: Planning permission for the construction and operation of a post-combustion carbon capture plant PCC, including carbon dioxide compressor and metering, cooling equipment, stacks, substations, internal roads, partial ditch realignment, new and modified services, connections, accesses, maintenance and laydown areas. (EIA development).

Location: VPI Power Station, Rosper Road, South Killingholme, DN40 3DZ.

Applicant: VPI Immingham LLP

Officer: Dean Watson

POLICY CONTEXT

National Planning Policy Framework (December 2023) (NPPF):

Chapter 2 – Achieving sustainable development.

Chapter 4 – Decision-making.

Chapter 9 – Promoting sustainable transport.

Chapter 11 – Making effective use of land.

Chapter 12 – Achieving well-designed and beautiful places.

Chapter 14 – Meeting the challenge of climate change, flooding and coastal change.

Chapter 15 – Conserving and enhancing the natural environment.

Chapter 16 – Conserving and enhancing the historic environment.

North Lincolnshire Core Strategy (2011) (NLCS):

Policy CS1 (Spatial Strategy for North Lincolnshire).

Policy CS2 (Delivering More Sustainable Development).

Policy CS3 (Development Limits).

Policy CS4 (Creating a Renaissance in North Lincolnshire).

Policy CS6 (Historic Environment).

Policy CS11 (Provision and Distribution of Employment Land).

Policy CS12 (South Humber Bank Strategic Employment Site).

Policy CS17 (Biodiversity).

Policy CS18 (Sustainable Resource Use and Climate Change).

Policy CS19 (Flood Risk).

Policy CS20 (Sustainable Waste Management).

Policy CS25 (Promoting Sustainable Transport).

Policy CS27 (Planning Obligations).

Housing and Employment Land Allocations DPD (2016) (HELA):

Policy PS1 (Presumption in Favour of Sustainable Development).

Policy SHBE-1 (South Humber Bank).

North Lincolnshire Local Plan (2003) (NLLP) Saved Policies:

Policy IN1 (Industrial Development Location and Uses).

Policy IN3 (Industrial and Commercial Development).

Policy RD2 (Development in the Open Countryside).

Policy LC1 (Special Protection Areas, Special Areas of Conservation & Ramsar Sites).

Policy LC4 (Development Affecting Sites of Local Nature Conservation Importance).

Policy LC5 (Species Protection).

Policy LC6 (Habitat Creation).

Policy LC7 (Landscape Protection).

Policy LC12 (Protection of Trees, Woodland and Hedgerows).

Policy LC20 (South Humber Bank – Landscape Initiative).

Policy HE5 (Development Affecting Listed Buildings).

Policy HE9 (Archaeological Evaluation).

Policy T2 (Access to Development).

Policy T3 (Transport Statements).

Policy T11 (Protecting Rail Routes).

Policy T18 (Traffic Management).

Policy T19 (Car Parking Provision and Standards).

Policy DS1 (General Requirements).

Policy DS7 (Contaminated Land).

Policy DS9 (Development of Land in the Vicinity of Established Hazardous Installations).

Policy DS10 (New Hazardous Installations and Pipelines).

Policy DS11 (Polluting Activities).

Policy DS13 (Groundwater Protection and Land Drainage).

Policy DS14 (Foul Sewage and Surface Water Drainage).

Policy DS15 (Water Resources).

Policy DS16 (Flood Risk).

Policy DS17 (Overhead Power Lines and High Powered Electrical Installations).

CONSULTATIONS

Environment Agency (EA) (response 1):

The EA originally objected to the application as it failed the second part of the flood risk exception test. The submitted Flood Risk Assessment (FRA) failed to propose adequate mitigation measures to address flood risk for the lifetime of the development (stated as 25 years).

The EA required that the applicant should provide further information on how the development, in particular the substations, will be designed and built to remain operational during a flood. The scope to raise floor levels for these should be investigated further.

As the development is classed as essential infrastructure it is important that this is addressed to ensure the development remains operational and safe in time of flood.

The previous use of the proposed development site as part of the existing VPI Combined Heat and Power Station presents a potential risk of contamination that can be mobilised during construction to pollute controlled waters. Controlled waters are particularly sensitive in this location because the proposed development site is located upon a principal aquifer at depth below the site and within a source protection zone 3.

EA (response 2):

Further to receipt of correspondence from the applicant's environmental consultants (AECOM) addressing the above objection, evidence was provided that demonstrated that whilst the proposal may be classed as essential infrastructure, there is no

practical requirement for the infrastructure to remain operational in case of flooding. The carbon capture plant will be an addition to the existing power station and substations will serve the carbon capture plant only. There would therefore be no offsite implications if it could not operate for any reason.

In addition, evidence was provided that states that it is the operator's intention to raise the substations on concrete tables, providing a degree of protection against flooding.

In light of the above the EA have withdrawn their objection.

The EA have requested that appropriate land contamination remediation conditions are imposed, in so far as they relate to controlled waters along with additional conditions restricting the unmonitored use of piling and investigation boreholes and an adherence condition that accords with flood resistance recommendations of the ES.

Natural England (NE) (response 1 - 16.05.2023).

As submitted, NE consider that the application could have potential significant effects on Humber Estuary Special Protection Area (SPA)/Special Area of Conservation (SAC)/Ramsar site. Humber Estuary Site of Special Scientific Interest (SSSI), and North Killingholme Pits SSSI. NE requested further information in order to determine the significance of these impacts and the scope for mitigation. This information included the following:

- Further assessment of potential construction and operational phase visual impacts to SPA/Ramsar birds;
- Further assessment of potential construction and operational phase noise impacts to SPA/Ramsar birds;
- Further assessment of potential operational phase air quality impacts.

Without the above information, NE may need to object to the proposal.

Natural England (NE) (response 2 dated 25.01.2024).

NE note that NLC as competent authority, has undertaken an appropriate assessment of the proposal in accordance with regulation 63 of the Conservation of Species Regulations 2017 (as amended).

NLC appropriate assessment concludes that the authority is able to ascertain that the proposal will not result in adverse effects on the integrity of any sites in question. Having considered the assessment NE advises that they concur with the assessment conclusions, although they highlight different reasons for reaching the conclusion, which are summarised below.

In combination assessment – NE accept that the assessment for the proposed development can only make use of the information currently available from other

proposed projects. NE has requested further information on noise and visual disturbance to SPA birds using functionality linked land for the planning applications at Land adjacent to Westgate Entrance PA/2022/1223 and land at March Lane PA/2023/502.

Regarding development within the South Humber Gateway, Halton Marshes Wet Grassland has been created as mitigation for the loss of functionally linked land. However, as the mitigation site hasn't yet fully achieved its habitat objectives and significant numbers of SPA birds are still present outside of the site, NE consider that potential disturbance impacts must still be assessed.

Visual disturbance – in combination – NE does not agree with the HRA dated January 2023 that potential impacts from visual disturbance to SPA birds using functionally linked land during construction and operation "are so minor that effects in-combination with other plans or projects are not likely."

NE is particularly concerned about potential reduction in perceived openness and accessibility of Rosper Road Pools by SPA/Ramsar birds that use the site, due to the proposed developments in-combination. However, due to the distance of the proposed development from Rosper Road Pools and the existing industrial development behind it, NE advise that the in-combination assessment is considered sufficient at this time to conclude no adverse effects from the proposed developments in-combination with other plans and projects.

Noise disturbance – in-combination – NE does not recommend that a 70dB threshold is used as a generic threshold for noise levels which result in disturbance of birds. NE advise noise assessments should set the sensitive receptors in the context of the existing noise environment and assess how noise leves will change, including the type of noise, such as consistent or sudden loud bangs and how this may impact on birds.

NE does not agree with the in-combination assessment in the HRA which states that the other identified projects will not act in-combination with the proposed development, however NE note that the HRA screens in likely significant effects from noise disturbance during construction and operation in-combination with the relevant projects. With this in mind NE advise that the shadow HRA is considered sufficient at this time to conclude no adverse effects from the proposed developments in-combination with other plans and projects, however they note the in-combination assessment for the proposed development relies on mitigation measures implemented for other projects.

Based on the plans submitted, NE considers that the proposed development will not damage or destroy the interest features for which the site has been notified and has no objection.

Ecology: (response 1 dated 02.05.2023).

Landscape: The submitted Landscape Visual Impact Assessment notes moderate adverse landscape and visual impacts on residents of Marsh lane and users of public footpaths in that vicinity, including the England Coast Path. Impacts on other

receptors are less significant and should be considered in the context of an industrial landscape that already has a number of visual detractors.

Options for on-site landscaping and mitigation are limited due to the large scale and land-take of the development. However, saved Policy LC20 also allows for off-site provision of landscaping in the South Humber Gateway.

Habitats Regulations Assessment (HRA): The application has provided some of the information reasonably required for a HRA, however more evidence is required before the HRA can be produced.

Protected Species: Protected and priority birds, butterflies and foraging bats are present, with potential for water voles. Some sensitive working measures are proposed for these species within the Ecology Chapter of the Environmental Statement (ES) and will need to be secured via a planning condition for a species protection plan or an ecological Construction Environmental Management Plan.

Bio-Diversity Net Gain (BNG): The submitted BNG report reveals a net loss of habitat units on site of >99% plus a net loss of river units of nearly 39%. A copy of the BNG metric spreadsheet has been requested. There are no alternatives to the proposal, given the need for carbon capture. Off-site BNG is proposed and will need to be secured via a S106 agreement.

Ecology: (response 2 dated 27.07.2023).

Matters pertaining to Landscape and HRA have been acknowledged and additional work is ongoing and awaited for consideration.

The applicant has acknowledged the need to impose planning conditions to secure the sensitive working measures for protected species as set out in the Ecology Chapter of the ES.

The Biodiversity metric spreadsheet was submitted and is considered to be a robust analysis of the site. It is estimated that 61.06 habitat units and 2.33 river units will be required offsite and secured via a S106 agreement that can delivered either onsite, offsite or by the purchase of BNG credits from third party landowners/suppliers.

Ecology: (response 3 dated January 2024).

Further to receipt of additional information a Habitat Regulations Assessment Stage 1 Significance Test and Stage 2 Appropriate Assessment was submitted to Natural England and subsequently following their above advice signed by North Lincolnshire Councl as competent authority.

National Highways (NH): (response 1 dated 16.01.2024).

The review of the submission highlighted the need for further information as outlined below:

1. A daily profile of operational trip generation should be presented and subject to the impact in peak periods, capacity assessments of Strategic Road Networks (SRN) junctions may be required;

2. Justification for the construction peak period trip generation assumptions should be presented for review;

3. NH consider that capacity assessments are necessary for the construction phase, due to the forecast number of trips, and would expect to see capacity assessments undertaken for the following junctions:

    a. A160 / Humber Road / Manby Road junction (Manby Roundabout);

    b. A160 / Eastfield Road Junction;

    c. A160 / Ulceby Road / East Halton Road / Habrough Road (Harbrough Roundabout0.

    d. A180 / A160 (Brocklesby Interchange); and

    e. M180 / A15 / A18 (Barnetby Interchange).

    However, to confirm the requirements, NH would request that the impact during SRN peak periods is presented for review for all SRN junctions within the study area.

4. Committed developments should be confirmed with the LPA;

5. The Applicant should identify the relationship between the proposed carbon capture developments and the emerging gathering networks, including identification of any cumulative impacts during the construction or operational phases.

6. Clarification should be provided on the variances in trip generation between the ES, TA and CTMP.

7. TM proposed on the SRN should be agreed with the relevant NH team and be designed in accordance with relevant policies and design guidance;

8. Temporary signage should be agreed with the relevant NH team and be designed in accordance with relevant policy;

9. The NH Abnormal Loads Team should be consulted regarding any AIL deliveries well in advance to ensure the suitability of the route(s).

10. The construction staff numbers in the CWTP are not consistent with those presented in the CTMP and clarification should be provided.

Notwithstanding the above, NH also suggest that a condition is imposed requiring the submission of a Decommissioning Traffic Management Plan for consideration and consultation with NH.

Additional information was subsequently provided for review in February 2024 to NH entitled National Highways Response 1 (AECOM) and subsequently in March 2024 Technical Memorandum (AECOM).

National Highways: (response 2 dated 12.07.2024).

National Highways are now able to accept the information that has been provided and offer No Objection, subject to the imposition of two conditions, the first is for a Construction Transport Management Plan and the second is an end of life Decommissioning Plan.

Highways: Further to the submission of additional information by the applicant, the Highways Authority have advised that a Stage 2 Road Safety Audit is submitted relating to the new access form Rosper Road.

Additional conditions are also recommended for a Construction Workers Travel Plan and a Phased Traffic Management Plan.

Drainage (Lead Local Flood Authority) (LLFA):

The LLFA Drainage Team has no objection to the proposed development subject to the impositions of conditions requiring the submission of a detailed surface water drainage scheme for the site and the satisfactory implementation of the approved scheme.

Environmental Protection (EP):

Contaminated land – EP reviewed the supporting ES chapter 10 and appendix along with a phase 1 desk study for the site and identified the following:

The initial conceptual site model has identified several pollutant linkages which are all considered low to moderate. The pollutant linkages relate to onsite, off-site, historical and current land use, and receptors that have been considered are human health (construction workers and future site users), controlled waters, development infrastructure and flora and fauna.

The main conclusions in relation to linkages are:

Made ground, pipeline networks, the off-site landfills and surrounding industrial land use are considered to be sources of potential contamination. Ground gas may also be generated within the made ground and natural strata located both on and off site, as well as within the landfills located off site.

The agent has agreed to the wording and imposition of a full raft of land contamination conditions, to include additional investigation and risk assessment, preparation of a detailed remediation scheme, submission of verification details and also the need to report any unexpected contamination.

The report has recommended that the above risks can be mitigated by undertaking a further ground intrusive investigation and risk assessment across the footprint of the development site.

Air Quality – EP assessed the impacts on local air quality, during both the construction and operational phases.

The report identifies the emissions to air during the construction phase of the development have the potential to adversely affect human health, sensitive ecosystems and amenity as a result of localised air quality effects caused by dust and traffic generation. EP recommend appropriate mitigation and control measures as set out in the outline submitted CEMP to be imposed via a pre-commencement condition.

Noise and Vibration – EP assessed the relevant chapter of the Environmental Statement (ES) which addresses the potential noise and vibration impacts of the development on local residential and other human receptors, Noise Sensitive Receptors (NSRs). The impacts and effects of the proposed VPI development and Phillips 66 development are considered separately and for both developments together. Impacts during the construction, operation (Including maintenance) and decommissioning of the proposed developments are assessed.

In relation to both construction noise and operational sound effects, mitigation, if considered necessary, would be integrated into the detailed design, in order to meet the limits to be agreed at the nearest NSR.

EP requested that permission should not be granted unless the applicant can demonstrate that it can comply with consent conditions, albeit the operation of the authorised development must not be greater than 3dB higher that the defined representative background sound level during each of the daytime and the night time, adjacent to the nearest residential properties at locations to be agreed.

Furter to receipt of the above EP were issued with a Technical Note dated 28.11.2023 demonstrating via appropriate mitigation the above scenario is achievable.

Archaeology: (response 1 dated 25.05.2023).

Following an initial consultation the Historic Environment Record (HER) preliminary results confirm that the site contains significant archaeological excavation, incorporating palaeoenvironmental assessment and analysis. An Archaeological Mitigation Strategy and Written Scheme of Investigation (WSI) detailing the archaeological work to be undertaken should be submitted and approved prior to determination of the application.

(Response 2 dated 05.12.2023).

The applicant submitted an Archaeological Mitigation Strategy that provides for the preservation in situ and pre-construction excavation and recording of features identified within specified areas of the application site.

A WSI titled VPI Immingham, Humber Zero Project; Written Scheme of Investigation for Archaeological Mitigation Works dated 04.12.2023. The document has been reviewed and is considered to be satisfactory. HER have no objections to the application subject to the impositions of appropriate conditions.

Humberside Police (Crime Reduction Officer): No Observations.

National Grid: No Objection.

Network Rail: No Objection in principle to the development.

Humberside Fire and Rescue Service: Information has been provided to be added to the file relating to the requirement to provide both access for fire services and water supplies for fire fighting.

Anglian Water: No Comments.

North East Lindsey Drainage Board: No Objection.

PARISH COUNCIL

South Killingholme Parish Council support efforts to clean toxins from the air.

PUBLICITY

Advertised by site notices and press notices in accordance with the EIA Regulations.

LETTERS OF COMMENT

No third party representations have been received.

MATERIAL CONSIDERATIONS

Context: By 2050, the United Kingdom (UK) has committed to reducing carbon emissions to net zero. This is only achievable by effectively decarbonising existing industry. Energy intensive industries account for more than 20% of the economy and 1 in 10 jobs in the Humber.

The Energy White Paper (EWP): Powering our Net Zero Future (HM Government 2020) confirms the Government's support for Carbon Capture Usage and Storage (CCUS) drawing upon the resource provided by the North Sea and new hydrogen technologies. The Government estimates that the measures in the EWP could reduce emissions across power, industry and buildings by up to 230 million tonnes of carbon dioxide in the period to 2032.

The UK Government's Net Zero Strategy (2021) expands on key commitments in the Energy White Paper, proposing to deliver four CCUS clusters by 2030.

The British Energy Security Strategy (2022) seeks to set out how Great Britain will accelerate homegrown power for greater energy independence and supports the objectives for low carbon emissions and is committed to investing in CCUS by providing £1billion in public investment to decarbonise the nations industrial clusters.

The Energy Security Bill (2022) seeks to deliver a cleaner, more affordable and secure energy system by growing the UK-based energy market to reduce dependency on fossil fuels. A key aspect of the Bill is to focus on low carbon energy, in particular the role of CCUS technologies and the creation of hydrogen using carbon dioxide captured from the CCUS process (also known as "blue hydrogen") in achieving the aims of the Bill.

Recently (December 2023) the UK Government has set out its plans ("CCUS Vision") for a new competitive UK CCUS market by 2035 – to unlock investment and drive economic growth, adding circa £5 billion to the economy by 2050.

The concept and process of carbon capture works by capturing carbon dioxide (CO2) before it reaches the atmosphere and storing it safely underground – filling the spaces left by oil and gas extraction. The UK holds a strategic advantage in this regard as an island nation offering enough space under the North Sea for up to 78 billion tonnes of CO2.

Humber Zero is a large-scale decarbonisation programme, being advanced in partnership by Phillips 66 and VPI Immingham LLP (the applicant) that aims to remove up to 8 million tonnes (MT) of atmospheric CO2 emissions per annum from the Immingham industrial cluster by 2030 through the deployment of a number of technologies such as CCUS. (See planning application ref: PA/2023/422).

The first phase of Humber Zero seeks to remove up to 3.8 Mt of CO2 annually by capturing carbon from the Phillips 66 Limited Humber Refinery's FCC stack and two of the gas turbines and auxiliary boilers at the VPI Immingham CHP Plant.

Each site has submitted an individual application for planning consent and in recognition of the interrelated nature of both developments a joint Environmental Statement (ES) has been prepared and submitted in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the "EIA Regulations") and based on the Scoping Opinion (SO) issued by the Local Planning Authority (LPA) March 2022. Each development (i.e. each application) is capable of being implemented independently. There are two potential networks that the developments could be connected to – the proposed Viking CCS CO2 transportation and storage network and/ or the Esat Coast Cluster Humber Low Carbon Pipelines (HCLP). The decision as to which will be connected to, will be made by each applicant following government funding announcements.

The ES contains the following technical chapters:
Air Quality; Noise and Vibration; Traffic and Transport; Water Environment and Flood Risk; Landscape and Visual Amenity; Cultural Heritage; Ecology and Nature Conservation; Geology, Hydrogeology and Contaminated Land; Materials and Waste; Climate Change; Major Accidents and Disasters; Socio-Economics and Human Health; and Cumulative and Combined Effects.

The application has been subject to a comprehensive pre-application community and stakeholder engagement exercise and full details are provided in support of this proposal within a Consultation Report.

The Proposal The current proposal seeks to include the following components necessary to facilitate the development:

- Ducting to connect existing Gas Turbines (GT1 and GT2) and the auxiliary boilers to the PCC plant.

- Two PCC units, each with associated, blower, direct contact cooler, absorber, stack stripper/ regenerator, heat exchangers and a common thermal reclaimer unit.
- A CO2 vent stack for use during start up, shut down and emergencies only.
- CO2 compression facility with associated heat exchangers.
- Oxygen removal and dehydration facilities.
- CO2 metering and a pipeline connecting the PCC plant and compression facilities to the CO2 gathering network interface.
- On-site electrical substations.
- Caustic, solvent and other chemical offloading and storage facilities.
- Utilities (including chiller, steam generator, hydrogen package and air compressors).
- Internal access roads.
- Surface water drainage system.
- Realignment of the existing ditch (South Killinghome Drain) within the VPI Site.
- Construction and maintenance laydown areas; and
- A new site access from Rosper Road.

Recent Planning history.

PA/2009/1093: Planning permission to replace two gas turbine air inlet filter houses. Approved 16.10.2009.

PA/2011/0370: Planning permission to erect office extension. Approved 26.05.2011.

PA/SCO/2017/3: Scoping opinion for VPI-Immingham Energy Park “A” Power Station. Issued 31/01/2018.

PA/2018/918: Construction of a new gas-fired power station with a gross electrical output of 49.9 megawatts.

PA/2021/1039: Application for non-material amendment following grant of planning permission PA/2018/918 to amend conditions 3,5,6,8,9,13 and 16. Approved 08.07.2021.

PA/2022/1548: Planning permission to construct and operate a temporary pilot post-combustion carbon capture plant and associated infrastructure. Approved 26.10.2022

PA/2023/612: Planning permission for the installation of a 71.28 kwp solar carport and infrastructure for renewable energy generation. Decision pending.

The site. The Immingham industrial cluster is located on the south bank of the River Humber, approximately 1 kilometre from the coastline with the North Sea.

The VPI Site is 28.51ha and within and immediately to the south of the operational VPI Immingham CHP Plant, accessed from Rosper Road. The area for the proposed VPI PCC plant and CO2 compression is to the south of the existing Power Station and comprises grassland with an open ditch running west-east through the centre, areas of hardstanding and existing below ground utilities. The northern part of the VPI PCC plant area was previously used for laydown during the construction of the existing VPI Immingham CHP Power Station. The southernmost part of the VPI Site will not be developed but it will be used for construction laydown for the Proposed Development.

The Lindsey Oil Refinery is immediately north west and Humber Refinery is immediately south west and is bisected from the Site by a railway line. Immingham Dock is approximately 1.5km to the south east of the CHP Plant at its closest point.

The Humber port is located approximately 980m north at its closest point.

The land to the north is the Site of the proposed VPI Immingham Open Cycle Gas Turbine ('OCGT') Power Station (also known as VPI 'B'), which was granted development consent on 7 August 2020. In 2018 planning permission was granted on land to the north of and within the VPI Immingham CHP Plant (Council application reference. PA/2018/918) for the construction of a gas fired power station (known as VPI Immingham Energy Park 'A').

The nearest settlement is the town of Immingham, which is located approximately 2.5km south of the site, and the nearest residential property is a single property on Marsh Lane located approximately 700m to the east of the site.

The surrounding area comprises industrial and agricultural uses.

In determining the proposal, the main issues to consider are:

The principle of development.
Highways..
Flood risk and drainage.
Biodiversity/Ecology.
Heritage.
Amenity.
Other material considerations.

Principle of development.

Achieving sustainable development is the core purpose of the NPPF, this has both an economic, social and environmental objective.

Chapter 14 of the NPPF outlines the planning systems overarching objective to support the transition to a low carbon future and support for low carbon energy.

Paragraph 163 states in part that:

When determining planning applications for renewable and low carbon development. Local Planning Authorities LPA's should approve the application if its impacts are (or can be made) acceptable.

Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires planning applications to be determined in accordance with the development plan unless material considerations indicate otherwise.

In this instance the development plan consists of the North Lincolnshire Local Plan (NLLP) which was adopted in May 2003, the North Lincolnshire Core Strategy (NLCS) which was adopted in June 2011 and the Housing and Employment Land Allocations (HELA) DPD which was adopted in March 2016.

Material considerations exist in the form of national planning policy and guidance contained within the National Planning Policy Framework (NPPF) December 2023 and the suite of documents comprising of the Planning Practice Guidance (PPG).

Paragraph 47 of the NPPF states that planning law requires applications for planning permission be determined in accordance with the development plan, unless material considerations indicate otherwise.

The most relevant Development Plan policies in establishing the principle of the proposed development are policy IN3 (Industrial and Commercial Development in the Urban Area, Principal Growth Settlements, South Humber Bank Area (including North Killingholme Airfield) and Humberside International Airport) of the North Lincolnshire Local Plan 2003 (NLLP); policy CS12 (South Humber Bank Strategic Employment Site) and policy CS18 (Sustainable Resource Use and Climate Change) of the North Lincolnshire Core Strategy 2011 (NLCS); and policy SHBE-1 (South Humber Bank) of the Housing and Employment Land Allocations Development Plan Document 2016 (HELADPD).

Policy IN3 of the NLLP supports, in principle, proposals for B1, B2 and B8 development within the South Humber Bank Area, which includes the application site. This policy requires that developments are compatible with surrounding uses, are planned and laid out on a comprehensive basis, storage areas are screened, provision is made for loading and offloading and that landscaping is incorporated as an integral part of the development.

Policy CS12 of the NLCS seeks to reserve the South Humber Bank Strategic Employment Site for B1, B2 and B8 port related activities in order to take special

advantage of its location, flat topography and adjacent a deep water channel of the River Humber as an extension to Immingham Port and the Humber Sea Terminal.

Policy CS18 relates to reducing climate change and seeks to meet the required national reductions of predicted CO2 emissions by at least 34% in 2020 and 80% in 2050. Paragraph 12 of Policy CS18 provides specific support for new technology and carbon capture for heavy industrial uses to reduce CO2 emissions in North Lincolnshire.

This is further reinforced via policy SHBE-1 if the HELA DPD, which allocates the South Humber Bank Employment area, in which the site is located, for port related industrial development (B1, B2 and B8 uses).

Whilst the proposed development is not “port related” development, it is industrial development which is directly related and necessary and functionally requires a location at the VPI site. It is recognised, that the site will involve the loss of agricultural soils (approximately 15ha of Grade 3 land), the function of the proposal does seek to significantly improve the wider environment via carbon capture in an area characterised by heavy industrial uses including power stations and oil refineries and is connected to the Strategic Road Network. For these reasons, it is considered that the proposal generally accords with the aforementioned policies and that the principle of development is acceptable in this instance.

Environmental Statement – The proposal would allow for favourable socio-economic outcomes in terms of enhanced and continued investment, employment opportunities and has been designed to avoid and minimise adverse impacts on human and environmental health. The proposal is considered to provide **beneficial but not significant benefits.**

Highways

The NPPF and NLCS policy CS25 have an overarching presumption in favour of promoting sustainable transport requiring a development to manage its impact on the transport network. Paragraph 115 of the NPPF states that:

“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”

Saved policies T2 and T18 of the NLLP require developments to ensure that satisfactory access can be provided to the site and that traffic management measures are implemented to address traffic generation.

As part of the proposal, a new access is proposed to be constructed from the public highway (Rosper Road) into the VPI site. This access is proposed as the main HGV access and egress during construction and for maintenance and emergency use during operation. Staff access is proposed via the existing main entrance to the VPI CHP Plant site.

The application has been supported by a Transport Assessment (TA), Construction Traffic Management Plan and a Construction Worker Travel Plan all appended within

the Traffic and Transport Chapter of the ES and the data and analysis reviewed by both National Highways and the Local Highway Authority.

The TA considered the predicted number of vehicle movements generated during the construction of the proposal and the sensitivity (including pedestrian and cyclist safety) and capacity of the local road network. Public rights of way have also been incorporated within the study.

Further to receipt of the above consultation responses, the proposal is considered to be acceptable with regards to its impacts upon the strategic and local road network subject to the impositions of conditions requiring a Stage 2 Road Audit, a Construction Workers Travel Plan and a Construction Traffic Management Plan in accordance with the mitigation requirements set out in the requisite chapter of the ES.

Environmental Statement – Additional traffic resulting from the proposed developments construction activities will result in temporary increases of traffic flows, including HGV's, on the roads leading to the sites. The effects of construction traffic on pedestrian amenity, severance, fear and intimidation, highway safety, pedestrian and cyclist amenity, driver delay and hazardous loads have been assessed and through implementation of traffic management measures as identified in the above conditions the residual effects of the proposal are all reduced to **not significant.**

The operational traffic effects of the development are considered to be **not significant.**

Flood Risk/Drainage

The relevant Development Plan policies in respect of flood risk and drainage are policy DS1 of the NLLP, which requires suitable on-site drainage to be provided and off-site drainage problems to be overcome; policy DS13 of the NLLP, which seeks to secure effective land drainage measures; policy DS14 requires satisfactory provision to be made for the disposal of foul and surface water from new developments; policy DS15 protects water resources and policy DS16 seeks to prevent increased flood risk on site or elsewhere.

Policy CS12 of the NLCS, which seeks to include surface water and sewage management solutions to accommodate development of the SHBES without harming the natural environment; policy CS18 of the NLCS, requires the use of SuDS where practical and supports the necessary improvement of flood defences and surface water infrastructure required against the actions of climate change; and policy CS19 of the NLCS, which seeks to avoid areas of current or future flood risk and prevent the increase in flood risk elsewhere as a result of new development.

In accordance with NPPF and Local Planning Policy a Flood Risk Assessment (FRA) has been prepared, which in turn has informed the supporting ES.

The VPI site lies within Flood Zone 3, although the site is not considered to be at risk from flooding from fluvial main rivers, the risk of flooding from tidal sources (the Humber Estuary) relates to the risk of a breach in the flood defences along the Estuary, although it is noted this is currently managed by the Environment Agency.

The proposed development is considered to be “Essential Infrastructure”, and in accordance with the NPPF Planning Practice Guidance (PPG) may be permitted in Flood Zone 3 where it passes the Exception Test.

The FRA has identified that any surface water drainage would continue to be via the South Killingholme Drain which would need to be diverted within the VPI site as part of the proposal and would be restricted to the greenfield runoff rate via a holding/balancing lagoon which would accommodate an estimated storage for a 1 in 100 year event with 20% allowance for climate change. Other SuDS techniques, such as swales, permeable paving and soakaways.

Further to consultations with the LLFA, the above approach is considered to be acceptable subject to a condition requiring full details of the design to be submitted prior to commencement on site.

Environmental Statement – Through the use of a CEMP and mitigation, including water monitoring, no significant adverse effects are predicted for the water environment during construction. The effect on all water bodies is considered **not significant.**

With the increased surface water attenuation on site and interception of pollutants collected and treated prior to discharge the effects on surface water drainage and flood risk as a result of the proposed development are anticipated to be **not significant.**

The impacts of the site decommissioning are considered similar to the construction phase and via the imposition of an appropriate Decommissioning Environmental Management Plan the effects are considered to be **not significant.**

Biodiversity/ Ecology

The relevant Development Plan policies in respect of the consideration of matters relating to biodiversity and ecology are NLLP policy LC1 (Special Protection Areas, Special Areas of Conservation & Ramsar Sites), which necessitate the need for the Habitat Regulations Assessment to be fully undertaken. NLLP policy LC4, which seeks to protect areas of local nature conservation importance. Whilst NLLP policy LC5 and HELA policy SHBE-1 South Humber Bank sets out the requirements of development to mitigate impacts on biodiversity and ecology, including to give appropriate consideration to international, national and local protected sites for nature conservation and to undertake an ecological assessment.

NLCS policies CS5, CS16 and CS17 relate to the protection of biodiversity resources, the maintenance of wildlife networks and green corridors and ensuring ecological enhancement through good design, respectively.

Chapter 13 of the ES provides an assessment of the effects of the proposed development upon ecology and biodiversity and was informed by a number of ecological surveys as identified below:

- Habitats, plant communities and species
- Invertebrates, Dingy skipper and wall brown butterfly
- Amphibians, Great Crested Newt
- Reptiles
- Breeding Birds
- Wintering and Passage Birds
- Bats
- Badgers
- Water Voles
- Otters
- Other Priority Species.

There are six ecological sites with nature conservation designations within 5 km of the site. Two are covered by statutory designations, whilst the remaining four are local non-statutory designated sites. The closest site is Rosper Road Pools, a Local Wildlife Site designated for its open water habitats, located approximately 130m east of the site.

Reports to inform HRA have been prepared to consider likely significant effects on the Humber Estuary SPA and SAC which are located approximately 1.5km to the north east.

The wider site comprises the CHP Plant operational area and a large mosaic of habitat types to the south ranging between nutrient rich and species-poor grassland that has been evaluated as being of County Level value due to its large area and the habitat it provides for the assemblage of birds, small heath butterfly and opportunities for foraging bats.

In the south of the site there is a large area of broken ground circa 4ha that is currently developing a range of early open mosaic habitats, which is of Local nature conservation value, given the high proportion of bare ground.

A broadleaved tree belt runs along the railway and into the south-west of the site which has a site level for nature conservation.

There are no permanent waterbodies on the site although, South Killingholme Drain runs through the site west to east and has a site value of nature conservation.

There are no Great Crested Newts within 2km of the site and the site provides no roosting opportunities for bats and limited foraging opportunities.

The application has been supported by a Biodiversity Net Gain (BNG) Report and Strategy has been prepared to support the proposed development. As there is insufficient opportunity to meet the 10% BNG commitment on land within the site, an off-site solution is required. The provision of the off-site solution is to be secured via a S106 agreement that allows for a variety of triaged solutions to be sought and delivered within the constructions phase of the development. Delivery of the mitigation and the management ongoing to be secured via a condition requiring the submission of a Biodiversity Enhancement and Management Plan which would need to be agreed by the LPA prior to commencement of work on site.

Having regard to HRA, an Appropriate Assessment (AA) has been prepared and submitted for approval to Natural England. The findings of the AA are to be recorded within the consultation responses section of this report and any potential conditions detailed within this summary.

In conclusion, the proposed development has provided all the requisite survey data and report to inform the Ecology Officer of all the potential impacts upon designated sites, habitats and species. Subject to securing the offsite mitigation via S106 for BNG units necessary to achieve the 10% net gain and also the signing off the Appropriate Assessment by Natural England, the proposal is considered to be policy complaint and acceptable in terms of its impacts upon ecology and biodiversity.

Environmental Statement – As a result of the construction and operation of the proposed development it is predicted there will be **no significant effects** on statutory or non-statutory designated sites. It is considered that any discernible noise or visual disturbance to wintering birds using nearby habitats would **not be significant** and **no significant effects** on water quality or flow rates to the nearby Rosper Road Pools Local Wildlife Site have been identified.

Having regard to habitats, the construction of the VPI development will result in the loss of approximately 4ha of habitat and approximately 8ha of grassland which are considered to represent significant adverse effects, however the securing of the offsite provision mitigates the loss in full.

The realignment of the South Killingholme Drain is considered to be **not significant** as the drain does not support protected species and has relatively low ecological value.

Impacts on species due to the loss of habitats within the VPI site are as follows. The effect on small heath butterfly within the grassland areas is considered to be a significant adverse, however off-site habitat creation and the translocation of pupa/eggs is the proposed form of mitigation to negate the adverse impacts. The ES reported the residual effects after mitigation would be moderate beneficial (significant) as a result of new habitat created/translocation under BNG.

The potential for noise and visual disturbance to affect wintering birds associated with the Humber Estuary that may be using the habitats to the east of the site has been assessed and these effects are considered to be **not significant**.

As a result of the proposed mitigation and enhancements to achieve a 10% biodiversity net gain, the long term effects from the development will provide a **significant beneficial effect**.

Heritage

The relevant development plan policies against which to assess the proposed development's effect upon cultural heritage are policy HE5 of the NLLP, which seeks to secure the preservation, restoration and continued use of buildings of special architectural or historic interest; policy HE8 of the NLLP, which seeks to prevent development proposals which would result in an adverse effect on SAM's and other nationally important monuments and their settings; policy HE9 of the NLLP, which require adequate assessment of archaeology; and policy CS6 of the NLCS, which seeks to protect, conserve and enhance North Lincolnshire's historic environment.

In addition to the above emerging policy HE1 requires development to take every practical step to protect and enhance (where possible) archaeological remains; to undertake appropriate and proportionate desk based assessments to understand the potential for significance of remains and any impact on them; and that in-situ preservation of such sites is preferred, however in instances where this is not justified, adequate provision for excavation and recording is required.

The assessment of the effects of the proposed development in respect of heritage assets is set out within Chapter 12 Cultural Heritage of the ES. The assessment addresses the potential effects of the development on cultural heritage assets and identifies the location, type and significance of cultural heritage assets and their setting.

The study area for the ES as agreed with the Historic Environment Officer was 1km buffer from the site boundary for all heritage assets and a 5km buffer for designated heritage assets.

The site, whilst heavily industrialised, does not fall within the setting of any listed buildings, nor does it contain any designated or non-designated heritage assets, scheduled monuments, registered parks and gardens or conservation areas. There are a number of / 33 listed buildings (Grade I, II and II*) within the study area, including 4 which are within 1km, and 16 non-designated buildings within 1km of the site.

In terms of archaeological assets, it has been identified that during the construction phase of the development there would be a partial loss of archaeological material from the ancient foreshore and associated paleochannels and deposits, and Iron Age-Roman Settlement assets in the southern portion of the site and possible Bronze Age-Roman settlement activity.

The proposal has been supported by an Archaeological Mitigation Strategy and a Written Scheme of Investigation for Archaeological Mitigation Works and appropriate conditions have been agreed with the Historic Environment Officer to safely develop the site, in accordance with relevant development plan policies.

Environmental Statement - The construction assessment considered both the impacts on the setting of the built heritage and below ground archaeology, whilst the operational impacts considered primarily the intrusive nature of the proposed development upon the setting of the landscape and the surrounding buildings, along with long term increases in noise as heard from the asset.

The findings of the ES conclude that since no physical remains of designated assets lie within the boundaries of the site, and as the site do not sit within the setting of any nearby designated assets, there will be no impacts and **no significant effects** upon any designated assets.

There are a number of non-designated assets within the site, most notably (if present) that may be effected during the construction phase, namely the loss of Bronze Age to Roman Settlement assets, which may be in association with an Iron Age to Roman Settlement (if present).

A program of mitigation currently ongoing via a series of trial trenches and a paleoenvironmental assessment is considered to provide sufficient research evidence to ensure that there will be **no significant effects** at the construction stage.

During operation, **no significant effects** to designated or non-designated heritage assets have been identified, including effects on setting of the closest listed buildings, due to distance and limited visibility of the proposed development.

No significant effects on historical landscape character have been identified for the proposed developments during the construction or operational phases.

Environmental - Land Contamination

The relevant development plan policies against which to assess the proposed development's effect upon ground conditions and hydrogeology are policy DS1 of the NLLP, which seeks to prevent development from resulting in pollution of water, air or land; policy DS7 of the NLLP, which requires contamination to be overcome by remedial measures or improvements; and policy DS15 of the NLLP, which seeks to protect the quality and quantity of water resources.

The application has been supported via a phase 1 land contamination report and assessed by both EP and the EA, both of which have requested site investigations to be undertaken to fully inform the impacts of the proposal upon human health and controlled waters. A full suite of conditions is recommended to ensure appropriate remediation is undertaken where necessary although it is noted the Phase 1 desk studies and ground investigations have already been completed.

In addition to the above, Chapter 10 of the ES covers matters relating to geology, hydrology and contamination during the construction, operation and decommissioning phases.

The majority of the site is agricultural land designated as Grade 3. The north west of the site, which hosts the VPI CHP Plant is designated as Grade Urban. The Agricultural Land Use Classification (ALC) divides land into Grades 1 to Grades 5,

with Grade 3 separated into 3a and 3b. Grades 1-3a are described as the “Best and Most Versatile Land.” Natural England should be consulted if the loss is likely to be 20ha or more. In this instance the area of Grade 3 within the site is less than 20ha (at approximately 15ha), subsequently an ALC survey is not considered to be necessary.

The groundwater vulnerability for the site varies between low and high. The principal aquifer in the centre of the site is designated as low vulnerability, whilst the areas of the site that are not overlain by Tidal Flat Deposits (Clay and Silt) have a groundwater vulnerability of medium to high, both resulting from the combination of a productive bedrock and unproductive superficial aquifer,

As previously mentioned within the drainage section of the report, the site sits within Flood Zone 3. During the construction phase, surface water runoff will be controlled using appropriate drainage measures and segregating uncontaminated surface water from any potentially polluted waters, as well as impermeable surfacing to minimise infiltration into the ground where necessary. If piled foundations are proposed, risk assessments will be necessary and controlled via a condition requested by the EA. These will be used to establish the means of mitigating any risks of causing new pollutant linkages and/or worsening existing ones with respect to risks to controlled waters at the construction stage of the development.

The risks to human health receptors from accidental leaks of fuels and oils from mechanical plant and/or potentially contaminated dust during excavation works needs to be managed by appropriate construction management measures and controlled via the inclusion of a CEMP condition.

Via the imposition of appropriate conditions to ensure the remediation of the site and precautionary management techniques to minimise risk to both human health and controlled waters, the land identified for development is considered to be developable and this element of the planning process is considered to be complaint with development plan policies.

Environmental Statement – Following analysis of the ground investigation results, implementation of the measures outlined within the CEMP, completion of piling risk assessments, and the use of appropriate construction materials, all effects are considered to be **not significant.**

Having regard to the loss of agricultural land this is considered to be **significant adverse** assuming a worse case that the land may be classified as Agricultural Land Classification Grade 3a. To mitigate the loss, measures will be set out within a Soil Management Strategy, which will confirm the different soil types and the most appropriate re-use for the different types of soils, handling methods and how soils should be handled, stored and replaced. In addition to the quantitative loss of the soil, it is noted that the site is constrained by its shape and location which will significantly reduce the potential agricultural use of the site on a purely logistical and cost effective basis.

Potential impacts to soil quality and groundwater could potentially occur during operation as a result of accidental spills from the handling or leakage of fuels ,lubricants, stored chemicals and process liquids. Potential impacts are considered

unlikely as the development will be operated in accordance with relevant regulations and legislation. With appropriate management, housekeeping and preventative maintenance practices (such as appropriate storage of potentially contaminating chemicals), as required by the Environmental Permits that will be needed for the site, any potential impacts to soil and groundwater will be minimised. As such, effects have been assessed as **not significant.**

Potential impacts due to direct contact or inhalation of dust, soil vapours or contamination during operation of the development will be mitigated through the adoption of safe working practices and use of appropriate

Amenity

Air Quality - The most relevant extant development plan policies against which to assess the proposed development's effect upon air quality are policy DS1 of the NLLP, which requires that development proposals do not result in pollution of air, water or land; policy DS11 of the NLLP, which seeks to prevent development that would result in dangerous levels of polluting emissions; and policy CS18 of the NLCS, which seeks to protect people and the environment from unsafe, unhealthy and polluted environments, by protecting and improving the quality of the air, land and water. Policy CS2 of the NLCS relates to the achievement of sustainable development and includes taking account of local environmental capacity to improve air quality.

ES chapter 6 assesses the impact of the development with regards to air quality during construction (dust), operation (process emissions) and decommissioning.
The development site is not located within a designated Air Quality Management Area (AQMA).

The development has been assessed by EP and their recommendation to include a comprehensive CEMP to manage the construction of the proposal have been added as a planning condition to the recommendation made within this report and to ensure the proposal is complaint with relevant development plan policy.

Environmental Statement - It is anticipated that the proposed development will generate short-term airborne dust from construction activities and emissions associated with motor vehicle exhaust. No mitigation is proposed, although best practice methods will be enforced through the imposition of the CEMP. Effects of construction dust are assessed as **not significant.**

During the operation phase there would be **no significant effects** on any human health or ecological receptors as a result of emissions, subject to the following mitigation measures:

Emission Limit Value compliance will be met for operational plant, in accordance with use of Best Available Techniques (BAT) under the environmental permitting regime;

Design of the stack to minimise ground level air quality and optimise opportunities for dispersion; and

Emissions control practices which would allow amines to be captured from flue gas and returned to the process train for re-use.

The decommissioning impacts are considered to be similar to those experienced during construction, **no significant effects.**

Noise and Vibration – The most relevant development plan policies against which to assess the proposed development's effect upon noise and vibration are policy DS1 of the NLL, which requires that new developments do not result in unacceptable loss of amenity to neighbouring land uses and policy DS11 of the NLLP, which requires that developments do not create environmental conditions likely to affect nearby developments and adjacent areas.

ES chapters 7 and 13 assess the potential noise and vibration impacts of the development upon residential and other human receptors and ecological receptors during construction, operation and decommissioning, including the cumulative impacts of other committed developments in the future.

The nearest residential receptors are sited approximately 340m to the south west and are already subject to industrial noise sources given the character of the surrounding developments in the locality.

In terms of the sources of noise, during construction and flowing consultations with EP it is recommended that a detailed CEMP will be required to ensure that operators and local residents are fully aware of the best practices to be adhered to be minimise impacts. Furthermore risk assessments are also required for any future piling on site and these will need to be agreed with the EA and EP prior to any such processes commencing on site.

Whilst increased levels of vehicles will be deployed to and from the site during the construction process, it is not anticipated that this increase is significant to effect any local residential receptors.

The proposed development would be operated in accordance with Environmental Permits as regulated by the EA and operational noise limits have been agreed with EP not to exceed 3dB above the background sound level at the nearest residential receptor.

The operational vibration impacts would not be significant given the distances of the site to surrounding residential development and sensitive receptors. CO2 venting is not anticipated, nor venting or steam lines during normal operation, these would only occur at start up, in emergency situations and during some maintenance activities and would be subject to Environmental Permits. Notwithstanding the aforementioned this would not result in significant adverse impacts in terms of noise amenity.

The impacts experienced during decommissioning in terms of noise and vibration would be similar or less than to those during construction and would be secured by way of planning condition for a Decommissioning Environmental Management Plan (DEMP).

Via the imposition of appropriate conditions monitoring working practices and controls over the limits of noise that are considered to be acceptable the proposal is considered to provide a form of development that will not lead to conditions prejudicial to residential amenity, which is policy compliant with relevant development plan policies.

Environmental Statement – Noise is likely to be generated throughout the construction phase through works such as initial site preparation, earthworks and excavation of buildings and infrastructure including potential piling, operation of temporary facilities, as well as from construction traffic on the local road network.

Construction noise effects at all residential receptors during construction of the development and associated increases in construction traffic within core daytime working hours are predicted to be **not significant** on the basis that mitigation measures set out in the CEMP are followed.

Any works necessary that need to take place outside core working hours will need to be planned, managed and controlled appropriately, whilst firstly being agreed with the LPA in consultation with EP.

Vibration effects on existing structures has been assessed as **not significant.**

The application of practical sound mitigation to reduce relevant noise at source within the development site will be undertaken during the detailed design to achieve an acceptable noise level at the nearest receptors. This mitigation will result in effects that are classified as **not significant**.

Landscape and Visual - The relevant extant development plan policies against which to assess the proposed development's effect upon landscape and visual impact are policy RD2 of the NLLP, which seeks to protect the character and appearance of the countryside; policy DS1 of the NLLP, which requires all new development to respect and where possible retain and/or enhance the existing landform; policy LC7 of the NLLP, which requires special attention to be given to the protection of the scenic quality and distinctive local character of the landscape; and policy LC12 of the NLLP, which proposed certain measures to be taken to mitigate the visual impact of new developments in the South Humber Bank Landscape Initiative area.

Chapter 11: Landscape and Visual Amenity of the ES has assessed the potential effects of the construction, operation (including maintenance) and decommissioning of the proposed development on the landscape character and visual amenity.

The study area for the landscape impact assessment includes a number of areas designated locally for their landscape character and/or perceived qualities/ tranquility, whilst being heavily influenced by existing industrial complexes such as VPI Immingham CHP Plant, Lindsey Oil Refinery, Phillips 66 Humber Refinery and Killingholme Power Stations, as well as open farmland and wooded areas.

At a national level the study area includes National Character Area (NCA) 41: Humber Estuary and NCA 42: Lincolnshire Coast and Marshes, which are influenced by the character of the river and coastline respectively .

The potential landscape impacts primarily relate to the visibility of the proposed structures, with the tallest tower and stack heights up to 110 m above ground level and how this affects the overall landscape character of the area.

The potential landscape impacts of the proposed development during the construction phase relate to the following:

- Movement of plant and heavy goods vehicles, in and around the development site.
- Temporary stockpiling of storage of materials on site.
- Establishment of site compounds resulting in temporary structures to serve the workforce.
- Crane activity to assist high level construction works.
- Building construction including new stacks.
- External lighting to illuminate site operations after dark.

The operational phase of the development will relate to the following:

- Introduction of permanent large-scale structures including the buildings, including stack and absorber.
- Introduction of other permanent large-scale structures.
- Presence of plumes from the stacks. (Air quality modelling results predict that the plumes will be visible 85% of the time and average 123m in length).

The decommissioning phase of the development is considered to be similar to those identified within the construction stage.

As part of the consideration of the impact of the proposed development, a total of eight viewpoints were selected, therefore providing a range of views from settlement, accessible roads and public rights of way all within 5km of the development site.

Given the existing landscape character and the existence of similar, large-scale industrial facilities within the wider area it is considered that the impacts of the proposed development on landscape character and visual amenity would be harmonious within its context and unlikely to lead to conditions prejudicial to visual amenity within the localised landscape immediately adjacent to the site.

In light of the above, the proposed development is considered to be consistent with the development plan policies with regards to landscape and visual impacts on amenity.

Environmental Statement – As the proposed development is located within an area characterised by large-scale industrial development**,** the proposal is considered to fit with the context of the area and therefore it has been assessed that there is low or very low impact on the landscape character during construction, operation and decommissioning. Effects on landscaping character are therefore assessed as **not significant.**

The ES concludes the majority of the assessed viewpoints will experience no change to their view during construction and operation due to the existing screening from the localised intervening landform and existing structures in the surrounding area. There is however, one exception that will experience a **significant adverse** visual effect due to the close proximity of the development site, this is categorised as viewpoint 3 (a residential property and public right of way on Marsh Lane to the east of the VPI site. There is no course of mitigation that can reduce this visual effect in this regard.

Impacts on transient views from the surrounding main transport routes and long-distance walking trails within the study area have also been considered but effects are considered to be **not significant** due to the intervening structures, screening vegetation, elevations and direction of travel.

Having regards to the visual impacts of the plumes from the stacks, these are considered within the context of multiple other stacks /plumes in an already industrial landscape and subsequently are considered to be **not significant.**

Other Material Considerations

Materials and Waste – Minimising waste and using natural resources prudently are important parts of the NPPF's environmental objective. Policy SHBE-1 of the HELA requires development to implement waste control measures (where practical) and use materials sensitive to the location.

Due to the size and nature of the proposals, waste arisings are anticipated to be very minor in nature during operation. Construction waste is not expected to be significant, as it is not envisaged that any cut and fill volumes would be necessary, thereby minimising the import and export of materials and waste. Any construction waste would be managed through the CEMP, which will be secured by condition.

No objections have been raised by the EA or EP in respect of waste. Taking into account the lack of objection raised by these consultees, it is considered that the proposed development is unlikely to have any adverse impact in respect of waste and that the mitigation of the effects of the development are both appropriate and proportionate.

The ES Chapter 15 details the expected operational waste streams associated with the proposed development, their source, classification, and estimated quantity. The operation wastes generated would mainly arise from the proposed PCC plant, and to a lesser extent from the operational site offices and would include wastes that may be hazardous, some of which would be suitable for landfill disposal, high temperature incineration, or managed by hazardous liquid waste facilities liquid waste.

Environmental Statement – The total percentage by weight of construction material is no greater than 1% compared to the baseline consumption in the UK, subsequently this is considered to be **not significant.**

Construction waste volumes are based on estimates at the writing of this report and it is therefore assumed that the non-hazardous construction waste, including any

demolition and excavated waste, will be sent to landfill. As the amount of waste produced will require less than 1% of the available landfill capacity the effect is considered to be **not significant.**

Quantities of hazardous construction waste are anticipated to be small compared to the overall construction waste arising, and will require less than 0.1% of the hazardous waste landfill capacity, so the effect is considered to be **not significant.**

During operation, hazardous waste will be produced due to the nature of the operational processes at the site, however the ES has identified that the volumes of waste to be generated will result in **no significant** effect on capacity of available hazardous waste landfill. Any such waste may be managed by high-temperature incineration or by physical-chemical treatment, or sent to landfill as a worst case.

Decommissioning waste volumes are considered to be similar to those generated during construction.

Climate Change and Carbon – The relevant development plan policies against which to assess the proposed development are CS1, CS2, CS5 and CS18 of the NLCS which aim to contribute towards the Council's own climate goals as well as the UK Government's commitment to meeting the legally binding targets of "net zero" carbon emissions by 2050.

The proposal is in accordance with the variety of UK Climate Change Government Strategy and Policy including "Net Zero Strategy; Build Back Greener," "Net Zero – Opportunities for the Power Sector" and "The Clean Growth Strategy."

Once operational, it is considered that the proposal will be designed to be capable of capturing 95% of carbon emissions during steady state operation. The overall carbon capture rate is reduced to 82% when upstream emissions from the wider value chain are taken into account. These are associated with the extraction, refining and transportation of the natural gas over which VPI have less control.

With the above in mind, the proposal is considered to be fully compliant with both international, national and local planning policy.

Environmental Statement – The VPI project is designed to capture 95% of CO2 from GT1 and GT2 and the two auxiliary boilers at VPI Immingham CHP Plant.

The greenhouse gas (GHG) emissions associated with the construction and operation of the proposed development without accounting for the GHG emissions abated are considered to be **not significant.** Taking account of the GHG emissions directly abated, the development can be assessed as having a GHG impact that is **beneficial and significant,** compared to a future baseline of the existing site without carbon capture.

No in-combination climate change impacts were identified.
The potential impacts and effects of future climate change to the proposed development have been assessed taking into account resilience measures that will be built into the design. These will include drainage systems to mitigate flood risk,

dusk control management measures, design measures to allow the plant to continue to operate in more extreme temperatures and maintenance inspections. The ES concludes that the embedded design measures are sufficient to reduce the likelihood or consequence of an impact occurring as a result of projected climate hazards. As such, no significant resilience risks have been identified and effects are therefore assessed as **not significant.**

Major accidents and disasters - The LPA are the appropriate authority for establishing the acceptability of the proposed development in terms of its land use and associated impacts on the surrounding environment. Both national and local policy reiterate this by stating that planning permission should only be granted for potentially hazardous installations and operations where it can be demonstrated that it would not impose significant restrictions and risk to surrounding land uses.

The current proposal seeks to incorporate the following mitigation, it is noted that many of the below are to be controlled via permitting regimes operated via pollution control authorities.

- The incorporation of “safety in design principles” following the hierarchy of “eliminate, control and protect” (eg Personal Protective Equipment PPE).
- Implementation of Health and Safety Plans and appointment of competent contractors.
- Major Accident Prevention Plans to inform the Control of Major Accident Hazards license. (COMAH).
- Siting and design of high pressure CO2 equipment, including with regard to areas of potential exposure and prevailing wind directions .
- Design of security measures to prevent trespassers.
- Surface water management systems to attenuate up to and including a 1 in 100 year storm event with an allowance for climate change.
- Operating in accordance with appropriate permissions and licenses.

During the construction phase, a range of mitigation measures would be employed.

- Preparation and implementation of a detailed CEMP in accordance with relevant permits and legislation, to include measures aimed at reducing flood risk during construction, particularly in flood Zone 3.
- Preparation and implementation of a CTMP to reduce risk of road-related accidents; and
- Installation of around the clock site security and lighting. This would include the provision of fencing and security arrangements which would be monitored on-site, including CCTV and controlled personnel/emergency accesses.

During the operational phase a range of mitigation measures would include.

- Obtaining a lower tier COMAH Licence as a minimum, pending finalisation of the hazardous substances that would be handled on-site and the inventories involved.
- Design and operational controls to manage risks associated with hazardous substances, including on-site storage of liquid chemicals in bunded controlled

areas with appropriate storage capacity and segregation of incompatible materials.

It is anticipated the decommissioning phase would be consistent with that of the construction phase.

With all of the above in place, it is considered that the residual effects on sensitive receptors are not considered likely and effects are therefore assessed as **not significant.**

Cumulative and Combined Effects – As required by the EIA Regulations (2017) at Schedule 4 Part 5, Chapter 18 of the ES considers the residual cumulative and combined effects of the proposed development during construction, operation and decommissioning.

The significant effects identified are cultural heritage and socio-economics impacts arising from the proposed development and other planned developments.

The ES concludes that any significant socio-economic impacts is moderate beneficial (significant) impact due to construction employment generation from various developments.

The significant effects on cultural heritage arise from the proposed development and planned developments of Viking CCS pipeline (undecided) and on land adjacent to the Westgate Entrance of Port Immingham (PA/2022/1223, undecided), which are considered to be “Major adverse (significant) on assets associated with the remains of a Broze Age Settlement Site. This will be mitigated by the archaeological evaluation for the proposed development and the other two developments.

No combined effects were identified that would be any greater than the individual effects assessed in each of the technical chapters of the ES.

Conclusion

The proposal seeks to introduce a form of development that will significantly facilitate the UK Governments aims of achieving net zero greenhouse gases by 2050. The large scale decarbonisation programme for the Immingham industrial cluster that is currently being developed and planning applications submitted for consideration covering technologies such as Carbon Capture, Utilisation and Storage (CCUS) will aim to remove up to 8 million tonnes of atmospheric CO2 emissions per annum.

The proposed development involves land that is identified as a Strategic Employment Site within a regionally important economic area and is therefore considered to represent an appropriate location.

The site is located the Humber Estuary (SSSI, SPA, SAC and Ramsar site) and has been subject to a Habitat Regulations Assessment, with an Appropriate Assessment produced to the satisfaction of Natural England.

The site is also in an area of high risk of flooding, however it is noted that the site is protected by defences so the high risk only relates to the event of a breach in the

Humber defences, however via the imposition of standard mitigation measures, the ES concludes that there would be no significant adverse residual risks in terms of flood risk and drainage.

The principal of the proposed development accords with the development plan and there are not any material considerations that indicate a decision should be made otherwise.

The table below summarises the residual impacts arising from the construction, operational and decommissioning phases of the proposed development, subject to the recommended conditions.

	Positive	Neutral / Negligible	Adverse
Economic	Employment (Moderate beneficial impact during construction and operation). (Approx. 349 FTE jobs in construction and 48 during operation).		
Environmental	Ecology (Long term CO2 reduction). (10% BNG secured via S106). Climate change/ carbon benefit (Long term CO2 reduction).	Flood Risk and Drainage. (Increased on-site attenuation). Highways. (CEMP, CTMP and CWTP conditions to mitigate increased volume). Ecology – Designated sites, habitats and species. (AA for HRA) Ground conditions Noise and Vibration (Mitigation secured via CEMP and	Amenity (Visual impacts for residential and PROW receptors at Viewpoint 3 Marsh Lane). Heritage Landscape (Cumulative effects on archaeological assets). Geology (Loss of agricultural soils less than 20 hectares of Grade 3 land).

		operational noise condition). Health and Safety (Controlled via CEMP and CTMP conditions and regulatory Licences from HSE and EA). Air quality	
Social	Employment (Moderate beneficial during the construction and decommissioning phases).		

In reaching a recommendation for the proposal, due consideration has been given in terms of the planning balance and the weight afforded to both the benefits identified in the table above when considered against the adverse impacts arising from three phases of the proposed development.

The benefits from the proposed development, clearly highlight the conformity with the UK Governments commitment to meeting a legally binding target of “net zero” carbon emissions by 2050.

The capture of greenhouse gas emissions during the operating life of the development will result in significant environmental improvements to air quality, with the added implications to human health and the long term sustainability of the environment. The securing of a 10% bio-diversity net gain will provide significant habitat creation and improvement.

Additionally, the socio-economic benefits during both the construction and decommissioning phases of the proposal will be significant with an estimated 349 construction jobs created over the 4 year construction period and 48 FTE jobs created in the operational phase.

The adverse impacts from the proposed development are generally environmental and include the loss of the agricultural soils, although it is noted that the shape and location of the site significantly reduce the potential agricultural use of the site.

Having regards to the adverse visual impacts, it is recognised that at one location this would be long term, however it is considered that the proposed development would be harmonious with its context and that these effects would be limited to the localised landscape adjacent to the site.

Turning to matters relating to the cumulative effects on archaeological assets with Viking CCS Pipeline and Land Adjacent to Westgate, Port of Immingham developments, the Historic Environment Record officer is satisfied that the scheme of preservation proposed is satisfactory to enable conditions to be imposed to mitigate impacts.

With the above in mind, it is considered that the very substantial benefits of the proposed development in the form of capturing green house gas emissions and improving and creating new habitats under the BNG strategy along with the public benefits in the form of job creation would outweigh the adverse effects of the proposal in terms of loss of agricultural soils, localised visual impacts and cumulative impacts on archaeological assets. Subject to the impositions of conditions and agreed BNG delivery secured via S106 the proposal is considered to be acceptable and recommended for approval.

The application has been submitted with an ES which includes an ecology chapter written by an expert which has been given consideration by the Council's ecologist and Natural England. The Council, as public authority, can therefore demonstrate regard to Section 40 of the Natural Environment and Rural Communities Act 2006.

Equality Act 2010 - 149 Public Sector Equality Duty:

During the detailed consideration of this application an equality impact assessment has been undertaken which demonstrates that due regard has been given to the duties placed on the LPA's as required by the Act. As part of the assessment of the application/proposal due regard has been given to the following relevant protected characteristics: -

• age.

• disability.

• gender reassignment.

• pregnancy and maternity.

• race; • religion or belief.

• sex.

• sexual orientation.

The LPA is committed to:

(a) eliminating discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Equality Act 2010.

(b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it.

(c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

In addition, the LPA, in the assessment of this application/proposal has given due regard to the need to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it. This approach involves.

(a) removing or minimising disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic.

(b) take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it.

(c) encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

The LPA has taken reasonable and proportionate steps to meet the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities, as part of this planning application/proposal.

Due regard has been given to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves. Particular consideration has been given to the need to: -

(a)tackle prejudice, and

(b)promote understanding.

Finally, the LPA recognise that compliance with the duties in this section may involve treating some persons more favourably than others; but that is not to be taken as permitting conduct that would otherwise be prohibited by or under this Act.

Recommendation : Approve subject the conditions listed below and the signing of the S106 legal agreement.