The Great Grid Upgrade

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Bramford to Twinstead Reinforcement

Volume 8: Examination Submissions

Document 8.5.13: Equality Impact Assessment

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1 Introduction

1.1 Purpose of Equality Impact Assessment

1.1.1 National Grid Electricity Transmission plc (the Applicant) is promoting an application for development consent to reinforce the transmission network between Bramford Substation in Suffolk, and Twinstead Tee in Essex. The Bramford to Twinstead Reinforcement ('the project') would be achieved by the construction and operation of a new electricity transmission line over a distance of approximately 29km (18 miles), the majority of which would follow the general alignment of the existing overhead line network.

1.1.2 The Equality Act 2010 provides people with legal protection from discrimination. It sets out different ways in which it is unlawful for someone to be treated. The public sector equality duty (the equality duty) was created under the Equality Act 2010 and came into force in 2011 to harmonise the equality duties and in particular, to require those subject to it to have due regard to:

- Eliminating unlawful discrimination, harassment and victimisation and other conduct prohibited by the Act;
- Advancing equality of opportunity between people who share a protected characteristic (defined below) and those who do not; and
- Fostering good relations between people who share a protected characteristic and those who do not.

1.1.3 Equality Impact Assessment (EqIA) is a tool to identify and address equality issues that may arise from a policy, a programme or a proposal. The aim is to promote equality and to avoid discrimination.

1.1.4 The aim of this EqIA is to identify and assess any impacts of the proposals on people with relevant protected characteristics under the Equality Act 2010 who live or work in areas affected by the project. These protected characteristics (defined in section 149 of the Equality Act 2010) are age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex, and sexual orientation.

1.1.5 The Applicant is committed to understanding and managing the potential impacts of the project on people who have characteristics that are protected under the Equality Act 2010. Whilst the Applicant is not a public body and is not bound by the Public Sector Equality Duty requirements of the Equality Act 2010, the Secretary of State is, and must have regard to the requirements in determining the outcome of the application for development consent for the project. As such, this EqIA provides the Secretary of State with relevant information to assist in their determination.

1.1.6 This document sets out how the Applicant has complied with the Public Sector Equality Duty (section 149 of the Equality Act 2010) during development of the project, and in doing so how the Applicant has sought to maximise equal opportunities and foster good relations with protected groups in the local area.

1.1.7 This EqIA considers the construction and operation of the project and other project related activities or decisions, such as community consultation and engagement, to demonstrate how equality, diversity and inclusion principles have been properly considered, and that proposals have given due regard to the needs of protected characteristic groups (PCG).

1.1.8 This EqIA has been prepared using available demographic data including baseline information presented in the Environmental Statement (ES) in **Volume 6.2** of the development consent order (DCO) application. See Chapter 3 of this EqIA 'Overview of relevant demographic data' for further details.

1.2 Description of the Project

1.2.1 A detailed description of the proposals is set out in ES Chapter 4: Project Description (**application document 6.2.4**) and is shown on Figure 4.1: The Project (**application document 6.4**). The project description is summarised in this section to provide context for the EqIA.

1.2.2 The Bramford to Twinstead Reinforcement is located in the East of England and crosses a county administrative boundary defined by the River Stour, with Suffolk County to the east of the river and Essex County to the west. The project lies within three local planning authority areas: the eastern part of the project lies in Mid Suffolk District (Suffolk); the central parts of the project lie in Babergh District (Suffolk); and the proposed Grid Supply Point (GSP) substation and the western part of the project lie in Braintree District (Essex).

1.2.3 The reinforcement would comprise approximately 18km of overhead line (consisting of approximately 50 new pylons, and conductors) and 11km of underground cable system (with associated joint bays and above ground link pillars).

1.2.4 Four cable sealing end (CSE) compounds would be required to facilitate the transition between the overhead and underground cable technology. The CSE would be within a fenced compound, and contain electrical equipment, support structures, control building and a permanent access track.

1.2.5 Approximately 27km of existing overhead line and associated pylons would be removed as part of the proposals (25km of existing 132kV overhead line between Burstall Bridge and Twinstead Tee, and 2km of the existing 400kV overhead line to the south of Twinstead Tee). To facilitate the overhead line removal, a new GSP substation is required at Butler's Wood, east of Wickham St Paul, in Essex. The GSP substation would include associated works, including replacement pylons, a single circuit sealing end compound and underground cables to tie the substation into the existing 400kV and 132kV networks.

1.2.6 Some aspects of the project, such as the underground cable sections and the GSP substation, constitute 'associated development' under the Planning Act 2008.

1.2.7 Other ancillary activities would be required to facilitate construction and operation of the project, including (but not limited to):

- Modifications to, and realignment of sections of existing overhead lines, including pylons;
- Temporary land to facilitate construction activities including temporary amendments to the public highway, public rights of way, working areas for construction equipment and machinery, site offices, welfare, storage and access;
- Temporary infrastructure to facilitate construction activities such as amendments to the highway, pylons and overhead line diversions, scaffolding to safeguard existing crossings and watercourse crossings;
- Diversion of third-party assets and land drainage from the construction and operational footprint; and

- Land required for mitigation, compensation and enhancement of the environment as a result of the environmental assessment process, and the Applicant's commitments to Biodiversity Net Gain.

1.2.8 Due to wider programme requirements to meet government objectives as described in the Need Case (**application document 7.2.1**), the Applicant applied for planning permission for the GSP substation under the Town and Country Planning Act (TCPA) from Braintree District Council. The Applicant obtained planning consent for the GSP substation under the TCPA in October 2022 (planning application reference 22/01147/FUL).

1.2.9 Construction at the GSP substation commenced in autumn 2023 (i.e. prior to an Order granting development consent), with the remaining aspects of the project, including the 132kV overhead line removal and construction of the new 400kV overhead line and underground cables, commencing in autumn 2024 subject to an Order granting development consent.

2 Approach to EqIA

2.1 Assessment Methodology

2.1.1 This chapter describes the approach taken with regards to the EqIA i.e. how relevance to equality has been determined and due regard given to PCG that could be affected during different stages of the project. Equality impacts have been considered with regard to the following stages of the project:

- Communications, engagement and public consultation;
- Construction of the project; and
- Operation of the project.

2.1.2 The EqIA considers the impacts of the project on PCG at each of these stages, where there may be potential for different groups of people to be affected differently. The EqIA is presented as a qualitative appraisal of these stages, each of which has the potential for equality impacts, and has been informed by the findings of the ES. The potential likely significant effects identified in the ES are reported where they could potentially lead to disproportionate and/or differential impacts on a particular equality group.

2.1.3 All PCG defined in section 149 of the Equality Act are hereafter referred to in this report as ‘equality groups’. This report focuses on differential impacts on groups of people (reporting at a community level) rather than on individuals.

2.1.4 The protected characteristics reported in this assessment (Equality and Human Rights Commission 2023), where relevant, are:

- Age - refers to a person belonging to a particular age or range of ages;
- Disability - a person has a disability if they have a physical or mental impairment that has a substantial and long-term adverse effect on that person's ability to carry out normal day-to-day activities;
- Gender reassignment - anyone who is proposing to undergo, are undergoing or have undergone a process (or part of a process) for the purpose of reassigning their sex, by changing physiological or other attributes of sex from that which was assigned to them at birth;
- Pregnancy and maternity - pregnancy is the condition of being pregnant or expecting a baby. Maternity refers to the period after the birth, and is linked to maternity leave in the employment context. In the non-work context, protection against maternity discrimination is for 26 weeks after giving birth;
- Race - refers to a group of people defined by their colour, nationality (including citizenship), ethnic or national origins;
- Religion or belief – religion refers to any religion, including a lack of religion. Belief refers to any religious or philosophical belief including lack of belief (such as atheism);
- Sex - this refers to a man or to a woman, or to a group of people of the same sex (sex is the protected characteristic and not gender); and
- Sexual orientation - whether a person's sexual attraction is towards their own sex, the opposite sex or to both sexes.

2.1.5 Although marriage and civil partnership is a protected characteristic under the Equality Act, it is not covered by the Public Sector Equality Duty. Therefore, in relation to this protected characteristic, a body subject to the equality duty only needs to comply with the first of the three aims of the duty (eliminate unlawful discrimination, harassment, victimisation) and only in relation to employment. Consequently, this equality group is not considered further in this report.

2.1.6 The assessment presented in Chapter 4 'EqIA findings', initially considers types of environmental effects that may be of particular relevance to equality groups, and scopes in which equality groups could be affected by the types of effect described. Further consideration is subsequently given to the nature of those project-specific effects, and an assessment is provided in Table 4.2 with justification of the potential benefits and negative impacts that may be experienced differentially (see Terminology section below) by equality groups, together with any embedded measures, good practice measures or additional mitigation proposed (see Terminology section below). Consideration is given to the vulnerability of the equality group identified in relation to the issue or type of effect described. A conclusion is provided to confirm whether equality groups may experience disproportionate and/or differential equality impacts.

2.1.7 The EqIA process has also considered whether the proposed permanent acquisition of land and acquisition of permanent rights (and temporary use powers) for delivery of the project, could potentially lead to equality impacts on a particular equality group (while noting that no information was available on Affected Persons with protected characteristics at the time of writing the EqIA). A range of alternative routing options were assessed during the evolution of the project by the Applicant, including against socio-economic criteria as far as reasonably practicable. These options included consideration of different geographical connection points and strategic route corridors for the transmission lines that avoided settlement centres and this project has sought to limit the impact on personal and business property where practicable. Notwithstanding this, the project by its very nature would require limited permanent acquisition of land and acquisition of permanent rights.

2.1.8 Where it has been necessary to seek the acquisition of land or rights to facilitate delivery of the project, the Applicant has ensured that they are only seeking to acquire the minimum land/rights required for the delivery of the project. Any land interests required would be subject to compensation in accordance with statutory provisions. The project does not require any residential dwellinghouse properties to be acquired and the land proposed for Compulsory Acquisition is predominantly rural land comprising agricultural fields. Consequently, no known equality impacts have been identified as a result of land or rights acquisition and are therefore not considered further in this report. Should any landowners, tenants or those with an interest in the land required for the project be identified as having protected characteristics at a later date, potential equality impacts (and mitigation of the same) will be considered separately on a case by case basis.

2.1.9 The EqIA has been based on readily available data outlined in Chapter 3 of this report 'Overview of relevant demographic data', which describes the demographics of the population potentially affected by the project. The available data is presented at the district level (not parish level). The EqIA therefore considers differential impacts and those disproportionate impacts that are based on a demographic analysis of district versus national level data (not parish level data) as well as those arising from the disproportionate use by one or more equality groups of a significantly affected environmental receptor.

2.1.10 The area over which potential equality impacts associated with different types of likely significant environmental effects have been considered directly relate to those study areas defined in the ES in **Volume 6.2** of the application for development consent for the following relevant assessments:

- ES Chapter 6: Landscape and Visual (**application document 6.2.6**);
- ES Chapter 12: Traffic and Transport (**application document 6.2.12**);
- ES Chapter 13: Air Quality (**application document 6.2.13**);
- ES Chapter 14: Noise and Vibration (**application document 6.2.14**); and
- ES Chapter 15: Cumulative Effects Assessment (**application document 6.2.15**).

Terminology

2.1.11 A disproportionate equality impact relates to an effect on a certain equality group that is greater than on other members of the general population at a particular location. For example, if an equality group makes up a greater proportion of the affected residential population than their representation in the wider national population. A disproportionate equality impact may also arise where an effect is predicted on an environmental receptor which is predominantly or heavily used by one or more equality groups (e.g. primary schools attended by young children).

2.1.12 A differential equality impact is one which affects members of an equality group differently from the rest of the general population because of their specific needs, or a recognised sensitivity or vulnerability associated with their protected characteristic, irrespective of the number of people affected i.e. an effect which varies according to the circumstances of groups that receive the impact.

2.1.13 Embedded measures are described as 'primary or inherent' by the Institute of Environmental Management and Assessment (IEMA, 2016) i.e. measures that are best applied early or are a fundamental part of the design seeking consent and do not require additional action to be taken and include things that are intrinsic to and built into the design.

2.1.14 Additional mitigation (described as secondary or foreseeable in IEMA (2016)) is additional mitigation identified through the environmental assessment process that is required to offset or reduce a likely significant environmental effect.

2.1.15 Good practice measures (described as tertiary or inexorable in IEMA (2016)) are typically actions that would occur with or without input from the Environmental Impact Assessment (EIA) feeding into the design process. These include actions that would be undertaken to comply with best practice, meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.

2.2 National Grid's Equalities Policies

2.2.1 The Applicant embraces diversity and their mission is to build a business that represents, reflects and celebrates the cultures and communities they serve. Their business is conducted in line with the Applicants Values to '*Do the Right Thing, Find a Better Way and Make it Happen*', and respect for human rights is incorporated into the Applicants employment practices and Values.

2.2.2 This is also reflected in their Code of Ethics document (National Grid 2022a) launched in 2021, which has clear objectives and greater accountability around the organisation with regard to Diversity, Equity and Inclusion.

2.2.3 The Applicant has been recognised for their inclusivity through various awards including:

- Ranking 1st in the UK and 3rd globally for gender equality in an assessment of almost 4000 companies in 23 markets by Equileap, the leading provider of gender equality data and insights, in 2021 (as cited on the inclusion and diversity section of National Grid's website);
- Rated in the annual Times Top 50 Employers for Women list, which recognises the employers that are taking action to drive gender equality at work, from embracing flexible working practices to tackling the pay gap and normalising caring responsibilities for all genders;
- One of 484 companies across 45 countries to be included in the 2023 Bloomberg Gender-Equality Index, which aims to track the performance of public companies committed to transparency in gender-data reporting; and
- Joined 499 other companies around the world to take action on disability inclusion.

2.2.4 The Applicant works with its supply chains to provide adherence to the principles of the UK Modern Slavery Act 2015 and the requirements of the Living Wage Foundation. It takes responsibility to report and monitor human rights violations and mitigate against any risk in its supply chain.

2.2.5 The Applicant is committed to maintaining a work environment and supply chain that recognises and upholds the importance of human rights and is committed to the communities served while supporting programmes designed to help improve the way people live and work.

2.3 Communications, Engagement and Public Consultation

Consultation Strategy

2.3.1 This section details how The Applicant has given all equality groups equal opportunities to be engaged during the process. It is essential that all groups of people in the communities affected by the project can be involved in consultation and engagement, so that they can influence and contribute to the development of the project and that the proposals have regard to the needs of each group of people (including those with protected characteristics).

2.3.2 The Consultation Report for the project (**application document 5.1**) details the Applicant's approach to inclusive engagement. This is particularly focused around engaging with seldom heard groups.

2.3.3 Seldom heard groups are defined by the Consultation Report (**application document 5.1**) as being inaccessible to most traditional and conventional methods of consultation for any reason, and are described as:

- The elderly;
- People with visual impairments;
- People with limited mobility/disability;

- Youth (13-15) age groups;
- 15-19 and 20-39 age groups;
- Carers and families with young children;
- Economically inactive individuals;
- Geographically isolated communities or individuals;
- Locally underrepresented minority ethnic groups (such as black, Asian and minority ethnic);
- English as a Second Language (ESL);
- Travellers; and
- Digitally isolated.

2.3.4 The strategy for engaging with seldom heard groups was developed over the course of the initial consultation exercise and included use of the communication tools set out in the Consultation Report (**application document 5.1**).

Approach to Consultation

2.3.5 The methodology for consultation and engagement on the proposals was impacted by the coronavirus Covid-19 pandemic. This meant that the Applicant was not able to meet face to face with stakeholders and run public exhibitions and events during 2021. Instead, digital methods for consultation were used and developed which allowed for the continuation of public consultation, in line with government advice surrounding social distancing and face-to-face meetings.

2.3.6 Digital consultation not only protects the health and wellbeing of both members of the public and the project team, but, paired with more traditional methods of communication, such as mailing of physical documents (e.g. consultation packs and feedback forms), the Applicant was able to provide a robust consultation which was accessible for all members of society, irrespective of access to the internet.

2.3.7 As such, a blend of digital and traditional engagement channels was used for public consultation. This involved using a dedicated project consultation website with interactive project maps, a virtual consultation town hall and videos, infographics and animations to present information on the project and gather feedback on the proposals. This approach has been shown to have a strong record of success and is becoming widely accepted for consultations on infrastructure projects.

2.3.8 Online consultation may be more accessible to groups such as:

- People who are less active or mobile and find it difficult to get to public events (due to lack of car ownership and/or dependency on public transport). The National Transport Survey defines someone with mobility difficulties as having difficulties travelling on foot, by bus, or both. The proportion of adults with mobility difficulties increases greatly with age. In 2014, the National Transport Survey reported that 9% of adults have a mobility difficulty. This increases with age to 32% of those aged 70 and over, and is more marked among women than men (Welsh Government 2016). Other groups in this category include pregnant women, disabled people and people with health problems. This can also include young people, as car ownership can be low due to prohibitive cost of insurance for 17-25 year olds;

- People who find the timing of fixed in-person events logistically difficult, for example people with young children, the elderly, young people, shift workers, single parents, women (who have a greater dependence on public transport than men as women are less likely to hold a full car driving licence than men (RAC Foundation 2011) and are more likely to be carers than men) and carers; and
- People who find face to face and/or public events socially difficult, for example people who do not have English as their first language.

2.3.9 Figures from the ONS show that as of 2019, virtually all adults aged 16 to 44 in the UK were recent internet users (99 per cent), compared with 47 per cent of adults aged 75+. Looking specifically at Suffolk, the study found that just 8.3 per cent of people had not used the internet for three months or had never used it at all. This demonstrates that there is a high uptake across all of society of people with internet access.

2.3.10 The 'digital first' campaign included online webinars, video surgery sessions, social media advertising and an interactive website. To assist people with visual impairments, the magnification of the project website and consultation documents could be increased (using the zoom function) when viewing, making them more accessible for reading for some. This is an advantage over using printed materials. The written content of the online platform was also supported with project videos which improves accessibility for people with visual impairments, people with low literacy levels and for different nationalities including those people whose first language is not english.

2.3.11 The Applicant also recognised that some people may not have access to or use of the internet and therefore used a number of more traditional engagement channels during the 2021 non-statutory consultation. These engagement methods included telephone surgery and 'ask the experts' sessions, which were advertised through door-to-door mailing and the provision of hard copies of documents on request. Despite face-to-face events being restricted due to the coronavirus Covid-19 pandemic, the Applicant ensured that relevant topic experts were available to speak to members of the public to discuss the project, if required. The traditional engagement methods used can encourage participation by people with disabilities that struggle or are unable to use a computer and older people who may not have internet access to access the online consultation materials, are not comfortable in using the internet and on average also use social media less than young people.

2.3.12 Additionally, documents (e.g. consultation packs, feedback forms and project background documents) were available on request in braille and large print, as well as being dementia friendly. An audio guide of the consultation banner was made available for those with visual impairments.

2.3.13 The Applicant took reasonable and proportionate means to engage as widely as possible with seldom heard groups during the time of the Coronavirus pandemic. The methods of engagement with these groups during the statutory consultation are outlined in the Consultation Report (**application document 5.1**).

2.3.14 Targeted consultation was held at a time when there were no restrictions in place regarding face-to-face events. Therefore, these involved a wider range of communication channels including drop in events and bookable one to one surgeries with members of the project team. These face-to-face events were supported by a similar range of online events as undertaken during the non-statutory consultation.

Feedback

2.3.15 The Applicant used feedback forms during non-statutory and statutory consultation to gather data for the project on the people who had engaged in the process to help inform the development and tailoring of the future consultation events. The feedback forms included questions on inclusion and diversity to help understand whether the consultation was useful to people of different backgrounds and requirements. The following responses were received relating to diversity during the statutory consultation: -

- Age - feedback was received from respondents ranging from Under 17 to the 85+ categories. The highest number of responses were received from those in the age groups of 55-64 (25%) and 65-74 (24%). The next most represented age group was 45-54 and 75-84, both with 18% of representation each. The age groups 25-34 and 35-44 each received 6% representation. Meanwhile, the lowest represented groups were those aged 17 and under, 18-24 and 85+ with 10%, 1% and 2% respectively. This sample of respondents is representative of the wider community when looking at data from the 2011 census, (updated in 2019) regarding the age makeup of people within the districts through which the project passes (see Appendix A).
- Disability – From the response feedback forms received, 87% of people said that they did not consider themself a person with a disability, 7% of respondents said that they would prefer not to say if they considered themselves a person with a disability and 6% stated that they did. This sample of respondents is representative of the wider community when looking at data from the 2011 census, which indicates that approximately 6% of people in the districts through which the project passes have a disability (see Appendix A).
- Race – from the response feedback forms received, 91% of respondents described themselves as 'White English, Welsh, Scottish, Northern Irish or British' whilst 6% did not wish to provide their ethnic background, and the remaining respondents described themselves as 'White other' or 'Mixed or Multiple ethnic groups'. This sample of respondents is generally representative of the wider community when looking at data from the 2011 census, which indicates that between 91% and 95% (dependent on geographical location) of people in the districts through which the project passes described themselves as 'White English, Welsh, Scottish, Northern Irish or British' (see Appendix A).
- Sex - From the response to consultation feedback forms received, 62% of responses were from males, compared to 35% from females and a further 3% who did not wish to provide their gender. Males made up the majority of respondents and were over-represented whereas females were under-represented in comparison to the gender makeup of the local population (see Section 3.3).

2.3.16 From the consultation feedback received, there is no evidence to suggest some groups of people are more dissatisfied than others with the project. Consultation feedback did however highlight the need for inclusion of vulnerable travellers (e.g. children and older people) in the environmental assessment in particular taking into account the sensitivity of receptors e.g. users of Public Rights of Way (PRoW) and taking account of specific needs when considering proposed diversions of PRoW. See ES Appendix 5.2: Response to Consultation Feedback (**application document 6.3.5.2**). These PRoW users were considered during the development of the EIA.

2.3.17 Consultation undertaken by the Applicant with local authority officers prior to statutory consultation on the project subsequently indicated that there are no known camp sites or areas where travellers stay within the project area (as defined in Section 2.1). Consequently, travellers are not considered further in the EqIA.

2.4 Construction of the Project

2.4.1 The construction of the project has the potential to disproportionately and/or differentially affect people from different protected characteristic groups (as explained in Section 2.1). Based on the findings of the ES, the following topics have the potential for equality impacts and are therefore assessed in Chapter 4 'EqIA findings' for the groups with potential to be affected. As described in Section 2.1, all potential likely significant effects identified in the ES are reported where they could potentially lead to differential impacts on a particular equality group or disproportionate impacts evident at a district level.

Changes in Views and Landscape Character

2.4.2 Changes in views from community areas (people living and moving around the area) and recreational receptors, relating to construction activity and loss of vegetation, have the potential to affect some equality groups differently. In particular, such changes may affect those with disabilities such as autism that affect a person's ability to interact and experience their surrounding environment.

Severance to PRoW or Changes to Journey Length or Time

2.4.3 Disruption to PRoW (notably temporary diversions and closures of PRoW) used by walkers, cyclists and horse riders (WCH) has the potential to differentially affect equality groups e.g. the elderly and young people that may be less likely to have access to a car as an alternative method of travel, pushchair users, wheelchair users and other disabled people that may experience barriers to recreation, and children who may be more sensitive to changes in public access. Any changes in PRoW journey length or severance therefore have the potential to affect these equality groups.

Increased Traffic Flows leading to Changes in Pedestrian Amenity, Fear and Intimidation

2.4.4 Changes to traffic flows due to construction traffic on local roads can disproportionately and differentially affect equality groups such as the disabled, women, pregnant travellers and age related groups. Some groups are particularly sensitive to the effects of road traffic, which can disproportionately affect individuals through pedestrian accidents, air pollution and noise (Redelmeier *et al.,* 2014). Heavy goods vehicles often have 'blind spots', which make it difficult for drivers to see pedestrians and other road-users, and are associated with a disproportionate number of accidents involving construction vehicles (Transport Research Laboratory, 2013).

2.4.5 Construction traffic poses a particular risk to some groups of disabled people, including visually impaired, deaf people, people who are hard of hearing, and people with mental disabilities. Children with hearing difficulties are 10 times more likely to be involved in road accidents while walking or playing than other children (AA Motoring Trust, 2002).

2.4.6 Busy roads can also result in severance for local communities, increase casualties and restrict walking/cycling, particularly for children and young people. Children and younger people rely on public transport to access places of employment, education and essential services. Older people also rely on public transport to access essential services, including healthcare, and for socialising and participating in their local communities. Women may have more concerns over personal security and accessibility as a higher proportion are less likely to have access to a car, particularly mothers of new born babies.

Elevated Noise and Vibration Levels

2.4.7 Certain groups with protected characteristics are more sensitive to changes in noise and vibration levels and may experience different effects compared to the overall population including children, young people, elderly, people with disabilities, pregnant women and people visiting places of worship.

2.4.8 Traffic-related noise is correlated more broadly with lower health-related quality of life in children and increased health risks for the elderly. Elevated environmental noise has the potential to cause health impacts such as hearing impairment, hypertension, ischemic heart disease, annoyance, and sleep disturbance. Vulnerable groups such as the sick, the elderly and the unemployed tend to spend large amounts of time in their homes. This includes people who suffer from mental illnesses. This could increase exposure for those living close to sources of noise (Welsh Government, 2015).

2.4.9 Exposure to noise can be a particular problem around schools, leading to cognitive impairment for children during lessons (Horizon *et al.,* 2017). Autistic children can be particularly sensitive to their environment, and in some cases can be extremely distressed by loud noise (Redelmeier *et al.,* 2014). Children with hearing difficulties also benefit from a quiet learning environment, and background noise can reduce the effectiveness of hearing aids (Welsh Government, 2015).

Elevated Dust Levels and Air Pollutants

2.4.10 Increased air pollution and emissions from generator use and construction traffic may cause potentially negative changes to human health. Particulate matter, mainly generated from construction activities, can adversely affect human health in varying degrees depending on its size, composition, origin and the length of exposure. Dust emissions can irritate the eyes and aggravate pre-existing respiratory problems, such as asthma. Children, the elderly and the disabled (particularly those with respiratory illness) are likely to be more vulnerable to the effects of poor air quality compared to the overall population and could therefore be differentially and adversely affected because of poorer air quality due to vehicle emissions, construction plant and construction dust.

2.5 Operation of the Project

2.5.1 The project seeks to provide a reliable electricity supply to the UK with positive impacts on health and wellbeing. The project would improve the security of supply of power to the network and increased electricity transmission capability, to all protected characteristic groups. Groups who will particularly benefit from a reliable electricity supply include the elderly, very ill and disabled people, who may rely on warmth and power for medical equipment. This is likely to disproportionately benefit older people as the relevant Suffolk districts have a higher representation of over 65 year olds than the national average.

2.5.2 Differential impacts on people with protected characteristics after the project has been completed are outlined in Chapter 4 ‘EqIA findings’ for the groups expected to be most affected.

2.5.3 A range of alternative options were assessed during the evolution of the project design against socio-economic criteria (as well as environmental, technical and economic criteria). These options included consideration of different geographical connection points and strategic route corridors for the transmission lines that avoided settlement centres. It also considered the appropriateness of overhead line versus underground cables and alternative construction methods such as opencut methods and trenchless crossings.

2.5.4 The Applicant also embedded measures into the design of the project that have been identified through iterative design, to avoid or reduce likely significant environmental effects to support a proportionate assessment.

2.5.5 The operation of the project has potential to disproportionately and/or differentially affect people from different protected characteristic groups. Based on the findings of the ES, the following topic has potential for equality impacts and is assessed in Chapter 4 ‘EqIA findings’.

Changes in Views and Landscape Character

2.5.6 As previously described in Section 2.4, changes in views from community areas (people living and moving around the area) and recreational receptors as a result of new electricity infrastructure within the landscape and views, have the potential to affect some equality groups differently, in particular, those with disabilities such as sensory disorders (e.g. autism).

3 Overview of Demographic Data

3.1 Overview

3.1.1 This chapter summarises the baseline socio-demographic information/data available in the wards through which the project passes, of relevance to groups with protected characteristics and how it has been considered. Consideration has been given to the following readily available data in the cited documents: -

- ES Appendix 15.1: Cumulative Effects Baseline (**application document 6.3.15.1**);
  - National, regional and district statistics (Office for National Statistics, 2022a);
  - Ward statistics (Nomis, 2023a); and
  - Population density statistics from 2021 Census data (Nomis, 2023b).
- Statement of Community Consultation (National Grid, 2022b);
- Consultation Strategy (National Grid, 2021) and consultation materials including consultation response forms (which included inclusion and diversity questions); and
- Consultation Report (**application document 5.1**).

3.2 Data Limitations, Gaps and Assumptions

3.2.1 In some cases, baseline data are not available at a local (e.g. ward) level; therefore, the assessment is limited by the granularity of the data available, with most data available for the districts through which the project passes. In addition, some data are not updated or recorded regularly. The most recent data has been sourced to establish the baseline and the data is considered to be sufficient for the conclusions of this chapter.

3.2.2 The following limitations and assumptions should be noted with regard to the data presented in this EqIA:

- The 2021 Census was carried out during the COVID-19 pandemic, which may have affected how people responded to the questions asked;
- The identification of disability in England and Wales has changed since the 2011 Census to be more closely aligned with the definition of disability in the Equality Act (2010), and is now based on the 2021 Census question '*Do you have any physical or mental health conditions or illnesses lasting or expected to last 12 months or more?*' If answered yes, a further question '*Do any of your conditions or illnesses reduce your ability to carry out day-to-day activities?*' was presented. The identification of disability differs from the 2011 Census question used, which asked '*Are your day-to-day activities limited because of a health problem or disability which has lasted, or expected to last, at least 12 months?*'. Further information is provided at Office for National Statistics (n.d.); and
- No data is available for gender reassignment, pregnancy and maternity and marriage and civil partnership.

3.3 Relevant Data

3.3.1 The districts and wards through which the project passes are shown in Table 3.1.

Table 3.1: Districts and Wards Through Which the Project Passes

Districts	Wards
Suffolk	
Mid Suffolk District	Blakenham; Bramford
Babergh	Assington; Box Vale;Brett Vale; Bures St Mary and Nayland; Copdock and Washbrook; Great Cornard; Hadleigh North; Hadleigh South; South East Cosford; Sproughton and Pinewood
Essex	
Braintree	Gosfield and Greenstead Green; Hedingham; Stour Valley South; The Colnes

3.3.2 Appendix A presents the socio-demographic data for the relevant protected characteristics in the districts and wards in the area through which the project passes (see Table 3.1) and provides a profile of residents living in the area surrounding the project, with specific reference to districts. It draws upon the 2021 Census to identify the level and distribution of people with protected characteristics in the area. This data is subsequently used in Chapter 4 'EqIA findings' to determine whether any particular groups with protected characteristics are disproportionately affected by the project (during construction or operation).

3.3.3 The analysis of demographic data for the project area highlights that Mid Suffolk and Babergh districts have a higher proportion of residents over 65 years old than the regional and national averages. There is no known disproportionate representation of other equality groups within the project area.

3.3.4 The baseline demographics will be continually changing due to a number of factors, including inbound and outbound migration and changes to the regional, national and international economic climate. In the reasonably foreseeable future, resident populations within the Babergh, Mid Suffolk and Braintree districts, Suffolk and Essex counties, the East of England, and England are all projected to rise based on current trends (ONS, 2020). The local, regional and national age distribution is projected to skew older over time, with fewer young people and a greater proportion of the population over 60 years old (ONS, 2020).

4 EqIA Findings

4.1 Overview

4.1.1 This chapter describes the analysis of impacts (risks and benefits of the project) on people with protected characteristics with reference to all equality groups as defined in the Equality Act 2010. Evidence (and reasonable justification) is provided, where relevant, of how the impacts of the project during construction and/or operation may be relevant to and affect different equality groups.

4.1.2 Table 4.1 summarises the topics where there could be a potential pathway for equality impacts on individual groups with protected characteristics. These equality groups are discussed further in Table 4.2.

4.2 All Protected Characteristics

4.2.1 Table 4.2 summarises the environmental effects identified in the ES that have potential to impact specific equality groups. Only those equality groups in Table 4.1 where a potential impact has been identified based on the EIA findings, are described in the conclusions in Table 4.2.

4.2.2 This EqIA has not identified any likely equality impacts for the gender reassignment and sexual orientation protected characteristics.

Table 4.1: Topics of Potential Relevance to Equality Groups

Topics with Potential for Equality Impacts	Equality Groups								
	Age	Disability	Gender reassignment	Marriage and civil partnerships	Pregnancy and maternity	Race	Religion and belief	Sex	Sexual orientation
Construction of the Project									
Changes in views/landscape relating to construction activity and loss of vegetation	**Y**	**Y**	N	N	**Y**	N	N	N	N
Severance to PRoW or changes to journey length or time	**Y**	**Y**	N	N	**Y**	N	N	N	N
Increased traffic flows leading to changes in pedestrian amenity, fear and intimidation	**Y**	**Y**	N	N	**Y**	N	Y	**Y**	N
Elevated noise and vibration	**Y**	**Y**	N	N	**Y**	N	**Y**	N	N
Elevated dust and air emissions	**Y**	**Y**	N	N	Y	N	N	N	N
Operation of the Project									
Changes in views and landscape character	**Y**	**Y**	N	N	**Y**	N	N	N	N

Table 4.2: Impacts on Equality Groups

Type of Impact	Assessment	Conclusion
Construction of the Project		
Changes in views/landscape character relating to construction activity and loss of vegetation	The changes to landscape and views from vegetation clearance, topsoil stripping, earthworks and excavation, construction plant, changes to access and general construction activities and construction lighting are described in ES Chapter 6: Landscape and Visual (**application document 6.2.6**) and the good practice measures are set out within the CoCP (**application document 7.5.1**). During construction, no significant effects have been identified in the ES for key recreational receptors (i.e. users of recreational routes) as shown in the viewpoint assessment presented in ES Appendix 6.4: Viewpoint Assessment (**application document 6.3.6.4.1 to 6.3.6.4.7**). Although it is acknowledged that recreational users of routes such as the Stour Valley Way and St Edmunds Way (regional trails), Painters Trail (cycle route) and Hadleigh Railway Walk (locally promoted footpath) would have views towards the project during construction, these transient views tend to be glimpsed through vegetation even when in close proximity and therefore effects would be very localised and not significant on these routes overall. Consequently, no differential impacts on equality groups views from recreational routes are envisaged. The ES identified moderate adverse effects on views from community areas (as a result of activities to construct the underground cables and Dedham Vale (East and West) and Stour Valley East CSE compounds) in the medium-term while reinstatement planting becomes established. See ES Appendix 6.5: Assessment of Visual Effects on Communities (**application document 6.3.6.5**). This could have differential impacts on people with disabilities such as autism (through modification of the environment in which sensory stimuli exists). However, these construction effects would generally be temporary and short term and the effects localised.	No differential impacts on equality groups' views from recreational routes are envisaged. Potential for differential impacts on disabled people with sensory disorders through temporary changes in views from community areas during construction. .
Severance to PRoW or changes to journey length or time	The changes to WCH are described in ES Chapter 12: Traffic and Transport (**application document 6.2.12**). The good practice measures within the CoCP (**application document 7.5.1**) would reduce the effects experienced by visitors from changes to PRoW, by only closing accesses for short periods while construction activities occur and providing signed diversions for any temporary diversions required (TT03 in the CoCP).	No significant issues on WCH journey length or severance identified in the ES although there may be potential for differential impacts on younger and older people, and disabled people due to increased PRoW distances and severance during construction.

Type of Impact	Assessment	Conclusion
	The design of the project and assessment of the proposals on access routes has given due consideration to vulnerable groups. For example, the existing baseline for the assessment of impacts on the WCH network was defined based on reviews of PRoW interacting with the project; the characteristics of the road network in the study area (including for example existing provision of pedestrian crossings); and the land-uses surrounding the road network (noting particularly the location of facilities such as schools that would generate WCH trips by vulnerable groups, such as school children). It was also supplemented by PRoW surveys. Sensitivity values for the impact assessment were assigned to road segments and PRoW within the study area based on network characteristics and an assessment of the likelihood of their usage by WCH, particularly vulnerable users such as school children and the elderly. Where possible, safe and continued public access would be maintained for all (including those with protected characteristics). For example, scaffolding and netting will be used during construction of the overhead line in the Brett Valley over Hadleigh Railway Walk, therefore maintaining safe and continued access for users of Hadleigh Railway Walk (locally promoted footpath) during construction. However, some changes to WCH journey length due to temporary closures and diversions of PRoW for over two weeks during construction are expected. These are assessed in the ES (noting that the assessment excluded PRoW closures for two weeks or less). A short term neutral or minor adverse effect is expected on all PRoW, as set out in ES Appendix 12.1: Traffic and Transport Significance of Effects Tables (**application document 6.3.12.1**). Any proposed changes to access networks and facilities for WCH such as increases in WCH distances and impacts on severance could potentially have differential impacts for equality groups, especially those that are less likely to have access to a car, such as young people, and the elderly and disabled who may not be able to travel by WCH over the longer distances resulting from diversions. Although the effects on these routes are not expected to be significant, there is potential for differential impacts on some equality groups and more vulnerable road users.	

Type of Impact	Assessment	Conclusion
Increased traffic flows leading to changes to pedestrian amenity, fear and intimidation	The changes to WCH are described in ES Chapter 12: Traffic and Transport (**application document 6.2.12**). Short term minor adverse effects on severance are anticipated on 21 road segments in the study area. This includes Church Road, Twinstead - Eastern Segment where the percentage change in traffic flow is above 100%. However, the assessment has accounted for a low absolute change in peak daily vehicle trips on this road (96 per day in both directions combined) and the fact that daily future baseline + construction traffic flow is expected to be well below the 8,000 daily vehicle threshold for severance referenced in guidance. Short term neutral effects on severance are expected on all other road segments in the study area. The only significant effect identified in the ES on WCH results from amenity, fear and intimidation. Amenity is defined as the relative pleasantness of a journey. It is affected by traffic flow, speed and composition, as well as WCH network characteristics including footway width, lighting and separation/protection from traffic. It encompasses the overall relationship between WCH and traffic, including fear and intimidation linked to large volumes of fast-moving traffic and heavy vehicles on roads with limited protection for WCH. Likely changes in pedestrian amenity, fear and intimidation due to temporary increases in traffic flow on roads during project construction were assessed as part of the EIA and identified a short term moderate (significant) adverse effect on the users of Church Road, Twinstead due to an increase in traffic resulting from construction staff vehicle movements. These changes may disproportionately affect those holding christian religion or beliefs using the local church, and have differential impacts on those with young children, or those with mobility issues such as pregnant women, older people, people with disabilities including people with health problems. Additional mitigation (EIA_TT01) is proposed on Church Road, Twinstead in response to the significant effect reported in the ES from the WCH amenity, fear and intimidation assessment. Baseline traffic on this route is fairly low, and while the route passes a church and a village hall, it has no dedicated footpaths. The Applicant is proposing the installation of temporary warning signage to inform users of the use of the road by construction traffic.	The potentially significant effects identified on pedestrians using Church Road in Twinstead may have disproportionate impacts on those holding Christian religion or beliefs, and differential impacts on younger children, older people, pregnant women and disabled people.

Type of Impact	Assessment	Conclusion
Temporary impacts during construction from locally elevated noise and vibration levels to noise sensitive receptors	Noise and vibration is assessed in ES Chapter 14: Noise and Vibration (**application document 6.2.14**). The Applicant and its contractor(s) would adopt Best Practicable Means (BPM) to reduce noise levels during the construction works. Temporary noise mitigation measures would be put in place and secured through the CEMP (**application document 7.5**) to reduce noise levels from construction plant and machinery at specified locations identified in the ES, unless a detailed assessment is undertaken which demonstrates that no significant noise impacts would occur. The ES identified potentially significant adverse effects at seven noise sensitive receptors due to daytime construction noise, and 12 receptors due to potential night-time construction noise. With the exception of Daws Hill Education Centre, no equality receptors (i.e. schools or care homes) were identified as being affected by changes in noise levels. No equality receptors were identified as being affected by changes in vibration levels. Although an increase in noise levels from the construction of underground cables has the potential to disproportionately affect children and young people using Daws Hill Education Centre (and exposure of noise can lead to cognitive impairment for children during lessons), all noise levels from the project are within the range that would be mitigated through site-specific BPM and it is concluded that the construction noise levels can be reduced such that that significant adverse effects would be avoided at all noise sensitive receptors.	No differential or disproportionate impacts on equality groups are predicted.
Temporary impacts during construction from locally elevated dust levels and air pollutants	Air quality is assessed in ES Chapter 13: Air Quality (**application document 6.2.13**). The ES concluded that there are no likely significant effects in relation to air quality receptors during construction and therefore, no mitigation measures have been identified beyond the good practice measures set out in the CoCP (**application document 7.5.1**). Consequently, no differential impacts to equality groups are predicted.	No differential impacts on equality groups are predicted.
Operation of the Project		
Changes in views and landscape character	As a result of consultation feedback and assessment, changes were made to the design to reduce impacts on landscape and visual amenity. This included proposing a greater length of underground cables overall, proposing modified routes for overhead cables and proposing new locations for CSE compounds. The design incorporates the following embedded and good practice measures: -	Potential for short-term differential impacts on disabled people with sensory disorders while adjusting to permanent changes in views from community areas. No long-term differential or disproportionate impacts on equality groups are predicted.

Type of Impact	Assessment	Conclusion
	• Inclusion of land within the Order Limits for embedded planting, which would filter and soften views of project components and reduce effects on views and landscape character. • Construction of low mounds to the west of the A131 and to the west of the proposed GSP substation. These would be planted to help filter views of the GSP substation from the A131 and from Wickham St Paul. The western mound would be approximately 2.5m high while the eastern mound would be approximately 1.5m high. • Additional mitigation in the form of landscape planting to mitigate effects within community areas. Appendix B: Vegetation Reinstatement Plan (**application document 7.8.2**) contains the plans showing the vegetation reinstatement and additional planting that is proposed. The permanent changes to landscape and views are described in ES Chapter 6: Landscape and Visual (**application document 6.2.6**). Overall landscape effects are likely to be not significant in the long term. Significant beneficial landscape effects are likely to occur where the existing 132kV and 400kV overhead lines are removed, or where the existing 132kV is removed and the proposed 400kV overhead lines are proposed to be underground for example within parts of the Dedham Vale AONB and the Stour Valley, and within the community areas of Chattisham, Lamarsh and Polstead. However, the removal of an existing 132kV overhead line and introduction of a larger-scale proposed 400kV overhead line broadly in its place would be likely to intensify the visual effects in relation to the baseline. Effects are unlikely to be significant unless close to the project, since overhead lines are already components in baseline views. The exception to this is potential significant effects in Section AB: Bramford Substation/Hintlesham, where the proposed 400kV overhead line parallels the existing 400kV overhead line rather than the existing 132kV overhead line alignment, and significant adverse effects within the community areas of Burstall and Hintlesham have been identified. Where negative changes in community-level views are likely to be experienced from the construction of new overhead line, there is potential for differential impacts on those with disabilities such as autism (through modification of the environment in which sensory stimuli exists). Although significant effects have been identified, it is not possible to mitigate these through landscape mitigation measures, predominantly due to the scale of the works for the 400kV underground cable. However, any differential impacts that may be experienced by equality groups would be short-term as they adjust to the permanent changes in the landscape.	

References

AA Motoring Trust (2003): The facts about road accidents and children. [Online]. Available from: www.theaa.com/staticdocs/pdf/aboutaa/child_safety.pdf [Accessed: May 2023]

Equality and Human Rights Commission (2023): Know your rights. [Online]. Available from: https://www.equalityhumanrights.com/en/equality-act/protected-characteristics#age

Horizon, Isle of Anglesey Council (IACC) and Medrwn Môn (2017): Community Officers Involvement Report. [Online]. Available from: http://www.anglesey.gov.wales/documents/Docs-en/Business/Energy-Island/Community-Involvement-Officers-Report-April-2017.pdf [Accessed: May 2023]

Institute of Environmental Management and Assessment (IEMA) (2016): Environmental Impact Assessment Guide to Delivering Quality Development.

National Grid (2022a): Our Code of Ethics. [Online]. Available from: https://www.nationalgrid.com/document/149001/download#:~:text=Our%20Code%20of%20Ethics%20for,all%20colleagues%20across%20the%20organisation [Accessed: May 2023]

National Grid (2022b): Bramford to Twinstead Reinforcement: 1 Consultation Summary Document, September 2022, [Online]. https://www.nationalgrid.com/electricity-transmission/document/145781/download [Accessed: May 2023]

National Grid (2021): Bramford to Twinstead Reinforcement: Consultation Strategy, March 2021

Office for National Statistics (n.d.) Disability. [Online] Available from: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/disability [Accessed: May 2023]

Office for National Statistics (2020): Subnational population projections for England: 2018-based. [Online]. Available from: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2018based [Accessed: May 2023]

Office for National Statistics (2022): Census 2021. [Online]. Available from: www.ons.gov.uk/census [Accessed: May 2023]. Data accessed included:

- English language proficiency across local authorities
- Population by ethnic group across local authorities
- Sex across local authorities

Donald A. Redelmeier, Sharon C. May, Deva Thiruchelvam, F. Barrett. (2014): Pregnancy and the risk of a traffic crash. Canadian Medical Association Journal. [Online]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4081196/ [Accessed: May 2023]

RAC Foundation (2011): Mortality statistics and road traffic accidents in the UK. [Online]. Available from: http://www.racfoundation.org/assets/rac_foundation/content/downloadables/road%20accident%20casualty%20comparisons%20-%20box%20-%20110511.pdf [Accessed: May 2023]

Transport Research Laboratory (2013): Construction logistics and cyclist safety. [Online]. Available from: https://content.tfl.gov.uk/construction-logistics-and-cyclist-safety-summary-report.pdf [Accessed: May 2023]

Welsh Government (2016-2017): Community Cohesion National Delivery Plan 2016-17 [Online]. Available from: https://www.gov.wales/sites/default/files/publications/2019-01/community-cohesion- national-delivery-plan-2016-17.pdf [Accessed: May 2023]

Welsh Government (2015): Welsh Index of Multiple Deprivation (WIMD) 2014. [Online]. Available from: http://gov.wales/statistics-and-research/welsh-index-multiple-deprivation/?lang=e [Accessed: May 2023]

Appendix A. Socio-demographic Data

Analysis – Protected Characteristics	Geographical Location	Demographics - 2021 Census Data and/or nomisweb.co.uk
Age	Suffolk County and Babergh and Mid Suffolk Districts	Suffolk county and the Mid Suffolk and Babergh districts have an older population compared with the regional and national age distribution. 23.6% of residents in Suffolk are aged 65+ (4% higher than the 65+ age distribution in East of England (19.6%) and 5.2% higher than England (18.4%), respectively). The percentage of residents aged 65+ in Mid Suffolk and Babergh districts skews older, with over a quarter of the population in Mid Suffolk and Babergh districts aged 65+ (25.3% and 26.4%, respectively). **Babergh** - Since 2011, there has been an increase of 30.1% in people aged 65 years and over, a decrease of 0.5% in people aged 15 to 64 years, and a decrease of 6.0% in children aged under 15 years. **Mid Suffolk** - Since 2011, there has been an increase of 33.5% in people aged 65 years and over, an increase of 1.0% in people aged 15 to 64 years, and a decrease of 7.5% in children aged under 15 years.
	Essex County and Braintree District	The age distribution for the Essex county and the Braintree district is broadly in line with the regional and national age distributions. 20.4% of residents in Braintree district, and 20.6% of residents in Essex county, are aged 65+, compared with 19.6% in East of England and 18.4% in England.
Disability	Suffolk County and Babergh and Mid Suffolk Districts	5.8% and 5.9% of people are disabled in Mid Suffolk and Babergh districts respectively under the Equality Act, which limits day to day activities a lot, compared to an average of 17.8% in England and Wales (ONS, accessed 2023).
	Essex County – Braintree district	6.2% of the population has a disability which limits day to day activities a lot, compared to an average of 17.8% in England and Wales (ONS, accessed 2023).
Gender Reassignment	Suffolk County Babergh and Mid Suffolk Districts	**Babergh** – In 2021, in Mid-Suffolk local authority 0.1% of residents aged 16 years had a gender identity different from the sex registered at birth but with no specific identity given, compared to 0.2% in Suffolk county and in England (Nomis, 2021). **Mid Suffolk** - In 2021, in Mid-Suffolk local authority 0.1% of residents aged 16 years had a gender identity different from the sex registered at birth but with no specific identity given, compared to 0.2% in Suffolk county and in England (Nomis, 2021).

Analysis – Protected Characteristics	Geographical Location	Demographics - 2021 Census Data and/or nomisweb.co.uk
	Essex County – Braintree District	In 2021, in Braintree local authority (and in Essex County as a whole) 0.1% of residents aged 16 years had a gender identity different from the sex registered at birth but with no specific identity given, compared to 0.2% in England (Nomis, 2021).
Pregnancy and Maternity	Suffolk county and Babergh and Mid Suffolk Districts Essex County and Braintree District	Data not available
Race	Suffolk County and Babergh and Mid Suffolk Districts	The proportion of white people in the population is higher in the Suffolk districts through which the proposals pass, and ethnic diversity is lower compared to the England average where 81.7% (48.7 million) of usual residents in England and Wales identified their ethnic group as white; 9.3% Asian, Asian British or Asian Welsh; 6.2% white - other white"; 1.6% other ethnic group; and 2.5% Black, Black British, Black Welsh, Caribbean or African: African. **Babergh** - In 2021, 94.1% of usual residents identified their ethnic group as white (including Irish, gypsy and Roma); 2.5% white - other white; 1.4% mixed or multiple ethnic, 0.9% Asian, Asian British or Asian Welsh; 0.5% Black, Black British, Black Welsh, Caribbean or African: African and 0.3% other ethnic group (it is noted that the percentages presented on the data set amount to 99.6% not 100%). 98.27% of usual residents have English as a main language, which is higher than 91.1% in England and Wales. A higher percentage of the population can speak English compared with the national average i.e. 13.2% of the population in Babergh cannot speak English or cannot speak English well compared with 20.2% in England and Wales. **Mid Suffolk** - In 2021, 94.5% of usual residents identified their ethnic group as white (including Irish, gypsy and Roma); 2.3% white - other white"; 1.5% mixed or multiple ethnic, 0.8% Asian, Asian British or Asian Welsh; 0.6% Black, Black British, Black Welsh, Caribbean or African: African and 0.3% other ethnic group. 98.52% of usual residents have English as a main language, which is higher than 91.1% in England and Wales. A higher percentage of the population can speak English compared with the national average i.e. 14.8% of the population in Mid Suffolk cannot speak English or cannot speak English well compared with 20.2% in England and Wales.

Analysis – Protected Characteristics	Geographical Location	Demographics - 2021 Census Data and/or nomisweb.co.uk
	Essex County and Braintree District	In 2021, 91.2% of usual residents identified their ethnic group as white (including Irish, gypsy and Roma); 3.5% white - other white; 1.9% mixed or multiple ethnic, 1.5% Asian, Asian British or Asian Welsh; 1.3% Black, Black British, Black Welsh, Caribbean or African: African and 0.6% other ethnic group. 97.05% of usual residents have English as a main language, which is higher than 91.1% in England and Wales. A higher percentage of the population can speak English compared with the national average i.e. 15% of the population in Braintree cannot speak English or cannot speak English well compared with 20.2% in England and Wales. The proportion of white people in the population is higher in Braintree, and ethnic diversity is lower compared to the England average where 81.7% (48.7 million) of usual residents in England and Wales identified their ethnic group as white; 9.3% Asian, Asian British or Asian Welsh; 6.2% white - other white"; 1.6% other ethnic group; and 2.5% Black, Black British, Black Welsh, Caribbean or African: African.
Religion or Belief	Suffolk County and Babergh and Mid Suffolk Districts	**Babergh** – 51.1% of the population are recorded to have a religion, of which 49.6% are Christian (compared with 46.2% for England and Wales) and 1.5% are from a minority faith group (Buddhist, Hindu, Jewish, Muslim, Sikh, Other). 6% did not answer the religion question. The minority faith group population in Braintree district is lower than the England average (10.7%). **Mid Suffolk** – 50.5% of the population are recorded to have a religion, of which 49.3% are Christian (compared with 46.2% for England and Wales) and 1.2% are from a minority faith group (Buddhist, Hindu, Jewish, Muslim, Sikh, Other). 5.9% did not answer the religion question. The minority faith group population in Mid-Suffolk is lower than the England average (10.7%).
	Essex County and Braintree District	49.2% of the population are recorded to have a religion, of which 47.1% are Christian (compared with 46.2% for England and Wales) and 2.1% are from a minority faith group (Buddhist, Hindu, Jewish, Muslim, Sikh, Other). 5.9% did not answer the religion question. The minority faith group population in Braintree district is lower than the England average (10.7%).
Sex	All districts	The proportion of male and female residents in all districts is broadly in line with the national distribution (approximately 49% male, 51% female) with Braintree (49.0%, 51.0%), mid Suffolk (49.3% male, 50.7% female) and Babergh (48.6% male, 51.4% female).
Sexual Orientation	Suffolk County and Babergh and Mid Suffolk Districts	**Babergh** - An estimated 2.1% of the UK population aged 16 years and over identified as lesbian, gay or bisexual (LGB+) in 2021 in Babergh compared with an estimated 3.2% of the population in England and Wales. 91.0% identified as straight or heterosexual in Babergh compared with 89.4% in England and Wales.

Analysis – Protected Characteristics	Geographical Location	Demographics - 2021 Census Data and/or nomisweb.co.uk
		Mid-Suffolk - An estimated 2.2% of the population aged 16 years and over identified as lesbian, gay or bisexual (LGB+) in 2021 in Mid-Suffolk compared with an estimated 3.2% of the population in England and Wales. 91.6% identified as straight or heterosexual in Mid-Suffolk compared with 89.4% in England and Wales. No information has been identified on whether there are specific locations where LGBT+ groups may meet, socialise or access support networks and services.
	Essex County and Braintree District	An estimated 2.2% of the population aged 16 years and over identified as lesbian, gay or bisexual (LGB+) in 2021 in Braintree compared with an estimated 3.2% of the population in England and Wales. No information has been identified on whether there are specific locations where LGBT+ groups may meet, socialise or access support networks and services. 91.3% identified as straight or heterosexual in Braintree compared with 89.4% in England and Wales.
Deprivation (NOTE: not protected characteristic but useful insight into demographics)	Babergh and Mid Suffolk Districts Braintree District	The Indices of Deprivation measure relative deprivation in small areas (Lower Layer Super Output Areas (LSOA)), using deprivation indicators (domains) such as income, employment, health and disability, education, skills and training, barriers to housing and services, crime, and the living environment. The Index of Multiple Deprivation (IMD) combines information from the indicators in weighted proportions to measure the overall relative deprivation for an area. Areas are ranked from 1 (most deprived area) to 32,844 (least deprived area). There are 20 LSOA within the wider study area comprising two in Mid Suffolk (012A and 012B), 15 within Babergh (002C, 004A-E, 005A, 005C, 006A, 008E, 009A-D, 010G) and three within Braintree (002A-C). These are all ranked among the top 30% least deprived neighbourhoods, with the exception being Babergh 004A (Hadleigh), which is amongst the top 40% most deprived. Between 2015 and 2019, the relevant LSOA either became marginally less deprived relative to other small areas (i.e. their rank value increased) or stayed the same (MHCLG, Indices of Deprivation Explorer, 2019). At a district level, the three districts are among the top 40% least deprived districts (out of 317 districts nationally). Mid Suffolk is the least deprived district in the study area and is among the top 30% least deprived districts with an IMD score of 233 (out of 317). Braintree and Babergh are among the top 40% least deprived districts with IMD scores of 203 and 212 (out of 317), respectively. The wider study area is less deprived than the UK average and therefore does not indicate that the communities are particularly vulnerable or ‘at risk’ based on the Index of Multiple Deprivation.

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