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Uniper UK Limited

North Killingholme Power Project

North Killingholme (Generating Station) Order – Non-Material Change Application 2025

Application Document

Reference: KLCP-ARP-PR-ACB010-0002

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1. Introduction

1.1 Background to Non-Material Change (NMC) Application

The North Killingholme (Generating Station) Order 2014 as corrected and amended by the North Killingholme (Generating Station) (Correction) Order 2015 and the North Killingholme (Generating Station) (Amendment) Order 2021 (together "the Order" or "DCO") granted development consent under the Planning Act 2008 for the construction and operation of a new 470MWe thermal generating station with associated development at North Killingholme, North Lincolnshire ("the Project"). The generating station as consented in the Order would operate either as a Combined Cycle Gas Turbine ("CCGT") plant or as an Integrated Gasification Combined Cycle ("IGCC") plant.

The 2021 Amendment granted consent for changes to the Order which extended the time limit for commencing the Authorised Development by five years to 1 October 2026, as well as amendments to Articles 2 (Interpretation); 34 (Certification of plans, etc.); and Part 3 (Requirements) of Schedule 1 (Authorised development) to allow for the CCGT to be developed and operated without requiring development of the IGCC generating station. As part of this amendment, land was identified and secured to be used to satisfy the Carbon Capture Readiness obligations (the "CCR provisions"), set out in the Carbon Capture Readiness (Electricity Generating Stations) Regulations 2013.

In December 2024, Uniper UK Limited ("Uniper", or "the Applicant") acquired the land and development rights, including the benefits of the Order, from the former applicants, C.GEN, and intend to construct a carbon captured enabled CCGT generating station. However, through further design work, Uniper has identified opportunities for minor and non-material changes to the design of the consented CCGT which will enable it to be implemented with an optimised layout and to facilitate development of the generating station as a carbon capture enabled CCGT. Further details on the minor changes for which consent is now sought are provided below.

1.2 Purpose of the NMC Application

The proposed changes relate to the intention to progress the development of a carbon capture enabled CCGT generating station at the site. The design work that has been undertaken has identified a number of minor, non-material, changes needed to the DCO to facilitate such a development, including:

- An increase in the MW capacity identified in the DCO from 470 MWe to 550 MWe; either output will be delivered from the same gas turbine technology but the higher output will enable the plant to run more efficiently and will also align with the grid export connection limit;
- Minor changes to internal boundaries of Work No. 1 to enable the CCGT build to be optimised;
- Minor changes to several building parameters specified in Schedule 1 Part 2 to the DCO to align with the design work undertaken for the CCGT; and
- Reprovision of the land set aside to meet the Carbon Capture Readiness (CCR) requirements to accommodate the appropriate carbon capture infrastructure in a suitable location in terms of the process flow, to enable efficient operation of the carbon capture enabled generating station. This alternative CCR land is outside of the Order limits but is owned and controlled by the Applicant. The Order (as amended by the proposed Draft Amendment Order) will continue to contain requirements that fulfil the requirements of demonstrating CCR readiness.

The purpose of this document is to provide details of the proposed non-material changes sought to the extant DCO and present the planning and environmental justification for the change application being non-material.

1.3 Structure of the Application

The application comprises the following documents:

- Application Document including Appendix A.1 and Appendix A.2 (this document);
- Report entitled 'Carbon Capture Readiness Compliance';
- Updated Works Plan (drawing. no. 305719-ARP-ZZ-ZZ-DR-T-0001);
- Updated Indicative Site Layout Plan (drawing. no. 305719-ARP-ZZ-ZZ-DR-T-0002);
- Updated Indicative Elevations Drawing (drawing. no. 305719-ARP-ZZ-ZZ-DR-T-0004);
- Draft Amendment Order, in Statutory Instrument form;
- A copy of the email confirming successful S.I. validation of the Draft Amendment Order;
- A copy of the Notice required under Regulation 6 of the 2011 Regulations, published for two consecutive weeks in the Scunthorpe Telegraph and Grimsby Telegraph;
- A copy of the template notification letter sent to all relevant parties [as required by the regulations and as agreed with the Secretary of State for DESNZ in writing under Regulation 7(3) on 22 July 2025]; and
- The appropriate Application fee as required by Regulation 5 of the 2011 Regulations

This Application Statement provides further information in each chapter as follows:

Chapter 2 – The regulatory framework for making changes to DCOs

Chapter 3 – The planning history relating to the DCO

Chapter 4 – The changes being sought in this application

Chapter 5 – Environmental assessment of the proposed changes

Chapter 6 – A summary of the non-materiality of the proposed changes

Chapter 7 – Conclusion

Appendix A1 – Air Quality Assessment (summary provided in Section 5.2)

Appendix A2 – Figure 9.3 included in the Environmental Statement Volume 3 – Figures included in 2013 Environmental Statement

2. Regulatory Framework for Changes to DCOs

2.1 Planning Act 2008

There are two separate mechanisms outlined in in the Planning Act 2008 for making an amendment to a DCO, centring on either the materiality or non-materiality of the proposed change. Regarding changes that are considered non-material, Paragraph 2(1) in Schedule 6 to the Planning Act 2008 provides that the Secretary of State "*may make a change to a development consent order if the Secretary of State is satisfied that the change is not material*".

Schedule 6 does not prescribe specific criteria for deciding if a change is considered material, save that the Secretary of State, '*must have regard to the effect of the change, together with any previous changes made under this paragraph, on the development consent order as originally made.'* (Paragraph 2(2) of Schedule 6). However, further government guidance is provided to serve as a basis on identifying specific characteristics which could mean a change is considered material. These characteristics are set out in detail in Section 2.3.

2.2 The Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011

Part 1 of the Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011 (hereafter referred to as the '2011 Regulations') provides the regulatory framework and requirements relating to non-material changes to DCOs, and sets out the format as well as publication and consultation requirements. Further details of these regulatory requirements are set out below.

2.2.1 Application

Regulation 4 of the 2011 Regulations sets out a number of requirements relating to the provision of certain documents and specific details to accompany an application for a non-material change, as follows:

4.(1) The application must be made to the Secretary of State.
(2) The application must be in writing and must contain the following—
- *(a) the name and address of the applicant;*
- *(b) the name and address of an agent, if appointed;*
- *(c) the Secretary of State's reference for the development consent order to which the application relates;*
- *(d) details of the change being applied for;*
- *(e) any documents and plans considered necessary to support the application;*
- *(f) a statement that the applicant is either—*
  - *i. the person who applied for the development consent order to which the application relates or a successor in title;*
  - *ii. a person with an interest in the land to which the development consent order relates; or*
  - *iii. any other person for whose benefit the development consent order has effect M10;*
- *(ff) the consultation and publicity statement referred to in regulation 7A;*
- *(g) details of the applicant's interest in the land; and*
- *(h) if requested by the Secretary of State, 3 paper copies of the application and other supporting documents and plans.*

The covering letter, which should be read in conjunction with this Application Document, provides the details pursuant to Regulation 4(2) (a-h), and it is noted that no paper copies have been requested by the Secretary of State at this time.

2.2.2 Publication of the application

Regulation 6 of the 2011 Regulations sets out the publication requirements for a non-material change. It states:

6.(1) The applicant must publish a notice of the application, which must include the matters prescribed by paragraph (2)—

(a) for at least two successive weeks in one or more local newspapers circulating in the vicinity in which the land is situated; and

(b) in any other publication necessary in order to ensure that notice of the application is given in the vicinity of the land.

(2) The matters which the notice must include are—

(a) the name and address of the applicant;

(b) a statement that the applicant is seeking, by way of an application to the Secretary of State, a change to be made to a development consent order which is not material;

(c) a summary of the main elements of the application;

(d) a statement that any documents, plans and maps showing the nature and location of the land, and accompanying the application, are available for inspection free of charge on a website maintained by or on behalf of the Secretary of State;

(da) the address of the website where the documents, plans and maps may be inspected;

(db) place on the website where the documents, plans and maps may be inspected;

(dc) a telephone number which can be used to contact the applicant for enquiries in relation to the documents, plans and maps;

(e) a statement as to whether a charge will be made for copies of any of the documents and, if so, the amount of any charge;

(f) the latest date on which those documents, plans and maps will be available for inspection on the website (being a date not earlier than the deadline in sub-paragraph (h);

(g) details of how to respond to the publicity; and

(h) a deadline for receipt of those responses by the Secretary of State, being not less than 28 days following the date when the notice is last published.

The Regulation 6 notice has been prepared pursuant to Regulation 6(2)(a)-(h) and is being published for two consecutive weeks in the local newspapers (the Scunthorpe Telegraph and the Grimsby Telegraph) pursuant to Regulation 6(1)(a and b), with the publication of the first notice being on the date on which this application is made (i.e. 31 July 2025).

A copy of the Regulation 6 notice has been sent to all those persons required to be consulted, as agreed with the Secretary of State pursuant to Regulation 7(3). The NMC Application is available to view from 8 August to 5 September 2025 on the Project website, and also on the Planning Inspectorate's website found here:

- Project website: www.uniper.energy/killingholme-low-carbon-power/consents-permitting
- Planning Inspectorate website: https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010038

Hard copies are also available to view from 8 August to 5 September 2025 at the following locations:

Venue	Address	Opening Hours
Barton Library	Baysgarth Leisure Centre, Baysgarth Park, Brigg Road, Barton upon Humber, DN18 5DT.	Mondays: 9am - 6pm Tuesdays: 9am - 5pm Wednesdays: 9am - 5pm Thursdays: 9am - 6pm

Venue	Address	Opening Hours
		Fridays: 9am - 5pm Sat & Sun: 9am - 3pm
Scunthorpe Central Library	Carlton Street, Scunthorpe, North Lincolnshire, DN15 6TX	Mondays to Fridays: 9am to 5pm Saturday: 9am to 1pm
Goxhill Library	The Parish Room, Howe Lane, Barrow Upon Humber, DN19 7HS	Monday: 2pm to 6pm Tuesday: closed Wednesday: 2pm to 5pm Thursday: closed Friday: 3.30pm to 6pm Saturday: closed
Immingham Library	Civic Centre, Pelham Road, Immingham, DN40 1QF	Monday to Fridays: 9am to 5pm Saturday: 9am to 1pm Sunday: closed Bank Holidays: closed

The above-mentioned application documents will be available for inspection online on the above websites throughout the duration of the consultation – from 8 August 2025 to 5 September (inclusive) with 11.59pm on 5 September 2025, being the date which is the deadline for receipt of representations on the Application. Hard copies of the Application documents can be obtained free of charge on request via the following contact information:

Email: klcp@communityfeedback.co.uk
Telephone: 0800 066 8941
Postal address: FREEPOST KLCP

Consultees should submit responses in writing on or before the closing date of 11.59pm on 5 September 2025, either electronically to NorthKillingholme@planninginspectorate.gov.uk or may send responses by post to National Infrastructure, The Planning Inspectorate, Temple Quay House, 2 The Square, Bristol, BS1 6PN. Consultees are requested to include the Planning Inspectorate's project reference EN010038 in all correspondence.

2.2.3 Duty to Consult

Regulation 7 sets out the consultation requirements for a non-material change. It states:

7.(1) The applicant must consult the persons specified in paragraph (2) about the application by sending them a copy of the notice referred to in regulation 6.
(2) Subject to paragraph (3), the persons to be consulted are—

- *(a) each person for whose benefit the development consent order, to which the application relates, has effect;*
- *(b) each person that was, in accordance with section 56, notified of the application for the development consent order which is the subject of the application; and*
- *(c) any other person who may be directly affected by the changes proposed in the application.*

(3) The applicant need not consult a person or authority specified above if they have obtained the written consent of the Secretary of State.

(4) If the Secretary of State exercises its discretion under paragraph (3) it must publish its reasons for doing so on its website.
(5) The Secretary of State must make available in accordance with regulation 46 all responses to the publicity and consultation.

Pursuant to Regulation 7(3), and in light of the consolidations proposed to the originally consented DCO extents, a revised list of consultees has been prepared and submitted to the Secretary of State on 04 July 2025, seeking agreement that not all persons prescribed in Regulation 7(2)(b) needed to be consulted in relation to this non-material change. The Secretary of State provided written consent to the proposed consultee list on 22 July 2025.

2.3 Planning Act 2008: Guidance on Changes to Development Consent Orders

In 2015 a guidance document was published for those wishing to make changes to a DCO by the then Department for Communities and Local Government (subsequently renamed Ministry of Housing, Communities and Local Government), titled 'Planning Act 2008: Guidance on Changes to Development Consent Orders'. As mentioned in Section 2.1, there is no statutory definition of what constitutes a material change. However, the guidance document identifies circumstances in which a change could be considered material. These include if:

- It requires an updated Environmental Statement;
- It requires either a Habitats Regulations Assessment, or a new or additional licence in respect of European Protected Species;
- It would authorise the compulsory acquisition of any land, or an interest in or rights over land, that was not authorised through the existing Development Consent Order; or
- The impact of the change on local people and businesses will be sufficient to indicate that the change should be considered as material.

Chapter 6 of this Application Document provides an assessment of the materiality of the proposed changes in light of the criteria set out above.

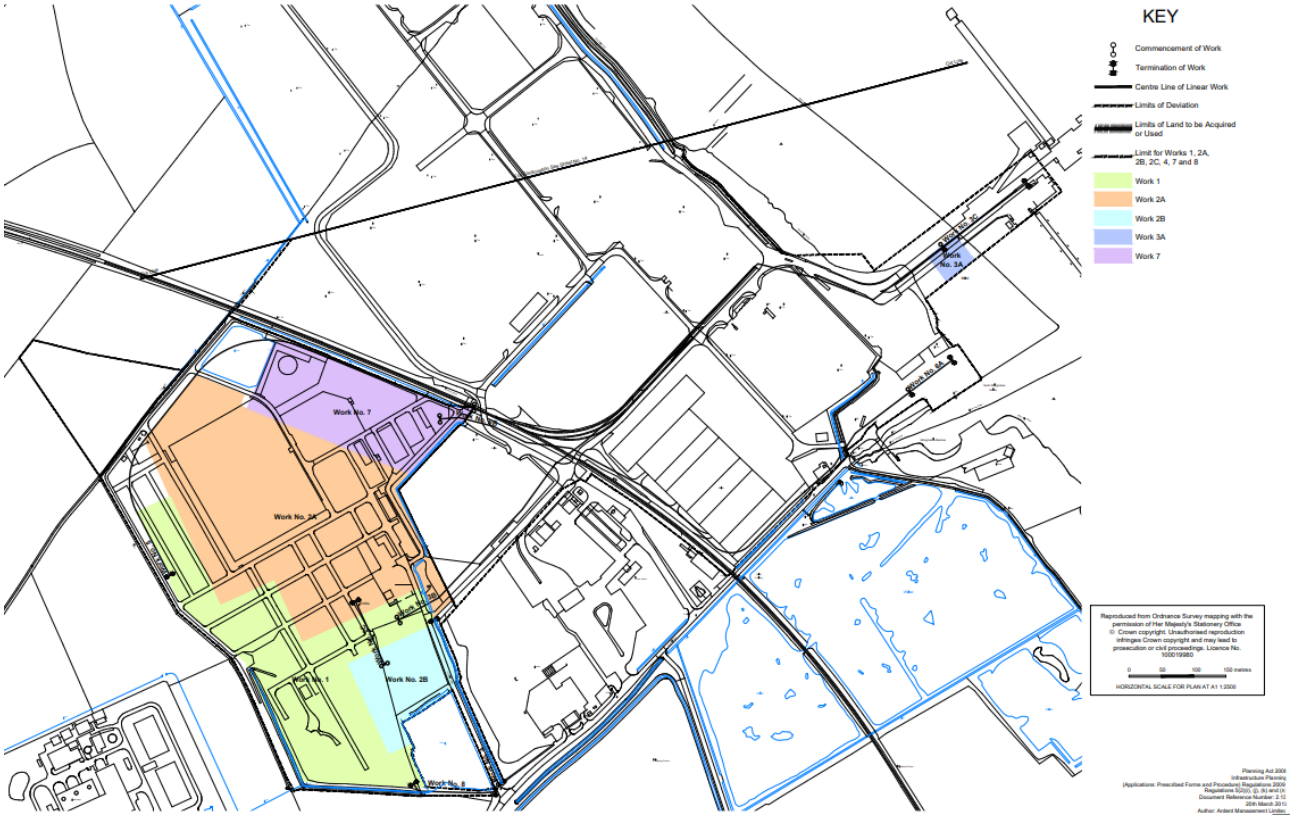
3. The Planning History of the North Killingholme (Generating Station) DCO

3.1 Introduction

The North Killingholme (Generating Station) DCO (or, "North Killingholme Power Project") is located on land north of Haven Road and west of Clough Road, North Killingholme, Immingham in the district of North Lincolnshire in the Yorkshire and the Humber region of England.

The original Works Plan is shown in **Figure 3-1** below.

Figure 3-1: The North Killingholme (Generating Station) Order 2014: Works Plan



3.2 The North Killingholme (Generating Station) Order 2014

The original DCO application for the North Killingholme Power Project was submitted in 2013, and approved by the then Secretary of State in 2014, before coming into force on 02 October 2014.

The North Killingholme Power Project, as consented, allowed for a number of alternative development scenarios for the generating station with a nominal gross electrical output of up to 470 MWe, operating either as a Combined Cycle Gas Turbine (CCGT) plant or as an Integrated Gasification Combined Cycle (IGCC) plant. The alternative development scenarios provided for a range of potential fuel sources for the generation station. The consented works were confined to the central area of the Order Limits covering Work Nos 1-8 and excluded works to provide certain utilities connections.

The original DCO authorised the following development within identified works packages:

- Work No. 1 provided the works required to construct and operate the combined cycle generation plant.
- Work Nos. 2a, 2b and 2c provided works required to construct a gasification facility to process a solid fuel to produce a gas, an associated flare stack, and associated equipment to connect the gasification facility to the flare stack.
- Work Nos. 3a, 3b and 3c provided for cooling water infrastructure.
- Work No. 4 provided for works to create an access road running in a northerly direction between Haven Road to the south of the Order Limits, along Clough Road and onwards up to the southernmost point of Work No. 2a.
- Work No. 5 provided for works to create a railway siding and a facility for the unloading of trains delivering solid fuel.
- Work Nos. 6a and 6b provided works to construct facilities for the unloading of solid fuel from vessels moored at the existing wharf and the transportation of the unloaded solid fuel via a pipe conveyor.
- Work No. 7 provided for construction of a storage hall for the storage of solid fuel.
- Work No. 8 provided for works to create a new access road running in an easterly direction from the junction with Haven Road to the southernmost point of Work. No. 1.

Certain other ancillary works were also permitted within the Order Limits including:

(a) the removal or modification of the northern drainage pond;
(b) habitat creation;
(c) water supply works, foul drainage provision, surface water management systems, and culverting;
(d) pipes for steam pass outs and/or hot water pass outs within the Order limits;
(e) internal site roads and vehicle parking facilities;
(f) bunds, embankments, swales, landscaping and boundary treatments and fencing;
(g) the demolition of buildings and structures within the Order limits;
(h) the provision of footways; and
(i) lighting columns and lighting.

3.3 The North Killingholme (Generating Station) (Correction) Order 2015

The North Killingholme (Generating Station) (Correction) Order 2015 came into force on 27 October 2015 to correct a minor error in the original DCO. This correction confirmed that the authorised generation station would have a nominal gross electrical output of up to 470 MWe, and that a combined cycle plant was authorised within Work No. 1.

3.4 North Killingholme (Generating Station) (Amendment) Order 2021

On 17 September 2021, the North Killingholme (Generating Station) (Amendment) Order 2021 came into force. This Order extended the time limit for commencing the Authorised Development by five years to 1 October 2026, as well as amendments to Articles 2 (Interpretation); 34 (Certification of plans, etc.); and Part 3 (Requirements) of Schedule 1 (Authorised development) to allow for the CCGT to be developed and operated without requiring development of the IGCC generating station. As part of this amendment, land was

identified and secured to be used to satisfy the Carbon Capture Readiness obligations (the "CCR provisions"), set out in the Carbon Capture Readiness (Electricity Generating Stations) Regulations 2013.

The replacement works plan identified an area of land within a section of Work No. 2A and Work No. 2B to be reserved for carbon capture readiness for the CCGT.

4. Changes sought to the DCO in this NMC Application

4.1 Summary of proposed changes to the DCO

4.1.1 Introduction

The changes sought to the DCO in this application are proposed in connection with the implementation of the CCGT generating station. Further design work identified opportunities for minor and non-material changes to the design of the consented CCGT which will enable it to be implemented with an optimised layout and to facilitate development of the generating station as a carbon capture enabled CCGT.

The Order Limits remain unchanged from the originally consented DCO, and all development consented as part of the Project is to be located entirely within these previously submitted Order Limits.

4.1.2 Summary of proposed changes

The proposed changes are:

- An increase in the MW capacity identified in the DCO from 470 MWe to 550 MWe; either output will be delivered from the same gas turbine technology but the higher output will enable the plant to run more efficiently and will also align with the grid export connection limit.
- Minor changes to internal boundaries of Work No. 1 to enable the CCGT build to be optimised
- Minor changes to several building parameters specified in Schedule 1 Part 2 to the DCO to align with the design work undertaken for the CCGT.
- Reprovision of the land set aside to meet the Carbon Capture Readiness (CCR) requirements to accommodate the appropriate carbon capture infrastructure in a suitable location in terms of the process flow, to enable efficient operation of the carbon capture enabled generating station. This alternative CCR land is outside of the Order limits but is owned and controlled by the Applicant. The Order (as amended by the proposed Draft Amendment Order) will continue to contain requirements that fulfil the requirements of demonstrating CCR readiness.

Further details of each element of change identified above are provided in the following sections of this Chapter.

4.2 Increase in electrical output to 550 MWe

The Applicant is seeking changes to the wording of Schedule 1 Part 1 to the Order, which refers to the authorised development in Work No. 1, to allow for an increase of output capacity for the CCGT from 470 MWe to 550 MWe.

This change is being sought because gas turbine technology has progressed significantly in the years since the original DCO was consented. Exactly the same gas turbine would be installed whether operating the CCGT to provide an output of 470 MWe or of 550 MWe. Restricting the gas turbine to operate at the 470 MWe level would result in the plant running less efficiently and miss an opportunity to maximise the benefits of improvements in turbine technology. This proposed increase in output will also align with the grid export connection limit.

The existing wording of Schedule 1 Part 1 as stated in the current DCO (as amended by the 2015 Correction Order) and the 2021 Amendment Order states:

'*A nationally significant infrastructure project comprising a generating station with a nominal gross electrical output of up to 470 MWe…*'

This application seeks to amend this wording to state as follows:

'*A nationally significant infrastructure project comprising a generating station with a nominal gross electrical output of up to 550 MWe…*'

Key relevant matters assessed to consider the environmental effects of this change focus on air quality, and the full Air Quality Assessment is provided in **Appendix A.1** and summarised in **Section 5.2**.

4.3 Minor changes to the internal boundaries of Work No. 1

Minor changes are sought to the footprint of Work No. 1 and to the land previously reserved for CCR compliance in order to optimise the CCGT layout and make best use of the site area. This change does not alter the extent of Work No. 1 in which the main components of the CCGT are authorised to be built. The new footprint of Work No.1 overlaps with part of the Work No.2A area and the whole of the Work No.2B area. An area of Work No.1 in the north west of the site has also been removed as this is no longer required to deliver the CCGT plant.

It is proposed that the overlap areas which include land previously reserved for CCR compliance (formerly Work Area 2B) within the North Killingholme (Generating Station) (Amendment) Order 2021 is utilised to accommodate non-critical elements of Work No. 1 (excluding Work Nos. 1(a), 1(b), 1(c), 1(d), 1(e) and 1(p)) of the CCGT infrastructure to consolidate development within the south-west operational area within the Order Limits. These changes are linked to the proposed change to the location of the land set aside to meet the Carbon Capture Readiness requirements set out at section 4.5, below. This change will allow more flexibility in the positioning of ancillary components of the CCGT infrastructure within the limits of deviation permitted in Article 3(5)(a) of the DCO 2014.

It is proposed that the buildings and equipment identified in the amended description of Work No. 1, will be provided within the amended area for Work No. 1 as identified by the area hatched in green on the Updated Works Plan. This enlarged area for Work No. 1 includes the land previously reserved for the provision of CCS plant in the 2021 amendment to the DCO.

However, in order to ensure that there are no new or different environmental effects arising from the changed layout of the CCGT plant as compared to what was originally consented in the DCO, the Draft Amendment Order includes a restriction (in the form of a new requirement 53 in Part 3 of Schedule 1 to the DCO that the main structures of the combined cycle plant as set out in the description of Work No. 1, items 1(a)-(e) and item 1(p) cannot be carried out in the overlap areas. The works which may not be carried out in the overlap areas are as follows:

(a) one gas turbine within a turbine hall;

(b) one steam turbine within a turbine hall;

(c) one or two electricity generators and one or two transformers within a compound;

(d) a heat recovery steam generator;

(e) a main stack;

(p) an auxiliary boiler and associated stack

Within the amended Work No. 1 area including the overlap areas identified on the Updated Works Plan, the following buildings and equipment can be located:

(f) up to two banks of hybrid cooling towers, condenser equipment and auxiliary cooling equipment;

(g) raw and fire water storage tanks;

(h) a raw water treatment plant;

(i) a demineralised water treatment facility;

(j) gas insulated switchgear;

(k) an administration building;

(l) a workshop and warehouse building;

(m) a materials storage facility;

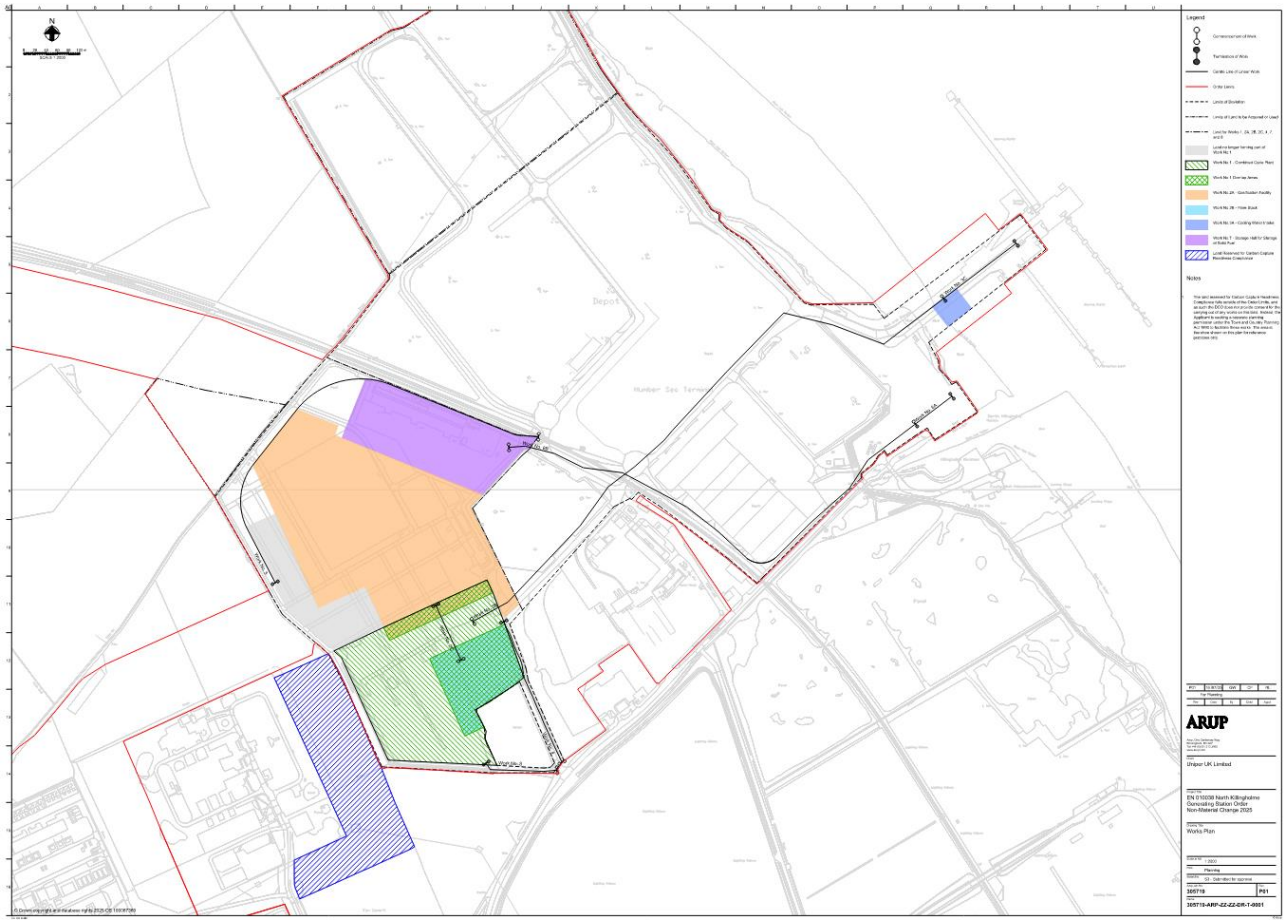
(n) a waste water treatment plant; and

(o) a facility to enable steam-water pass-outs and/or hot-water-pass-outs.

This change provides Uniper with more flexibility to optimise the layout of the CCGT whilst also consolidating the built form of the CCGT within the southern part of the original consented area for Work No.1. The consolidation of the layout of the CCGT within the amended extent of Work No.1 including the overlap areas allows the removal of the north-western extent of the consented extent of Work No. 1 because it is no longer required. The area of land no longer proposed to form part of Work No. 1 is shown coloured grey on the Updated Works Plan.

As the land previously reserved for CCR compliance in the 2021 Amendment Order is proposed to be included within the larger Work No. 1 area described above, this application seeks the reprovision of land proposed to be reserved for CCR compliance as identified in Section 4.5 as indicated by the area hatched in dark blue, and labelled in the legend of Figure 4-1 below as 'land reserved for Carbon Capture Readiness Compliance'. This land is owned by and is under the control of the Applicant. No works associated with this land are included as part of this DCO and this land is outside the Order Limits. Planning permission is being sought separately for the development of any carbon capture infrastructure., under the Town and Country Planning Act 1990 regime. Further details are provided in section 4.5, below.

Figure 4-1: Proposed amended works plan (for detailed version see drawing reference 305719-ARP-ZZ-ZZ-DR-T-0001)



4.4 Minor changes to a limited number of building/infrastructure parameters

Minor changes are proposed to a limited number of building/infrastructure parameters specified in Schedule 1 Part 2 to the Order to take into account the engineering design that has now been undertaken for the CCGT.

In addition, references to an auxiliary boiler and associated stack were included in the original DCO documents (including the Environmental Statement and the Design and Access Statement) as part of the common facilities for the proposed generation station, and its operation was assessed as part of its Environmental Statement, however, it was not specifically referenced in the DCO Schedule 1. The Draft Amendment Order included with this application adds an additional limb to the works listed as Work No.1 to reference to the auxiliary boiler and stack to bring it into conformity with the authorised design.

Table 4-1 provides a comparison between the building heights set out in Schedule 1 Part 2 of the 2014 DCO, and the proposed new parameters for the respective CCGT infrastructure.

Table 4-1 Comparison of authorised and proposed building heights for CCGT infrastructure

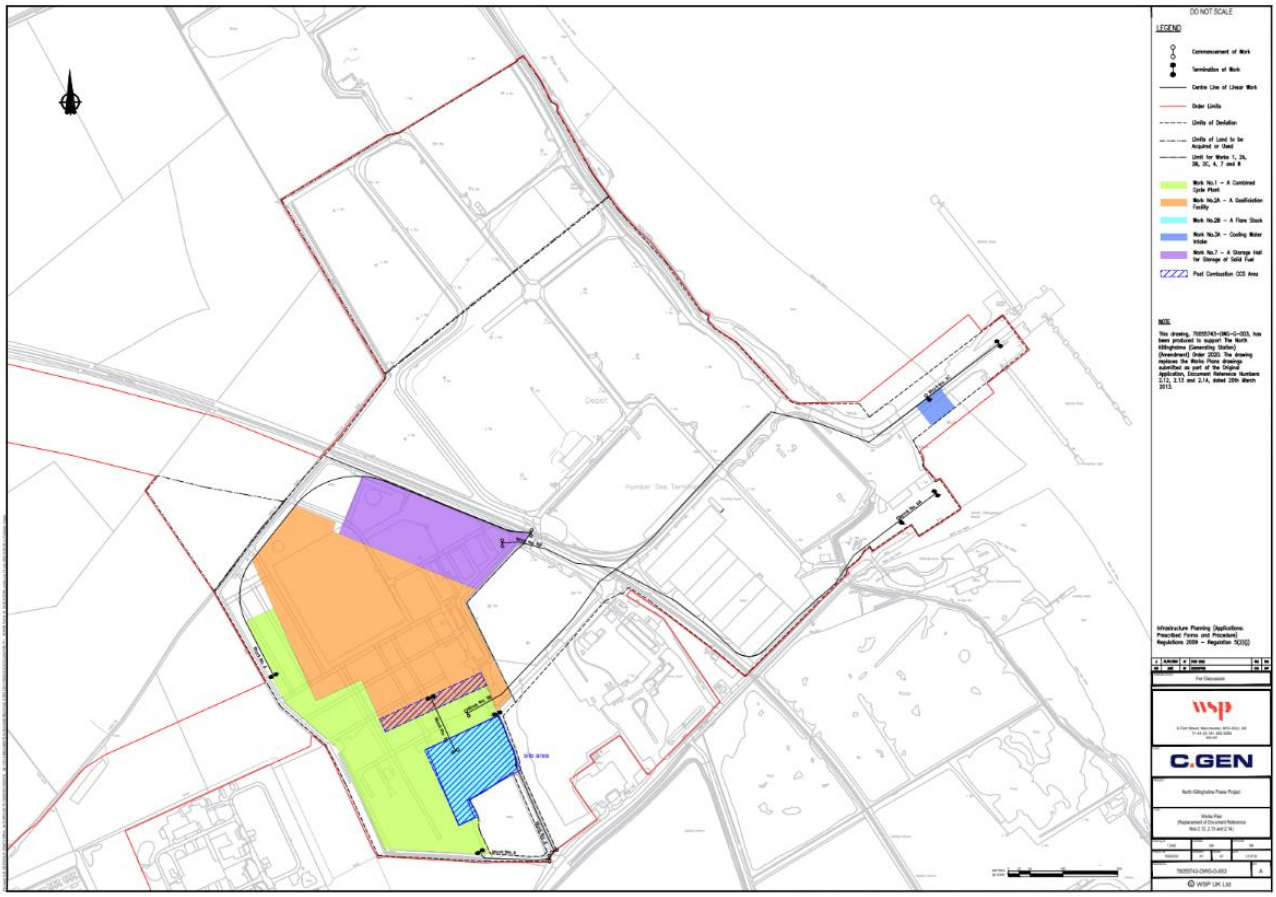
Building	(1) Height (metres) above ordnance datum (original DCO 2014)	(2) Maximum height (metres) taking into account the limits of deviation vertically as set out in articles 3(5)(b) and 3(6) of the DCO	(3) New height of specific buildings or equipment Proposed in this NMC application (inclusive of limits of deviation)	(4) Difference in height from authorised maximum height (column (3)-column (2))	(5) New height (metres) parameter proposed in Schedule 2 of the amended DCO (excluding the limits of deviation vertically as set out in articles 3(5)(b) and 3(6) of the proposed amendment to the DCO (column (1) +column (4))
Heat recovery steam generator	40	45	52	+7	47
Turbine hall	35	40	38	0	35
Main stack	85	90	90	0	85
Hybrid cooling tower (bank 1)	25	30	33	+3	28
Hybrid cooling tower (bank 2)	25	30	33	+3	28
Administration building	17	22	22	0	17
Warehouse	25	30	30	0	25
Auxiliary boiler and stack	n/a	n/a	15	n/a	15

The proposed new parameters are presented in the Updated Indicative Site Layout Plan (drawing. no. 305719-ARP-ZZ-ZZ-DR-T-0002) and Updated Illustrative Elevations Drawing (drawing. no. 305719-ARP-ZZ-ZZ-DR-T-0004) accompanying the application. The consideration of the effect of these changes in parameters to environmental outcomes is reported in section 5 of this Application Statement.

4.5 Change in location of the site reserved for CCR compliance

The North Killingholme (Generating Station) (Amendment) Order 2021 did not authorise the development of any carbon capture infrastructure. It identified a site to be reserved for post-combustion carbon capture, as required by the Carbon Capture Readiness requirements and the Carbon Capture Readiness (Electricity Generating Stations) Regulations 2013. This land is identified by the dark blue hatched areas shown in **Figure 4-2,** which shows the works plan approved by the North Killingholme (Generating Station) (Amendment) Order 2021.

Figure 4-2 Works plan approved by the 2021 amendment to the DCO



Following further design of the CCGT by Uniper, in order to optimise CCGT development as a carbon capture enabled plant, it is proposed that the land currently reserved to meet the Carbon Capture Readiness requirements is reprovisioned, to enable its location and extent to be sufficient to accommodate the proposed CCS infrastructure and optimise the layout of the CCGT and the CCS plants. For these reasons, this application seeks approval for the relocation of the CCR reserved land to land immediately west of Work No. 1 (i.e. west of the CCGT infrastructure), outside of the Order limits.

Through this reprovision, Uniper continues to demonstrate that the proposed generating station meets the Carbon Capture Readiness requirements. The proposed amendments to the DCO, as set out in the Draft Amendment Order ensure that the Order as amended would continue to demonstrate carbon capture readiness. The alternative land is owned by and therefore already under the control of the Applicant and has no infrastructure on it that would be a barrier to its use for carbon capture.

The Applicant is developing the design of a carbon capture plant. As noted in Section 1, the extant DCO does not include powers to develop any carbon capture infrastructure and therefore, planning permission is being sought separately for these works., under the Town and Country Planning Act 1990 regime. The Applicant has made progress with the pre-application stage of this planning application. The Applicant obtained an EIA Scoping Opinion (ref: PA/SCO/2025/7) on 10 April 2025 and a response to a Pre-Application Enquiry (ref: PRE/2025/40) on 16 May 2025 from North Lincolnshire Council. The Applicant is currently preparing the application documents and drawings and intends to submit a planning application for the proposed carbon capture plant at the earliest opportunity.

5. Environmental Assessment of Changes

5.1 Overview

As required by 'The Planning Act 2008: Guidance on Changes to Development Consent Orders', consideration has been given to the effects of any of the proposed changes on the conclusions of the original Environmental Statement (ES) that accompanied the DCO application. Any changes to what was previously assessed are discussed below.

5.2 Assessment of changes – Air Quality

5.2.1 Introduction

An Air Quality Assessment has been undertaken that reviews the predicted concentrations resulting from a proposed output capacity change to those predicted in the original 2021 Amendment and accompanies this Application Document in **Appendix A.1.**

5.2.2 Outcome of the Air Quality Assessment

The assessment findings can be summarised as follows:

- There was insignificant change in the Nitrogen Dioxide (NO_2) concentrations predicted at human receptor locations and predicts no exceedances of the relevant national Air Quality Standards. The overall effect was insignificant for both the updated 2021 Amendment results and the 2025 proposed change results, in line with the EA risk assessment guidance.
- The assessment also reviewed Nitrogen Oxides (NO_x) concentrations predicted at ecological designations and no exceedances of the relevant Critical Levels (CLs) were predicted. The overall effect was insignificant at all receptors with minimal exceptions.
- As for human receptors and Ecological receptors, the Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) planning criteria show a negligible impact at all receptors, which is therefore not significant. The changes in the results from the updated 2021 Amendment and the 2025 proposed change are considered to be non-material as a result.
- Nitrogen deposition was also considered for the ecological receptors. The comparison of the updated 2021 Amendment deposition results with those from the 2025 proposed change, indicate that the process contributions at each receptor as a proportion of the critical load were less than the 1% insignificance criteria. This shows that these ecological receptors can be screened out of further assessment.

The Air Quality Assessment concluded that, overall, any changes resulting from the proposed increased capacity of the generating station can be considered non-material from an air quality perspective, compared with the results from the 2021 Amendment.

5.3 Assessment of changes – Landscape and Visual Effects

5.3.1 Introduction

This section assesses the proposed changes and considers their effect on the findings of the Landscape and Visual Impact Assessment (LVIA) included within the ES submitted with the DCO Application in 2013.

5.3.2 Background and Context

The original ES included a LVIA. This assessment considered potential landscape and visual impacts arising from a number of proposed development scenarios for the new generating station.

The methodology for the assessment was based on best practice and guidance at the time of drafting. It followed the Guidelines for Landscape and Visual Impact Assessment, second edition (GLVIA2), published by the Landscape Institute and the Institute of Environmental Management and Assessment (IEMA) in 2002 (GLVIA). Although the guidelines were updated in 2013 (GLVIA3) just after the 2013 LVIA was undertaken, the latest guidance does not undermine the methodology and approach used in the original assessment or its findings.

Viewpoint photographs were taken to represent views from residential properties, public rights of way, recreational resources, and heritage assets, and photomontages were produced to illustrate existing and proposed views in the ES. The assessment included Zone of Theoretical Visibility (ZTV) mapping to establish the study area and identify representative viewpoints. The assessment considered effects during the construction, operation, and decommissioning phases, and also included an assessment of cumulative effects arising from the proposal in combination with other proposed large scale industrial developments.

The review of the 2013 LVIA undertaken for the non-material change application in 2021, considered changes to the environmental baseline and concluded that no new or materially different likely significant effects on landscape and visual impacts were anticipated, compared to the original ES (2013) findings. It considered the demolition of Killingholme A Power Station (KPS-A) in 2017 and the absence of stacks at Killingholme B Power Station (KPS-B) and concluded that "*whilst the demolished structures contributed to the industrial character, it was within a much wider industrial extent that still remains and within which the Project will continue to be located*". As part of this review, consultation with North Lincolnshire Council confirmed no changes to landscape policy, designations, or baseline that would likely affect the proposal.

5.3.3 Assumptions and limitations

The study area for the assessment is maintained at a 15km radius from the centre of the Operations Area, consistent with the study area used in the original 2013 ES.

The Order Limits remain unchanged from the consented development. All proposed development associated with the Project is to be located entirely within these previously submitted Order Limits.

The assessment primarily relies on a desk-based review and previous assessments, including updated viewpoint photographs taken in September 2019 to accompany the non-material change amendment approved in 2021.

The 2013 ES refers to significance of impacts, whereas the 2021 non-material change to the DCO refers to significance of effects. These terms are treated as being interchangeable for these purposes and have been followed through in this report.

For the purposes of this assessment, it is considered that the baseline landscape and visual conditions have not undergone any material changes relevant for the assessment since 2021 that would affect the conclusions of the 2013 LVIA and 2021 Non-material change Environmental Report.

The consented development parameters outlined in the DCO set the framework for assessing non-material changes. Schedule 1 Part 3to the DCO includes Requirements that dictate how the Project must be delivered such that it is carried out within the envelopes of environmental effects assessed in the ES, covering aspects like design, operation, landscaping, drainage, and lighting. The proposed changes apply only to the CCGT structures comprising Work No.1.

The effects associated with the construction and decommissioning phases of the Project are considered to remain consistent to or lesser than those assessed in the original ES. No new or different landscape or visual significant effects are predicted during these phases.

The proposed changes do not require amendments to the landscape and visual mitigation strategy established in the original ES. The embedded design mitigation measures, such as the design of buildings and structures, selection of appropriate colours and materials, and perimeter structure planting, identified in the original assessment continue to apply to the proposed modifications.

The assessment maintains consistency with the original 2013 ES and previous non-material change environmental reports to ensure a coherent approach to the evaluation of landscape and visual effects. This consistency is to demonstrate that the proposed changes remain within the envelope of effects previously assessed and consented, and that they do not introduce new significant effects that were not previously identified.

5.3.4 Proposed non-material changes to the Project

Some of the parameters for the CCGT building structures have changed as outlined in Table 4-1 Comparison of authorised and proposed building heights for CCGT infrastructure. The key increases of height which have the potential to alter the visual composition of the Project are included in the Table 5-1: .

It should be noted that while some building parameters represent increases in height, other structures within the CCGT complex are proposed to be constructed at the same heights or potentially lower than the maximum parameters consented in the DCO. Any reductions in building heights will result in reducing the magnitude of visual effects compared to the consented scheme, and will not increase the significance of landscape and visual effects.

A full list of the proposed changes is included in Chapter 4.1.

Table 5-1: Summary of key proposed increases in height for the CCGT structures

	DCO Maximum Height (including 5m limit of vertical deviation allowed)	New Proposed maximum height (including 5m limit of vertical deviation)
Hybrid cooling tower (bank 1)	30m	33m
Hybrid cooling tower (bank 2)	30m	33m
Auxiliary boiler and stack	Not listed	15m
Heat recovery steam generator (HRSG)	45m	52m

5.3.5 Assessment of changes to landscape effects

Effects on the character of national and local landscape character areas within the 15km study area were assessed in the 2013 ES. While many impacts were assessed as Slight adverse or Neutral, the ES identified Moderate adverse impacts on North Lincolnshire Landscape Character Assessment and Guidelines (NLLCAG) Wooded Farmland – East Halton, North Killingholme Character Area during construction and operation for Scenario B (operation as a CCGT plant) and NLLCAG Flat Open Farmland – Barrow Haven, New Holland, Goxhill Haven Character Area during construction (Scenarios A, C and D).

The 2013 ES also considered potential impacts on specific landscape features and the setting of heritage assets. A significant impact was identified on the setting of Manor Farm House, North Killingholme (Listed Building). This was assessed as a moderate – significant impact, arising from a medium magnitude of change in a landscape feature considered to be of high sensitivity.

The assessment of effects on the landscape considers that the sensitivity of the receptors would remain unchanged. The proposed changes pertain solely to the CCGT plant, will not result in an increased building footprint, the proposed heights of the elements will remain broadly similar, the maximum heights of the overall development are unchanged and the landscape mitigation measures will remain consistent with the DCO. Therefore, the significance of effect will remain as reported in the 2013 ES.

5.3.6 Assessment of changes to visual effects

Given the overall scale of the development and existing heavily industrialised setting, the proposed increase in the height of the cooling towers would be barely perceptible. For the HRSG building, there is potential for the taller element to alter the overall composition, making it more prominent. However, while these changes may slightly increase the magnitude of change, this increase is not sufficient to alter the magnitude category or the significance of effects on any receptor reported in the 2013 ES. Table 5-2 below details the effect of the changes relevant for each of the viewpoints defined in the ES.
Please refer to Appendix A.1 that contains Figure 9.3 included in the Environmental Statement Volume 3 – Figures for the plan showing the viewpoints submitted with the 2013 ES.

Table 5-2: Viewpoints review

Viewpoint	Distance/ Direction	2013 LVIA Significance of Effect (Operation, Scenario B)	Review of the effect with the 2025 proposed design changes
1. East Halton	1.5km NW	Substantial Adverse	The increased structures height will slightly increase the prominence of the Project. However, the proposed structures will be viewed within the context of a heavily industrialised area, including the Killingholme B Power Station north of Chase Hill Road, tall structures of oil refineries and pylons. Therefore, the effect will remain substantial adverse.
2. Fort Paull	7.0km NNE	Slight Adverse	At 7km, the increased height is unlikely to be perceptible and therefore materially alter the visual impact.
3. Nev Cole Way	4.2km N	Moderate Adverse	Oil refinery stacks will continue to dominate the horizon from this viewpoint. Therefore, the increased height of the CCGT plant structures will not change the significance of effect.
4. Nicholson Road, North Killingholme	1.5km SSW	Moderate Adverse	The Project introduces an extensive industrial feature in the background of the view (as identified in the 2013 ES). However, as this is a glimpsed view along a footpath, the slight increase of height will not change the significance of effect.
5. Staple Road, South Killingholme	3.8km S	Slight Adverse	Due to intervening oil refinery stacks and structures, the changes to the Project would be difficult to differentiate from this viewpoint. Therefore, the proposed changes would not change the significance of effects reported in the 2013 ES.
6. Habrough Road, South Killingholme	5.5km S	Slight Adverse	The intervening oil refinery stacks and structures dominate the horizon at this viewpoint. Therefore,

Viewpoint	Distance/ Direction	2013 LVIA Significance of Effect (Operation, Scenario B)	Review of the effect with the 2025 proposed design changes
			the proposed changes would not change the significance of effects reported in the 2013 ES.
7. East Halton Road	1.3km NW	Substantial Adverse	The increased height of the CCGT structures would be noticeable from this viewpoint. However, the Project was originally assessed to have already a substantial adverse effect, which is the maximum at the scale of effects.
8. Goxhill Hall Gatehouse	5.0km NW	Slight Adverse	The Project will remain largely screened by the intervening vegetation; it is anticipated that the proposed design changes will only slightly alter this. Therefore, the proposed changes would not change the significance of effects reported in the 2013 ES.
9. Thornton Abbey and Gatehouse	3.0km WNW	Slight Adverse	The Project remains largely screened by the intervening vegetation; it is anticipated that the proposed design changes will only slightly alter this. Therefore, the proposed changes would not change the significance of effects reported in the 2013 ES.
10. College Road (near Thornton Abbey)	2.9km WNW	Slight Adverse	The increased building height may slightly reduce the degree of screening by intervening woodland and hedgerows but seen in the industrial context and at a distance, the slight adverse effect reported in the 2013 ES would be maintained.
11. Station Road, Ulceby	5.2km SW	Slight Adverse	The Project will remain in a distant view with minimal change in perceived scale due to the change of height. Therefore, the proposed changes would not change the significance of effects reported in the 2013 ES.
12. Kirmington Village Centre	8.2km SSW	Neutral	The Project will remain largely screened by intervening vegetation; it is anticipated that the proposed design changes will only slightly alter this. Therefore, the proposed changes would not change the significance of effects reported in the 2013 ES.
13. Cherry Cobb Sands Road	8.0km E	Slight Adverse	The industrial context seen in far distance from the other shore of Humber would be maintained with the proposed changes. Within the overall industrial context of the view, the Project would still result in a slight adverse change, as reported in the 2013 ES.
PEIR VP10a - Clough Lane/Haven Road	0.2km SSE	Substantial Adverse	At this distance, the increased height would be noticeable. However, the change would not alter the significance of effects reported in the 2013 ES. The Project was originally assessed to have already a substantial adverse effect, which is the maximum at the scale of effects.
PEIR VP10b - North Killingholme Haven	0.25km SSE	Substantial Adverse	At this distance, the increased height would be noticeable. However, the change would not alter the significance of effects reported in the 2013 ES. The Project was originally assessed to have already a substantial adverse effect, which is the maximum at the scale of effects.

While the visual effects assessment was completed for Scenarios B and E, the visualisations presented in the original 2013 ES were based only on Scenario E, which represents the operation of the Generating Station as an IGCC plant. This scenario was selected as the basis for assessment because it includes the full extent of development and therefore constitutes the worst-case scenario in terms of scale, massing, and potential visual impact. The proposed 2025 non-material change relates solely to the CCGT plant structures. These changes remain within the visual envelope established by Scenario E. As such, the revised CCGT configuration continues to represent a lesser visual impact than that of the Scenario E visualised for the 2013 ES and therefore no new visualisations have been prepared.

This assessment concludes that the visual impacts on receptors resulting from the proposed changes to the parameters are consistent with those documented in the ES submitted with the DCO application and the 2021 Amendment to the Order.

5.3.7 Mitigation

No changes to mitigation relating to landscape and visual impacts are required.

5.3.8 Consistency with the cumulative assessment

The cumulative effects assessment in the ES considered the Project in combination with other developments in the area. It established an approach to evaluating cumulative landscape and visual effects, identifying whether significant combined effects could occur as a result of the other proposals in the study area.

The Applicant has provided an updated consideration of cumulative developments in section 5.4 below.

The non-material change assessment confirms that the proposed changes do not materially alter the cumulative effects assessment (as set out in section 5.4), as they remain broadly within the parameters of the consented development that formed the basis of the original cumulative assessment. The changes do not introduce new interactions with other developments that would result in additional cumulative effects beyond those previously identified and assessed.

5.3.9 Conclusions

In terms of landscape and visual impacts, the key areas of change relate to the height of the cooling tower and HRSG (with building). The building heights and volume will be broadly of similar size and scale to that consented in the DCO.

Although the proposed changes will slightly exceed some of the parameters originally outlined in the DCO, it is considered that no new significant landscape and visual effects would be experienced compared to those reported in the 2013 ES. The mitigation proposed in the DCO is sufficiently flexible to accommodate these changes. As such, no updates to the 2013 ES are required as the proposed changes are considered to be non-material from a landscape and visual perspective.

5.4 Cumulative Assessment

5.4.1 Introduction

The purpose of this cumulative assessment is to evaluate the combined environmental effects of the Project with other existing or approved projects / schemes. This Cumulative Assessment Report considers updated or new schemes since the North Killingholme (Generating Station) (Amendment) Order 2021, was granted and forms part of this Application.

It is important to note that any project in the vicinity of the Project that undertook an Environmental Impact Assessment (EIA) since the original Order was granted in 2014 will have had to include the consented Project within their cumulative assessment.

5.4.2 Methodology

The assessment reported in this document has been completed with regards to the Planning Inspectorate Advice Note 17 'Cumulative effects assessment relevant to nationally significant infrastructure projects'.

As part of the North Killingholme (Generating Station) (Amendment) Order 2021, an updated Cumulative Assessment was undertaken to identify any new projects since the Environmental Statement (ES) submitted with the 2013 Application (the '2013 ES'). The outcome from this Assessment was a revised short list of developments in close proximity to the Project. A review of the 2021 short-list of developments has been undertaken to confirm any changes to the status of the schemes, since the 2021 Assessment was completed. This is summarised in Table 5-4.

Further to the 2021 Cumulative Assessment, the Applicant has also undertaken a review of any new schemes in close proximity to the Project. This has involved a two-stage process; establishment of a long-list of potential cumulative schemes within the vicinity, which was then refined to a short-list of schemes which have the potential to give rise to significant cumulative effects by virtue of overlaps in temporal scope, the scale and nature of the 'other development' and receiving environment; or any other relevant factors.

5.4.2.1 Long-list criteria methodology

To establish a list of potential cumulative projects, a review of major Town and Country Planning Act 1990 (TCPA) Applications submitted to North Lincolnshire Council (Ferry Ward), North East Lincolnshire Council (Immingham Ward), and West Lyndsey Council (Caistor and Yarborough Ward) was undertaken. In addition, a review of all DCO projects submitted to the Planning Inspectorate within the Yorkshire and Humber area was completed.

This list of potential cumulative projects was considered against the Zone of Influence (ZoI) for each environmental topic (refer to Table 5-3) to establish the long list of schemes. This shows that the maximum ZoI with potential to provide cumulative environment effects is 5km for both construction and operation.

Table 5-3: Zone of Influence for each environmental effect

Environmental Topic	Zone of Influence	
	Construction	**Operation**
Air Quality (includes Human Health)	350m for emissions and construction dust (and 500m along roads from the site entrance for dust trackout)	15km for international statutory designated ecology sites but effects of the Project are negligible beyond 5km from the site
Noise and Vibration	1km	1km
Ecology and Nature Conservation	For both construction and operation - 15km for international statutory designated ecology sites but effects of the Project are negligible beyond 5km from the site	
Landscape and Visual Amenity	2km (landscape) 5km (visual)	2km (landscape) 5km (visual)
Ground Conditions and Hydrogeology	2km	2km
Flood Risk, Hydrology and Water Resources	2km	2km
Cultural Heritage	Onsite	2km
Socio-economics	500m	500m
Traffic and transport	The ZoI for construction and operation is related to the road network in direct connectivity to the site rather than a set distance from the site. The ZoI therefore includes the local and strategic road network as far as the A180.	

Table 5-5 provides the new long-list of cumulative schemes. Note, this has been prepared considering those projects requiring an EIA as this scale of project is considered most relevant for consideration.

5.4.2.2 Short-list criteria methodology

Following the identification of the long list of cumulative schemes, this list was refined to a revised short-list of schemes which have the potential to give rise to significant cumulative effects by virtue of overlaps in temporal scope, the scale and nature of the 'other development' and receiving environment; or any other relevant factors.

5.4.3 Long-list of schemes

Table 5-4 details the previous short-list of schemes from the 2021 Amendment. Additional information regarding any changes since the Project was amended in 2021 is provided in the far right-hand column.

Table 5-4: Previous short list from 2021, with 2025 updates provided in the far-right hand column

Ref Number	Project name	Distance from Site	2021 status	Description	Any changes since Project was amended in 2021
1	Able Marine Energy Park, Able UK	2km	Under construction	Development of a quay on the south bank of the River Humber, alongside associated (dredging, land reclamation, onshore facilities) and ancillary (harbour regulations and footpath diversions) infrastructure.	DCO non-material change application decision from Secretary of State has granted a one-year extension for completion of construction, with the possibility for a further extension if additional information is provided for review.
2	Smart Wind – Hornsea Offshore Wind Farm (Zone 4) Projects 3 and 4	21km	Project 3 under construction. Project 4 consented	Development of the Hornsea Project Three offshore wind farm with an approximate capacity of up to 2,400MW.	Construction commenced for Project 3. Project 4 has been discontinued by the developer.
3	North Beck Energy Centre DM/0026/18/FUL	6.8km	Consented	Energy Recovery Facility with an export capacity of up to 49.5MW and associated infrastructure.	Construction commenced.
4	VPI Immingham OCGT PA/SCO/2018/3	2.5km	Consented	Gas-fired power station with an output capacity of 299MW.	Construction commenced.
5	Queens Road Estate, Immingham DM/1027/13/OUT	6.3km	Consented	General industry storage and distribution and office development.	Reserved Matters submitted and approved. Construction commenced.
6	Highfield Residential DM/0728/18/OUT	6.2km	Consented	Development of up to 525 residential dwellings and an extra care facility for the elderly.	Reserved Matters submitted and approved. Construction not yet commenced.

Ref Number	Project name	Distance from Site	2021 status	Description	Any changes since Project was amended in 2021
7	Peter Ward Homes Residential DM/1175/17/FUL	4.8km	Consented	Residential development for 145 dwellings with associated parking and landscaping.	Construction commenced.
8	Immingham Rail Freight DM/0628/18/FUL	7.2km	Consented	Development of a 20MWe waste to energy power generation facility	Construction commenced.
9	Stallingborough Interchange DM/0105/18/FUL	7.5km	Consented	Development of a 62ha Business Park and associated infrastructure.	Construction commenced.

Table 5-5 provides a new long-list of schemes identified in a review of current / live planning applications for 2025.

Table 5-5: 2025 long list

Ref Number	Project name	Distance from Site (approx.)	Status	Description
1	VPI Immingham OCGT (NSIP) PA/SCO/2018/3	2.5km	DCO - Consented – under construction	Construction and operation of a new Open Cycle Gas Turbine Power Station of up to 299MW output and associated infrastructure.
2	Viking CCS Pipeline (NSIP)	3km	DCO - Consented	A new 55km onshore underground pipeline and associated infrastructure.
3	Humber Carbon Capture Pipeline (Proposed NSIP)	Directly adjacent	Proposed DCO - EIA Scoping Opinion provided	A new onshore underground CO2 pipeline and associated above ground infrastructure to transport captured CO2 from emitters in the Humber region, from Drax to Easington to connect with a secure offshore storage in the North Sea.
4	Immingham Green Energy Terminal, Redfearn House, High Street, North Kelsey (NSIP) PA/SCO/2022/9	3.5km	DCO - Consented	A multi-user liquid bulk green energy terminal located on the eastern side of the Port of Immingham.
5	Port of Immingham PA/2024/397	3.5km	Decision pending	Construction of 2x wind turbines and associated and ancillary infrastructure.
6	Land at Marsh Lane, South Killingholme PA/2023/502	2.9km	Consented (with conditions)	Enabling works on land east of Rosper Road, including ground levelling, ground drainage, fencing, road widening, drainage, building demolition, access, substation construction, bridge crossings and new rail sidings.
7	Immingham Dock Western Entrance, Humber Road South Killingholme, DN40 3DZ PA/SCO/2023/1	3.5km	EIA Scoping Opinion provided	Immingham onshore wind including up to three wind turbines.

Ref Number	Project name	Distance from Site (approx.)	Status	Description
8	Phillips 66 Ltd, Eastfield Road, South Killingholme PA/2023/422	2.8km	Consented	Construction and operation of a post-combustion carbon capture plant and associated infrastructure.
9	VPI Power Station, Rosper Road, South Killingholme PA/2023/421	2.6km	Decision pending	Construction and operation of a post-combustion carbon capture plant and associated infrastructure.
10	Site of Former Myrtle Villas, Rosper Road, South Killingholme PA/SCO/2022/13	2.9km	EIA Scoping Opinion provided	A 100MW hydrogen electrolyser and underground electrical cable connection to the Hornsea Two onshore substation and associated infrastructure.
11	Land East of Rosper Road, South Killingholme PA/SCO/2022/3	2.1km	EIA Scoping Opinion provided	An offshore wind turbine manufacturing facility.
12	Able Marine Energy Park, south of Station Road, South Killingholme PA/2021/1525	2.2km	Consented	A monopole manufacturing facility.
13	Port of Immingham Wind Turbines, Land off Southern Way, Immingham Docks, Immingham North East DM/0329/24/FUL	4.4km	Decision pending	Erection of two wind turbines and associated ancillary infrastructure.
14	Humber H2ub® Green, Killingholme, North Lincolnshire PA/SCO/2024/4	2km	EIA Scoping Opinion provided	A 200MW+ green hydrogen production facility.

5.4.4 Short-list of schemes

Following identification of the 2025 long-list of planning schemes near to the North Killingholme Power Project, a revised short-list of schemes has been identified and considered as outlined in Table 5-6.

Table 5-6: 2025 short-list

Ref Number	Project Name	Potential cumulative effects
1	VPI Immingham OCGT (NSIP) PA/SCO/2018/3	The cumulative chapter submitted as part of the ES for the VPI Immingham OCGT in April 2019 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 the proposed non-material change 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 VPI Immingham OCGT and the Project.

Ref Number	Project Name	Potential cumulative effects
2	Viking CCS Pipeline (NSIP)	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 the proposed non-material change 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 Project.
3	Humber Carbon Capture Pipeline (NSIP)	Through 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 the proposed non-material change will have very minor effects that don't have the potential to create new significant effects, it is therefore assessed that there would be no significant cumulative effects between the Humber Carbon Capture Pipeline and the Project.
6	Land at Marsh Lane, South Killingholme PA/2023/502	The cumulative chapter submitted as part of the ES for this project in April 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 the proposed non-material change 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 this project and the Project.
8	Phillips 66 Ltd, Eastfield Road, South Killingholme PA/2023/422	*Note: The proposed Phillips 66 development and the VPI Power Station were both assessed in combination within the Humber Zero Environment Statement. Together, both proposals form the first phase of the Humber Zero project.* The cumulative chapter submitted as part of the ES for the Humber Zero project in April 2023 states that there would be a moderate beneficial (significant) socio-economic effect during construction on employment generation. As the proposed non-material change will not result in any change to construction employment it is therefore assessed that there would be no new or different significant cumulative effect between the Humber Zero project and the Project.
9	VPI Power Station, Rosper Road, South Killingholme PA/2023/421	
14	The Humber H2ub® Green, Killingholme, North Lincolnshire PA/SCO/2024/4	Humber H2ub® Green is being developed by Uniper UK Limited, the same company as the Applicant for the Project. It is anticipated that due to the incorporation of both embedded and additional mitigation measures within the development and associated with the other identified development any potential cumulative effects will be managed to avoid effects to sensitive receptors. As such, potential cumulative effects are not anticipated to be significant.

5.4.5 In-Combination effects

As the proposed changes that are the subject of the non-material change application would not result in any new, or materially different, likely significant effects from those reported in the 2013 ES (see Summary of Environmental Effects section 5.5 (2025) that is provided in support of this non-material change application), identifies that there are no changes to in-combination effects (being those which can occur from two (or more) environmental impacts interacting and both affecting the same receptor).

5.4.6 Conclusion

This assessment has been prepared to identify any new projects that have come forward since the cumulative assessment was completed for the Project as reported in the 2013 ES and then subsequently updated as part of the 2021 non-material change application.

Given that the non-material change has been assessed as making no material difference to the potential effects of the Project itself and it is therefore within the assessment envelope previously assessed and consented (including the inclusion of additional developments, as presented within this Assessment), it can be concluded that there are no identified changes to the cumulative assessment or significance of effects as presented in the original 2013 ES or as part of the 2021 non-material change application.

5.5 Summary of Environmental Effects

5.5.1 Purpose of this assessment

'The Planning Act 2008: Guidance on Changes to Development Consent Orders' sets out that *'A change should be treated as material if it would require an updated Environmental Statement (from that at the time the original Development Consent Order was made) to take account of new, or materially different, likely significant effects on the environment.'*

The Summary of Environmental Effects considers whether the proposed changes that are the subject of the 2025 Application result in any new, or materially different, likely significant effects from those reported in the '2013 ES'.

The 2021 non-material change application documents concluded that there would be no new, or materially different, likely significant effects on the environment resulting from the amendments made to the Order at that time. This document therefore considers the proposed changes against the 2013 ES.

5.5.2 Summary of the changes in environmental effects predicted as a result of the proposed non-material change

Table 5-7 identifies the likely significant residual effects reported in the 2013 ES and then considers whether any new, or materially different, likely significant residual effects would be likely as a result of the proposed non-material change.

The 2013 ES states that effects arising from decommissioning would be similar to those described for construction. It is assumed that the proposed non-material changes would not result in any new, or materially different, likely significant residual effects and that this conclusion remains unchanged.

Table 5-7: Summary of the changes in environmental effects predicted as a result of the proposed non-material change

Environmental topic	Phase of Project	New, or materially different, likely significant residual effects as a result of this non-material change when compared to the 2013 ES
Air quality	Construction	The proposed non-material change results in no increases to construction traffic numbers or scale of development. No change in effects identified.
	Operation	An assessment of the increase in output capacity of the CCGT from 470MWe to 550MWe is reported in the Air Quality Assessment (2025) which accompanies this non-material change application. This assessment concluded that the increase in capacity results in an insignificant change in emissions. No change in effects identified.
Ecology and biodiversity	Construction / Operation	No change in effects identified.
Historic environment	Construction	The proposed non-material change results in no changes to the footprint of CCGT development within the southern, undisturbed part of the Operation Area (Works 1). No change in effects identified.
	Operation	The proposed non-material change results in minor increases to various building height parameters of the CCGT. These are not considered to be material and the impact on views is assessed in the Landscape and Visual Technical Note. The footprint of the CCGT development within Works 1 is unchanged. No change in effects identified.
Landscape and visual	Construction	No change in effects identified.
	Operation	An assessment of the proposed non-material change is reported in the Landscape and Visual Technical Note (2025) which accompanies this non-material change application. This assessment concludes that although the proposed

Environmental topic	Phase of Project	New, or materially different, likely significant residual effects as a result of this non-material change when compared to the 2013 ES
		changes to building parameters will exceed those originally outlined in the DCO, they would be broadly of similar size and scale and therefore it is considered that no new significant landscape and visual effects would be experienced compared to those reported in the 2013 ES. No change in effects identified.
Noise and vibration	Construction / Operation	The proposed non-material change would not result in changes to the predicted noise emissions (as identified in the 2013 ES) outside the consented limits. No change in effects identified.
Socio-economic	Construction	The proposed non-material change results in no changes to construction employment as identified in the 2013 ES. No change in effects identified.
	Operation	No change in effects identified.
Traffic and transport	Construction	The proposed non-material change results in no increases to construction traffic numbers as identified in the 2013 ES. No change in effects identified.
	Operation	No change in effects identified.
Water quality and resources (and flood risk)	Construction / Operation	No change in effects identified.
Geology and land contamination	Construction / Operation	No change in effects identified.
Public health	Construction / Operation	No change in effects identified.

5.5.3 Habitats Regulations

The Planning Act 2008: Guidance on Changes to Development Consent Orders states that a proposed change to a Development Consent Order '*is likely to be material if it would invoke a need for a Habitats Regulations Assessment'*.

The 2013 Application included a Report to Inform Habitats Regulations Assessment which concluded that *'through the ranges of ecological mitigation measures identified to reduce and offset impacts to negligible levels that the project would not result in adverse effects to the European sites and their associated interest features either alone or in-combination.'*

Those conclusions have been reviewed in light of the proposed non-material change and taking account of any new plans or projects within the relevant study area since development consent was granted for the Project. The conclusion of this review is that there is no material change to the conclusions of the Report to Inform Habitats Regulations Assessment (submitted as part of the 2013 Application).

5.5.4 Conclusion

This section concludes that the proposed changes that are the subject of the non-material change application would not result in any new, or materially different, likely significant effects from those reported in the 2013 ES.

6. Non-Materiality of Proposed Amendments

Table 6-1 below summarises the key conclusions presented in this document in light of the considerations on materiality set out within 'the Planning Act 2008: Guidance on Changes to Development Consent Orders' (2015).

Table 6-1: Assessment of materiality against The Planning Act 2008: Guidance on Changes to Development Consent Orders (2015)

Consideration	Relevant para.	Text	NMC Response
Change to Environmental Statement	12.	*A change should be treated as material if it would require an updated Environmental Statement (from that at the time the original Development Consent Order was made) to take account of new, or materially different, likely significant effects on the environment.*	The effects of the changes proposed have been assessed and no change to the ES is required.
Need for a Habitats Regulation Assessment	14.	*A change to a Development Consent Order is likely to be material if it would invoke a need for a Habitats Regulations Assessment. Similarly, the need for a new or additional licence in respect of European Protected Species is also likely to be indicative of a material change.*	The Report to Inform Habitats Regulations Assessment contained in the 2013 Application concluded that that the project would not result in adverse effects to the European sites and their associated interest features, either alone or in-combination. This has been reviewed in light of the proposed non-material change, and taking account of any new plans or projects within the relevant study area, it is concluded that there is no change to the conclusions of the 2013 Report.
Need for Compulsory Purchase of additional land	15.	*A change should be treated as material that would authorise the compulsory acquisition of any land, or an interest in or rights over land, that was not authorized through the existing Development Consent Order.*	No new compulsory acquisition of land is proposed as part of the non-material change application.
Impact on business and residents	16.	*The potential impact of the proposed changes on local people will also be a consideration in determining whether a change is material. In some cases, these impacts may already have been identified, directly or indirectly, in terms of likely significant effects on the environment. But there may be other situations where this is not the case and where the impact of the change on local people and businesses will be sufficient to indicate that the change should be considered as material. Additional impacts that may be relevant to whether a particular change is material will be dependent on the circumstances of a particular case, but examples might include those relating to visual amenity from changes to the size or height of buildings; impacts on the natural or historic environment; and impacts arising from additional traffic.*	The potential impacts on human receptors have been assessed in this document and it has been concluded that no material impacts would be created as a result of the change across all of the specified impacts of para.16 nor has any other potentially material impact on business or residents been identified as a result of the proposed changes.

7. Conclusion

It is considered that the changes proposed in this application are non-material for the purposes of the Planning Act 2008, and the associated 'Planning Act 2008: Guidance on Changes to Development Consent Orders' (2015).

This is clearly demonstrated within Table 6-1 of Section 6, in light of the four key characteristics of materiality outlined in the 2015 Guidance, in that:

- An updated Environmental Statement is not required;
- there is no requirement for a new or updated HRA or European Protected Species licence;
- no new compulsory acquisition powers are being sought; and
- the proposed changes would not have a material impact on local residents and businesses.

Accordingly, the Applicant concludes that the proposed changes specified in section 0 of this document should be consented by the Secretary of State as non-material changes and that there is no impediment which would prevent the approval of the proposed amendments to the DCO set out in this non material change application.

A.1 Air Quality Assessment Report

ARUP

Uniper UK Limited

North Killingholme Power Project

North Killingholme (Generating Station) Order – Non-Material Change Application 2025

Air Quality Assessment

Reference:

Rev B | 1 July 2025

Job number 305719-171

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ARUP

Document Verification

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Job number	305719-71
Document ref	Air Quality Assessment
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1. Introduction

The North Killingholme (Generating Station) Order 2014 as corrected and amended by the North Killingholme (Generating Station) (Correction) Order 2015 and the North Killingholme (Generating Station) (Amendment) Order 2021 (together "the Order" or "DCO") granted development consent under the Planning Act 2008 for the construction and operation of a new 470MWe thermal generating station with associated development at North Killingholme, North Lincolnshire ("the Project"). The generating station as consented in the Order would operate either as a Combined Cycle Gas Turbine ("CCGT") plant or as an Integrated Gasification Combined Cycle ("IGCC") plant.

The 2021 Amendment granted consent for changes to the Order which extended the time limit for commencing the Authorised Development by five years to 1 October 2026, as well as amendments to Articles 2 (Interpretation); 34 (Certification of plans, etc.); and Part 3 (Requirements) of Schedule 1 (Authorised development) to allow for the CCGT to be developed and operated without requiring development of the IGCC generating station. As part of this amendment, land was identified and secured to be used to satisfy the Carbon Capture Readiness obligations (the "CCR provisions"), set out in the Carbon Capture Readiness (Electricity Generating Stations) Regulations 2013.

In December 2024, Uniper UK Limited ("Uniper", or "the Applicant") acquired the land and development rights, including the benefits of the Order, from the former applicants, C.GEN, and intend to construct a carbon captured enabled CCGT generating station. However, through further design work, Uniper has identified opportunities for minor and non-material changes to the design of the consented CCGT which will enable it to be implemented with an optimised layout and to facilitate development of the generating station as a carbon capture enabled CCGT.

1.1 Updates for the Proposed 2025 Change

The DCO and land associated with it have now been acquired by Uniper UK Limited who are seeking to implement the consent. This Non-Material Change application ("the Application") is seeking to increase the output capacity of the thermal generating station from the current consent of 470MWe to 550MWe. The change application also includes some minor changes to building parameters set out in the Order.

This report contains references to various assessments, which will be referred to as follows:

- The 2013 DCO Application;
- The original 2021 Amendment prepared in 2020[1];
- The updated 2021 Amendment – the Arup reproduction of the original 2021 Amendment using the latest version of the air dispersion modelling software, current background concentrations and more recent meteorological data;
- The 2025 Change – this report.

1.2 Purpose of this Document

In order to demonstrate whether the air quality impacts associated with the proposed increased output capacity of the Project represent a non-material change to the DCO, an Air Quality Assessment has been carried out. The assessment considers the impacts of the currently consented scheme against those of the Project and demonstrates that the change in the predicted impacts is insignificant and therefore does not alter the conclusions of the original 2021 Amendment prepared in 2020. The original 2021 amendment is considered to supersede the assessment undertaken for the 2013 DCO application.

[1] WSP, 2020. North Killingholme Power Project, Appendix 4.2: Air Quality Modelling.

2. Methodology

The overarching legislative framework and assessment methodology remains as it was for the original 2021 Amendment. Where changes to data and model inputs have been made as a result of the 2025 Change, the changes have been highlighted in this report.

2.1 Air Quality Regulations

The Air Quality Standards Regulations 2010[2] defines the policy framework for air pollutants known to have harmful effects on human health or the natural environment.

Some pollutants have standards expressed as annual average concentrations due to the chronic way in which they affect health or the natural environment, i.e., effects occur after a prolonged period of exposure to elevated concentrations. Other pollutants have standards expressed as 24-hour or 1-hour average concentrations due to the acute way in which they affect health or the natural environment, i.e., after a relatively short period of exposure. Some pollutants have standards expressed in terms of both long and short-term concentrations.

Air quality limit values and objectives apply to outdoor locations where people are regularly present and do not apply to occupational, indoor or in-vehicle exposure. The Regulations set out the national air quality standards (AQS) for nitrogen dioxide (NO_2), which is relevant to this assessment, and is shown in Table 2-1.

2.1.1 Critical Levels

The Conservation of Habitats and Species Regulations 2017 requires the competent authority first to evaluate whether operation of a site is likely to give rise to a significant effect on the European site (Habitats Regulation Assessment screening). Where this is the case, it has to carry out an 'appropriate assessment' in order to determine whether the Project would adversely affect the integrity of the European site.

These regulations transpose the European Council Directive 92/43/EEC (Habitats Directive) into law in England and Wales and is retained in UK law by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[3].

There are specific objective pollutant concentrations for vegetation called 'critical levels' (CLs). These are concentrations below which harmful effects are unlikely to occur. The CLs apply to locations more than 20km from towns with more than 250,000 inhabitants or more than 5km from other built-up areas, industrial installations or motorways, although for assessment purposes these are considered to apply to all locations.

The objectives in the legislation are used to assess the potential impacts upon any sensitive ecosystems, and the relevant CLs for NO_x are shown in Table 2-1.

Table 2-1: Air Quality Standards Objectives and Critical Levels

Pollutant	Averaging Period	AQAL	Source
Nitrogen dioxide (NO_2)	Annual mean	40µg/m^3	Air Quality Standards Regulations
	1-hour mean	200µg/m^3 not to be exceeded more than 18 times a year (99.79th percentile)	Air Quality Standards Regulations
Oxides of nitrogen (NO_x as NO_2)	Annual mean	30µg/m^3	Critical level – Air Quality Standard Regulations
	Daily mean	75µg/m^3	Critical level

[2] UK Parliament (2016). The Air Quality Standards (Amendment) Regulations 2016, SI 2016/1184 [Accessed: April 2025].

[3] The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, SI 2019/579

Pollutant	Averaging Period	AQAL	Source
Carbon Monoxide (CO)	Hourly mean	30,000µg/m^3	Environment Agency Risk Assessment Guidance Environmental Assessment Level
	8-hour rolling mean	10,000µg/m^3	Air Quality Standards Regulations

2.1.2 Critical Loads

Critical loads are defined as *"a quantitative estimate of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge"*[4].

Critical load criteria for the deposition of nutrient nitrogen and acidifying species are dependent on the habitat type and species present and therefore are specific to the sensitive receptors considered within the assessment. The relevant critical loads are detailed on the APIS website and are expressed as a range, to account for the variation in ecosystem response across the whole of Europe. The critical load criteria adopted for the sensitive ecological receptors considered in the assessment are presented in Section 2.10.2 and the assessment has used the lower end of the critical load range to ensure a conservative assessment is carried out.

An assessment of nutrient nitrogen deposition has been undertaken by applying published deposition velocities to the predicted annual average NO_2 and NH_3 concentrations at the identified ecological receptors, determined through dispersion modelling, to calculate nitrogen deposition rates (expressed as kilograms per hectare per year, Kg/ha/yr). These deposition rates have then been compared to the Critical Loads for Nitrogen published by APIS[4].

2.2 Dispersion Model

The Atmospheric Dispersion Modelling System (ADMS) has been used for the assessment, which is widely used for planning and regulatory purposes. Since the original 2021 Amendment dispersion modelling assessment was carried out, the ADMS modelling software has been updated from ADMS version 5.2 to ADMS version 6.0. For this assessment, the dispersion modelling from the original 2021 Amendment has therefore been reproduced with the most recent version of ADMS in order to be directly comparable.

2.3 Modelled Scenarios

As stated above, in order to provide a new baseline for comparison of the impacts between the consented scheme (470MWe) and the Project (550MWe), the results of the original 2021 Amendment have been reproduced using the data from that report. The emission parameters associated with the increased output capacity have also been modelled with data provided by Uniper.

Emissions of NO_x have been modelled at both the Industrial Emissions Directive (IED)[5] Emission Limit Value (ELV) of 50mg/Nm^3, and the Best Available Technique (BAT) Environment Assessment Level (EAL)[6] of 30mg/Nm^3, in line with the original 2021 Amendment. Whilst it is recognised that the Environmental Permit for the consented scheme contains an ELV for NOx at the IED value of 50mg/Nm^3, it is considered that prior to operation, discussions will need to be had with the Environment Agency on whether the plant would need to meet the BAT-AEL of 30mg/Nm^3 due to the changes in legislation since the issue of the current Environmental Permit.

[4] Air Pollution Information System | Air Pollution Information System

[5] European Union (2010). Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (recast) (Text with EEA relevance). Available Directive - 2010/75 - EN - EUR-Lex

[6] European Union (2021). Commission Implementing Decision 2021/2326 of 30 November 2021 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for large combustion plants (notified under document C (2021) 8580) (Text with EEA relevance). Available at: Implementing decision - 2021/2326 - EN - EUR-Lex

The modelled scenarios are as follows:

- Scenario 1: Updated 2021 Amendment – NO_x at 50mg/Nm^3;
- Scenario 2: Updated 2021 Amendment – NO_x at 30mg/Nm^3;
- Scenario 3: 2025 Change – NO_x at 50mg/m^3; and
- Scenario 4: 2025 Change – NO_x at 30mg/m^3.

Emission rates for carbon monoxide (CO) are only available for the 2025 Change Scenarios. Since there is no CO data to compare with in the 2021 Amendment, the CO emissions have been modelled for Scenario 4 to determine the significance in this assessment.

2.4 Meteorological Data

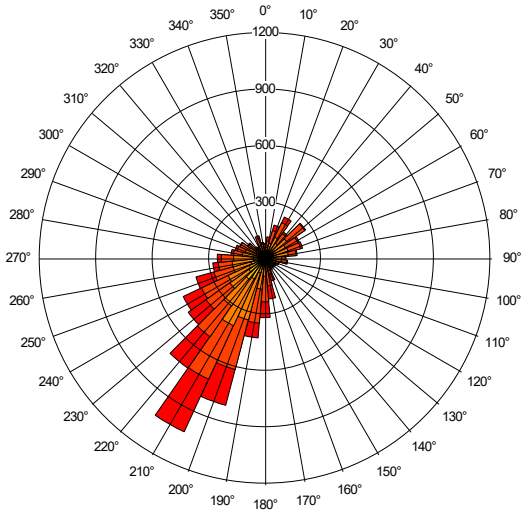
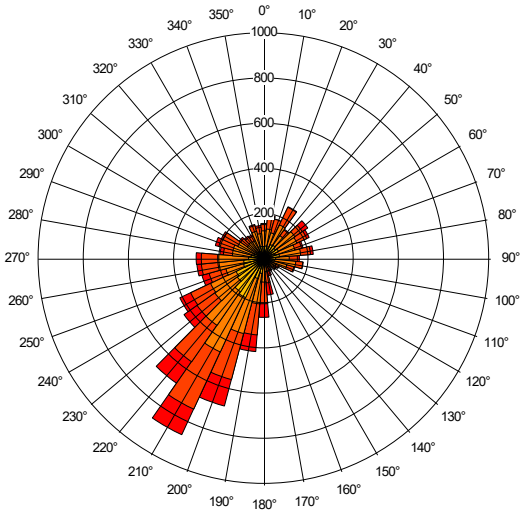
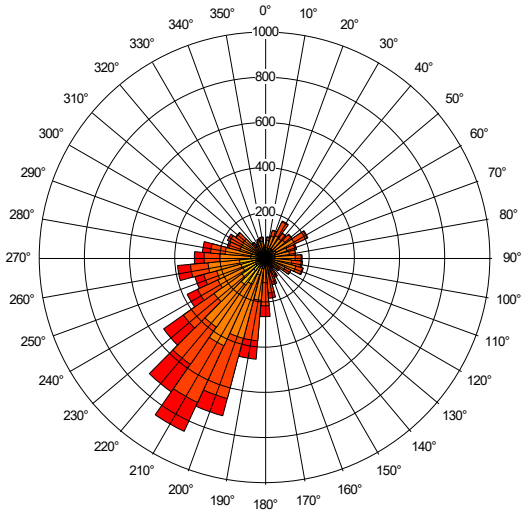
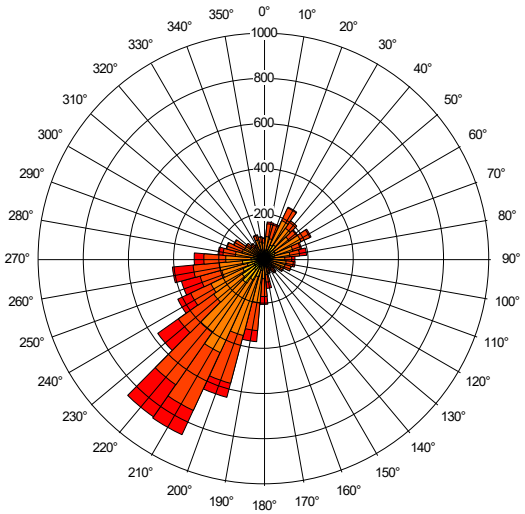
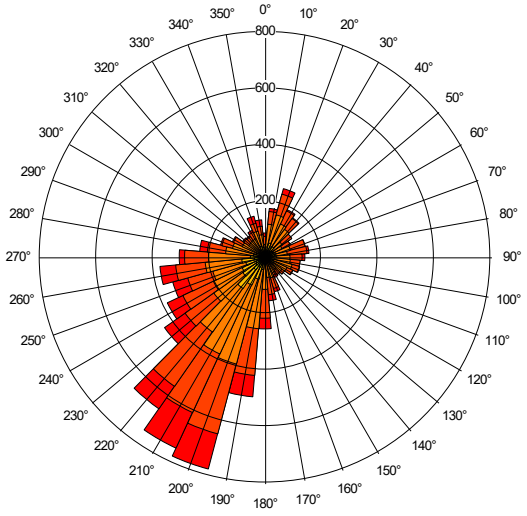
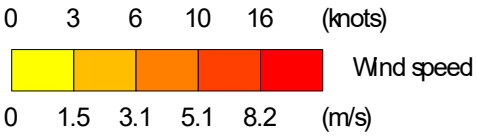
The meteorological site used in the assessment is the same as that used in the 2021 Amendment: Humberside Airport. However, the most recent five years of meteorological data have been used in the assessment to account for recent climate change and interannual variability. The meteorological data used in this assessment is therefore from 2020 to 2024.

Defra's LAQM.TG22 guidance[7] recommends that the meteorological data file is tested in a dispersion model and the relevant output log file checked to confirm the number of missing hours and calm hours that cannot be used by the dispersion model. This is important when considering predictions of high percentiles and the number of exceedances. The guidance recommends that meteorological data should only be used if the percentage of usable hours is greater than 85%.

Hourly sequential observation data was used in this assessment. The datasets include usable data corresponding to 99.7%, 99.5%, 94.8%. 97.2% and 94.1% for the years 2020 to 2024 respectively. This is above the 85% threshold, so meets the requirements of the Defra guidance and is adequate for the dispersion modelling. Figure 1 shows the wind roses for Humberside Airport for 2020 to 2024. It can be seen that the predominant wind direction is south westerly.

[7] Defra (2022) LAQM.TG(22). Available at: https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf [Accessed May 2025]

Figure 1: Wind Roses for Humberside Airport for 2020 to 2024

2020	2021
	
2022	**2023**
	
2024	**Legend**
	

2.5 Emissions and Model Parameters

The Project comprises one Combined Cycle Gas Turbine (CCGT). Although actual operational hours are not yet known, it has been assumed for the purposes of this assessment that it would be operational for 24 hours per day, all year round, in order to assess a worst-case.

The potential stack height envelope in the existing DCO is 80 - 85m above ground level. Since 80m would provide the worst-case assessment for air quality, this height has been used throughout the assessment. A stack diameter of 6.2m has also been used throughout.

The model inputs for both the original 2021 Amendment and the 2025 Change are provided below in Table 2-2.

Table 2-2: Dispersion Model Inputs

Model scenario	Actual volumetric flow rate (Am^3/s)	Velocity (m/s)	Temperature (°C)	H_2O and O_2 content	Normalised volumetric flow rate[1] (Nm^3/s)	NO_x concentration (mg/Nm^3)	NO_x release rate (g/s)
2021 Amendment Scenario 1	738.0	24.4	87.6	Not stated in 2021 Amendment	683.0	50.0	20.5
2021 Amendment Scenario 2						30.0	34.2
2025 Change Scenario 3	835.0	27.7	73.8	H_2O – 8.5% O_2 – 13.0%	801.0	50.0	24.0
2025 Change Scenario 4						30.0	40.1

[1] At 0°C, dry gas, 15% Oxygen

For the 2025 Change Scenarios, CO has been modelled at the IED emission limit of $100mg/Nm^3$, as a worst-case, which corresponds to a release rate of 80.1g/s.

2.6 Buildings

Buildings can have a significant effect on the dispersion of pollutants and have been included within the model set-up. The complex building geometry has been simplified for inclusion in the model, which only accepts rectangular or circular building shapes.

The buildings have changed slightly between the original 2021 Amendment and 2025 Change and details of the modelled buildings are outlined below in Table 2-3. The modelled buildings are shown in Figure 2 for the updated 2021 Amendment and Figure 3 for the 2025 Change.

It should also be noted that some of the smaller buildings that were included in the original 2021 Amendment (i.e. those that are less than 40% of the stack height) are not deemed necessary to have been included in the dispersion model, in line with the model guidance, as they would have little to no effect on the model outcome. These buildings have therefore been removed from the 2025 Change modelling.

In addition, upon reviewing the original 2021 Amendment modelled building inputs, it was found that the building orientations did not match the 2021 Amendment design plan. The updated 2021 Amendment work has been corrected for the orientation.

For the 2025 Change, the building heights have been provided by Uniper and are the height above ground level from the top of concrete. These heights are the design heights rather than the maximum parameter heights in the main application document.

The new ‘auto’ function of the ADMS dispersion model has been used in both assessments, as this allows the model to define the main building as opposed to the user and accounts for meteorological conditions in addition to proximity.

Finally, in the 2025 Change work, the locations of the cooling towers have also changed, which is reflected in the modelling.

Table 2-3: Modelled Buildings

Name	Building centre National Grid Reference		Height (m)	Width (m)	Length (m)	Angle of building length to north (degrees)
	X	Y				
2021 Amendment						
HRSG	515734	419636	35	30	50	155
Turbine Hall	515753	419580	30	45	65	155
Cooling Tower Block 1	515596	419727	20	20	135	155
Cooling Tower Block 2	515641	419748	20	20	135	155
Admin Building	515850	419545	10	30	70	155
Warehouse	515474	419685	20	30	60	155
Water Treatment Plant	515826	419763	8	25	55	155
GIS Building	515709	419533	12	15	30	65
2025 Change						
HRSG	515734	419636	45	30	50	155
Turbine Hall	515753	419580	31.6	45	65	155
Cooling Tower Block 1	515778	419721	24.6	20	135	65
Cooling Tower Block 2	515764	419744	24.6	20	135	65

Figure 2: Updated 2021 Amendment Modelled Buildings

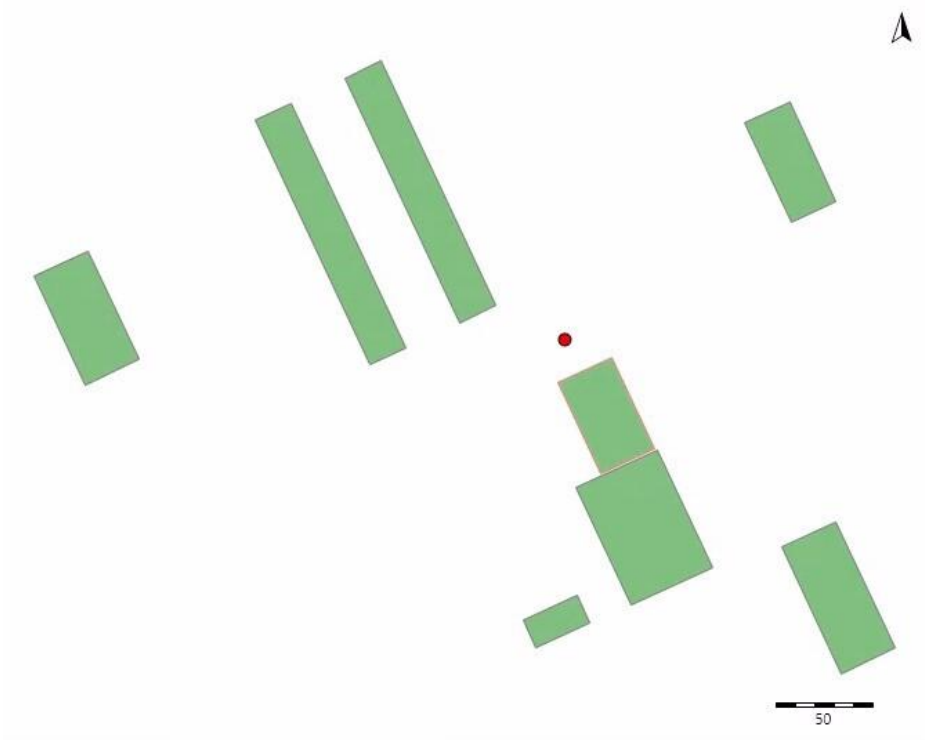
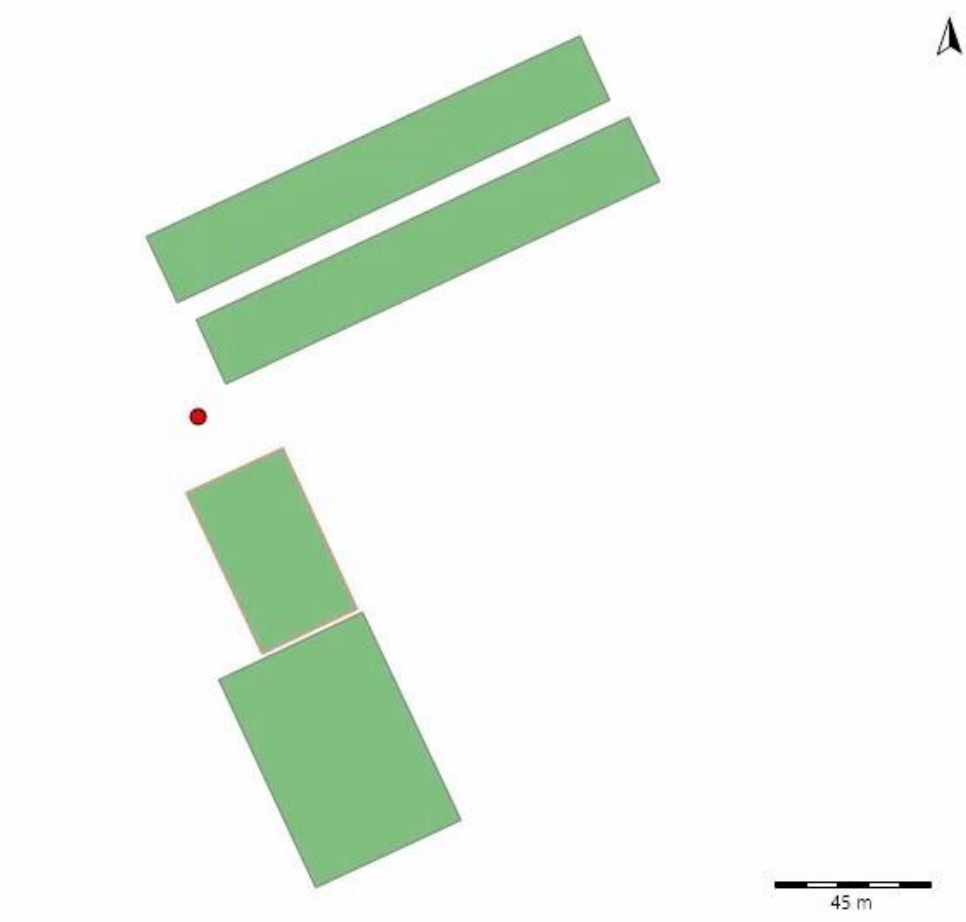


Figure 3: 2025 Change Modelled Buildings



2.7 Stack

The location of the modelled stack in the original 2021 Amendment work appeared to be too far from the associated building and therefore has been moved to an appropriate location in both the updated 2021 Amendment and the 2025 Change. The modelled coordinates of the stack are Ordnance Survey (OS) grid reference: 515713, 419674.

2.8 Sensitive Receptors

The 2021 Amendment document did not identify the coordinates of the specific receptors used in the assessment. As such, sensitive receptors have been defined here and have been chosen at worst case locations to provide a conservative assessment.

2.8.1 Human Receptors

The assessment has been undertaken to assess the predicted concentrations in areas where the AQS apply.

The long-term annual mean standard applies at locations where sensitive receptors are located, these include residential properties, hospitals and schools. The short-term hourly mean standard applies at locations where members of the public may be expected to be present for more than an hour.

These receptors have been modelled at the façades of nearby buildings, as these are closest to the pollutant sources, and have been included at 1.5m above ground level (corresponding to the average height of human exposure).

Details of the assessed human receptors are given in Table 2-4 below and their locations are shown in Figure 5.

Table 2-4: Modelled Human Receptors

ID	Type	National Grid Reference		Height (m)
		X	Y	
R1	Residential	514761	417335	1.5
R2	Residential	514451	417646	1.5
R3	Residential	514433	418197	1.5
R4	Residential	514640	418825	1.5
R5	Residential	513664	419614	1.5
R6	Residential	514075	420602	1.5
R7	School	514923	416108	1.5
R8	Residential	517155	414968	1.5
R9	Residential	517848	415385	1.5
R10	School	518018	414928	1.5
R11	School	518584	414754	1.5
R12	School	518390	414644	1.5
R13	Residential	515504	416121	1.5
R14	Residential	515951	415723	1.5
R15	Residential	519920	423664	1.5
R16	Residential	521324	422416	1.5
R17	Residential	523160	420394	1.5

Figure 4: Human Receptor Locations

2.8.2 Ecological Receptors

Ecological receptors have been reviewed within the vicinity of the Project, in accordance with Environment Agency (EA) guidance[8]:

- Special Protection Areas (SPA), Special Areas of Conservation (SAC), Ramsar Sites and Sites of Special Scientific Interest (SSSI) within 15km; and
- Local Nature Sites (including ancient woodlands, Local Wildlife Sites (LWS), National and Local Nature Reserves (NNR and LNR) within 2km.

This review has identified that there are two SPAs, two Ramsars, one SAC, nine SSSIs and nine LWSs. These ecological receptors are detailed in Table 2-5 and shown in Figure 5.

There are no ancient woodlands within 2km of the Project.

Receptors were placed at the closest edge of the ecological designation to the Project. Ecological receptors have been modelled at a height of 0m, representative of ground level.

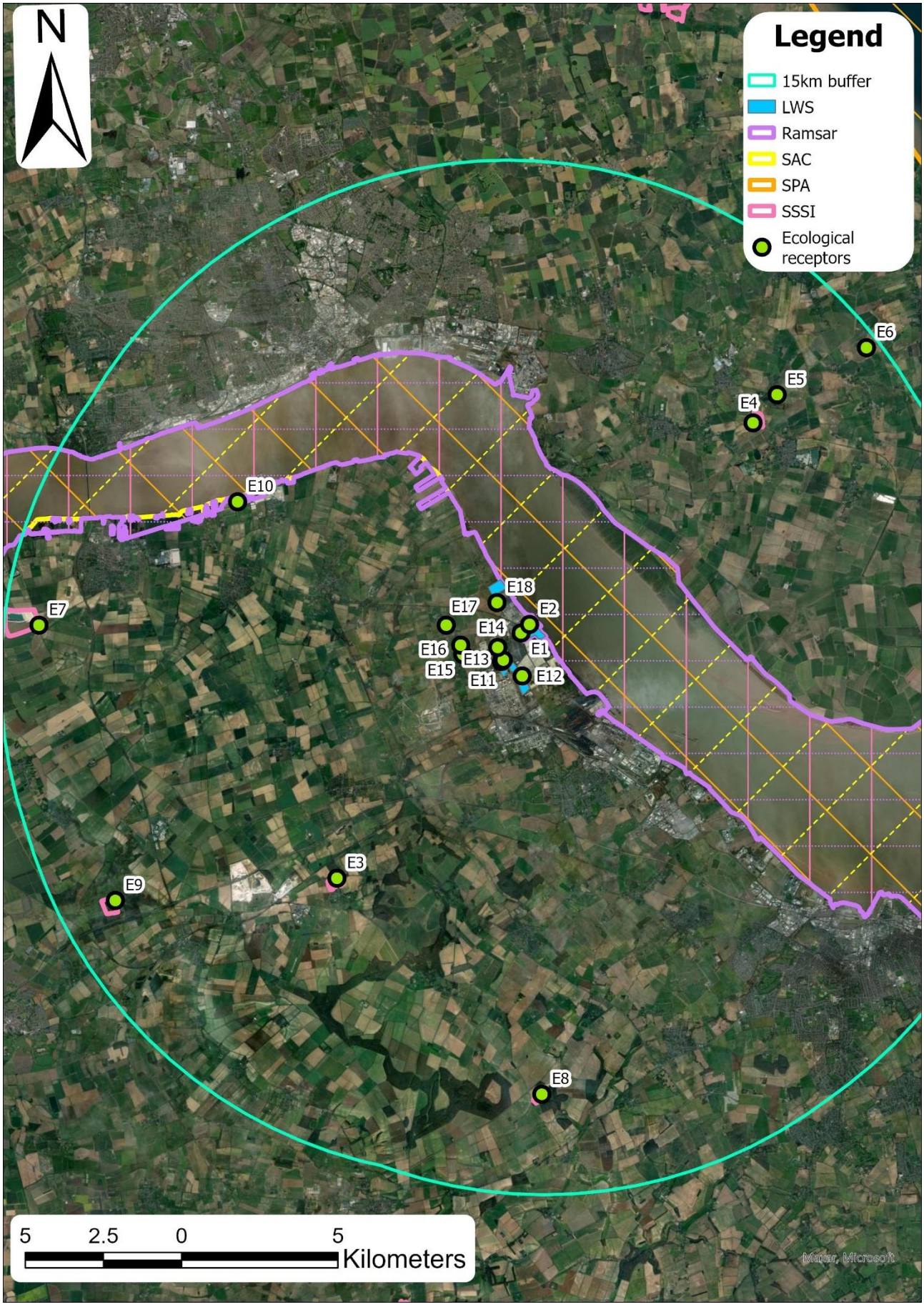
Table 2-5: Modelled Ecological Receptors

ID	Receptor	National Grid Reference	
		X	Y
E1	Humber Estuary SPA & Ramsar, SSSI North Killingholme Haven Pits, Halton Marsh Clay Pits LWS	516258	419728
E2	Humber Estuary SAC	516533	420007
E3	Kirmington Pits SSSI	510371	411881
E4	Kelsey Hill Gravel Pits SSSI	523682	426456
E5	Kelsey Hill Gravel Pits SSSI	524451	427347
E6	Roos Bog SSSI	527307	428858
E7	South Ferriby Chalk Pit SSSI	500841	419985
E8	Swallow Wold SSSI	516925	404973
E9	Wrawby Moor SSSI	503284	411173
E10	Humber Estuary SPA, Ramsar, SSSI	507196	423932
E11	Burkinshaw's Covert LWS	515627	418817
E12	Burkinshaw's Covert LWS	516293	418355
E13	Chase Hill Wood LWS	515692	418867
E14	Chase Hill Wood LWS	515513	419264
E15	Scrub Lane Field LWS	514404	419047
E16	Swinster Lane Field LWS	514322	419341
E17	East View Meadow LWS	513862	419977
E18	Halton Marsh Clay Pits LWS	515487	420700

Receptors E3-E7 are designated for geological features and as a result are not sensitive to atmospheric NO_x and nitrogen deposition and do not have defined critical levels and critical loads. Impacts at these receptors have therefore not been included in the assessment.

[8] Environment Agency, 2025. Air emissions risk assessment for your environmental permit - GOV.UK. Available at: https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit [Accessed May 2025]

Figure 5: Modelled Ecological Receptors



2.8.3 Modelled Grid

The air quality modelling was also undertaken across the study area and pollutant concentrations were interpolated from the modelled grid. The modelled grid was 2km by 2km and had a 67m resolution. This data was used to produce contour plots for each Scenario and to enable a clear comparison between the updated 2021 Amendment and this 2025 Change.

2.9 Modelled Results

2.9.1 NO_x to NO_2 Conversion

The model predicts nitrogen oxides (NO_x) concentrations which comprise nitric oxide (NO) and nitrogen dioxide (NO_2). NO_x is emitted from combustion processes, primarily as NO with a small percentage of NO_2. The emitted NO reacts with oxidants in the air (mainly ozone) to form NO_2.

This assessment has followed the methodology set out by the EA[9], which states it should be assumed as a worst-case scenario that 70% of long-term and 35% of short-term NO_x concentrations will convert to NO_2.

2.9.2 Predicted Environmental Concentrations

To calculate the Predicted Environmental Concentration (PEC), the background concentrations are added to the modelled concentrations from the operational Project (i.e. the Process Contribution (PC)) at the receptors. For long-term concentrations, the annual average background concentration has been used. For the short-term concentrations (daily mean or hourly mean), twice the annual mean will be added to the model predictions, following EA guidance[7].

The total concentrations at each receptor are calculated as follows:

- Long-term PEC: long-term Process Contribution (PC) from the generators + annual mean background concentration.
- Short-term PEC: short-term PC + 2 x annual mean background concentration. The exception is for NO_x daily, where 1.5 x annual mean background concentrations have been used in line with EA advice on similar projects.

Background data has been taken from the Defra website[10] for the main assessment and from the APIS website for the nutrient nitrogen deposition assessment.

2.10 Significance Criteria - Permitting

2.10.1 Human Receptors

The EA risk assessment guidance[7] describes how insignificant process contributions can be screened out of further analysis.

Step 1: The PC can be considered insignificant and require no further investigation if:

- The long-term PC is <1% of the long-term environmental standard; and
- The short-term process contribution is <10% of the short-term environmental standard.

Step 2: For those contributions not screened out, the PEC, which is the sum of background concentration and PC, must be tested. Concentrations are considered potentially significant if:

- The long-term PEC is greater than 70% of the long-term standard; or

[9] Environment Agency (2024) Environmental permitting: air dispersion modelling reports. Available at: https://www.gov.uk/guidance/environmental-permitting-air-dispersion-modelling-reports [Accessed May 2025]

[10] Defra, UK AIR, Air Information Resource, Available at: https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021 [Accessed May 2025].

- The short-term PC is greater than 20% of the short-term standard minus twice the annual mean background concentration.

2.10.2 Ecological Receptors

Similarly, to the above process, the following criteria from the EA guidance[8] have been used in this assessment in respect to potential impacts at ecological sites:

- For SPAs, SACs, Ramsar sites or SSSIs:
  - The short-term PC is greater than 10% of the short-term environmental standard for protected conservation areas;
  - The long-term PC is less than 1% of the long-term environmental standard for protected conservation area but the PEC is less than 70% of the long-term environmental standards.
- For local nature sites, the EA guidance notes that if the PC is less than 100% of the respective standard, then it can be concluded that the effects are not significant and no further assessment is required. If the PC exceeds the screening criteria, detailed modelling would be required.

Predicted PC or PEC that meet the above criteria are deemed to be insignificant. When impacts cannot be screened out as being insignificant using the thresholds above, further evaluation of the significance requires advice from an ecologist.

Ecological data on the relevant critical loads and NO_x backgrounds has been obtained from the Air Pollution Information System (APIS).[11]

2.11 Significance Criteria – Planning

The 2017 EPUK/IAQM guidance note 'Land-Use Planning & Development Control'[12] provides an approach to determining the air quality impacts resulting from a Site and the overall significance of local air quality effects arising from a Site.

Firstly, impact descriptors are determined based on the magnitude of incremental change as a proportion of the relevant assessment level, in this instance the annual mean NO_2 objectives. The change is then examined in relation to the predicted total pollutant concentrations in the assessment year and its relationship with the annual mean NO_2 objectives. If the impact descriptor is negligible or slight, this is considered to not have a significant effect. The overall significance is determined by professional judgement.

The assessment framework for determining impact descriptors at each of the assessed receptors is shown in Table 2-6.

[11] Air Pollution Information System (SPIS) website. Available at: https://www.apis.ac.uk/app [Accessed May 2025]

[12] IAQM, 2017. Land-use Planning and Development Control – Planning for Air Quality. Available at air-quality-planning-guidance.pdf [Accessed June 2025]

Table 2-6: Impact Descriptors for annual average air quality concentrations

Annual average concentrations at receptor in the assessment years	% Change in concentrations relative to annual mean NO_2 objectives			
	1	2 - 5	6 - 10	>10
75% or less of objective	Negligible	Negligible	Slight	Moderate
76 – 94% of objective	Negligible	Slight	Moderate	Substantial
95 – 102% of objective	Slight	Moderate	Moderate	Substantial
103 – 109% of objective	Moderate	Moderate	Substantial	Substantial
110% or more of objective	Moderate	Substantial	Substantial	Substantial
Note: Changes in pollutant concentrations of less than 1% i.e. <0.5% would be described as negligible				

The guidance also provides advice for determining the magnitude of change for hourly mean NO_2 concentrations, which is shown in Table 2-7. The impact descriptor is determined by considering the process contribution only. However, in assessing the significance, consideration is also given to total pollutant concentrations, including background concentrations, and comparison of these with the hourly mean NO_2 objective.

Table 2-7: Impact descriptors for maximum hourly mean air quality concentrations

Changes in hourly mean concentrations at receptor in the assessment year	Magnitude of change	Impact descriptors
<10% of hourly mean NO_2 threshold	Imperceptible	Negligible
10 – 20% of hourly mean NO_2 threshold	Small	Slight
20 – 50% of hourly mean NO_2 threshold	Medium	Moderate
>50% of hourly mean NO_2 threshold	Large	Substantial

The impact descriptors at each of the assessed receptors can then be used as a starting point to make a judgement on the overall significance of effect of a Site, however other influences would also need to be taken into account, such as:

- The existing and future air quality in the absence of the development;
- The extent of current and future population exposure to the impacts; and
- The influence and validity of any assumptions adopted when undertaking the prediction of impacts.

Professional judgement should be used to determine the overall significance of effects of the Site, however in circumstances where the Site can be judged in isolation, it is likely that a 'moderate' or 'substantial' impact will give rise to a significant effect and a 'negligible' or 'slight' impact will not result in a significant effect.

The IAQM Nature Conservation Guidance[13] recommends the same assessment criteria as the EA risk assessment guidance in relation to SACs, SPAs and SSSIs. For LWSs and ancient woodland, the IAQM Nature Conservation Guidance[13] recommends that such sites are screened using the same criteria as SACs, SPAs and SSSIs (i.e. 1% for long-term impacts and 10% for short-term impacts) but notes that the determination of significance of effect may differ for local wildlife sites.

[13] IAQM, 2020. A guide to the assessment of air quality impacts on designated nature conservation sites – version 1.1. Available at: https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2020.pdf [Accessed June 2025]

2.12 Assumptions and Limitations

There are inherent limitations and uncertainties associated with dispersion modelling. These limitations include:

- Simplification in model algorithms and empirical relationships that are used to stimulate complex physical and chemical processes in the atmosphere;
- Spatial variability of model background concentrations;
- Spatial variability of meteorological data;
- Effects of terrain; and,
- Emissions concentrations due to varied raw material inputs.

Conservative assumptions and robust methodologies have been used in this assessment to reduce some of the uncertainty, including:

- The plant was modelled at full load and was assumed to operate all year round;
- The lowest and worst-case values were taken from the critical load ranges used in the assessment;
- Five years of meteorological data were modelled and the worst-case data were taken for each receptor and each pollutant;
- Dry and wet deposition have not been modelled so no plume depletion due to these processes is included in the modelling;
- The plant has been assumed to emit at the ELV limits, whereas in practice the plant would operate below these concentrations to ensure a suitable compliance margin; and
- It has been assumed that the widths and lengths of the buildings have not changed since the original 2021 Amendment.

3. Model Results

The modelled results have been split into permitting and planning sections to reflect the two sets of significance criteria.

3.1 Human Receptors – Permitting Significance Criteria

3.1.1 NO_2

Table 3-1 below provides a summary of both annual mean and hourly mean NO_2 results at the worst-case human receptor. The full suite of modelled results for all receptors are provided in Appendix A.1.

For both annual mean and hourly mean NO_2, the 2021 Amendment and the 2025 Change assessments indicate the resulting effect is insignificant according to the EA risk assessment criteria at all receptors.

Table 3-1: Summary of NO_2 Results at Human Receptors

Scenario and Emission Limits		Annual Mean (µg/m³)		Hourly Mean (µg/m³)		Overall Significance of Effect
		Max PC (µg/m³)	% of the AQS	Max PC (µg/m³)	% of the AQS	
2021 Amendment	Scenario 1: IED ELV (50mg/Nm³)	0.16	0.4%	2.9	1.4%	Insignificant
	Scenario 2: BAT EAL (30mg/Nm³)	0.26	0.7%	4.8	2.4%	Insignificant
2025 Change	Scenario 3: IED ELV (50mg/Nm³)	0.18	0.5%	3.3	1.7%	Insignificant
	Scenario 4: BAT EAL (30mg/Nm³)	0.30	0.8%	5.6	2.8%	Insignificant
Air Quality Standard		40 µg/m³		200 µg/m³ (not to be exceeded more than 18 times per year)		

The 2021 Amendment results were compared directly with the 2025 Change results to determine the greatest change. The IED ELV scenarios were compared together and the BAT EAL scenarios were compared. These comparisons are shown below in Table 3-2.

Table 3-2: Comparison of 2025 Change with 2021 Amendment Results - Human Receptors

Scenarios	Annual Mean NO_2 (µg/m³)	Proportion as a % of AQS	Hourly Mean NO_2 (µg/m³)	Proportion as a % of AQS	Corresponding Receptor ID
Scenario 3 - Scenario 1	0.02	0.06%	0.46	0.23%	R4
Scenario 4 – Scenario 2	0.04	0.10%	0.77	0.39%	R4

Given the very small changes between the scenarios, and as no significant effects were identified in the 2021 Amendment or the 2025 Change, the resulting changes in 2025 can be considered to be non-material at human receptors in line with the EA's Permitting significance criteria.

3.1.2 CO

Table 3-1 below provides a summary of both the 8-hour rolling mean and hourly mean CO results at the worst-case human receptor for 2025 Change scenarios. The full suite of modelled results for all receptors are provided in Appendix A.

For both the 8-hour rolling mean and hourly mean CO, the 2025 Change assessment indicates the resulting effect is insignificant according to the EA risk assessment criteria at all receptors. The 2021 Amendment did not state the CO emissions so it is not possible to provide a comparison between the assessments. Although the 2025 Change results cannot be compared to the 2021 Amendment results, they are provided here to demonstrate that the effects of CO are insignificant.

Table 3-3: Summary of CO Results at Human Receptors

Scenario and Emission Limits	8 Hour Rolling (µg/m^3)		Hourly Mean (µg/m^3)		Overall Significance of Effect
	Max PC (µg/m^3)	% of the AQS	Max PC (µg/m^3)	% of the AQS	
2025 Change	36.0	0.4%	43.8	0.2%	Insignificant
Air Quality Standard	10,000 µg/m^3		30,000 µg/m^3		

3.2 Human Receptors – Planning Significance Criteria

3.2.1 Scenarios 1 and 3 Comparison

Scenarios 1 and 3 were compared against the EPUK significance criteria, using the updated 2021 Amendment Scenario 1 as the Do-Minimum (DM) case and the 2025 Change Scenario 3 as the Do-Something (DS) case.

For annual mean NO_2, the largest change in predicted concentrations occurred at receptors R4 and R15, which was an increase of 0.04µg/m^3 between the two scenarios. This is a negligible impact according to the EPUK/IAQM criteria and as such can be considered not significant.

The hourly mean NO_2 concentrations increased by a maximum of 0.8µg/m^3 at receptor R4 between Scenarios 1 and 3. This is also a negligible impact and as such can be considered not significant.

The full suite of results can be found in Appendix A.2.

Given the above findings, this is considered to constitute a non-material change.

3.2.2 Scenarios 2 and 4 Comparison

Scenarios 2 and 4 were compared against the EPUK significance criteria, using the updated 2021 Amendment Scenario 2 as the Do-Minimum (DM) case and the 2025 Change Scenario 4 as the Do-Something (DS) case.

The largest change in annual mean NO_2 between Scenarios 2 and 4 was predicted at receptor R4 and was 0.02µg/m^3. This is a negligible impact according to the EPUK/IAQM criteria and as such can be considered not significant.

For hourly mean NO_2, the largest change in predicted concentrations was 0.5µg/m^3, also at receptor R4, which is a negligible impact and can therefore be considered not significant.

The full suite of results can be found in Appendix A.2.

Given the above findings, this is considered to constitute a non-material change.

3.3 Ecological Receptors – Permitting Significance Criteria

3.3.1 Annual and Daily Mean NO_x Results

A summary of the ecological results for annual mean NO_x and daily mean NO_x for the worst-case receptor are presented below in Table 3-4. The full suite of results for ecological receptors are presented in Appendix A.2. The results show that there is little difference in the PCs for both averaging periods between the 2021 and 2025 Changes.

The predicted PCs were found to be insignificant at all receptors except E2, where the annual mean NO_x PCs were slightly over the screening threshold of 1% for all modelled scenarios. In addition, the daily mean NO_x PC in Scenarios 2 and 4 at receptor E2 and E18 were over the screening threshold of 10%. Although these PCs could not be screened out using the EA risk assessment criteria, the PECs are well below the respective CLs and as such can be considered not significant. As no significant effects were reported in the original 2021 Amendment, and no significant effects were identified in this 2025 Change, it can be concluded that the changes are non-material.

Table 3-4: Summary of NO_x Results at Ecological Receptors

Scenario and Emission Limits		Annual Mean (µg/m³)		Daily Mean (µg/m³)		Overall Significance of Effect
		Max PC (µg/m³)	% of the CL	Max PC (µg/m³)	% of the CL	
2021 Amendment	Scenario 1: IED ELV (50mg/Nm³)	0.39	1.3%	6.5	8.6%	Insignificant at all receptors except E2 for annual mean NO_x only.
	Scenario 2: BAT EAL (30mg/Nm³)	0.67	2.2%	10.8	14.1%	Insignificant at all receptors except E2 for both periods.
2025 Change	Scenario 3: IED ELV (50mg/Nm³)	0.45	1.5%	7.0	9.4%	Insignificant at all receptors except E2 for annual mean NO_x only.
	Scenario 4: BAT EAL (30mg/Nm³)	0.75	2.5%	11.7	15.6%	Insignificant at all receptors except E2 for annual mean NO_x and E2 and E18 for daily mean NO_x.
Critical Level		30 µg/m³		75 µg/m³		

Additionally, there is little difference between the 2021 and 2025 Change results, which is demonstrated in the comparison below in Table 3-5. The 2021 Amendment results were compared directly with the 2025 Change results to determine the greatest change. The IED ELV scenarios were compared together and the BAT EAL scenarios were compared. These comparisons are shown below in Table 3-5.

Table 3-5: Comparison of 2025 Change with 2021 Amendment Results - Ecological Receptors

Scenarios	Annual Mean NO_x (µg/m³)	Proportion as a % of CL	Daily Mean NO_x (µg/m³)	Proportion as a % of CL	Corresponding Receptor ID
Scenario 3 - Scenario 1	0.05	0.16%	0.7	0.9%	E2
Scenario 4 – Scenario 2	0.08	0.26%	1.2	1.6%	E2

Given the very small changes between the scenarios, and as no significant effects were identified in the 2021 Amendment or the 2025 Change, the resulting changes in 2025 can be considered to be non-material at ecological receptors.

3.3.2 Nitrogen Deposition Results

Receptors E11-E14 are LWS and no details on the APIS website are available for these sites in regard to critical load data so for the sites dominated by woodland (E11 to E14) a critical load of 10 kgN/ha/yr has been applied representative of woodland habitats. For the non-woodland sites (E15-E18) a precautionary critical load of 5 kgN/ha/yr has been applied.

Nitrogen deposition was calculated for each Scenario and then the deposition was compared as follows: Scenario 1 with Scenario 3 and then Scenario 2 with Scenario 4.

The comparison of Scenarios 1 and 3 is presented below in Table 3-6. Full details of the results for each scenario are provided in Appendix A.2. The below results show that the PC as a proportion of the critical level for each receptor is less than 1% and therefore can be screened out of further assessment.

Table 3-6: Nitrogen Deposition Comparison for Scenarios 1 and 3

Receptor ID	Critical Load (kg N/ha/yr)	Woodland or Grassland habitat	Difference between Scenario 1 and Scenario 3		
			N dry dep (kg N/ha/yr)	Proportion of PC to CL (%)	Screening criteria: PC > 1%?
E1	15	Grassland	< 0.1	<0.1%	Screen Out, PC <1% CL
E2	15	Grassland	< 0.1	<0.1%	Screen Out, PC <1% CL
E8	10	Grassland	< 0.1	<0.1%	Screen Out, PC <1% CL
E9	15	Woodland	< 0.1	<0.1%	Screen Out, PC <1% CL
E9	15	Grassland	< 0.1	<0.1%	Screen Out, PC <1% CL
E10	5	Grassland	< 0.1	<0.1%	Screen Out, PC <1% CL
E11	10 [a]	Woodland	< 0.1	<0.1%	Screen Out, PC <1% CL
E12	10 [a]	Woodland	< 0.1	<0.1%	Screen Out, PC <1% CL
E13	10 [a]	Woodland	< 0.1	<0.1%	Screen Out, PC <1% CL
E14	10 [a]	Woodland	< 0.1	<0.1%	Screen Out, PC <1% CL
E15	10	Grassland	< 0.1	<0.1%	Screen Out, PC <1% CL
E16	10	Grassland	< 0.1	<0.1%	Screen Out, PC <1% CL
E17	10	Grassland	< 0.1	<0.1%	Screen Out, PC <1% CL
E18	10	Grassland	< 0.1	<0.1%	Screen Out, PC <1% CL

[a] the critical load was assumed to be 10kgN/ha/yr in the absence of exact data from the APIS website, based on the assumption that these sites are LWS due to the presence of woodland habitats.

The comparison of Scenarios 2 and 4 is presented below in Table 3-7. Full details of the results for each scenario are provided in Appendix A.2. The below results show that the PC as a proportion of the critical level for each receptor is less than 1% and therefore can be screened out of further assessment.

Table 3-7: Nitrogen deposition comparison for Scenarios 2 and 4

Receptor ID	Critical Load (kg N/ha/yr)	Difference between Scenario 2 and Scenario 4		
		N dry dep (kg N/ha/yr)	Proportion of PC to CL (%)	Screening criteria: PC > 1%?
E1	15	< 0.1	<0.1%	Screen Out, PC <1% CL
E2	15	< 0.1	0.1%	Screen Out, PC <1% CL
E8	10	< 0.1	0.0%	Screen Out, PC <1% CL
E9	15	< 0.1	<0.1%	Screen Out, PC <1% CL

Receptor ID	Critical Load (kg N/ha/yr)	Difference between Scenario 2 and Scenario 4		
		N dry dep (kg N/ha/yr)	Proportion of PC to CL (%)	Screening criteria: PC > 1%?
E9	15	< 0.1	<0.1%	Screen Out, PC <1% CL
E10	5	< 0.1	<0.1%	Screen Out, PC <1% CL
E11	10 [a]	< 0.1	<0.1%	Screen Out, PC <1% CL
E12	10 [a]	< 0.1	0.1%	Screen Out, PC <1% CL
E13	10 [a]	< 0.1	<0.1%	Screen Out, PC <1% CL
E14	10 [a]	< 0.1	<0.1%	Screen Out, PC <1% CL
E15	10	< 0.1	0.1%	Screen Out, PC <1% CL
E16	10	< 0.1	0.1%	Screen Out, PC <1% CL
E17	10	< 0.1	<0.1%	Screen Out, PC <1% CL
E18	10	< 0.1	0.1%	Screen Out, PC <1% CL

[a] the critical load was assumed to be 10kgN/ha/yr in the absence of exact data from the APIS website, based on the assumption that these sites are LWS due to the presence of woodland habitats

The 2021 Amendment did not include an assessment of the impacts of acid deposition, however, it can be assumed that as the nitrogen deposition effects are insignificant, the acid deposition results would also be insignificant. This is especially considered to be appropriate as there are no emissions of sulphur dioxide from the Project, which is a much greater contributor to acid deposition compared to NO_2.

3.3.3 Ecological Results Summary

The assessment reviewed NO_x concentrations predicted at ecological designations and no exceedances of the relevant CLs were predicted. The overall effect was insignificant at all receptors with the below exceptions:

- Receptor E2, which could not be screened out for annual mean NO_x in the 2021 or 2025 Change results (all scenarios);
- Receptor E2, which could not be screened out for daily mean NO_x in Scenarios 2 and 4; and
- Receptor E18, which could not be screened out in Scenario 4 for daily mean NO_x.

When receptors cannot be screened out using the EA risk assessment guidance, further consideration is required. In this instance, no exceedances of the relevant CLs were predicted at any receptors.

There are several factors that indicate the change is non-material:

- The change in predicted concentrations is small (less than 0.3% of the annual mean NO_x critical level and less than 2% of the daily mean NO_x critical level) for ecological receptors between the updated 2021 Amendment and this 2025 Change.
- The PECs do not exceed the Critical Levels for either annual mean or daily mean NO_x, hence indicating that the overall significance of effect would be not significant; and
- The PCs are all less than 1% of the critical loads for nitrogen deposition throughout.

3.4 Ecological Results – Planning

3.4.1 Scenarios 1 and 3 Comparison

Scenarios 1 and 3 were compared against the EPUK significance criteria, using the updated 2021 Amendment Scenario 1 as the Do-Minimum (DM) case and the 2025 Change Scenario 3 as the Do-Something (DS) case.

For annual mean NO_x, the largest change in predicted concentrations occurred at receptor E2, which was an increase of 0.08µg/m^3 between the two scenarios. This is a negligible impact according to the EPUK/IAQM criteria and as such can be considered not significant.

The daily mean NO_x concentrations increased by a maximum of 1.2µg/m^3 at receptor E16 between Scenarios 1 and 3. This is also a negligible impact and as such can be considered not significant.

The full suite of results can be found in Appendix A.

Given the above findings, this is considered to constitute a non-material change.

3.4.2 Scenarios 2 and 4 Comparison

Scenarios 2 and 4 were compared against the EPUK significance criteria, using the updated 2021 Amendment Scenario 2 as the Do-Minimum (DM) case and the 2025 Change Scenario 4 as the Do-Something (DS) case.

The largest change in annual mean NO_x between Scenarios 2 and 4 was predicted at receptor R4 and was 0.05µg/m^3. This is a negligible impact according to the EPUK/IAQM criteria and as such can be considered not significant.

For daily mean NO_x, the largest change in predicted concentrations was 0.7µg/m^3 at receptor E16, which is a negligible impact and can therefore be considered not significant.

The full suite of results can be found in Appendix A.

Given the above findings, this is considered to constitute a non-material change.

3.5 Contour Plots

Contour plots for each NO_2 and NO_x short term and long term air quality objectives are provided below in Figure 6 to Figure 13. Scenario 1 and Scenario 3 are compared throughout, and Scenario 2 is compared with Scenario 4.

The contour plots show that there is very little difference between the 2021 updated Amendment results and the 2025 Change results throughout. This indicates that the change between these two assessments is non-material even at a cartesian grid level.

Figure 6: Contours of Annual Average NO_2 Concentrations for the Updated 2021 Amendment (top) and the 2025 Change (bottom) for Scenarios 1 and 3

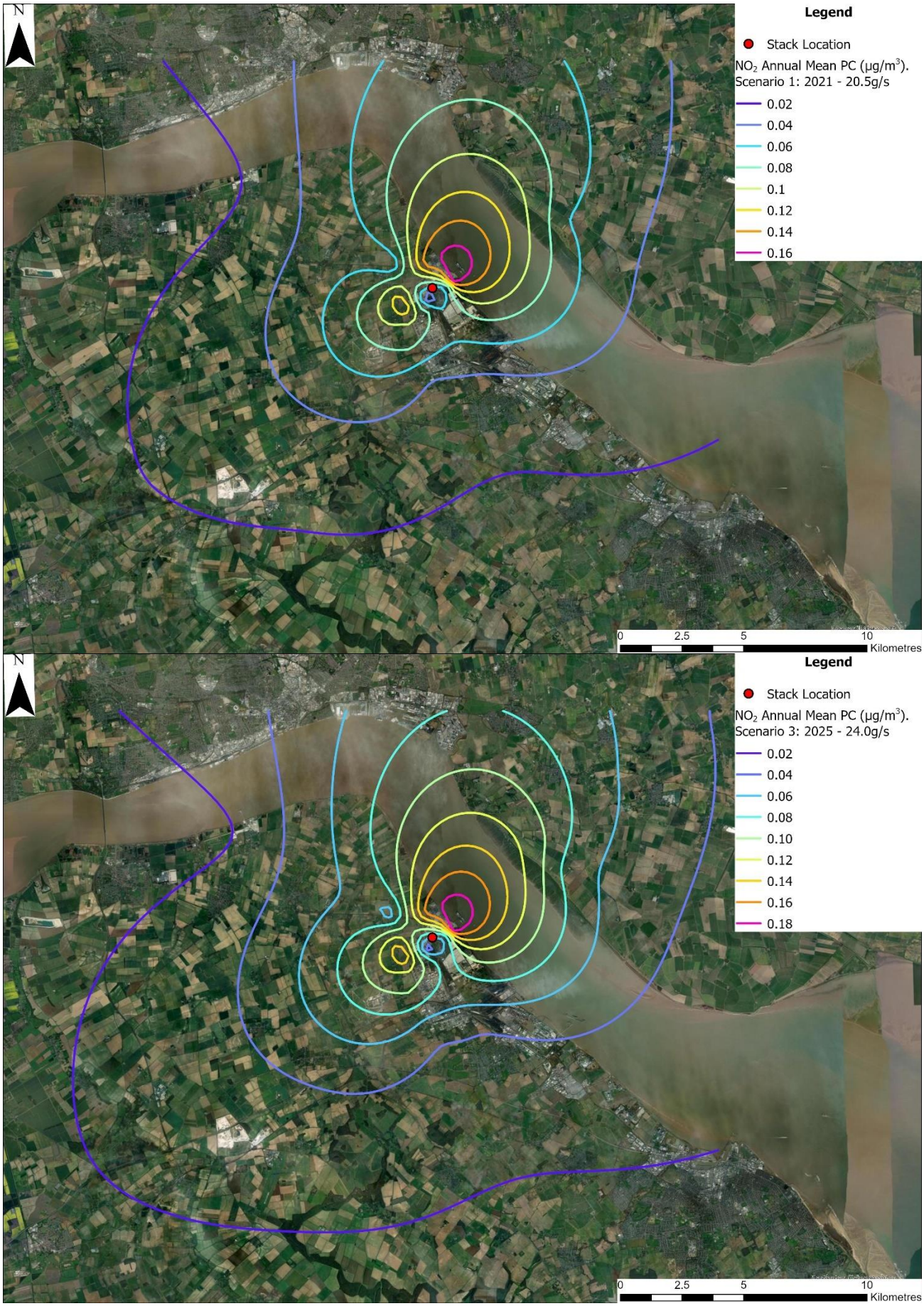


Figure 7: Contours of Annual Average NO_2 Concentrations for the Updated 2021 Amendment (top) and the 2025 Change (bottom) for Scenarios 2 and 4

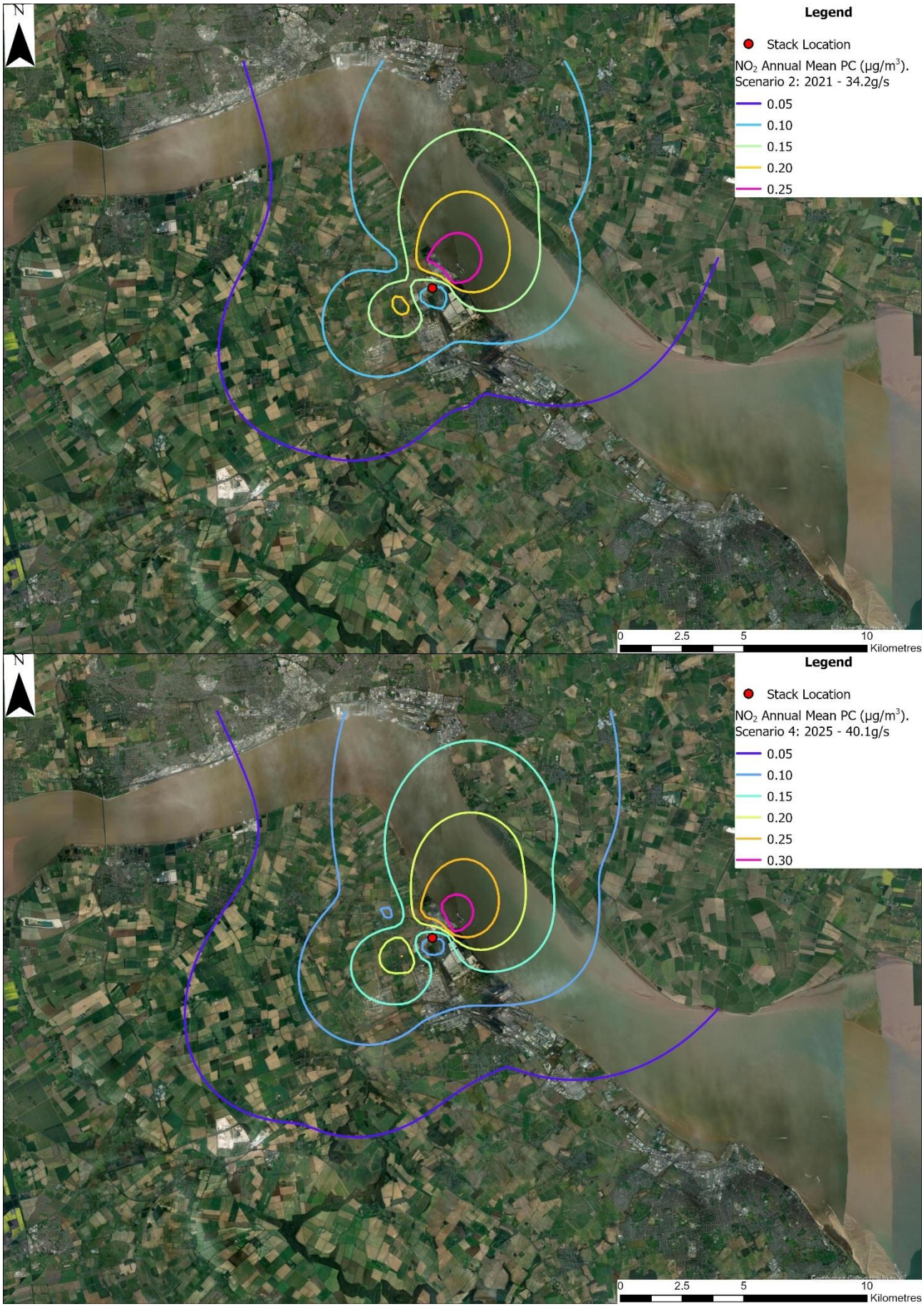


Figure 8: Contours of Hourly NO_2 Concentrations for the Updated 2021 Amendment (top) and the 2025 Change (bottom) for Scenarios 1 and 3

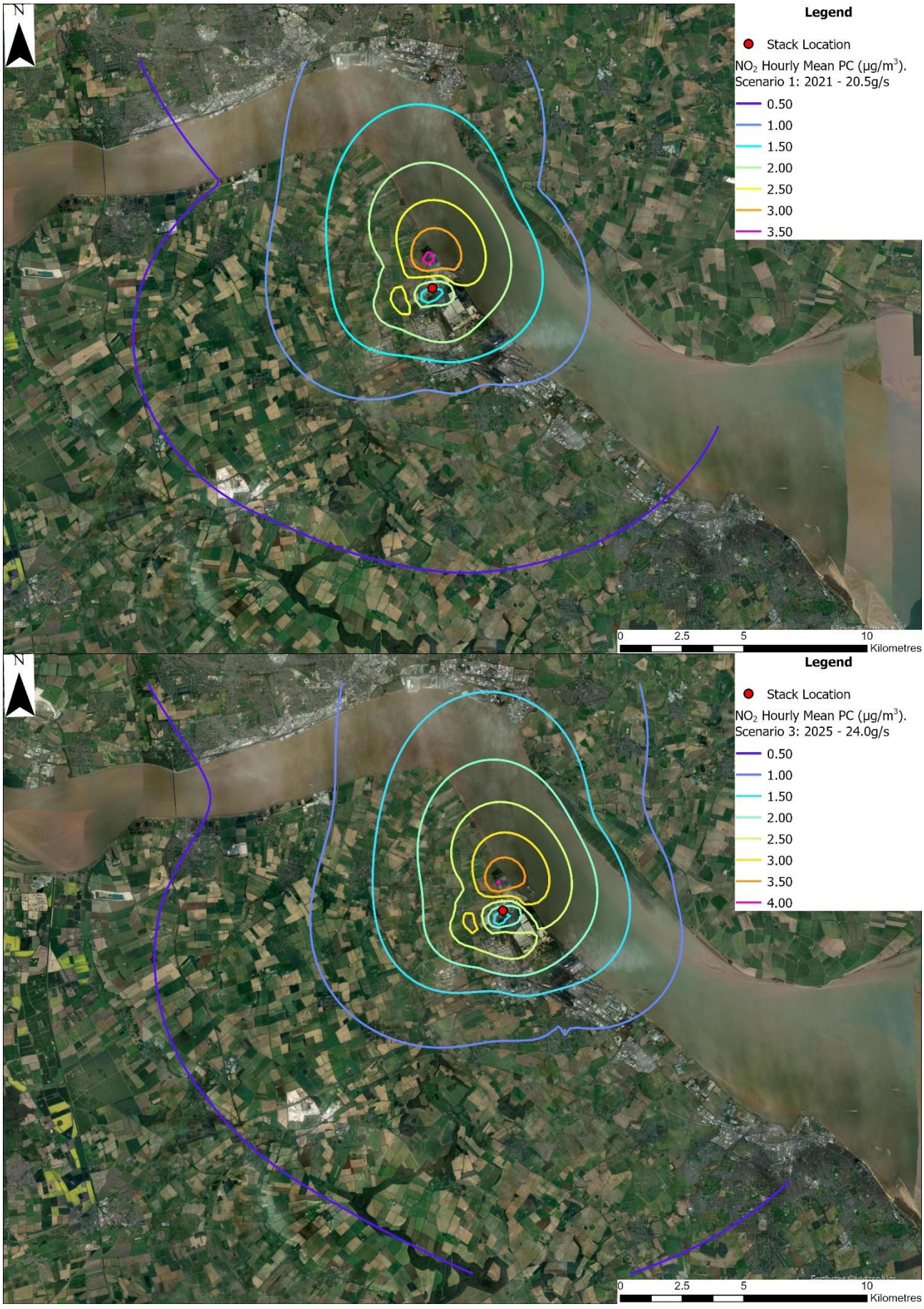


Figure 9: Contours of Hourly NO_2 Concentrations for the Updated 2021 Amendment (top) and the 2025 Change (bottom) for Scenarios 2 and 4

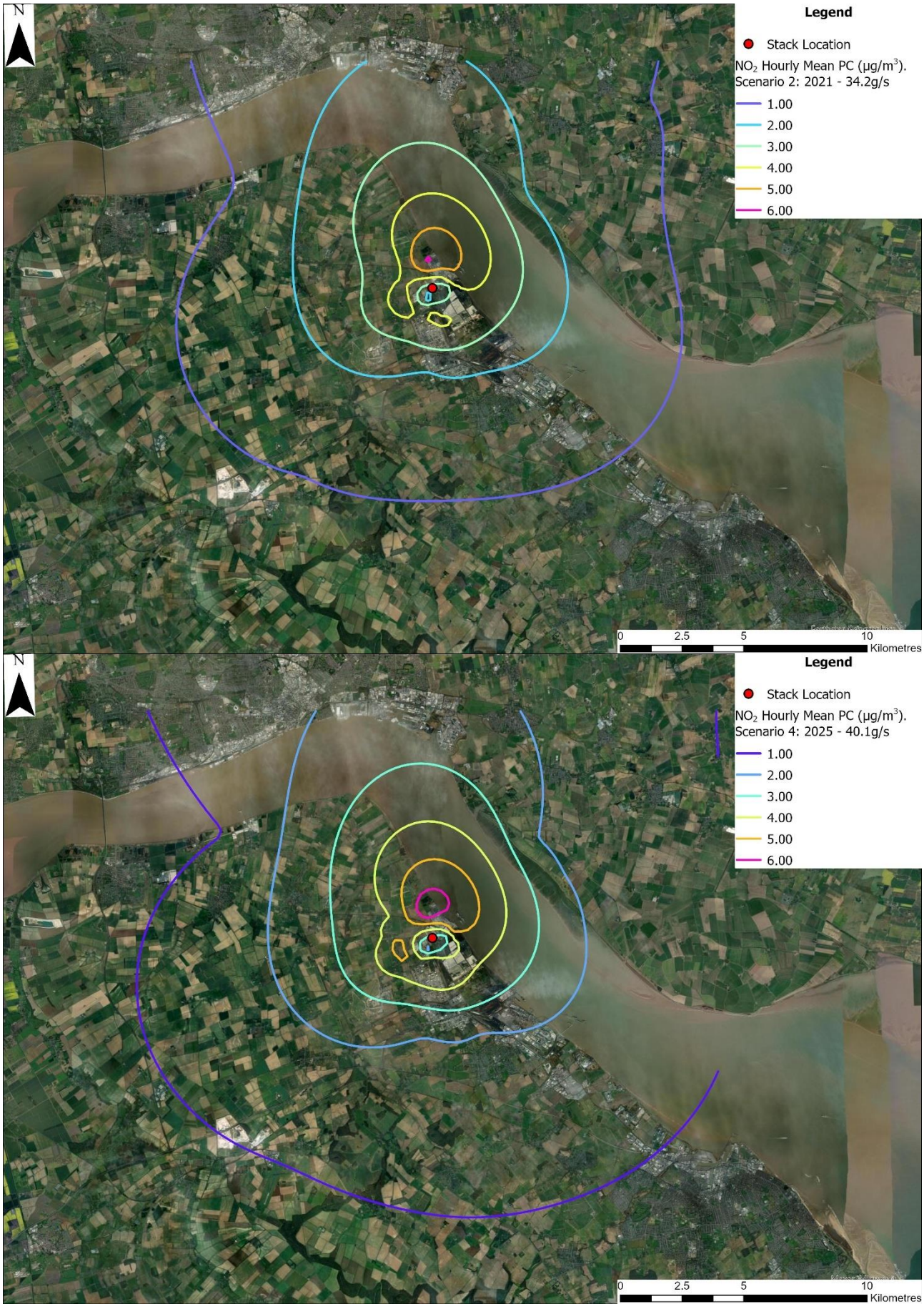


Figure 10: Contours of Annual Average NO_x Concentrations for the Updated 2021 Amendment (top) and the 2025 Change (bottom) for Scenarios 1 and 3

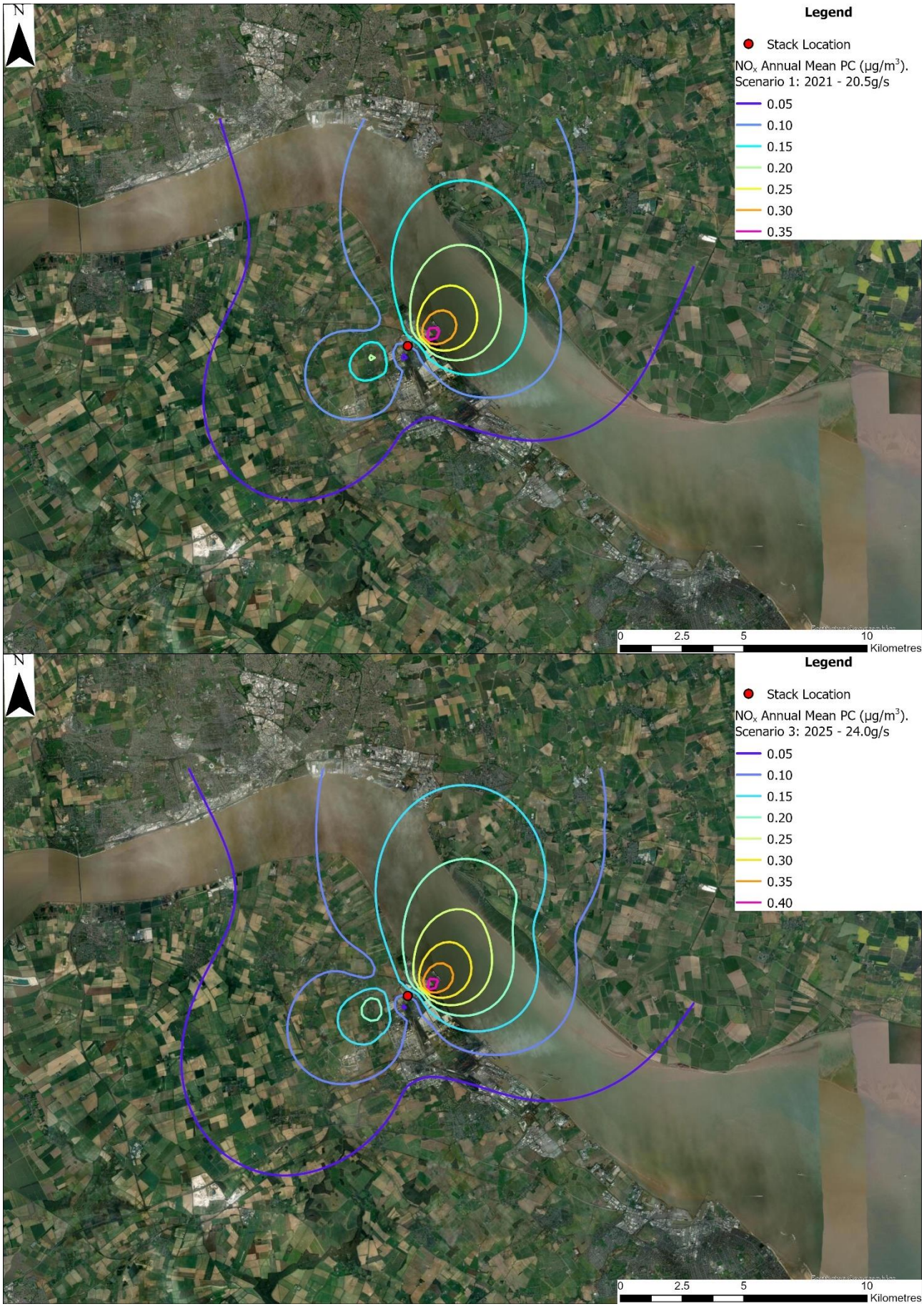


Figure 11: Contours of Annual Average NO_x Concentrations for the Updated 2021 Amendment (top) and the 2025 Change (bottom) for Scenarios 2 and 4

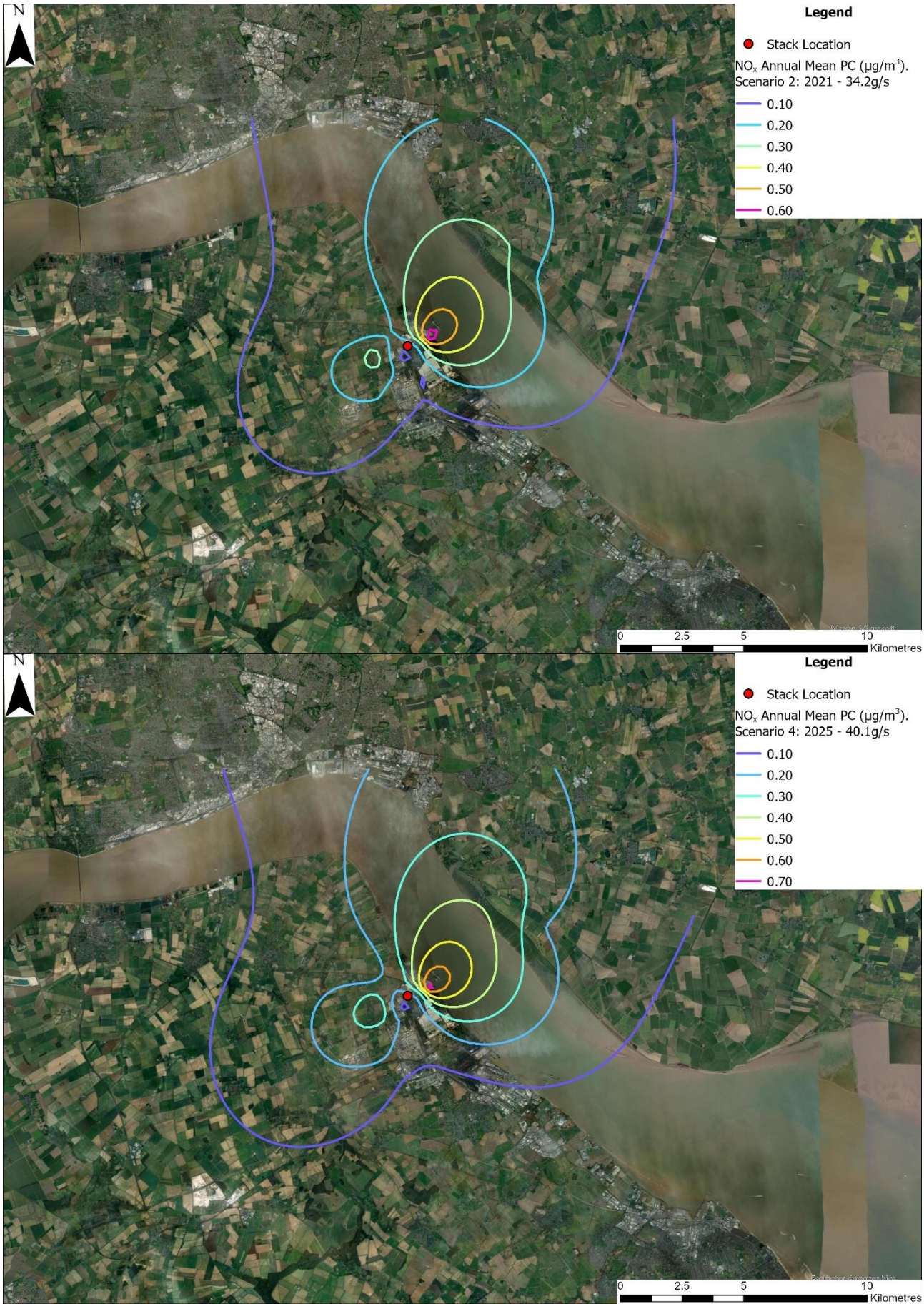


Figure 12: Contours of Daily NO_x Concentrations for the Updated 2021 Amendment (top) and the 2025 Change (bottom) for Scenarios 1 and 3

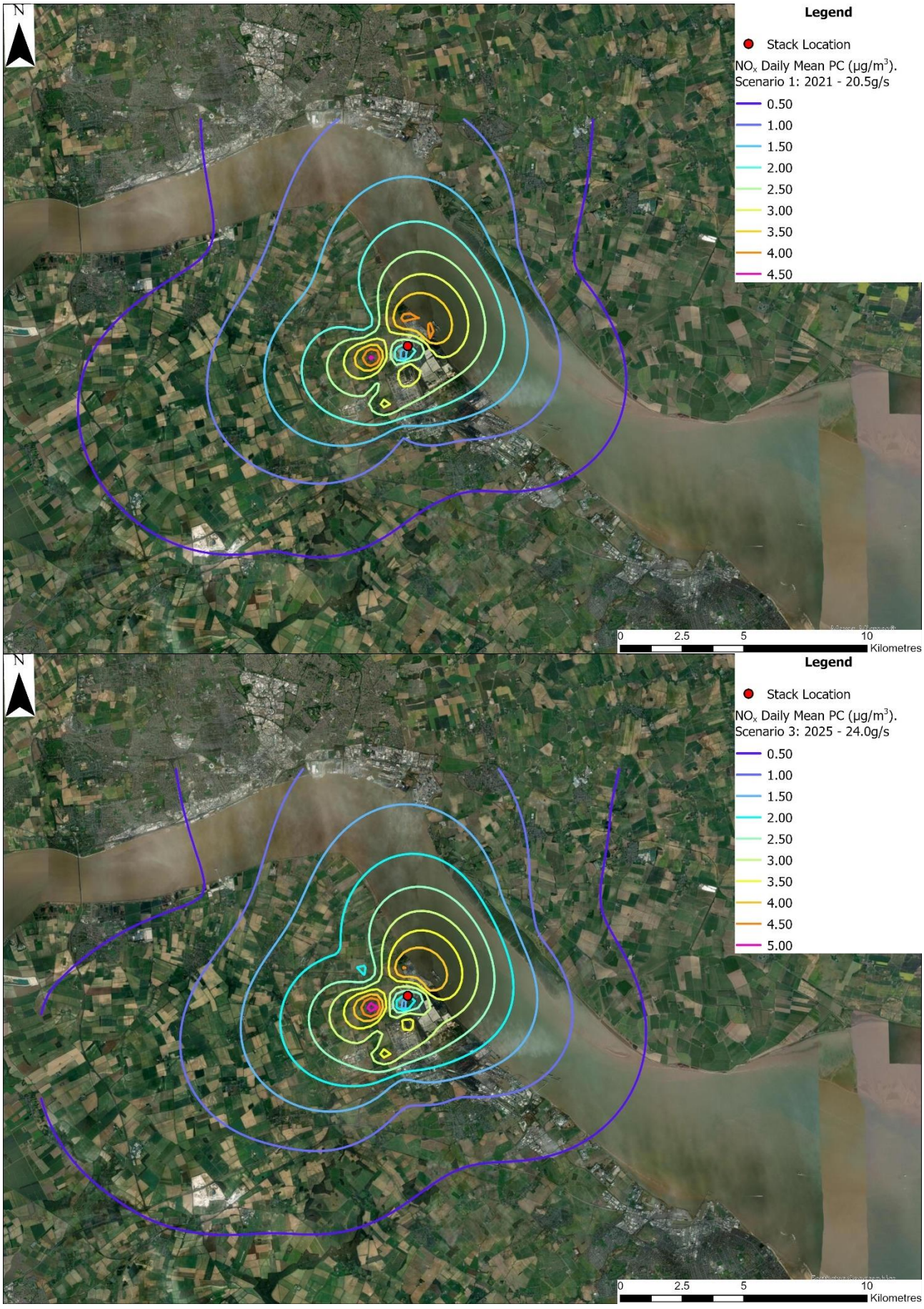
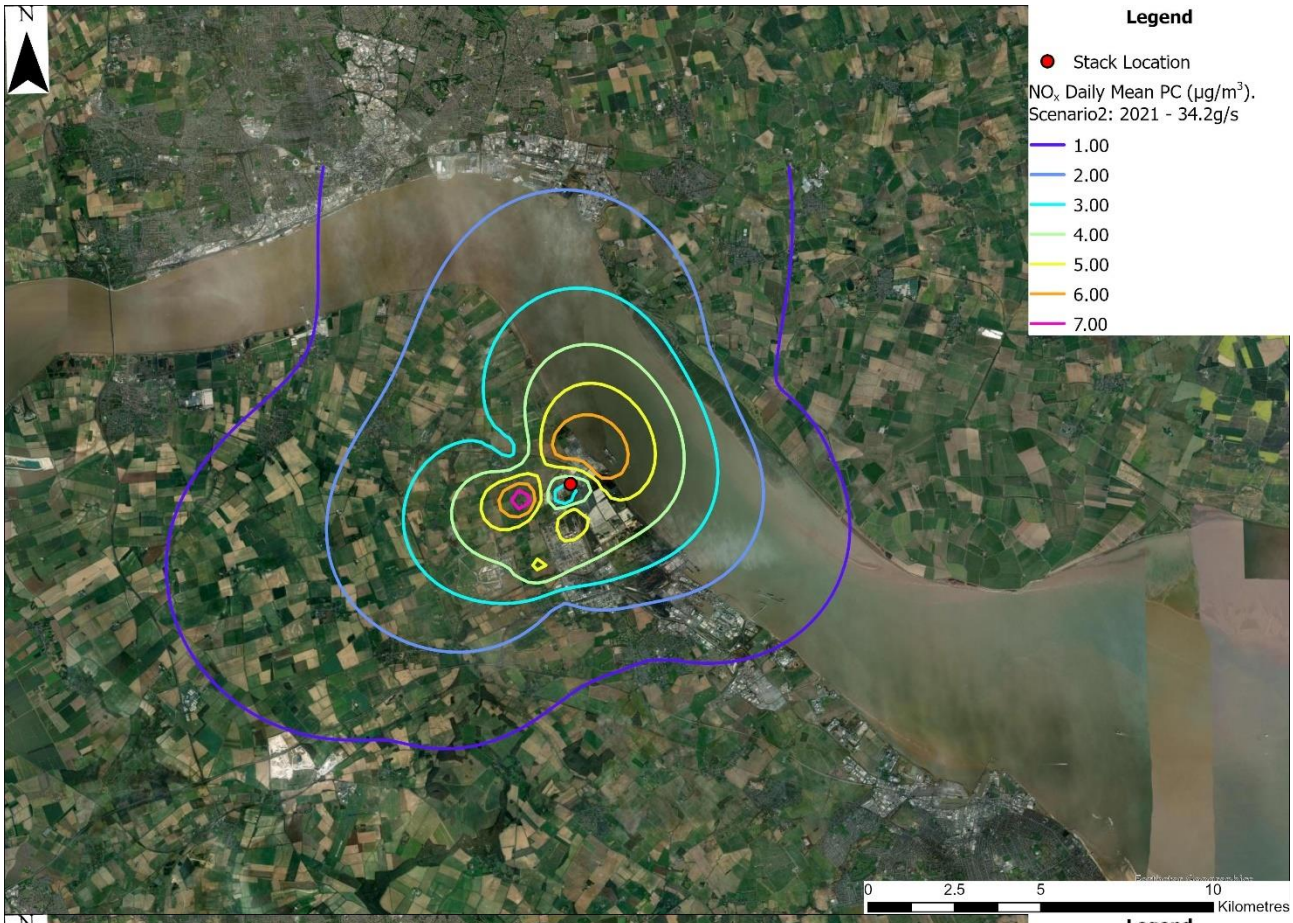
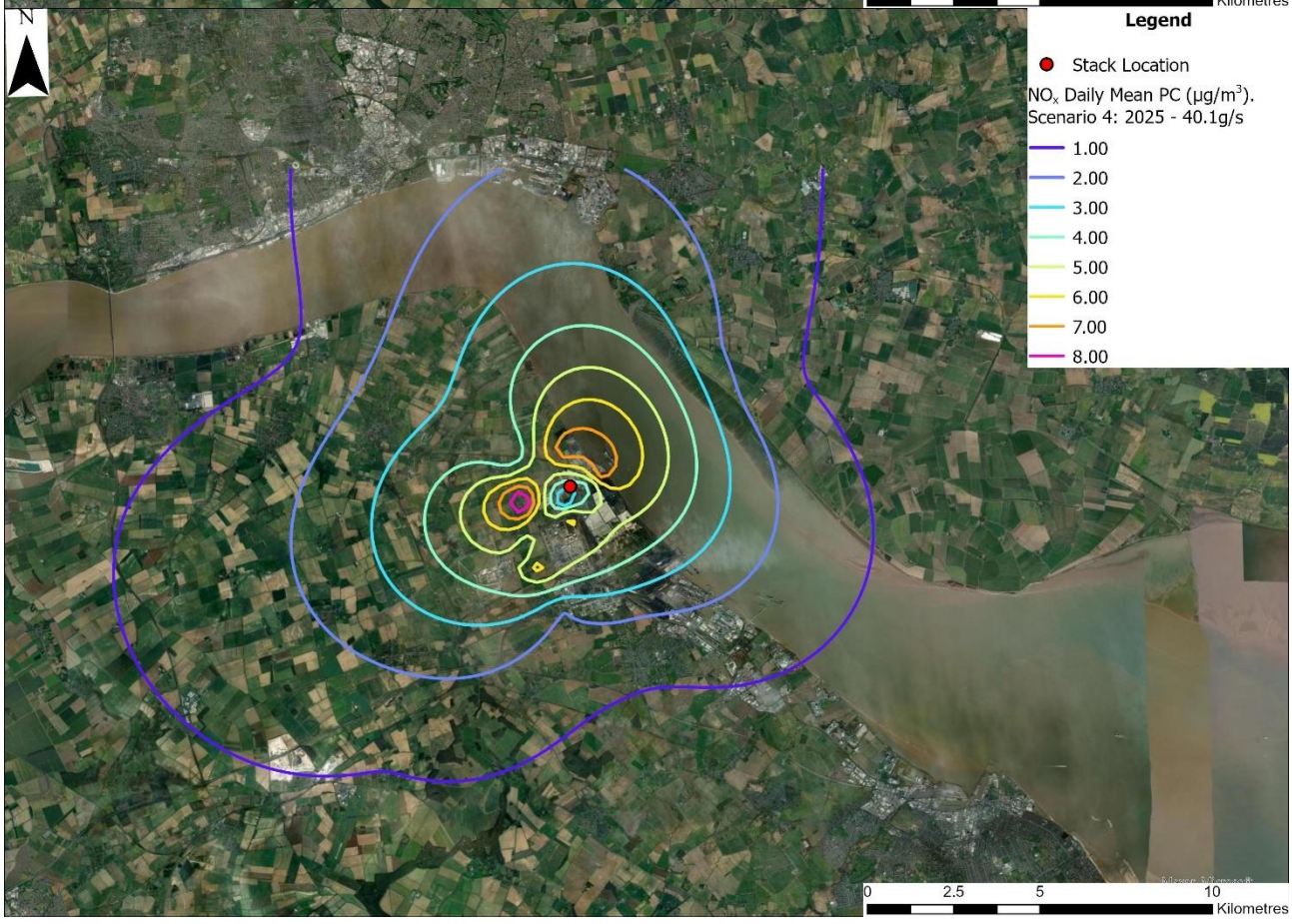


Figure 13: Contours of Daily NO_x Concentrations for the Updated 2021 Amendment (top) and the 2025 Change (bottom) for Scenarios 2 and 4





4. Auxiliary Boiler

In addition to the proposed CCGT, there will also be an auxiliary boiler as part of the operations for the Project, which was not included in the modelling in the original DCO or the 2021 Amendment.

Dispersion modelling of the auxiliary boiler has been carried out which demonstrates that there would be no significant effects associated with its operation, assuming it has a 15m stack. Details are provided below regarding the model setup and results.

The 2025 Change model was used as the basis for this model.

4.1 Buildings

Additional buildings were included when determining the impacts of the auxiliary boiler, as the auxiliary boiler stack is much shorter (15m) than the CCGT stack and therefore could be impacted by shorter buildings. Therefore, to allow for the inclusion of the smaller relevant buildings, the building heights for the assessment of the Auxiliary boiler were kept the same as the 2021 DCO Amendment. Buildings that were excluded were those that would not be expected to impact dispersion either due to distance or height.

In the absence of information, the height of the auxiliary boiler building was assumed to be 6m, with dimensions estimated from the site layout plan.

The modelled building information is shown below in Table 4-1 and the locations are shown in Figure 14.

Table 4-1: Auxiliary Boiler Modelled Buildings

Name	Building ID	Building centre National Grid Reference		Height (m)	Width (m)	Length (m)	Angle of building length to north (degrees)
		X	Y				
HRSG	1	515734	419636	35	30	50	155
Turbine Hall	2	515753	419580	30	45	65	155
Cooling Tower Block 1	3	515778	419721	20	20	135	65
Cooling Tower Block 2	4	515764	419744	20	20	135	65
GIS Building	5	515710	419512	12	24	18	65
CT makeup tank	6	515790	419683	30	28	28	0
Auxiliary boiler building	7	515776	419532	6	11	11	245

4.2 Emissions and Model Parameters

The model inputs for the auxiliary boiler model are provided below in Table 4-2. The annual average emissions have been prorated to assume a maximum of 500 hours of operation per year, whereas the short term emissions have been used to determine the hourly average impacts, assuming continuous operation throughout the year, to ensure that the meteorological conditions that lead to the worst-case impacts are taken into account.

Table 4-2: Auxiliary Boiler Dispersion Model Inputs

Model scenario	Actual volumetric flow rate (Am^3/s)	Velocity (m/s)	Temperature (°C)	H_2O and O_2 content	Normalised volumetric flow rate[1] (Nm^3/s)	NO_x concentration (mg/Nm^3)	NO_x release rate (g/s)
Auxiliary boiler model Annual emission rate	10.6	13.4	230	Not stated	6.7	9.7	0.07

Model scenario	Actual volumetric flow rate (Am^3/s)	Velocity (m/s)	Temperature (°C)	H_2O and O_2 content	Normalised volumetric flow rate[1] (Nm^3/s)	NO_x concentration (mg/Nm^3)	NO_x release rate (g/s)
Auxiliary boiler model Hourly emission rate						171	1.8
Note: the annual emission rate has been pro-rated for 500 hours of operation per year.							

Figure 14: Buildings Included in the Auxiliary Boiler Model

4.3 Model Results – Sensitive Receptors

The modelling demonstrates that no exceedances of the national air quality objectives for NO_2 are predicted. The results are presented at the location of maximum impact, which occurs to the east of the turbine hall building, and therefore within the operational site. Contour maps of these results are shown in Figure 15 and Figure 16 for annual and hourly mean NO_x. The conversion rates for long term and short term NO_x to NO_2 are 70% and 35% respectively. The contour maps (Figure 15 and Figure 16) show the impact from the auxiliary boiler is very minimal and is localised onsite.

Table 4-3 provides the results of the auxiliary boiler assessment and a comparison with the AQS for the worst case location across the modelled grid.

The maximum annual mean NO_2 PC concentration equates to 0.8% of the respective air quality objectives at the maximum point of impact (onsite).

The maximum hourly mean NO_2 PC concentrations equate to 22.2% of the air quality objective at the maximum point of impact (onsite).

Table 4-3: Model Results for the Auxiliary Boiler Assessment

Annual emissions				
Annual mean NO_2 PC (ug/m^3)	**Annual mean NO_2 PEC (ug/m^3)**	**National AQS**	**PC as % of AQS**	**PEC as % of AQS**
0.3	9.7	40	0.8%	24.2%
Annual mean NO_x PC (ug/m^3)	**Annual mean NO_x PEC (ug/m^3)**	**National AQS**	**PC as % of AQS**	**PEC as % of AQS**
0.4	12.7	30	1.5%	42.2%
Hourly emissions				
Hourly mean NO_2 PC (ug/m^3)	**Hourly mean NO_2 PEC (ug/m^3)**	**National AQS**	**PC as % of AQS**	**PEC as % of AQS**
44.5	63.2	200	22.2%	31.6%

The human receptors identified in Section 2.8.1 are outside the auxiliary boiler modelled grid area but the contours plots suggest the annual average and hourly PCs at areas to the west of the modelled grid (i.e. where most of the human receptors are located), would be <0.1 $\mu g/m^3$ and therefore be insignificant.

The ecological receptors (identified in Section 2.8.2) E1 and E14 are both within the auxiliary boiler modelled grid domain. The worst case results for the closest grid point to these receptors are 0.05$\mu g/m^3$ annual mean NO_x or 0.2% of the annual critical level (at both E1 and E14) and 0.61$\mu g/m^3$ daily mean NO_x or 0.8% of the relevant critical level (at E14), and therefore can be considered to be insignificant.

The PC at the worst case ecological receptors (E1 and E14) for the auxiliary boiler was 0.2% of the air quality objective, compared with 0.5% and 0.2% respectively for the CCGT (to one decimal place). Since the change in nitrogen deposition for the CCGT was less than 0.1% (between the 2021 Amendment and the 2025 Change), it is considered that since even doubling this value to account for the auxiliary boiler would still not exceed the 1% criteria and the effect remains insignificant.

It is therefore considered that the impacts associated with the operation of an auxiliary boiler can also be considered to be non-material.

Figure 15: Contours of Annual Mean NOx Concentrations from the Auxiliary Boiler

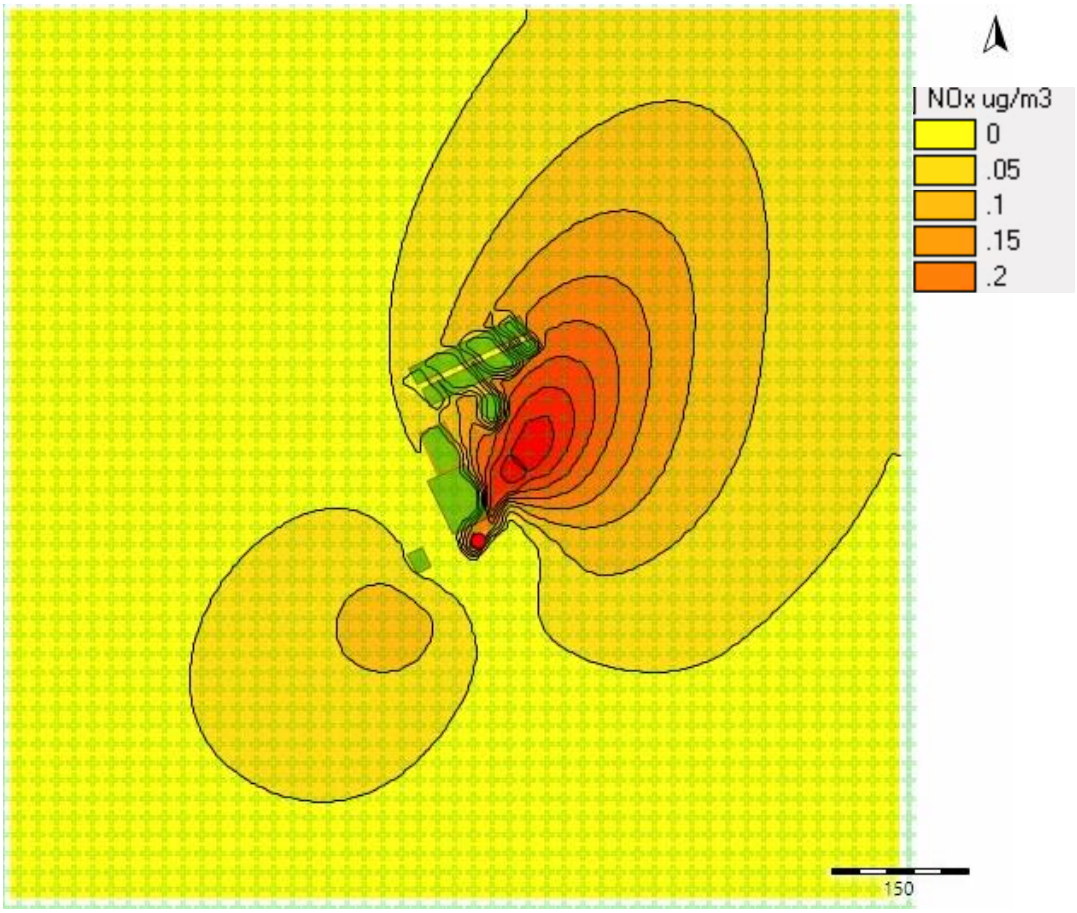
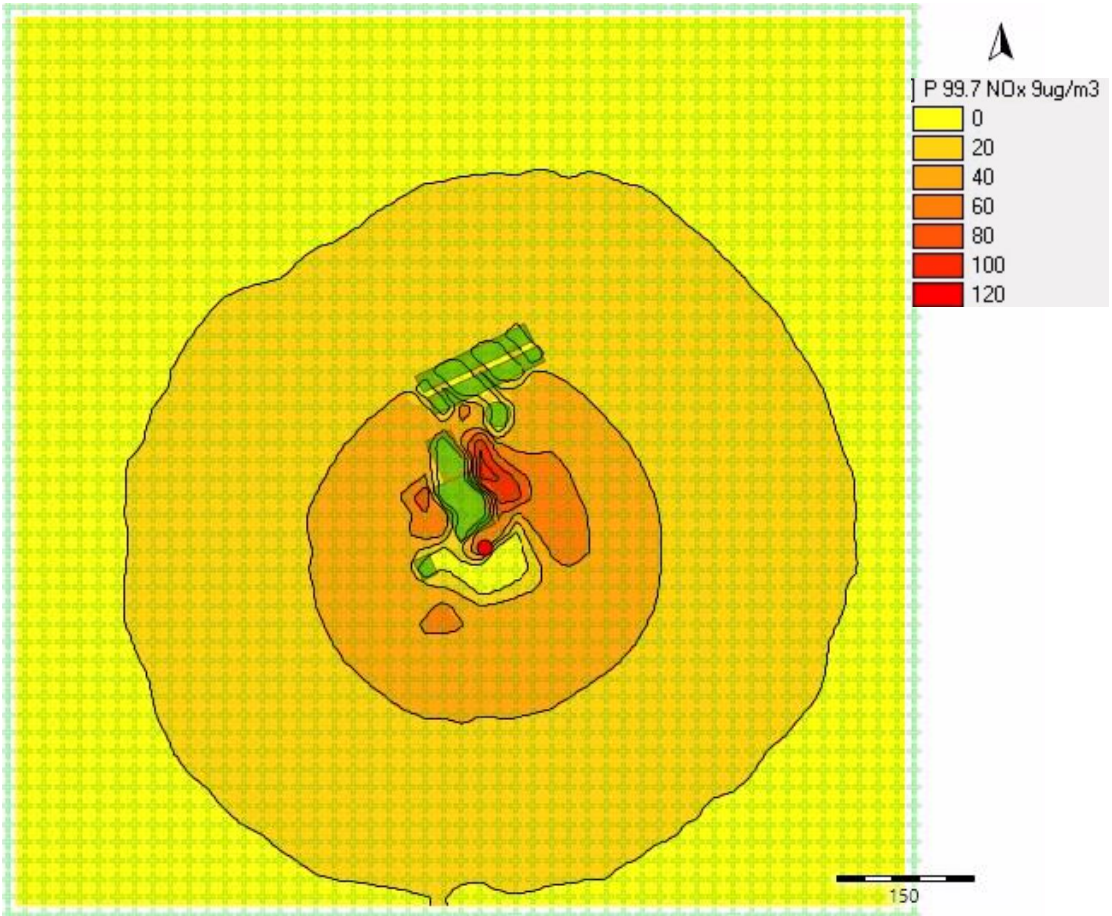


Figure 16: Contours of Hourly Mean NO_x Concentrations from the Auxiliary Boiler



5. Conclusions

This assessment reviews the predicted concentrations resulting from a proposed small increase in the output capacity of the generating station compared to those predicted in the original 2021 Amendment. The assessment considers human and ecological sensitive receptors.

The assessment shows that there is very little change in the NO_2 concentrations predicted at human receptor locations and no exceedances of the relevant AQS are predicted. The overall effect was insignificant for both the updated 2021 Amendment results and the 2025 Change results, in line with the EA risk assessment guidance. The planning criteria set out by the EPUK/IAQM show that the predicted change at all human receptor locations would result in a negligible impact that is not significant. This indicates that the changes can be considered as non-material for human receptors for air quality.

The assessment reviewed NO_x concentrations predicted at ecological designations and no exceedances of the relevant CLs were predicted. The overall effect was insignificant at all receptors with minimal exceptions. When receptors cannot be screened out using the EA risk assessment guidance, further consideration is required. In this instance, no exceedances of the relevant CLs were predicted at any receptors, which is considered to be not significant. As for human receptors, the EPUK/IAQM planning criteria show a negligible impact at all ecological receptors, which is not significant. The changes in the results from the updated 2021 Amendment and the 2025 Change are considered to be non-material as a result.

Nitrogen deposition was also considered for the ecological receptors. The comparison of the updated 2021 Amendment deposition results with those from the 2025 Change indicate that the process contributions at each receptor as a proportion of the critical load were less than the 1% insignificance criteria. This shows that these ecological receptors can be screened out of further assessment. This is therefore considered to be non-material change.

The effects of the Project have also been assessed for CO in the 2025 Change scenario where data is available. This assessment shows that the effects of CO would be insignificant.

The auxiliary boiler was also considered in this assessment and was shown not to result in a significant effect and is also considered to constitute a non-material change.

Overall, the air quality changes resulting from the proposed increased capacity of the generating station can be considered non-material compared with the results from the 2021 Amendment.

Appendix A - Receptor Results

A.1 Human Results – Permitting Significance Criteria

The full suite of results for sensitive human receptors are provided in the sections below in Table 5-1 to Table 5-4.

Table 5-1: Assessment against annual and hourly mean NO_2 air quality standards, Scenario 1 - Updated 2021 Amendment – NO_x at 50mg/Nm^3

Receptor ID	Type	NO_2 annual mean PC (µg/m^3)	PC as % of the AQS	NO_2 annual mean PEC (µg/m^3)	PEC as % of the AQS	Significance	NO_2 hourly mean PC (µg/m^3)	PC as % of the AQS	NO_2 hourly mean PEC (µg/m^3)	PEC as % of the AQS	Significance
R1	Residential	0.1	0.4%	8.4	21.0%	Insignificant	2.8	1.4%	19.3	9.7%	Insignificant
R2	Residential	0.2	0.4%	8.4	21.1%	Insignificant	3.1	1.5%	19.6	9.8%	Insignificant
R3	Residential	0.2	0.5%	8.7	21.8%	Insignificant	3.6	1.8%	20.7	10.3%	Insignificant
R4	Residential	0.3	0.7%	8.8	21.9%	Insignificant	4.8	2.4%	21.8	10.9%	Insignificant
R5	Residential	0.2	0.4%	7.9	19.6%	Insignificant	3.5	1.8%	18.9	9.5%	Insignificant
R6	Residential	0.1	0.3%	8.0	20.0%	Insignificant	3.8	1.9%	19.5	9.8%	Insignificant
R7	School	0.1	0.2%	8.5	21.2%	Insignificant	1.9	1.0%	18.7	9.4%	Insignificant
R8	Residential	0.1	0.1%	9.6	24.0%	Insignificant	1.5	0.8%	20.6	10.3%	Insignificant
R9	Residential	0.0	0.1%	9.3	23.1%	Insignificant	1.4	0.7%	19.8	9.9%	Insignificant
R10	School	0.0	0.1%	10.5	26.1%	Insignificant	1.4	0.7%	22.2	11.1%	Insignificant
R11	School	0.0	0.1%	10.4	26.1%	Insignificant	1.4	0.7%	22.2	11.1%	Insignificant
R12	School	0.0	0.1%	10.4	26.1%	Insignificant	1.4	0.7%	22.2	11.1%	Insignificant
R13	Residential	0.1	0.2%	9.0	22.6%	Insignificant	1.9	0.9%	19.8	9.9%	Insignificant
R14	Residential	0.1	0.2%	8.5	21.2%	Insignificant	1.8	0.9%	18.6	9.3%	Insignificant
R15	Residential	0.2	0.5%	8.5	21.2%	Insignificant	1.8	0.9%	18.3	9.2%	Insignificant
R16	Residential	0.1	0.3%	8.5	21.1%	Insignificant	1.6	0.8%	18.2	9.1%	Insignificant
R17	Residential	0.1	0.2%	8.5	21.3%	Insignificant	1.3	0.7%	18.2	9.1%	Insignificant

Table 5-2: Assessment against annual and hourly mean NO_2 air quality standards, Scenario 2 - Updated 2021 Amendment – NO_x at 30mg/Nm^3

Receptor ID	Type	NO_2 annual mean PC (µg/m^3)	PC as % of the AQS	NO_2 annual mean PEC (µg/m^3)	PEC as % of the AQS	Significance	NO_2 hourly mean PC (µg/m^3)	PC as % of the AQS	NO_2 hourly mean PEC (µg/m^3)	PEC as % of the AQS	Significance
R1	Residential	0.1	0.2%	8.3	20.9%	Insignificant	1.7	0.8%	18.2	9.1%	Insignificant
R2	Residential	0.1	0.3%	8.4	20.9%	Insignificant	1.8	0.9%	18.3	9.2%	Insignificant
R3	Residential	0.1	0.3%	8.6	21.6%	Insignificant	2.2	1.1%	19.2	9.6%	Insignificant
R4	Residential	0.2	0.4%	8.7	21.7%	Insignificant	2.9	1.4%	19.9	10.0%	Insignificant
R5	Residential	0.1	0.2%	7.8	19.5%	Insignificant	2.1	1.1%	17.5	8.8%	Insignificant
R6	Residential	0.1	0.2%	7.9	19.8%	Insignificant	2.3	1.1%	18.0	9.0%	Insignificant
R7	School	0.1	0.1%	8.5	21.1%	Insignificant	1.2	0.6%	18.0	9.0%	Insignificant
R8	Residential	< 0.1	0.1%	9.6	24.0%	Insignificant	0.9	0.5%	20.0	10.0%	Insignificant
R9	Residential	< 0.1	0.1%	9.2	23.1%	Insignificant	0.9	0.4%	19.3	9.6%	Insignificant
R10	School	< 0.1	0.1%	10.4	26.1%	Insignificant	0.9	0.4%	21.7	10.8%	Insignificant
R11	School	< 0.1	0.1%	10.4	26.1%	Insignificant	0.8	0.4%	21.6	10.8%	Insignificant
R12	School	< 0.1	0.1%	10.4	26.1%	Insignificant	0.9	0.4%	21.7	10.8%	Insignificant
R13	Residential	< 0.1	0.1%	9.0	22.5%	Insignificant	1.1	0.6%	19.1	9.5%	Insignificant
R14	Residential	< 0.1	0.1%	8.4	21.1%	Insignificant	1.1	0.5%	17.9	8.9%	Insignificant
R15	Residential	0.1	0.3%	8.4	20.9%	Insignificant	1.1	0.5%	17.6	8.8%	Insignificant
R16	Residential	0.1	0.2%	8.4	21.0%	Insignificant	0.9	0.5%	17.6	8.8%	Insignificant
R17	Residential	0.1	0.1%	8.5	21.2%	Insignificant	0.8	0.4%	17.7	8.8%	Insignificant

Table 5-3: Assessment against annual and hourly mean NO_2 air quality standards, Scenario 3 – 2025 Change – NO_x at 50mg/m^3

Receptor ID	Type	NO_2 annual mean PC (µg/m^3)	PC as % of the AQS	NO_2 annual mean PEC (µg/m^3)	PEC as % of the AQS	Significance	NO_2 hourly mean PC (µg/m^3)	PC as % of the AQS	NO_2 hourly mean PEC (µg/m^3)	PEC as % of the AQS	Significance
R1	Residential	0.2	0.4%	8.4	21.1%	Insignificant	3.3	1.7%	19.8	9.9%	Insignificant
R2	Residential	0.2	0.5%	8.5	21.1%	Insignificant	3.6	1.8%	20.1	10.0%	Insignificant
R3	Residential	0.2	0.6%	8.7	21.9%	Insignificant	4.3	2.1%	21.3	10.6%	Insignificant
R4	Residential	0.3	0.8%	8.8	22.0%	Insignificant	5.6	2.8%	22.6	11.3%	Insignificant
R5	Residential	0.2	0.5%	7.9	19.7%	Insignificant	4.2	2.1%	19.6	9.8%	Insignificant
R6	Residential	0.1	0.3%	8.0	20.0%	Insignificant	4.4	2.2%	20.2	10.1%	Insignificant
R7	School	0.1	0.3%	8.5	21.3%	Insignificant	2.3	1.1%	19.1	9.5%	Insignificant
R8	Residential	0.1	0.2%	9.6	24.1%	Insignificant	1.8	0.9%	20.9	10.5%	Insignificant
R9	Residential	0.1	0.1%	9.3	23.2%	Insignificant	1.7	0.8%	20.1	10.1%	Insignificant
R10	School	0.1	0.1%	10.5	26.1%	Insignificant	1.7	0.8%	22.5	11.2%	Insignificant
R11	School	0.1	0.1%	10.5	26.1%	Insignificant	1.6	0.8%	22.4	11.2%	Insignificant
R12	School	0.1	0.1%	10.5	26.1%	Insignificant	1.7	0.8%	22.5	11.3%	Insignificant
R13	Residential	0.1	0.2%	9.1	22.6%	Insignificant	2.2	1.1%	20.1	10.1%	Insignificant
R14	Residential	0.1	0.2%	8.5	21.2%	Insignificant	2.1	1.0%	18.9	9.4%	Insignificant
R15	Residential	0.2	0.6%	8.5	21.2%	Insignificant	2.1	1.1%	18.7	9.3%	Insignificant
R16	Residential	0.1	0.3%	8.5	21.2%	Insignificant	1.9	0.9%	18.5	9.3%	Insignificant
R17	Residential	0.1	0.3%	8.5	21.4%	Insignificant	1.6	0.8%	18.5	9.2%	Insignificant

Table 5-4: Assessment against annual and hourly mean NO_2 air quality standards, Scenario 4 - 2025 Change – NO_x at 30mg/m^3

Receptor ID	Type	NO_2 annual mean PC (µg/m^3)	PC as % of the AQS	NO_2 annual mean PEC (µg/m^3)	PEC as % of the AQS	Significance	NO_2 hourly mean PC (µg/m^3)	PC as % of the AQS	NO_2 hourly mean PEC (µg/m^3)	PEC as % of the AQS	Significance
R1	Residential	0.1	0.3%	8.4	20.9%	Insignificant	2.0	1.0%	18.5	9.2%	Insignificant
R2	Residential	0.1	0.3%	8.4	20.9%	Insignificant	2.1	1.1%	18.7	9.3%	Insignificant
R3	Residential	0.1	0.3%	8.7	21.6%	Insignificant	2.5	1.3%	19.6	9.8%	Insignificant
R4	Residential	0.2	0.5%	8.7	21.7%	Insignificant	3.3	1.7%	20.4	10.2%	Insignificant
R5	Residential	0.1	0.3%	7.8	19.5%	Insignificant	2.5	1.2%	17.9	8.9%	Insignificant
R6	Residential	0.1	0.2%	7.9	19.9%	Insignificant	2.7	1.3%	18.4	9.2%	Insignificant
R7	School	0.1	0.2%	8.5	21.2%	Insignificant	1.4	0.7%	18.2	9.1%	Insignificant
R8	Residential	<0.1	0.1%	9.6	24.0%	Insignificant	1.1	0.5%	20.2	10.1%	Insignificant
R9	Residential	<0.1	0.1%	9.2	23.1%	Insignificant	1.0	0.5%	19.4	9.7%	Insignificant
R10	School	<0.1	0.1%	10.4	26.1%	Insignificant	1.0	0.5%	21.8	10.9%	Insignificant
R11	School	<0.1	0.1%	10.4	26.1%	Insignificant	1.0	0.5%	21.8	10.9%	Insignificant
R12	School	<0.1	0.1%	10.4	26.1%	Insignificant	1.0	0.5%	21.8	10.9%	Insignificant
R13	Residential	0.1	0.1%	9.0	22.6%	Insignificant	1.3	0.7%	19.3	9.6%	Insignificant
R14	Residential	<0.1	0.1%	8.4	21.1%	Insignificant	1.3	0.6%	18.1	9.0%	Insignificant
R15	Residential	0.1	0.4%	8.4	21.0%	Insignificant	1.3	0.6%	17.8	8.9%	Insignificant
R16	Residential	0.1	0.2%	8.4	21.1%	Insignificant	1.1	0.6%	17.8	8.9%	Insignificant
R17	Residential	0.1	0.2%	8.5	21.3%	Insignificant	1.0	0.5%	17.8	8.9%	Insignificant

Table 5-5: Assessment against hourly and 8-hour rolling mean CO air quality standards, 2025 Change

Receptor ID	Type	CO hourly mean PC (µg/m^3)	PC as % of the AQS	CO hourly mean PEC (µg/m^3)	PEC as % of the AQS	Significance	CO 8 hr rolling PC (µg/m^3)	PC as % of the AQS	CO 8 hr rolling PEC (µg/m^3)	PEC as % of the AQS	Significance
R1	Residential	34.4	0.1%	37.3	0.1%	Insignificant	15.3	0.2%	18.3	0.2%	Insignificant
R2	Residential	41.5	0.1%	44.5	0.1%	Insignificant	28.2	0.3%	31.2	0.3%	Insignificant
R3	Residential	17.1	0.1%	20.1	0.1%	Insignificant	4.2	<0.1%	7.2	0.1%	Insignificant
R4	Residential	15.3	0.1%	18.2	0.1%	Insignificant	4.6	<0.1%	7.5	0.1%	Insignificant
R5	Residential	13.6	<0.1%	16.6	0.1%	Insignificant	4.2	<0.1%	7.1	0.1%	Insignificant
R6	Residential	12.1	<0.1%	15.0	<0.1%	Insignificant	3.3	<0.1%	6.2	0.1%	Insignificant
R7	School	11.2	<0.1%	14.2	<0.1%	Insignificant	4.0	<0.1%	7.0	0.1%	Insignificant
R8	Residential	11.5	<0.1%	14.4	<0.1%	Insignificant	3.1	<0.1%	6.0	0.1%	Insignificant
R9	Residential	9.7	<0.1%	12.6	<0.1%	Insignificant	4.8	<0.1%	7.8	0.1%	Insignificant
R10	School	17.8	0.1%	20.8	0.1%	Insignificant	5.3	0.1%	8.3	0.1%	Insignificant
R11	School	43.8	0.1%	46.8	0.2%	Insignificant	25.1	0.3%	28.1	0.3%	Insignificant
R12	School	34.4	0.1%	37.4	0.1%	Insignificant	25.5	0.3%	28.4	0.3%	Insignificant
R13	Residential	41.5	0.1%	44.4	0.1%	Insignificant	22.5	0.2%	25.4	0.3%	Insignificant
R14	Residential	22.1	0.1%	25.1	0.1%	Insignificant	7.0	0.1%	10.0	0.1%	Insignificant
R15	Residential	34.7	0.1%	37.7	0.1%	Insignificant	25.7	0.3%	28.7	0.3%	Insignificant
R16	Residential	35.4	0.1%	38.4	0.1%	Insignificant	28.5	0.3%	31.5	0.3%	Insignificant
R17	Residential	28.5	0.1%	31.4	0.1%	Insignificant	24.2	0.2%	27.2	0.3%	Insignificant

A.2 Human Results – Planning Significance Criteria

The results below in Table 5-6 and Table 5-7 show the changes between Scenario 1 and Scenario 3 and the predicted impact in line with the EPUK/IAQM criteria. Table 5-8 and Table 5-9 show the changes between Scenarios 2 and 4.

Table 5-6: Comparison of Annual Mean NO_2 Concentrations for Scenarios 1 and 3 and Predicted Impacts using EPUK/IAQM Criteria

Receptor ID	Scenario 1 DM PEC (µg/m^3)	Scenario 3 DS PEC (µg/m^3)	Change (µg/m^3)	Impact
R1	8.4	8.4	<0.1	Negligible
R2	8.4	8.5	<0.1	Negligible
R3	8.7	8.7	<0.1	Negligible
R4	8.8	8.8	<0.1	Negligible
R5	7.9	7.9	<0.1	Negligible
R6	8.0	8.0	<0.1	Negligible
R7	8.5	8.5	<0.1	Negligible
R8	9.6	9.6	<0.1	Negligible
R9	9.3	9.3	<0.1	Negligible
R10	10.5	10.5	<0.1	Negligible
R11	10.4	10.5	<0.1	Negligible
R12	10.4	10.5	<0.1	Negligible
R13	9.0	9.1	<0.1	Negligible
R14	8.5	8.5	<0.1	Negligible
R15	8.5	8.5	<0.1	Negligible
R16	8.5	8.5	<0.1	Negligible
R17	8.5	8.5	<0.1	Negligible

Table 5-7: Comparison of 1 Hourly Mean NO_2 Concentrations for Scenarios 1 and 3 and Predicted Impacts using EPUK/IAQM Criteria

Receptor ID	Scenario 1 DM PEC (µg/m^3)	Scenario 3 DS PEC (µg/m^3)	Change (µg/m^3)	Impact
R1	19.3	19.8	0.5	Negligible
R2	19.6	20.1	0.5	Negligible
R3	20.7	21.3	0.6	Negligible
R4	21.8	22.6	0.8	Negligible
R5	18.9	19.6	0.6	Negligible
R6	19.5	20.2	0.7	Negligible
R7	18.7	19.1	0.3	Negligible
R8	20.6	20.9	0.3	Negligible
R9	19.8	20.1	0.3	Negligible
R10	22.2	22.5	0.2	Negligible
R11	22.2	22.4	0.2	Negligible
R12	22.2	22.5	0.3	Negligible
R13	19.8	20.1	0.3	Negligible
R14	18.6	18.9	0.3	Negligible
R15	18.3	18.7	0.3	Negligible
R16	18.2	18.5	0.3	Negligible
R17	18.2	18.5	0.3	Negligible

Table 5-8: Comparison of Annual Mean NO_2 Concentrations for Scenarios 2 and 4 and Predicted Impacts using EPUK/IAQM Criteria

Receptor ID	Scenario 2 DM PEC (µg/m^3)	Scenario 4 DS PEC (µg/m^3)	Change (µg/m^3)	Impact
R1	8.3	8.4	<0.1	Negligible
R2	8.4	8.4	<0.1	Negligible
R3	8.6	8.7	<0.1	Negligible
R4	8.7	8.7	<0.1	Negligible
R5	7.8	7.8	<0.1	Negligible
R6	7.9	7.9	<0.1	Negligible
R7	8.5	8.5	<0.1	Negligible
R8	9.6	9.6	<0.1	Negligible
R9	9.2	9.2	<0.1	Negligible
R10	10.4	10.4	<0.1	Negligible
R11	10.4	10.4	<0.1	Negligible
R12	10.4	10.4	<0.1	Negligible
R13	9.0	9.0	<0.1	Negligible
R14	8.4	8.4	<0.1	Negligible
R15	8.4	8.4	<0.1	Negligible
R16	8.4	8.4	<0.1	Negligible
R17	8.5	8.5	<0.1	Negligible

Table 5-9: Comparison of 1 Hourly mean NO_2 concentrations for Scenarios 2 and 4 and predicted impacts using EPUK/IAQM criteria

Receptor ID	Scenario 2 DM PEC (µg/m^3)	Scenario 4 DS PEC (µg/m^3)	Change (µg/m^3)	Impact
R1	18.2	18.5	0.3	Negligible
R2	18.3	18.7	0.3	Negligible
R3	19.2	19.6	0.4	Negligible
R4	19.9	20.4	0.5	Negligible
R5	17.5	17.9	0.4	Negligible

Receptor ID	Scenario 2 DM PEC (µg/m^3)	Scenario 4 DS PEC (µg/m^3)	Change (µg/m^3)	Impact
R6	18.0	18.4	0.4	Negligible
R7	18.0	18.2	0.2	Negligible
R8	20.0	20.2	0.2	Negligible
R9	19.3	19.4	0.2	Negligible
R10	21.7	21.8	0.1	Negligible
R11	21.6	21.8	0.1	Negligible
R12	21.7	21.8	0.2	Negligible
R13	19.1	19.3	0.2	Negligible
R14	17.9	18.1	0.2	Negligible
R15	17.6	17.8	0.2	Negligible
R16	17.6	17.8	0.2	Negligible
R17	17.7	17.8	0.2	Negligible

A.3 Ecological Results – Permitting Significance Criteria

The full suite of ecological results are provided below in Table 5-10 to Table 5-13.

Table 5-10: Assessment against annual and daily mean NO_x air quality standards, Scenario 1 - Updated 2021 Amendment – NO_x at 50mg/Nm^3

Receptor ID	Designation	NOx annual mean PC (µg/m^3)	PC as % of the AQS	NOx annual mean PEC (µg/m^3)	PEC as % of the AQS	Significance	NOx daily mean PC (µg/m^3)	PC as % of the AQS	NOx daily mean PEC (µg/m^3)	PEC as % of the AQS	Significance
E1	SPA & Ramsar Humber Estuary, SSSI North Killingholme Haven Pits, Halton Marsh Clay Pits LWS	0.2	0.8%	15.0	50.1%	Insignificant	3.7	5.0%	25.9	34.5%	Insignificant
E2	SAC Humber Estuary	0.7	2.2%	26.0	86.7%	Not screened out	10.0	13.3%	48.0	64.0%	Not screened out
E3	Kirmington Pits SSSI	0.1	0.2%	9.4	31.3%	Insignificant	1.3	1.7%	15.3	20.4%	Insignificant
E4	Kelsey Hill Gravel Pits SSSI	0.1	0.5%	9.6	32.1%	Insignificant	0.9	1.2%	15.1	20.2%	Insignificant
E5	Kelsey Hill Gravel Pits SSSI	0.1	0.4%	9.2	30.6%	Insignificant	0.8	1.1%	14.4	19.2%	Insignificant
E6	Roos Bog SSSI	0.1	0.3%	8.3	27.7%	Insignificant	0.7	0.9%	13.0	17.3%	Insignificant
E7	South Ferriby Chalk Pit SSSI	0.0	0.1%	8.5	28.4%	Insignificant	0.7	0.9%	13.4	17.9%	Insignificant
E8	Swallow Wold SSSI	0.0	0.1%	8.4	28.0%	Insignificant	0.6	0.8%	13.1	17.5%	Insignificant
E9	Wrawby Moor SSSI	0.0	0.2%	8.5	28.2%	Insignificant	0.8	1.1%	13.4	17.9%	Insignificant
E10	Humber Estuary SPA, Ramsar, SSSI	0.1	0.2%	9.6	32.1%	Insignificant	1.0	1.4%	15.4	20.5%	Insignificant
E11	Burkinshaw's Covert LWS	0.2	0.7%	14.0	46.8%	Insignificant	5.8	7.7%	26.5	35.3%	Insignificant
E12	Burkinshaw's Covert LWS	0.2	0.6%	12.8	42.8%	Insignificant	7.1	9.4%	26.1	34.8%	Insignificant
E13	Chase Hill Wood LWS	0.2	0.6%	14.0	46.7%	Insignificant	5.8	7.8%	26.5	35.4%	Insignificant
E14	Chase Hill Wood LWS	0.1	0.2%	12.3	40.9%	Insignificant	1.6	2.1%	19.9	26.5%	Insignificant
E15	Scrub Lane Field LWS	0.4	1.2%	10.7	35.8%	Insignificant	7.7	10.3%	23.3	31.1%	Insignificant
E16	Swinster Lane Field LWS	0.3	1.2%	10.7	35.7%	Insignificant	7.8	10.4%	23.4	31.2%	Insignificant

Receptor ID	Designation	NOx annual mean PC (µg/m^3)	PC as % of the AQS	NOx annual mean PEC (µg/m^3)	PEC as % of the AQS	Significance	NOx daily mean PC (µg/m^3)	PC as % of the AQS	NOx daily mean PEC (µg/m^3)	PEC as % of the AQS	Significance
E17	East View Meadow LWS	0.3	0.8%	10.1	33.8%	Insignificant	6.8	9.1%	21.6	28.8%	Insignificant
E18	Halton Marsh Clay Pits LWS	0.5	1.7%	12.5	41.7%	Insignificant	10.8	14.3%	28.8	38.4%	Insignificant

Table 5-11: Assessment against annual and daily mean NO_x air quality standards, Scenario 2 - Updated 2021 Amendment – NO_x at 30mg/Nm^3

Receptor ID	Designation	NOx annual mean PC (µg/m^3)	PC as % of the AQO	NOx annual mean PEC (µg/m^3)	PEC as % of the AQO	Significance	NOx daily mean PC (µg/m^3)	PC as % of the AQO	NOx daily mean PEC (µg/m^3)	PEC as % of the AQO	Significance
E1	SPA & Ramsar Humber Estuary, SSSI North Killingholme Haven Pits, Halton Marsh Clay Pits LWS	2.2	3.0%	24.4	32.5%	Insignificant	2.2	3.0%	24.4	32.5%	Insignificant
E2	SAC Humber Estuary	6.0	8.0%	44.0	58.7%	Not screened out	6.0	8.0%	44.0	58.7%	Insignificant
E3	Kirmington Pits SSSI	0.8	1.0%	14.8	19.7%	Insignificant	0.8	1.0%	14.8	19.7%	Insignificant
E4	Kelsey Hill Gravel Pits SSSI	0.6	0.7%	14.8	19.7%	Insignificant	0.6	0.7%	14.8	19.7%	Insignificant
E5	Kelsey Hill Gravel Pits SSSI	0.5	0.7%	14.1	18.8%	Insignificant	0.5	0.7%	14.1	18.8%	Insignificant
E6	Roos Bog SSSI	0.4	0.6%	12.7	17.0%	Insignificant	0.4	0.6%	12.7	17.0%	Insignificant
E7	South Ferriby Chalk Pit SSSI	0.4	0.6%	13.1	17.5%	Insignificant	0.4	0.6%	13.1	17.5%	Insignificant
E8	Swallow Wold SSSI	0.3	0.5%	12.9	17.2%	Insignificant	0.3	0.5%	12.9	17.2%	Insignificant
E9	Wrawby Moor SSSI	0.5	0.6%	13.1	17.5%	Insignificant	0.5	0.6%	13.1	17.5%	Insignificant
E10	Humber Estuary SPA, Ramsar, SSSI	0.6	0.8%	15.0	20.0%	Insignificant	0.6	0.8%	15.0	20.0%	Insignificant
E11	Burkinshaw's Covert LWS	3.4	4.6%	24.2	32.2%	Insignificant	3.4	4.6%	24.2	32.2%	Insignificant
E12	Burkinshaw's Covert LWS	4.2	5.7%	23.2	31.0%	Insignificant	4.2	5.7%	23.2	31.0%	Insignificant
E13	Chase Hill Wood LWS	3.5	4.6%	24.2	32.3%	Insignificant	3.5	4.6%	24.2	32.3%	Insignificant
E14	Chase Hill Wood LWS	0.9	1.3%	19.3	25.7%	Insignificant	0.9	1.3%	19.3	25.7%	Insignificant
E15	Scrub Lane Field LWS	4.6	6.2%	20.2	26.9%	Insignificant	4.6	6.2%	20.2	26.9%	Insignificant
E16	Swinster Lane Field LWS	4.7	6.2%	20.2	27.0%	Insignificant	4.7	6.2%	20.2	27.0%	Insignificant
E17	East View Meadow LWS	4.1	5.4%	18.9	25.2%	Insignificant	4.1	5.4%	18.9	25.2%	Insignificant
E18	Halton Marsh Clay Pits LWS	6.5	8.6%	24.5	32.6%	Insignificant	6.5	8.6%	24.5	32.6%	Insignificant

Table 5-12: Assessment against annual and daily mean NO_x air quality standards, Scenario 3 - 2025 Change – NO_x at 50mg/m^3

Receptor ID	Designation	NOx annual mean PC (µg/m^3)	PC as % of the AQO	NOx annual mean PEC (µg/m^3)	PEC as % of the AQO	Significance	NOx daily mean PC (µg/m^3)	PC as % of the AQO	NOx daily mean PEC (µg/m^3)	PEC as % of the AQO	Significance
E1	SPA & Ramsar Humber Estuary, SSSI North Killingholme Haven Pits, Halton Marsh Clay Pits LWS	0.3	0.9%	15.0	50.1%	Insignificant	3.8	5.0%	25.9	34.6%	Insignificant
E2	SAC Humber Estuary	0.7	2.5%	26.1	87.0%	Not screened out	10.7	14.3%	48.8	65.0%	Not screened out
E3	Kirmington Pits SSSI	0.1	0.3%	9.4	31.3%	Insignificant	1.5	2.0%	15.5	20.6%	Insignificant
E4	Kelsey Hill Gravel Pits SSSI	0.2	0.6%	9.6	32.2%	Insignificant	1.1	1.5%	15.3	20.4%	Insignificant
E5	Kelsey Hill Gravel Pits SSSI	0.2	0.5%	9.2	30.7%	Insignificant	1.0	1.3%	14.6	19.4%	Insignificant
E6	Roos Bog SSSI	0.1	0.4%	8.3	27.7%	Insignificant	0.8	1.1%	13.1	17.5%	Insignificant
E7	South Ferriby Chalk Pit SSSI	0.0	0.1%	8.5	28.4%	Insignificant	0.8	1.1%	13.5	18.0%	Insignificant
E8	Swallow Wold SSSI	0.0	0.1%	8.4	28.0%	Insignificant	0.7	0.9%	13.2	17.6%	Insignificant
E9	Wrawby Moor SSSI	0.1	0.2%	8.5	28.2%	Insignificant	0.9	1.3%	13.6	18.1%	Insignificant
E10	Humber Estuary SPA, Ramsar, SSSI	0.1	0.2%	9.6	32.2%	Insignificant	1.2	1.6%	15.6	20.8%	Insignificant
E11	Burkinshaw's Covert LWS	0.2	0.8%	14.1	46.8%	Insignificant	6.2	8.3%	26.9	35.9%	Insignificant
E12	Burkinshaw's Covert LWS	0.2	0.7%	12.9	42.9%	Insignificant	8.1	10.8%	27.1	36.1%	Insignificant
E13	Chase Hill Wood LWS	0.2	0.7%	14.0	46.8%	Insignificant	6.0	8.0%	26.7	35.7%	Insignificant
E14	Chase Hill Wood LWS	0.1	0.2%	12.3	41.0%	Insignificant	1.6	2.1%	19.9	26.5%	Insignificant
E15	Scrub Lane Field LWS	0.4	1.4%	10.8	36.0%	Insignificant	8.9	11.8%	24.4	32.6%	Insignificant
E16	Swinster Lane Field LWS	0.4	1.3%	10.8	35.9%	Insignificant	9.0	12.0%	24.6	32.8%	Insignificant
E17	East View Meadow LWS	0.3	1.0%	10.2	33.9%	Insignificant	7.9	10.5%	22.7	30.2%	Insignificant
E18	Halton Marsh Clay Pits LWS	0.6	1.9%	12.6	41.9%	Insignificant	11.7	15.6%	29.7	39.7%	Not screened out

Table 5-13: Assessment against annual and daily mean NO_x air quality standards, Scenario 4 - 2025 Change – NO_x at 30mg/m^3

Receptor ID	Designation	NOx annual mean PC (µg/m^3)	PC as % of the AQO	NOx annual mean PEC (µg/m^3)	PEC as % of the AQO	Significance	NOx daily mean PC (µg/m^3)	PC as % of the AQO	NOx daily mean PEC (µg/m^3)	PEC as % of the AQO	Significance
E1	SPA & Ramsar Humber Estuary, SSSI North Killingholme Haven Pits, Halton Marsh Clay Pits LWS	0.2	0.5%	14.9	49.8%	Insignificant	2.2	3.0%	24.4	32.6%	Insignificant
E2	SAC Humber Estuary	0.4	1.5%	25.8	86.0%	Not screened out	6.4	8.6%	44.4	59.3%	Insignificant
E3	Kirmington Pits SSSI	0.0	0.2%	9.4	31.2%	Insignificant	0.9	1.2%	14.9	19.8%	Insignificant
E4	Kelsey Hill Gravel Pits SSSI	0.1	0.3%	9.6	31.9%	Insignificant	0.7	0.9%	14.9	19.8%	Insignificant
E5	Kelsey Hill Gravel Pits SSSI	0.1	0.3%	9.2	30.5%	Insignificant	0.6	0.8%	14.2	18.9%	Insignificant
E6	Roos Bog SSSI	0.1	0.2%	8.3	27.6%	Insignificant	0.5	0.7%	12.8	17.1%	Insignificant
E7	South Ferriby Chalk Pit SSSI	0.0	0.1%	8.5	28.3%	Insignificant	0.5	0.6%	13.2	17.6%	Insignificant
E8	Swallow Wold SSSI	0.0	0.1%	8.4	27.9%	Insignificant	0.4	0.5%	12.9	17.2%	Insignificant
E9	Wrawby Moor SSSI	0.0	0.1%	8.4	28.2%	Insignificant	0.6	0.8%	13.2	17.6%	Insignificant
E10	Humber Estuary SPA, Ramsar, SSSI	0.0	0.1%	9.6	32.1%	Insignificant	0.7	1.0%	15.1	20.1%	Insignificant
E11	Burkinshaw's Covert LWS	0.1	0.5%	14.0	46.5%	Insignificant	3.7	4.9%	24.4	32.6%	Insignificant
E12	Burkinshaw's Covert LWS	0.1	0.4%	12.8	42.6%	Insignificant	4.8	6.4%	23.8	31.8%	Insignificant
E13	Chase Hill Wood LWS	0.1	0.4%	13.9	46.5%	Insignificant	3.6	4.8%	24.3	32.4%	Insignificant
E14	Chase Hill Wood LWS	0.0	0.1%	12.3	40.9%	Insignificant	1.0	1.3%	19.3	25.7%	Insignificant
E15	Scrub Lane Field LWS	0.2	0.8%	10.6	35.4%	Insignificant	5.3	7.1%	20.9	27.8%	Insignificant
E16	Swinster Lane Field LWS	0.2	0.8%	10.6	35.4%	Insignificant	5.4	7.2%	21.0	27.9%	Insignificant
E17	East View Meadow LWS	0.2	0.6%	10.1	33.5%	Insignificant	4.7	6.3%	19.5	26.0%	Insignificant
E18	Halton Marsh Clay Pits LWS	0.3	1.1%	12.3	41.2%	Insignificant	7.0	9.4%	25.0	33.4%	Not screened out

Table 5-14: Comparison of Nutrient Nitrogen Deposition Results for Scenarios 2 and 4

Receptor ID	Scenario 2			Scenario 4			Difference (Sc 4- Sc 2)		
	Critical Load (kg N/ha/yr)	N dry dep	Proportion of PC to Critical Load (%)	Critical Load (kg N/ha/yr)	N dry dep (N + NH3)	Proportion of PC to Critical Load (%)	Total N dry dep (kg N/ha/yr)	Proportion of PC to Critical Load (%)	1st stage screening summary
E1	15	0.02	0.2%	15	0.03	0.2%	< 0.01	< 0.1%	Screen Out, PC <1% CL
E2	15	0.07	0.4%	15	0.08	0.5%	0.01	0.1%	Screen Out, PC <1% CL
E8	10	< 0.01	< 0.1%	10	< 0.01	0.0%	< 0.01	< 0.1%	Screen Out, PC <1% CL
E9	15	0.01	0.1%	15	0.01	0.1%	< 0.01	< 0.1%	Screen Out, PC <1% CL
E9	15	0.01	0.1%	15	0.01	0.1%	< 0.01	< 0.1%	Screen Out, PC <1% CL
E10	5	0.01	0.1%	5	0.01	0.1%	< 0.01	< 0.1%	Screen Out, PC <1% CL
E15	10	0.04	0.4%	10	0.04	0.4%	0.01	0.1%	Screen Out, PC <1% CL
E16	10	0.03	0.3%	10	0.04	0.4%	0.01	0.1%	Screen Out, PC <1% CL
E17	10	0.03	0.3%	10	0.03	0.3%	< 0.01	< 0.1%	Screen Out, PC <1% CL
E18	10	0.05	0.5%	10	0.06	0.6%	0.01	0.1%	Screen Out, PC <1% CL

A.2 Figure 9.3 included in the Environmental Statement Volume 3 – Figures from 2013 Environmental Statement

The Planning Act 2008

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

The Proposed North Killingholme (Generating Station) Order

North Killingholme Power Project

Environmental Statement
Volume 3 – Figures

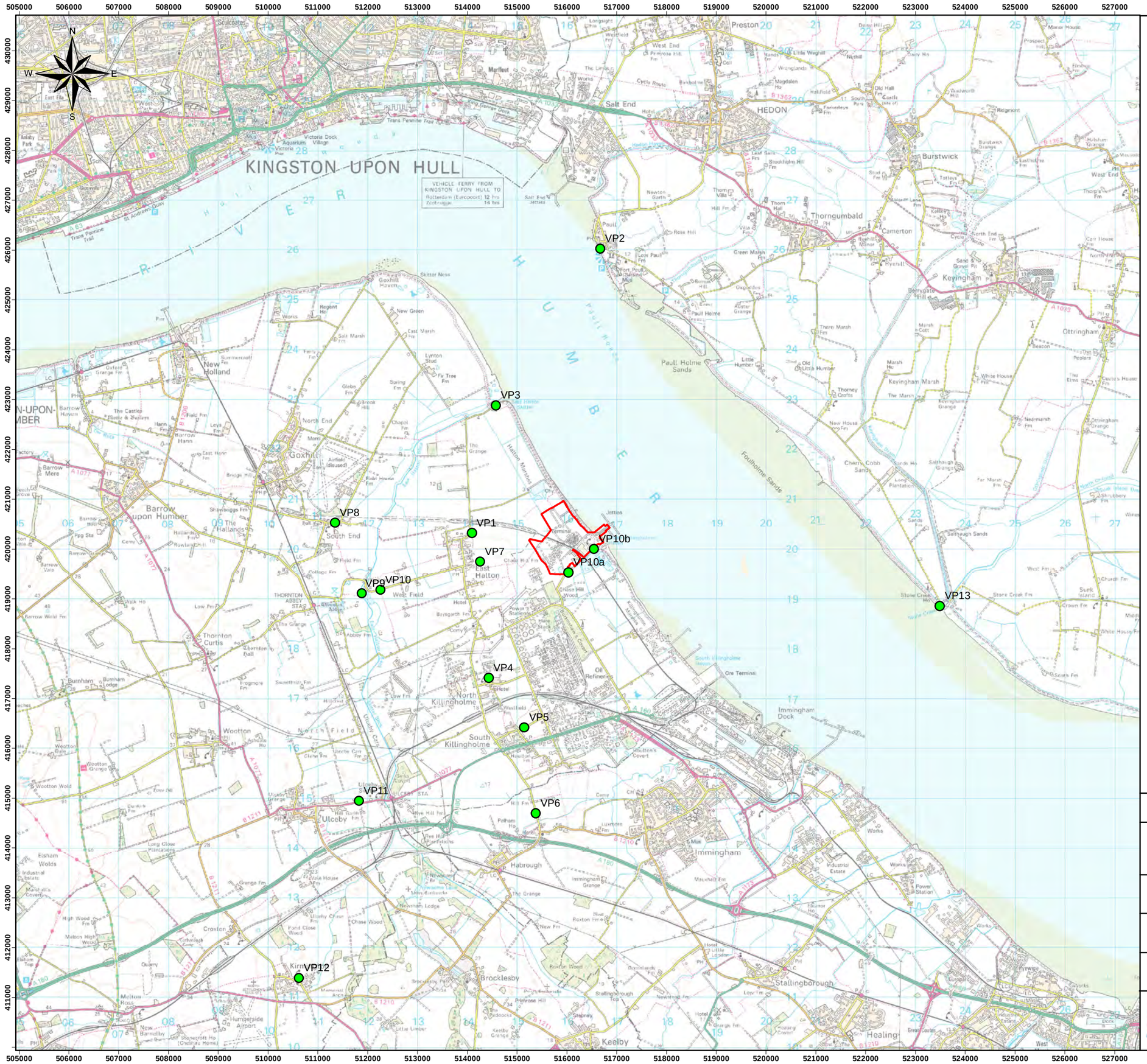
22 March 2013

Document Reference: 6.3

Author: Parsons Brinckerhoff

C.GEN Killingholme Limited

C.GEN



Legend

- Principal Project Area
- Viewpoint Location

North Killingholme Power Project

Photograph Viewpoint Locations

DOCUMENT REF:	SITE DESIGN VERSION:	DATE:
64042A-ES-54	v1	22/03/2013

BAR SCALE
NOT TO SCALE

0 0.9 1.8 2.7 3.6 Km

DRAWN BY:	CHECKED BY:	APPROVED BY:
RT	EA	CL

PARSONS BRINCKERHOFF

FIGURE 9.3