

## VPI Immingham B

# The Immingham Open Cycle Gas Turbine (VPI 'B') Project

Non Material Change 3 - Updated Cumulative Assessment 2025

Reference:

| 03 March 2025

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Job number

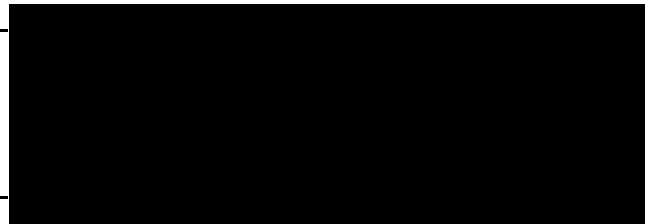
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## Document Verification

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# 1. Introduction

A cumulative impact assessment was undertaken and included in the Environmental Statement (ES) for VPI B Open Cycle Gas Turbine (OCGT) (the ‘Project’) Development Consent Order (DCO) and submitted to the Planning Inspectorate on the 11<sup>th</sup> April 2019. The Immingham Open Cycle Gas Turbine Order 2020 (S.I. 2020 No. 847) (the Order), was granted consent on 7<sup>th</sup> August 2020.

In 2022, an updated cumulative impact assessment was prepared and submitted to the Planning Inspectorate, to support a Non-Material Change (NMC) application to the Order, for the inclusion of a Synchronous Condenser within an already consented building.

In 2023, a further updated cumulative impact assessment was prepared and submitted to the Planning Inspectorate, to support a NMC application to the Order, for an update to the length of the single gas turbine and generator as well as an update to the design of the gas turbine building.

In the 2019, 2022 and 2023 assessments, all topics concluded that there were no significant cumulative effects to arise from the construction or operation phases of the Project when considered alongside other developments proposed within the vicinity of the Site.

This application for a NMC is anticipated to maintain the same level of effects as identified in the original ES. Nonetheless, for thoroughness, the cumulative impact assessments from 2019, 2022 and 2023 have been reviewed, and an updated assessment included in this report.

This NMC application relates to the proposed associated changes to ‘Schedule 11 – Documents and plans to be certified’ of the Order which allow for changes to the design and routing of the gas pipeline over an existing pipe-bridge adjacent to the Order land. This change does not alter the significance of any effects previously identified in the original ES (nor the 2022 and 2023 assessments), as explained in the covering letter of this NMC application.

It is important to note that any project undertaking an environmental impact assessment from 2020 onwards within the Project’s Zone of Influence (ZoI) will have had to include the VPI B OCGT consented project within their cumulative assessment.

# 2. Methodology – Cumulative Effects Assessment (Stages 1-3)

The applicant completed an update of the Long List of identified other developments in February 2025.

The Applicant has considered potentially cumulative schemes up to 15 km from the Site. However, based on the effects identified in the original ES assessments for the Project (particularly Landscape and Visual Amenity, Noise and Air Quality effects) and given the nature of the changes sought in the NMC application, only schemes up to 5 km from the Site have the potential to introduce cumulative effects in association with the Project.

Potential Zones of Influence (ZoI) of each environmental effect are identified in Table 1.

**Table 1: Potential Zones of Influence (ZoI) of each environmental effect**

Environmental Topic	Zone of Influence
Air Quality	Construction: 350 m ZoI for emissions and construction dust (and 500 m along roads from the site entrance, for dust track out).  Operation: Considers 15 km ZoI for international statutory designated ecology sites but effects are negligible beyond 5 km from the Site.

Environmental Topic	Zone of Influence
	2 km for non-statutory designations. Refer to ES Chapter 6: Air Quality for more information.
Noise and Vibration	Construction and Operation: 1 km ZoI. Refer to ES Chapter 8: Noise and Vibration for more information.
Ecology and Nature Conservation	Construction and Operation: A maximum ZoI of 15 km has been applied. 15 km for air quality impacts to international statutory designated sites but effects are negligible beyond 5 km from the Site. 2 km ZoI for national and locally designated sites. 500 m for ponds. Refer to ES Chapter 9: Ecology and Nature Conservation for more information.
Landscape and Visual Amenity	Construction and Operation: 2 km (landscape) and 5 km (visual amenity). Refer to ES Chapter 10: Landscape and Visual Amenity
Ground Conditions and Hydrogeology	Construction and Operation: 2 km ZoI Refer to ES Chapter 11: Ground Conditions and Hydrogeology for more information.
Flood Risk, Hydrology and Water Resources	Construction and Operation: 2 km ZoI. Refer to ES Chapter 12: Flood Risk, Hydrology and Water Resources for more information.
Cultural Heritage	Construction: On-site. Operation: 2 km. Refer to ES Chapter 13: Cultural Heritage for more information.

The following search areas have been considered for the cumulative schemes in accordance with the methodology used in Chapter 17: 'Cumulative and Combined Effects' of the original VPI-B Environmental Statement.

- 5 km for Nationally Significant Infrastructure Projects (NSIP) and Environmental Impact Assessment (EIA) Developments;
- 3.5 km for EIA developments; and
- 1.65 km for non-EIA Major developments.

The Applicant has also reviewed the Short List of developments that was used for the original ES and previous NMCs to confirm whether any have changed status since those assessments were completed. Decisions made and relevant planning applications submitted since the original assessment was prepared in February 2020 are summarised below in Table 2.

**Table 2: Previous Short List - updated in 2023**

Ref Number	Scheme	Distance from Site	2019 Status	Description	Any changes since the Project was consented in 2020
1	VPI Energy Park 'A'	Adjacent	Consented	Gas-fired power station of up to 49.9MW	Non-material Amendment granted under PA/2021/1039.  Construction complete, plant now in operation.
2	Able Marine Energy Park DCO	Adjacent	Under construction	Port development	Two material changes of three amendments, two for the layout of the quay, and one to a footpath diversion  One NMC to move an area proposed for ecological mitigation  Not yet built
3	Marsh Lane Car Storage	Adjacent	Pending decision	Car storage facility	Decided and constructed
4	Killingholme Power Station PA/2016/1240	1.5 km	Consented	14 gas reciprocating engine generators and ancillary equipment	Operational
5	North Killingholme Power Project DCO	2 km	Consented	470MW power station	NMC accepted and consent extended.  Deed to transfer benefit of DCO signed January 2025.
6	Able Logistics Park	2.5 km	Consented	Site for warehousing, external storage	Operational
7	AMP Generator	5 km	Consented	Standing reserve power plant	-
8	North Beck Energy Centre	5 km	Consented	Energy recovery facility	Not built
9	CPL Pilot Charcoal Plan	2.5 km	Consented	Erection of a pilot charcoal manufacturing plant	-
10	Stallingborough Interchange	5 km	Consented	Development of 62ha Business Park at Stallingborough	Some plots of this development are now constructed, whilst others are not yet developed
11	South Humber Bank Energy Centre	7 km	Pending consideration	Energy from waste facility	Consented 2021  Not yet built
12	Brocklesby Estate (N.E)	3.4 km	Pending consideration	Proposed residential development	-
13	Engie NEL Energy Park	4.5 km	Pending consideration	Energy Park including 32ha solar farm (18MW)	Consented 2020

Ref Number	Scheme	Distance from Site	2019 Status	Description	Any changes since the Project was consented in 2020
				and battery storage (24MW)	
14	20MW Flexible Gas Generation Plant	5 km	Pending consideration	10 x 2 MW flexible gas generation plant (total of 20MW) at disused Immingham Rail Freight Terminal	Consented
15	KBC Logistics Ltd	2.5 km	Pending decision	Workshop, offices and lorry park	Permission Renewed 2024
16	Hornsea Offshore Wind Farm Project One Lagoons PA/2018/155	1.6 km	Consented	9 lagoons for storage of water for the Hornsea Project One Offshore Windfarm	Not believed to be under construction
17	Hornsea Offshore Wind Farm (Zone 4) Project One DCO	Adjacent	Consented	Three offshore wind generating stations with a total capacity of up to 1,200MW	Operational
18	Kiln Lane Tyre Recycling Facility	5 km	Consented	Waste tyre to energy pyrolysis plant at disused Immingham Rail freight Terminal	-
19	South Killingholme Car Storage and Distribution Facility	350 m	Pending decision	Car storage and distribution facility	Application Withdrawn November 2020
20	Stallingborough CHP	5 km	Consented	Installation of 4 CHP boilers and erection of associate flues at Selvic Shipping Warehouse in Stallingborough	Operational
21	Humber Zero – Phillips 66, Humber Refinery PA/2023/422	0.9km	Consented	Carbon capture project at the Humber Refinery's FCC	Consented
22	Humber Zero – VPI Immingham PA/2023/421	Adjacent	Pending Decision	Carbon capture project for two of the gas turbines and auxiliary boilers at VPI Immingham CHP Plant.	Pending Decision

The updated and refined cumulative Long List as of February 2025 is presented in Table 3.

**Table 3: Updated Long List February 2025**

Ref Number	Scheme	Distance from Site	Status	Description	Carried to short list?
1	Phillips 66 Humber Refinery, Humber Road, South Killingholme, Immingham, DN40 3DU  PA/2024/1058	0.46 km	Pending	Planning permission to erect two storage tanks to store FAME (bio-diesel)	Yes – due to proximity to Site
2	Land at Killingholme, North Lincolnshire  PA/SCO/2024/4	Adjoins	Scoping opinion given 04/11/2024	EIA scoping request for the development of a hydrogen production facility	No – the EIA scoping report states construction expected to begin in Q1 2026. The Project will be completed by September 2025 and therefore there is no construction overlap.
3	Land Off Southern Way Immingham Docks, Immingham, North East Lincolnshire  DM/0329/24/FUL  And  PA/2024/397	0.83 km	Pending	Erection of one wind turbine (T2), measuring up to 149.9m to blade tip height. Associated ancillary infrastructure to include access tracks, hardstanding areas for the turbine location, electrical infrastructure, drainage works, temporary laydown areas, temporary construction compound and associated works 'amended Habitats Regulations Assessment (HRA) November 2024'	No due to distance and industrial nature of intervening existing landscape
4	Land south of the A160, South Killingholme  PA/2024/584	1.8 km	Approved, pending discharge of conditions	Outline planning permission for the construction of a data centre of up to 309,000m <sup>2</sup> (GEA) delivered across up to three buildings, including ancillary offices, internal plant and equipment, emergency backup generators and associated fuel storage. Other works include internal roads and footpaths, cycle and car parking, hard	No due to distance and nature of development as well as industrial nature of intervening existing landscape

Ref Number	Scheme	Distance from Site	Status	Description	Carried to short list?
				and soft landscaping, security perimeter fencing, lighting, drainage, an electricity substation, a district heating unit, horticultural glasshouse and other associated works and infrastructure, with all matters reserved for subsequent consideration	
5	Port of Immingham, Immingham, North Lincolnshire  TR030007	2.57 km	Approved 04/10/2024	Immingham Eastern Ro-Ro Terminal. A new roll-on/roll-off facility comprising a new jetty with three berths, improved hardstanding, Terminal buildings and an internal side bridge to cross over existing port infrastructure.	No due to distance and industrial nature of intervening existing landscape
6	Able Marine Energy Park, Rosper Road, Immingham, DN40 3DZ  TR030006	1.6 km	Approved 16/07/2022	Able Humber Ports Ltd - Able Marine Energy Park Material Change 2. Two amendments to the layout of the quay that was authorised by the Able Marine Energy Park Development Consent Order 2014 and one amendment to a footpath diversion to go round the end of a railway rather than crossing it.	No due to distance and industrial nature of existing intervening landscape
7	Eastern side of Port Immingham, North Lincolnshire  TR030008	2.83 km	Approved 06/02/2025	Associated British Ports - Immingham Green Energy Terminal. The project comprises a new liquid bulk import terminal and associated processing facility, the purpose of which is to deliver a green hydrogen production facility. Imported ammonia will be stored and processed at the site to create green hydrogen, for onward	No due to distance and industrial nature of existing intervening landscape



Ref Number	Scheme	Distance from Site	Status	Description	Carried to short list?
				transport to filling stations throughout the UK. Key project infrastructure comprises; a new approach trestle, jetty superstructure and topside infrastructure; and land side processing infrastructure.	
8	Land adjacent to Westgate Entrance, Port of Immingham, Immingham, DN40 3DX  PA/2022/1223	0.6 km	Pending	Associated British Ports. Hybrid application comprising full planning permission for the construction of a hardstanding area for external level storage with landscaping, drainage, access and associated works, and outline planning permission to erect 26,096m <sup>2</sup> floor space for industrial/storage and distribution, (Use Class B2/Use Class B8) including ancillary offices (Use Class E) with appearance, landscaping, layout and scale reserved for subsequent consideration	No, due to the size and nature of the development and due to distance and industrial nature of existing intervening landscape
9	VPI Power Station, Rosper Road, South Killingholme, DN40 3DZ  PA/2022/1548	Adjacent	Approved 26/10/2022	VPI Immingham LLP. Planning permission to construct and operate a temporary pilot post-combustion carbon capture plant and associated infrastructure	Yes, due to the nature of this development and the proximity to the site.
10	Land at Able Marine Energy Park, south of Station Road, South Humber Bank, South Killingholme  PA/2021/1525	0.86 km	Approved 09/08/2022	Able UK Ltd. Planning permission to erect a monopole manufacturing facility	No due to distance and industrial nature of existing intervening landscape

Ref Number	Scheme	Distance from Site	Status	Description	Carried to short list?
11	South bank of the River Humber,  2km north of Immingham  TR030001	4.2 km	One application for a Material Change was approved on 16/07/2022. Another was withdrawn on 03/12/2024	Able Marine Energy Park DCO  This submission sought to move an area proposed for ecological mitigation (Area A) to a new site outside the order limits next to two other areas being utilised for ecological mitigation  (Halton Marshes Wet Grassland Scheme), thereby allowing all three areas to operate as a single unit	No, due to distance and industrial nature of existing intervening landscape
12	Land at North Killingholme, North Lincolnshire  EN010038	1.87km	Approved 16/09/2021	Non-material change to North Killingholme Power Project, seeking the following changes:  The Applicant is seeking consent for changes to the North Killingholme (Generating Station)  2014 Order (as amended) (the “2014 Order”) to allow:  - an amendment to Part 3 (Requirements) of Schedule 1 (Authorised development) to the 2014 Order to extend the time limit for commencing the Authorised Development, which currently expires on 1 October 2021, by five years to 1 October 2026 (the “extension provisions”); and amendments to:  o Article 2 (Interpretation);  o Article 34 (Certification of plans, etc.); and	No due to distance and industrial nature of existing intervening landscape

Ref Number	Scheme	Distance from Site	Status	Description	Carried to short list?
				o Part 3 (Requirements) of Schedule 1 (Authorised development); of/to the 2014 Order allowing for the potential delivery of an alternative, post-combustion, carbon capture and storage (CCS) proposal for the CCGT mode of operation without requiring development of the IGCC generating station (the “CCS provisions”).	
13	Phillips 66 Ltd, Eastfield Road, South Killingholme, Immingham, DN40 3DW  PA/SCR/2024/5	1.2km	Screening Response Received	EIA Screening Request for a low sulphur gasoline (LSG) project at Phillips 66 Ltd Humber Refinery.	Yes, due to the nature of the proposal
14	Humber Carbon Capture Pipeline  ENV0710003	0.8km (closest pipeline boundary)	Pre-application stage	An onshore underground CO2 pipeline and associated above ground infrastructure to transport captured carbon dioxide from emitters in the Humber region.	No, due to this application being in the Pre-application stage and submission not expected until between October and December 2026. The Project will be completed by September 2025 and therefore there is no construction overlap.
15	Viking CCS Pipeline  ENV070008	100m	DCO awaiting decision	A new 55km onshore underground pipeline and associated infrastructure and ancillary works.	Yes, due to the nature of this development and the proximity to the site.

## Review of New Long List Developments

There are eight additional developments identified within 2km of the Project Site since the 2023 assessment

## 3. Short List 2025

Three new developments in addition to those in the 2019, 2022 and 2023 Short List have been identified. One development (Reference Number 9) previously on the 2023 Long List that was not carried onto the 2023 Short List has been brought forward due to the delays in construction.

## **Phillips 66 Humber Refinery – Storage Tanks**

The proposed development would comprise the construction of two storage tanks to provide storage capacity for FAME products at the Site. The tanks themselves would be up to 24m in height with a diameter of 25m and a fixed conical roof. The tanks will be supported by the existing infrastructure within the current industrial landscape. Construction vehicle emissions are anticipated during the construction period of the proposed development, but these are anticipated to be small and minimised through effective management strategies outlined within a Construction Environment Management Plan. Due to the nature of this development and the temporary nature of the air quality impacts, no significant cumulative effects are predicted.

## **Phillips 66 Humber Refinery – Low Sulphur Gasoline (LSG)**

Phillips 66 is intending to install additional plant and equipment to enable the removal of sulphur from the gasoline produced in the Fluidised Catalytic Cracker (FCC) Unit. The LSG project will require the installation of a new Selective Hydrogenation Unit (SHU) and Selective Hydrodesulphurisation (HDS) unit to desulphurise two of the naphtha streams produced in the existing FCC Unit.

It is likely that the construction phases for the Phillips 66 LSG project will overlap with the VPI B OCGT Project, which has the potential to lead to cumulative traffic and transport impacts along Eastfield Road. However, within the EIA Screening Request submitted to North Lincolnshire Council, it is noted that due to the scale of the LSG project and the VPI B OCGT Project, it is likely that standard best practice construction traffic management techniques would be sufficient for managing the potential traffic and transport impacts. Due to the nature of this development and the temporary nature of the traffic and transport impacts, no significant cumulative effects are predicted.

## **VPI Immingham – Temporary Pilot Carbon Capture Plant**

This development will comprise a pilot post-combustion carbon capture plant at VPI Immingham's CHP plant to inform the first phase of the Humber Zero Project (Reference 22 in Table 2) by establishing the key design and operating parameters that can be achieved.

This development was originally excluded from the 2023 Short List due to the understanding the plant would have been constructed and decommissioned before the start of construction on the VPI B OCGT Project. However, as of February 2025 construction is yet to have started so this project has been brought forward into the 2025 Short List. Important to note is that VPI are responsible for both this temporary project and the first phase of the Humber Zero Project, so any potential interactions can be managed internally.

The EIA screening request submitted in June 2022 included an assessment of potential cumulative effects. This found that due to the limited spatial and temporal extents of identified effects, the development (together with other existing/approved proposed developments) will not result in the cumulative interactions of effects. Due to this, it is therefore assessed that there would be no significant cumulative effects.

## **Viking CCS Pipeline – Carbon Capture and Storage Pipeline**

This development will comprise an approximately 55.5km long buried pipeline, which would enable CO<sub>2</sub> captured by emitters in Immingham to be transported to Theddlethorpe, for onward transportation within the existing offshore LOGGS Pipeline and a newly installed offshore spur pipeline, to the offshore injection facilities for permanent storage.

The cumulative chapter submitted as part of the ES for the Viking CCS Pipeline in November 2023 states that due to the incorporation of both embedded and additional mitigation measures within the development and associated with the other identified development, it is not anticipated that any significant cumulative effects would occur, during either the construction or operational phases. Due to these findings, and that this NMC will have very minor effects that don't have the potential to create new cumulative effects, it is therefore assessed that there would be no significant cumulative effects between the Viking CCS Pipeline and the proposed VPI B OCGT Project.

## 4. Combination Effects

As there is no change to the effects assessed in the original ES as a result of the NMC, there are no changes to combination effects (being those which can occur from two environmental impacts interacting and both affecting the same receptor).

## 5. Summary and Conclusion

The above identified developments have been reviewed and assessed with regards to the Planning Inspectorate Advice Notes 17 'Cumulative effects assessment relevant to nationally significant infrastructure projects'.

This assessment of cumulative impacts has reviewed the original ES cumulative assessment and the updated 2022 and 2023 cumulative assessment for the potential for cumulative impacts to arise from one or several of the other developments together with the Project.

Given that the NMC has been assessed as making no material difference to the potential effects of the Project itself and is therefore within the assessment envelope previously assessed and consented (including any minor changes to existing developments presented above), there are no identified changes to the cumulative assessment or significance of effects as presented in the original ES.