



Immingham Green Energy Terminal

TR030008

Volume 7

7.8 Equality Impact Assessment

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Immingham Green Energy Terminal

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7.8 Equality Impact Assessment

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Executive Summary

This Equality Impact Assessment (“EqIA”) forms part of an application for a development consent order (“DCO”) relating to the construction, operation and maintenance for the Immingham Green Energy Terminal (“IGET”) Project. The associated development includes the construction and operation of a green hydrogen facility for the production of green hydrogen from imported ammonia on site.

This EqIA will assist the Secretary of State’s decision-making process by demonstrating that due regard has been paid to the needs of protected characteristic groups in line with the Equality Act 2010 and the Public Sector Equality Duty (“PSED”). Demonstration of due regard is provided through the assessment of potential impacts of the Project on protected characteristic groups, which is informed by policy and legislation review, Project summary, equalities baseline, and consultation and engagement.

A baseline profile of the population living around the Site has been established to enable an assessment of the potential impacts the Project may have on groups with protected characteristics. This has been derived through the analysis of Census 2021 data and other datasets from the Office for National Statistics (“ONS”). The Protected Characteristics and socio-economic profile of the local area surrounding the Project have been presented and analysed against regional and national datasets.

The effect of the Project on this baseline is then characterised through all phases of the Project (consultation, construction, operation and decommissioning) by characterising a number of potential positive and negative effects that are likely to occur. This document concludes by summarising the positive and negative effects identified against the three aims of the PSED.

It is considered that, with continued regard to the effects on different protected characteristics and vulnerable groups, in addition to the measures already taken by the Applicant, it will be possible for negative impacts to be adequately mitigated through the mitigation set out in the ES and described further in the Schedule of Mitigation and detailed in the Outline Construction Environmental Management Plan.

1 Introduction

1.1 Purpose

- 1.1.1. This Equality Impact Assessment (“EqIA”) has been prepared by AECOM Ltd (“AECOM”) on behalf of Associated British Ports (“ABP”) (“The Applicant”). It supports an application for a Development Consent Order (“DCO”) (“the Application”) for the construction, operation, and maintenance of a multi-user green energy terminal, which would be located on the eastern side of the Port of Immingham (hereafter “the Port”), as well as associated development (collectively termed “the Project”). A part of the associated development is the construction and operation of a green hydrogen production facility for the production of green hydrogen from imported ammonia on site by Air Products BR Ltd (“Air Products”).
- 1.1.2. The Project constitutes a Nationally Significant Infrastructure Project (“NSIP”) and therefore requires an application for a DCO to be submitted to the Planning Inspectorate for determination by the Secretary of State for Transport (“Secretary of State”). The Secretary of State is a public authority to which the PSED applies, as prescribed in Schedule 18 of the Equality Act 2010 (Ref 1-7).
- 1.1.3. While an EqIA is not expressly prescribed for all applications under the Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009 (as amended) (the “APFP Regulations”), nor is an EqIA a necessary component of the obligation to have “due regard” imposed under the Equality Act, Regulation 5(q) of the APFP Regulations provides for the inclusion of “*any other documents considered necessary to support the application*” and an EqIA provides a means of systematically assessing and analysing the equality impacts of the Application. This EqIA is being submitted as part of a range of supplementary documents that support the Application.
- 1.1.4. This EqIA demonstrates the Applicant’s commitment to take into account the interests of people who share protected characteristics¹. This EqIA will assist the Secretary of State’s decision-making process by demonstrating that due regard has been paid to the needs of protected characteristic groups in line with the Equality Act 2010² (Ref 1-7) and the PSED. Demonstration of due regard is provided through the assessment of potential impacts of the Project on protected characteristic groups, which is informed by policy and legislation review, Project summary, equalities baseline, and consultation and engagement.
- 1.1.5. An EqIA is a systematic assessment of the effects of plans, policies, or proposals on groups with protected characteristics as defined by the Equality Act 2010 and outlined under **Section 2.3.1**. This EqIA provides a consideration of potential direct and indirect equality impacts (both adverse and beneficial) associated with the construction, operational, and decommissioning phases of the Project – all

¹ As defined by the Equality Act 2010, these protected characteristics are: age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation (and, in some instances, marriage or civil partnership status).

² The requirements of the Equality Act and Public Sector Equality duty are fully explained in Section 3.

references to the construction impacts are in relation to Phase 1 of the Project, as this will involve the highest intensity of impacts that may be experienced by communities, including protected characteristic groups. The EqIA also addresses the process of obtaining the DCO itself through review of consultation and engagement activities taken place during the pre-application consultation stages, outlined in **Section 6**. This review provides the information the Secretary of State requires to determine that the needs of protected characteristic groups impacted by the Project have been considered. The positive equality effects of the consultation and engagement activities are detailed in **Section 7**.

- 1.1.6. The approach draws on evidence from the Environmental Statement (“ES”) **[TR030008/APP/6.2]**, secondary data sources, as well as feedback from consultation and engagement processes and information from construction planning undertaken for the Project.

1.2 Context

- 1.2.1 The Site is located in North East Lincolnshire on the south bank of the Humber Estuary to the east of the Port. The landside works fall within the administrative boundary of the North East Lincolnshire Council (“NELC”). The marine-side works that extend seaward and fall beyond the local authority’s boundary will take place on the bed of the Humber Estuary. The Project would comprise the alteration of a harbour facility for the construction, operation, and maintenance of a multi-user green energy terminal to facilitate the import and export of liquid bulks associated with the energy sector. The terminal would consist of a jetty and associated loading and unloading infrastructure and pipelines. Initially, the terminal would be used for the import and export of green ammonia to be converted to green hydrogen. To facilitate this, a hydrogen production facility, composed of associated ammonia handling equipment, storage and processing units, would be constructed as part of the “Associated Development” element of the Project. Other proposed users of the green energy terminal will come forward in due course and separate applications submitted as required.
- 1.2.2 The need for the Project arises from the need identified by the Government to deliver new port infrastructure to provide capacity, competition and resilience in the sector. In the National Policy Statement for Ports (“NPSfP”) (Ref 1-3), ports are seen as essential in the process of industrial decarbonisation through the provision of enabling infrastructure for the energy sector, allowing the technologies and measures needed for a transition to net zero to be deployed.

- 1.2.3 There is a growing need to develop green hydrogen capacity in the UK. While some of this is being facilitated through UK production, the opportunity exists to import green hydrogen from other countries where surplus renewable energy can be harnessed. The safest and most appropriate way to transport hydrogen is in the form of ammonia. As shipping will continue to provide the most effective way to move ammonia in and out of the UK, sufficient port and landside infrastructure is required for its subsequent storage and processing to convert it to hydrogen. There is also a need to develop carbon capture and storage infrastructure. The Project seeks to provide necessary marine infrastructure for anticipated future carbon dioxide (CO₂) movements, including imported CO₂ from industrial processes to feed into emerging CO₂ transport and storage networks.
- 1.2.4 The provision of the port infrastructure, both landside and within the marine area, can therefore be seen as necessary to meet the changing demands from the energy sector, which in turn will help decarbonise UK's industrial activities, particularly within the Humber Industrial Cluster and the Humber Industrial Zone which emit substantial quantities of CO₂, and in the heavy transport sector. Both will assist in the UK's transition towards net zero.
- 1.2.5 New port infrastructure and the hydrogen production facility would make use of available land, water, transport, and utility connections which exist in and around the Port. The construction, operation and decommissioning of the Project has the potential to impact both the environment and the lives of local residents, including those with protected characteristics.
- 1.2.6 A detailed explanation of need for and objectives of the Project are included within **Chapter 3: Need and Alternatives** of the ES [TR030008/APP/6.2].
- 1.3 **Report Structure**
- 1.3.1 Following on from this introduction section, the remainder of this report is structured as follows:
- a. **Section 2: Methodology** – sets out the approach to collecting evidence and the assessment of impacts.
 - b. **Section 3: Policy and legislation review** – provides context through the review of relevant national, regional and local policy and legislation associated with equalities, planning, energy and other relevant topics.
 - c. **Section 4: Summary of the Project** – provides an overview of the Project.
 - d. **Section 5: Equalities baseline** – uses secondary data sources, such as Census 2021 data, to form an understanding of residents living within the area
 - e. **Section 6: Consultation and engagement activities** – provides an overview of consultation and engagement activities undertaken thus far, including key responses from affected stakeholders;
 - f. **Section 7: Assessment of potential equality effects** – provides an assessment of impacts and equality effects of the Project using the evidence gathered; and

- g. **Section 8: Conclusions and next steps** – provides conclusions of the equality assessment and the due regard had by the Applicant to the PSED. This section also contains continued actions recommended for enhancing positive equality effects and minimising potential negative effects based on available evidence to date. As the Project progresses, this EqIA may be further reviewed and revised as necessary.

2 Methodology

2.1 Introduction

2.1.1 This section sets out the approach to assessing the equality impacts of the Project. The assessment considers potential direct and indirect equality impacts (both adverse and beneficial) arising as part of the pre-application consultation stage of the Application together with the potential direct and indirect (adverse and beneficial) equality impacts associated with the construction, operational and decommissioning phases of the Project itself.

2.1.2 The approach for undertaking this EqIA and compiling this report follows a three-stage process as follows:

- a. Desk-based review: including review of relevant national, regional and local policies and legislation documents relevant to the Project and secondary datasets relating to groups with protected characteristics.
- b. Appraisal of potential impacts: informed by a consideration of the policy context, consultation responses, equalities baseline data.
- c. Providing conclusions for this stage of assessment. Equalities impacts will continue to be considered by the Project team in line with the ongoing nature of the PSED.

2.1.3 The approach is based on AECOM's understanding of the Equality Act 2010 (Ref 1-7), particularly Section 149 regarding the PSED, and supporting technical guidance produced by the Equality and Human Rights Commission ("EHRC") (Ref 1-28) as well as AECOM's in-house approach to conducting EqIAs.

2.2 Desk-Based Review

2.2.1 In addition to a review of recent relevant national, regional and local policies and legislation, the desk-based review included the following:

- a. Review of all relevant documentation regarding the Application including design information, relevant assessment work and mitigation and management plans.
- b. Review of national and local datasets to develop an equalities baseline profile of groups with protected characteristics within and surrounding the Site (defined in **Section 4.1**) including Census 2021 data.
- c. Review of the consultation and engagement activities to date in relation to the development undertaken by the Applicant (and consultants working on their behalf such as the land agents, Gateley Hamer) to identify any issues of relevance to this EqIA.

2.3 Assessment of Impacts

2.3.1 The assessment of equality impacts takes into account the information gathered via the above activities. A professional judgement has been made as to how the Project may affect people with protected characteristics as defined in section 4 of the Equality Act 2010 (Ref 1-7). These protected characteristics are:

- a. **Age:** this refers to persons defined by either a particular age or a range of ages. This can include children (aged under 16), young people (aged 16-25), older people or pensioners (i.e. those aged 65+) and the elderly/very old (i.e. those aged 85+).
- b. **Disability:** a disabled person is defined as someone who has a physical or mental impairment that has a substantial and long-term adverse effect on their ability to undertake normal day-to-day activities. It can also include people who have progressive conditions such as human immunodeficiency virus (HIV), cancer, or multiple sclerosis (MS), even where someone is able to undertake day to day activities.
- c. **Gender reassignment:** this refers to people who are proposing to undergo, are undergoing, or have undergone a process for the purpose of reassigning their gender identity.
- d. **Marriage and civil partnership:** marriage or civil partnership can be between a man and a woman or between two people of the same sex.
- e. **Pregnancy and maternity:** pregnancy is the condition of being pregnant or expecting a baby. Maternity refers to the period after the birth. In the non-work context, protection against maternity discrimination is for 26 weeks after giving birth.
- f. **Race:** the Equality Act 2010 defines race as encompassing colour, nationality (including citizenship) and ethnic or national origins.
- g. **Religion or belief:** religion means any religion a person follows. Belief means any religious or philosophical belief, and includes those people who have no formal religion or belief.
- h. **Sex:** this refers to a man or to a woman or a group of people of the same sex, while gender refers to the wider social roles and relationships that structure men's and women's, boys' and girls' lives.
- i. **Sexual orientation:** a person's sexual orientation relates to their emotional, physical and/or sexual attraction and the expression of that attraction.

2.3.2 Although income is not classed as a protected characteristic under the Equality Act 2010 (Ref 1-7), this assessment also considers equality implications in relation to deprivation.

- 2.3.3 This assessment considers both disproportionate and differential effects on groups with protected characteristics. A disproportionate equality effect arises when an impact has a proportionately greater effect on protected characteristic groups than on the general population overall at a particular location. For the purposes of this assessment, disproportionality arises:
- Where an impact is predicted for the study area and protected characteristic groups are known to make up a greater proportion of the affected resident population than their representation in north east Lincolnshire or England.
 - Where an impact is predicted on a community resource which is predominantly or heavily used by protected characteristic groups (e.g. primary schools attended by children; care homes catering for elderly people).
- 2.3.4 A differential equality effect is one which affects members of a protected characteristic group differently from the rest of the general population because of specific needs, or a recognised vulnerability associated with their protected characteristic.
- 2.3.5 In some cases, protected characteristic groups are subject to both disproportionate and differential equality effects. The EqIA considers effects on groups of people and not those on specific individuals.
- 2.3.6 The criteria used to determine disproportionate or differential effects with respect to protected characteristics groups include where:
- People who share a protected characteristic form a disproportionately large number of those adversely affected by the proposals.
 - Amongst the population affected by the proposals, people who share protected characteristics are particularly vulnerable or sensitive to a possible effect in relation to their possessing a specific protected characteristic.
 - The proposals may either worsen or improve existing disadvantage (e.g. housing deprivation or economic disadvantage) affecting people who share a protected characteristic.
 - People with shared protected characteristics amongst the affected population may not have an equal share in the benefits arising from the proposals. This can be either due to direct or indirect discrimination or where the groups experience particular barriers to realising such benefits, unless suitable mitigation measures are proposed to overcome those barriers.
 - The proposals may worsen existing community cohesion amongst the affected local population or exacerbate conflicts with community cohesion policy objectives.
- 2.3.7 This approach allows for completion of an assessment of qualitative positive or negative equality effects, although significance is not assigned. **Section 7.6** and **Table 7-2** provide a summary of effects including steps being taken to mitigate adverse equality effects to demonstrate where due regard has been paid to the needs of the groups impacted.

2.4 Conclusion and Next Steps

- 2.4.1 **Section 8** of this report sets out a summary of the Project's potential equality effects, and proposed mitigation measures (according to the **Schedule of Mitigation and Monitoring [TR030008/APP/7.2]**) in relation to the three aims of the PSED (detailed in **Section 8.1**) and a conclusion on the key potential negative effects of the Project.

3 Policy and Legislative Context

3.1 Legislation

Equality Act 2010 and the Public Sector Equality Duty (PSED)

- 3.1.1 The Equality Act 2010 (Ref 1-7) provides the framework to protect the rights of individuals against unlawful discrimination and to advance equal opportunities for all. Section 149 of the Equality Act sets out the PSED to which the Secretary of State, as a public body, is subject in undertaking all its functions, including decision-making in the DCO process.
- 3.1.2 Those subject to the PSED must, in the exercise of their functions, have due regard to the need to:
- Eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Equality Act 2010;
 - Advance equality of opportunity between people who share a protected characteristic and those who do not; and
 - Foster good relations between people who share a protected characteristic and those who do not.
- 3.1.3 These are sometimes referred to as the three aims or arms of the PSED. Section 149(3) of the Equality Act 2010 (Ref 1-7) explains that having due regard for advancing equality involves:
- Removing or minimising disadvantages suffered by people due to their protected characteristics;
 - Taking steps to meet the needs of people from protected groups where these are different from the needs of other people; and
 - Encouraging people from protected characteristics groups to participate in public life or in other activities where their participation is disproportionately low.
- 3.1.4 The Equality Act 2010 states that meeting different needs involves taking steps to take account of disabled people's disabilities (s149(4)). It describes fostering good relations as tackling prejudice and promoting understanding between people from different groups (s149(5)). It states that compliance with the duty may involve treating some people more favourably than others (s149(6)).
- 3.1.5 The PSED applies fully to the following eight protected characteristics: age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex, and sexual orientation as described in **Section 2.3**.

- 3.1.6 While marriage and civil partnership is a protected characteristic under the Equality Act, it is not covered by the PSED in relation to its aims of advancing equality of opportunity and fostering good relations. This means that it is unlawful to discriminate, harass or victimise someone due to their marriage or civil partnership status, however public authorities do not have to have due regard to the matters set out at **Paragraph 3.1.3** above in relation to this protected characteristic.

Human Rights Act 1998

- 3.1.7 The Human Rights Act 1998 (the “HRA”) (Ref 1-59) implements into domestic English law Articles and Protocols of the European Convention on Human Rights (the “Convention”) to the extent specified in Schedule 1 of the HRA. The following Articles of the Convention are relevant to the Secretary of State’s decision to include powers of compulsory acquisition and are considered in more detail in Section 8 of the **Statement of Reasons [TR030008/APP/3.2]**.
- 3.1.8 Article 1 of the First Protocol to the Convention provides that no one can be deprived of their possessions except in public interest and subject to the relevant national and international laws and principals.
- 3.1.9 Article 8 protects private and family life, home, and correspondence. No public authority can interfere with these rights except in accordance with the law, and so far, as is necessary in the interest of national security, public safety or the economic wellbeing of the country.

Planning Act 2008

- 3.1.10 The Planning Act 2008 (“the 2008 Act”) (Ref 1-56) establishes a legal framework for applying for, examining, and determining DCO applications for NSIPs. It sets out the requirement for obtaining development consent as well as thresholds for classifying projects as nationally significant. Under the 2008 Act (Ref 1-56), the development consent may be granted only if an application is made for it, with the APFP Regulations (Ref 1-58) further setting out application requirements.
- 3.1.11 Section 104 of the 2008 Act requires the Secretary of State, when determining DCOs, to have regard to the provisions of National Policy Statements (“NPSs”) where relevant. NPSs are produced by the UK Government and comprise the Government's objectives for the development of NSIPs.
- 3.1.12 The 2008 Act (Ref 1-56) does not contain any specific guidance relating to protected characteristics and equalities, but it does include a duty to consult with the local community as a part of the DCO application process.

3.2 National Policy

National Planning Policy Framework (July 2021)

- 3.2.1 The National Planning Policy Framework (“NPPF”) (Ref 1-1) was originally published in March 2012, with revisions in July 2018, February 2019 and most recently in July 2021. The NPPF identifies three overarching objectives of the planning system, being economic, social and environmental objectives. While the NPPF does not contain specific guidance on protected characteristics or equality effects, it does emphasise the importance of sustainable development and the need to support a healthy and just society.
- 3.2.2 Paragraph 5 of the NPPF states that whilst it does not contain specific policies for NSIPs, it may be considered as 'important and relevant' in the decision-making process in accordance with s104 of the 2008 Act (Ref 1-56). It sets out the Government's planning policies for England and how they should be applied. At the heart of the NPPF is a presumption in favour of sustainable development and to deliver this, the framework sets out the Government's economic, environmental, and social planning policies for England and how these should be applied.
- 3.2.3 The NPPF identifies key principles that local planning authorities should ensure that they consider, including:
- a. Local strategies to improve health, social and cultural wellbeing for all.
 - b. The delivery of sufficient community and cultural facilities and services to meet local needs.
 - c. The requirement to plan for the needs of different groups within communities, including how the size, type and tenure of housing should be assessed and reflected in planning policies.
- 3.2.4 Section 5 of the NPPF outlines how planning policy should deliver a sufficient supply of homes that meets the needs of groups with specific housing requirements. Local housing need assessments should inform the minimum number of homes needed and the size, type and tenure of housing should be assessed and reflected in local planning policies to accommodate different groups in the community, such as those who require affordable housing, families with children, older people and disabled people.
- 3.2.5 The Department for Levelling Up, Housing and Communities consulted on proposed changes to the NPPF between 22 December 2022 and 2 March 2023. It is expected that a new NPPF will be published in due course, but no substantive changes to the above provisions were proposed in the draft NPPF as part of the consultation process (Ref 1-54).

3.3 Local Policy

3.3.1 Details of the key legislation and policies as they pertain to the Project are included in **Chapter 4: Legislative and Consenting Framework**, **Chapter 23: Socio-Economics [TR030008/APP/6.2]**, and the **Planning Statement [TR030008/APP/7.1]**. The following information from local policies is relevant to equalities.

North East Lincolnshire Local Plan

3.3.2 The Local Plan (Ref 1-6) was adopted in 2018 by NELC and sets out regional development objectives for 2013-2032. It provides a framework for guiding future growth and protection of environmental assets while considering and meeting the needs of the local community. The Local Plan covers several aspects, including housing, employment, transport, infrastructure and the environment. Significant focus is put on the promotion of sustainable development in order to balance economic growth and environmental considerations.

3.3.3 The Local Plan outlines the strategic vision to foster economic growth, attract investment and create employment opportunities, as well as key areas for development, including industrial zones. By encouraging the development of renewable energy, advanced manufacturing and logistics industries, NELC aims to diversify the local economy. Between 2013 and 2032, the Plan aims to help to deliver 8,800 new jobs, with considerable proportion focused on ports and logistics, chemicals and renewable energy, which are considered some of the key economic sectors.

3.3.4 The Local Plan emphasises the importance of ensuring existing Public Rights of Way (“PRoW”) are kept open and minimal disruptions to PRoW are made during the construction process: *‘Proposals that would result in the loss or reduction in quality or existing Public Rights of Way (PRoW) will not be permitted unless acceptable equivalent alternative provision is made. Where diversions are proposed, these should be convenient and attractive to users and not increase disturbance on protected wildlife sites.’*

North East Lincolnshire Council Equality Objectives 2021

3.3.5 NELC adopted a number of equality objectives in 2021 (Ref 1-5) which inform their approach to how they deliver their council services. The objectives help the Council to:

- a. Work with communities to ensure they are involved in decision-making;
- b. Oppose all forms of prejudice and discrimination;
- c. Provide equal access to jobs at all levels of the Council;
- d. Make sure their employment policies and practices do not discriminate;
- e. Promote diversity and tolerance; and
- f. Prevent harassment and victimisation of residents, service users and employees.

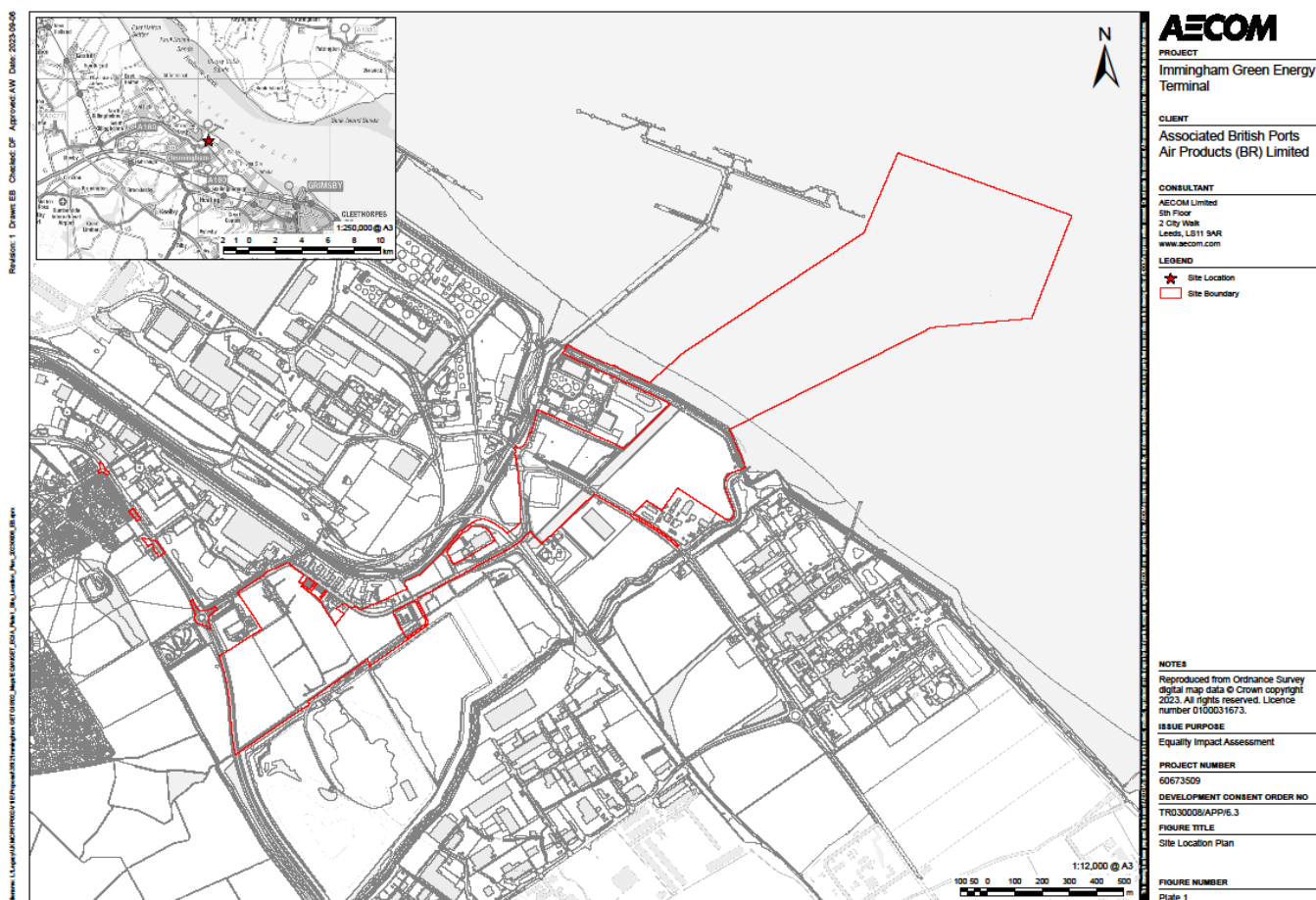
- 3.3.6 As the Project would create a high number of jobs through construction and operation, the following objective is relevant to the creation of a social value or employment plan for the Project: *“We will work with partners to ensure there are effective pathways into education, training and employment (including apprenticeships) to enable young people to fulfil their ambitions. We will continue to work with schools and partner organisations from early years onwards, to ensure children have a great start in life and to close attainment gaps for disadvantaged pupils and children with Special Educational Needs and Disabilities (“SEND”)”* (Ref 1-5).

4 Summary of the Project

4.1 Current Site and the Surrounding Area

- 4.1.1 The Site is situated to the east of the Port and largely outside of the operational area of the Port – refer to **Plate 4-1**. The Site is located within North East Lincolnshire on the south bank of the Humber Estuary. The Port is owned and operated by ABP, and together with other ports on the Humber (Grimsby, Hull, and Goole), Immingham is part of the UK’s leading port complex. Whilst the town of Immingham is the closest urban area, located approximately 460m to the west of the Site, the town of Grimsby is situated approximately 5km to the South East.
- 4.1.2 The landside works fall within the administrative boundary of NELC and the town of Immingham, whilst the marine side is situated in the bed of Humber Estuary owned by the Crown Estate, and over which ABP has a long lease. The marine-side area falls within the boundaries of the Humber European Marine Site (“EMS”).

Plate 4-1: Site location plan



- 4.1.3 The area surrounding the Port has significant industrial presence and is relatively sparsely populated. The nearest residential properties sit within the boundaries of the town of Immingham and are located on the west side of the Site, along the western side of Queens Road. This area includes a cluster of commercial, residential and mixed use properties (the residential comprises terraced properties at 1-5, flats at 6 (upper and lower floors), 7/8 (upper floor) and 18 (upper floor) and a detached dwelling at 31 Queens Road). Endeavours are being made to acquire the residential and part residential properties by agreement, as their continued residential use is not compatible with the operation of the hydrogen production facility, and at present one residential property has been acquired, other acquisitions are underway, and negotiations continue with other owners. Powers to acquire the properties are included in the **draft DCO [TR030008/APP/2.1]**. Additionally, a number of residential properties are located approximately 460-500m to the west of the Site Boundary, located on the eastern side of the Immingham urban area, but outside the Project limits.
- 4.1.4 There is a collection of nine businesses within the vicinity of the Site, situated on Queens Road and Mauxhall Farm off Stallingborough Road, located approximately 1km south-west of the West Site (refer to **Section 4.2**).
- 4.1.5 The main proposed temporary construction area within the Site covers an area of approximately 3 hectares (ha) and is located east of Laporte Road and is currently used for agricultural purposes. This area is intended to be temporarily leased from the landowners for the construction period (powers to use the land temporarily are included in the **draft DCO [TR030008/APP/2.1]**).
- 4.1.6 There is a narrow woodland belt situated between East Site and the temporary construction area, through which Public Bridleway 36 connects users to a coastal access path that follows the River Humber eastwards to Grimsby. As detailed in the **Stopping Up and Restriction of Use of Streets and Public Rights of Way Plan [TR030008/APP/4.7]**, it is proposed that the bridleway would be temporarily diverted between the points BA and BB during the construction phase and following construction, be reinstated.

4.2 Proposed Project

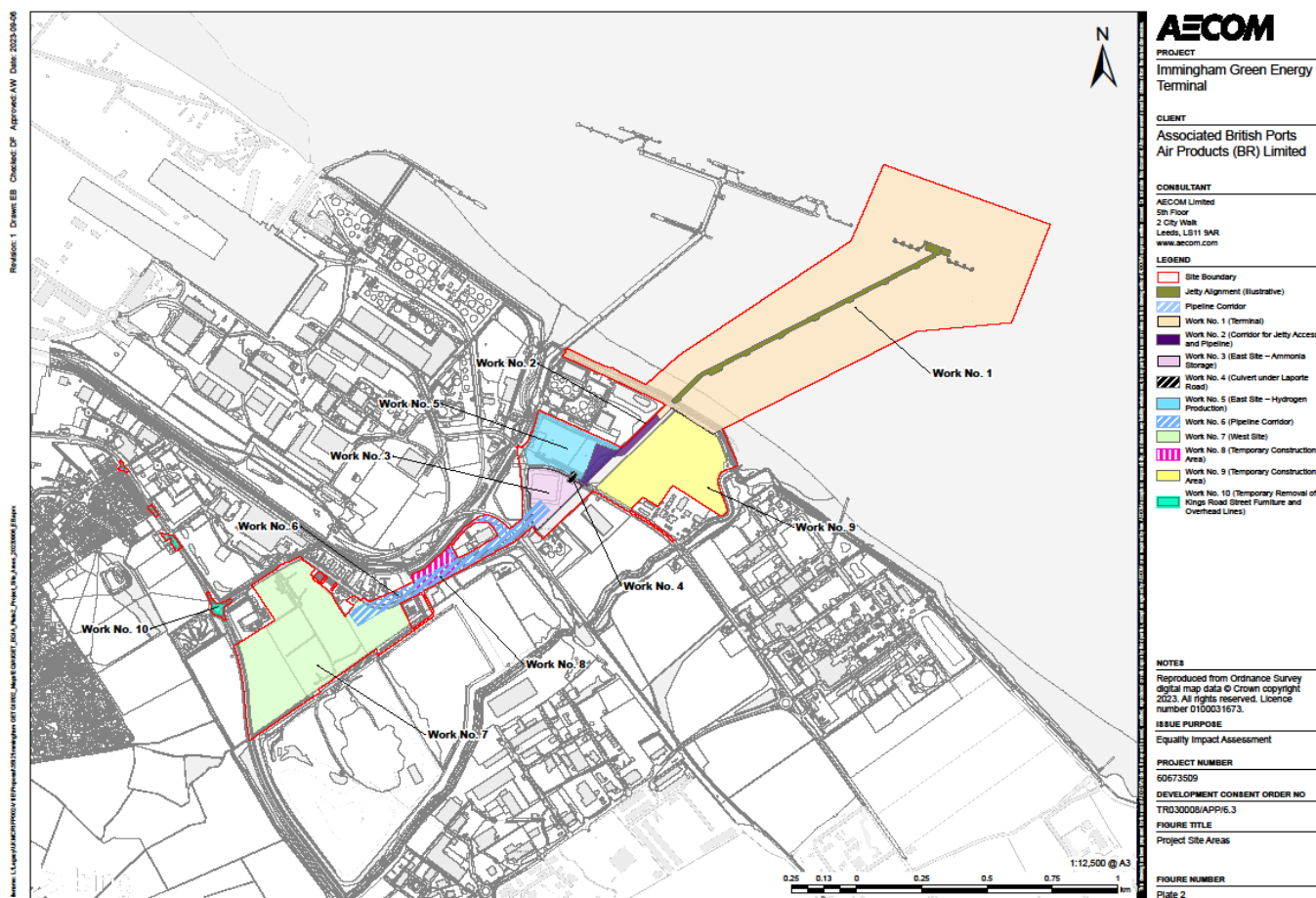
4.2.1 The Project in its entirety covers an area of approximately 121ha.

4.2.2 As seen in **Plate 4-2**, Project consists of the following components:

- a. Terminal comprising a jetty, topside infrastructure and related landside infrastructure including access ramps (Work No.1);
- b. A corridor between the jetty and Laporte Road to support a jetty access road, pipe-racks supporting the ammonia import pipeline to the East Site and other utilities with the potential to support future pipelines including CO₂ (Work No.2);
- c. East Site on which ammonia storage and hydrogen production would be undertaken (Work No. 3, 4 and 5);

- d. Pipeline and Utility Corridors between the East and West Sites for the transfer of ammonia, hydrogen, nitrogen and utilities (Work No. 6);
- e. West Site, where hydrogen production, hydrogen liquefaction, storage and loading would be undertaken (Work No. 7);
- f. Temporary Construction Areas for laydown and construction compounds (one off Queens Road (Work No. 8) and one north of Laporte Road (Work No. 9); and
- g. Four areas on Kings Road to enable the temporary modification of overhead cables and temporary remove of signage, lampposts and street furniture (Work No. 10).

Plate 4-2: Project site areas



4.2.3 The proposed terminal extends seaward into the Humber Estuary and the Site is located to the east of the existing Immingham Oil Terminal jetty.

- 4.2.4 The East Site, comprising two pieces of land bisected by Laporte Road, consists of an area of hardstanding which is used by ABP as a storage area to the north, as well as a brownfield land area to the south, accessed via Queens Road. The Associated Petroleum Terminals works complex is situated to the north and north east of the East Site, whilst to the south are various industrial complexes. To the west and north west is the Port with the Immingham Dock East Gate entry point accessible from Queens Road.
- 4.2.5 The West Site is formed by three former agricultural fields; its northern boundary is defined by Kings Road, with an electrical sub-station situated to the north west. Queens Road runs along the eastern boundary with residential and commercial properties within and adjacent to the Site. A tarmac road has been constructed from Kings Road into the West Site.
- 4.2.6 The proposed underground Pipeline Corridor connects the East Site to the West Site and extends to the terminal. The area it crosses along Queens Road, Laporte Road and Grimsby Docks Branch Line has already been impacted by industrial development. The jetty access road corridor which links the proposed terminal to the East Site runs through a section of woodland located between Laporte Road and the Humber Estuary.
- 4.2.7 A detailed description of the Project is provided **Chapter 2: The Project** of the ES [TR030008/APP/6.2].
- 4.3 Construction Phases
- 4.3.1 Construction of the Project would be phased, subject to consent being granted for the Application. The construction of the terminal, as well as the first phase of the hydrogen production facility, is expected to start early 2025 and last between two and a half and three years. Following completion of the first phase, a further five phases of the hydrogen production facility would be constructed incrementally to increase the processing capacity. Further details of the Project construction stages are detailed **Chapter 2: The Project** of the ES [TR030008/APP/6.2].

Table 4-1: Anticipated Project components within each phase and area

Phase	Jetty	Pipeline Area	East Site	West Site
Phase 1 Construction: Y1 – Y3	Jetty structure and Jetty topside infrastructure	NH ₃ pipeline from the jetty Jetty access road H ₂ , NH ₃ and Natural Gas pipelines between the East and the West Site	NH ₃ tank Internal access roads, drainage and utilities Temporary construction area	Two hydrogen production units One liquefier Tanker loading bays Trailer filling station Control room and workshop building Other supporting building and facilities

Phase	Jetty	Pipeline Area	East Site	West Site
		Utilities and cabling to the East and West Sites		as listed in ES Chapter 2: The Project [TR030008/APP/6.2] . Internal access roads, drainage and utilities
Phase 2 Construction: Y4 – Y5 (TBC)	-	-	-	One hydrogen production unit One liquefier Hydrogen Refuelling Station and compressor
Phase 3 Construction: Y6 – Y7 (TBC)	-	-	One hydrogen production unit	One liquefier
Phase 4 Construction: Y8 – Y9 (TBC)	-	-	-	One liquefier
Phase 5 Construction: Y9 – Y10 (TBC)	-	-	One hydrogen production unit	-
Phase 6 Construction: Y10 – Y11 (TBC)	-	-	One hydrogen production unit	-

5 Equalities Baseline

5.1 Introduction

5.1.1 A baseline profile of the population living around the Site is necessary to enable an assessment of the potential impacts the Project may have on groups with protected characteristics.

5.1.2 This section outlines the equalities baseline relevant to the Project. This includes analysis of Census 2021 data and other datasets from the Office for National Statistics (“ONS”). Where possible, the most recently available data is presented at five geographical levels that define the relevant study area. These are, in increasing size:

- a. North East Lincolnshire Lower Super Output Area (LSOA³ 001A, E01013174) (the “Project LSOA”) which the Project Site is located within;
- b. the North East Lincolnshire Medium Super Output Area (MSOA⁴ 001, E02002726) (the “Project MSOA”) which covers the town of Immingham and the majority of local residents;
- c. North East Lincolnshire County;
- d. Yorkshire and the Humber region which provides a wider regional context; and
- e. England, to provide the fuller national context.

5.2 Protected Characteristics

5.2.1 According to the most recent data available (from 2021), the Project LSOA is home to 1,521 people, while the Project MSOA is inhabited by 10,360 people. As detailed in **Table 5-1** both geographies show a population decrease between 2001 and 2021 (by 7% and 2% respectively). While the population of North East Lincolnshire County also decreased (by 1%) over the same period, Yorkshire and the Humber and England experienced significant population growth.

³ ONS (2021) Census 2021 geographies.

“Lower Super Output Areas (LSOAs) are made up of groups, usually four or five, of Output Areas which are the lowest geographical area for census statistics. LSOAs comprise between 400 and 1,200 households and have a usually resident population between 1,000 and 3,000 persons.”

⁴ ONS (2021) Census 2021 geographies.

“Middle layer Super Output Areas (MSOAs) are made up of groups of LSOAs, usually four or five. They comprise between 2,000 and 6,000 households and have a usually resident population between 5,000 and 15,000 persons.”

Table 5-1: Population size and change (%) by geographical area from 2001 to 2021 (Ref 1-8)

Year	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
2001	1,636	10,609	157,979	4,964,833	52,041,916
2011	1,462	10,273	159,616	5,283,733	56,075,912
2021	1,521	10,360	156,966	5,480,774	59,597,542
% Change	-7%	-2%	-1%	+10%	+15%

Age

5.2.2 **Table 5-2** provides the population age breakdown in 2021 across the five defined geographical areas. The Project LSOA has a significantly higher population of children aged 0-15 (31.6%) when compared to the other four geographical areas. At the same time, the proportion of elderly people aged 65 and over in the Project LSOA is low (7.7%), compared to 22.1% in the Project MSOA, 21% in North East Lincolnshire County, 18.7% in Yorkshire and the Humber and 19.1% in England.

Table 5-2: Age breakdown (%) by geographical area, 2020 and 2021 (Ref 1-9, Ref 1-22)

Age range (years)		Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
2021	0-15	26.4	18.5	18.8%	18.6	18.6
	16-64	65.6	59.5	60.3	62.4	62.3
	65 and over	8.0	22.0	20.9%	18.7	19.1
2020	0-15	31.6	19.5	19.4	19.0	19.2
	16-64	60.7	58.4	62.1	62.1	62.3
	65 and over	7.7	22.1	18.9	18.9	18.5

5.2.3 The proportion of children has decreased slightly both at the Project LSOA and Project MSOA level between 2020 and 2021, decreasing from 31.6% to 26.4% in the Project LSOA and 19.5% to 18.5% in the Project MSOA. This is consistent with county-level, regional and national trends, as shown in **Table 5-2**.

5.2.4 ONS estimates that by 2040, the proportion of the population who are children in North East Lincolnshire County will decrease by 3%, while the population aged 65 and over is estimated to increase by 26%. By comparison, the proportion of the population who are children is expected to increase by 5% in the wider Yorkshire and the Humber region and by 6% nationally, and the population aged 65 and over will also increase, by 25% and 28% respectively (Ref 1-11).

Disability

5.2.5 The 2021 Census shows that 21.9% of the Project LSOA population and 21.3% at the Project MSOA level have a disability that limits their day-to-day activities, compared to North East Lincolnshire County, Yorkshire and the Humber and England which are lower at 20.4%, 18.6% and 17.5% respectively – refer to **Table 5-3**.

Table 5-3: Limiting long-term illness or disability (%) by geographical area, 2021 (Ref 1-12)

Level of disability	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
Day-to-day activities limited a lot	9.1	9.9	9.2	8.1	7.5
Day-to-day activities limited a little	12.8	11.4	11.2	10.5	10.0
Long-term physical or mental health conditions but day-to-day activities not limited	5.5	6.7	6.5	6.9	6.8
No long-term physical or mental health conditions	72.5	71.9	73.1	74.4	75.7

Gender reassignment

5.2.6 Until the 2021 Census, there were no official statistics relating to gender reassignment; the data collected was only relating to sex (gender assigned at birth). The 2021 Census included the optional question “Is the gender you identify with the same as your sex registered at birth?”, for which the findings are presented at the national, regional and county-level geographies in **Table 5-4**.

5.2.7 Of those who responded, the majority (94.2%) of North East Lincolnshire County’s population identified with the same gender as their sex registered at birth, while 0.2% identified with a different gender. Similarly, in Yorkshire and the Humber 93.6% of the population identified with their gender assigned at birth, while 0.2% identified with an alternative gender.

Table 5-4: Gender identity (%) in North East Lincolnshire County, Yorkshire and the Humber and England, 2021 (Ref 1-13)

Gender identity	North East Lincolnshire County	Yorkshire and The Humber	England
Gender identity the same as sex registered at birth	94.2	93.6	93.5
Gender identity different from sex registered at birth but no specific identity given	0.2	0.2	0.2
Trans woman	0.1	0.1	0.1
Trans man	0.1	0.1	0.1
Non-binary	0.0	0.1	0.1
All other gender identities	0.0	0.0	0.0
Not answered	5.3	5.8	6.0

Marriage and civil partnership

5.2.8 Across all geographies, the minority of the population aged 16 and over have never married or entered a civil partnership. The Project LSOA (47.5%) level sits significantly above other geographies, compared to an average of 33.4% in the Project MSOA, 36.2% in the county, 37.7% in the region and 37.9% nationally having never married or entered a civil partnership, as shown in **Table 5-5**.

Table 5-5: Legal partnership status (%) by geographical area, 2021 (Ref 1-14)

Legal partnership status	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
Never married or entered a civil partnership	47.5	33.4	36.2	37.7	37.9
Married: opposite sex	33.3	45.2	42.4	43.8	44.2

Legal partnership status	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
Married: same sex	0.2	0.2	0.2	0.3	0.3
In a registered civil partnership: opposite sex	0.4	0.1	0.1	0.1	0.1
In a registered civil partnership: same sex	0.2	0.1	0.1	0.1	0.1
Separated	4.1	2.4	2.6	2.3	2.2
Divorced	12.0	10.8	11.2	9.4	9.1
Widowed	2.4	7.8	7.2	6.4	6.1

Pregnancy and maternity

5.2.9 As shown in **Table 5-7**, in 2011 30.3% of households within the Project LSOA were lone parent households, of which 24.2% have dependent children. Furthermore, lone parents represented 12% of households in the Project MSOA (with 8.7% dependent children), in comparison to 10.6% of households in England. The Census 2021 reported a decrease in lone-parent household across both geographies, with the proportion in the Project LSOA falling to 22.8% with 16.8% having dependent children, compared to 11.1% (and 7.0%) in the Project MSOA.

Table 5-6: Lone parent families (%) of total households by geographical area, 2011 and 2021 (Ref 1-16)

Household composition		Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
2011	Lone parent family	30.3	12.0	12.1	10.4	10.6
	With dependent children	24.2	8.7	8.7	7.1	7.2

Household composition		Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
2021	Lone parent family	22.8	11.1	12.4	11.0	11.1
	With dependent children	16.8	7.0	8.6	7.2	6.9

5.2.10 Data on general fertility rates can also provide useful insight into future population change and so has also been reviewed. Although not available at the Project LSOA or regional level, in the Project MSOA between 2016 and 2020 the general fertility rate was 57.6 per 1,000 women, which was lower than the North East Lincolnshire County average of 62.3, and slightly lower than the England average of 59.2 (Ref 1-27).

Race

5.2.11 **Table 5-7** shows the percentage breakdown of ethnic groups by geographical area. Overall, white ethnic groups compose 97.1% of the Project LSOA and 97.8% of the Project MSOA populations, compared to lower proportions in Yorkshire and the Humber (85.5%) and England (81.8%).

Table 5-7: Ethnic group (%) by geographical area, 2021 (Ref 1-17)

Ethnic group		Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
White	English, Welsh, Scottish, Northern Irish or British	90.7	93.0	92.6	80.9	74.4
	Irish	0.1	0.2	0.2	0.5	0.9
	Gypsy or Traveller	0.0	0.1	0.0	0.1	0.1
	Roma	0.1	0.1	0.1	0.2	0.2
	Other	6.2	4.4	3.3	3.8	6.2
Mixed/ Multiple	White/ Black Caribbean	0.0	0.2	0.2	0.7	0.9

Ethnic group		Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
Ethnic Groups	White/ Black African	0.1	0.1	0.2	0.3	0.4
	White and Asian	0.3	0.2	0.3	0.7	0.8
	Other	0.3	0.2	0.3	0.5	0.8
Asian/ Asian British	Indian	0.0	0.0	0.3	1.5	3.1
	Pakistani	0.1	0.1	0.2	5.4	2.7
	Bangladeshi	0.0	0.1	0.2	5.4	2.7
	Chinese	0.3	0.2	0.3	2.7	5.4
	Other Asian	0.5	0.4	0.5	0.9	1.6
Black/ African/ Caribbean/ Black British	African	0.1	0.1	0.4	1.5	2.5
	Caribbean	0.1	0.0	0.1	0.4	1.0
	Other Black	0.1	0.0	0.1	0.3	0.5
Other Ethnic Group	Arab	0.1	0.1	0.2	0.5	0.6
	Other	0.9	0.5	0.4	1.0	1.6

Religion or belief

5.2.12 Amongst those identifying with a religion, Christians are the majority at all geographies: from 34.9% at the Project LSOA to 46.2% at the national level. The amount of people not identifying with any religion is significantly higher in the Project LSOA (57.8%) compared to other geographies (39.4% in Yorkshire and the Humber and 37.2% in England), as shown in **Table 5-8**.

Table 5-8: Religion or belief (%) by geographical area, 2021 (Ref 1-18)

Religion	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
Christian	34.9	49.3	45.3	44.9	46.2
Buddhist	0.4	0.1	0.3	0.3	0.5
Hindu	0.1	0.1	0.3	0.5	1.7

Religion	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
Jewish	0.0	0.0	0.1	0.2	0.5
Muslim	0.2	0.6	1.2	8.1	6.5
Sikh	0.0	0.2	0.1	0.4	0.9
Other religion	0.4	0.4	0.4	0.4	0.6
No religion	57.8	43.4	46.5	39.4	37.2
Religion not stated	6.2	5.9	5.9	5.7	6.0

Sex

5.2.13 **Table 5-9** indicates that the Project LSOA has a higher proportion of female residents (51.7%) compared to males (48.3%). This observation is consistent across all geographies, with the national average being 51% females to 49% males.

Table 5-9: Proportion (%) of residents by sex and geographical area, 2021 (Ref 1-19)

Sex	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
Female	51.7	51.7	51.1	50.9	51.0
Male	48.3	48.3	48.9	49.1	49.0

Sexual orientation

5.2.14 **Table 5-10** presents a breakdown of adults by their identified sexual orientation for North East Lincolnshire County, Yorkshire and The Humber, and England. North East Lincolnshire County had a slightly lower proportion of adults identifying as gay or lesbian (1.2%), compared to regional (1.4%) and national (1.5%) averages. No sexual orientation data is available at the Project LSOA and Project MSOA levels.

Table 5-10: Sexual orientation (%) in North East Lincolnshire County, Yorkshire and The Humber, England, 2021 (Ref 1-20)

Sexual orientation	North East Lincolnshire County	Yorkshire and The Humber	England
Straight or Heterosexual	90.8	89.7	89.4
Gay or Lesbian	1.2	1.4	1.5
Bisexual	1.1	1.3	1.3
Pansexual	0.2	0.2	0.2
Asexual	0.1	0.1	0.1
Queer	0.0	0.0	0.0
All other sexual orientations	0.0	0.0	0.0
Not answered	6.6	7.2	7.5

5.3 Socio-economic Profile

5.3.1 The socio-economic profile considers several factors including levels of deprivation, employment, education, health, housing, transport, and connectivity; as well as access to services and facilities; public realm and open space; safety, security and well-being; and community cohesion.

5.3.2 These factors are pertinent to those with protected characteristics and inequality and, as such, provide additional baseline information relevant to the assessment of equality effects.

Deprivation

5.3.3 Deprivation is measured by the 2019 English Indices of Deprivation (Ref 1-21). This provides an overall deprivation score and rank for LSOAs across England by building upon seven distinct ‘domains’ of deprivation. These domains are seen as the key indicators which influence a person’s level of deprivation as follows:

- a. Income - measures the proportion of the population experiencing deprivation relating to low income. The definition of low income used includes both those people that are out of work, and those that are in work but who have low earnings.
- b. Employment - measures the proportion of the working age population in an area involuntarily excluded from the labour market. This includes people who would like to work, but are unable to do so due to unemployment, sickness or disability, or caring responsibilities.

- c. Education, skills and training – measures the lack of attainment and skills in the local population. The indicator falls into two sub-domains intended to reflect the ‘flow’ and ‘stock’ of educational disadvantage:
 - i. Children and young people sub-domain: measures the attainment of qualifications and associated measures (flow).
 - ii. Adult skills sub-domain: measures the lack of qualifications in the resident working population (stock).
- d. Health deprivation and disability – measures the risk of premature death and the impairment of quality of life through poor physical and mental health.
- e. Crime – measures the risk of personal and material victimisation at a local level.
- f. Barriers to housing and services – measures the physical and financial accessibility of housing and local services. The indicator falls into two sub-domains:
 - i. Geographical barriers: which relates to the physical proximity of local services.
 - ii. Wider barriers: which includes issues relating to access to housing such as affordability and homelessness.
- g. Living environment – measures the quality of the local environment. The indicator falls into two sub-domains:
 - i. ‘Indoors’: measures the quality of housing.
 - ii. ‘Outdoors’: measures the local air quality and road traffic accidents.

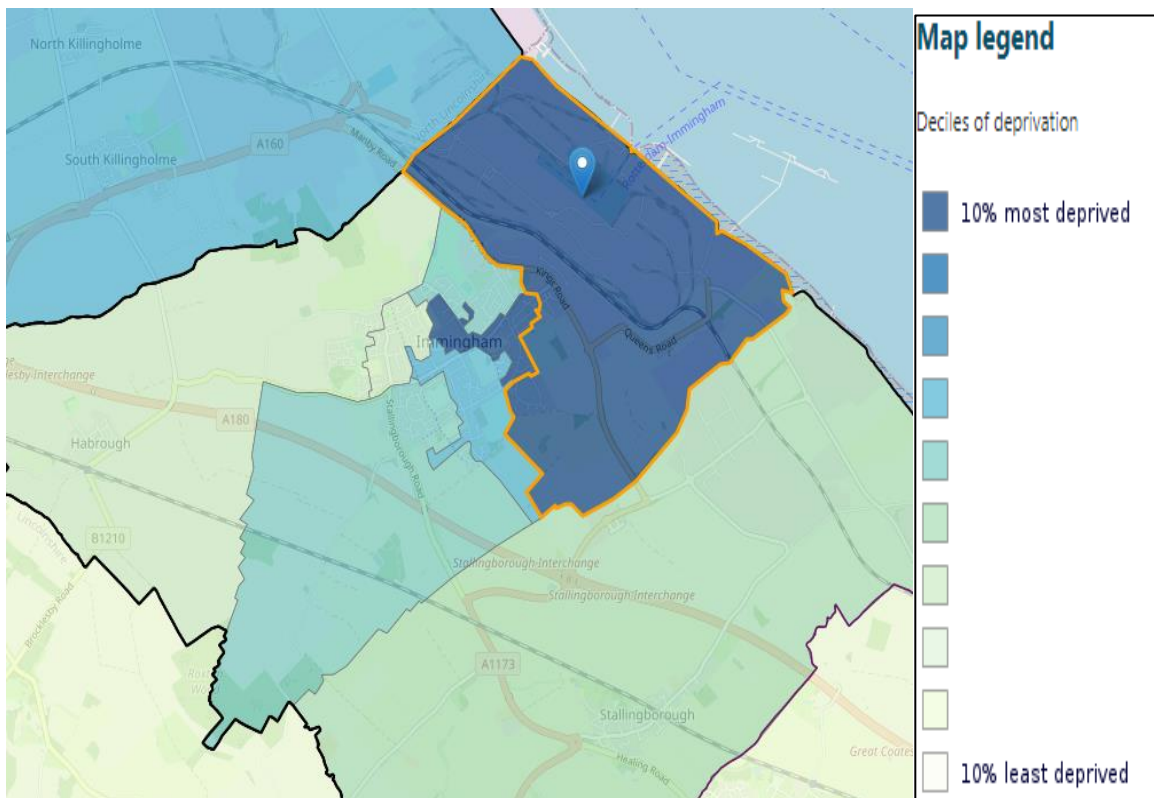
5.3.4 The overall relative score generated by the combination of these ranks is the Index of Multiple Deprivation (“IMD”). The Income Deprivation Affecting Children Index (“IDACI”) measures the proportion of children aged 0 to 15 living in income deprived families. The Income Deprivation Affecting Older People Index (“IDAOPI”) measures the proportion of all those aged 60 or over who experience income deprivation.

5.3.5 The scores provided against each domain are a measure of relative deprivation rather than affluence. As such, it is important to recognise that not every person in a deprived area will themselves be deprived and likewise, that there will be some deprived people living in the least deprived areas.

5.3.6 People belonging to protected characteristic groups are more likely to experience deprivation, as they may experience poor health, have lower levels of income, or experience barriers to accessible housing, car ownership and access to services. This can lead to poor health and wellbeing outcomes, and detrimentally affect the equality of opportunity.

5.3.7 The Project LSOA and the LSOAs bordering it experience varying levels of overall deprivation as highlighted in **Plate 5-1**. The Project LSOA is outlined in yellow and alongside is a key of the different shadings and the level of deprivation each represents. Although the Project LSOA experiences elevated levels of deprivation it is heavily industrial and does represent a small part of the population of the wider Immingham area. Neighbouring LSOAs which are more residential but which sit further from the Site and are less likely to be impacted by the Project are less deprived.

Plate 5-1: IMD map of the Project area (Ref 1-22)



5.3.8 The Project LSOA is within the 10% most deprived LSOAs nationally according to the IMD, ranking 1,453rd of 32,844. Supplementary indices for deprivation also rank the LSOA:

- a. In the top 10% most deprived areas nationally (ranking 76th out of 32,844) for IDACI.
- b. In the top 30% most deprived areas nationally (ranking 8,004th out of 32,844) for IDAOPI.

Income

5.3.9 The Project LSOA is within the top 10% most deprived LSOAs nationally in terms of income deprivation (Ref 1-38), which may be a reflection of a high number of low-wage jobs associated with the process, plant and machine operative roles or in elementary occupations at the Port – as highlighted under the employment section below.

Employment

- 5.3.10 The Project LSOA is within the top 10% most deprived LSOAs nationally in terms of employment deprivation which measures the proportion of the working age population involuntarily excluded from the labour market (Ref 1-23).
- 5.3.11 **Table 5-11** provides a breakdown of economic activity status according to the relevant geographies and reflects the high employment deprivation ranking. The Project LSOA, although having a higher share of economically inactive residents than England, has the lowest share compared to the Project MSOA, North East Lincolnshire County, and Yorkshire and the Humber, which may indicate a high proportion of nearby residents work at the Port.

Table 5-11: Economic activity status (%) by geographical area, 2021 (Ref 1-36)

Economic activity status	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
Economically active (excluding full-time students): In employment	51.7	52.4	52.6	53.5	55.7
Economically active (excluding full-time students): Unemployed	4.9	2.8	2.8	2.7	2.9
Economically inactive	41.1	43.1	42.7	41.4	39.1

- 5.3.12 **Table 5-12** presents a detailed breakdown of current employment sectors for the resident population in each of the relevant geographies. Corresponding to its proximity to the Port, the Project LSOA has a considerable proportion of residents (26.8%) working as ‘Process, plant and machine operatives’ compared to the wider geographies (18.7% in the Project MSOA) – it is therefore possible that these residents both live and work within the Project LSOA, reflecting that the Port is a large source of employment for residents in the Project LSOA. A similar pattern is evident in the high proportion of residents working in elementary occupations in the Project LSOA (22.0%) compared to the wider geographies (16.0% in the Project MSOA, 13.9% in North East Lincolnshire County, 10.5% in England).

Table 5-12: Employee jobs by broad sector group (%) across different geographical areas, 2021 (Ref 1-37)

Occupation (current)	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
1. Managers, directors and senior officials	5.2	8.1	8.8	11.2	12.9
2. Professional occupations	4.7	8.6	12.3	18.1	20.3
3. Associate professional and technical occupations	6.2	10.3	10.6	12.3	13.3
4. Administrative and secretarial occupations	4.0	9.2	8.5	9.0	9.3
5. Skilled trades occupations	9.2	11.2	11.8	11.1	10.2
6. Caring, leisure and other service occupations	11.6	10.3	10.7	9.7	9.3
7. Sales and customer service occupations	10.4	7.5	8.3	8.3	7.5
8. Process, plant and machine operatives	26.8	18.7	15.1	8.4	6.9
9. Elementary occupations	22.0	16.0	13.9	11.8	10.5

Education

- 5.3.13 The Project LSOA is within the top 10% most deprived LSOAs nationally in terms of education, skills and training deprivation (Ref 1-27). This ranking is reflected in **Table 5-13** which highlights that the Project LSOA has a considerable proportion of residents with No Qualifications (30.2%), compared to Yorkshire and the Humber (20.6%) and England (18.1%).
- 5.3.14 Correspondingly, the proportion of residents with Level 4 or above qualifications in the Project LSOA is lower (12.8%) than the wider geographies (17.1% in the Project MSOA, 33.9% in England).

Table 5-13: Educational attainment (%) by different geographical area, 2021

Highest level of qualification	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and The Humber	England
No qualifications	30.2	26.6	24.2	20.6	18.1

Highest level of qualification	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and The Humber	England
Level 1 and entry level qualifications	18.8	13.9	12.2	10.1	9.7
Level 2 qualifications	17.4	16.0	16.1	13.6	13.3
Apprenticeship	4.4	6.1	6.5	6.1	5.3
Level 3 qualifications	13.5	17.0	16.4	17.4	16.9
Level 4 qualifications or above	12.8	17.1	21.6	29.5	33.9
Other qualifications	2.9	3.3	3.0	2.6	2.8

5.3.15 There are no schools within the immediate vicinity of the Site, and although there are several in Immingham, they are all more than a half an hour walk away (using the intersection of Queens Road and Laporte Road as a reference point). The only education facility that may be affected by the Project is Immingham Day Nursery, located near the roundabout of Pelham Road and the A1173 which would be a key transport route for the Site.

Health

5.3.16 There is a tendency for people belonging to protected characteristic groups, particularly young people, older people, disabled people and ethnic minorities, to experience poorer health (Ref 1-28). The Project LSOA is within the top 20% most deprived LSOAs nationally in the health deprivation and disability domain.

5.3.17 On average, life expectancy is lower in the Project MSOA compared to England - being 77.9 for males (compared to 79.5 in England) and 82.4 for females (compared to 83.2 in England). When assessing mortality expressed as a standardised ratio against the national level (100), deaths from respiratory diseases (112.9), preventable causes (126.9) and cancer (106.2) are all higher in the MSOA (Ref 1-29).

5.3.18 In the Project MSOA, the health of children is varied compared to England depending on which indicator is assessed. Prevalence of obesity amongst Year 6 children is higher than the national average, at 23.7% compared to 21.6%, but the rate of emergency hospital admissions for injuries in under 15-year-olds is lower at 82.3 compared to 92.0 (Ref 1-30).

5.3.19 In terms of health facilities in the area, there is one GP practice in Immingham, the Roxton Practice, as well as the Stark Lincolnshire & Goole Hospital, both located in the same building on Pelham Road. A detailed baseline of primary healthcare provision in the area is included in **Chapter 23: Socio-Economics** of the ES [TR030008/APP/6.2].

Housing

5.3.20 The Project LSOA is within the top 40% most deprived LSOAs nationally with regard to barriers to housing domain. There are 590 properties within the Project LSOA (Ref 1-31).

5.3.21 **Table 5-14** outlines the tenure data by relevant geographical area and shows that the Project LSOA has a significantly greater proportion of social rented housing at 47.5% compared to the wider geographies (17.0% in the Project MSOA and 17.1% in England). Correspondingly the Project LSOA has a significantly lower proportion of owned (33.9%) and private rented properties (18.5%).

Table 5-14: Tenure (%) by geographical area, 2021 (Ref 1-32)

Tenure	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and The Humber	England
Owned	33.9	66.1	63.9	62.6	61.3
Social rented	47.5	17.0	13.2	17.3	17.1
Private rented	18.5	16.6	22.4	19.4	20.5

5.3.22 **Table 5-15** presents a breakdown of overcrowding and under-occupation⁵ of bedrooms in the Site and wider geographies. The Project LSOA (3.9%) and Project MSOA (1.7%) have lower proportions of overcrowding compared to the national level (4.3%).

Table 5-15: Household bedroom overcrowding and under-occupation (%) by geographical area, 2021 (Ref 1-33)

Overcrowding (bedrooms)	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
Occupancy rating of bedrooms: +2 or more	34.1	44.0	41.6	37.3	35.6

⁵ ONS (2021) Census 2021. TS052.

This analysis uses the 'bedroom standard' measure of overcrowding, which determines how many bedrooms households need based on the ages, genders and relationships of members. Households are overcrowded if they have fewer bedrooms than they need. They are under-occupying if they have more bedrooms than they need.

Overcrowding (bedrooms)	Project LSOA 001A	Project MSOA 001	North East Lincolnshire County	Yorkshire and the Humber	England
Occupancy rating of bedrooms: +1	38.6	36.1	35.4	35.7	33.2
Occupancy rating of bedrooms: 0	23.3	18.3	21.3	24.0	26.8
Occupancy rating of bedrooms: -1	3.2	1.5	1.6	2.5	3.6
Occupancy rating of bedrooms: -2 or less	0.7	0.2	0.2	0.4	0.7

Transport and connectivity

- 5.3.23 Immingham’s public transport connectivity is limited. Bus journeys to Grimsby take 45 - 50 minutes on average and run three times an hour on the number five bus operated by Stagecoach. Bus travel to Hull takes approximately two hours 40 minutes, requiring up to three changes - these bus services are also operated by Stagecoach.
- 5.3.24 The nearest train station is Habrough, located approximately two miles west of Immingham, which connects northwards to Hull and south to Grimsby. Train journeys take 15 minutes from Habrough to Grimsby and are run on the TransPennine Express. Journeys to Hull take significantly longer and require at least one change.
- 5.3.25 There are two PRoWs that run through the Site, namely Public Footpath 32 and Public Bridleway 36. It is anticipated that Public Footpath 32 would not be affected by the Project, however, Public Bridleway 36 which runs north from Laporte Road to the Humber, along the east edge of the Long Strip woodland, would be temporarily diverted during part of the Project construction phase (refer to **Section 6.2** and **Plate 6-2** for details).

Public realm and open space

- 5.3.26 The ability to access and use the public realm is important to ensuring that all members of society are able to participate in their community. However, certain protected characteristic groups such as people with a disability and some ethnic minorities are less likely to take part in public life than other sections of the population. For disabled people, public spaces can often be inaccessible due to mobility limitations. Access to the public realm is also important to the provision (and management) of play space for children.
- 5.3.27 Immingham has a range of open spaces including Centenary Woodland, Pilgrim Park, and the Riverside Gardens, which offer opportunities for leisure activities, picnics and relaxation.
- 5.3.28 There is no formal PRow through the southern part of the Long Strip woodland; any informal access routes will be temporarily closed during construction for safety reasons.

Safety and security

- 5.3.29 The feeling of safety and security within a person's local area is key to ensuring their personal wellbeing. Everyone is vulnerable to feelings of being unsafe, however these may be particularly acute for people belonging to certain protected characteristic groups, including young people, older people, disabled people, women and people belonging to a particular ethnicity or sexual orientation (Ref 1-34).
- 5.3.30 Between April 2022 and March 2023 there were 266 crimes recorded in the Project LSOA at a rate of 11.3 per 1,000 population as of March. This figure is higher than the rate for North East Lincolnshire County (10.9) and England (6.9). Violence and sexual offences were the most commonly recorded crimes at 142 of the 266, followed by violent crime (40) and public order offences (36) (Ref 1-35).

Community cohesion

- 5.3.31 To ensure healthy communities which are functional, safe and enjoyable places to live and work, it is important to promote community cohesion and good relations between different groups. Encouraging civic engagement and ensuring dialogue with all people in the community, particularly those belonging to protected characteristic groups, is an important step in working towards community cohesion. For people belonging to protected characteristic groups, their feelings of a lack of cohesion (or exclusion) may be more acute than those of other people.
- 5.3.32 ONS data on personal well-being shows that in North East Lincolnshire County, average life satisfaction scores in 2021 rated 7.42 out of 10 compared to 7.32 in Yorkshire and the Humber and 7.38 in England (Ref 1-36).

Key findings

- 5.4.1 There are a number of key findings that have been identified through the collation of an equality and socio-economic baseline of the Site as follows:
- a. The Project LSOA, is one of the 10% most deprived LSOAs nationally, ranking 1,453rd of 32,844.
 - b. The Project LSOA is in the top 20% most deprived LSOAs nationally in the health deprivation and disability domain.
 - c. The Project LSOA has higher than national rates of unemployment and educational attainment.
 - d. The Project LSOA has a higher proportion of children (between the ages of 0-15) living in the area, compared to other regional and national geographies.
 - e. The Project LSOA has a higher rate of residents whose day-to-day lives are impacted by a health condition or disability than regional and national averages.
 - f. The Project LSOA has a significantly lower proportion of homeowners compared to the Project MSOA, North East Lincolnshire County, Yorkshire and the Humber, and England.
 - g. The Project LSOA and Project MSOA both have significantly smaller proportions of minority ethnic residents than regional and national averages.
 - h. The Project MSOA has a higher proportion of people aged 65 and over than regional and national levels.

6 Consultation and Engagement

6.1 Overview

6.1.1 Before a DCO application can be submitted, an applicant must undertake a comprehensive consultation exercise which not only engages with statutory consultees such as local councils and the Environment Agency, but also seeks feedback from local residents, businesses, stakeholders, interested parties and the wider local community.

6.1.2 The aim of the consultation process is to find out what issues are of the greatest importance to people, such that such information can be used to inform the development design and the need for mitigation measures.

6.1.3 In the pre-application phase, two rounds of Statutory Consultation for the Project have taken place as detailed below in **Section 6.1.3**.

6.1.4 During pre-examination and examination phases, individuals will be able to contribute representations to the examining authority by registering as Interested Parties.

6.2 Statutory Consultation and Responses

6.2.1 The **Consultation Report [TR030008/APP/5.1]** provides a detailed report on consultation activities and how these have been considered in the Project development and design.

First Statutory Consultation

6.2.2 The first Statutory Consultation (the “First Statutory Consultation”) for the Project took place over a 6-week period (42 days inclusive) between 9 January 2023 and 20 February 2023. The approach to the first Statutory Consultation was set out in a Statement of Community Consultation (“SoCC”) prepared and published in accordance with Sections 42 and 47 of the 2008 Act and included as Appendix A of the **Consultation Report [TR030008/APP/5.1]**. To ensure consultation was comprehensive, the Applicant engaged with several statutory consultees (fulfilling Section 42 requirements) regarding the SoCC and consultation proposals, including:

- a. The Marine Management Organisation;
- b. Environment Agency;
- c. NELC;
- d. North Lincolnshire Council;
- e. Lincolnshire County Council;
- f. West Lindsey District Council;
- g. East Lindsey District Council;

- h. East Riding of Yorkshire Council;
- i. Hull City Council;
- j. Stallingborough Parish Council;
- k. South Killingholme Parish Council; and
- l. North Killingholme Parish Council.

6.2.3 To further ensure the First Statutory Consultation was comprehensive (and in fulfilling Section 47 requirements), the Applicant engaged with a wide range of community stakeholders and residents including statutory consultees, local stakeholders, interested parties and the local community.

6.2.4 During the First Statutory Consultation period information on all key aspects of the Project, including information within the Preliminary Environmental Information Report (“PEI Report”), was made available to the public via the methods detailed under **Paragraph 6.2.5**.

6.2.5 Project information available included:

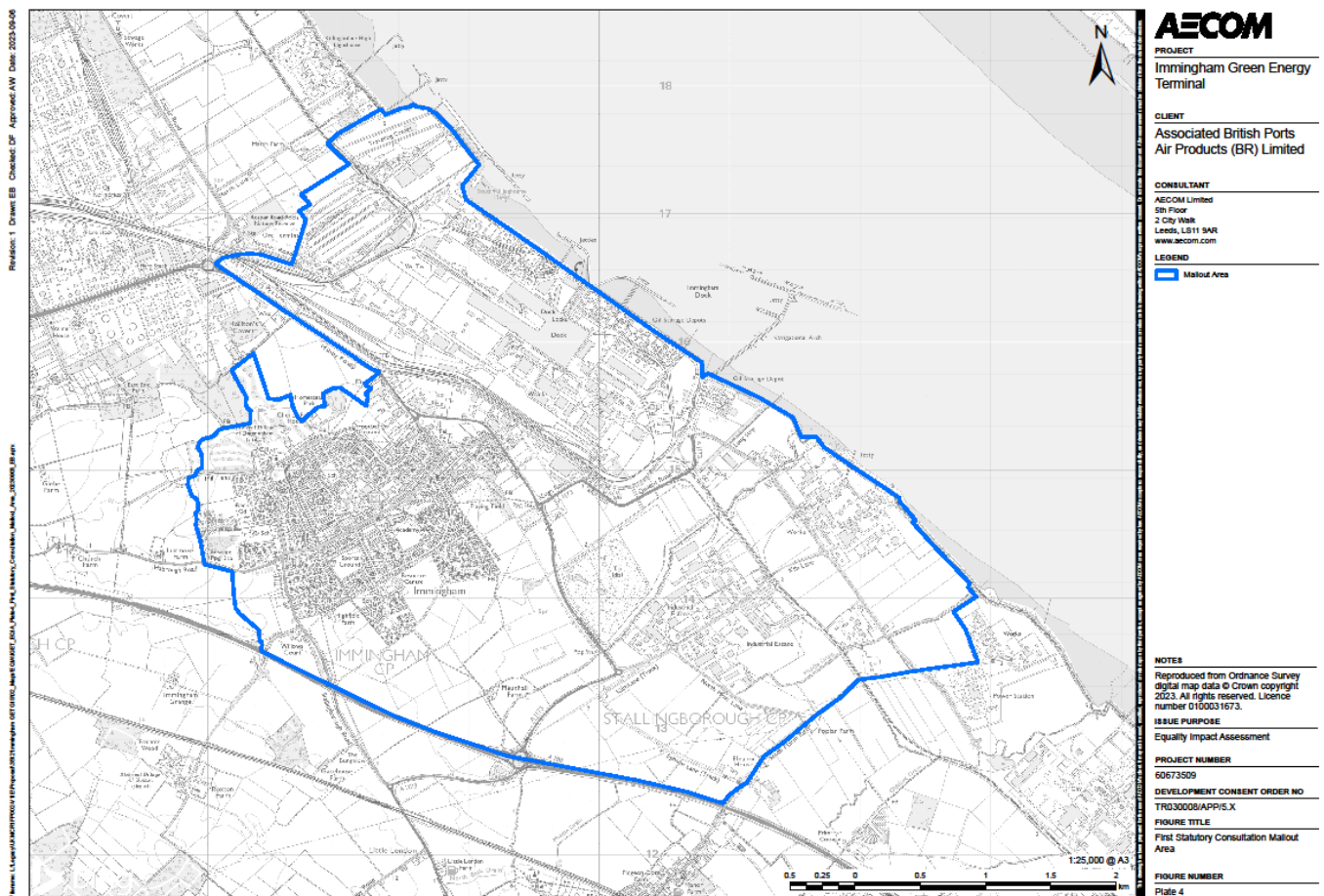
- a. The Project design and layout;
- b. The required marine infrastructure;
- c. The landside works;
- d. The construction and operation of the facilities;
- e. Traffic and access;
- f. Environmental impacts on land and in the marine environment (including for example noise and vibration, air quality, ecology, landscape, archaeology, water and contamination); and
- g. How those impacts are proposed to be minimised/mitigated.

6.2.6 The local community was notified of the First Statutory Consultation via:

- a. The Project website www.imminghamget.co.uk/documents/ where all consultation documents including the PEI Report and addendum were published and are still available;
- b. Letters/newsletter introducing the proposals and inviting residents to exhibition sessions was sent to residents living in the area highlighted in blue in **Plate 6-1**;
- c. Posters were displayed in prominent positions within the locality;
- d. Statutory notices were publicised in various newspapers and publications (The Times, The Grimsby Telegraph, the Lincolnite, Fishing News, London Gazette, and Lloyds List);
- e. Posters and information available to post on social media, including links to the Project’s website, were made available to local community and interest groups for dissemination through their own channels;

- f. Hard copies of the consultation documents and copies on USB drives were available at all events, as well as for collection at the Immingham Civic Centre and at the NELC offices; and
- g. A freephone line available between 09.00 and 17.00 Monday – Friday for the duration of the Statutory Consultation period.

Plate 6-1: First Statutory Consultation mailout area



6.2.7 The Applicant has paid due regard to protected characteristic groups by proactively engaging with local authorities during the consultation process to identify relevant communities and organisations, ensuring engagement materials were accessible and that all venues had wheelchair access. Information detailed in **Paragraphs 6.2.5** and **6.2.6** above published during the First Consultation Period was, and still is, available online via the link provided in **Paragraph 6.2.6** and below in **Table 6-1**. During the First Consultation Period it was also available in hard copy, and on USB through speaking with a member of the consultation team in-person or via the freephone line – details of which were provided in the SoCC. **Table 6-1** outlines the consultation methods and activities.

Table 6-1: First Statutory Consultation activities

Method and activities	Detail
Face to face consultation events	<p>Six in-person consultation/exhibition events hosted by ABP held at Immingham Civic Centre:</p> <ul style="list-style-type: none"> - Weds 18 January 2023, 8:00am – 12:00pm - Thurs 19 January 2023, 3:30pm – 7:30pm - Weds 1 February 2023, 8:00am – 12:00pm - Thurs 2 February 2023, 3:30pm – 7:30pm - Fri 17 February 2023, 12:00pm – 4:00pm - Sat 18 February 2023, 10:00am – 2:00pm <p>Topic specialists and members of the Project team were on hand to answer questions.</p>
Physical copies of project documents	<p>The following physical documents were displayed at Immingham Civic Centre from Monday to Friday between 9am – 5pm during the consultation period:</p> <ul style="list-style-type: none"> - PEI Report including technical appendices and accompany figures; - Non-technical summary of PEI Report; - The SoCC.
Project website	<p>Information about the Project, consultation documents, the face-to-face consultation events, and webinars available at: www.imminghamget.co.uk</p> <p>The website continues to host copies of all consultation materials, including the PEI Report and an online feedback questionnaire. Hard copies of the feedback questionnaire were also available for request via email, phone or, post and were sent with a free postage envelope to return.</p>
Telephone surgeries	<p>Free of charge telephone surgeries were available for booking where individuals could talk to someone from the Project team.</p>
Project newsletter	<p>Issued to the area outlined in Plate 4, the newsletter informed residents of when the First Statutory Consultation was commencing and included details of the exhibition events and encouraged people to take part.</p>

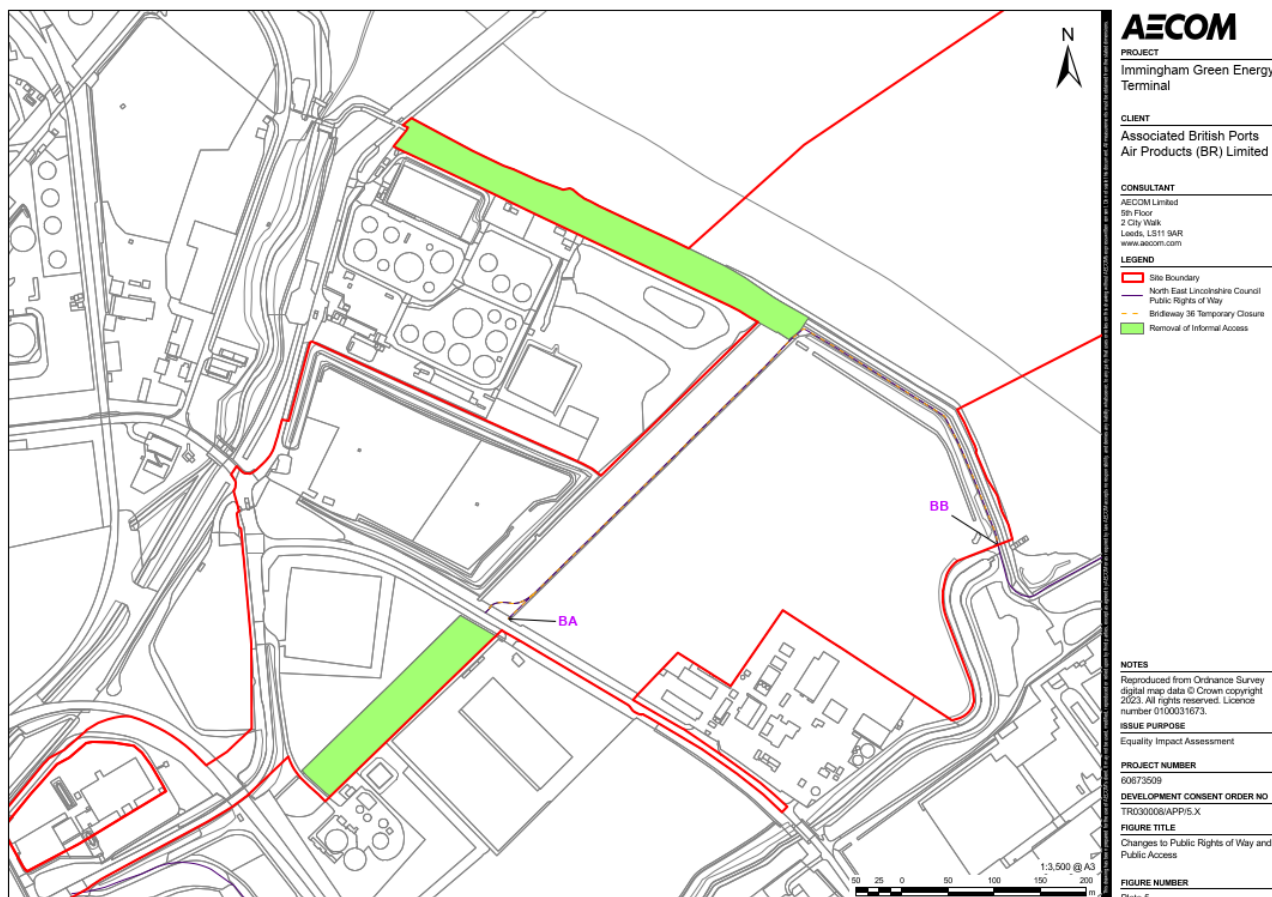
6.2.8 Responses to the First Statutory Consultation were collated through a feedback questionnaire at the in-person exhibitions, and which were also available to download and complete online, by email and free-post. Verbal feedback was noted down at in-person events or during phone conversations upon consultee request.

Secondary Statutory Consultation

6.2.9 A second Statutory Consultation took place over an 8-week period between Wednesday 24 May and Thursday 20 July 2023. The Applicant replicated the same approach and methods to consultation in the second SoCC as the first, including consultation with the same local authorities.

- 6.2.10 After considering responses and feedback to the First Statutory Consultation, evolution to the Project design resulted in a further eight key design changes being proposed to the Project. These changes necessitated the second round of statutory consultation (the "Second Statutory Consultation") and are summarised below:
- a. Amendments to the Order limits:
 - i. Inclusion of four areas along Kings Road.
 - ii. Removal of an area of land south of Queens Road which it was established not to be required for the proposed pipeline corridor which would link the West and East Sites.
 - iii. Inclusion of the southern part of the Long Strip woodland.
 - iv. Inclusion of an additional section of Laporte Road.
 - v. Inclusion of an extended section of the sea wall.
 - vi. Re-orientation of the area of works in the marine area (removal of two large areas and inclusion of a third smaller area).
 - b. Marine design changes relating to jetty alignment, length, berth arrangements (now proposed to be a single berth) and dredging requirements.
 - c. Changes to the routing of pipe-rack and jetty access road in Long Strip woodland to mitigate woodland loss and to avoid impacts on the veteran ash tree located in the north east corner of Long Strip.
 - d. Changes to the West Site layout, elevations (to reflect the operational requirements of the hydrogen production facility) and drainage (ground raising to ensure sufficient surface water storage can be achieved to limit run-off rates and so that a drainage solution can be achieved for the site) (the layout and elevations remained illustrative only and not for approval).
 - e. Revisions to the peak construction heavy goods vehicle numbers (particularly in light of changes to the ground elevation) from 194 movements per day to 260.
 - f. Introduction of a permanent reduction of the speed limit on Laporte Road (between the junction with Queens Road and the Tronox site entrance) to 30 miles per hour.
 - g. Temporary PRoW diversion (see **Plate 6-2** for details) and closure of other areas of informal access during the construction phase for health and safety reasons (the southern part of Long Strip) and permanently (in respect of the seawall to facilitate construction and use of the jetty).
 - h. Temporary removal of Kings Road street furniture and modification of overhead lines in four locations to facilitate the transportation of abnormal loads of construction materials being brought to the temporary construction area.

Plate 6-2: Changes to PRow and Public Access



- 6.2.11 For detailed explanation of the changes, please refer to the **Consultation Report [TR030008/APP/5.1]**.
- 6.2.12 The Second Statutory Consultation was carried out from 24 May 2023 to 20 July 2023 inclusive.
- 6.2.13 As in the First Statutory Consultation period, it was ensured that all venues were wheelchair accessible, and that the local community were notified of Second Statutory Consultation information through a variety of methods, including:
- The Project website www.imminghamget.co.uk/documents/ where all consultation documents including the PEIR and addendum were published;
 - Mailout of information letters to residents living in the same area as defined in **Plate 6-1**;
 - Posters were displayed in prominent positions within the locality;
 - Statutory notices were publicised in various newspapers and publications (The Times, The Grimsby Telegraph, the Lincolnite, Fishing News, London Gazette, and Lloyds List);

- e. Posters and information available to post on social media, including links to the Project's website, were made available to local community and interest groups for dissemination through their own channels;
- f. Hard copies of the consultation documents and copies on USB drives were available at all events, as well as for collection at the Immingham Civic Centre and at the North East Lincolnshire Council offices; and
- g. A freephone line available between 09.00 and 17.00 Monday – Friday for the duration of the Statutory Consultation period.

6.2.14 Two in person consultation/exhibition events were held during this period, both at the Immingham Civic Centre, which took place on:

- a. Thursday 22 June 2023, 14:00 to 18:00.
- b. Saturday 24 June 2023, 10:00 to 14:00.

6.2.15 **Table 6-2** outlines the consultation methods, activities, and details undertaken in the Second Statutory Consultation, as taken from the second SoCC (available at **Appendix B.4** of the **Consultation Report [TR030008/APP/5.1]**):

Table 6-2 Second Statutory Consultation activities

Method and activities	Detail
Face to face consultation events	<p>Two in-person consultation/exhibition events were held during the Second Statutory Consultation period. Topic specialists and members of the Project team were on hand to answer questions from members of the public at allocated times, as detailed below. Exhibition events were held at the Immingham Civic Centre, Pelham Road, Immingham DN40 1QF. The Civic Centre is an accessible and well-known community venue for people in Immingham and Stallingborough. If for any reason the venue needed to change, an appropriate alternative venue would be chosen in agreement with the Local Planning Authority.</p> <p>The events provided information on the proposed Project in an easy-to-understand format, as well as a feedback questionnaire, which could be completed by hand at the event or submitted later via post, email or on the Project website.</p> <p>For in-person events, the following venues were used:</p> <ul style="list-style-type: none"> - Burton Hall, Civic Centre, Pelham Rd, Immingham, DN40 1QF - Old Library Building, Immingham Civic Centre, Pelham Road, Immingham, DN40 1QF <p>Across both sessions, ABP hosted nineteen attendees from the local community.</p>
Physical copies of project documents	<p>The following physical documents were displayed at the Immingham Civic Centre from Monday to Friday between 09.00 and 17.00 throughout the consultation period:</p> <ul style="list-style-type: none"> - Addendum to the PEI Report, including revisions to technical appendices and accompanying figures to explain design changes; - Update to non-technical summary of the PEI Report;

Method and activities	Detail
	- The second SoCC which explains how the Applicant proposed to undertake the Second Statutory Consultation.
Online Webinars	ABP offered the option of an online webinar but due to insufficient demand from consultees, this was not held.
Project website	Information about the proposed Project, consultation documents, face-to-face consultation events, any webinars and details of how to respond were available at www.immingham.co.uk . Copies of consultation materials were hosted at www.imminghamget.co.uk/documents/ . Hard copies of the feedback questionnaire could also be requested (via email, phone or post) and were sent with a free postage envelope for return.
Telephone surgeries	For those who are not comfortable or not able to access information digitally or to attend the in-person events, a free of charge telephone surgery appointment could be booked. Individuals were then able to talk to one of the Project team in more detail about specific issues or topics related to the Project, and the questions from the exhibition feedback questionnaire could be read out and answers recorded over the phone. Alternatively, if the person preferred, a hard copy of the summary information boards displayed at the in-person events could be posted along with a feedback questionnaire to fill out by hand, which they could then post back to the address using the pre-paid envelope provided. The phone line and inboxes were monitored Monday-Friday, 09.00-17.00, for the duration of the Second Statutory Consultation.
Project newsletter	A newsletter was issued to the consultation area agreed with NELC explaining the proposed changes to the Project and notifying when the Second Statutory Consultation commenced, including details of exhibition events and encouraging people to take part in the consultation and how to do so.

6.2.16 Responses were collated through a feedback questionnaire, with all comments to be made in writing by either:

- a. Downloading and completing the online feedback questionnaire;
- b. Emailing a copy of the questionnaire to enquiries@imminghamget.co.uk;
- c. Downloading the questionnaire and posting it to a defined PO box address; and
- d. Requesting a hard copy of the feedback questionnaire and a pre-paid stamped addressed envelope that could be sent in the post and then returned.

6.2.17 Verbal feedback could be noted down as a formal response upon consultee request by a member of the Project team at an event or over the phone.

- 6.2.18 While the overall tone of responses to the Secondary Statutory Consultation was positive, comments were raised in relation to key themes which have been addressed in Table 31 of the **Consultation Report [TR030008/APP/5.1]**. The key themes were:
- a. Construction impact: traffic;
 - b. Operational impact: traffic;
 - c. Operational impact: health & wellbeing;
 - d. Environment impact: Long Strip Woodland;
 - e. Environment impact: terrestrial wildlife;
 - f. Reduction in project footprint;
 - g. Support for renewable/green energy; and
 - h. Flood risk

Continued Community Engagement

- 6.2.19 On behalf of the Applicant, land agents Gateley Hamer have been undertaking engagement with the residents living at properties along Queen's Road. The properties are:
- a. 1 Queens Road, Immingham, Lincolnshire, DN40 1QR;
 - b. 2 Queens Road, Immingham, Lincolnshire, DN40 1QR;
 - c. 3 Queens Road, Immingham, Lincolnshire, DN40 1QR;
 - d. 4 Queens Road, Immingham, Lincolnshire, DN40 1QR;
 - e. 5 Queens Road, Immingham, Lincolnshire, DN40 1QR;
 - f. Flat 1, 6 Queens Road, Immingham, Lincolnshire, DN40 1QR;
 - g. Flat 2, 6 Queens Road, Immingham, Lincolnshire, DN40 1QR;
 - h. Flat above 7-8 Queens Road, Immingham, Lincolnshire, DN40 1QR;
 - i. 1st Floor Flat, 18 Queens Road, Immingham, Lincolnshire, DN40 1QR; and
 - j. 31 Queens Road, Immingham, Lincolnshire, DN40 1QR
- 6.2.20 The engagement was first launched following indication from the Health and Safety Executive ("HSE") that they would advise against the grant of Hazardous Substances Consent whilst the above properties remained in residential use, given their proximity to the hydrogen production facility on the West Site.
- 6.2.21 Gateley Hamer approached the owners and occupiers of the ten residential properties listed under **Paragraph 6.2.19** and undertook internal inspections where possible. Details were obtained from landowners and tenants either through direct contact and/or their appointed agents. Information gathered was considered against planning records, Council Tax records and business rates records.

- 6.2.22 As of June 2023, one property (No. 31) has been acquired, with active negotiations ongoing with the remaining nine owners/occupiers.
- 6.2.23 The engagement also identified that a number of occupiers have protected characteristics.

Examination

- 6.2.24 Opportunities will exist for further input from those who wish to contribute to the continuous consultation process until the application is submitted. Once the application is submitted, individuals will have the opportunity to register as Interested Parties during the pre-examination stage to share their opinions on the application, including at the Preliminary Meeting.
- 6.2.25 The examining authority will consider these representations during the examination stage, including the impact on protected characteristic groups.
- 6.2.26 This EqlA can act as a resource for the examination stage to continue to consider the equality effects of the Project by demonstrating where these have been identified and considered and providing a framework to assess the overall equality impact of the Project.

7 Assessment of Impacts

7.1 Introduction

7.1.1 The assessment of equality impacts considers the potential impacts on affected people sharing protected characteristics arising from the Project. It considers adverse and beneficial effects on protected characteristic groups during consultation, construction, operation and decommissioning phases. The assessment takes a comprehensive approach given impacts are likely to be similar across all construction Phases. Phase 1 of the construction works will be the most intensive and therefore impacts have been considered during this phase as this represents the worst-case scenario. Steps being taken to mitigate potential negative effects have also been outlined in alignment with the **Schedule of Mitigation and Monitoring [TR030008/APP/7.2]**.

7.1.2 This assessment as to the effects on protected characteristic groups has been made using available ES chapters, the legislation and policy review, evidence baseline, statutory consultation information documents, and evidence gathered from engagement with local residents carried out by Gateley Hamer. The Project stages that have been addressed, and the objective of the EqlA in relation to potential impacts, are set out in the framework in **Table 7-1**.

Table 7-1: EqIA assessment framework

Stage	EqIA objectives
Consultation	Clear, transparent, inclusive and meaningful engagement with local residents, stakeholders and the local community.
Construction	<p>Assess the impact of potential voluntary acquisition of residential properties.</p> <p>Mitigation of potential negative environmental impacts of demolition and construction on local residents and businesses.</p> <p>Provide employment opportunities for disadvantaged and underrepresented groups. Determine potential strain on local services as a result of the Project.</p> <p>Ensure changes to PRoW and active travel networks are minimised and mitigated.</p>
Operation	<p>Assess the impact of the acquisition of residential properties to facilitate operation.</p> <p>Provide employment opportunities for disadvantaged and underrepresented groups.</p> <p>Mitigation of potential negative environmental impacts on local residents and businesses.</p> <p>Determine potential strain on local services as a result of the Project.</p> <p>Reduce public safety concern around the operation of the Terminal.</p> <p>Improvement in air quality at a regional or national scale due to decarbonisation arising from the use of green hydrogen.</p>
Decommissioning	<p>Mitigation of potential negative environmental impacts of demolition and decommissioning on local residents and businesses.</p> <p>Provide employment opportunities for disadvantaged and underrepresented groups.</p> <p>Determine potential strain on local services as a result of the Project.</p> <p>Ensure changes to PRoW and active travel networks are mitigated.</p>

7.2 Consultation

Positive effect: Inclusive community consultation

- 7.2.1 Accessibility of consultation documents, information, and events to ensure they are inclusive, meaningful and consider the needs of users, in particular disabled and elderly people, should be a key consideration for those implementing policies, strategies, programmes, or projects (Ref 1-60).
- 7.2.2 The Applicant has paid due regard to the needs of protected characteristic groups during the Statutory Consultation periods through various measures. Firstly, a multi-modal approach to disseminating Statutory Consultation documents was taken; this included sending letters explaining key aspects of the Project and information of the various means of participating in the consultations, including attending consultation events (both in-person and remote) and the availability of a freephone line to local residents (those living in the area outlined in **Plate 6-1, Section f**). This ensured that mostly or predominantly house-bound individuals, including those with disabilities and/or mobility issues, those of older age or with caring responsibilities, and those without internet access, were informed of the Project and consultation events.
- 7.2.3 Secondly, Immingham Civic Centre was chosen to host the eight in-person consultation events (six during the First Statutory Consultation, and two during the Second Statutory Consultation). The Civic Centre is an accessible and well-known community venue for local residents which ensured accessibility for disabled people, elderly people, and those with mobility issues. Members of the Project team were present at all consultation events to answer questions, with hard copies of consultation documents as well as copies on USB flash drives being available to attendees who wanted to take them home. Availability of hard copies and USB flash drives with consultation materials loaded, as discussed in **Paragraph 6.2.6**, would benefit those with no internet access, including disabled and elderly people who are more likely to face barriers in using the internet.
- 7.2.4 A Project website was set up for those who prefer accessing information online. The website is up-to-date and still available and has sufficient contrast to accommodate users with low vision, with sufficient accessibility evidenced by the use of alt text and possibility to work reliably with different browsers and assistive technologies.
- 7.2.5 All formal written responses from the First Statutory Consultation were recorded and considered before the Applicant proposed necessary design changes that reflected the feedback.
- 7.2.6 Changes were consulted on during the Second Statutory Consultation and responses to comments from consultees are included in the **Consultation Report [TR030008/APP/5.1]**.

7.3 Construction

Negative effect: Permanent acquisition of residential properties

- 7.3.1 As noted above, it is expected that HSE will advise against the grant of hazardous substances consent for the hydrogen production facility whilst the residential properties at Queens Road remain in residential use. The HSE will define what are known as “land use planning zones” in connection with the hazardous substances consent. Those zones are expected to impact the residential or part residential properties located on the west side of Queens Road (1-6, 7/8, 18 and 31 Queens Road), which are included within the Site.
- 7.3.2 Once the hydrogen production facility on the West Site is fully operational, it is expected that these properties will fall within or close to the Inner Zone (as defined in **Chapter 22: Major Accidents and Disasters [TR030008/APP/6.2]** as the zone ‘*closest to the major hazard where risks and hazards are greatest and restrictions on development are strictest*’) associated with the operational Project.
- 7.3.3 The continued residential use of those properties is considered incompatible with the operation of the hydrogen production facility on the West Site and an impediment to the grant of hazardous substances consent, and therefore will need to cease. Discussions are ongoing with the owners and occupiers with a view to negotiating their acquisition by Air Products by agreement before construction begins, with 31 Queen’s Road having already been acquired and a number of others close to completion. Where it is not possible to acquire those properties through negotiation, compulsory acquisition powers for these properties will be sought through the DCO.
- 7.3.4 The acquisition of the residential properties would impact upon the affected owners and occupiers of those private assets and on the wider availability of housing stock in Immingham. While the small reduction in housing stock cannot be mitigated, steps have been and are being taken to mitigate the impact on individuals who live in these properties to the extent possible. Gateley Hamer, acting on behalf of the Applicant and Air Products, have consulted with the residents of Queens Road to discuss the acquisition of residential properties by agreement. Efforts have been made through engagement with residential owners/occupiers to determine protected characteristics that may have a differential effect on their ability to relocate. Specific regard has been had to the protected characteristics of residents (which may have a differential effect on their ability to relocate) - a number of residents have been identified with disabilities and mobility issues and a number of the households have adaptations to their properties to make them suitable for their occupier’s needs, creating further complications in finding suitable alternative accommodation.
- 7.3.5 Mandatory relocation can take a toll on the mental health and wellbeing of residents, with the process of negotiation of adequate compensation, acquiring a new house, and movement of personal belongings being potentially lengthy and stressful. Without support, people belonging to the most vulnerable groups can experience a significant struggle.

- 7.3.6 If appropriate and subject to the consent of the relevant occupier, Gateley Hamer will write to NELC to seek support with assisted living needs should it not be possible to find a suitable privately owned relocation property.
- 7.3.7 Relocating to a different area may mean potentially longer journeys to employment, key services and support networks, which may be less accessible if alternative accommodation is located further away to public transport routes and bus stops. This is especially significant for people with mobility issues and disabilities. Currently, the houses are served by the 5M bus with a stop located opposite the residential area, and alternative accommodation may not be situated in a similar proximity to a public transportation route.
- 7.3.8 Gateley Hamer, on behalf of the Applicant, have considered the needs of those with protected characteristics when conducting negotiations, and considering the requirements of occupiers for a relocation property. The following criteria (which can help mitigate against the detrimental effects of forced relocation on members of groups with protected characteristics) have been considered:
- Adaptation costs of relocation property;
 - A requirement to be close to care provision; and
 - A requirement to be close to family members.
- 7.3.9 Occupiers who use the commercial properties as informal housing (there is one resident living above the commercial properties at 7-8 Queen's Road who is not subject to a formal tenancy, according to Gateley Hamer's engagement with the freeholder) or are not property owners may face loss of housing without compensation or support with relocation. Those who live in informal housing are often forced to do so due to very low income or inability to work or find employment, which may be more likely for members of some protected characteristic groups, such as disability or race. As such, it will be important that tenants (as well as owner-occupiers) are supported to seek appropriate alternative accommodation. Gateley Hamer is engaged to provide this support. Gateley Hamer have recommended surveyors with compulsory acquisition experience to the affected residents on Queen's Road, funded by Air Products, and have provided support throughout the negotiation and acquisition process. This has ensured that the residents, including those with protected characteristics are receiving fair and suitable payments for properties and support in finding alternative accommodation. Gateley Hamer have confirmed that the informal occupier will be supported with the same measures which are intended for the owner occupiers or formal tenants.
- Negative effect: Adverse noise, vibration, and air quality impacts on nearby sensitive receptors**
- 7.3.10 During the construction phases of the Project, there is the potential for significant effects in relation to noise and vibration to be experienced by surrounding residential and commercial properties.

- 7.3.11 An assessment of the impact of construction of the Project is included in ES **Chapter 7: Noise and Vibration [TR030008/APP/6.2]**. Minor adverse effects (not significant) are expected to be experienced by residential occupiers immediately adjacent to the Site on Queens Road. Mitigations set out in the **Outline Construction Environmental Management Plan (“CEMP”) [TR030008/APP/6.5]** (secured by a requirement of the **draft DCO [TR030008/APP/2.1]**) will ensure that residual effects are not significant.
- 7.3.12 However, some groups with protected characteristics also have differential sensitivity to noise and vibration. For example, people with dementia have an increased sensitivity to noise and light (Ref 1-38); whilst some children are more susceptible to increased noise levels than others, particularly those with a pre-existing medical condition or sensory disorders, such as ADHD or autism. Autistic children and adults are particularly sensitive to the changes in their environment and can experience severe discomfort caused by uncharacteristic, loud noises (Ref 1-39).
- 7.3.13 **Chapter 7: Noise and Vibration [TR030008/APP/6.2]** of the ES sets out the effects which construction will have on Noise Sensitive Receptors (“NSRs”). If residential properties on Queens Road are still occupied during construction work on the West Site, the short-term noise effects are deemed to be of minor adverse significance. Disabled residents on Queens Road may be particularly affected, as they are likely to spend more of their time at home and may therefore face greater exposure to increased noise levels than other individuals who spend more time outside the home during core working hours. In this context, the elevated levels of health conditions and disability deprivation identified in the area is noted.
- 7.3.14 **Chapter 7: Noise and Vibration** of the ES **[TR030008/APP/6.2]** sets out the potential for vibration impacts from piling as part of the construction works to be carried out during Phase 1 on the West Site. There is potential for any disabled people who are still residing in the Queens Road properties to be particularly affected. However, any significant impacts on disabled people should be avoided as, in the **Outline CEMP [TR030008/APP/6.5]**, it is specified that the types of piling will be selected to reduce vibration impact and there will be a minimum 12-hour continuous break in piling within each 24-hour period.
- 7.3.15 In addition, it is discussed in **Chapter 7: Noise and Vibration [TR030008/APP/6.2]** that if vibratory rollers were required to be used, medium/major adverse impacts could be experienced by occupants in terms of vibration annoyance. This would, again, be experienced most acutely by disabled residents. However, use of non-vibratory rollers is set out in the **Outline CEMP [TR030008/APP/6.5]** so that any residual effects are minor adverse.

- 7.3.16 There is also the potential for significant adverse effects as a result of construction traffic passing residential NSRs on Queens Road, but taking account of the anticipated construction traffic volumes and the proposed construction traffic management plan, no significant effects are anticipated. Additional residential properties in Immingham further from the Site have also been assessed in relation to the noise and vibration impact which may be experienced. It has been judged that the properties close to 500m from the Site (residential properties at Somerton Road, Worsley Road, Dunster Walk, Ings Lane, Oakham Walk, and Kendal Road as well as residential properties at Chestnut Avenue, Waterworks Street and Spring Street) are likely to experience low to very low levels of noise and vibration related impact which should not result in significant effects.
- 7.3.17 Those working in businesses along Queens Road and other surrounding streets may be impacted by construction noise and vibration, taking into account the core construction hours from 07:00-19:00 between Monday and Saturday. Noise and vibration may have a greater impact on some vulnerable groups than others. However, the measures outlined in the **Outline CEMP [TR030008/APP/6.5]** anticipated to adequately mitigate these impacts.
- 7.3.18 Steps to mitigate construction noise and vibration effects have been included in the **Schedule of Mitigation and Monitoring [TR030008/APP/7.2]**, for example the use of pneumatic percussive tools with effective silencers and acoustic covers, and all such measures have been included in the **Outline CEMP [TR030008/APP/6.5]**.
- 7.3.19 Further, as discussed in **Paragraph 7.3.3** endeavours are being made to acquire the Queens Road residential properties by agreement. Where such agreements are not concluded and any compulsory acquisition process has not completed, it is possible that residents may remain in the properties during construction. However, as outlined above, assistance is available to those residents to help them find alternative properties, such that they are not in occupation when construction works commence.
- 7.3.20 The construction of the Project has the potential to adversely affect local air quality. An assessment of the impact of construction of the Project is included in **ES Chapter 6: Air Quality [TR030008/APP/6.2]**. The impacts were assessed in respect of the most intensive stage of the construction works, which would be during Phase 1 (anticipated to last for two and a half to three years), to represent a reasonable worst case scenario. Dust emissions from demolition works, earthworks, construction activities and trackout are predicted to be large.⁶ Air quality could also be affected by site plant and non-road mobile machinery, vessel and traffic emissions. However, with appropriate mitigation secured in the **Outline CEMP [TR030008/APP/6.5]** the effects of these impacts are not predicted to be significant.

⁶ According to IAQM classification, dust emissions can be of small/medium/large magnitude.

- 7.3.21 Due to the fact that air quality would be mostly affected by dust emissions, its effects are expected to be most significant at residential properties on Queens Road within or immediately adjacent to the Site. While the effects are not predicted to be significant, some groups are more sensitive to adverse effects than others, which may mean residents who are elderly, pregnant or people with a disability that results in a weak respiratory system may be affected (Ref 1-40, Ref 1-41). In addition, as deaths resulting from respiratory diseases are significantly higher in the Project MSOA compared to the national average, it could indicate that many local residents already suffer from respiratory diseases and therefore might be more vulnerable to changes in air quality.
- 7.3.22 Due to the considerable distance of other residential premises to the Site, it is estimated that their air quality would not be impacted.
- 7.3.23 Those working in businesses along Queens Road may be affected by worsened air quality. Some groups are more sensitive to adverse impacts than others, which may mean employees who are elderly, pregnant or people with a disability that results in a weak respiratory system may be disproportionately affected (Ref 1-40, Ref 1-41).
- 7.3.24 As noted above, it is expected in ES **Chapter 6: Air Quality [TR030008/APP/6.2]** that all adverse effects on air quality arising from construction works can be mitigated by controlling dust emissions in a way such that there are no significant effects. Further, as set out in **Paragraphs 7.3.6 and 7.3.9** assistance is available to those residents to help them find alternative properties, such that they are not in occupation when construction works commence
- Negative effect: Increased traffic movements on the local road network**
- 7.3.25 Traffic movements during the Project construction phase and their expected effects are set out in ES **Chapter 11: Traffic and Transport [TR030008/APP/6.2]**. Residents are likely to use the same strategic roads (A180, A160, A1173) as construction traffic and workers travelling to the Site.
- 7.3.26 Where there is a material increase in traffic, people with certain protected characteristics, such as children, older people, disabled people, and pregnant women may be more vulnerable to the health risks associated with increased emissions (and associated air pollution) and noise and may therefore face differential adverse impacts. In addition to residential occupiers and employees, Immingham Day Nursery, which is located near the roundabout between Kings Road and A1173, is a sensitive receptor which could be negatively impacted by increased traffic and resulting poor air quality.

- 7.3.27 Large increases in HGV traffic movements and resulting increases in noise and vibration have the potential to impact some residents more than others, especially those with disabilities, neurodivergent people and the elderly, not only through sensory impacts, but also heightened fear and intimidation and overall feeling of safety due to the barriers this can create in safely crossing roads. That can lead to people in these groups staying at home more, resulting in significant disruption to their day-to-day lives.
- 7.3.28 The A1173 and Kings Road form part of the 'Immingham to Grimsby Cycle Superhighway', whilst there is also a cycle path on the north side of the A1173. In general, increased traffic can mean that cycling becomes less safe for users (Ref 1-62), or cause heightened safety concerns particularly amongst young, elderly, or disabled users who may have less confidence. The potential intimidation factor caused by HGV movements is particularly significant for cyclists given the greater chance of a collision being fatal (Ref 1-63). This may lead to a decrease in active travel in the community for travel to education, employment and leisure and community facilities.
- 7.3.29 It is estimated that the Kings Road (between A1173 and Queens Road) would experience the greatest percentage increase in traffic flows as a result of the Project. As per Table 11-24 of **Chapter 11: Traffic and Transport [TR030008/APP/6.2]**, the Queens Road (between Kings Road and Queens Laporte Road) section of the local network will see a 18% increase in total vehicle numbers, and a 10% increase in the number of HGVs, during the peak construction period in 2026 compared to the predicted 2026 baseline traffic flow.
- 7.3.30 **ES Chapter 11: Traffic and Transport [TR030008/APP/6.2]** has concluded that this section of the A1173 is unlikely to see a significant increase of traffic during the Project construction phases.
- 7.3.31 The transport projections estimate that HGV traffic movements are unlikely to increase significantly in residential areas. In terms of the residential properties at Queens Road, assistance is available to those residents to help them find alternative properties, such that they are not in occupation when construction works commence.
- Negative effect: Potential temporary closure of local businesses and loss of employment during construction phase**
- 7.3.32 As detailed in **ES Chapter 23: Socio-Economics [TR030008/APP/6.2]**, it is anticipated that the businesses located within 9-30 Queens Road (excluding 18) would be able to remain operational throughout the Project construction period. Nevertheless, Queens Road could face adverse effects during construction, caused by increased traffic and noise. These factors may negatively impact groups within the local workforce with protected characteristics that are more vulnerable – including people with disabilities, elderly and pregnant women. Air Products is in discussions with the landowners regarding the potential for voluntary acquisition of these properties.

7.3.33 If businesses were to close and not relocate, then business owners, employees and self-employed workers might experience temporary or permanent loss of income and/or employment unless and until further employment is obtained. However, as noted above, any acquisition of these properties would be by agreement and no compulsory acquisition is proposed.

Neutral effect: Temporary diversion to PRow during construction

7.3.34 It is proposed that Public Bridleway 36 be temporarily closed for the duration of the construction period. Public Bridleway 36 runs through a woodland belt and connects users to a coastal access path towards Grimsby.

7.3.35 Following consideration of feedback received during the First Statutory Consultation, a decision was taken to provide a temporary Bridleway diversion route, which will run through the Temporary Construction Area to reconnect with the Bridleway further east on the seawall (see **Plate 6-2**). The diversion would be removed after completion of Phase 1 of the construction and the Bridleway reopened.

7.3.36 Diversion of PRow in general can result in changes to journey time, disruption of local travel patterns and certainty of routes for users, which may have differential adverse impacts on those with restricted mobility, including older people, disabled people and people with pushchairs.

7.3.37 The existing Bridleway 36 presently serves mostly recreational purposes. It is however unsuitable for those with restricted mobility and therefore, whilst the proposed diversion could add up to approximately 400m to the journey length, it is unlikely to present additional impediment to those using it. There will also be temporary closure of the northern section of Long Strip, but no formal rights of way exist over this section and its use is considered to be limited.

7.3.38 A sea angling group uses an area within the Site for fishing activities, in the vicinity of where Public Bridleway 36 meets the sea wall. This is not a public right of way but informal access to the area will be prevented to enable the jetty to be constructed. During construction access to the sea wall for anglers would be stopped up, however as there are other locations on the sea wall that provide opportunities for sea anglers, the impact is considered not significant. During operation, the sea anglers would still have access to the sea front to the point where Bridleway 36 is diverted. As such **Chapter 23: Socio-Economics** of the ES [TR030008/APP/6.2] has assessed the impact on sea anglers at operation as not significant. No differential effects on particular groups have been identified in relation to access to this area for the purposes of sea angling.

Positive effect: Employment generation during construction phases

- 7.3.39 The Project has the potential to generate substantial economic benefits, such as new jobs in the area. As detailed in ES **Chapter 23: Socio-Economics [TR030008/APP/6.2]** it is estimated that during the construction phase the Project would support 627 total net jobs per annum. Employment creation includes temporary employment opportunities, both directly at work sites and indirectly in the supply chain, and these should benefit residents of the local area through opportunities to secure employment.
- 7.3.40 The Project LSOA, Project MSOA, and North East Lincolnshire County experience high levels of employment deprivation with large proportions of the local population being economically inactive in comparison to national averages. The Project LSOA is within the 10% most deprived LSOAs nationally in terms of education, skills and training deprivation, thus simply offering the jobs to the local population might be insufficient in advancing equality of opportunity.
- 7.3.41 The creation of new jobs is expected to have a significant beneficial effect in the local community, and especially for those who are disproportionately represented in wider national unemployment and economic inactivity figures, such as young people or people with a disability.
- 7.3.42 **Chapter 23: Socio-Economics [TR030008/APP/6.2]** of the ES notes that Immingham Jobcentre Plus has offered to support employability programmes to maximise the benefit to the local community.

7.4 Operation

Positive effect: Employment opportunities during the operational phase

- 7.4.1 The Project would generate socio-economic benefits through the creation of jobs during the operation of the Project. As per ES **Chapter 23: Socio-Economics [TR030008/APP/6.2]**, it is currently estimated that during operation 207 total gross jobs will be created, comprising 134 direct roles (working at the terminal) and 142 indirect roles (created in the supply chain as a result of the Project). However, due to displacement, which measures the extent to which the benefits of a development are off-set by reductions in output or employment elsewhere, and consequently applying a displacement factor of 25% - in line with Homes and Communities Agencies ("HCA") guidelines - it is estimated that 69 jobs will be lost as a result of the Project. This brings total net operational employment to 207 jobs created.
- 7.4.2 The creation of new jobs may have a positive effect on those in the local community who are disproportionately represented in unemployment and economic inactivity figures, for example young people and disabled people (Ref 1-42, Ref 1-43) and groups underrepresented in the port/industrial sector, for example women (Ref 1-44). Furthermore, the Project LSOA, and North East Lincolnshire County in general, experience elevated levels of employment deprivation with large proportions of the local population being economically

inactive compared to the national level - new employment opportunities may benefit these residents.

- 7.4.3 There is potential to create further beneficial employment opportunities through the implementation of local supply chain initiatives during operation of the Project, as outlined in ES **Chapter 24: Human Health and Wellbeing [TR030008/APP/6.2]**. For example, **Chapter 23: Socio-Economics [TR030008/APP/6.2]** of the ES notes that Immingham Jobcentre Plus has offered to support employability programmes to maximise the benefit to the local community.
- 7.4.4 The job opportunities to be created would also support the aims of the North East Lincolnshire Local Plan, which states the intention to create 8,800 new jobs between 2013-2032 focused on key economic sectors, including ports and logistics, and renewable energy.
- Negative effect: Adverse noise, vibration, and air quality effects on nearby sensitive receptors during operation of the Project**
- 7.4.5 Operation of the Project may result in detrimental air quality changes due to marine-side vessel emissions, landside combustion and process emissions, odour emissions and vehicle movements and may have an adverse effect on individuals due to increased noise and vibration. Those living or working closest to the Site, particularly on Queens Road, could be most affected, particularly if they are more vulnerable to the adverse health effects of poor air quality or noise.
- 7.4.6 However, the air quality assessment presented in ES **Chapter 6: Air Quality [TR030008/APP/6.2]** has assessed the reduction in air quality to be negligible on sensitive receptors and therefore impacts are predicted to be minimal.
- 7.4.7 Further, the acquisition of the residential Queen's Road properties and the assistance provided to those occupiers to find alternative accommodation ahead of operation will ensure that those occupiers do not experience any noise and vibration effects during the operational phase.
- 7.4.8 The assessment presented within ES **Chapter 7: Noise and Vibration [TR030008/APP/6.2]** identified that there could be impacts of minor adverse significance (not significant, and not exceeding the Lowest Observed Adverse Effect Level ("LOAEL") once mitigation measures have been deployed on some residential properties on the eastern edge of Immingham. No significant effects are therefore expected for these properties.

Negative effect: Increased traffic movements on the local road network

- 7.4.9 Noise and vibration from traffic (particularly HGVs) has the potential to impact on residents around the Site and the wider area (i.e., further afield than Queen's Road); for example, those living along King's Road and in particular at the roundabout with Pelham Road which will likely be used by the majority of HGVs. Children (Ref 1-48), older people (Ref 1-49), disabled people (Ref 1-50), and pregnant women (Ref 1-51) are all more vulnerable to the various adverse health risks associated with increased traffic and may therefore face differential adverse effects. Disabled people may be disproportionately affected, not only through sensory or health impacts, but also increased safety concerns and feelings of vulnerability (Ref 1-52) when crossing the road or walking along footpaths adjacent to HGV traffic routes.
- 7.4.10 The 24-hour operational nature of the Project might exacerbate negative effects of traffic movements by differentially impacting on children, elderly and disabled people who are more likely to experience sleeping difficulties or are more vulnerable to the negative impacts of a disrupted sleeping pattern.
- 7.4.11 According to ES **Chapter 11: Traffic and Transport [TR030008/APP/6.2]** during the Project operational phase, total daily two-way (i.e., access and egress of the Site) traffic movements on Queens Road between Kings Road and Laporte Road would amount to 336 - comprising 134 shift worker movements, 96 HGV movements, and 106 'normal' Monday to Friday worker movements. Baseline figures for Queen's Road – between Kings Road and Laporte Road currently stand at 566 average daily HGV two-way flows (of 3,883 total traffic movements). Therefore, an additional 96 HGV movements constitutes a 17% increase.
- 7.4.12 Based on this volume of traffic, with staff working shifts and only around four HGVs per hour, the levels are below the screening threshold of including highway links where traffic flows would increase by more than 30% for assessment outlined in the Guidelines for the Environmental Assessment of Road Traffic ("GEART") (Ref 1-61). As such, a full assessment of the operational traffic and transport was scoped out in ES **Chapter 11: Traffic and Transport [TR030008/APP/6.2]**
- 7.4.13 In summary, noise and vibration from HGV traffic has not been identified as a significant concern. As noted above, the acquisition of the residential Queen's Road properties and the assistance provided to those occupiers to find alternative accommodation ahead of operation will ensure that those residents and occupiers do not experience any effects during the operational phase.

7.5 Decommissioning

7.5.1 The Project only makes provision for decommissioning of the land-side hydrogen production facility after its design life of up to approximately 25 years (and any associated infrastructure on the topside of the jetty). At the time of decommissioning, due regard will be given to equality considerations in line with legislative requirements. It is expected that the marine-side aspect of the Project and the jetty access road would remain in place and become part of the fabric of the Port estate.

7.5.2 Potential adverse and beneficial effects on equality considerations associated with the Project decommissioning phase include:

- a. Potential employment opportunities that could benefit individuals who share protected characteristics in the local area, as well as local businesses through the supply chain;
- b. Decommissioning activities are likely to have a similar effect to that experienced during the Project construction phase, but smaller in magnitude and timeframe given the lesser extent of required works;
- c. The nature of noise and vibration and air quality effects of decommissioning the hydrogen production facility are likely to be similar to those experienced during construction, although will most probably be less significant as less of the Project is being decommissioned compared to what is proposed to be constructed. The decommissioning activities may negatively affect houses on the eastern edge of Immingham, including residents with protected characteristics who are especially vulnerable to the adverse health effects of increased noise levels. Appropriate best practice mitigation measures will be applied during decommissioning works for the hydrogen production facility and are documented in the Outline **Decommissioning Environmental Management Plan** (“DEMP”) [TR030008/APP/6.6] to control noise effects; and
- d. Movement of vehicles associated with decommissioning may also have similar impacts as during construction and operation, in particular HGVs, but at a reduced scale relative to the construction phase.

7.6 Summary of Impacts

7.6.1 **Table 7-2** provides a summary of the potential construction, operation and decommissioning equality impacts of the Project. This provides an assessment of groups with protected characteristics who are likely to be disproportionately or differentially affected by each of the impacts. As defined in **Section 2**:

- a. A *disproportionate* equality effect arises when an impact has a proportionately greater effect on protected characteristic groups than on the general population overall at a particular location.

b. A *differential* equality effect is one which affects members of a protected characteristic group differently from the rest of the general population because of specific needs, or a recognised vulnerability associated with their protected characteristic.

7.6.2 In some cases, protected characteristic groups can be subject to both disproportionate *and* differential equality effects.

7.6.3 **Table 7-2** also provides a brief overview of planned mitigation measures to minimise adverse impacts, as well as activities to be put in place to enhance opportunities resulting from beneficial impacts.

Table 7-2: Summary of potential equality impacts of the Project

Impact	Disproportionately/ Differentially Affected Protected Characteristic Groups											Overview of Potential Effects	Planned Mitigation/ Actions	
	Age			Sex	Ethnicity	Religion	Disability	Transgender	Sexual Orientation	Pregnancy/ Maternity	Marriage and civil partnership			
	Children	Young People	Older People											
Consultation														
Beneficial	Inclusive community consultation		✓	✓				✓			✓	✓	All groups including those with protected characteristics who are traditionally under-represented in terms of engagement. This can include young people and disabled people.	
Construction														
Beneficial	Employment generation during construction phases		✓		✓			✓					Young people and disabled people who experience disproportionately higher levels of unemployment may experience positive effects. Furthermore, women may also benefit from targeted employment as they are underrepresented in Port employment figures.	
Adverse	Permanent acquisition of residential properties	✓		✓			✓						Forced relocation could affect a number of residents who have disabilities and mobility issues. Forced relocation can have a negative impact on mental health of the residents, potential loss of accessibility to public transport links and change in commute.	<p><u>Planned mitigation:</u></p> <p>The Applicant has provided and will continue to provide support for residents, through Gateley Hamer and the funding of surveyors for those seeking alternative accommodation.</p> <p>Adaptation costs of relocation property.</p> <p>Discussion to take account of any requirement to be close to care provisions.</p> <p>Discussions to take account of any requirement to be close to family members.</p> <p>Engagement with local authority with the consent of residents in relation to supported housing for any vulnerable residents where private alternative accommodation is not viable.</p>

Impact	Disproportionately/ Differentially Affected Protected Characteristic Groups											Overview of Potential Effects	Planned Mitigation/ Actions
	Age			Sex	Ethnicity	Religion	Disability	Transgender	Sexual Orientation	Pregnancy/ Maternity	Marriage and civil partnership		
	Children	Young People	Older People										
Adverse noise, vibration, and air quality impacts on nearby sensitive receptors	✓	✓	✓				✓			✓		Children are more vulnerable to the effects of increased noise and vibration than the population overall. Older people, disabled people and pregnant people may also be more vulnerable to noise exposure due to physiological and psychological vulnerabilities, as well as potentially spending more time at home than the population overall.	<p><u>Planned mitigation:</u></p> <p>Planned voluntary acquisition of residential on Queens Road that would likely experience major adverse noise impacts during the construction phase and support for occupiers to find alternative accommodation.</p> <p>Steps to mitigate construction noise and vibration effects are set out in the Schedule of Mitigation and Monitoring [TR030008/APP/7.2], for example the use of pneumatic percussive tools with effective silencers and acoustic covers and will be secured through the Outline CEMP [TR030008/APP/6.5].</p> <p><u>Monitoring:</u></p> <p>Air Products will monitor noise during operation, as secured in the Schedule of Mitigation and Monitoring [TR030008/APP/7.2] (Table 2-2 SRD-NV6)</p>
Increased traffic movements on the local road network	✓		✓				✓			✓		Children, older people, disabled people, and pregnant women can be more vulnerable to the negative impacts of increased traffic flows and consequent increase in noise and vibrations and worsened air quality, both of which can particularly be caused by large vehicles such as HGVs.	<p><u>Planned mitigation:</u></p> <p>Development of a Construction Environmental Management Plan (CEMP) and Construction Traffic Management Plan including a Construction Worker Travel Plan (CWTP).</p>

Impact	Disproportionately/ Differentially Affected Protected Characteristic Groups											Overview of Potential Effects	Planned Mitigation/ Actions
	Age			Sex	Ethnicity	Religion	Disability	Transgender	Sexual Orientation	Pregnancy/ Maternity	Marriage and civil partnership		
	Children	Young People	Older People										
Diversions to PRowWs during construction		✓	✓				✓			✓		The diversion provided to the PRowW may be more accessible compared to the existing bridleway due to its poor quality, this could provide positive impacts for those with mobility issues such as older people, disabled people and people with young children/pushchairs. However, while not expected to present significant barriers, these groups could also experience differential effects which make extended journeys more difficult. as the diversion is longer Taken together, these potential effects suggest a neutral impact overall of the closure of the PRowW.	Planned mitigation: Appropriate diversion provided.
Operation													
Beneficial	Employment opportunities during the operational phase		✓		✓			✓				Young people and disabled people who experience disproportionately higher levels of unemployment may experience positive effects. Furthermore, women may also benefit from targeted employment as they are underrepresented in Port employment figures.	
Adverse	Adverse noise, vibration, and air quality impacts on nearby sensitive receptors during Project operation	✓		✓			✓			✓		Children are more vulnerable to the effects of increased noise and vibrations and decreased air quality compared to the population overall. Older people, disabled people and pregnant people may also be more vulnerable to noise exposure and poor air quality due to physiological and psychological vulnerabilities, as well as because they may spend more time at home than the population overall.	Planned mitigation: Acquisition of residential on Queens Road ahead of operation thus avoiding adverse effects on key sensitive receptors.
	Increased traffic movements on the local road network	✓		✓			✓			✓		While no significant impact is anticipated on the whole. Noise and vibration caused by an increase in traffic may disproportionately impact young, old, disabled and pregnant people – both due to noise and vibration impacts but also safety concerns.	

Impact	Disproportionately/ Differentially Affected Protected Characteristic Groups											Overview of Potential Effects	Planned Mitigation/ Actions	
	Age			Sex	Ethnicity	Religion	Disability	Transgender	Sexual Orientation	Pregnancy/ Maternity	Marriage and civil partnership			
	Children	Young People	Older People											
Decommissioning														
Beneficial	Employment opportunities during decommissioning		✓		✓			✓					Young people and disabled people who experience disproportionately higher levels of unemployment may experience positive effects. Furthermore, women may also benefit from targeted employment as they are underrepresented in Port employment figures.	
Adverse	Adverse noise, vibration, and air quality impacts on nearby sensitive receptors during Project decommissioning	✓		✓			✓			✓			Children are more vulnerable to the effects of increased noise and vibrations and decreased air quality compared to the population overall. Older people, disabled people and pregnant people may also be more vulnerable to noise exposure and poor air quality due to physiological and psychological vulnerabilities, as well as because they may spend more time at home than the population overall.	Planned mitigation: Noise impacts to be designed out or limited in the Outline Decommissioning Environmental Management Plan ("DEMP") [TR030008/APP/6.6].

8 Summary and conclusions

8.1 Summary

8.1.1 This EqlA has identified the key issues and potential impacts related to protected characteristic groups with regards to the Project. This section summarises key impacts and the mitigation measure that have been planned.

PSED Aim 1: To eliminate unlawful discrimination, harassment and victimisation, and other conduct prohibited by the Act

8.1.2 No direct discrimination, harassment and victimisation of any protected characteristic group has been identified as a result of the Project.

8.1.3 There is potential for the Project to result in disadvantage for some protected groups through the following:

- a. Relocation of residents through acquisition of properties on Queens Road in the Site. This could have negative effects on residents with protected characteristics such as disability through challenges in finding appropriate, local, alternative accommodation. However, as significant consultation and negotiation is being carried out with residents taking into account their protected characteristics, the risk of disadvantage is therefore considered to be low.
- b. Increased noise levels for residents during construction, operation and decommissioning. This could have a differential effect on those who are more sensitive to noise impacts such as children and disabled people or those who may spend more time at home such as older people. The proposed acquisition of the Queen's Road residential properties and assistance to residents will help ensure that residents of these properties can find alternative accommodation ahead of effects being experienced. The wider mitigations in relation to piling, traffic control and construction methods will reduce this effect on occupiers of commercial properties on Queen's Road and residents and commercial properties further from the Site, in the East of Immingham. Therefore, the overall risk of disadvantage is considered to be low.

PSED Aim 2: To advance equality of opportunity between people who share a protected characteristic and those who do not

8.1.4 The EqlA has highlighted a number of benefits of the Project that would help to reduce inequalities and advance equality of opportunity between people who share a protected characteristic and those who do not. These are summarised below:

- a. The green hydrogen generation of the Project is considered to have a beneficial effect on the climate. The adverse impacts of climate change are disproportionately expected to affect protected characteristic groups such as children, older people, disabled people and women. Therefore, the Project would support in advancing equality of opportunity for these groups.

- b. The construction, operation and decommissioning of the Project could provide a range of procurement and employment opportunities to local groups who are overrepresented in unemployment figures (such as younger people and disabled people) or underrepresented in the port and energy industry (such as women) will enhance the positive effect. Furthermore, local employment will help mitigate local issues relating to deprivation, such as high unemployment and economic inactivity.

PSED Aim 3: To foster good relations between people who share a protected characteristic and those who do not

- 8.1.5 The EqIA has highlighted how the Project can help to foster good relations between people who share a protected characteristic and those who do not, for example:
 - a. Inclusive public engagement has been undertaken and will continue to be undertaken as the Project develops. Consultation and engagement processes have been designed to reach as many people as possible within the areas in the vicinity of the Project.

8.2 Conclusions

- 8.2.1 This EqIA has identified some potential for negative impacts on groups with protected characteristics through the construction, operation and decommissioning of the Project. However, in almost all cases, the acquisition of residential properties within the Site or other mitigation measures would significantly reduce the negative impact.
- 8.2.2 The key negative impacts are:
 - a. Relocation of a number of residents from properties on Queens Road, including a number with protected characteristics in relation to disability and older age. Relocation can take a toll on the mental health and wellbeing of the residents, with the process of negotiation of adequate compensation, acquiring a new house (including securing necessary adaptations where necessary), and movement of personal belongings being potentially lengthy and stressful. Without support, people belonging to the most vulnerable groups can experience a significant struggle. However, the Applicant is undertaking ongoing negotiations with those affected through Gateley Hamer and directing the residents to appropriate advisors, with compulsory purchase experience. If appropriate and subject to the consent of the relevant occupier, Gateley Hamer will write to NELC to seek support with assisted living needs should it not be possible to find a suitable privately owned relocation property.
 - b. Increased noise levels for residents during construction, operation and decommissioning. This could have a differential effect on those who are more sensitive to noise impacts such as children and disabled people or those who may spend more time at home such as older people. However, the residential properties on Queens Road within the Site are to be acquired and assistance provided in finding alternative accommodation. The effects on

residents who live further from the Site, such as the residents in Immingham closest to the Site, are expected to be of only minor adverse significance (not significant, and not exceeding the LOAEL) once mitigation measures will be deployed.

- c. Temporary diversion of the Bridleway – resulting in a proposed longer alternative route and closure of informal access to part of the seawall. The proposed temporary diversion of the Bridleway could be approximately 400m longer than the existing route. This is not expected to have a differential impact on protected characteristic groups given the unsuitability of the original Bridleway PRow for those with limited mobility.

8.2.3 It is considered that with, continued regard to the effects on different protected characteristics and vulnerable groups, in addition to the measures already taken by the Applicant, it will be possible for negative impacts to be adequately mitigated through the mitigation set out in the ES and described further in the **Schedule of Mitigation and Monitoring [TR030008/APP/7.2]** and detailed in the Outline **CEMP** and its annexes **[TR030008/APP/6.5]**.

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