PORT OF TILBURY LONDON

PLANNING ACT 2008
INFRASTRUCTURE PLANNING
(APPLICATIONS: PRESCRIBED FORMS AND PROCEDURE) REGULATIONS 2009
REGULATION 5 (2) (q)

PROPOSED PORT TERMINAL AT FORMER TILBURY POWER STATION

TILBURY2

TR030003

VOLUME 6

ES APPENDIX 6.6: EQUALITIES IMPACT ASSESSMENT

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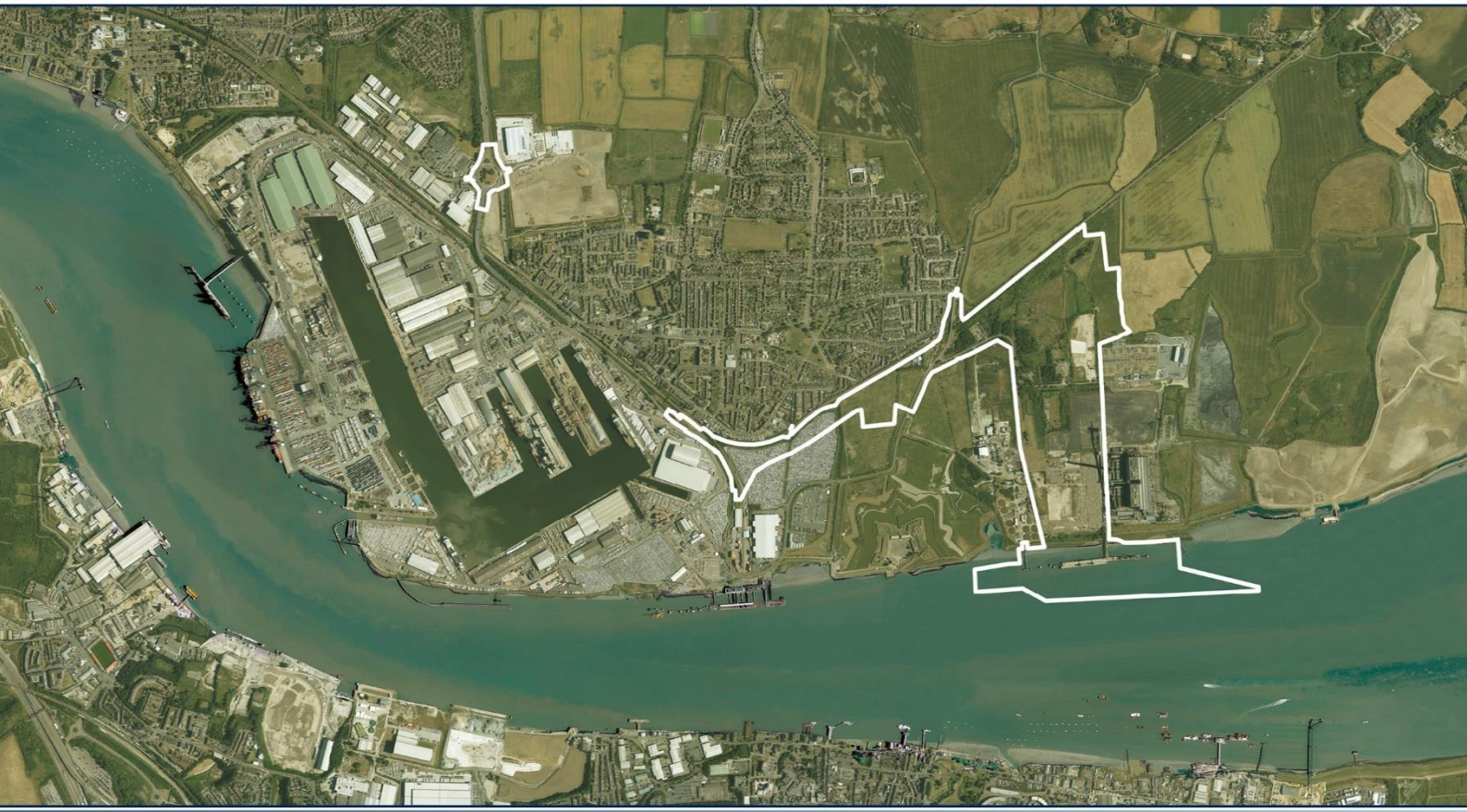

TILBURY2

PORT OF TILBURY

PROPOSED PORT TERMINAL AT FORMER TILBURY POWER STATION 'TILBURY2'

PLANNING ACT 2008

Infrastructure Planning

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Equalities Impact Assessment

Formal Issue Schedule

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1.0 INTRODUCTION

EQIA AIMS AND OBJECTIVES

1.1 The Equality Impact Assessment (EqIA) process is designed to ensure that projects, policies and practices do not discriminate or disadvantage people, and to promote equality where possible. An EqIA considers the impact of a proposal on relevant groups who share characteristics which are protected under the Equality Act 2010.

1.2 The aim of this EqIA will be to:

- Identify equalities issues in relation to proposals, and how these may affect equality target groups
- Identify measures to mitigate any anticipated negative effects, and enhance positive outcomes for communities where possible
- Outline further assessment work that may need to be undertaken to aid the further development of proposals

1.3 This assessment accompanies the ES, and has been updated in line with the progression of development proposals. It incorporates and builds upon a range of other technical assessments undertaken as part of the ES process.

2.0 REGULATORY AND POLICY CONTEXT

INTRODUCTION

2.1 The EqIA will has been prepared in accordance with current policy and legislative guidance. This includes both the National Policy Statement (NPS), and other national, regional and local policy. This section provides an overview of the key policy documents used in the EqIA.

NATIONAL POLICY

National Policy Statement for Ports

2.2 The NPS for Ports was published in 2012 by the Department of Transport. This statement is part of the planning system established under the 2008 Planning Act, used to deal with Nationally Significant Infrastructure Projects (NSIPs).

2.3 Paragraph 4.16.1 of the NPS observes that ports "*have the potential to affect the health, well-being and quality of life of the population*"[1]. It is therefore important for the applicant and decision-maker to ensure that impacts are appropriately mitigated, and do not adversely impact upon individual communities. Paragraph 4.16.3 further states that "*new port developments may affect the composition, size and proximity of the local population*", particularly in terms of access to key services such as transport, and open space and recreational opportunities.

2.4 Paragraph 4.7 of the NPS outlines the requirements for an Environmental Statement (ES), outlining how aspects of the environment are likely to be impacted by the project. This section of the NPS advises the applicant to consider the potential effects of a proposal for a project. Paragraph 4.7.2 states how this involves the applicant providing information on the "*likely significant social and economic effects of the development and shows how any likely significant negative effects would be avoided or mitigated*." This information could include a range of issues, such as employment, equality, community cohesion, health and wellbeing.

2.5 Paragraph 4.7.3 of the highlights the importance of considering the cumulative impacts of development, and states that the ES should "*provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development.*"

Equality Act

2.6 The Equality Act 2010 brings together a number of previously separate anti-discrimination laws into one single Act. The Act harmonises existing legislation to protect individuals and communities from unfair treatment, and in turn seeks to reduce socio-economic inequalities. The main pieces of legislation within the Act relate to gender, gender reassignment, race, disability, sexual orientation, marriage, pregnancy and maternity, religion and age. These Acts legally protect people from discrimination in both the workplace and wider society.

[1] National Policy Statement for Ports (2012), Department for Transport

2.7 The Act identifies a number of 'protected characteristics', whereby it is against the law to discriminate against anyone because of:

i. "Age

ii. Being or becoming a transsexual person

iii. Being married or in a civil partnership

iv. Being Pregnant or on maternity

v. Disability

vi. Race including colour, nationality, ethnic or national origin

vii. Religion, belief or lack of religion/ belief

viii. Sex

ix. Sexual orientation"

2.8 The Public Sector Equality Duty (PSED) requires public bodies to have regard to the need to eliminate discrimination, promote equal opportunities and encourage good relations across all people and communities. In light of these requirements, equalities impacts will be considered as part of the planning and development process by decision makers such as the Secretary of State.

National Planning Policy Framework

2.9 The National Planning Policy Framework (NPPF) was published in March 2012, and sets out the overarching planning policies for England, with guidance on how these are expected to be applied. The NPPF provides the framework for councils and local communities to develop local and neighbourhood plans, which reflect the needs and priorities of their communities.

2.10 The NPPF asserts that the overarching purpose of the planning system is to contribute to achieving sustainable development, and as such, there is a general 'presumption in favour of sustainable development' that applies to both the plan-making and decision-taking process.

2.11 Paragraph 7 of the NPPF states that there are three dimensions to sustainable development: economic, social and environmental.

- Economic role – contributing to building a strong, responsive and competitive economy;
- Social role – supporting strong, vibrant and healthy communities; and
- Environmental role – contributing to protecting and enhancing the natural, built and historic environment.

2.12 There are several policies in the NPPF of relevance to port development.

2.13 Paragraph 18 of the NPPF outlines the Government's commitment to securing economic growth, in order to create jobs and prosperity. The priority is therefore to

build on the country's inherent strengths, and to meet the challenges of global competition.

2.14 Paragraph 21 builds on this, and states that planning policies should "seek to address potential barriers to investment, including a poor environment or any lack of infrastructure, services or housing". In doing so, planning authorities should support existing business sectors, taking account of whether they are expanding or contracting, and where possible, identify and plan for new or emerging sectors likely to locate in the area.

2.15 In relation to equalities, section eight of the NPPF outlines the importance of promoting healthy and inclusive communities through planning. Paragraph 69 states that planning policies should promote safe and accessible development, which encourage the active and continual use of public areas. Planning policies and decisions should therefore promote:

- "Opportunities for meeting between member of the community who might not otherwise come into contact with each other
- Safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion
- Safe and accessible development, containing clear and legible pedestrian routes, and high quality public space, which encourage the active and continual use of public areas"

Planning Policy for Traveller Sites

2.16 The Equality Act 2010 defines Romany Gypsies and Irish Travellers as ethnic groups. They are therefore legally protected against race discrimination, which is included within the protected characteristics.

2.17 The Planning Policy for Traveller Sites document was published by the Department for Communities and Local Government in 2015, and sets out the Government's planning policy for traveller sites and should be read in conjunction with the NPPF.

2.18 The overarching aim of the policy is to ensure fair and equal treatment for travellers, in a way that respects their traditional and nomadic way of life. The Policy supports a plan-lead approach, enabling local authorities to positively and sustainably plan for traveller communities as part of their Local Plan process. This includes gathering sufficient evidence, and identifying current and future accommodation needs.

2.19 Paragraph 13 of the policy outlines a number of issues relating to equalities. These provide the framework for how local planning authorities should ensure that their policies:

- "Promote peaceful and integrated co-existence between the site and the local community
- Ensure that children can attend school on a regular basis
- Ensure consideration is made for the effect of local environmental quality on the health and wellbeing of travelling communities."

LOCAL POLICY

Thurrock Borough Local Plan

2.20 The Thurrock Core Strategy and Policies for Management of Development was adopted in 2011. The Core Strategy sets out a number of policies which are of particular relevance to the assessment of equalities impacts.

2.21 The Core Strategy and Policies for Management of Development (Core Strategy) forms the main Local Plan document. The Core Strategy was originally adopted in 2011, and was subsequently updated in January 2015, following an independent examination on consistency with the NPPF. The Plan period covers up to 2026. This document sets out the spatial vision and planning policies for Thurrock across a range of strategic areas, including housing, employment, green belt, education and health, community facilities, sport and leisure and environment. The Core Strategy identifies the following strategic issues for Thurrock relevant to future development:

- Ageing population
- Deep pockets of deprivation
- Lack of integrated medical services, and a need to extend and upgrade the network of health centres around the Borough. There is not an even distribution of facilities.
- A need to diversify Thurrock's economic base to provide the local community with more training and employment opportunities in identified growth sectors.

2.22 The Core Strategy sets out a number of policies that support a reduction in health, social and economic inequalities across the borough:

- CSTP3 – Gypsies and Traveller
- CSTP4 – Travelling Showpeople
- CSTP5 – Neighbourhood Renewal
- CSTP9 – Wellbeing: Leisure and Sports
- CSTP10 – Community Facilities
- CSTP11 – Health Provision

2.23 These policies support inclusive development and regeneration across the borough, to help reduce inequalities and provide equitable access to services and opportunities.

Thurrock Local Plan – The Story So Far

2.24 A new Local Plan for Thurrock is currently being prepared by the Council. Thurrock is anticipated to undergo significant change over the next 20 year period, including investments in industry, service provision and across socio-economic indicators. A

range of forces will shape the future priorities for the Borough, including an ageing population, addressing housing pressures and job creation.

2.25 To date, the Council has undertaken an Issues and Options consultations (Oct/ Nov 2016), with a further Regulation 18 consultation planned for late 2017. The current Local Development Scheme assumes adoption by the end of 2020.

Single Equality Scheme – Equality Matters, 2012

2.26 The *Single Equality Scheme, Equality Matters* was published in 2012 by Thurrock Council, and complies with Section 149 of the Equality Act 2010 (Statutory Duties) Regulations 2011.

2.27 This document sets out the Council's approach to promoting equality and diversity, and the recognition that inequalities are often interdependent and interrelated across a range of factors.

2.28 Section two of the Single Equality Scheme sets out the priorities for Thurrock council in building resilience and cohesion across local communities. A number of relevant aims of the Scheme underpin the requirements of the EqIA, and provide a basis for meeting the Council's statutory equality obligations:

- "Oppose all forms of prejudicial discrimination on grounds of age, disability, ethnic origin, gender, gender reassignment, sexual orientation and religious or belief.
- Ensure equal access to jobs at all levels of the council so that [their] workforce reflects Thurrock's diversity
- Ensure that employment policies and practices do not discriminate. This includes those dealing with recruitment, promotion, training, grievance, capability, discipline and retention, performance and reward
- Promote diversity and tolerance through work with public, private and third sectors, both locally and regionally
- Take positive actions to prevent harassment and victimisation of residents, service users and employees"

Gypsy, Traveller and Travelling Showperson Accommodation Assessment, Thurrock

2.29 The Equality Act 2010 defines Romany Gypsies and Irish Travellers as ethnic groups. Travelling showpeople are therefore not
legally protected against discrimination, however have been considered as sharing protected characteristics as part of this assessment.

2.30 This study was commissioned by the Essex Planning Officer Association in 2014 to provide an evidence base to enable authorities to effectively comply with their requirements towards Gypsy and Travellers and Travelling Showpeople. The assessment identifies provision and potential need in regards to traveller accommodation, but also provides an understanding of issues facing the community more broadly.

2.31 Paragraph 1.9 of the Study states that there are a number of cultural groups included within the definition of Gypsies and Travellers. These groups include Romany Gypsies, Irish Travellers and New (Age) Travellers.

2.32 Paragraph 1.7 of the assessment states that Thurrock has historically been the base for a significant number of Travelling Showpeople. These communities have a different cultural identity to Gypsies and Travellers. Traditionally sites are used as 'winter quarters' from which Showpeople travel the rest of the year, however this pattern is shifting with an increasing need for permanent residence. This is particularly true for children and elderly members of the community. There is 'winter quarter' site within Tilbury.

2.33 Paragraph 1.26 sets out the approach to tackling inequalities for Gypsy and Traveller communities, referencing the DCLG's 'Progress report by the ministerial working group on tackling inequalities experienced by Gypsies and Travellers' report, published in 2012. The report contains a number of commitments to help improve both circumstances and outcomes for these communities, including raising educational aspirations, improving health outcomes, tackling hate crime, and encouraging appropriate site provision.

Other Guidance

2.34 In addition to the above policies, the EqIA was informed by a number of other data sources, including:

- Local government guidance on the 2010 Equality Act and EqIA
- Review of EqIAs prepared for other NSIPs to identify best practice
- EqIAs from relevant local authorities, to identify equalities groups and approach taken to equalities procedure.

3.0 METHODOLOGY

INTRODUCTION

3.1 This section outlines the methodology that has been used to prepare the EqIA.

3.2 The methodology has been informed through examining relevant national and local policy and guidance documents, along with a review of best practice examples. The methodology was informed by a number of stages:

- Literature and policy review
- Socio-economic data collection and baseline
- A review of non-statutory consultation responses received to date
- Assessment of potential impacts associated with the proposals upon different equalities groups

3.3 The NPS and the PSED also informed the scope of assessment.

GENERAL APPROACH

Scope

3.4 The identified groups were informed by the Equality Act 2010. As set out in Paragraph 2.7, the Equality Act (2010) identifies a number of 'Protected Characteristics'. These groups formed the basis of the assessment, as they legally protected from discriminatory practices.

3.5 Although low-income groups are not identified within the 'Protected Characteristics' under the Equality Act (2010), they have been included as part of this assessment because they are considered relevant to development proposals within the context of Tilbury. Low-income and deprivation typically overlap with other equalities characteristics, and therefore in the absence of complete data for some topics, it has the potential to be a good proxy. Similarly, working patterns has been included within the identified equalities groups, to ensure that adequate consideration is made for residents undertaking shift work, including night shifts. This type of working can disproportionately be undertaken by low-income communities, and forms part of wider equalities considerations.

3.6 Equalities groups can be defined as communities with either shared protected characteristics, or those considered particularly sensitive to adverse impacts. The equalities groups considered as part of the EqIA therefore include:

- Gender
- Age
- Race
- Religion

- Disability
- Sexual orientation
- Gender reassignment
- Marriage and Civil partnerships
- Pregnancy and maternity
- Low-income groups
- Working patterns

Equalities indicators

3.7 The role of the EqIA is to identify where changes associated with the proposals may result in disproportionate impacts, particularly in relation to equalities groups. A number of assessment topics were identified as appropriate for the nature of the proposals.

Table 1: Scope of topics assessed within the EqIA

Assessment topic	Includes:	Justification for inclusion within the EqIA
Accessibility	Private car use and bus network	Accessibility plays a key role in both individual and community opportunities, including accessing services, employment, and social interaction. The proposals will involve modifications to the local highway network, which could result in changes to accessibility. Accessibility was therefore considered an appropriate assessment topic for the EqIA.
Active Travel	Walking and cycling	Active transport options provide a healthy, affordable and sustainable alternative mode of travel, which is particularly important for residents without a car. Active transport plays a key role in providing access to services, employment, and social interaction. The proposals will involve modifications to the local highway network, and access routes which could result in changes to active transport opportunities and safety. It was therefore considered an appropriate assessment topic for the EqIA.
Air Quality	N/A	Air quality is a key determinant of health and wellbeing, particularly for residents with existing health and respiratory conditions. The proposals will involve construction and operation activity that is likely to result in localised changes air quality. It was therefore considered an appropriate assessment topic for the EqIA.
Noise	N/A	Noise disturbance is a key determinant of health and wellbeing, and can significantly influence the quality of life for those affected. The proposals will involve construction and operation activity that is

Assessment topic	Includes:	Justification for inclusion within the EqIA
		likely to result in localised changes to noise pollution. It was therefore considered an appropriate assessment topic for the EqIA.
Access to social infrastructure	Schools, community facilities and faith-based institutions	Access to social infrastructure plays a key role in reducing socio-economic inequalities, and ensuring equitable across communities. Poor access can have detrimental impacts upon health and wellbeing, along with economic welfare. The proposals will involve construction and operation activity that is likely to result in localised changes to access to social infrastructure. It was therefore considered an appropriate assessment topic for the EqIA.
Access to work and training	Employment opportunities, apprenticeships, skills and training	Access to work and employment plays a key role in reducing socio-economic inequalities, and improving economic security and opportunity. The proposals will involve construction and operation activity that is likely to result in localised changes to employment and training opportunities. It was therefore considered an appropriate assessment topic for the EqIA.
Safety	Road safety, community and personal safety	Safety covers a range of factors that significantly influence travel, work and leisure decisions. The proposals will involve construction and operation activity that is likely to result in localised changes to both personal, community and road safety. It was therefore considered an appropriate assessment topic for the EqIA.
Social capital	Social links, networks, and participation	Social capital underpins the success and prosperity of communities, and covers a range of themes. The proposals will involve construction and operation activity that is likely to result in localised changes to community networks, access and participation in public spaces. It was therefore considered an appropriate assessment topic for the EqIA.

3.8 These topics have been assessed in line with the proposals to identify the likely impacts on equalities groups, both in terms of scale, duration and possible mitigation measures.

RELATIONSHIP WITH OTHER DOCUMENTS

3.9 There are a number of assessment overlaps in relation to impacts upon vulnerable groups within the community. In order to fully capture potential impacts arising as a result of the proposals, a range of technical assessments that form part of the ES have fed into the EqIA. Chapters, therefore, of the following topics have been considered, with outputs incorporated as part of this assessment where relevant:

- Air quality
- Health Impact Assessment (HIA)

- Noise and vibration
- Land-side transport
- Socio-economic
- The outputs of the ES chapters have been assessed across a range of spatial scales, to identify anticipated impacts will effect different groups within the study area.
- Suggested mitigation measures are considered as part of the EqIA assessment where they are additional to those already identified as part of the ES.

CONSULTATION

3.10 This section summarises the approach to consultation within the NSIP application process, and provides an overview of the consultation undertaken by PoTLL to date. A review of consultation practices provides important context for the equalities assessment, and shows how 'harder to reach' groups have been engaged with as part of this process.

NSIP Consultation Process

3.11 Nationally Significant Infrastructure Projects require a front loaded process of consultation prior to submission. The opportunity to influence the design, location or outcomes of an NSIP application is in the pre-application stage, before the applicant finalises and submits the application to the Planning Inspectorate.

3.12 NSIP applicants are expected to consult widely on development proposals, including statutory consultees as set out in Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009.

PINS SCOPING RESPONSE

3.13 The PINS scoping response sets out the main points raised by the Planning Inspectorate and Statutory Consultees in relation to the Tilbury2 Scoping Report. The scoping response did not provide any direct comments in relation to the EqIA, or approach to assessing equalities outcomes. A number of the responses referring to health, noise, air quality and socio-economic factors both directly and indirectly influence how the proposals impacts upon different equalities groups. These considerations have been incorporated as part of the EqIA where appropriate.

Approach to non-statutory consultation

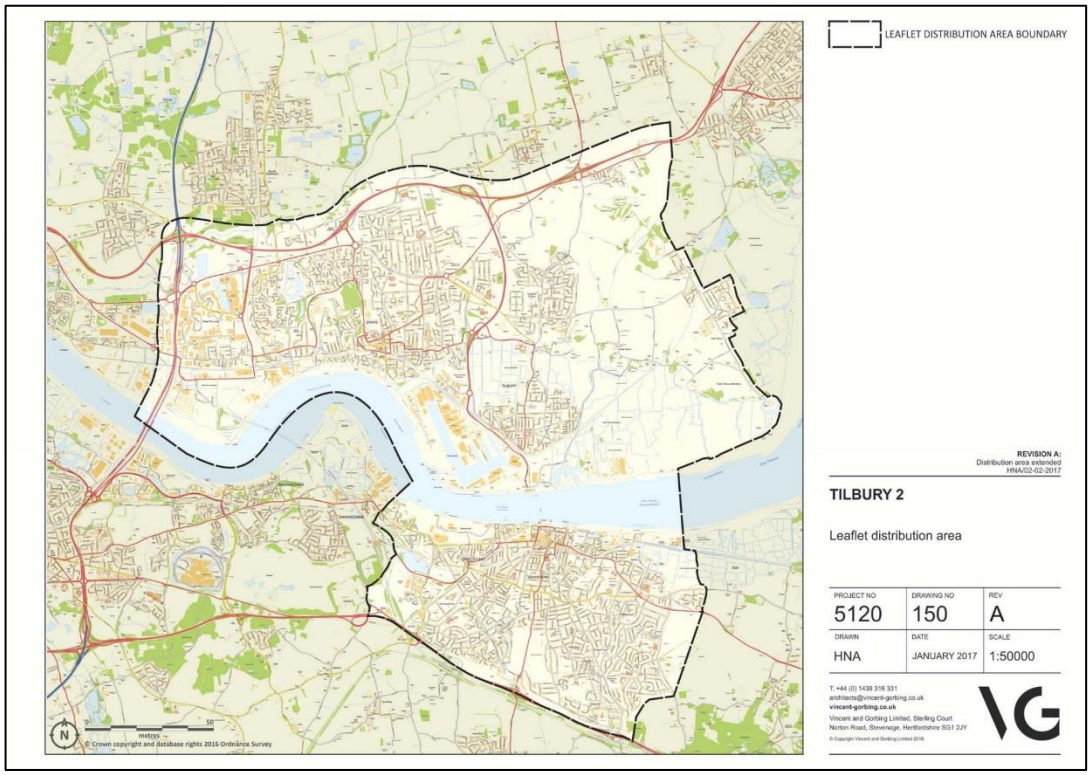
3.14 PoTLL undertook a round of non-statutory consultation to receive input from local communities on the development proposals. This phase of consultation concluded 21 April 2017, and the responses were analysed and used to review and refine proposals and the draft EIA.

3.15 This non-statutory consultation included consultation with both statutory and non-statutory consultees. Non-statutory consultees include individuals and groups who are likely to have an interest in a proposed development, however are not designated by the Planning Act 2008 and its subsidiary regulations. There are usually wider planning policy reasons to engage with consultees other than those

who have a duty to respond, as they can provide a broader perspective on the proposals, and contribute to shaping a higher quality development.

3.16 Non-statutory consultation was undertaken by PoTLL. A consultation website was produced, displaying information about the development proposals and consultation process. An online survey also formed part of the non-statutory consultation. In addition to these measures, over 750,000 leaflets were distributed across Thurrock Council and Gravesend (Figure 1).

Figure 1: Leaflet distribution plan. Source: PoTLL



3.17 The approach to consultation was iterative. Community groups involved in the process expressed an interest in a Port of Tilbury Newsletter, to provide further information and clarifications. In response to this request, PoTLL created a newsletter detailing the port operations, key figures associated with employment, relevant points of contact at the Port, and engagement findings to date. This was distributed to local libraries community groups, schools and the Tilbury Hub. PoTLL is also working alongside Thurrock Council in providing information on the proposals to the local gypsy and traveller community.

3.18 In addition to the survey, consultation events were hosted in local community facilities, throughout the day and evenings, to encourage participation. Consultation survey leaflets were provided in hard copies at these events.

Table 2: Summary of non-statutory consultation events

Date	Location	Duration	Consultation format
06/03/2017	Tilbury Hub	9am – 7pm	Display boards/ banner, information leaflets and survey response forms.
09/03/2017	Thameside	10am – 11.45am	Display boards/ banner, information

Date	Location	Duration	Consultation format
	Theatre	12pm – 3pm (Councillor workshop) 3pm – 6pm	leaflets and survey response forms. Presentation to Councillors.
10/03/2017	Tilbury Hub	9am – 7pm	Display boards/ banner, information leaflets and survey response forms.
14/03/2017	Gateway Free School	3pm – 8pm	Display boards/ banner, information leaflets and survey response forms.
16/03/2017	Gravesend Market Place	10am – 6pm	Display boards/ banner, information leaflets and survey response forms.
03/03/2017	ASDA	09:30am – 12:30pm	Leaflet hand out
03/03/2017	Tilbury stations	06:30am – 9am	Leaflet hand out

3.19 Non-statutory consultation included two events held at the Tilbury Hub. This location was chosen due to its accessibility, and inclusion of the wider local community. The Hub is a popular resource for the community, and volunteers represent significant cross-cultural diversity, including Chinese, Nepalese, Indian, Caribbean, Irish, African and White British communities. The exhibition remained on display for over a week in the Hub, and some of the volunteers were included as part of local workshop sessions, where planning processes were discussed in more detail.

3.20 A number of community groups meet and use the Tilbury Hub on a regular basis, with a weekly footfall of over 800. During the non-statutory consultation period, a number of these community groups would have had access to the consultation events and exhibition materials, and include:

- DWP – Support for people who are out of work for over 16 weeks
- Thurrock Council Housing Strategy, which deals with council housing issues
- Baby Rhyme Time – Parents and children group
- Knitter Natter – senior group
- Batias sessions – support for people with mental health and physical disability
- Inspire – Working with young people age 16-19 in relation to career pathways and getting back into work.
- Citizens Advice sessions (weekly)

Non- statutory preliminary findings

3.21 A comprehensive review of stakeholders comments received during the non-statutory consultation was undertaken. This process provided an insight into the key issues identified by local communities, which in turn fed into the impact assessment process. Consultation with the local community brought to light a number of perceived benefits and general concerns in regard to Tilbury2. The key concerns

which were referenced by more than 20 responses have been summarised in Table 3.

Table 3: Summary of responses from non-statutory consultation questionnaires

Question topic	Sub-topic	Summary of key points drawn from consultation questionnaires
Jobs	Jobs not going to local people	Concerns that jobs will not be available for local people, need for both skilled and unskilled positions in the local area, concern that jobs will require high level of skill and educational attainment
Pollution	Noise	Concerns over noise due to the proximity of houses, located within a relatively quiet part of Tilbury
Pollution	General Pollution	Pollution is already a problem in Thurrock, and will only get worse
Pollution	Air pollution/ quality	Already high levels of air pollution and child asthma in the area, concerns about levels of dust
Pollution	Lighting	Light pollution from operation of site, and increase in traffic
Location	Floodplains	Concerns about developing on floodplains, already an area vulnerable to flooding
Location	Location	Concerns over proximity to housing, location will cause disruption, location means that jobs will not impact the local community
Location	Other ports	Concerns that there are already two major deep water ports in the South East, concerns over competition with London Gateway.
Environment	Environment	Concerns over the preservation of wildlife and loss of habitats, particularly those unique to Tilbury and Gravesend. Concerns over the loss of farmland, marshland and green belt.
Amenities	Walks/ Cycle	Importance of maintaining existing pedestrians and cycling provision, many people walk their dogs along the road towards the river, need for space cycling routes in congested area
Amenities	Quality of life	Concerns that the area is residential, concerns over the capacity of existing social infrastructure when additional workforce is in operation, commercial uses in a residential area
Amenities	Green space	A reduction in natural land, loss of green belt, proximity of lorry park and traffic near

Question topic	Sub-topic	Summary of key points drawn from consultation questionnaires
		to children's play, loss of public areas
Infrastructure	ASDA roundabout	Concerns over potential for gridlock and accidents
Infrastructure	Lower Thames Crossing	Concerns that there will be an increase to already high levels of congestion, cumulative levels of pollution
Infrastructure	Presence of HGVs	Concerns over number of HGVs, and the level of noise and light pollution this will cause, roads are already busy, concerns over where lorries park on their breaks, vibrations from the HGVs driving through residential areas
Infrastructure	Infrastructure and Traffic	Concerns over worsening levels of traffic, noise near to residential areas, concerns over safety, Thurrock roads operating over capacity
Infrastructure	Traffic and Infrastructure	Concerns over worsening traffic, particularly in the villages. Concerns over the timing and delivery of the new road link, increased risks of accidents
Impact on the Fort	Impact on the Fort	Concerns about degrading the landscape around the port, reduced access and overall management
Impact on the Fort	Significance of History	Concerns over the protection of historic/ heritage sites, the fort is of local significance, concerns over reduced access

3.22 A number of responses also identified the need for further information or alternative approaches to consultation. These included:

- Request for updated information on the Port on a regular basis, in the form of a community document
- Further information in the form of detailed site plans
- Avoid the use of leading or loaded questions
- Hard copies to be posted to affected residents with limited access to technology
- Support for community days, including tours of the Port and the river
- Support for consultation being delivered by people working on the project, as opposed to an outside company.

3.23 Following non-statutory consultation, a number of recommendations were made to inform the approach to the statutory consultation process and onwards throughout the duration of the proposals. These recommendations were based on a review of literature, policy and best practice DCO applications, and were used to ensure equalities groups are fully represented in the process, and that aspirations for local

participation are clearly defined and monitored. The additional consultation considerations identified included:

- The collection and internal analysis of demographic information of respondents is an important aspect in assessing whether consultation has been inclusive, particularly in relation to 'harder to reach' groups. This can also be used to identify concerns specific to different groups within the community, and further used to monitor the extent to which consultation and participation aspirations have been met.

- Actively contacting a range of equalities groups in the community, to ensure that they had the opportunity to engage if they wished. Tapping into local networks can also be an effective way of circulating information into harder to reach networks.

3.24 The approach to statutory consultation accommodated these recommendations, along with additional measures, to ensure an active and inclusive approach has been taken. Equalities specific questions, and wider questions on the demographic information of respondents were included as part of the consultation questionnaire to identify key concerns associated with different groups within the community. This has provided an important monitoring tool, to identify how inclusive engagement practices have been, and the extent to which participation aspirations have been met; and where necessary, to identify concerns specific to different groups within the community. This process has been detailed below.

Approach to statutory consultation

3.25 Statutory consultation is prescribed by planning law, whereby consultation must take place between a local planning authority and certain organisations, to inform a decision being made on a development application. Statutory consultees can vary according to the type of development proposal, and include organisations and bodies, defined by statute. Statutory consultees have a duty to respond, and are expected to provide a substantive response to an application in relation to their area of responsibility. The Consultation Report provides further detail on the statutory consultation process.

3.26 As with the non-statutory consultation an online questionnaire was used to capture stakeholder views on the proposals. Measures were taken to actively engage with people who did not have readily available internet access, including sending stamped and addressed envelopes to capture this information. This was supported by further leafleting at key locations to reach a wider audience as possible.

3.27 In addition to the survey, consultation events were hosted in local community facilities in Tilbuy and Gravesend, throughout the day and evenings, to encourage participation. Consultation survey leaflets were provided in hard copies at these events.

3.28 In addition to working alongside existing community groups, a more targeted approach to consultation was taken. PoTLL sent letters directly to community groups in the area, informing them of upcomoing public consultation events, to encourage wider participation. This was accompanied by targeted advertising of consulation events on social media within 15km of the site, to inform groups who may otherwise not have known about consultation.

Table 2: Summary of statutory consultation events

Date	Location	Duration	Consultation format
21/06/2017	Thameside Theatre, Grays	10am – 12pm 2.30pm - 9pm	Display boards/ banner, information leaflets and questionnaires
26/06/2017	Tilbury Hub	3pm – 9pm	Display boards/ banner, information leaflets and questionnaires
27/06/2017	Gateway Primary Free School	3pm – 9pm	Display boards/ banner, information leaflets and questionnaires
28/06/2017	Tilbury Hub	10am-5pm	Display boards/ banner, information leaflets and questionnaires
29/06/2017	Gravesham Civic Centre, Gravesend	10am-12pm 2.30pm – 9pm	Display boards/ banner, information leaflets and questionnaires

Statutory consultation preliminary findings

3.29 A comprehensive review of stakeholder questionnaire responses received during the statutory consultation was undertaken. This process provided an insight into the key issues identified by different stakeholders, and in turn fed into the impact assessment. A summary of key themes are set out in Table 4. A summary of responses to the equalities questions are set out in Appendix A.

Table 4: Summary of responses from statutory consultation questionnaires

Question topic	Sub-topic	Summary of key points drawn from consultation questionnaires
Jobs	Jobs not going to local people	Concerns that high quality jobs should to local people, and should be accessible for people located south of the river.
Pollution	Noise	Concerns over the operations being 24/7, and the adverse impacts this could have on surrounding residential and community uses. Wider concerns surrounding noise arising from the road and rail link.
Pollution	Air pollution/ quality	Respondents were concerned about the impacts of dust emissions from operation of Tilbury2, particularly the CMAT facilities and conveyor belts, and increased HGV movement. Further concerns were raised surrounding the cumulative impact of air pollution, particularly on the health of local residents.
Pollution	Lighting	Concerns about the impact of lighting on surrounding residential properties.
Location	Location	Concerns over proximity of proposals to housing, in that location will cause disruption,

Question topic	Sub-topic	Summary of key points drawn from consultation questionnaires
		and should be situated in a more isolated location. Also concerns that the infrastructure corridor is located too close to existing residential and community uses. Wider concerns surrounding the location of the CMAT.
Environment	Environment	Concerns surrounding the loss of natural land and ecological sites, impact on visual landscape, and the sufficiency of drainage ditches to deal with the Tilbury2 proposals.
Amenities	Walks/ Cycle	Agreement that it would be important to maintain and enhance existing pedestrians and cycling provision. Wider concerns over pedestrian connectivity surrounding the infrastructure corridor.
Infrastructure	Infrastructure and Traffic	Concerns over worsening levels of traffic in an already congested area. Wider concerns surrounding pedestrian safety, health and access.

3.30 Where consultation responses raised criticism relating to the consultation process, or approach to engagement more broadly, PoTLL proactively dealt with concerns, including responding directly to emails.

CONCLUSIONS AND RECOMMENDATIONS OF THE EQIA FOR CONSULTATION

3.31 In line with best practice, the approach to both non-statutory and statutory consultation undertaken to date has sought to reach a wide audience within the local community, including 'harder to reach' groups.

3.32 As set out in the OMP, a final recommendation for the future communication of proposals includes the need for communication material to be available in a range of languages and formats (braille, large print). This can help improve ease of access for non-native speakers, and those with sensory impairments and other forms of invisible disability.

STUDY AREA

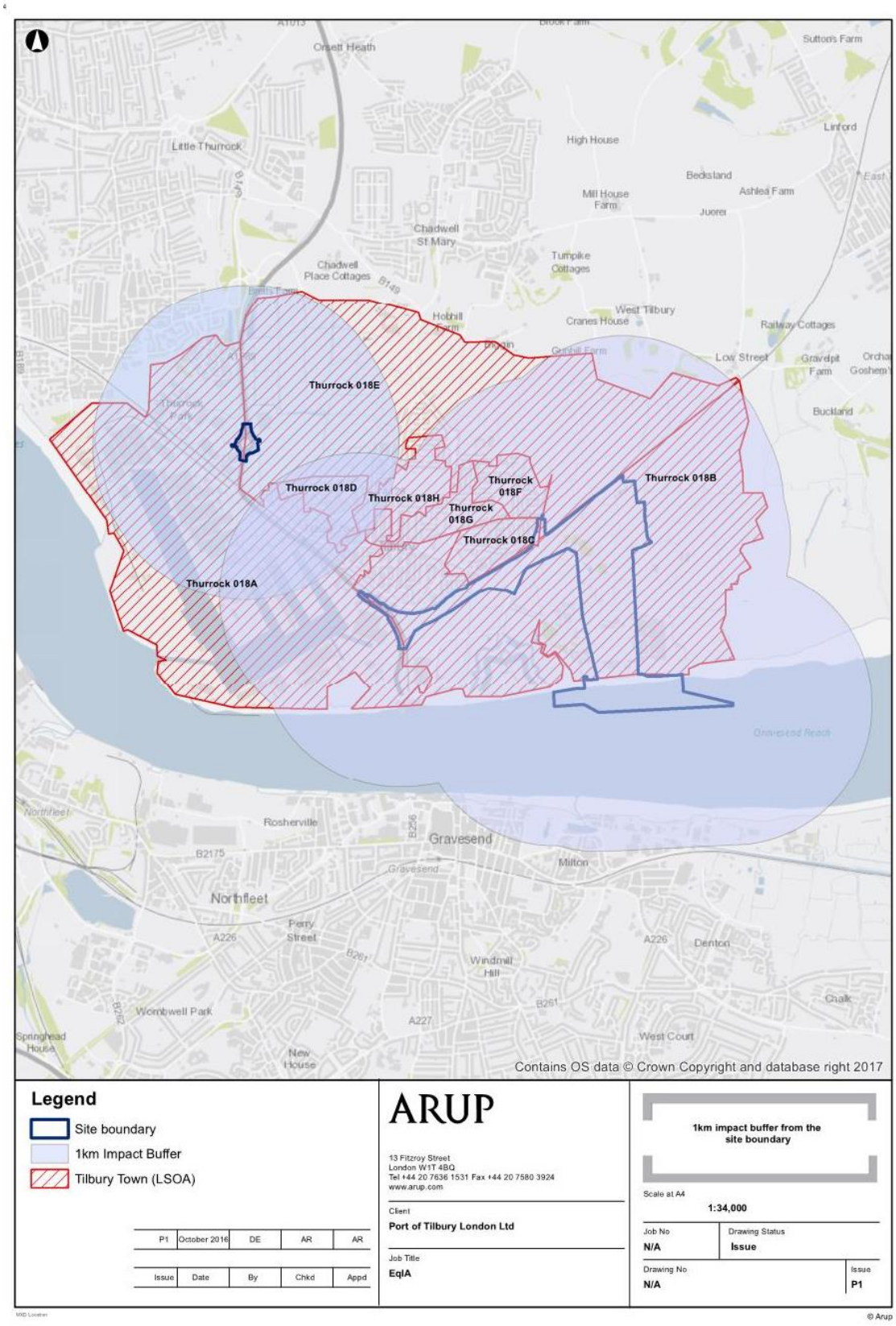
3.33 This section sets out the spatial scales used to assess anticipated impacts associated with the proposals on different equalities groups. Due to the range of topics assessed, a number of spatial scales have been used to accurately reflect the likely impact areas on sensitive receptors.

3.34 The spatial scope identified for the EqIA, and associated topics, was informed by other technical assessments undertaken as part of the ES. The findings relating to health, air quality, noise, transport and socio-economics set out within the ES (at time of preparation), were used to guide the spatial scale in which to consider equalities impacts during construction and operation.

3.35 In addition to input from relevant chapters from the ES, a review of best practice EqIA examples was undertaken to identify appropriate spatial scales, where not specified in the ES.

3.36 This review showed that a range of spatial scales have been used to assess equalities impacts, ranging from 250m to 1km buffer areas from the Site Boundary. To ensure a comprehensive approach to assessment, a spatial scale of 1km from the Site was used where not otherwise specified by technical assessments. Figure 1 shows the 1km impact buffer from the site boundary, and how it overlaps with Tilbury town, and the surrounding area.

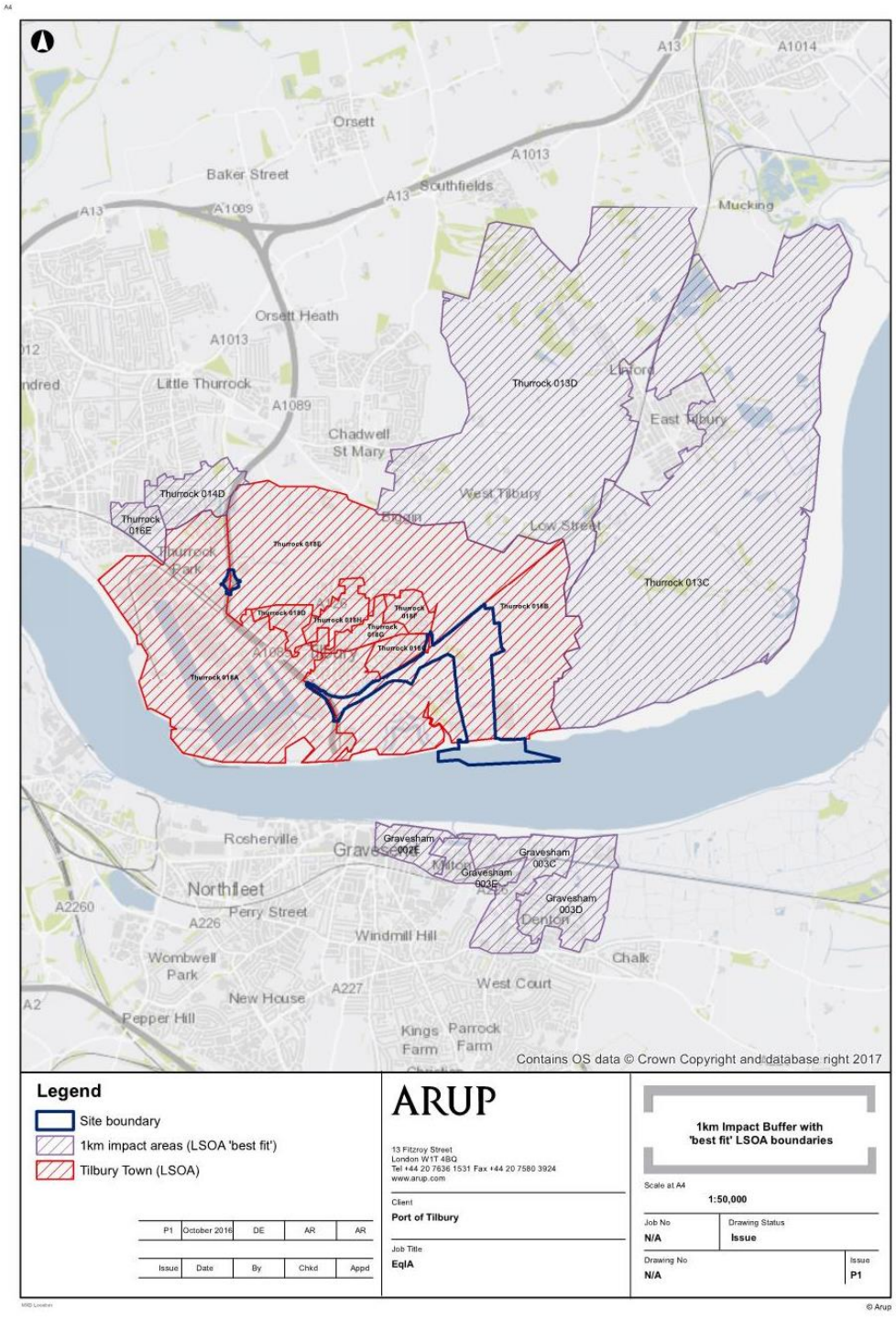
Figure 2: 1km impact buffer from site boundary



3.37 The 1km impact buffer from the site extends beyond the Lower Super Output Areas boundaries of Tilbury Town. A 'best fit' approach was therefore taken to align the impact buffer with the nearest Lower Super Output Area (LSOA) boundaries, to

provide an indicative area in which to assess equalities impacts associated with the proposals.

Figure 3: 1km impact boundary from site boundary, best-fit to LSOA boundaries



3.38 It is clear from Figure 2 that the LSOA boundaries extend further away from the site boundary compared to the 1km buffer. This increases the impact area to assess equalities groups by a significant amount, particularly to the east and north east of Tilbury Town. It was however felt appropriate to cover a larger spatial area than might be required, to ensure a comprehensive approach, and avoid overlooking areas which might be affected by the proposals.

3.39 As part of the wider baseline data collection process and demographic profiling, a number of spatial scales were assessed. This was done to identify benchmark parameters for key equalities groups and to show whether the presence of vulnerable communities in the study area aligns with regional and national trends. The spatial scales assessed within the EqIA are set out in Table 3.

3.40 LSOAs are a level of geographical boundary developed by the Office for National Statistics (ONS), and use groups of existing Census output areas. Each LSOA has a minimum size of 1,000 residents. Table 4 identifies the LSOAs relevant to each spatial scale, and is listed by code. The code number refers to the Middle Super Output Areas (MSOA) label, and the single character letter identifies the individual LSOA within this MSOA.

Table 4: Spatial scales used in the baseline data collection and impact assessment of the EqIA

Use within EqIA study	Spatial scale	Definition	Included
Baseline data collection	Local	Tilbury Town (defined by LSOA 'best-fit' boundary)	Thurrock 018H, Thurrock 018D, Thurrock 018E, Thurrock 018B, Thurrock 018G, Thurrock 018C, Thurrock 018A, Thurrock 018F
	Wider borough area	This includes the host borough, and the neighbouring authority of Gravesham	Thurrock Borough Council, Gravesham Borough Council
	Wider sub-region	Surrounding counties of Essex and Kent, and the London Boroughs within the Thames Gateway.	Ashford, Canterbury, Dartford, Dover, Gravesham, Maidstone, Sevenoaks, Shepway, Swale, Thanet, Tonbridge and Malling, Tunbridge Wells, Basildon, Braintree, Brentwood, Castle Point, Chelmsford, Colchester, Epping Forest, Harlow, Maldon, Rochford, Tendering, Uttlesford, Thurrock, and Southend-on-Sea, Barking & Dagenham, Bexley, Havering, Lewisham, Greenwich, Newham and Tower Hamlets
Impact Assessment/ demographic profiling	Core area	1km impact area from the site boundary, amended to best fit relevant LSOA boundaries.	Thurrock 018H, Thurrock 018D, Thurrock 018E, Thurrock 018B, Thurrock 018G, Thurrock 018C, Thurrock 018A, Thurrock 018F, Thurrock 013C, Thurrock 013D, Thurrock 016E, Thurrock 14D, Gravesham 003C, Gravesham 003D, Gravesham 002E, Gravesham 003E
	Transport	Local road network	Fort Road, A1089 ferry Road, A1089 St Andrews Road and the A126 Marshfoot Road junctions with the A1089 Dock Approach Road. The ASDA roundabout is also included, along with the A13 to junction 30 of

Use within EqIA study	Spatial scale	Definition	Included
			the M25.
	Noise [construction]	300km impact area from site boundary	N/A
	Air quality [construction - dust]	350m from the Order Limits	N/A
	Air quality [operational - dust]	400m from the Order Limits	N/A
	Air quality [traffic]	200m either side of the centerline of roads "affected" by the proposals	N/A

METHODOLOGY FOR ASSESSING IMPACTS

3.41 The EqIA is based on the identification of impacts upon different equalities groups, and whether these are proportionate. The methodology was developed through the examination of relevant policy and guidance, along with a review of best practice examples. These include the Thames Tideway EqIA carried out by Thames Water, and the Silvertown Health and Inequalities Impact Assessment produced by TfL.

3.42 The study has also drawn upon the findings of a number of technical assessments covered as part of the ES. This has been reviewed alongside relevant policy and literature, as well as baseline information and demographic profiling.

Temporal Scope

3.43 The EqIA considers impacts that may arise during both the construction of Tilbury 2 and those that may arise once it is in full operation. Future schemes have also been considered as part of the assessment, to help identify the cumulative impact of development proposals in the area, and anticipate any further impacts that may arise.

Assessment Framework

3.44 The EqIA has assessed both direct and indirect effects resulting from the proposals. In the context of this study, the term 'impact' has been used to specify where changes (both positive and negative) are thought likely to be felt by groups of people sharing the protected characteristics. The assessment considers whether the impacts of the proposals on equalities groups are over and above those likely to affect the general population of the study area.

3.45 The significance of an environmental effect is typically a function of the sensitivity of the receptor and the 'magnitude' or 'scale' of the impact. Combined, these factors will produce a significant of effect category.

3.46 For each potential impact, an assessment has been undertaken against a number of criteria, to identify the level of change, exposure and duration of adverse effects. The full assessment criteria is set out below:

- Change - The identification of the aspect of the proposals that would cause the change, and specific reference to whether the change is likely to be beneficial or adverse
- Receptor- The identification of the equalities groups that are likely to be vulnerable to this change
- Direct/ Indirect - The identification of whether the impact is a direct result of development proposals, or forms part of wider indirect effectsDuration – The identification of whether the change is temporary or permanent
- Positive/ Negative – The identification of whether the change is likely to have beneficial or adverse impacts upon equalities groups within the relevant study area
- Extent of population exposure – the consideration of the number of people, equalities groups or catchment areas likely to be impacted by the change.
- Magnitude – To gauge how severe the impact is likely to be upon certain equalities groups
- The criteria was then used to form an overall conclusion on the significance of the effect on equalities groups, by considering how proportional the change was on vulnerable groups in relation to the general population.

3.47 Through demographic profiling, the equalities assessment identifies whether the impact is proportionate. The assessment of proportionality is based on an assessment of whether a given impact is likely to be felt more, less or differently by equalities groups than by members of the general population in the same area. This will also include whether an impact is differential, and therefore is likely to have a different impact on equalities groups due to specific needs, greater sensitivity, or the reduced ability to accommodate change. It also considers whether there are impacts which are likely to be experienced in the same way by all, but which occur in areas with disproportionate numbers of people sharing one or more protected characteristics.

Assumption and limitations

3.48 The EqIA is based on a number of assumptions and technical assessments.

- The EqIA has been informed by outputs from the noise, vibration, health and transport studies in the ES. This was of particular importance in identifying the relevant impact zone in which to assess equalities impacts.
- Baseline data gathered to inform this assessment was taken from a range of sources. Census 2011 data was used extensively due to the level of detail required to assess the demographic profile of Tilbury and the surrounding area. Although this data is somewhat outdated, it provided the most extensive available data source to identify the representation of equalities groups.

4.0 BASELINE CONDITIONS

INTRODUCTION

4.1 This chapter provides a profile of the areas and communities likely to be affected by the proposals, and includes a description of key equalities indicators. It provides an analysis of socio-economic and equalities data across the local Tilbury area, host borough and wider sub-region. This information has also been compared to national trends where appropriate.

4.2 In order to identify the presence of equalities groups, and the likely impact of the proposals on these groups, a process of baseline information gathering was required. The baseline assessed existing socio-economic conditions, and the characteristics of equalities groups where data permitted. Baseline data has been collated across a range of sources to provide an overview of the characteristics of the equality groups. These include:

- ONS, 2011 Census
- ONS, 2014 population projections
- Working and Pensions Longitudinal Study, 2016
- Data provided by Port of Tilbury London Limited
- Policy review of local strategies
- Department for transport, 2016
- These sources have been supplemented by 'grey' literature and desk-based research, to reflect equalities indicators that are not recorded in national data collection.

SPATIAL SCALE OF BASELINE ASSESSMENT

4.3 Demographic analysis has also been undertaken in relation to employment at the Port of Tilbury London Limited. The Port makes a significant contribution to the local employment market, and is considered an important aspect of the local profile.

DEMOGRAPHIC PROFILE

Population

4.4 The population of Thurrock is both growing and becoming more diverse. Table 5 sets out the population of Tilbury and the gender split, compared to surrounding authorities. Tilbury has the highest proportion of female residents.

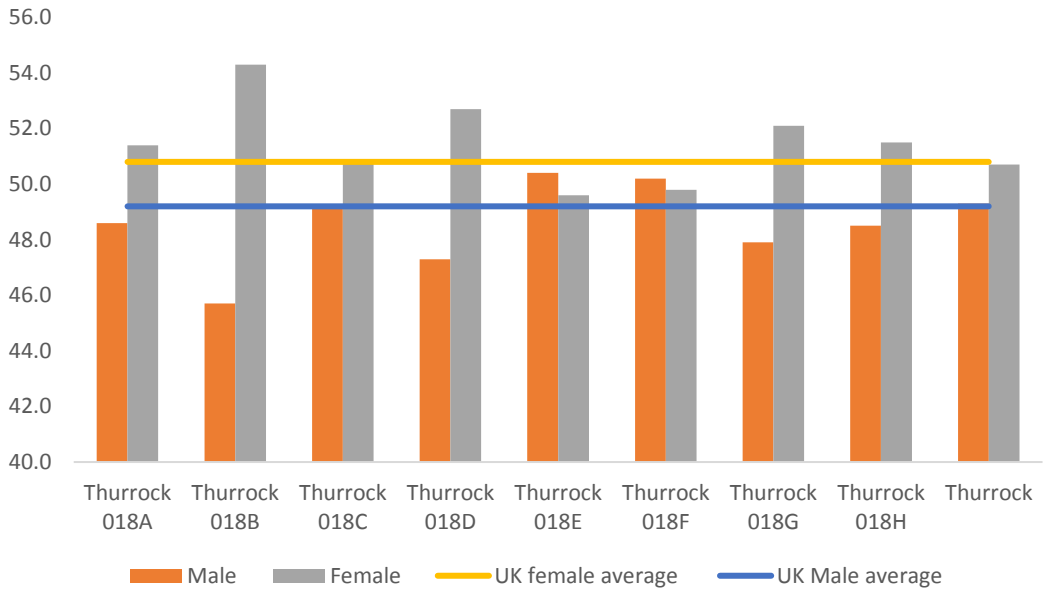
Table 5 Population by Gender. *Source: ONS Census, 2011*

Area	Total Resident Population	% Male	% Female
Tilbury Town	13,055	48.4	51.6

Area	Total Resident Population	% Male	% Female
Thurrock	157,705	49.3	50.7
Gravesham	101,720	49.3	50.7
Thames Gateway LB	1,747,662	49.7	50.3
Essex	1,393,587	48.8	51.2
Kent	1,463,740	48.9	51.1

4.5 Figure 4 shows that LSOAs within Tilbury typically have more female than male residents, in line with Thurrock as a whole. LSOA Thurrock O18B located in central Tilbury, has the highest proportion of female residents (54.3%). This proportion of female population is significantly higher than national trends, which averages 50.8%.

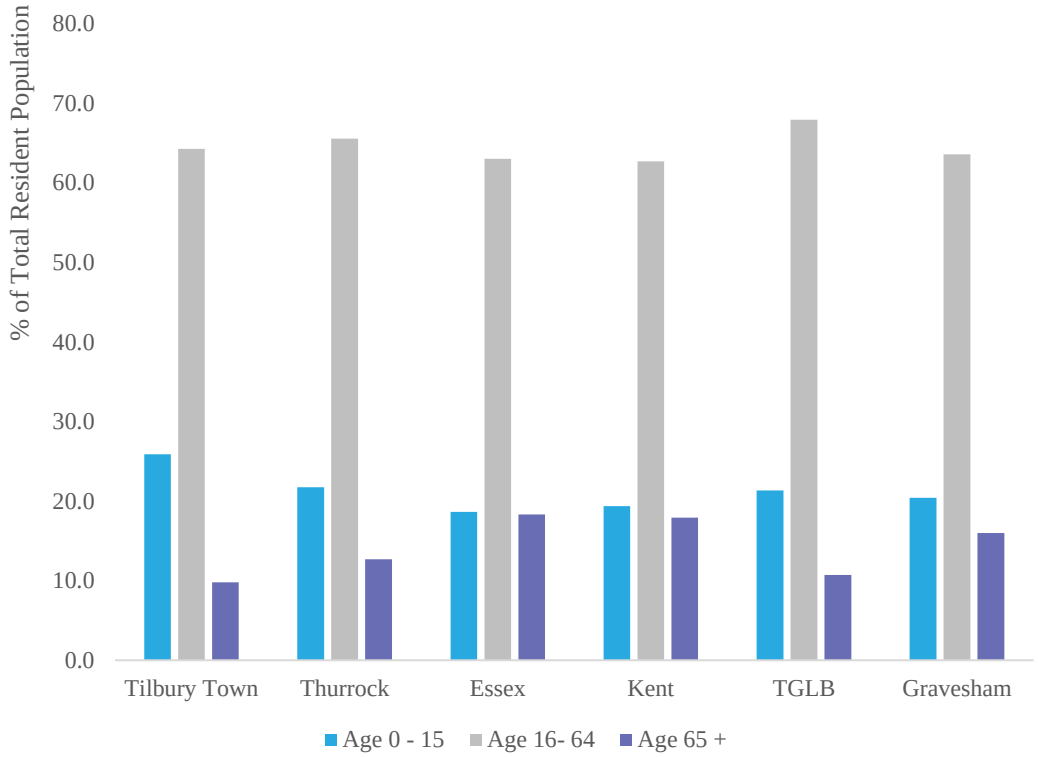
Figure 4 Breakdown of gender in Tilbury LSOAs. *Source: ONS Census, 2011*



Age Structure

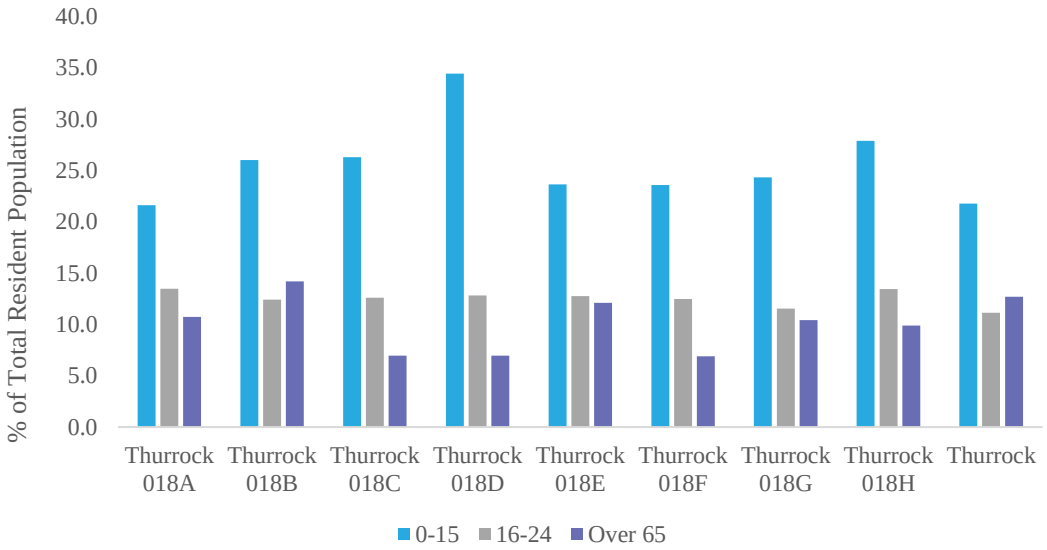
4.6 Thurrock has a younger than average population profile, compared to both Thurrock, Gravesham, and the wider sub-region. 27.1% of the Borough population are aged 0-15, compared to 20.4% in Gravesham, and 18.6% in Essex. Tilbury has a particularly high proportion of 0-15 year olds, at 25.9%, and a lower proportion of over 65s (9.8%) compared to local and regional averages.

Figure 5 Age Structure 2011. *Source: ONS Census, 2011*



4.7 Figure 6 shows the age breakdown of individual LSOAs within Tilbury town, which all have a younger demographic than Thurrock as whole. Thurrock 018D located in central Tilbury has a significantly higher proportion of residents below the age of 16. The proportion of residents ages 16-24 remains relatively consistent across Tilbury, and is in line with Thurrock as a whole.

Figure 6: Age breakdown of LSOAs within Tilbury. *Source: ONS Census, 2011*



ETHNIC GROUPS

4.8 Table 6 details the proportion of the resident population by ethnic group for Tilbury and surrounding authorities. Compared to the wider Essex and Kent region,

Thurrock shows greater ethnic diversity, particularly in terms of Black/African/Caribbean/Black British residents (7.8%). Tilbury has a marginally lower proportion of white residents compared to Thurrock, and has a significantly higher proportion of Black/African/Caribbean/ Black British residents (13%) compared to the regional average (1.3%). Tilbury however shows a significantly lower proportion of Asian/Asian British residents (1.9%) than Thurrock (3.8%), and the regional averages. This is particularly true in relation to the Thames Gateway London Boroughs (20%), which show the greatest ethnic diversity.

Table 6 Proportion of resident population by ethnic group (%). Source: ONS, Census 2011

Ethnic Group	Tilbury Town (%)	Thurrock (%)	Gravesham (%)	Essex (%)	Kent (%)	TG LB (%)
White	83.2	85.9	82.8	94.3	93.7	58.2
Mixed/multiple ethnic groups	1.4	2	2.0	1.5	1.5	4.3
Asian/Asian British	1.9	3.8	10.4	2.5	3.3	20.0
Black/African/ Caribbean/Black British	13.0	7.8	2.8	1.3	1.1	15.5
Other ethnic group	0.4	0.6	1.9	0.4	0.5	2.0

4.9 The ethnic composition of Tilbury can be further examined through the breakdown of individual LSOAs. Thurrock 018A, located to the west of the town, shows the greatest ethnic diversity across the resident population, with the largest population of Black/African/Caribbean/Black British residents (17.9%). This is significantly higher than the borough wide average (7.8%). All the LSOAs within Tilbury have a lower proportion of Asian residents compared to Thurrock (3.8%). The greatest Asian population is located within Thurrock 018G, located in central Tilbury.

Table 7 Ethnic groups by LSOA within Tilbury, Census 2011

Ethnic group	Thurrock 018A	Thurrock 018B	Thurrock 018C	Thurrock 018D	Thurrock 018E	Thurrock 018F	Thurrock 018G	Thurrock 018H	Thurrock
White	76.9	85.7	80.9	86.5	89.4	79.6	84.6	83.8	85.9
Mixed/ multiple ethnic groups	1.8	1.5	0.7	1.7	1.0	1.5	0.9	1.9	2.0
Asian/ Asian British	2.9	2.0	1.4	0.8	0.7	1.2	3.2	2.5	3.8
Black/ African/ Caribbean/Black British	17.9	10.3	16.6	10.3	8.5	17.1	11.1	11.5	7.8
Other ethnic group	0.6	0.4	0.3	0.8	0.4	0.6	0.1	0.3	0.6

FAITH

4.10 The 'Provision of facilities for faith groups in Thurrock' report (2009) was commissioned by Thurrock Council to identify and understand the physical infrastructure needs of faith groups within the borough. The report states that the term 'faith group' encompasses a wide range of community and voluntary organisations.

4.11 As shown in Table 8, there are a diverse range of faiths and cultures within the Borough, including both well-established populations and new migrant communities and recently formed worship groups. The overwhelming majority of the faith groups identified in the borough are from Christian denominations. Both Tilbury and Thurrock show higher proportions of Christian faith compared to surrounding authorities and the regional average.

Table 8 Religious groups, 2011. *Source: ONS Census, 2011*[2]

	Tilbury Town (%)	Thurrock (%)	Gravesham	Essex (%)	Kent	TG LB
Christian	63.7	63.3	60.8	61.8	62.5	50.1
Buddhist	0.3	0.4	0.3	0.3	0.5	0.9
Hindu	0.3	0.7	0.9	0.6	0.7	3.3
Jewish	0.0	0.1	0.1	0.5	0.1	0.3
Muslim	1.4	2.0	1.9	1.0	1.0	14.7
Sikh	0.1	0.8	7.6	0.2	0.7	1.2
Other religion	0.4	0.3	0.6	0.4	0.4	0.4
No religion	27.8	26.0	21.5	28.1	26.8	20.8
Religion not stated	5.9	6.3	6.3	7.2	7.3	8.4

4.12 Faith institutions provide important community facilities, and often offer a range of local services, in addition to religious services. Table 9 identifies the key religious institutions within Tilbury.

Table 9 Places of worship in Tilbury and Grays

Place of worship
St Clements Church
The Sikh Temple, Grays
Grays Thurrock Team Ministry
Grays Baptist Tabernacle
Thurrock Bangladesh Welfare Institution

[2] Due to a Census data processing error, the 'no religion' category in Tower Hamlets is overstated

Place of worship
Grays United Reform Church
St Mary the Virgin
Grand Turk
Christ Gospel Ministry
Covenant of Mercy
St Johns CofE
Parish of East and West Tilbury and Linford Anglican Church
The redeemed Christian Church of God Fruitful land
Parish Church of St Catherine
Linford Methodist Church

DISABILITY

4.13 Table 10 shows that 8.2% of the resident population in Tilbury are limited a lot by a disability. This is broadly in line with the national average, however it is higher than Thurrock and Essex as a whole.

Table 10 Long-term health problem or disability, as a percentage of the resident population, Census 2011

	Tilbury	Thurrock	Gravesend	Essex	England
Day-to-day activities limited a lot	8.2	7.2	7.8	7.7	8.3
Day-to-day activities limited a little	8.8	8.3	8.95	9.4	9.3

4.14 This data can be broken down by age group (Table 11), to identify the groups most affected by health conditions and disability. Within Tilbury, the age bracket 45-69 experience the greatest proportion of residents with a disability or long term health condition. This reflect both regional and national averages, however shows a higher proportion than both. The proportion of residents within Tilbury with a disability or health condition under the age of 15 is significantly higher than the national average, and just under double the regional average. This is likely to reflect the young demographic profile of the town.

Table 11 Long-term health problem or disability, for persons whose day to day activities are limited, by age bracket, as a percentage of the resident population (%), Census 2011

Age bracket	Tilbury	Thurrock	Gravesham	Essex	England
0-14	1.00	0.73	0.84	0.58	0.64
15-24	0.76	0.63	0.72	0.58	0.64
25-44	2.97	2.25	2.22	1.90	2.30
45-69	7.49	6.23	6.36	6.31	6.80

Age bracket	Tilbury	Thurrock	Gravesham	Essex	England
70-84	3.58	4.11	4.88	5.21	4.93
85+	0.71	1.27	1.42	1.78	1.56

4.15 Within Tilbury, the north of the town has the highest concentration of residents with a disability or long-term health condition that limits day to day activities a lot. Table 12 shows that LSOA Thurrock 018E (north of the town centre) shows a significantly higher proportion of residents (11%), compared to Thurrock as a whole (7.2%).

Table 12 Long-term limiting health problem or disability, as a percentage of the resident population, Census 2011

	Thurrock 018A	Thurrock 018B	Thurrock 018C	Thurrock 018D	Thurrock 018E	Thurrock 018F	Thurrock 018G	Thurrock 018H	Thurrock
Day-to-day activities limited a lot	8.5	9.1	6.3	6.4	11.0	6.0	9.5	8.4	7.2

Table 13 Benefit claimants - disability allowance for small areas, August 2016, Working and Pensions Longitudinal Study

	Tilbury	Thurrock
Total claimants	660	6,045
% of total population	5.06	3.83

4.16 In addition to this information, statistics on Blue Badge users can also help indicate the number of disabled residents at a local authority level. The Department for Transport release this information at the local authority level. The number of valid Blue Badges held by individuals is set out in the table below.

Table 14 Blue Badge holders (2016), Department for Transport

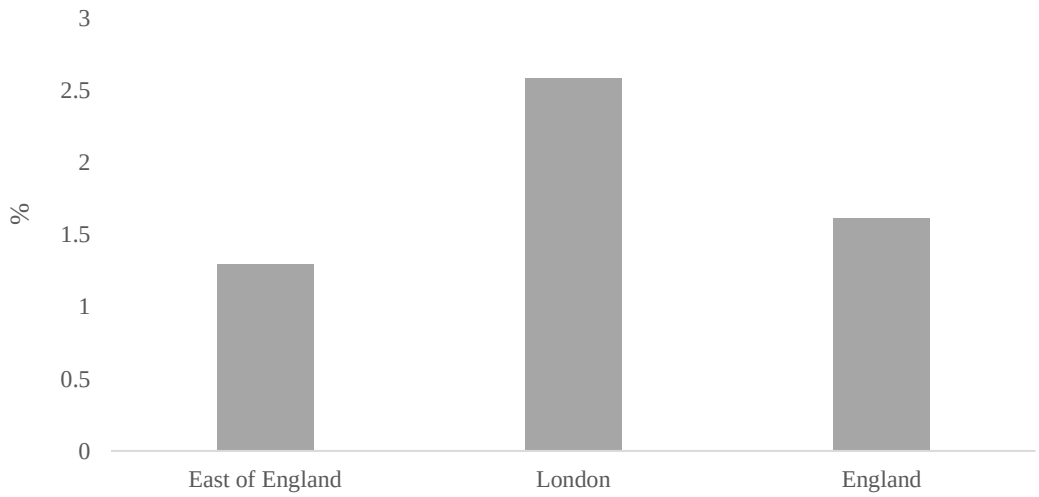
	Thurrock	Essex	England
Number of individual Blue Badges[3]	7,400	63,000	2,378,000
% of population	4.69	4.52	4.49

SEXUAL ORIENTATION

4.17 Information on sexual identity is collected through the Integrated Household Survey. The survey asks a question on the self-perceived sexual identity of adults in the UK. Figure 7 shows the proportion of gay, lesbian and bisexual residents, across different spatial scales. The East of England has a lower proportion of LGB residents (1.29) compared to London (2.58) and England as a whole (1.61).

4.18 It is not believed that there are any data sources which allow for a more detailed spatial breakdown than this.

Figure 7 Proportion of gay, lesbian and bisexual residents across regional and national scales



[3] Held at 31 march 2016

GENDER REASSIGNMENT

4.19 There are multiple definitions of transgender. For the purposes of this report, following the approach taken by the Office for National Statistics, we have used the common umbrella term 'trans' to refer to people whose lived identities conflict with societal gender norms. This encompasses a range of identifies ranging from those who cross-dress to those people who identify their own gender differently to that assigned to them at birth. It also includes individuals who identify as androgynous, non-gendered or non-binary. Importantly, it is not limited to people who have undergone gender reassignment surgery.

4.20 No data sets are available to allow us to identify the proportion of trans people in the population for the purposes of this EqIA. No major Government or administrative surveys have collected data that includes a question where trans, people can choose to identify themselves. Publicly collected data on trans people is "virtually non-existent"[4]. One source, collected by the Gender Identity Research and Education Society (GIRES) for the Home Office in 2009, identified between 300,000 and 500,000 people in the UK with some degree of gender variance. This represents some 0.4% to 0.8% of the UK population. There is no evidence on the spatial distribution of trans people around the UK but applying those figures to known population figures locally suggests there could be somewhere in the region of 50 to 100 people with some degree of gender variance in Tilbury and 600 to 1,200 in Thurrock. These figures should be regarded as illustrative.

SOCIO-ECONOMIC DEPRIVATION

4.21 The Local Plan Core Strategy (updated 2015) identifies a number of key challenges for the borough going forward into the Plan period. One of the main challenges identified is the acute pockets of deprivation, with two of the most deprived wards in Thurrock located within Tilbury. The Plan sets out ambitions to diversify Thurrock's economic base, and to provide the local community with more training and employment opportunities within identified growth sectors. The Plan identifies a target to create around 1,000 jobs a year across Thurrock, to help reduce socio-economic inequalities.

APPROXIMATED SOCIAL GRADE

4.22 Table 15 shows the proportion of each residential population by social grade. The social grade brackets are a form of demographic classification which group people by income and skill level. The following categories have been used:

- 'AB' refers to those in higher and intermediate managerial, administrative or professional occupations;
- 'C1' refers to those in supervisory or clerical, junior managerial, administrative or professional occupations;
- 'C2' refers to those in skilled manual occupations; and
- 'DE' refers to those either in semi and unskilled manual occupations or state pensioners or widows, casual or lowest grade occupations.

[4] Equalities & Human Rights Commission, 'Trans Inequalities Reviewed', https://www.equalityhumanrights.com/en/trans-inequalities-reviewed/introduction-review, accessed 19 May 2017

4.23 In comparison to both surrounding authorities and the national average, Thurrock has a significantly lower proportion of residents within the AB social grade category. For categories C2 and DE, Thurrock has a larger proportion of the population than Gravesham and Dartford, and the national average. This trend reflects the acute pockets of deprivation within the Borough.

4.24 The wards of Tilbury St Chads and Tilbury Riverside & Thurrock Park have significantly lower proportions of residents within the AB category, the highest proportion of category DE across all the wards, local authority and national level. This reflections the concentration of deprivation within the wards covering Tilbury Town, and local employment patterns.

Table 15 Proportion of resident population (aged 16-64) identified as social grade DE. Source: ONS, Census 2011

Approximated Social Grade	Tilbury Town	Thurrock	Gravesham	Essex	Kent	TG LB
Approximated social grade DE	39.40	26.96	27.71	20.34	22.21	27.54

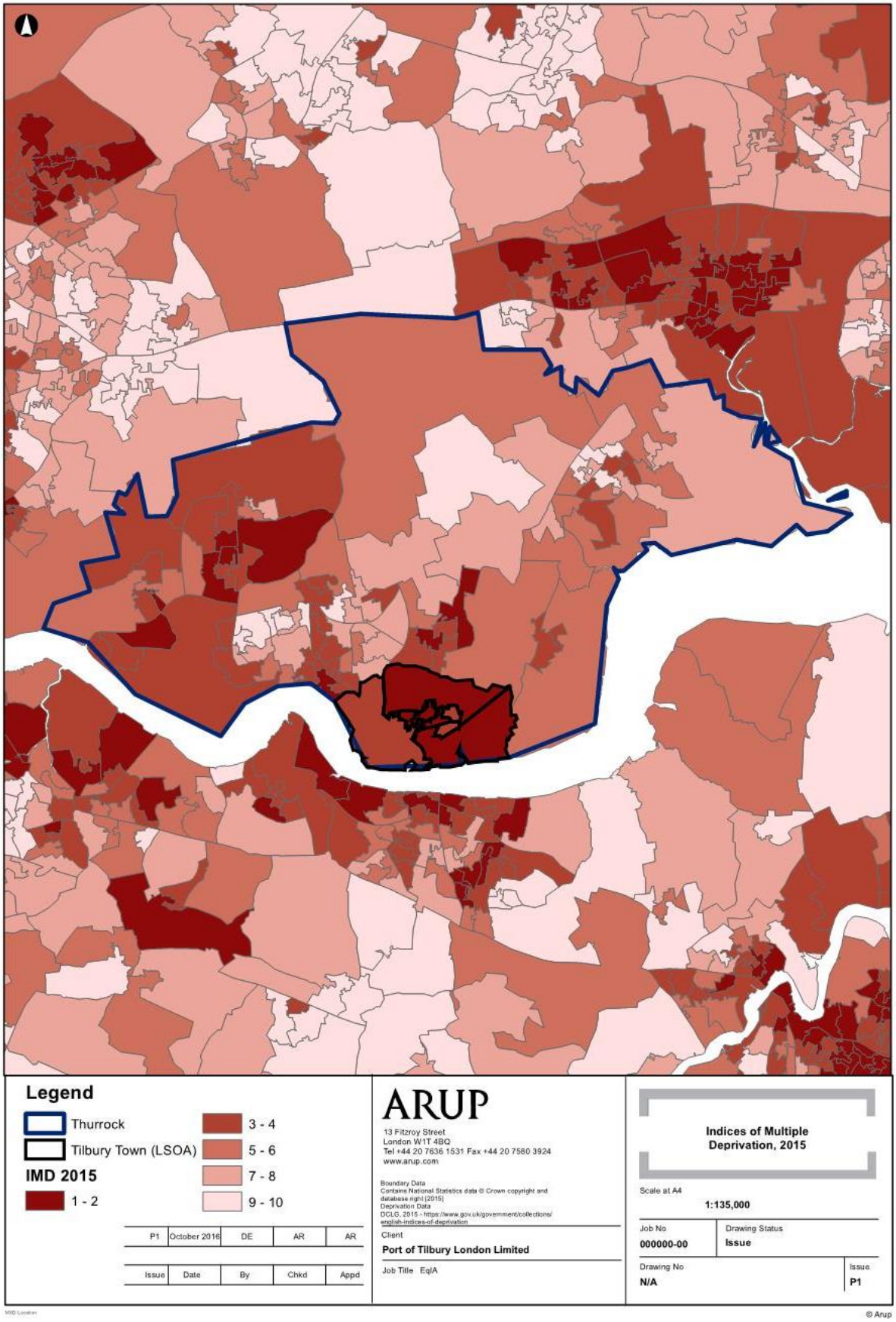
Index of Multiple Deprivation

4.25 The English Indices of Multiple Deprivation (IMD) (2015) measures relative levels of deprivation across LSOAs in England. The Measures of IMD are based on 37 separate indicators across seven domains of deprivation, which include:

- Income;
- Employment;
- Education, skills and training;
- Health deprivation and disability;
- Crime;
- Barriers to housing and services; and
- Living environment.

4.26 Figure 8 shows the IMD (2015) scores for Tilbury, identifying that the majority of LSOAs within the town are amongst the most deprived 20% of LSOAs across the country. One of the main challenges identified in the Local Plan Core Strategy (updated 2015) is the acute pockets of deprivation across the Borough. As shown in Figure 8, two of the most deprived wards in Thurrock are located within Tilbury.

Figure 8 Indices of Multiple Deprivation, 2015. Source: ONS



EDUCATION, SKILLS AND TRAINING

4.27 The Thurrock Local Economic Assessment (2011) identifies a number of key challenges faced across the borough in relation to education and training. The primary challenge is the low skills base within the adult population, which puts Thurrock significantly behind the skills performance of other areas in the Thames Gateway

4.28 The educational deficits within the borough begin as early as Key Stage 1, with literacy and numeracy attainment falling below national average. Raising the educational attainment of the area has been identified as a key policy priority for the Council.

4.29 Table 16 shows that Tilbury has a significantly higher level of residents with no qualifications (35%) compared to Thurrock, (26.5%), Gravesham (24.4%) and Essex as a whole (23.9%). Similarly, Tilbury has the lowest proportion of residents with Level 4 qualifications and above (12.6%), compared to the wider region of Essex (23%) and Kent (24.7%).

Table 16 Highest level of qualification, age 16 and over. *Source: Census 2011*

Highest level of qualification	Tilbury Town	Thurrock	Gravesham	Essex	Kent	TG LB
No qualifications	35.0	26.5	24.4	23.9	22.5	21.9
Level 1 qualifications	18.7	18.1	16.4	16.1	14.7	13.0
Level 2 qualifications	15.9	17.5	17.0	17.2	16.9	13.4
Apprenticeship	2.5	3.4	4.3	3.8	3.8	2.1
Level 3 qualifications	8.8	10.9	11.1	11.6	12.3	10.5
Level 4 qualifications and above	12.6	17.4	20.0	23.0	24.7	29.9
Other qualifications	6.5	6.1	7.0	4.5	5.1	9.2

EMPLOYMENT AT THE PORT OF TILBURY

4.30 The baseline assessments include the Port of Tilbury and current workplace population. The Port has 649 employees, covering a range of clerical, technical and managerial positions and a range of contracted hours. There are eight members of staff who work part time, all of which are female.

4.31 The workforce is predominantly male, with only 10.5% of the staff female. A review of the current nationalities of employees also show that the workforce is predominantly formed of UK nationals, and does not reflect the diversity of Tilbury or Thurrock as a whole.

Table 17 Nationality of current staff at Port of Tilbury. *Source: Port of Tilbury London Limited*

Nationality of staff	% of workforce
Greek	0.15
Polish	0.46
UK	99.38

HEALTH

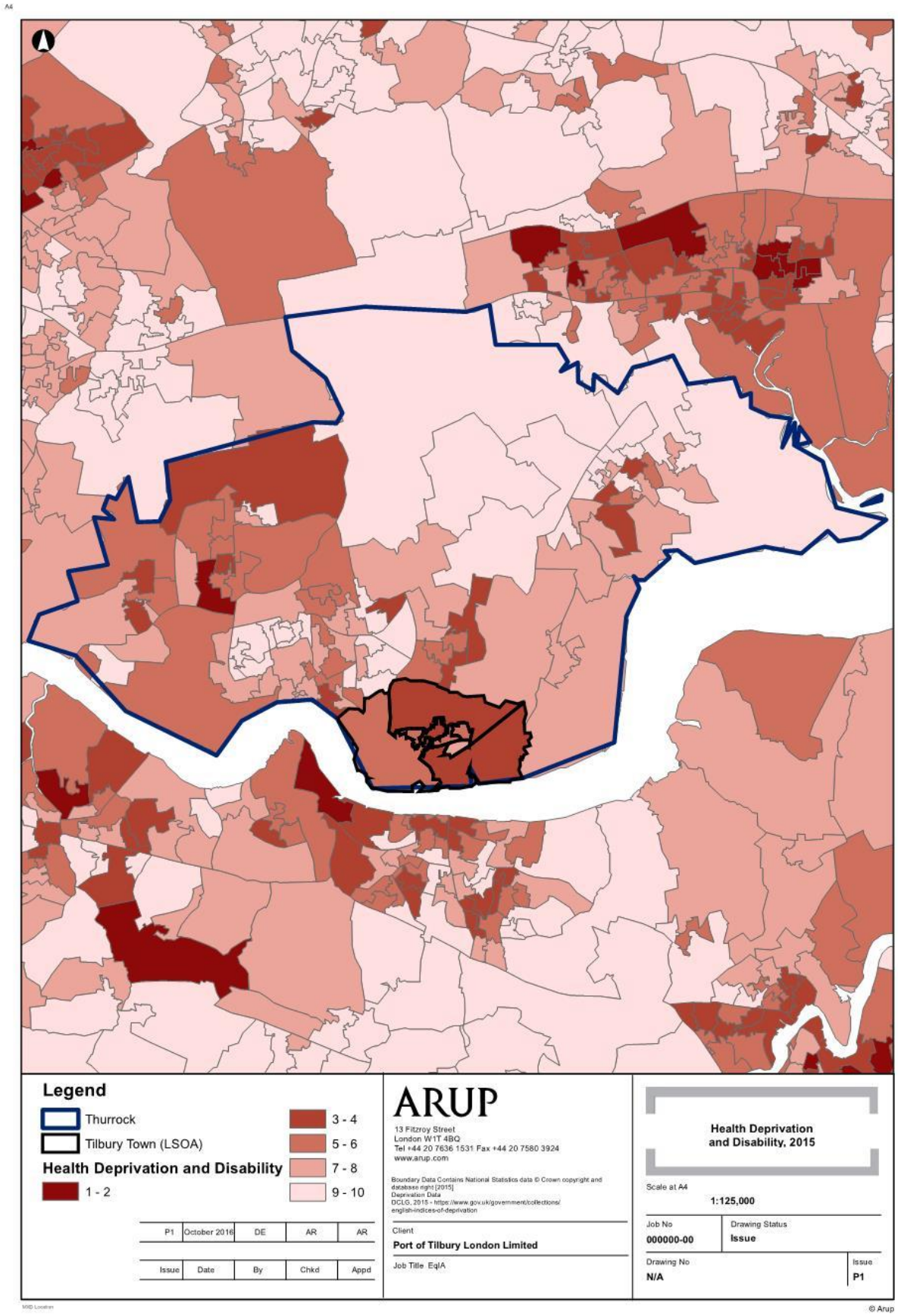
4.32 Tilbury has historically experienced poor access to primary health care services, with a wider lack of integrated health services across the Borough. The network of healthcare surgeries across the Borough is not evenly distributed, contributing to a poor health profile amongst deprived communities. This has caused significant variation in life expectancies across different groups, and in comparison to the wider region.

4.33 Recent closures of health facilities in Tilbury have resulted in a significant under provision of GPs. Some of the facilities in Tilbury have been identified as poor quality, and in need of major upgrades.

4.34 Deprivation is directly linked to both life expectancy and overall quality of life, including the length of disability free life. Some of the consequences of poverty, such as higher levels of harmful behaviour and lower levels of protective behaviour are seen most clearly in the distribution of illnesses and health status[5]. When compared to those living in more affluent communities, populations living in areas of high deprivation statistically have: - higher levels of mental illness - increased likelihood of developing a long-term condition, particularly chronic respiratory conditions, cardiovascular disease and arthritis - a higher prevalence of unhealthy lifestyle behaviours such as obesity, physical inactivity and smoking.

[5] Tilbury Integrated Healthy living Centre Needs Assessment Report (2015)

Figure 9 Health deprivation and disability domain, 2015. Source: ONS



HOUSING

4.35 The Thames Gateway SHMA outlines a number of overarching trends in relation to housing, experienced across the region. These key themes include:

- Decline in owner occupation
- Rise in private rental sector
- Fall in new housing delivery
- Higher level of growth in Thurrock in particular over recent years, which has coincided with an increased flow from London
- Backlog of affordable housing need

4.36 Between 2006 and 2016, housing delivery within Thurrock was significantly lower than the annual target of 950 per annum, as set out in the Regional Spatial Strategy. Over this period, there was an under build of 6,503 dwellings. The South Essex Strategic Housing Market Area (SHMA) (2016) identifies an Objectively Assessed Housing Need (OAHN) range of 919 – 973 per annum[6] to help accommodate rising demands for housing across the region. Within the SHMA, Thurrock has experienced the second lowest increase in house prices, rising by 44.2% between 2002 and 2012.

Table 18 Household tenure. Source: ONS Census, 2011

	Tilbury Town	Thurrock	Gravesham	Essex	Kent	TG LB
Owned	47.1	66.2	64.6	71.3	67.3	47.5
Shared Ownership (part owned and part rented)	0.5	0.5	0.8	0.6	1.0	1.4
Social rented	37.2	18.4	17.3	14.3	13.9	28.2
Private rented	14.3	14.1	16.1	12.7	16.5	21.9
Living rent free	0.9	0.8	1.2	1.1	1.3	1.0

4.37 Adverse health effects associated with poor quality housing. There are strong links between quality of housing and physical and mental wellbeing. The Tilbury Integrated Healthy living Centre Needs Assessment (2015) identifies that the average number of persons per household for Tilbury is 2.657, which is above the national average at 2.36. The report outlines specific health needs of residents within council housing accommodation, including. The most significant of these health need include low mobility and mental health.

4.38 Key trends outlined in the Thames Gateway South Essex Fundamental Review of the Strategic Housing Market Assessment Review (2013):

[6] baseline date of 2014
[7] Data source – Census, 2011

- Decline in owner occupation
- Rise is private rental sector
- Fall in new housing delivery

DEMOGRAPHIC PROFILING

4.39 Data collected as part of the baseline process has been collated to form a demographic profile matrix.

4.40 The assessment of impacts was partly informed by demographic profiling. This was undertaken to show whether the presence of equalities groups within the study area is broadly in line with the average for Thurrock as a whole. This information was then used to identify whether impacts associated with the proposals are proportional across different equalities groups, or whether some are more vulnerable.

4.41 The demographic profiling (Table 19) shows that there is not a significant concentration of equalities groups within Tilbury as a whole, with indicators broadly in line with borough wide averages. There are however clear pockets of the town that have higher proportions of equalities populations, including children, black people and deprived communities. These include:

- Black ethnicity – Thurrock 018A
- Under 16's – Thurrock 018D
- Approximated Social Grade DE – Thurrock 018B, Thurrock 018D, Thurrock 018E, Thurrock 018G, Thurrock 018H

4.42 Within these LSOAs, there may be a risk of disproportionate impacts in relation to construction and operational activity associated with the proposals.

Table 19 Potential Impacts during the Construction Phase

	More than ten per cent less of the equalities groups in the study area, compared to the wider local authority
	More than five per cent less of this equalities groups in the study area, compared to the wider local authority
	Representation of the equalities groups in the study area is proportional to the wider local authority.
	More than five per cent more of the equalities group in the study area, compared to the wider local authority
	More than ten per cent more of this equalities group in the study area, compared to the wider local authority

Table 20: Population breakdown of Tilbury by LSOAs that best fit the 1km impact boundary, compared to Thurrock wide averages (%)

		Thurrock 018A	Thurrock 018B	Thurrock 018C	Thurrock 018D	Thurrock 018E	Thurrock 018F	Thurrock 018G	Thurrock 018H	Thurrock 016E	Thurrock 014D	Thurrock 013D	Thurrock 013C
Age	**Under 16s**	-0.1	+4.3	+4.6	+12.7	+1.9	+1.8	+2.6	+6.1	+3.0	-4.0	-6.0	-1.0
	16 - 24	+2.4	+1.3	+1.5	+1.7	+1.7	+1.4	+0.4	+2.4	+1.0	-2.0	-1.0	+2.0
	Over 65	-2.0	+1.5	-5.8	-5.7	-0.6	-5.8	-2.3	-2.8	-5.0	+6.0	+3.0	-6.0
Ethnicity	**Asian**	-0.9	-1.8	-2.4	-3.0	-3.1	-2.6	-0.6	-1.3	+6.3	+2.2	-3.6	-2.7
	Black	+10.1	+2.5	+8.8	+2.5	+0.7	+9.3	+3.3	+3.7	+5.1	-2.9	-3.6	-5.4
	Other	0	-0.2	-0.3	+0.2	-0.2	0	-0.5	-0.3	-0.5	-0.2	-0.4	-0.5
	Mixed	-0.2	-0.5	-1.3	-0.3	-1.0	-0.5	-1.1	-0.1	+1.4	-0.1	-1.2	-0.8
	White	+9.0	-0.2	-5.0	+0.6	+3.5	-6.3	-1.3	-2.1	-12.3	+0.9	+9.5	+9.3
	White: Gypsy or Irish Traveller	-0.1	-0.1	-0.2	-0.1	0	-0.2	-0.1	0	-0.2	-0.2	-0.1	-0.5
Gender	**Male**	-0.7	-3.6	-0.1	-2.0	+1.1	+0.9	-1.4	-0.8	+0.5	-1.0	-0.6	-1.5
	Female	+0.7	+4.6	+0.1	+2.0	-1.1	-0.9	+1.4	+0.8	-0.5	+1.0	+0.6	+1.5
Religion	**Christian**	+4.8	-2.5	+3.5	-7.9	-0.7	+2.4	-0.6	+4.6	-12.3	+1.7	+6.0	+0.5
	Buddhist	-0.1	-0.2	-0.2	-0.3	-0.3	-0.1	+0.1	+0.1	+0.7	+0.3	-0.4	-0.2
	Hindu	0	-0.5	-0.6	-0.3	-0.7	-0.2	-0.1	-0.4	+1.9	+0.4	-0.7	-0.6
	Jewish	0	0	0	-0.1	-0.1	-0.1	+0.1	-0.1	+0.1	0	0	-0.1
	Muslim	+0.2	-0.1	-0.2	+0.2	-1.3	-1.3	-0.4	-0.5	+1.0	+0.1	-1.7	-1.8
	Sikh	-0.6	-0.8	-0.7	-0.7	-0.6	-0.8	-0.5	-0.7	+1.9	+1.6	-0.7	-0.8
	Other	-0.2	+0.1	0	-0.2	+0.4	+0.1	+0.2	0	-0.1	+0.2	-0.1	-0.1
Disability	**Long term limiting disability**	+1.3	+1.9	-0.9	-0.8	+3.8	-1.2	+2.3	+1.2	-1.5	+0.1	+0.4	-2.6
Deprivation	**JSA Claimants**	+0.2	+2.4	+1.3	+3.4	+2.6	+0.3	+1.0	+4.0	+1.25	-0.99	-0.68	-0.51
	Social Grade DE (as a proportion of the 16-64 resident population)	+4.1	+13.6	+9.0	+20.1	+17.1	+6.0	+15.1	+18.	+6.0	-4.6	-1.9	+0.3

4.43 The spatial implications of the equalities demographic profiling is shown below in Figures 10 to 12. LSOAs shaded light blue identify where more than five per cent more of this equalities group is located in the study area, compared to Thurrock as a whole. LSOAs shaded dark blue show where more than ten per cent more of this equalities group is located.

Figure 10 Demographic profiling by LSOA – ethnicity

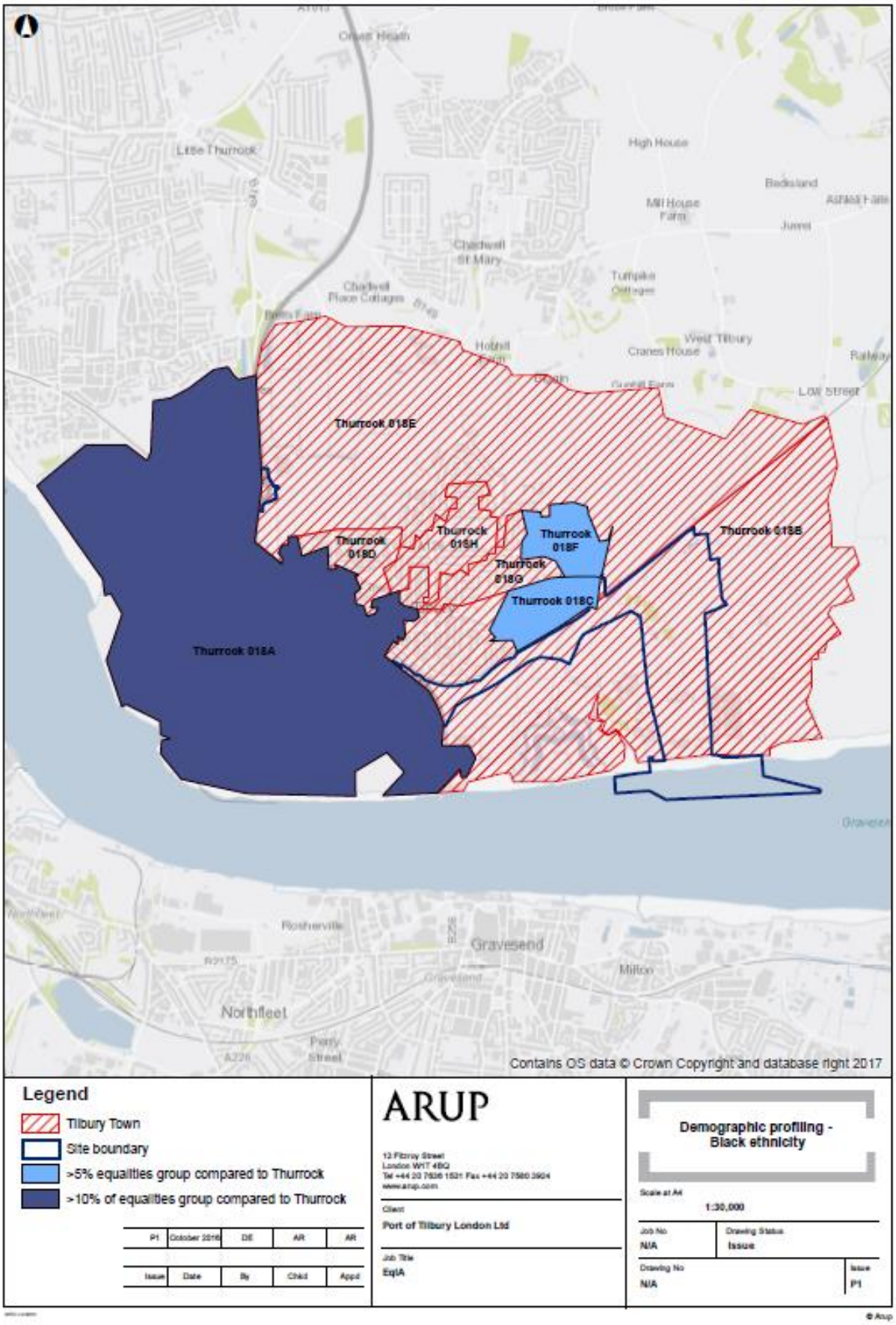


Figure 11 Demographic profiling by LSOA – Age 16 and under

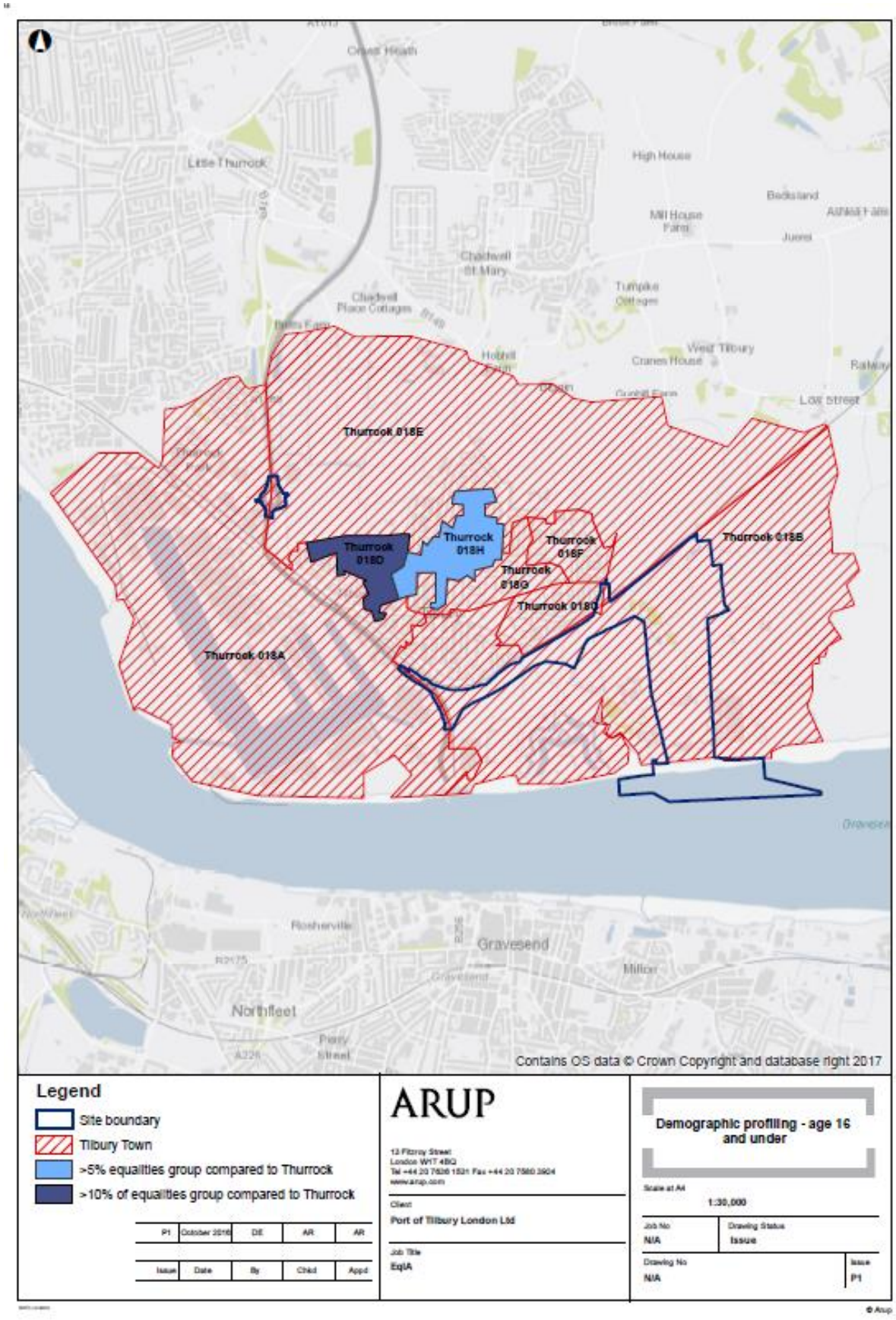
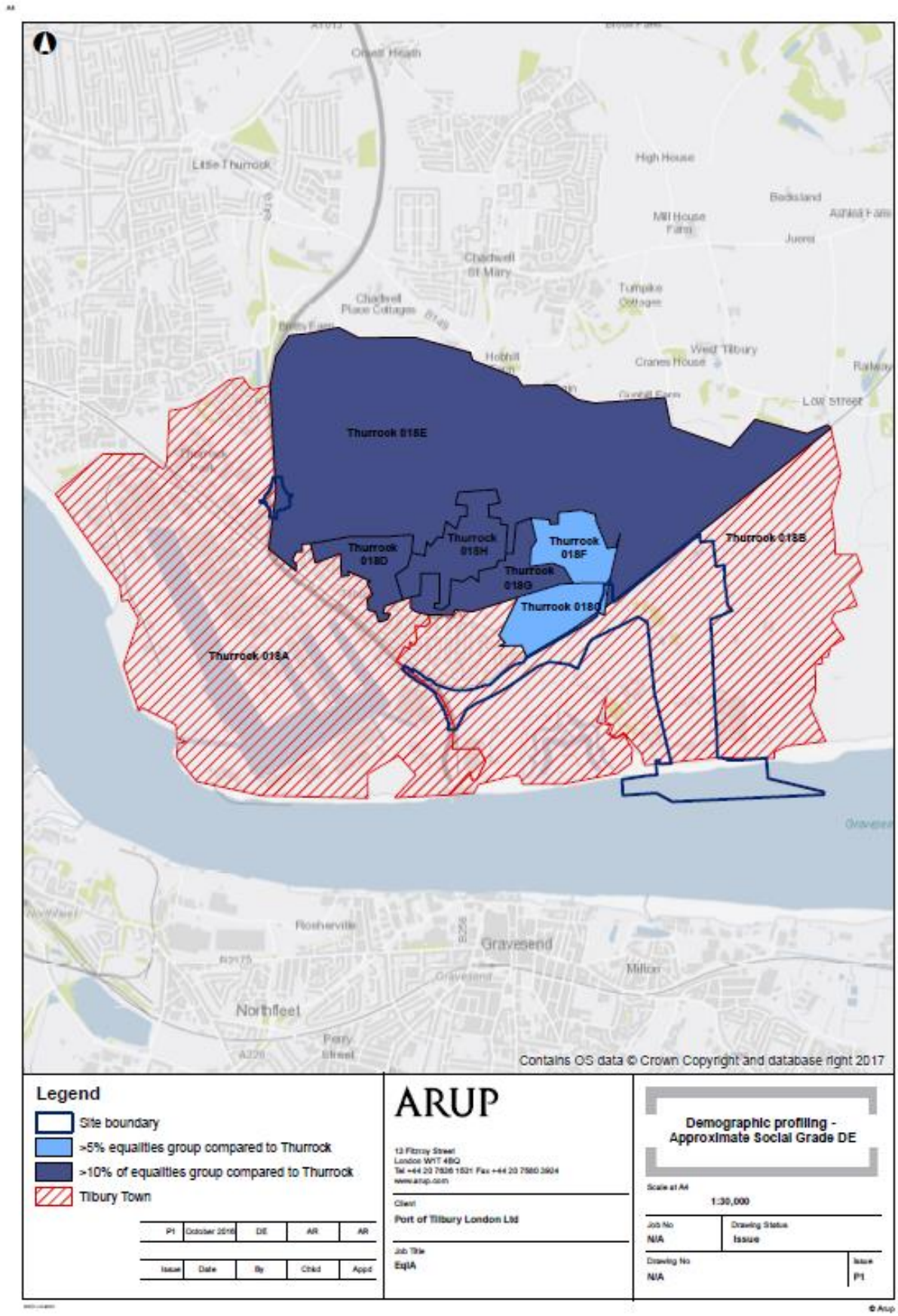


Figure 12 Demographic profiling by LSOA – Age 16 and under



BASELINE SUMMARY

4.44 Tilbury is a diverse and growing town, which shares a number of economic trends with the wider sub-region. There are however a number of key challenges surrounding deprivation, health, housing and educational attainment that have caused localised disparities in key equalities indicators

FUTURE BASELINE

4.45 The future baseline considers future conditions expected in the study area.

4.46 The Local Plan Core Strategy (updated 2015) anticipates that Thurrock will experience population growth of around 23% over the 25 year Plan period, reaching around 183,000 by 2031. Table 6 shows the projected population across Thurrock and surrounding authorities. Thurrock is expected to experience the greatest population increase outside of London, of around 44,400 (27.2%) by 2039. This is higher than Essex as a whole, which is expected to see a 20% population increase.

4.47 This growth is expected to generate significant demand for housing development, improved social and transport infrastructure, and an enhanced open space network.

Table 21 Projected population forecasts. ***Source: ONS 2014-based National Population Projections***

Area	Estimated Population 2014	Projected Population 2039	Projected Population Change 2014-2039	Projected Population Change 2014-2039 (%)
Thurrock	163,300	207,700	+44,400	+27.2
Gravesham	105,000	130,000	+25,000	+23.8
Essex	1,432,000	1,718,900	+286,900	+20.0
Kent	1,510,400	1,845,100	+334,700	+22.2
TG LB	1,853,100	2,503,300	+650,200	+35.1

4.48 The Local Plan Core Strategy (updated 2015) also sets out Thurrock's Spatial Vision for 2026. This includes delivering regeneration, job growth, and up to 23,250 houses over the Plan period to 2026.

4.49 New social infrastructure will be required to support the increased population, such as healthcare, educational facilities and an improved transport network. A number of major schemes in the area will go some way towards supporting these needs.

4.50 The future baseline includes other developments that have recently secured planning permission and are already under construction. These developments include:

- Demolition of Tilbury B Power Station
- Completion/opening of the Amazon Fulfilment Centre at London Distribution Park located adjoining the 'ASDA' roundabout circa August 2017;

- Completion of the remainder of the London Distribution Park site for lorry parking and stopover, circa early 2018;

- The operation of the waste wood recycling centre on the land adjoining the site occupied by Stobarts, currently the subject of a Certificate of Lawfulness and already partly operational;

- Operation of Tilbury Green Power Station within the main Port area during 2017;

- Completion of London Gateway Port. This has been factored into the ES by utilising traffic impact assessments of that project as part of the baseline.

4.51 It is expected that these developments will create positive regional cumulative effects in terms of employment opportunities, and may have modest impacts upon the local socio-economic demographic in the future.

5.0 SCHEME DESIGN AND EMBEDDED MITIGATION

THE TILBURY2 SITE

5.1 The redevelopment of the Tilbury2 site itself will comprise a number of key components with the two principal proposed port uses being a Ro-Ro terminal, located south of Substation Road, and a CMAT to the north of Substation Road.

JETTY/MARINE WORKS

5.2 To facilitate its use for both the Ro-Ro terminal and the CMAT, the existing jetty will require modification at both its upstream and downstream arms.

5.3 The Ro-Ro berth will accommodate two vessels at a time, one moored against the existing jetty at its western end, and one moored against mooring dolphins to the west of the existing jetty. A central pontoon will be constructed against which stern ramps of each vessel will be placed to allow embarkation and disembarkation of trailers and containers.

5.4 To facilitate the Ro-Ro activities the upstream works will comprise:-

- An approach bridge comprising a 3 lane roadway and adjoining footway;
- A linkspan bridge connecting the bridge to the floating pontoon;
- A floating pontoon
- Erection of a control office on the floating pontoon;
- Alterations and improvements to the existing jetty and associated fenders
- Mooring dolphins (constructed on the river bed) with associated fenders arranged east west as an extension to the existing jetty connected by a footway link brifge;
- Removal of the existing Anglian Water (AW) jetty. This has been agreed in principle with AW who no longer use the jetty; and
- Related piling operations and construction works in the river Thames
- The construction of a surface water outfall; and
- The alteration and renewal of existing flood defences where the linkspan bridge crosses the existing flood defence.

The CMAT berth will be at the eastern (downstream) end of the existing jetty which will be extended to accommodate barges and vessels of the required size. Downstream works in association with the CMAT will comprise:

- The construction of mooring dolphins to the front of and downstream of the existing jetty on the river bed
- Walkways between dolphins

- Installation of an extension to the existing conveyor system
- Erection of a new conveyor hopper and supporting structures on the river bed
- Installation of pipework on the jetty linked to the landside area; and
- Piling works and construction activities in the River Thames

BERTH POCKETS AND APPROACH DREDGING

5.5 Dredge pockets will be created and maintained for the life of the terminal around the improved terminal jetty. These works are included in Works No.1 and 2 for the Ro-Ro berth and the CMAT berth respectively. In relation to the downstream (CMAT) berth, the depth of pocket will be circa 15m and cater for the largest likely bulk aggregate vessels to visit the site in the future (100,000 tonnes). A sheet pile wall will be installed to run along the northern edge of the dredge pocket. The Ro-Ro berthing pocket (next to the western end of the existing jetty and around its westward extension) will require less dredging in order to create a depth of circa 8m.

5.6 The immediately adjoining approaches to the berth pockets will also need dredging and are included within the indicative Order limits.

RO-RO TERMINAL – LANDSIDE FACILITIES

5.7 The land south of Substation Road will be developed to accommodate associated storage areas and access to the Ro-Ro jetty over an area of approximately 20ha. These works will comprise:

- The filling of land for port facilities including the formation of a concrete pavement for the storage of shipping containers ad trailers and other port facilities with associated civil works, earth works and service work;
- And infrastructure and the laying out of vehicular, cyclist and pedestrian roads routes including a roadway close to the western boundary to access the approach bridge;
- Underground and above ground surface water drainage features including a pumping stations;
- Installation of site lighting infrastructure including column mounted and high luminaires;
- The construction of ancillary buildings including staff welfare and operational facilities;
- Construction of security infrastructure including cameras, perimeter fencing and gates;
- Peripheral structural landscaping uncluding SUDs features.

5.8 This area will also accommodate a single storey rail served warehouse, on a site of approximately 3ha. This will replace the existing “Maritime” terminal warehouse at the existing Port and will be used for multi-modal transhipment of steel.

CONSTRUCTION MATERIALS AND AGGREGATES TERMINAL – LANDSIDE FACILITIES

5.9 The Construction Materials and Aggregates Terminal ("CMAT") will comprise a number of permanent uses and structures. The exact composition of uses, structures and processes is not known in detail at this stage but industry-based assumptions have been used to define the likely worst-case scenario. The CMAT is assumed to include the following elements:

AGGREGATES STORAGE YARD

5.10 This area will comprise the storage of aggregate, pigments and cementitious materials in silos and in the open air, for use in a mixing plant also in this area. It will also include covered aggregate storage bays with dust suppression water spray systems.

PROCESSING FACILITIES

5.11 This area has been assumed to include:

- A block and precast manufacturing facility: this will involve a mixing plant that will include the use of a mechanical mixer, a mould, pressure removal of water, and the robotised stacking of products once completed. Manufactured products may also be cured in a heated area of the plant;

- A cement facility: this is envisaged to include a ready-mix concrete batching plant fed from the aggregate storage yard described above; and.

- An ashpalt manufacturing plant: this area is envisaged to involve the delivery of materials such as aggregate, sand, reclaimed asphalt pavement (RAP), bitumen and limestone to, stockbays, feed bins, bitumen tanks, and sealed silos. The aggregate would then be conveyed to a heating drum and transported to the top of the plant via a bucket elevator. The aggregates would then be screened, weighed out and mixed with the other materials mentioned above. Finished material would then be stored in hot material storage bins. This material would then be collected and transport to a facility (offsite) where it could be reprocessed and made available to be inputted into the process as recycled asphalt.

SILO

5.12 A silo is proposed on land close to the river. The facility will include associated piping and pumping infrastructure and road tanker loading, a weighbridge, access roads, surfacing and other works. The silo will be enclosed to approximately 100m in height, and capabl of storing powdered bulk produces that will be supplied by river. The exact design of the silo will be controlled by the submission of further details pursuant to a requirement in the DCO.

OTHER USES AND STRUCTURES

5.13 Remaining land in the north east cosrner of the Tilbury2 site will be used for external storage uses, with the principal use likely to be the storage of new imported motor vehicles that is already taking place within the site, or for storage of bulk materials.

RAIL INFRASTRUCTURE WITHIN THE TILBURY2 SITE

5.14 A rail spur will enter the main site in the north west corner, routing around the northern and down the eastern boundary of the site, terminating in three new sidings within the Ro-Ro Terminal. The rail spur within the CMAT terminal will include a loading sidings with the Ro-Ro Terminal adjoining the maritime warehouse.

HIGHWAYS AND PUBLIC RIGHTS OF WAY

5.15 In order to full utilise the new Ro-Ro terminal and CMAT, a surface assess strategy has been devised comprising new and improced road and rail links. It is proposed to construct a new single lane two way highway to link the A1089/Ferry Road from a location to the south of Tilbury Railway station, along an alignment which closely follows the existing railway line.

5.16 The highway will be approximately 1450m in length from a point approximately 1,460m from the centre point of the Asda roundabout to a junction with the road known as Substation Road within the Tilbury2 site. The road will comprise a single carriageway in each direction. On its southern side a shared cycleway (permitting cyclists and pedestrians) will be constructed.

5.17 The new highway will link to the A1089/Ferry Road/St Andrews Road. The works include improvement to a 150m length of St Andrew's Road itself. A simple priority junction will be formed with the existing route to the Cruise Terminal at a point approximately 1700m south east of the centre point of the Asda roundabout. The highway will then route east through the PoTLL owned Fortland site, separated from the existing rail corridor by existing landscaped bund.

5.18 The route will cross land currently used for fly grazing of horses and link directly to the new terminal. It will pass under Fort Road, but a new junction will be constructed to link the new highway to Fort Road itself approximately 290m south west of the centre point of the existing bridge that crosses the London to Tilbury railway line. The existing Fort Road bridge over the railway will be retained and a new independent open spac bridge will be constructed south of the existing.

EMBEDDED MITIGATION

5.19 The proposals include a range of embedded environmental measures. These will help to mitigate adverse impacts arising from the construction and operation phases. There are not any mitigation measures directly associated with equalities impacts, however equalities groups will indirectly benefit from wider mitigation measures associated with transport, air quality, noise and health.

6.0 POTENTIAL IMPACTS

6.1 The EqIA seeks to identify whether construction and operation impacts associated with Tilbury2 will impact equalities groups in the same way as the rest of the population. The process for which potential impacts were identified and assessed are outlined in full in the methodology section.

6.2 This assessment has evolved in line with the development of the proposals throughout the ES process. It assesses the likely equalities impacts of the proposals on the basis of inputs from a range of technical assessments and supporting strategies.

7.0 TRANSPORT ACCESSIBILITY

INTRODUCTION

7.1 This section considers the potential effects on equalities groups from changes to accessibility associated with the construction and operation of the proposals. Within this section, accessibility refers to cars and buses, and therefore relates to modifications to the local highways network and bus routes.

7.2 Accessibility is a key influence on how people live, including how they access services, economic opportunity and socialise. This can have a direct impact on health and wellbeing, socio-economic opportunity and quality of life. Accessibility is determined by a number of factors, including:

- Availability of public transport;
- Frequency and efficiency of service;
- Safety of services;
- Interchange options;
- Inclusive access design, such as ramps;
- Affordability;
- Legibility and safety of roads; and
- Congestion and delays.

LINK BETWEEN ACCESSIBILITY AND EQUALITIES

7.3 There are a number of adverse impacts that can arise from severance and isolation. Poor transport accessibility can lead to social exclusion, and restricted access to key amenities and economic opportunities.

7.4 Research undertaken by University College London (UCL) on the link between transport and deprivation defines transport-related exclusion as:

7.5 “A process by which people are prevented from participating in the economic, political and social life of the community because of reduced accessibility to opportunities, services and social networks, due to whole or in part to insufficient mobility in a society and an environment built around the assumption of high mobility”[8].

7.6 The impacts of poor transport access can be more significant for people with protected characteristics, including older people, residents with a health condition or long-term disability, low-income households and young people. Public transport can play a key role in providing an affordable transport option. This is particularly important for low-income households, providing access to social infrastructure and

[8] Titheridge et al (2014) *Transport and Poverty – A Review of Evidence*, University College London

economic opportunities. Research shows that more bus trips are made by the lowest income groups, who are less likely to own a car[9].

7.7 Private vehicle use can play a particularly important role for certain equalities groups (including older people, mothers with children or pregnant women, and residents with a form of disability), as it can provide a more direct and convenient alternative to public transport.

7.8 Car ownership amongst equalities grounds tends to be low. This makes these groups disproportionately reliant upon public transport networks, and alternative means of travel to the private car. Car availability tends to be lowest amongst BAME groups, which can restrict access to activities that enhance life chances. Older residents, particularly those over the age of 80, are also at risk of transport-related isolation, which can limit their ability to participate in society. Many people within this age bracket do not have access to a car, and often face financial and physical limitations in accessing suitable transport.

7.9 Disruption to the local highways network can also cause a number of issues relating to driver stress, as a result of delays, route uncertainty and congestion.

STAKEHOLDER VIEWS

7.10 As set out in Table 3, a review of non-statutory consultation responses outlined a number of concerns relating to transport access. These included concerns surrounding worsening levels of traffic and delays, air pollution, and increased risk of accidents on already dangerous roads.

7.11 The statutory consultation process also outlined a number of concerns surrounding transport accessibility. These included the following considerations:

- Desire for improvements to the Two Forts Way and access, including improved access for people with disabilities
- Keen to ensure that proposals do not affect access to the riverside and station, and where possible enhance access
- Concerns surrounding proposed road closures/ diversions/ alternative access arrangements on Royal Mail operations
- Concerns that the new road link would sever the existing siding, taking it out of use.
- Concerns as to whether public transport would be affected, particularly the route 99 bus.

EXISTING CONDITIONS

7.12 The site is currently accessed via a simple priority junction with Fort Road which historically served the former Power Station and associated operations. At present the access is used by vehicles associated with the demolition of the Power Station and a temporary use for car storage (part of the Port's operation). The Land-Site Transport chapter of the ES sets out the existing transport conditions in full.

[9] Titheridge et al (2014) *Transport and Poverty – A Review of Evidence*, University College London

Observations and baseline modelling confirm that vehicle delay is experienced at the ASDA roundabout during peak periods.

7.13 The nearest bus stop to the site is located some 1,400m to the west of the site on Brennan Road, accessible via Fort Road. This bus stop is served by the 99-circular service, which serves the following destinations:

- Fort Road for Tilbury Fort;
- Tilbury Landing Stage;
- London International Cruise Terminal;
- Tilbury Town Station;
- Port of Tilbury; and
- Tilbury ASDA.

7.14 Service 99 operates every 20 - 30 minutes on Mondays to Saturdays. No services run on Sundays. It provides access to the Port of Tilbury with bus stops located at the Ferry Terminal and the railway station enabling access by bus for existing port employees. The bus route does not serve any community facilities, or key social infrastructure such as schools and health services.

EFFECTS ARISING FROM CONSTRUCTION ACTIVITY

7.15 The level of traffic generated during the construction period will be determined by the phasing of construction activity and the techniques used, which can vary considerably throughout development. The completed Transport Assessment (TA), undertaken as part of the EIA, will also determine the estimated number of HGVs and LGV movements generated throughout the construction period.

7.16 The construction works will be localised, and associated diversions to the highways network are likely to be minor, and temporary. During the construction period, bus route 99 will require temporary diversion, which could cause passenger delay and inconvenience. The bus will continue to provide access to key services such as the ferry and train station. The effect on vulnerable populations who may be more dependent on public transport and private car use will therefore be minimised.

7.17 From an equalities perspective, the most sensitive groups include older residents, children, residents with a disability or long-term health condition, low-income households and people without a car. In particular, users of the 99 Bus Route and users of St Andrews Road, Fort Road and the ASDA roundabout by car could face delays from increased traffic, and the diverted route. The impact is however likely to be short-term and temporary, and will align with the construction programme of the proposals. To help overcome potential severance and delay associated with the diversion of the 99 bus service, the Framework Travel Plan provides for a new bus stop located on Fort Road close to the Tilbury2 site access. The exact location will be agreed with Thurrock Council as part of the detailed design of the link road and associated changes to Fort Road.

7.18 There may also be possible adverse impacts during the construction period, associated with driver delay, road safety, public transport access and delays. The Design Manual for Roads and Bridges[10] provides evidence that route uncertainty, delays and congestion can increase driver stress, and cause a number of adverse health impacts. Road diversions and disruption where they occur associated with the construction period could contribute to heightened stress amongst drivers frequently using the effected routes.

7.19 Modelling undertaken as part of the Land-Side Transport assessment demonstrates that the proposed construction traffic will result in a greater than 10% increase in traffic only on Fort Road (south of Site), which is expected to see an increase of 24.9%. The existing population within the vicinity of Fort Road is sparse, and therefore the sensitivity of the link in telation to severance is neglible.

7.20 The Land-Side Transport assessment notes that constructon traffic is transitional, and therefore any effects upon the local environment and road users will be temporary. A Contruction Traffic Management Plan (CTMP) for the development will set out the principles of the overall management of contruction activity, and will ensure that any construction methodologies are consistent with the mitigation measures set out elsewhere in the ES.

[10] DMRB, Volume 11 Section 3 Part 9, Vehicle Travellers

Table 22: Summary of construction impacts on equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Construction	Disruption and delays to local highways network and public transport routes.	Sensitive populations may include the elderly or disabled residents, pregnant women and mothers with young children, for whom access to local services is particularly importan.	Direct	Temporary	Negative	Low/ medium Users of the local highway network	Negligible

OPERATION ASSESSMENT

7.21 On completion of the proposals, it is estimated that Tilbury2 will generate 3,022 vehicle movements across a typical weekday, of which 2,143 (71%) would be HGVs.

7.22 All HGV's will route via the new link road, along the A1089 Ferry Road/St Andrews Road and then via the A1089(T) and subsequently disperse across the wider strategic road network (A13(T) and M25).

7.23 Transport modelling work has been undertaken to assess the impact of Tilbury2 proposals on key junctions and interchanges, including:

- ASDA roundabout;
- A1089/A126 Marshfoot Road interchange;
- A1089/A13 interchange; and
- M25 J30.

7.24 Modelling undertaken in relation to the ASDA roundabout shows that by 2020 the junction is expected to be operating in excess of capacity during the AM peak. The addition of traffic associated with Tilbury2 is likely to exacerbate these operational difficulties. This is the same for the PM peak, with the Tilbury2 proposals likely to exacerbate the operational difficulties with increased queuing and delay.

7.25 Traffic flows on the A1089 Ferry Road (north of the Link Road) are predicted to increase by 27.4%. As a result of the delivery of the proposed link road however, it is anticipated that traffic flows on Fort Road will decrease by up to 100% and traffic on the A1089 Ferry Road will decrease by 34%. For the A1089/A126 Marshfoot Road interchange, modelling shows that the existing layout remains the required standard for both the merge and diverge at this interchange, with the addition of development traffic arising from Tilbury2.

7.26 It is noted that the ASDA roundabout is sensitive to changes in traffic in respect of driver delay. The junction is operating close to capacity in part of the peak hour periods, and therefore has the potential to increase driver delay and prolong journey times. Modelling work shows that the predicted increase in delay at the ASDA roundabout during the periods when background traffic flows are greatest is relatively modest, and is on average 19 seconds on any one approach. Such changes are overall considered to be neglible.

Table 23: Summary of operation impacts on equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Operation	Increased vehicle and HGV movement, and associated congestion	Residents living and working in the area, along with vulnerable groups such as older or disabled residents, pregnant women, women with young children and low-income households.	Direct	Permanent	Negative	Low/ medium Users of the local highway network	Negligible /Minor

SUMMARY OF EFFECT

Table 24: Summary of accessibility impacts on equalities groups

Equalities Group	Summary of Effect/ proportionality
Elderly people Children Disability Pregnant women Long-term health condition Low-income	**Construction** The overall effects of changes to car and bus accessibility during the construction phase is likely to have the greatest impact upon groups more reliant on public transport. Although no known bus diversions are planned, there could be delays associated with traffic and obstructions, and increased driver stress as a result of route uncertainty. The baseline demographic profile suggests, however, that these equalities groups are not represented disproportionately among the affected population. **Operation** The overall effects of changes to car and bus accessibility during the operation phase is likely to have the greatest impact upon groups more reliant on public transport, and frequent users of the ASDA roundabout to access employment or social infrastructure. There is not however considered to be a disproportionate effect upon equalities groups.

MITIGATION

7.27 The Framework Travel Plan states that a new bus stop will be located on Fort Road close to the Tilbury2 site access. The exact location will be agreed as part of the detailed design of the link road and associated changes to Fort Road. Network requirements and associated mitigation measures during the construction phase will be provided in line with the Construction Traffic Management Plan.

7.28 There are no additional EqIA mitigation measures (either at construction or operational stage) above those identified in the ES.

8.0 ROAD SAFETY

INTRODUCTION

8.1 This section considers the potential effects on equalities groups from changes to road safety, associated with the construction and operation of the proposals.

8.2 Road safety is a key influence on how people live, including how they access services, economic opportunity and socialise. It can also influence how people move independently, particularly children and older people. This can have a direct impact on health and wellbeing, socio-economic opportunity and quality of life. Road safety is determined by a number of factors, including:

- Speed limits;
- Quality of walking infrastructure;
- Lighting; and
- Availability and accessibility of safe crossing points.

LINK BETWEEN ROAD SAFETY AND EQUALITIES

8.3 Pedestrian safety, across all age groups, is linked to the speed of traffic. The higher the vehicle speed, the greater the risk of accident, injury and mortality. Alongside these direct impacts, there are a number of indirect effects on bereaved families and friends, and those supporting victims who have long-term injuries as a result of a road accident.

8.4 Road safety also plays a key role in influencing active transport decisions, and can deter sustainable travel options such as cycling and walking. Poor road safety, or perceptions of poor road safety can contribute to parents restricting the independent movement of their children. Reductions in active travel can cause a range of adverse health impacts in the long term, including obesity.

8.5 In relation to equalities, the most vulnerable groups at risk of road safety impacts include children and disadvantaged communities. Research by Transport for London (TfL) has shown that there is a relationship between deprivation and injury risk, particularly for pedestrians[11]. Deprived groups are less likely to own a car, and in turn experience a disproportionately high risk of injury from road related accidents. This is particularly true for children living in more deprived areas, who are more likely to travel as pedestrians.

STAKEHOLDER VIEWS

8.6 The non-statutory consultation identified a number of concerns surrounding re-routing, congestion, pedestrian, and cycling safety and proximity of traffic to residential areas.

[11] Deprivation and Road Safety in London, A report to the London Road Safety Unit

8.7 The statutory consultation process also outlined similar concerns surrounding the proximity of the infrastructure corridor to housing and green space, increased traffic around the ASDA roundabout, increased risks to road safety, and pedestrian safety.

CONSTRUCTION ACTIVITY

8.8 The road transportation of materials will be required across the site. This is likely to increase localised levels of traffic, and increase the number of large vehicles manoeuvring around the area. During the construction period, changes to road safety are likely to arise from changes to existing routes, changes in traffic flow and road layout. Vulnerable road users are likely to be at greatest risk from these changes during the construction period, including children, older people, new drivers, cyclists and motorcyclists.

8.9 The level of impact will vary according to construction practices and site characteristics. Potential impacts include:

- Reduced accessibility for residents with limited mobility levels;
- Physical and perceived severance;
- Reduced pedestrian and cyclist safety; and
- Proximity of construction activity and re-routing to social infrastructure such as schools, and residential areas.

8.10 These potential impacts could be mitigated in line with the safety requirements set out in the CTMP, particularly in terms of reducing the effects of the construction phase on the amenity of the local area and on local residents.

Table 25: Summary of construction impacts on equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Construction	Changes to road safety arising from vehicle and HGV movement and changes in traffic flows.	Populations vulnerable from increased road accident risk include children, the elderly, pedestrian and cyclists, and residents from low-income households.	Direct	Temporary	Negative	Low/ medium	Negligible

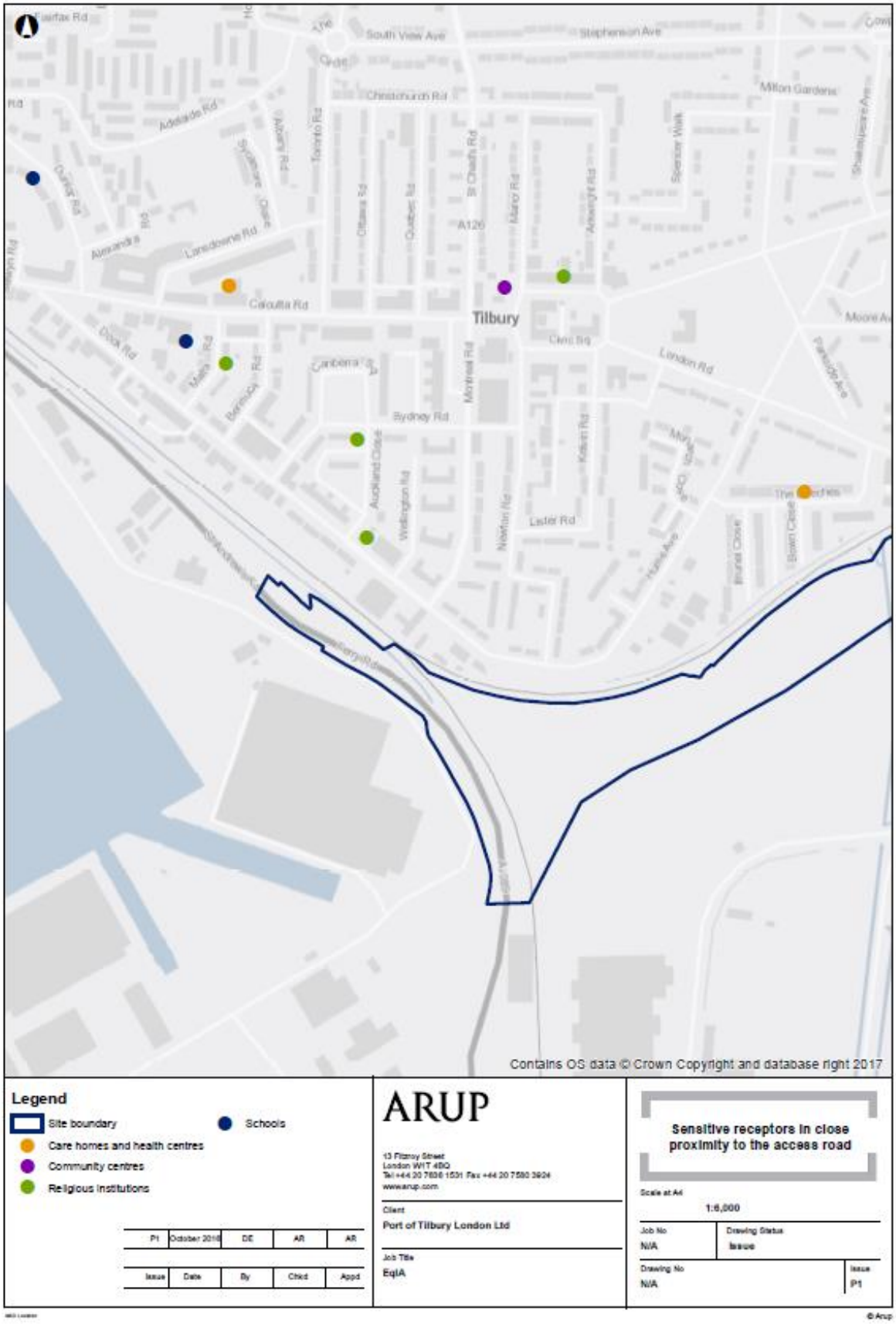
OPERATION ASSESSMENT

8.11 Accidents principally occur at junctions where vehicles are undertaking conflicting manoeuvres. The main operational impacts surrounding road safety will include increased volume of traffic on the local road network, and ASDA roundabout. It is likely that the road safety records will show the occurrence of accidents at this junction on a fairly regular basis. Detailed analysis of the contributory factors to identify common causes of accidents will be undertaken, and used to assess whether the increased traffic flows exacerbate the situation. The ES chapter on Land- SideTransport undertook a detailed review of the personal injury accident record for the local highway network. The number and causes of accidents does not suggest a specific safety issue at any particular location within the study area. During the study period, there were no recorded accidents on A1089 Ferry Road, and it is considered that this link road has negligible sensitivity to changes in traffic flow in terms of road safety.

8.12 The new infrastructure corridor will however create a direct road link, with fewer junctions than the existing route. This is likely to reduce possible conflict on the road at junctions, and encourage safer vehicle movement. The Land-Side Transport Assessment indicates that accident decreases on Fort Road could be up to 100%.

8.13 In terms of pedestrian safety, there are a number of faith-based institutions and a primary school located within reasonable proximity to the St Andrews Road.

Figure 13: Proximity of schools, religious institutions and care facilities to link road



8.14 These facilities however do not have access points near to the main road, and can be accessed safely to the north. The presence of these facilities however may increase the exposure of children and religious communities to adverse impacts relating to the road and its increased traffic.

8.15 A new toucan crossing will also be installed across Thurrock Park way, to improve both vehicle and passenger safety as part of the Active Travel Study, secured through the DCO and a proposed section 106 agreement with Thurrock Council.

Table 26: Summary of operation impacts on equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Operation	Changes in traffic flows and speed as a result of operational activity.	Populations vulnerable from increased road accident risk include children, the elderly, pedestrian and cyclists, and residents from low-income households.	Direct	Permanent	Negative	Low/ medium Limited to resident population near to main vehicle routes.	Negligible

SUMMARY OF EFFECT

Table 27: Summary of road safety impacts on equalities groups

Equalities Group	Summary of Effect/ proportionality
Elderly people Children Disability Pregnant women Long-term health condition Low-income	**Construction** The overall effects of changes to road safety during the construction phase is likely to have the greatest impact upon groups more reliant on active transport, elderly people, children and low-income households. The increase in traffic and route uncertainty could increase risks of accidents. The baseline demographic profile suggests, however, that these equalities groups are not represented disproportionately among the affected population. **Operation** The overall effects of changes to road safety during the operation phase is likely to have the greatest impact upon local residents from low-income households, and those who access services and social infrastructure near to St Andrews Road. The demographic profiling shows that social deprivation within the LSOAs closest to the routes anticipated to experience increased traffic is greater than that for the District as a whole. The overall operational impacts are not likely to be significant, particularly as improved walking and cycling infrastructure is expected to be delivered as part of the proposals.

MITIGATION

8.16 The proposed infrastructure corridor provides a number of embedded mitigation measures, to overcome some of the expected challenges surrounding transport accessibility. This includes roads being constructed to modern design standards, to enable vehicles to manoeuvre safely, and reduce conflicts with fewer junctions and accesses, than the existing route. In addition, new footways and cycleways will play a role in providing safe crossing points, and mitigate the impacts on safety from increased traffic flow.

8.17 Additional EqIA mitigation measures to ensure inclusive design and safe access around the new walking and cycling infrastructure will be developed in line with the Active Transport Study (secured through the DCO and section 106 agreement with Thurrock Council as relevant). These include increasing levels of walking and cycling through accessible infrastructure, filling ‘gaps’ in the existing network, speed limit alterations, improving route legibility and general infrastructure maintenance and improvements. The Active Transport Study also outlines measures to improve safer cycling and access to key infrastructure, such as employment and schools. This could help to improve safe crossings and cycling opportunities for children at school peak times.

9.0 ACTIVE TRAVEL

INTRODUCTION

9.1 This section considers the potential effects on equalities groups from changes to active travel, associated with the construction and operation of the proposals.

9.2 Active travel includes walking and cycling modes of transport, and is a key influence on how people live, including how they access services, economic opportunity and participate in active lifestyles. This can have a direct impact on health and wellbeing, socio-economic opportunity and quality of life. Active travel is determined by a number of factors, including:

- Quality of walking and cycling infrastructure;
- Lighting; and
- Supporting facilities, such as cycle parking.

LINK BETWEEN ACTIVE TRAVEL AND EQUALITIES

9.3 Active travel offers an affordable mode of transport, which encourages healthy living. It provides a reliable and sustainable travel option, and is particularly important for low-income households, children and people with health conditions. There is evidence to suggest that physical activity can also help improve mental health and wellbeing.

9.4 Transport has an impact on health and wellbeing, both directly and indirectly. Walking and cycling provide direct forms of physical activity, which can improve health outcomes. Evidence suggests that access to jobs and services promote mental health and wellbeing.

9.5 It also helps to address a number of health problems associated with physical inactivity, which can be a leading cause of early death. Levels of cycling and walking however tend to vary between communities. Older and disabled people are less likely to walk or cycle.

9.6 Disruption or severance to active transport routes can restrict access to key services, economic opportunities and social interaction. This can be particularly isolating for residents with limited transport options.

STAKEHOLDER VIEWS

9.7 As stated in Table 3, the non-statutory consultation brought to light a number of concerns surrounding the loss of walking and cycling access routes and safety of active travel options.

9.8 The statutory consultation process outlined similar concerns surrounding active travel modes. These included concerns that existing footpaths and cycleways would be harmed, and used inappropriately such as for lorry parking. Wider considerations included the need for foot and cycle crossings over the infrastructure corridor.

EXISTING CONDITIONS

9.9 There are a number of footpaths and walkways within the vicinity of the infrastructure corridor. These include:

- Unmade footway on the western side of Fort Road at its junction with the existing site access road, which connects with the footway on Brennan Road
- Footways either side of Brennan Road, providing a direct walking route to Tilbury town centre and the railway station.
- Shared footway and cycle route on the southern side of Fort Road by the Fortress Distribution Park
- Footways on both side of Fort Road, adjacent to the Riverside Business Centre.
- A shared pedestrian and cyclist bridge (Hairpin Bridge) connects St Andrews Road to the residential area to the north of the railway line. This route forms part of Route 13 of the National Cycle Network (NCN).

9.10 St Andrew's Road provides access to Tilbury Town railway station with footways on both sides of the road, however at the eastern end where it changes to Ferry Road the footway on the northern side is terminated with a dropped kerb provided to facilitate crossing of the carriageway.

CONSTRUCTION ACTIVITY

9.11 Construction activity associated with the proposals is likely to include diversions to Public Rights of Way (PRoW), and reduced pedestrian and cyclist amenity across local highways network. Disruption and diversion of local walking and cycling routes could impact upon people's ability or preference to walk and cycle. This could be due to changing perceptions of safety, distance and duration of travel, and quality of environment.

9.12 Public Footpath 146 is located along the foreshore of the Thames, at the southern boundary of the site. This footpath forms part of the Thames path, and may need to be temporarily diverted or closed during the construction process. This could displace pedestrian movement, and residents and visitors dog-walking.

Table 28: Summary of construction impacts on equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Construction	Diversion of PRoW, and possible disruption to pedestrian and cycling access routes.	Vulnerable groups include residents and employees living and working in the vicinity, children, and residents with limited mobility, low-income households.	Direct	Temporary	Negative	Low/ medium	Negligible

OPERATION ASSESSMENT

9.13 In relation to the operational phase of the proposals, there are a number of potential impacts associated with severance, delay and disruption to active transport modes.

9.14 The ES identifies that the completed proposals will have a limited impact on pedestrian delay. It is expected that during the operation of the site and the link road, traffic flows on Fort Road (south of the site) and the A1089 Ferry Road (south of the link road) would decrease significantly. Existing traffic volumes further north along the A1089 are higher and hence the proportionate increase in traffic as a consequence of the proposals is lower, with reduced effects. It is therefore unlikely there will be significant effects on pedestrian amenity further north. However, there is a reasonable level of pedestrian activity in the vicinity of the ASDA roundabout and, therefore minor impacts on pedestrian amenity could be experienced in this location.

9.15 Adverse impacts upon pedestrian amenity could deter the use of active transport to access key services in the local area, and increase isolation for lese mobile communities. The residential areas within the local vicinity comprise relatively deprived areas, whereby affordable active transport options may be of particular importance.

9.16 Pedestrian delay in the vicinity of the ASDA roundabout will also be lessened prior to completion of the proposals by a segregated pedestrian/cycle link between Dock Road and Thurrock Park Way (beneath St Andrews Road) being provided as part of the London Distribution Park development, which caters for the principal desire line. This will, for most journeys, remove the need to cross the A1089 at grade where traffic flows will increase. The Active Travel Study sets out a number of mitigation measures that are likely to improve accessibility for active transport modes. These include improving pedestrian and cyclist crossings and paths, as well as wayfinding schemes.

Table 29: Summary of operational impacts on equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Operation	Pedestrian delay surrounding the ASDA roundabout	Residents and employees living and working in the vicinity.	Direct	Permanent	Negative	Low/ medium	Negligible
	Pedestrian amenity at the St Andrews Road/ Ferry Road Corridor	Residents and employees living and working in the vicinity.	Direct	Permanent	Negative	Low/ medium	Negligible
	Pedestrian amenity – new footway and cycle ways/ crossings	Residents and employees living and working in the vicinity, low-income households, women with children and residents with a disability or limited mobility.	Direct	Permanent	Positive	Low/ medium	Minor

SUMMARY OF EFFECT

Table 30: Summary of active travel impacts on equalities groups

Equalities Group	Summary of Effect/ proportionality
Children Low-income Limited mobility	**Construction** The overall effects of changes to active travel during the construction phase is likely to have the greatest impact upon groups more reliant on active transport, children and young people, and low-income households. The increase in traffic and route uncertainty could increase risks of accidents. The baseline demographic profile suggests, however, that these equalities groups are not represented disproportionately among the affected population. **Operation** The overall effects of changes to active travel during the operation phase is likely to have the greatest impact upon local residents from low-income households, and those who access services and social infrastructure near to St Andrews Road and the ASDA roundabout. Further details are required on the detailed design of mitigation measures, to fully assess positive and negative impacts associated with the proposals. The demographic profiling shows that social deprivation within the LSOAs closest to the routes anticipated to experience increased traffic is greater than that for the District as a whole. The proposals will however provide improved walking and cycling infrastructure, to enhance safe access. There is not considered to be a disproportionate effect upon equalities groups.

MITIGATION

9.17 The ES identifies a number of mitigation measures to reduce adverse impacts on active travel modes. The proposals include new and improved road and rail links, including a shared cycleway on the southern side of the access road. Pedestrian delay in the vicinity of the ASDA roundabout will also be lessened prior to the completion of the proposals by a segregated pedestrian/cycle link between Dock Road and Thurrock Park Way (beneath St Andrews Road) being provided as part of the London Distribution Park development which caters for the principal desire line.

9.18 Additional EqIA mitigation measures to ensure inclusive design and safe access around the new walking and cycling infrastructure are set out in further detail in the Active Transport Study.

10.0 ACCESS TO WORK AND TRAINING

INTRODUCTION

10.1 This section considers the potential effects on equalities groups from changes to access to work and training opportunities, associated with the construction and operation of the proposals.

- Access to employment and training;
- Job diversity; and
- Business support.

10.2 Access to work and training are a key influence on how people live, including how they participate in the economy, achieve future aspirations and alleviate socio-economic deprivation. This can have a direct impact on health and wellbeing, socio-economic opportunity and quality of life. Accessibility is determined by a number of factors, including:

- Availability of employment opportunities in accessible locations;
- The range of employment opportunities across different skills levels;
- The availability and frequency of training opportunities;
- A range of contractual arrangements to accommodate flexibility;
- Provision of childcare facilities; and
- Provision of 'bridging' services to facilities the transition from education to employment.

LINK BETWEEN ACCESS TO WORK AND TRAINING, AND EQUALITIES

10.3 Access to employment, apprenticeships and training opportunities plays a key role in determining socio-economic status, opportunities for progression and local aspirations. Census data shows that Tilbury has a higher proportion of the population with no qualifications than Thurrock as a whole, and a relatively high unemployment rate.

10.4 Unemployment can lead to a range of adverse impacts, such as poverty, mental and physical illness and a decrease in personal and social esteem. The long term implications of prolonged unemployment can significantly impact upon the wellbeing of individuals and families. Lack of access to employment and skills opportunities can have financial and emotional social impacts on households and family relationships.

EXISTING CONDITIONS

10.5 Tilbury Town is characterised as an area with higher than average levels of economic inactivity and lower than average levels of qualifications. Employment in Tilbury Town is characterised by activity at the Port of Tilbury, where over half

(53%) of the jobs are semi-skilled. Tilbury Town is also characterised by employment in retail services but there are low levels of employment in other services such as financial and insurance services, health, education and public administration, reflecting the low levels of skills and qualifications in the study area.

STAKEHOLDER VIEWS

10.6 As set out in Table 3, the issue of local jobs was a prevalent theme throughout the non-statutory consultation. A number of responses showed concern that employment opportunities arising from the proposals would not be felt in the local community, and would favour bringing in labour from the wider sub-region. There were concerns that local residents would not benefit from the wider multiplier effects associated with port expansion and increased employment opportunity.

10.7 The statutory consultation outlined similar issues surrounding access to work and training. These included strong views that high quality jobs should go to local people, including employment access for those located south of the River. The responses indicated that proposals could support and build upon existing initiatives to support employment and skills for local people.

CONSTRUCTION ACTIVITY

10.8 The construction of the road and railway corridors, along with the main construction site may provide opportunities for local residents to undertake training or gain employment. The Outline Business Case states that Tilbury2 proposals could produce 218 to 266 additional construction FTEs. PoTLL's objective is to maintain a proportion of direct, on-site employment going to local residents. The Port aims to employ 125 to 152 additional employes from the local area for the extension construction phase.

10.9 The proposals could have positive impacts on access to employment and training opportunities during construction. In relation to equalities, the construction industry is typically dominated by male employees, and there are unlikely to be equal opportunities in terms of offering jobs to women. The Skills and Employment Strategy (secured through a section 106 agreement with Thurrock Council – document reference 5.3 Appendix B) however states that PoTLL's mentoring programmes strive to enhance diversity at the Port, by providing specific support to young women interested in careers related to the Port industry. It also states that PoTLL are aiming to increase the diversity of it's workforce by paying specific attention to including women in a number of initiatives and programmes.

Table 31 Summary of construction impacts on equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Construction	Increased employment opportunities arising from the construction of road and railway corridors, and the port expansion	Vulnerable equalities groups are likely to include low-income households, JSA claimants, women and unemployed residents in the local area.	Direct	Temporary	Positive and negative	Low The proportion of people likely to benefit is low in comparison to the size of the local labour market.	Minor

OPERATION ASSESSMENT

10.10 The Socio-economic chapter of the ES provides a full assessment on the likely impacts associated with Port-related employment. Additional regional and local employment is expected to have a modest effect on qualification levels, and sectoral employment characteristics in the local Tilbury area. This would be primarily as a result of PoTLL's training opportunities, but also partly due to tenant and supplier employment, particularly within higher skilled jobs.

10.11 The Outline Business Case shows that the Tilbury2 proposals could lead to 527 to 868 additional operational employment FTEs. PoTLL's objective is to maintain the proportion of direct, on-site employment going to local residents with the expansion. PoTLL therefore aims to employ about 300 to 495 additional employees from the local area during the operation phase of Tilbury2. The residential areas within the local vicinity comprise relatively deprived areas, and could therefore benefit from increased local employment opportunities.

10.12 The Skills and Employment Strategy sets out that the proposals could provide new and expanded opportunities in term of education and careers within the Ports and logistics sector. It is estimated as part of the Outline Business Case that Tilbury2 could increase training and education opportunities, demands and requirements by at least 30 per cent compared to existing conditions. Tilbury2 will support the development of additional employability programmes, including working alongside the 'Military veterans into Work' programme, utilising the new plant simulator and learning facilities. In addition, there will be ongoing support for local schools, colleges and universities by providing port and logistics in-sights days, career workshops and presentations, work experience placements, port tours and career engagement events.

10.13 The proposals have the potential to generate a further 40 apprenticeship/ traineeships over the 24 months covering operations, admin, and management. There is also opportunity to expand the Ports Graduate Programme to cover a broader range of degree disciplines.

10.14 Although there could be positive equality impacts in terms of bringing employment to a deprived area, there are unlikely to be equal opportunities in terms of offering jobs to women, disabled people, and ethnic minorities, based on the current employee profile. As set out in the Skills and Employment Strategy, PoTLL does however already have measures in place for guaranteed interviews for disabled candidates, which will help to promote equal employment opportunities.

Table 32 Summary of operational impacts on equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Operation	Improved access to employment and training opportunities as a result of the proposals' ongoing operation.	Residents and employees living and working in the vicinity, currently unemployed residents, and young people who might benefit from apprenticeships and training opportunities.	Direct	Permanent	Positive and negative	Low The proportion of people likely to benefit is low in comparison to the size of the local labour market	Minor

SUMMARY OF EFFECT

10.15 Generation of employment opportunities. The increase in local employment opportunities would be beneficial for all, however would more positively impact those who are able to work on this type of project, and are currently employed.

Table 33: Summary of employment and training impacts on equalities groups

Equalities Group	Summary of Effect/ proportionality
Low-income Unemployed Young people JSA Females Ethnic minority groups Disability	**Construction** The overall effects of changes to access to employment and training during the construction phase is likely to have the greatest impact upon low-income groups, and those currently unemployed and seeking work. The extent of this change however will depend upon the number of construction jobs available, the extent of training opportunities, and whether positions will be recruited for locally. If the construction stage involved local recruitment, then there could be modest opportunities for local reduction in unemployment and income generation. Construction work tends to be predominantly male employees, however there could be opportunities for other groups to benefit from access to new employment and training opportunities. **Operation** The overall effects of changes to access to employment and training opportunities during the operation phase is likely to have the greatest impact upon local residents from low-income households, young people attending local schools and colleges, and current employees of the Port who may experience greater training opportunities. This is predominantly likely to be males. The operational changes could have a disproportionately positive impact upon low-income households in the local area, depending on the extent to which the Port employs staff locally, as opposed from drawing upon the wider sub-regional labour market. This is supported by the demographic profiling, which shows that social deprivation within the LSOAs closest to the Port is significantly greater than that for the District as a whole. The current employee population of the Port is only 10.5% female, and overwhelmingly formed of UK nationals. Job growth associated with the Port expansion therefore could seek to further expand opportunities for other groups, who may not have otherwise directly benefited from these economic opportunities.

MITIGATION

10.16 The Skills and Employment Strategy sets out a number of mitigation measures to build on existing strategies by PoTLL to increase the diversity of the current and future workforce. PoTLL already have a strategy in place to work with Thurrock schools and the local colleges in providing work experience placements, with an emphasis on encouraging females to explore careers within the port environment. In addition, POTLL has supported a recruitment campaign to recruit female straddle carrier drivers and are exploring greater use of social media to promote port opportunities. These measures will help to ensure inclusive and diverse employment and training opportunities associated with the proposals.

10.17 The Skills and Employment Strategy also sets out a number of PoTLL's operational employment commitments. There are measures such as guaranteed interviews to

any disabled applicants that meet the criteria for employment, which can assist in increasing representation of employed people in the workforce. In addition, PoTLL will commit to supporting the veteran community into employment and training.

10.18 Additional EqIA mitigation measures could include measures such as flexible working hours and childcare support, which could build on existing initiatives to broaden employment opportunities for women. Workforce matters will be discussed as part of the Employment and Skills Strategy to be agreed with Thurrock Council, as part of a planning obligation.

11.0 NOISE

INTRODUCTION

11.1 This section considers the potential effects on equalities groups from changes to noise, associated with the construction and operation of the proposals.

11.2 Noise can have a significant impact on how people live, including how they sleep, perform daily activities, and socialise. This can have a direct impact on health and wellbeing, socio-economic opportunity and overall quality of life. Noise impacts are determined by a number of factors, including:

- The time of day and duration of noise;
- The quality of sound insulation within residential houses; and
- Type of construction practices and associated mitigation measures.

EXISTING CONDITIONS

11.3 The current noise climate in the vicinity of the site is generally dominated by road traffic, emanating from either local or distant highways. Train services using the rail line to the north of the site contribute to the existing noise climate, as does noise associated with activities taking place at the existing port. At locations close to the River Thames, noise from water vessels and birds is prevalent.

LINK BETWEEN NOISE AND EQUALITIES

11.4 Impacts relating to construction noise and vibration are likely to vary across the sites, depending on the method of construction and proximity to people and social infrastructure. There a number of adverse impacts associated with noise disturbance, including disrupted sleep, physiological effects, stress, and a range of other physical and mental health problems.

11.5 There is a potential for construction noise and vibration to impact on the wellbeing of both local residents, and visitors or users of local services. Where adverse noise effect are identified, this is likely to cause disruption, which may change temporally.

11.6 There are a number of communities with protected characteristics who likely to be more sensitive to impacts of noise pollution arising from the site. Sensitive receptors particularly vulnerable to noise impacts include:

- Children – particularly those learning in schools during the day. There are 2 schools located within close proximity to the development, and include Lansdowne Primary Academy and St Mary's RC Primary School.
- Residents at home during the day, including shift workers sleeping, JSA claimants, Pregnant women and those with small children
- Residents with a disability or long term health condition, including invisible disabilities such as autism or schizophrenia

- Residents and visitors to religious institutions, whereby noise pollution could disturb religious and cultural ceremonies.

11.7 Noise disturbance forms a direct impact of the project, however is likely to be temporary and only during the construction period. The intensity and duration is likely to vary according to the construction programme taking place on the site.

STAKEHOLDER VIEWS

11.8 As set out in Table 3, concerns over noise impacts were identified during the non-statutory consultation period. There were particular concerns raised over the proximity of houses to the main site, located within a relatively quiet part of Tilbury. In addition, residents showed concern surrounding increased traffic and HGV movement, and the noise impacts associated with this.

11.9 The statutory consultation process outlined similar concerns surrounding noise. These included the potential for operations to be 24/7 and 365 days a year which would cause adverse noise impacts, concerns over noise impacts to local properties, adverse impacts on residents as a result of piling, and noise disturbance associated with the rail link. There were also concerns surrounding increased traffic and HGV movement, and the noise impacts associated with this.

EFFECTS ARISING FROM CONSTRUCTION ACTIVITY

11.10 The hours of construction activity play a significant part in determining the overall impact of noise pollution on equalities groups. Working hours during weekdays (Monday to Friday) will generally cover a ten hour period from 8am to 6pm. On weekends (Saturday and Sundays), working hours will cover an eight hour period from 8am to 4pm. Extended hours of 7am to 8pm are proposed for the marine (nonpiling) work in order to minimise the construction programme for the element of work. In some instances, equipment maintenance of set up work may need to take place outside of the hours specified.

11.11 The Noise and Vibration Assessment within the ES undertook modelling to identify the predicted noise levels at various distances from the key construction activities. The modelling work uses the following terms in creating a framework for assessing the significance of impacts:

- LOAEL – Lowest Observed Adverse Effect
- SOAEL – Significant Observed Adverse Effect

11.12 The predictions are based on noise emissions from the construction activities for a given distance, across a number of phases of work. The construction associated with development will involve the use of a variety of working methods, and operation noise levels will vary over time, as activities change. Noise predictions have been undertaken in relation to the following phases of construction:

- Construction of the main site;
- Construction of the proposed road and rail link; and
- Construction traffic entering and existing the site.

11.13 Construction activity generating the highest levels of noise on the main site is anticipated to be the piling and dredging works associated with the jetty construction. Due to the location of the jetty, and associated works, this activity is not predicted to give rise to potential impacts.

11.14 The predicted noise levels have been considered in relation to setback distances to the nearest receptors. Based on these predictions, there is potential for significant impacts to occur during the construction of the rail line and link road, as well as the elements of the bridge construction. Although temporary, these impacts could cause moderate impacts for surrounding receptors.

11.15 Noise modelling undertaken as part of the ES has also considered impacts associated with construction traffic entering and exiting the site along the site access road. During peak activities, construction deliveries have been estimated at up to 177 movements per day. The increase in HGV use would be around 11% for construction vehicles accessing via the south site access.

11.16 In considering the likely significance and extent of noise impacts on sensitive receptors, a 300m impact zone for the construction phase (from site boundary) has been applied. As shown in Figure 14, the following LSOAs are impacted:

- Thurrock 018A;
- Thurrock 018C;
- Thurrock 018F; and
- Thurrock 018B.

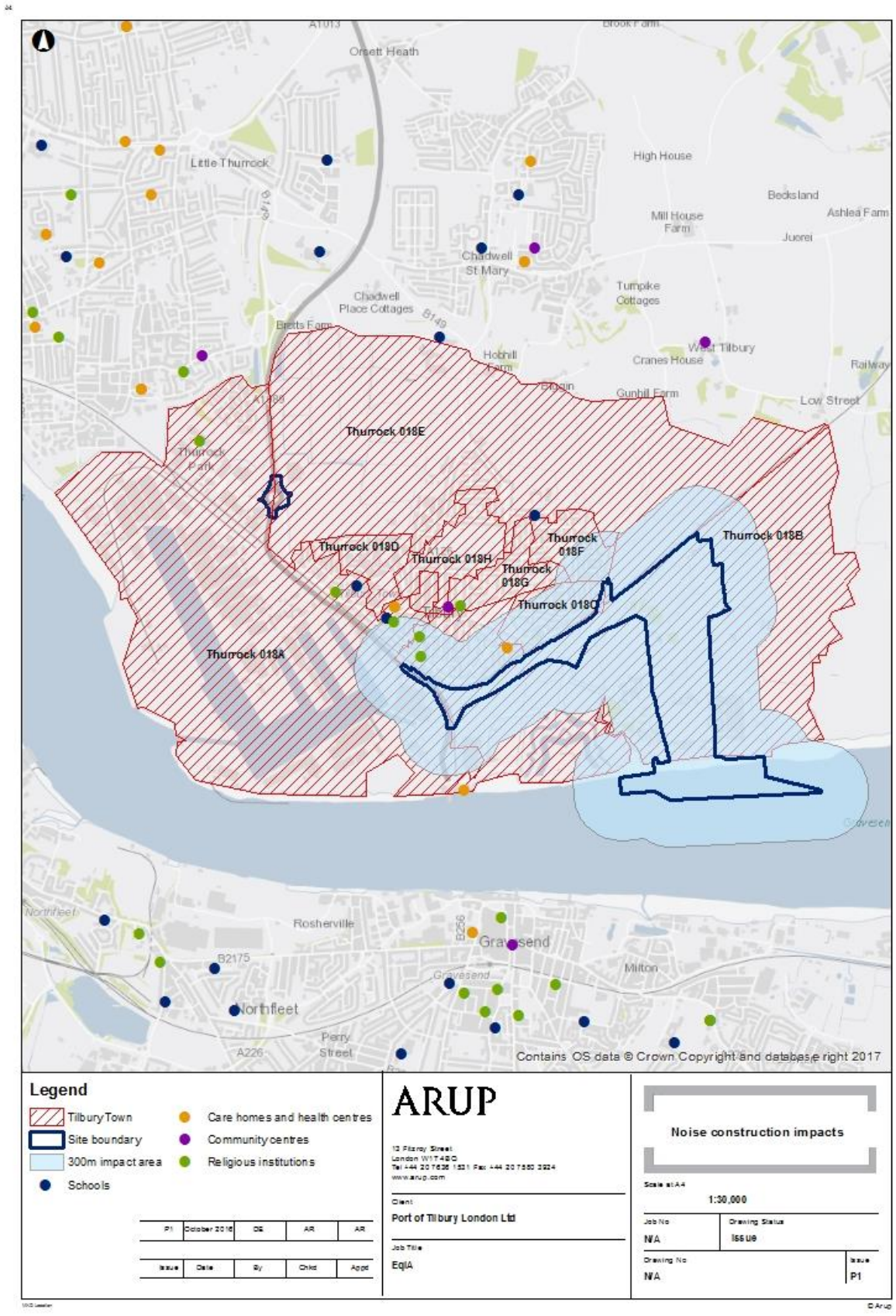
11.17 When reviewing the results from the demographic profiling, a number of protected characteristics are present within these LSOAs at a higher proportion compared to Thurrock as a whole. These characteristics include a higher proportions of:

- Under 16 year olds;
- Black ethnicity; and
- Residents aged16-64 with an approximated Social Grade of DE.

11.18 The higher proportion of equalities groups within the 300m noise impacts area surrounding the site could cause disproportional adverse impacts.

11.19 In addition, a number of sensitive receptors, including social infrastructure amenities, are located within this 300m impact boundary. This includes three religious institutions, a school (on the very border of impact boundary), and a residential care home.

Figure 14: 300m impact buffer from site boundary for noise impacts during construction activity



11.20 The religious intuitions, primary school and care home within the construction noise impact area include:

- Covenant of Mercy;
- St Johns Church of England;
- Parish of East and West Tilbury and Linford Anglican Church;
- St Marys Catholic primary; and
- Sarahdap Limited residential care home.

11.21 The Noise and Vibration assessment shows that noise levels associated with the construction of the main site are below both LOAEL and SOAEL, demonstrating no significant effect. The construction of the link road and rail link were however identified as as having the potential to be above SOAEL. It was noted that noise barriers are expected to provide sufficient attenuation to bring the construction noise levels below the weekday and Saturday morning SOAEL. Constrcution traffic noise associated with the local road network are considered to be neglibile, and due to the temporary nature are unlikely to cause adverse impacts.

Table 34: Summary of construction impacts

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Construction	Construction activity associated with the road and rail link, and main site.	Residents and social infrastructure services within a 300m noise impact area, children, elderly residents, low-income households, residents with a disability or long-term health condition.	Direct	Temporary	Negative	Low	Minor

EFFECTS ARISING FROM OPERATION

11.22 The levels of noise generated by the operation of Tilbury2 covers the following:

- CMAT and Ro-Ro Terminal;
- Proposed link road and rail link;
- Road traffic noise on local roads; and
- Vessel movement.

11.23 Modelling undertaken as part of the ES identifies that for operational noise impacts, an impact radius of 1km to the north, and up to 1.5km south of the edge of the application boundary for site operations. This area extends to parts of Gravesend.

CMAT and Ro-Ro terminal

11.24 Based on the findings of the assessment, the predicted noise levels attributable to the activities taking place on the site have the potential to create significant adverse effects at the most exposed receptors. Within this operational impact area, a number of social infrastructure and residential areas are impacted.

11.25 Modelling work undertaken as part of the ES shows that there are limited significant effects from the operation of the Port. This consists of nightime effects arising from the CMAT, and day time effects from the general storage areas.

11.26 Regarding night time effects from CMAT, these are limited to receptors in Gravesend, and arise mainly due to the use of plant with assumed high noise levels, in combination with the propagation of sound over the river. The CMAT operations have less of a noise impact in Tilbury due the processing plants which would act as a noise 'screen' against the CMAT plant operational noise, coupled with the less strong propogation of sound across land when compared to water.

11.27 The daytime noise impact in Tilbury arises mainly due to the general storage area (on the assumption that it is used for bulk storage, rather than vehicle storage) which is in close proximity to propertries in Tilbury. The activities with the highest noise levels are the site access traffic.

11.28 There are no nighttime impacts in either Gravesend or Tilbury from the RoRo, due to lower noise levels of the operational plant in the RoRo area as compared to the CMAT plant.

11.29 None of the impacts from other activities or at other locations assessed reach the threshold for significance. The modelling shows that noise levels attributable to site activities will give rise to direct, major adverse effects at the most exposed receptors. These will be minimised through mitigation measures.

Road and rail links

11.30 Noise modelling has been undertaken as part of the ES to identify the changes in traffic flows attributable to the development. This includes the change in noise levels for existing roads in the vicinity of the site. Road traffic is predicted to be the dominant noise disturbance surrounding the infrastructure corridor, and is higher than the predicted noise levels generated by the proposed rail link over the

equivalent assessment period. In relation to receptors in close proximity to the Infrastructure Corridor, road traffic noise is expected to dominate.

11.31 There is no intention to alter the frequency of existing train services as a result of the proposals, or to re-route existing train services onto the new rail line. Noise modelling for the proposed rail link have been undertaken against ambient noise levels during the day and night.

11.32 There are likely to be impacts of noise and vibration from operation of the new link road between Fort Road and Ferry Road, due to the limited separation distance between the works and the nearest noise sensitive receptors.

11.33 The modelling however shows that the use of the link road generally gives levels that are below LOAEL. For receptors closest to the link road, the levels from the daytime operation of the link road are similar to LOAEL, and below the baseline levels. The predicted road traffic noise levels attributable to the infrastructure corridor will give rise to negligible adverse effects at the most exposed receptors, and are therefore are not considered significant.

Road traffic noise on local roads

11.34 The change in road traffic noise levels on existing road links in close proximity of the site has been considered as part of the assessment. In the short term, the change in road traffic noise is considered to have minor effects for the majority of road links. Two road links have however been identified as an exception, whereby noise impacts are likely to be moderate. These include:

- A13 E/B on-slip; and
- A1089- (N) of A126 slips.

11.35 Long terms noise impacts from traffic are considered to be minor, with the exception of the road links outlined above, which are likely to see a moderate adverse impact during the night.

Vessel movements

11.36 Vessel movements associated with the Tilbury2 proposals are expected to create an 11% increase in marine traffic. These additional vessel movements are not expected to give rise to significant noise impact.

11.37 In considering the likely significance and extent of noise impacts on sensitive receptors, a 1km impact zone for the operation phase (from site boundary) has been applied. As shown in Figure 15, the following LSOAs are impacted:

- Thurrock 018A;
- Thurrock 018D;
- Thurrock 018H;
- Thurrock 018G;
- Thurrock 018F;

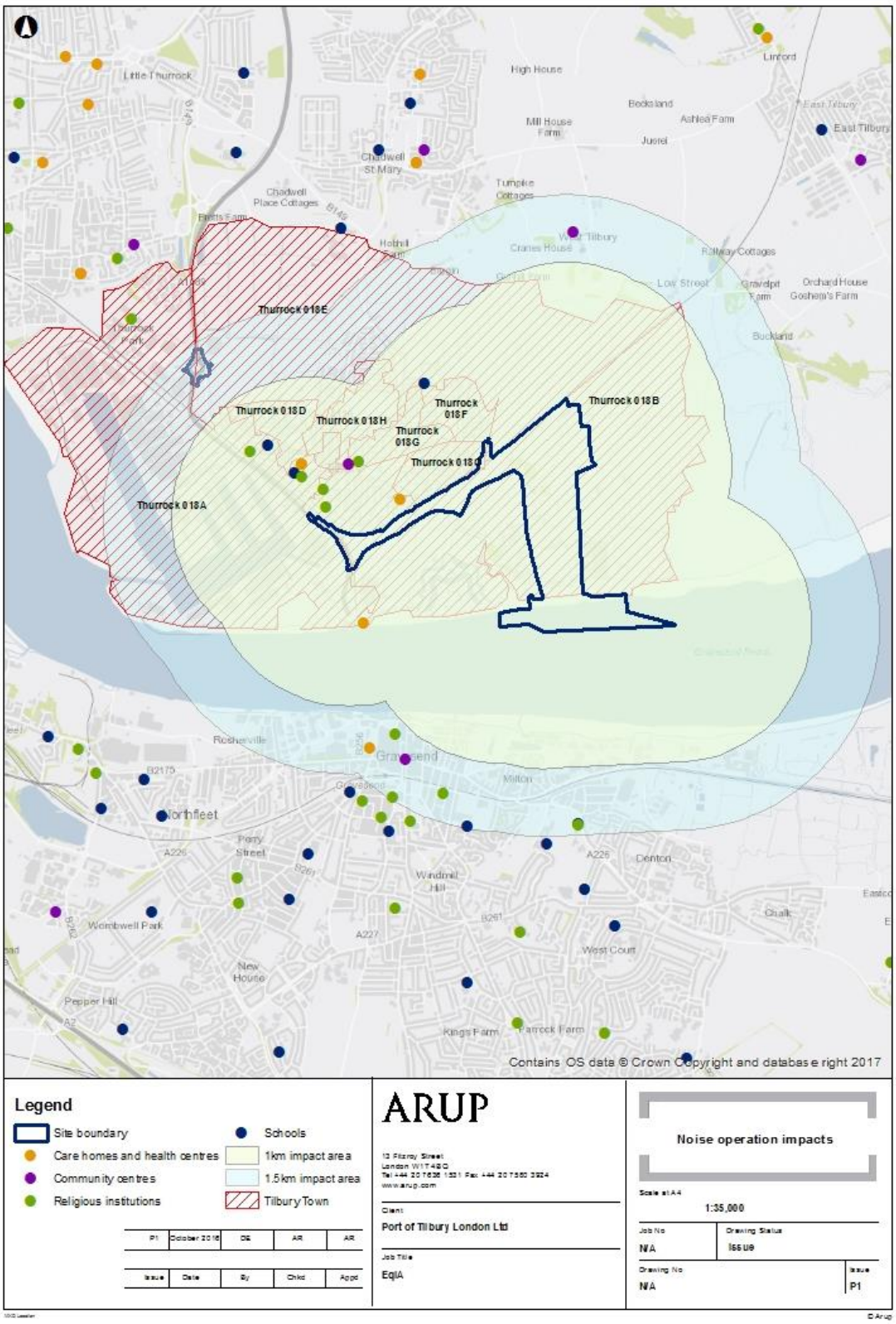
- Thurrock 018C; and
- Thurrock 018B.

11.38 When reviewing the results from the demographic profiling, a number of protected characteristics are present within these LSOAs at a higher proportion compared to Thurrock as a whole. These characteristics include a higher proportion of:

- Black ethnicity;
- Under 16 year olds; and
- Approximated Social Grade DE.

11.39 Although not identified as part of demographic profiling, a review of relevant policy and guidance has identified a community of around 80 travelling showpeople located within the ward of Tilbury St Chads. This area is located within the 1km operational noise impact area, and therefore could cause adverse noise disturbance to this community.

Figure 15: 1km and 1.5km impact buffer for noise impacts during operation



11.40 Within these impact areas from the site boundary, a number of schools, faith-based institutions, community centres and residential care homes are exposed to operational noise disturbance. These include:

- Tilbury Pioneer Academy;
- Landsdowne Primary Academy;
- St Mary's Catholic Primary;
- Tilbury Community Centre;
- Christ Gospel Ministry;
- Covenant of Mercy;
- St Johns Church of England;
- Parish of East and West Tilbury and Linford Anglian Church;
- The Redeemed Christian Church of God Fruitful Land;
- Willow Lodge residential care home;
- Regent Care Services; and
- Sarahdap Limited residential care home.

11.41 In addition, residential areas directly north of the site comprise deprived neighbourhoods, with areas of poor quality housing. These residential communities are particularly at risk from adverse impacts associated with noise pollution. As previously stated, low-income households and those with health conditions and disability, are disproportionately impacted by noise disturbance.

Table 35: Summary of operational impacts

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Operation	Noise disturbance arising from aggregates industry and Ro-Ro terminal	Children, elderly residents, pregnant women, residents with a disability or long-term health condition, low income households	Direct	Permanent	Negative	Low/ moderate	Moderate
	Noise arising from road and rail link	Children, elderly residents, pregnant women, residents with a disability or long-term health condition, low income households	Direct	Permanent	Negative	Low/ moderate	Minor

SUMMARY EFFECT

Table 36: Summary of noise impacts on equalities groups

Equalities Group	Summary of Effect/ proportionality
Low-income Children Pregnant women Disability Long-term health condition Religious groups associated with the impacted faith-based institutions Travelling showpeople	**Construction** The overall effects of changes to noise disturbance during the construction phase is likely to have the greatest impact upon residents with a disability or long-term health condition, pregnant women, young children and elderly people. The residential areas nearest the construction activity experience relatively high levels of deprivation, and therefore may also be particularly vulnerable to noise disturbance if residents are home during the day, or trying to sleep from shift work. There is not however considered to be a disproportionate effect upon equalities groups. **Operation** The overall effects of changes to access to noise disturbance during the operation phase may have disproportionate impact upon local residents from low-income households, children in nearby schools, religious groups in nearby faith-based institutions and residents with a disability or existing health condition. The effects of permanent noise disturbance could impact nearby low-income households, along with children and religious communities who use schools and religious institutions within the noise impact area, to a greater extent than the general population.

MITIGATION

11.42 The Noise Chapter of the ES suggests that a number of potential mitigation measures would be required to manage potentially significant disturbance associated with the operation of the proposals, as secured by the CEMP, OMP and DCO. This is particularly notable for the Ro-Ro and CMAT facilities. Further details of the proposed noise mitigation measures are outlined in full as part of the Noise and Vibration assessment.

11.43 An additional EqIA mitigation measure that has been included within the CEMP is providing information, through the Tilbury Community Forum, to surrounding residents, schools, care facilities, religious institutions and community centres located within the noise impact area. Published and frequently updated information on operating hours, construction phasing and other relevant port activities could help to make it easier for residents to adapt their activities, and minimise adverse impacts.

11.44 For surrounding schools and care facilities in particular, along with surrounding residential communities and travelling showpeople communities, consultation could form an additional ‘softer’ mitigation strategy. This could help maintain ongoing dialogue with key equalities receptors throughout the duration of the proposals, and ensure that appropriate mitigations minimise the localised impact on these facilities.

12.0 AIR QUALITY

INTRODUCTION

12.1 This section considers the potential effects on equalities groups from changes to air quality, associated with the construction and operation of the proposals.

12.2 Air quality is a key influence on how people live, including how they access services, economic opportunity and socialise. This can have a direct impact on health and wellbeing, and overall quality of life. Air quality is determined by a number of factors, including:

- The type and concentration of pollutants;
- The provision of, and accessibility to, open space; and
- Type of construction and associated mitigating measures.

12.3 Due to the absence of detail design and associated construction activity, the ability to assess air quality is limited at this stage.

Link between air and equalities

12.4 As set out in the Air Quality ES chapter, the pollutants affecting local air quality and are of key concern include:

- Nitrogen Dioxide (No2);
- Particulate Matter (PM10 and PM2.5); and
- Sulphur Dioxide (SO2).

12.5 Exposure to pollutants and particulate matter have a direct impact on health and wellbeing. The extent of adverse impact depends on the toxicity of the particles, their size and the level and duration of exposure.

12.6 Adverse impacts can include damage to property from layers of particulate dust, and a number of health risks such as respiratory problems, cardiovascular and cardiopulmonary diseases, complications during pregnancy and premature mortality.

12.7 These adverse health impacts can have disproportional impacts on vulnerable communities, particular young children, pregnant women, elderly people, and people with long-term health conditions or a disability. Exposure to air pollution can cause a range of health problems, including asthma, bronchitis, heart and circulatory disease and forms of cancer. Children with asthma are particularly vulnerable to the effects of air pollution, which can have direct irritant and inflammatory effects. Long term exposure to pollutant is associated with the exacerbation, and possible onset of, asthma[12].

12 Guarnieri. M and Blames. J.R (2014) Outdoor Air Pollution and Asthma, The Lancet, Volume 383, Issue 9928

Existing situation

12.8 Thurrock Council undertakes monitoring of local air quality in its administrative area, using both Continuous Monitoring Stations (CMS) and passive diffusion tubes (DT). The closest AQMA to the proposals is in Tilbury, along Calcutta Road, Dock Road and St Chads Road, encompassing 78 properties[13]. The AQMA was declared due to exceedances of the annual objective for NO2.

12.9 Data gathered from 2011-2015 suggests that exceedances of the annual mean NO2 AQS objective have the potential to occur in the air quality study area without the proposals in the opening year but that AQS objectives for PM10, PM2.5 and SO2 are likely to be achieved.

Stakeholder views

12.10 The non-statutory consultation identified a number of concerns surrounding air quality. These included concerns that there are already high levels of air pollution and child asthma in the area, concerns about levels of dust.

12.11 The statutory consultation process also outlined similar concerns surrounding air quality. These included concerns over air quality arising from ships utilising the new port facilities, dust emissions associated with the operation of Tilbury2, adverse air quality impacts on the Tilbury Fort, dust emissions and pollution arising from lorries, the infrastructure corridor and the cumulative impacts on air quality associated with the Lower Thames Crossing, the London Distribution Park and nearby Biomass facilities. There was also a concern that poor air quality would have a harmful impact on resident health, particularly children with asthma.

Effects arising from construction activity

12.12 There are a number of sources of pollutants associated with the construction of the proposals:

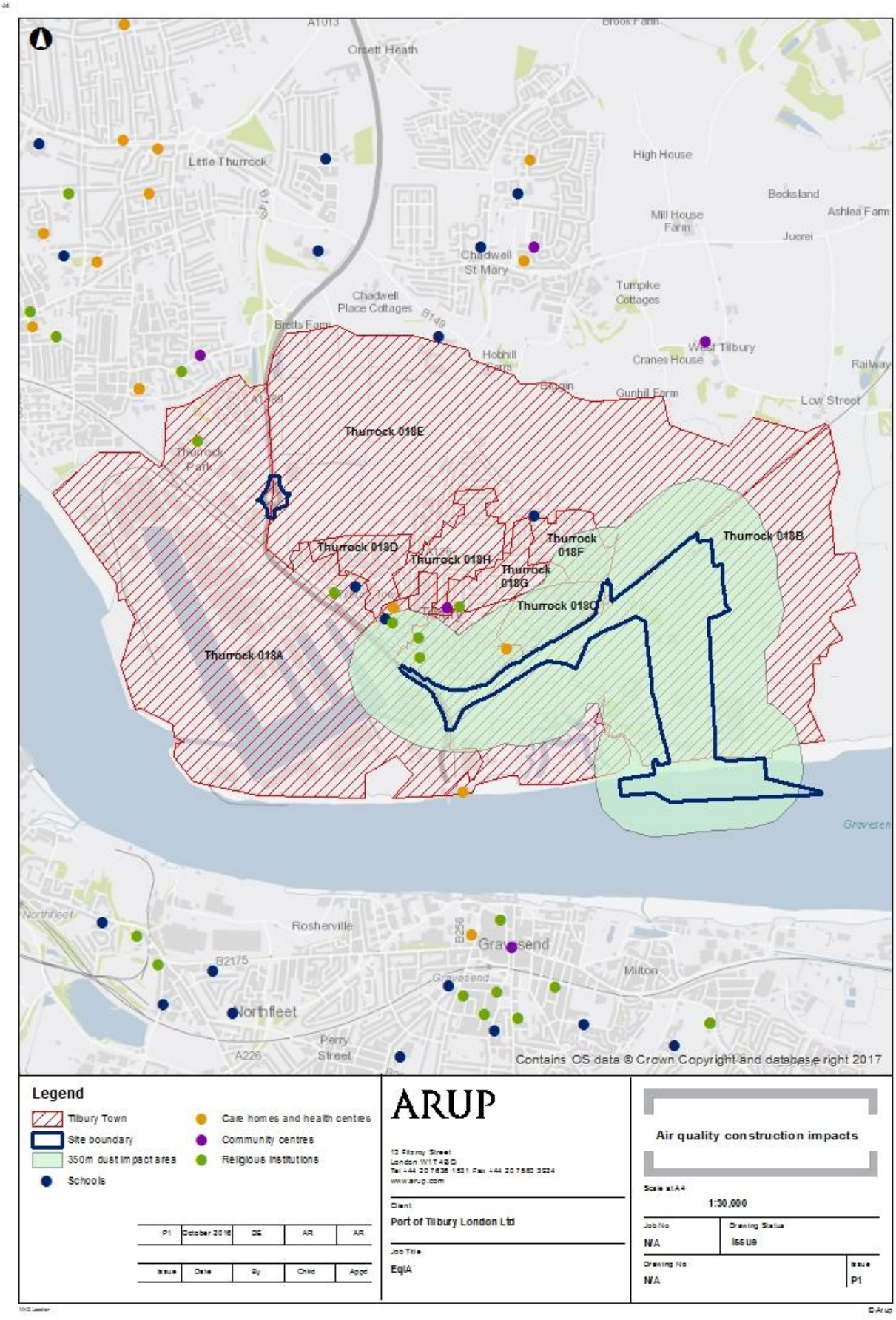
- Construction dust emissions – increased dust and PM matter during construction of the new infrastructure corridor (road and rail), including emission from the on-site construction plant.
- Construction traffic emissions - additional vehicles travelling to and from the site transporting materials, plant and labour

12.13 The ES identifies spatial impact areas for construction air quality impacts:

- Air quality for construction dust – 350m from the Order Limits

[13] https:www.thurrock.gov.uk/air-quality/air-quality-management areas

Figure 16: Construction impact area for air quality from the site boundary



12.14 A number of LSOAs within Tilbury fall within the 350m construction dust impact area. When compared with the demographic profiling, some equalities groups have a greater local representation than across Thurrock as a whole, including:

- Thurrock 018C – Residents 16-64 with an approximated social grade DE;
- Thurrock 018B – Residents 16-64 with an approximated social grade DE;
- Thurrock 018F - No significant representation of equalities groups;
- Thurrock 018A – Black ethnicity; and
- Thurrock 018E (if including smaller site boundary) - Residents 16-64 with an approximated social grade DE.

12.15 These equalities groups could be at greater risk to air pollution exposure during the construction period. A number of social infrastructure facilities also fall within this buffer, including:

- St Mary's Catholic Primary School;
- Covenant of Mary;
- St Johns Church of England;
- Parish of East/ West Tilbury and Linford Anglican Church; and
- Regent Care Services.

12.16 Modelling work undertaken as part of the Air Quality chapter within the ES assessed possible traffic emissions. This represented a neglible change to the annual mean nitrogen dioxide for residential dwellings close to Fort Road. The overall changes to particulate matter concentrations during construction were found to be neglible. Although a number of sensitive receptors are located within the air quality construction buffer, the incremental and temporary nature of emissions associated with the construction phase are not considered to have adverse impacts on the surrounding population.

Table 36: Summary of construction impacts for equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Construction	Dust associated with construction of transport corridor	Children, residents with a disability or pre-existing health condition (particularly respiratory diseases), pregnant women, low-income households	Direct	Temporary	Negative	Low	Negligible
	Increased emissions from construction-related vehicles	Children, residents with a disability or pre-existing health condition (particularly respiratory diseases), pregnant women, low-income households	Direct	Temporary	Negative	Low	Negligible

Operation assessment

12.17 There are a number of sources of pollutants during the operation stage:

Operational traffic

12.18 The findings from the ES chapter indicates that with the exception of Baker Street (near the A13/A1089 junction), concentrations of NO2 are expected to be below the annual mean AQS objective at all locations in the opening year of 2020. This also extends to annual concentrations of PM10 which are expected to be below AQS objective at all locations in the opening year.

Operational dust

12.19 The assessment of operation dust has primarily been in relation to the Construction Materials and Aggregates Terminal (CMAT).

12.20 There may be emissions of dust and particulate matter from materials processing/storage facilities proposed as part of the CMAT along with internal HGV emissions as well as small point source emissions associated with site activities such as machinery and on-site generators.

12.21 The ES identifies spatial impact areas for construction air quality impacts

- Air quality operational dust – 400m from the Order Limits; and
- Air quality from traffic – 200m either side of the centreline of roads affected by the proposals.

12.22 A number of LSOAs within Tilbury fall within the 400m operational dust impact area, and the 200m traffic impact area. When compared with the demographic profiling, some equalities groups have a greater local representation than across Thurrock as a whole, including:

- Thurrock 018C – Residents 16-64 with an approximated social grade DE;
- Thurrock 018B – Residents 16-64 with an approximated social grade DE;
- Thurrock 018D – Under 16 year olds;
- Thurrock 018F - No significant representation of equalities groups;
- Thurrock 018A – Black ethnicity; and
- Thurrock 018E - Residents 16-64 with an approximated social grade DE.

12.23 The extent of the combined air quality impact buffers could also cause adverse impacts to the travelling showpeople community, located within Tilbury St Chads.

12.24 A number of social infrastructure facilities located in Tilbury fall within the 200m road traffic impact buffer, including:

- Tilbury Community Centre;
- The Redeemed Christian Church of God Fruitful Land;

- Regent Care Services;
- Landsdowne Primary Academy;
- Christ Gospel Ministry; and
- Palmers College.

12.25 In addition, there are a number of sensitive receptors located within both the operational dust and traffic air quality impact buffers. These facilities are at an increased risk of harmful exposure as a result of operational activity. These include:

- Willows Lodge residential care home;
- Sarahdap Limited residential care home;
- St Mary's Catholic Primary School;
- Covenant of Mercy;
- Parish of East/ West Tilbury and Linford Anglican Church; and
- St Johns Church of England.

12.26 Modelling work undertaken as part of the Air Quality chapter within the ES assessed possible emissions associated with the operation phase. All potential dust impact risks were classified as neglible, including dust effects on the residential properties in south and east Tilbury. London Road was identified as having a low risk of effects from the nearby infrastructure.

Figure 17: Operational impact areas for air quality from the site boundary

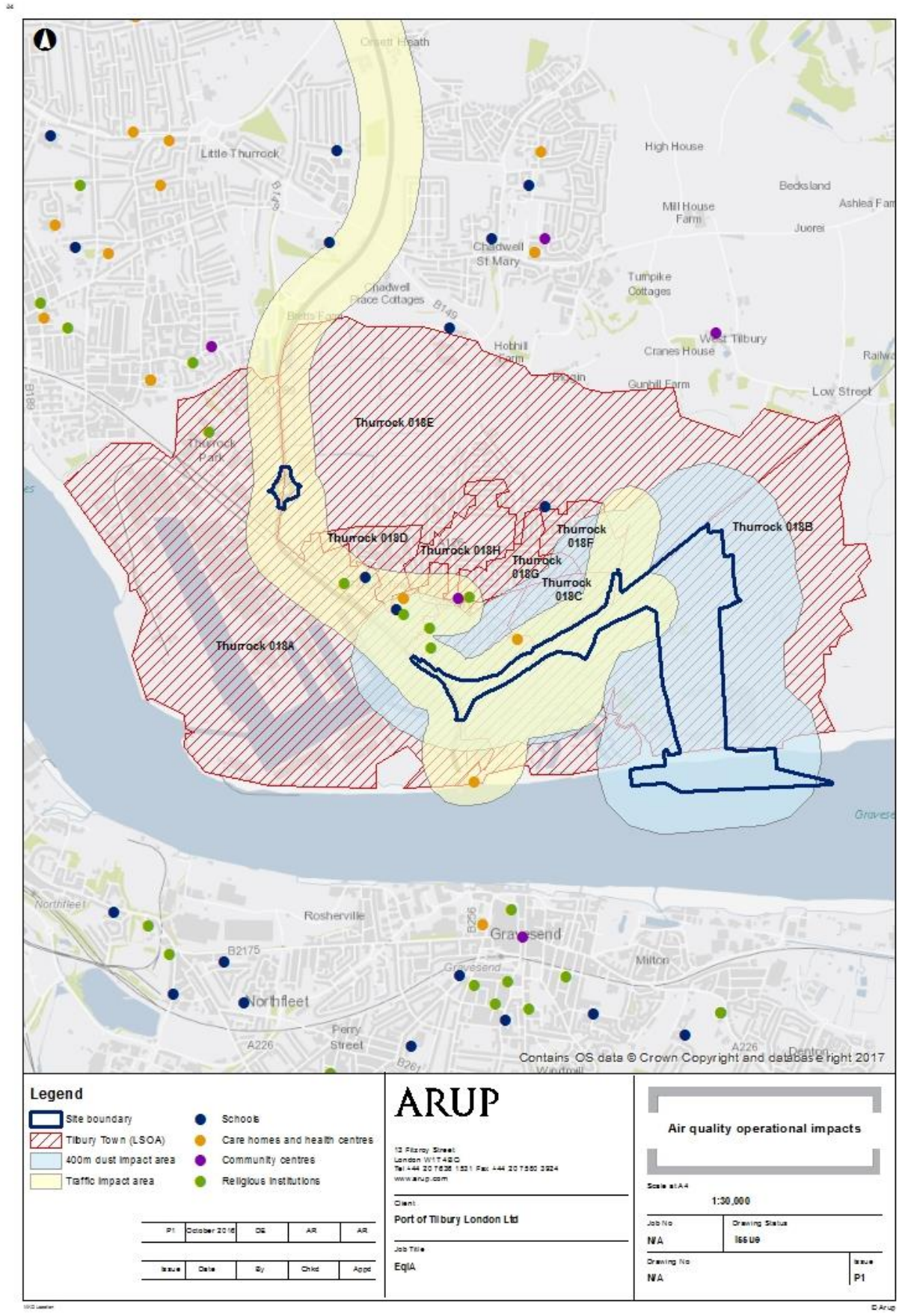


Table 37: Summary of operational impacts on equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Operation	Dust and particulate matter from the aggregates processing facility	Children, residents with health conditions (particularly respiratory), pregnant women	Direct	Permanent	Negative	Low	Negligible
	Emissions from increased vehicle movement	Children, residents with health conditions (particularly respiratory), pregnant women, low income households reliant upon active transport	Direct	Permanent	Negative	Low/ moderate	Negligible/ Minor
	Shipping emissions (transit or berth)	Children, residents with health conditions (particularly respiratory), pregnant women	Direct	Permanent	Negative	Low	Negligible

SUMMARY OF EFFECT

Table 38: Summary of air quality impacts on equalities groups

Equalities Group	Summary of Effect
Children Pregnant women Disability Long-term health conditions (particularly respiratory) Low-income Religious groups Travelling showpeople	**Construction** The overall effects of changes to air quality during the construction phase is likely to have the greatest impact upon children, residents with existing health and respiratory conditions, and low-income households. St Mary's Catholic Primary school falls within the impact area for both construction and operational dust, and could increase the exposure of young children. The full implications of air quality is not yet known, however could have minor impacts upon children with existing health and respiratory conditions. **Operation** The full extent of air quality implications for the proposals during the operation phase are not yet fully known. Due to the location of the Port, and the small impact buffers, it is not anticipated that adverse impacts will be significant. There is not considered to be a disproportionate effect upon equalities groups.

MITIGATION

12.27 The Air Quality Chapter of the ESES describes a range of guidelines and practices that will be employed to mitigate adverse effects relating to air quality arising from the proposalsas secured by the CEMP, OMP and DCO.

12.28 Additional EqIA mitigation measures included in the CEMP include consultation with affected sensitive receptors located within the air quality impact buffers. This could include consultation, through the Tilbury Community Forum, with primary schools, care facilities, and surrounding residential communities, including travelling showpeople, prior to the construction and operational activity. This could help maintain ongoing dialogue with key equalities receptors throughout the duration of the proposals, and ensure that appropriate mitigations minimise the localised impact on these facilities.

13.0 SOCIAL CAPITAL

INTRODUCTION

13.1 This section considers the potential effects on equalities groups from changes to social capital, associated with the construction and operation of the proposals.

13.2 The OECD (Organisation for Economic Cooperation and Development) define social capital as:

"Networks together with shared norms, values and understandings that facilitate co-operation within or among groups"

13.3 In this instance, the concept of networks refers to the "real world links between groups or individuals". Social capital can take multiple forms, including[14]:

- Bonds – links to people based on a sense of common identity;
- Bridges – Links that stretch beyond a shared sense of identity; and
- Linkages – links to people or groups further up or down the social ladder.

13.4 Social capital plays a key role in how people live, including how they access services, economic opportunities and socialise. This can have a direct impact on health and wellbeing, socio-economic opportunity and quality of life. Social capital is determined by a number of factors, including:

- Provision of a range of community facilities; and
- Inclusive access to facilities.

LINK BETWEEN SOCIAL AND EQUALITIES

13.5 Social capital manifests differently across different spatial scales. Evidence suggests that modern societies are significantly more mobile and transient than previous generations. Social capital can play a strong role in binding communities together, creating a shared sense of identify and encouraging local resilience.

13.6 Community bonds and cohesion can play a disproportionately important role for more vulnerable and less mobile communities, who may be unable to seek alternative support.

STAKEHOLDER VIEWS

13.7 Table 3 provides a summary of non-statutory consultation responses, highlighting key concerns raised by local people. A number of concerns were raised in relation to community characteristics and the local environment, particularly regarding the capacity of existing social infrastructure when the additional workforce is in operation. Responses also expressed concern over the degradation of the local landscape, environmental features and heritage sites.

[14] https://www.oecd.org/insights/37966934.pdf

13.8 The statutory consultation process outlined similar concerns surrounding social capital, degradation of the surrounding environment, visual impacts from residential areas, loss of visual waypoints and wider concerns over community safety.

CONSTRUCTION ACTIVITY

13.9 During the construction phase, social capital may be impacted in a number of ways, including:

- Changes to access to services, employment, social opportunities and social infrastructure;
- Changes to personal safety – including perceived changes;
- Pressure on services and amenities as a result of demographic changes to the area. This can also impact upon the local sense of community and identity of individual groups; and
- Changes to the quality of environment, and how residents feel about their local area.

13.10 Impacts associated with access, environmental quality and safety are likely to disproportionately impact upon equalities groups.

Table 39: Summary of construction impacts on equalities group

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population exposure	Magnitude
Construction	Changes to community networks, access, environment and identity as a result of construction activity.	Vulnerable groups are likely to include low-income households, elderly residents and those with restricted mobility, such as a disability or long-term health condition.	Indirect	Temporary	Positive and negative.	High All local residents, employees and those who participate in local services and the environment.	Negligible Impacts upon the local environment will be temporary, and access to local services will not be affected.

OPERATION ASSESSMENT

13.11 During the operation phase, social capital may be impacted due to demographic change associated with employment at the Port, and the wider supply chain. The Socio-economic Assessment within the ES sets out the anticipated social and economic impacts of the proposals in further detail.

- Changes to access to services, employment, social opportunities and social infrastructure;
- Pressure on services and amenities as a result of demographic changes to the area. This can also impact upon the local sense of community and identity of individual groups; and
- Changes to the quality of environment, and how residents feel about their local area.

13.12 Impacts associated with access, environmental quality, community cohesion and safety are likely to disproportionately impact upon equalities groups.

Table 40: Summary of operational impacts on equalities groups

Phase	Change	Receptor	Direct/ Indirect	Permanent/ temporary	Positive/ negative	Extent of population	Magnitude

						exposure	
Operation	Changes to the local community associated demographic and employment change.	Vulnerable groups are likely to include low-income households, elderly residents and those with restricted mobility, such as a disability or long-term health condition.	Indirect	Permanent	Positive and negative	High All local residents, employees and those who participate in local services and the environment.	Minor Demographic change associated with Port employment is expected to be modest, and is unlikely to significantly transform the nature of the local community.

SUMMARY OF EFFECT

Table 41: Summary of social capital impacts on equalities groups

Equalities Group	Summary of Effect/ proportionality
Elderly residents Low-income households Disability Long-term health conditions Travelling showpeople	**Construction** The overall effects of changes to social capital, access and the environment during the construction phase are likely to have the greatest impact on local residents and employees. Changes to social networks are hard to predict, and can have a range of positive and negative impacts on different equalities groups. Social capital can play a particularly important role for low-income groups, elderly people and those with limited mobility, with fewer options to seek alternative services. However, as the proposals are unlikely to involve such changes, the impacts are not considered to be a disproportionate compared to the wider population. **Operation** The overall effects of changes to social capital, access and the environment during the construction phase are likely to be minimal, due to the modest impact of population change, and mitigation measures to reduce wider adverse effects on the environment and access routes. There is therefore not considered to be a disproportionate effect upon equalities groups.

14.0 SUMMARY OF IMPACTS ON EQUALITIES GROUPS

Table 42: Summary of impacts on equalities groups, during both construction and operation phases of the proposals

Impact Description	Direct/Indirect – Positive/Negative - Temporary/Permanent/ - Cumulative	Significance
Construction Phase		
Disruption to local highways and public transport	Direct, Negative, Temporary	Negligible
Road safety	Direct, Negative, Temporary	Negligible
Diversion of PRoW	Direct, Negative, Temporary	Negligible
Increased employment and training opportunities	Direct, Positive/Negative, Temporary	Minor
Construction noise	Direct, Negative, Temporary	Minor
Dust associated with construction of transport corridor	Direct, Negative, Temporary	Negligible/Minor
Emission from construction-related vehicles	Direct, Negative, Temporary	Negligible/Minor
Changes to community access, networks and environment	Indirect, Positive/ Negative, Temporary	Negligible
Operation Phase		
Increased vehicle and HGV movement	Direct, Negative, Permanent	Negligible/Minor
Road safety	Direct, Negative, Permanent	Negligible
Pedestrian delay on the ASDA roundabout	Direct, Negative, Permanent	Negligible
Pedestrian amenity a St Andrews Road/ Ferry Road Corridor	Direct, Negative, Permanent	Negligible
Pedestrian amenity – new footway and cycleway/ crossings	Direct, Positive, Permanent	Minor
Increased employment and training opportunities	Direct, Positive/ negative, Permanent	Minor
Noise arising from aggregates industry and Ro-Ro terminal	Direct, Negative, Permanent	Minor
Noise arising from road and rail link	Direct, Negative, Permanent	Minor
Dust and particulate matter	Direct, Negative, Permanent	Negligible

Impact Description	Direct/Indirect – Positive/Negative - Temporary/Permanent/ - Cumulative	Significance
from the aggregates processing facility		
Emissions from increased vehicle movement	Direct, Negative, Permanent	Negligible/ Minor
Shipping emissions (transit or berth)	Direct, Negative, Permanent	Negligible
Changes to demographics and employment	Indirect, positive/ Negative, Permanent	Minor

15.0 POTENTIAL FURTHER MITIGATION OR COMPENSATION

15.1 A number of mitigation measures are already integrated into the proposals, as explained in the ES and this EqIA, both in terms of construction practices, or design features within the operation phase. The policy framework, at both local and national level, supports best practice, and should help to mitigate certain adverse impacts, particularly in relation to equalities and socio-economic indicators. More broadly it impacts upon how communities integrate, and how resilient they are.

15.2 Throughout the assessment, a number of additional EqIA mitigation measures have been suggested as a means of ensuring equality of impacts and opportunities associated with the construction and operation of the proposals.

15.3 No further mitigation measures are therefore proposed here.

RESIDUAL IMPACTS

15.4 Residual impacts relate to those effects which remain following the implementation of mitigation and compensation measures.

15.5 Taking into account existing information, there are likely to be some residual impacts relating to noise disturbance, air quality and employment opportunities.

16.0 CUMULATIVE AND SYNERGISTIC IMPACTS

CUMULATIVE IMPACTS

16.1 The equalities impacts of Tilbury2 have been initially assessed in combination with the effects of surrounding or committed schemes as identified in Chapter 2 of the ESES. The cumulative assessment includes the following categories for development:

- Under construction
- Permitted application(s) approved not yet implemented
- Submitted application(s) not yet determined
- NSIPS projects listed on the PINS infrastructure website
- Projects identified in the relevant development plan, and emerging plan where appropriate
- Projects identified in other plans and programmes

Table 43: Summary of cumulative impacts for consideration in equalities impact assessment

Project	Location	Development Summary	Potential cumulative impacts on equalities receptors	
			Construction	Operation
Thames Enterprise Park	South east of Corringham 11km east of the Tilbury2 site Northern shore of Thames	Redevelopment of the 'Coryton' site. It aims to attract environmental and energy technology firms.	It is predicted there will be positive regional cumulative effects in terms of for employment opportunities.	It is predicted there will be positive cumulative effects for employment and training opportunities, which could have beneficial socio-economic impacts in the study area, such as reducing unemployment, and raising skills and educational attainment.
Oikos Storage Proposals	Canvey Island 14km east of the Tilbury2 site Northern shore of Thames	Construction of a new deep water jetty at Oikos Storage Ltd, Hole Haven Wharf, Haven Road, Canvey Island Essex.	It is predicted there will be positive regional cumulative effects in terms of for employment opportunities.	It is not predicted there will be any significant cumulative operation effects that will adversely impact upon equalities groups.
Goshems Farm Jetty	Station Road, East Tilbury. 1.14km east of eastern boundary of Tilbury2 site, northern shore of Thames	Proposed jetty comprising pontoon and access bridge to improve facilities for barges to bring spoil from Thames Tideway Tunnel to adjoining landfill site and Ash Fields (see below)	It is predicted there will be positive regional cumulative effects in terms of for employment opportunities, and access facilities to support the movement of goods.	It is not predicted there will be any significant cumulative operation effects that will adversely impact upon equalities groups.
Land Adjacent Tilbury Power Station Fort Road	Ash Fields to the east of Tilbury B Power Station	Continued re-profiling of the site to 9 metres AOD using inert reclamation material imported by river, in place of Pulverised Fuel Ash from the adjacent now redundant Power Station	It is predicted there will be positive regional cumulative effects in terms of for employment opportunities, and access facilities to support the movement of goods.	It is not predicted there will be any significant cumulative operation effects that will adversely impact upon equalities groups.

Project	Location	Development Summary	Potential cumulative impacts on equalities receptors	
			Construction	Operation
West Thurrock Biomass CHP plant	Land at Fiddlers Reach, Wouldham Road, Grays, Thurrock	Waste-wood fueled combined heat and power station to generate heat and energy from biomass. The development will comprise a main building that contains the fuel reception and storage area, gasification and oxidation area, the boiler, flue gas treatment facility, stack; a building containing steam turbine and water treatment facilities, control room, and staff facilities; an auxiliary boiler house and associated stack; air cooled condenser; steam offtake pipe; and associated ancillary buildings and infrastructure.	It is predicted there will be positive regional cumulative effects in terms of for employment opportunities.	It is not predicted there will be any significant cumulative operation effects that will adversely impact upon equalities groups.

SYNERGISTIC IMPACTS

- Synergistic impacts refer to those that in-combination produce an effect greater than the sum of their individual effects.

- Potential synergistic effects across the key assessment areas of transport, air quality, noise, access and safety are not anticipated to significantly impact equalities groups, above and beyond impacts on the general population. The relatively localised nature of impacts, along with a range of mitigation measures proposed as part of the proposals, will reduce the potential for adverse in-combination effects. Please see chapter 20 – cumulative and synergistic impacts for more detail on this.

NPS COMPLIANCE

16.1 As set out in the policy review, the NPS stipulates the requirement for environmental impacts to be considered as part of an ES. This includes providing information on potential socio-economic impacts across a range of topics areas such as equality, wellbeing and community cohesion. An EqIA is not explicitly required as part of this process, however best practice suggests that a higher quality of proposal can be achieved by assessing potential inequality of outcomes. Consideration of the needs of equalities groups can encourage inclusive access, design and equality of opportunity associated with the proposals.

16.2 The EqIA forms part of this wider evidence base, providing further information on potential impacts on equalities groups with protected characteristics, as defined by the Equality Act (2010).

16.3 The NPS also identifies the need to assess both cumulative and synergistic impacts associated with surrounding developments, in combination with the proposals. The EqIA has assessed potential cumulative impacts, based on surrounding development proposals, to ensure the full extent of potential impacts are captured.

Table 44: Summary of NPS compliance where applicable to EqIA

NPS Clause	Requirement	Compliance
5.14.3	This assessment should consider all relevant socio-economic impacts, which may include: • the creation of jobs and training opportunities; • the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities; • effects on tourism; • the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and	The assessment has considered the following socio-economic impacts, where they overlap with equalities considerations: • effects on jobs and training have been assessed qualitatively • effects on local services and infrastructure and businesses have been assessed qualitatively where appropriate; • the effect of a changing labour market for the proposals and for the study area have been addressed • cumulative effects have been

NPS Clause	Requirement	Compliance
	physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion, depending on how populations and service provision change as a result of the proposals; and • cumulative effects – if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.	assessed qualitatively as part of this assessment
5.14.4	Applicants should describe the existing socio-economic conditions in the areas surrounding the proposals and should also refer to how the proposals' socio-economic impacts correlate with local planning policies.	Existing socio-economic conditions have been explored in relation to potential equalities impact, as have predicted effects on these conditions, alongside how the proposals impacts correlate with local and regional planning policies