The Great Grid Upgrade

Sea Link

Sea Link

Volume 6: Environmental Statement

Document Number 6.2.3.11
Part 3 Kent
Chapter 11
Health & Wellbeing

Planning Inspectorate Reference: EN020026

Version: B
May 2025

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

nationalgrid

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Date	**Issue**	**Status**	**Description / Changes**
March 2025	A	Final	For DCO Submission
May 2025	B	Final	Including missing paragraphs under the Social cohesion and community identify heading in Section 11.9

11. Health & Wellbeing

11.1 Introduction

11.1.1 This chapter of the Environmental Statement (ES) presents the assessment of the likely significant health and wellbeing effects that could result from the Proposed Project (as described in **Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project**).

11.1.2 This chapter describes the methodology used, the datasets that have informed the assessment, baseline conditions, mitigation measures and the health and wellbeing residual significant effects that could result from the Proposed Project.

11.1.3 The Order Limits, which illustrate the boundary of the Proposed Project, are illustrated on **Application Document 2.2.1 Overall Location Plan** and the Kent Onshore Scheme is illustrated on **Application Document 2.2.3 Kent Location Plan**.

11.1.4 This chapter should be read in conjunction with:

- **Application Document 6.2.1.3 Part 1 Introduction Chapter 3 Main Alternatives Considered**;
- **Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project**;
- **Application Document 6.2.1.5 Part 1 Introduction Chapter 5 EIA Approach and Methodology**;
- **Application Document 6.2.1.6 Part 1 Introduction Chapter 6 Scoping Opinion and EIA Consultation**;
- **Application Document 6.2.3.1 Part 3 Kent Chapter 1 Landscape and Visual**;
- **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**;
- **Application Document 6.2.3.8 Part 3 Kent Chapter 8 Air Quality**;
- **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration**;
- **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**;
- **Application Document 6.2.3.12 Part 3 Kent Chapter 12 Kent Onshore Scheme Intra-Project Cumulative Effects**; and
- **Application Document 6.2.3.13 Part 3 Kent Chapter 13 Kent Onshore Scheme Inter-Project Cumulative Effects**.

11.1.5 The chapter is supported by the following application documents:

- **Application Document 7.5.3 Outline Onshore Construction Environmental Management Plan (CEMP)**;
- **Application Document 7.5.3.1 CEMP Appendix A Outline Code of Construction Practice**;

- **Application Document 7.5.3.2 CEMP Appendix B Register of Environmental Actions and Commitments (REAC)**;
- **Application Document 7.5.9.2 Outline Public Rights of Way Management Plan – Kent**; and
- **Application Document 7.5.7.2 Outline Landscape and Ecological Management Plan – Kent (LEMP)**.

11.2 Regulatory and Planning Context

11.2.1 This section sets out the legislation and planning policy that is relevant to the health and wellbeing assessment. A full review of compliance with relevant national and local planning policy is provided within **Application Document 7.1 Planning Statement** submitted as part of the application for Development Consent.

11.2.2 Policy generally seeks to minimise health and wellbeing effects from development and to avoid significant adverse effects. This applies particularly to ensuring suitable air quality, reducing noise pollution, and promoting access to green spaces for physical activity and mental well-being. Additionally, it includes designing infrastructure that supports safe and active transportation, ensuring easy access to healthcare facilities, and incorporating social and community engagement.

Legislation

The Health and Care Act (2022)

11.2.3 The Health and Care Act (HM Government, 2022) was passed in April 2022. This Act sets out health reforms in England and formalises Integrated Care Systems (ICSs) as the means of provision of healthcare services. Each ICS has an Integrated Care Board (ICB); there are 42 ICBs which cover England, National Health Service (NHS) Kent and Medway ICB is the board which covers the study area relevant to the Proposed Project.

11.2.4 Each ICB has been established with four strategic purposes:

- improve population health and healthcare;
- tackling unequal outcomes and access;
- enhance productivity and value for money; and
- helping the NHS to support broader social and economic development.

National Policy

National Policy Statements

11.2.5 National Policy Statements (NPS) set out the primary policy tests against which the application for a Development Consent Order (DCO) for the Proposed Project would be considered. Table 11.1 and Table 11.2 below provides details of the elements of NPS for Energy (EN-1) (Department for Energy Security and Net Zero, 2023) and NPS for Electricity Networks Infrastructure (EN-5) (Department for Energy Security and Net Zero, 2023) that are relevant to this chapter.

11.2.6 NPS EN-3 Renewable Energy Infrastructure has relevance to the Proposed Project, but only in respect of the offshore elements. As such it has no relevance to the assessment presented in this chapter.

Table 11.1 NPS EN-1 requirements relevant to health and wellbeing

NPS EN-1 section	Where this is covered in the ES
4.4.1 *"Energy infrastructure has the potential to impact on the health and well-being ("health") of the population. Access to energy is clearly beneficial to society and to our health as a whole. However, the construction of energy infrastructure and the production, distribution and use of energy may have negative impacts on some people's health."*	The potential effects of the Proposed Project on health and wellbeing across all phases (construction, operation, maintenance and decommissioning) is considered in Section 11.9
4.4.4 *"As described in the relevant sections of this NPS and in the technology specific NPSs, where the proposed project has an effect on humans, the ES should assess these effects for each element of the project, identifying any potential adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate."*	It is expected that measures relevant to supporting technical assessments will manage risks and ensure effects on health and wellbeing are unlikely / minimised directly. The health and wellbeing assessment thus assesses the likely residual significant effects from the construction, operation, maintenance and decommissioning of the Proposed Project. The relevant assessment chapters include: • **Application Document 6.2.3.1 Part 3 Kent Chapter 1 Landscape and Visual**; • **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**; • **Application Document 6.2.3.8 Part 3 Kent Chapter 8 Air Quality**; • **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration**; • **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**; • **Application Document 6.2.3.4 Part 3 Kent Chapter 4 Water Environment**; and • **Application Document 6.2.3.5 Part 3 Kent Chapter 5 Geology and Hydrogeology**.
4.4.5 *"The impacts of more than one development may affect people simultaneously, so the applicant should consider the cumulative impact on health in the ES where appropriate."*	The cumulative impacts associated with the Kent Onshore Scheme are considered within **Application Document 6.2.3.12 Part 3 Kent Chapter 12 Kent Onshore Scheme Intra-Project Cumulative Effects** and **Application Document 6.2.3.13 Part 3 Kent Chapter 13 Kent Onshore Scheme Inter-Project Cumulative Effects**.

NPS EN-1 section	Where this is covered in the ES
4.4.2 *"The direct impacts on health may include increased traffic, air or water pollution, dust, odour, hazardous waste and substances, noise, exposure to radiation, and increases in pests."*	Generally, those aspects of energy infrastructure which are most likely to have a significant and detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them. The health and wellbeing assessment, in Section 11.9, considers the outcomes of other technical chapters relevant to health and wellbeing.
4.4.3 *"New energy infrastructure may also affect the composition and size of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport, or the use of open space for recreation and physical activity."*	The health and wellbeing assessment, set out in Section 11.9, considers the impacts of any potential changes to access to key public services, transport or the use of open space for recreation and physical activity.
4.4.7 *"Generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them, so that it is unlikely that health concerns will either by themselves constitute a reason to refuse consents or require specific mitigation under the Planning Act 2008 (the Act)."*	The impact of noise and air quality on health and wellbeing is considered in Section 11.9, specifically through Sections 11.9.24 to 11.9.29 and 11.9.30 to 11.9.34
4.4.6 *Opportunities should also be taken to mitigate indirect impacts; by promoting local improvements to encourage health and wellbeing, this includes potential impacts on vulnerable groups within society i.e. those groups within society which may be differentially impacted by a development compared to wider society as a whole.*	A consideration of vulnerable groups within society is covered in this chapter as the health and wellbeing assessment utilises Institute of Environmental Management and Assessment (IEMA) guidance (IEMA, 2022) and (IEMA, 2022), as detailed in Section 11.4 of this chapter. This guidance details the need to consider whether there are any vulnerable sub-populations which would materially change the outcome of an assessment and is covered in Section 11.9.
5.12.17 *"(part) The Secretary of State should not grant development consent unless they are satisfied that the proposals will meet the following aims through the effective management and control of noise:* *avoid significant adverse impacts on health and quality of life from noise;* *mitigate and minimise other adverse impacts on health and quality of life from noise; and*	An assessment of noise and vibration is set out in **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration**; this considers any noise effects and discusses mitigation measures to control noise. The assessment of effects for health and wellbeing draws on the noise and vibration chapter and considers all of the points laid out in paragraph 5.11.9 of EN-1, specifically through Sections 11.9.30 to 11.9.34.

NPS EN-1 section	Where this is covered in the ES
where possible, contribute to improvements to health and quality of life through the effective management and control of noise."	

Table 11.2 NPS EN-5 requirements relevant to health and wellbeing

NPS EN-5 section	Where this is covered in the ES
2.10.11 *"(part) The Applicant should consider the following factors: […] that optimal phasing of high voltage overhead power lines is introduced wherever possible and practicable in accordance with the Code of Practice to minimise effects of EMFs; and* *any new advice emerging from the Department of Health and Social Care relating to government policy for EMF exposure guidelines."*	As set out in the Scoping Report (National Grid, 2022) (**Application Document 6.14 Environmental Scoping Report 2022**) and agreed in the Scoping Opinion received from the Secretary of State (SoS) on 1 December 2022 (**Application Document 6.15 Scoping Opinion 2022**), this matter is scoped out on the basis that the application for development consent will demonstrate the design is compliant with the International Commission on Non-Ionizing Radiation Protection guidelines (1998) in ensuring that the threshold for impacts to humans is not met/exceeded. National Grid will ensure that policies and procedures are in place at the design phase to ensure that all equipment complies with public electric and magnetic fields (EMF) exposure limits.

National Planning Policy Framework

11.2.7 The National Planning Policy Framework (NPPF) as revised in December 2024 (Ministry of Housing, Communities, and Local Government, 2024) sets out national planning policies that reflect priorities of the Government for operation of the planning system and the economic, social, and environmental aspects of the development and use of land. The NPPF has a strong emphasis on sustainable development, with a presumption in favor of such development. The NPPF has the potential to be considered important and relevant to the SoS consideration of the Proposed Project.

11.2.8 Table 11.3 below provides details of the elements of the NPPF that are relevant to this chapter, and how and where they are covered in the ES.

Table 11.3 NPPF requirements relevant to health and wellbeing

NPPF section	Where this is covered in the ES
Paragraph 8 (b) *"[…] a social objective – to support strong, vibrant and healthy communities, by*	The impact of the Kent Onshore Scheme on access to social

NPPF section	Where this is covered in the ES
ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being"	infrastructure, open space, leisure and play and social cohesion and community identity is considered in Section 11.9.
Paragraph 96 (c) *"[…] enable and support healthy lives, through both promoting good health and preventing ill-health, especially where this would address identified local health and well-being needs and reduce health inequalities between the most and least deprived communities – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.."*	The impact of the Kent Onshore Scheme on enabling and supporting healthy lifestyles is considered in Section 11.9. This includes assessing the Kent Onshore Scheme's impacts on factors such as access to healthcare, air quality, noise and vibration, transport and access, open space, and social cohesion and community identity, ensuring that proposed developments align with the goal of fostering healthy and inclusive communities.
Paragraph 98 *"[…] take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community;"*	Local strategies and policies regarding social and cultural wellbeing are included in Local Planning Policy within this section and provide context for the assessment of health and wellbeing effects set out in Section 11.9. This includes assessing the Kent Onshore Scheme's impacts on factors such as access to healthcare, air quality, noise and vibration, transport and access, open space, and social cohesion and community identity, ensuring that proposed developments align with the goal of fostering social and cultural wellbeing.
Paragraph 103 *"Access to a network of high-quality open spaces and opportunities for sport and physical activity is important for the health and well-being of communities, and can deliver wider benefits for nature and support efforts to address climate change."*	Access to open space and active travel networks are considered in Section 11.9, specifically through Sections 11.9.35 to 11.9.40.
Paragraph 135 *"[…] create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience."*	The impact of the Kent Onshore Scheme on creating safe, inclusive, and accessible communities, as well as impacts on quality of life and community cohesion are considered in Section 11.9, specifically through Sections 11.9.45 to 11.9.51.

NPPF section	Where this is covered in the ES
Paragraph 198 *"[…] Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:* *(a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;* *(b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and* *(c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation."*	An assessment for health and wellbeing is set out in Section 11.9 of this chapter. The cumulative impacts associated with the Kent Onshore Scheme are considered in **Application Document 6.2.3.12 Part 3 Kent Chapter 12 Kent Onshore Scheme Intra-Project Cumulative Effects** and **Application Document 6.2.3.13 Part 3 Kent Chapter 13 Kent Onshore Scheme Inter-Project Cumulative Effects.** An assessment of noise and vibration is set out in **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration**. An assessment of landscape and visual impact is set out in **Application Document 6.2.3.1 Part 3 Kent Chapter 1 Landscape and Visual**.
Paragraph 223 (f) *"[…] set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality."*	An assessment for health and wellbeing is set out in Section 11.9 of this chapter. The cumulative impacts associated with the Kent Onshore Scheme are considered in **Application Document 6.2.3.12 Part 3 Kent Chapter 12 Kent Onshore Scheme Intra-Project Cumulative Effects** and **Application Document 6.2.3.13 Part 3 Kent Chapter 13 Kent Onshore Scheme Inter-Project Cumulative Effects**.
Paragraph 224 (b) *"[…] ensure that there are no unacceptable adverse impacts on the natural and historic environment, human health or aviation safety, and take into account the cumulative effect of multiple impacts from individual sites and/or from a number of sites in a locality;"*	An assessment for health and wellbeing is set out in Section 11.9 of this chapter. The cumulative impacts associated with the Kent Onshore Scheme are considered in **Application Document 6.2.3.12 Part 3 Kent Chapter 12 Kent Onshore Scheme Intra-Project Cumulative Effects** and **Application Document 6.2.3.13 Part 3 Kent Chapter 13 Kent Onshore Scheme Inter-Project Cumulative Effects**.

National Planning Practice Guidance

National Planning Practice Guidance

11.2.9 Accompanying the NPPF, the National Planning Practice Guidance (’NPPG’) (Department for Levelling Up, Housing and Communities, 2024) provides guidance on planning and provides a web-based resource in support of the NPPF. The NPPG offers guidance on health and wellbeing in planning and planning obligations, and covers:

- the role of health and wellbeing in planning; and
- the links between health and wellbeing and planning.

11.2.10 The NPPG suggests that local authority planners should consult with the Director of Public Health on mitigation measures for any planning applications that are likely to have an impact on the health and wellbeing of the local population or particular groups.

11.2.11 The NPPG states that: *“strategic-policy-making authorities can work with public health leads and health organisations to understand and take account of the current and projected health status and needs of the local population, including the quality and quantity of, and accessibility to, healthcare and the effect any planned growth may have on this. Authorities will also need to assess the quality and quantity of, and accessibility to, green infrastructure, education, sports, recreation and places of worship including expected future changes, and any information about relevant barriers to improving health and well-being outcomes”* (See ‘Plan-Making’ Guidance, Paragraph 46).

11.2.12 The NPPG for health and safe communities covers the role of positive planning on healthier communities and how the design and use of the built and natural environments, including green infrastructure, are major determinants of health and wellbeing. The guidance states that *“planning and health need to be considered together in two ways: in terms of creating environments that support and encourage healthy lifestyles, and in terms of identifying and securing the facilities needed for primary, secondary and tertiary care, and the wider health and care system”*.

11.2.13 The NPPG for open space, sports and recreation facilities, Public Rights of Way (PRoW) and local green space provides additional guidance on those designation and how they should be taken into consideration in planning. The guidance mentions that planning should consider proposals that may affect existing open space as they provide health and recreational benefits to people living and working nearby.

Local Planning Policy

11.2.14 The Kent Onshore Scheme (refer to **Application Document 2.2.3 Kent Location Plan**) lies within the jurisdiction of Kent County Council. County and local planning guidance which is relevant to a study of health and wellbeing and provides context for and informs the assessment of effects in this chapter is set out as follows:

- Kent County Council: A 2050 Picture of Kent and Medway (Kent County Council, 2018); and
- Kent County Council Rights of Way Improvement Plan 2018-2028 (Kent County Council, 2018).

Local Plans

11.2.15 The majority of the Kent Onshore Scheme lies within the jurisdiction of Thanet District Council. Local planning policy for Thanet District Council consists of the Thanet Local Plan (adopted July 2020) (Thanet District Council, 2020). Thanet Local Plan policies which are relevant to health and community assessment matters and have informed the health and wellbeing assessment are detailed in Table 11.4.

Table 11.4 Local planning policies relevant to health and wellbeing – Thanet Local Plan

Thanet Local Plan - Policy	Where this is covered in the ES
SP27 – Green Infrastructure *This policy sets out how developments should make a positive contribution to Thanet's Green Infrastructure network wherever possible and appropriate.*	The impacts of the Kent Onshore Scheme on access to open space and active travel networks, which constitute green infrastructure, is considered in Section 11.9, specifically through Sections 11.9.18 to 11.9.23, and Sections 11.9.35 to 11.9.40.
SP32 - Protection of Open Space and Allotments *This policy sets out the criteria required for proposals which would result in a loss of open space or allotments.*	The impacts of the Kent Onshore Scheme on open space is considered in Section 11.9, specifically through Sections 11.9.18 to 11.9.23. There are no allotments within the study area.
SP33 – Local Green Space This policy identifies 19 Local Green Spaces which are protected under policy SP30 (Biodiversity and Geodiversity Assets).	The impacts of the Kent Onshore Scheme on green space is considered in Section 11.9, specifically through Sections 11.9.18 to 11.9.23.
SP38 – Healthy and Inclusive Communities This policy sets out that Council will work with relevant organisations, communities and developers to promote, protect and improve the health of Thanet's residents, and reduce health inequalities, supporting proposals that fulfil numerous criteria.	Section 11.9 evaluates the implications of the Kent Onshore Scheme on various health determinants, emphasising the importance of integrating health considerations into the assessment. This includes assessing the scheme's impacts on factors such as access to healthcare, air quality, noise and vibration, transport and access, open space, and social cohesion and community identity, ensuring that proposed developments align with the goal of fostering healthy and inclusive communities.
SP41 – Community Infrastructure *This policy sets out how Development will only be permitted when provision is made to ensure delivery of relevant and sufficient community and utility infrastructure by developer.*	The impacts of the Kent Onshore Scheme to healthcare services and social infrastructure is considered in Section 11.9, specifically through Sections 11.9.3 to 11.9.18.

11.2.16 Parts of the Kent Onshore Scheme lie within the jurisdiction of Dover District Council who published the Dover District Local Plan to 2040 in October 2024 (Dover District Council, 2024). Local Plan policies which are relevant to health and wellbeing matters are identified in Table 11.5 below.

Table 11.5 Local Planning Policies relevant to health and wellbeing – Dover District Local Plan to 2040

Draft Dover New District Local Plan– Policy	Where this is covered in the ES
SP2 – Planning for Healthy and Inclusive Communities This policy lays out how the Council will support the creation of healthy, inclusive and safe communities in the district.	Section 11.9 evaluates the implications of the Kent Onshore Scheme on various health determinants, emphasising the importance of integrating health considerations into the assessment. This includes assessing the scheme's impacts on factors such as access to healthcare, air quality, noise and vibration, transport and access, open space, and social cohesion and community identity, ensuring that proposed developments align with the goal of fostering healthy and inclusive communities.
PM5 – Protection of Open Space, Sports Facilities and Local Green Space *This policy discusses the criteria for development proposals that involve loss of open space. The policy aims to ensure that valued open spaces within the District are retained and protected for all to access.*	The impacts of the Kent Onshore Scheme on open space is considered in Section 11.9, specifically through Sections 11.9.18 to 11.9.23.

Ash Neighbourhood Development Plan 2021 (Ash Parish Council, 2021)

11.2.17 The Ash Neighbourhood Development Plan covers the period from 2018-2037 and sits alongside the district and national policies when determining planning applications in the Parish of Ash. It contains a vision for the future of Ash and sets out clear objectives and planning policies to realise and deliver this vision. The plan has five overarching objectives, with the two relevant to health and wellbeing being:

- Objective 1: Environmental (landscape, open spaces, biodiversity and climate change) aims to protect the parish's historic landscape and heritage, promote a healthy and safe environment, secure existing and promote new green and open spaces; and
- Objective 3: Leisure, Well-being, Education and Healthcare aims to ensure leisure, well-being, education and healthcare provision will be protected an enhanced through new developments.

11.2.18 The policies of note to health and wellbeing include:

- Policy ANP1 – Development in the countryside;

- Policy ANP2 – Designated local green spaces;
- Policy ANP3 – Green and open spaces in new developments;
- Policy ANP8 – Retention of community facilities;
- Policy ANP9 – Health and social care; and
- Policy ANP15 – Transport.

Kent County Council: A 2050 Picture of Kent and Medway (Kent County Council, 2018)

11.2.19 KCC's A 2050 Picture of Kent and Medway is closely linked to the 2018 Kent and Medway Growth and Infrastructure Framework (GIF), which provides a picture of emerging development and infrastructure requirements across the area and provides a strategic framework for identifying and prioritising infrastructure investment. The work sets out four plausible scenarios of how the future may develop in Kent and Medway. There is particular reference to the impact of an ageing population and increased demand for health and social care services.

Kent County Council Rights of Way Improvement Plan 2018-2028 (Kent County Council, 2018)

11.2.20 The plan sets out objectives for Kent's PRoW network and wider public access up to 2028. There are a number of relevant actions in the plan related to health and wellbeing, some of those include:

11.2.21 target priority areas and deliver improvements to the network addressing health inequalities through increasing active travel and recreational activity;

11.2.22 improve and upgrade the PRoW network where it links with amenities, public transport nodes, work and education to increase the attractiveness of walking, cycling and riding as an alternative to driving;

11.2.23 work with planners and developers to create a planned strategic green infrastructure which incorporates the PRoW network to promote and encourage sustainable, active travel and provide opportunities for leisure and recreation; and

11.2.24 use data available on air quality, to prioritise projects and schemes to help towards improving the local environment.

11.3 Scoping Opinion and Consultation

Scoping

11.3.1 A Scoping Report for the Proposed Project was issued to the Planning Inspectorate (PINS) on 24 October 2022 (**Application Document 6.14 Environmental Scoping Report 2022**) and a Scoping Opinion was received from the SoS on 1 December 2022 (**Application Document 6.15 Scoping Opinion 2022**). Table 11.6 sets out the comments raised in the Scoping Opinion and how these have been addressed in this ES. The Scoping Opinion takes account of responses from prescribed consultees as appropriate. **Application Document 6.3.1.6.A ES Appendix 1.6.A Response to Scoping Opinion** provides responses to the comments made by the prescribed consultees at scoping stage and how each comment has been considered.

Table 11.6 Comments raised in the Scoping Opinion

ID	Inspectorate's comments	Response
4.11.1	*All phases –EMF* The Inspectorate agrees this matter can be scoped out on the basis that the ES demonstrates the design is compliant with the International Commission on Non-Ionizing Radiation Protection guidelines (1998) in ensuring that the threshold for impacts to humans is not met/exceeded.	The inspectorate's response has been noted.
4.11.2	*Census data* Where new census data from 2021 is available, this should be used to inform baseline data and the ES assessment.	New census data from 2021 is used throughout Section 11.7 where relevant. Alternative forms of data are only used when census 2021 data is not available for a specific indicator or geography.
4.11.3	*Study area* The study area for impacts from severance vary between 1km and 500m however, the Inspectorate considers severance can be caused by changes in traffic movements and type. The assessment of potential severance impacts on receptors from changes in the road network from the Proposed Development should consider the entirety of the affected road network rather than an arbitrary buffer zone.	As detailed in **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**, the study area has now been agreed with Kent County Council Highways and based on the extent of the affected road network.
4.11.4	*Judgement of significance* Scoping Report paragraph 2.12.7.12 states that the proposed guidance does not provide a methodology for assessing the significance of effects. The ES should describe the methodology for determining the significance of effects and report the significance of effects on human health. The Applicants attention is directed to the response of UK Health Security Agency at Appendix 2 to this Opinion with regards to this matter.	The response from the UK Health Security Agency has been noted and the methodology for determining the significance of effects is set out in Section 11.4. The methodology follows a best practice approach, including in utilising IEMA guidance for determining significance for human health in Environmental Impact Assessment (EIA) (IEMA, 2022), which was published following the issue of the Scoping Report in October 2022.

Statutory Consultation

11.3.2 Statutory Consultation for the Proposed Project took place between 24 October and 18 December 2023. A further Targeted Consultation exercise on the main changes to the Proposed Project introduced after the 2023 statutory consultation, was undertaken

between 8 July and 11 August 2024. In addition, a project update and a local engagement exercise took place between 22 November 2024 and 12 January 2025, focusing on design amendments made following Targeted Consultation. A summary of relevant feedback received during statutory consultation relating to Health and Wellbeing is provided in subsequent paragraphs below. Further details on how consultation responses have informed the assessment can be found in **Application Document 5.1 Consultation Report** and **Application Document 5.1.6 Appendix E Statutory Consultation**.

11.3.3 Feedback from the prescribed consultees included the following key issues:

- *PRoW* - Feedback has been noted considering the local importance of PRoW in Kent, calling for greater consideration of this network. Impacts on PRoW are considered throughout the ES, across the **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** and **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** chapters, as well as this health and wellbeing assessment (across relevant determinants in this Chapter). **Application Document 7.5.9.2 Outline PRoW Management Plan - Kent** has also been produced for the application which deals with closures and diversions to PRoW routes.
- *Construction traffic impacts* – Feedback raised concern regarding the possible effect that construction traffic and construction sites set within the Dover district may have on nearby residences. The impact of construction traffic is considered within **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**, and this health and wellbeing assessment reflects any transport related impacts within the relevant assessments.

Further Engagement

11.3.4 A health and wellbeing thematic meeting was held with Kent County Council, Thanet District Council and Dover District Council since the Preliminary Environmental Information Report (PEIR) was produced in February 2024. The meeting primarily focused on discussing points raised by the local planning authorities in the Statutory Consultation and provided the opportunity to discuss key aspects of local context to help inform the health and wellbeing assessment for the ES.

Summary of Scope of Assessment

11.3.5 This section details what aspects have been scoped in and scoped out of the assessment through the scoping process and consultation with stakeholders.

Aspects scoped into the assessment

11.3.6 The assessment in this chapter follows IEMA guidance to assign significance to health effects as it is the recognised best practice approach for the assessment of health and wellbeing. Therefore, it is deemed appropriate to use IEMA determinants and terminology. The health determinants scoped into the study are covered under the following assessments presented in Section 11.9:

- access to healthcare services and other social infrastructure;
- access to open space, leisure and play;
- air quality;

- noise and vibration;
- transport modes, access, connections and physical activity;
- employment and income; and
- social cohesion and Community identity.

11.3.7 The impacts of the Proposed Project on these determinants of health and wellbeing have been assessed using professional judgement, best practice and drawing on other assessments within the ES. The relevant assessment chapters include:

- **Application Document 6.2.3.1 Part 3 Kent Chapter 1 Landscape and Visual**;
- **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**;
- **Application Document 6.2.3.8 Part 3 Kent Chapter 8 Air Quality**;
- **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration**; and
- **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**.

11.3.8 Assessments within other relevant technical chapters have been reviewed, and where potential health effects are identified these have been considered in the health and wellbeing assessment as relevant. These are:

- **Application Document 6.2.3.4 Part 3 Kent Chapter 4 Water Environment**; and
- **Application Document 6.2.3.5 Part 3 Kent Chapter 5 Geology and Hydrogeology**.

11.3.9 It is expected that measures relevant to these technical assessments will manage risks and ensure effects on health and wellbeing are unlikely.

11.3.10 Table 11.7 sets out a summary of the health and wellbeing determinants scoped into this assessment, and the source, pathway, and receptor links relevant to each.

Table 11.7 Health determinants: Source-Pathway-Receptor links

Determinant	Source	Pathway	Receptor	Project Phase
Access to healthcare and other social infrastructure	Potential changes to access to healthcare arising from an influx of workers to the local area	Potential adverse impact on access to health services due to effects of levels of provision resulting from additional workforce in the local area	Human receptors who use local healthcare services	Construction / decommissioning
	Potential changes to access to healthcare arising from temporary or	Potential adverse impact on access to health services which could	Human receptors living within local communities	Construction / decommissioning

Determinant	Source	Pathway	Receptor	Project Phase
	permanent closures, diversions or amenity impacts on PRoW or impacts on the local road network	impact human health		
	Potential changes to demand for social infrastructure arising from an influx of workers to the local area, and potential increased traffic reducing accessibility to social infrastructure	Potential adverse impact on access to social infrastructure which could impact human health	Human receptors who use local social infrastructure	Construction / decommissioning
Access to open space, leisure and play	Potential changes to community connectivity and wider community services including open space arising from temporary or permanent closures, diversions or amenity impacts on PRoW or impacts on the local road network	Potential adverse impacts on access to open spaces, which could impact human health	Human receptors living within local communities	Construction / decommissioning, operation, maintenance
Air quality	Potential temporary changes in local air quality which could impact on health and wellbeing	Potential adverse human health impacts arising from increased exposure to dust and particulate matter emissions arising from the Proposed Project	Human receptors likely to be at risk of possible direct and indirect air quality impacts from the Proposed Project	Construction / decommissioning, operation, maintenance

Determinant	Source	Pathway	Receptor	Project Phase
Noise and vibration	Potential temporary or permanent changes in noise levels arising from the Proposed Project	Potential adverse health and wellbeing impacts arising from increased exposure to noise due to the Proposed Project	Human receptors likely to be at risk of possible direct and indirect noise impacts from the Proposed Project	Construction / decommissioning, operation, maintenance
Transport modes, access, connections and physical activity	Potential changes to community connectivity and accessibility, including active travel networks, arising from temporary or permanent closures, diversions or amenity impacts on PRoW and other active travel networks	Potential adverse impacts on journeys made by active travel modes, which could impact health and wellbeing	Human receptors living within local communities	Construction / decommissioning, operation, maintenance
Employment and income	Potential temporary or permanent increase in employment opportunities, directly related to the Proposed Project	Potential beneficial economic impacts arising from employment, training and income opportunities for those working on the Proposed Project, which could impact human health	Human receptors who could potentially benefit from employment and training opportunities, directly related to the Proposed Project	Construction / decommissioning

Determinant	Source	Pathway	Receptor	Project Phase
Social Cohesion and Community identity	Potential temporary or permanent changes to social cohesion and community identity (including potential changes to landscape and visual amenity)	Potential adverse impacts on health and wellbeing resulting from disruption to community connectivity and potential changes to landscape and visual amenity, which could impact mental health	Human receptors in communities near to the Proposed Project	Construction / decommissioning, operation, maintenance

Aspects scoped out of the assessment

11.3.11 Consideration of the Code of Practice on the effects of EMF and any new EMF exposure guidelines from the Department of Health and Social Care, has been scoped out. The Planning Inspectorate agreed that this matter can be scoped out on the basis that the design is compliant with the International Commission on Non-Ionizing Radiation Protections guidelines (1998).

11.4 Approach and Methodology

11.4.1 **Application Document 6.2.1.5 Part 1 Introduction Chapter 5 EIA Approach and Methodology** sets out the overarching approach which has been used in developing the environmental assessment. This section describes the technical methods used to determine the baseline conditions, sensitivity of the receptors and magnitude of effects and sets out the significance criteria that have been used for the health and wellbeing assessment.

Guidance Specific to the Health and Wellbeing Assessment

11.4.2 The health and wellbeing assessment has been carried out in accordance with the following good practice guidance documents:

- IEMA Guide to Effective Scoping of Human Health in EIA (IEMA, 2022);
- IEMA Guide for Determining Significance for Human Health in EIA (IEMA, 2022);
- NHS Healthy Urban Development Unit (HUDU) Rapid Health Impact Assessment HIA Assessment Tool (NHS Healthy Urban Development Unit (HUDU), 2019);
- Public Health England (PHE) Spatial Planning for Health: An evidence resource for planning and designing healthier places (Public Health England, 2017);
- PHE Strategy 2020-2025 (Public Health England, 2020);
- The Marmot Review: Fair Society, Healthy Lives (The Marmot Review, 2010);
- Health Equity in England 10 Years On (Institute of Health Equity, 2020);

- Build Back Fairer: The Covid-19 Marmot Review (Institute of Health Equity, 2020); and
- NHS Long Term Plan (Department of Health and Social Care , 2019).

IEMA Guide to Effective Scoping of Human Health in EIA

11.4.3 The IEMA Guide to Effective Scoping of Human Health in EIA (IEMA, 2022) was published in November 2022.

11.4.4 The guide provides information on determining the relevant health issues that should be included in EIAs by those responsible for the commissioning, conducting, or reviewing or EIAs. The guide emphasises the need to take a holistic approach to health, considering physical, mental and social dimensions of health, as well as health inequalities.

IEMA Guide for Determining Significance for Human Health in EIA;

11.4.5 The IEMA guidance on Determining Significance for Human Health in Environmental Impact Assessment (IEMA, 2022) was published in November 2022.

11.4.6 The guide presents a framework that should be used by EIA practitioners to identify, describe, and assess the direct and indirect significant effects of a proposed development on human health. It defines significance as informed expert judgement of the importance, desirability, or acceptability of a change, which must be evidence-based and explained within context.

11.4.7 In particular, the guidance highlights the need to consider the significance of human health effects in relation to vulnerable groups.

NHS HUDU Rapid Health Impact Assessment Tool (2019)

11.4.8 NHS England developed the HUDU Rapid Health Impact Assessment (HIA) Toolkit (NHS Healthy Urban Development Unit (HUDU), 2019), which identifies eleven broad determinants of health that are likely to be influenced by specific development proposals and can be influenced through design and management measures. It provides an assessment checklist against which the likely impacts of new developments can be assessed.

PHE Spatial Planning for Health: An evidence resource for planning and designing healthier places (2017)

11.4.9 In 2017, PHE published ‘Spatial Planning for Health: An evidence resource for designing healthier places’ (Public Health England, 2017).

11.4.10 The review provided public health planners and local communities with evidence informed principles for designing healthy places. The review addresses the relationship which exists between public health and the built environment. It identifies five aspects of the built and natural environment which can be influenced by local planning policy:

- neighbourhood design;
- housing;
- healthier food;
- natural and sustainable environment; and

- transport.

11.4.11 For each aspect identified above, the review provides the evidence base underpinning why they are important determinants of public health. It also sets out principles which public health professionals and planners should follow to ensure healthier places.

11.4.12 The two aspects deemed most relevant to the Proposed Project are 'neighbourhood design' and 'natural and sustainable environment'. For 'neighbourhood design', the review states that *"neighbourhoods are places where people live, work, and play and have a sense of belonging. The design of a neighbourhood can contribute to the health and well-being of the people living there. Several aspects of neighbourhood design (walkability and mixed land use) can also maximise opportunities for social engagement and active travel. Neighbourhood design can impact on our day-to-day decisions and therefore have a significant role in shaping our health behaviours"* (Public Health England, 2017, p. 11).

11.4.13 For the 'natural and sustainable environment', the review states *"there is a very significant and strong body of evidence linking contact and exposure to the natural environment with improved health and wellbeing. For the purpose of this review, the natural and sustainable environment is comprised of neighbourhood ecosystems and the resulting co-benefits between the environment and health. Protecting the natural environment is essential to sustaining human civilization"* (Public Health England, 2017, p. 38).

PHE Strategy 2020-2025 (2020)

11.4.14 The PHE Strategy 2020 to 2025 (Public Health England, 2020) was published in 2020 and states PHE's objectives over the five-year period. Note, in 2021 PHE was replaced by the UK Health Security Agency and Office for Health Improvement and Disparities.

11.4.15 Relevant priorities within the strategy include:

- healthier diets, healthier weights: help make the healthy choice the easy choice to improve diets and rates of childhood obesity;
- cleaner air: develop and share advice on how best to reduce air pollution levels and people's exposure to polluted air; and
- better mental health: promote good mental health and contribute to the prevention of mental illness.

The Marmot Review: Fair Society, Healthy Lives (2010)

11.4.16 The Marmot Review (The Marmot Review, 2010) argued that serious avoidable health inequalities exist across England and shows these inequalities to be determined by a wide range of socio-economic factors.

11.4.17 The Review identifies policy objectives including the following of relevance to the Proposed Project:

- create fair employment and good work for all;
- ensure a healthy standard of living for all;
- create and develop healthy and sustainable places and communities; and
- strengthen the role and impact of ill health prevention.

Health Equity in England 10 Years On (2020)

11.4.18 Ten years following the original review, the follow up Marmot Review, Health Equity 10 Years On (Institute of Health Equity, 2020) was published in February 2020.

11.4.19 The report highlighted the growth in health inequality over the preceding 10 years, especially for those living in more deprived districts and regions. The report calls upon the Government to make health and wellbeing a central policy goal which will in turn create a better society, with better health and health equity.

Build Back Fairer: The Covid-19 Marmot Review (2020)

11.4.20 An update to the Marmot Review 10 Years On report, Build Back Fairer: The Covid-19 Marmot Review (Institute of Health Equity, 2020) was published in December 2020 to investigate how the pandemic has affected health inequalities in England. The Covid-19 pandemic exposed and amplified some of the inequalities highlighted in the Marmot Review 10 Years On report.

NHS Long Term Plan (2019)

11.4.21 The NHS Long Term Plan 2019 (Department of Health and Social Care , 2019) sets out a ten-year programme of phased improvements to the NHS. The plan outlines how the NHS will attempt to reduce health inequalities through wider preventative action in deprived areas and improved integrated community-based care systems. This includes funding support to programmes which help to reduce obesity and air pollution in vulnerable communities.

11.4.22 The IEMA guidance, "*Determining Significance for Human Health In Environmental Impact Assessment,*" forms the basis of the approach adopted to assess impacts on human health and wellbeing in this chapter. This guidance was published in November 2022, following the writing of the Scoping Report (**Application Document 6.14 Environmental Scoping Report 2022**) for the Proposed Project, but is considered throughout the health and wellbeing assessment as this is deemed the most up to date, best practice approach.

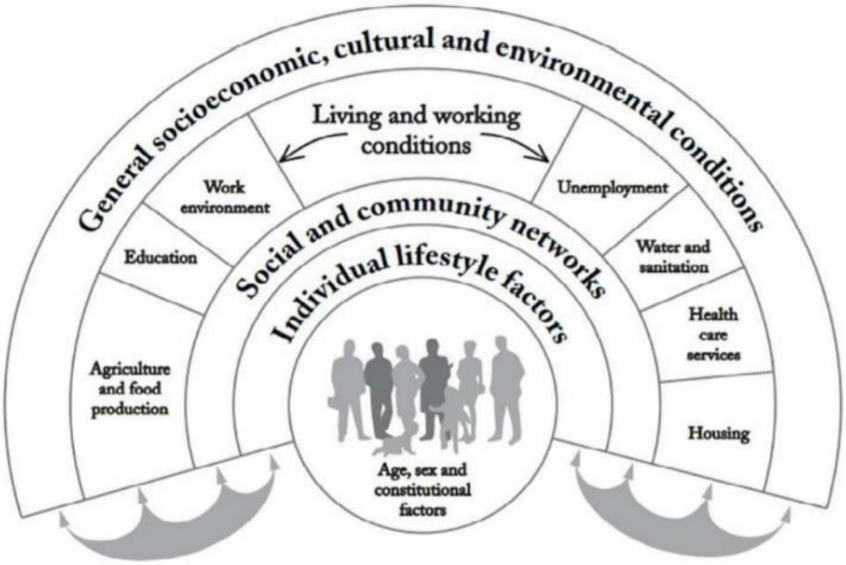
11.4.23 In addition, consideration has been given to NHS England's HUDU Rapid Health Impact Assessment (HIA) Toolkit 2019 to help with the identification of relevant health determinants and mapping of health pathways (the route through which changes to health determinants would be expected to lead to changes in health outcomes).

11.4.24 The World Health Organisation (WHO) Europe defines health as a 'state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity' (World Health Organisation, 1946). Public health therefore encompasses general wellbeing, not just the absence of illness.

11.4.25 The health and wellbeing of individuals is determined by a broad range of individual constitutional and behavioural factors (or "determinants"), as well as broader environmental, social, and economic factors. Some factors are direct and obvious, others are indirect.

11.4.26 Dahlgreen and Whitehead's model of the main determinants of health (Dahlgreen, G & Whitehead, M , 2021) illustrates the breadth of possible influences on health, as shown in Plate 11.1. At the centre of the illustration are factors that are largely fixed, including individual age, sex, constitutional and genetic factors. Outside this are factors generally described as the wider or broader determinants of health. The model emphasises interactions between the layers. Moving outwards from the centre, individual lifestyle

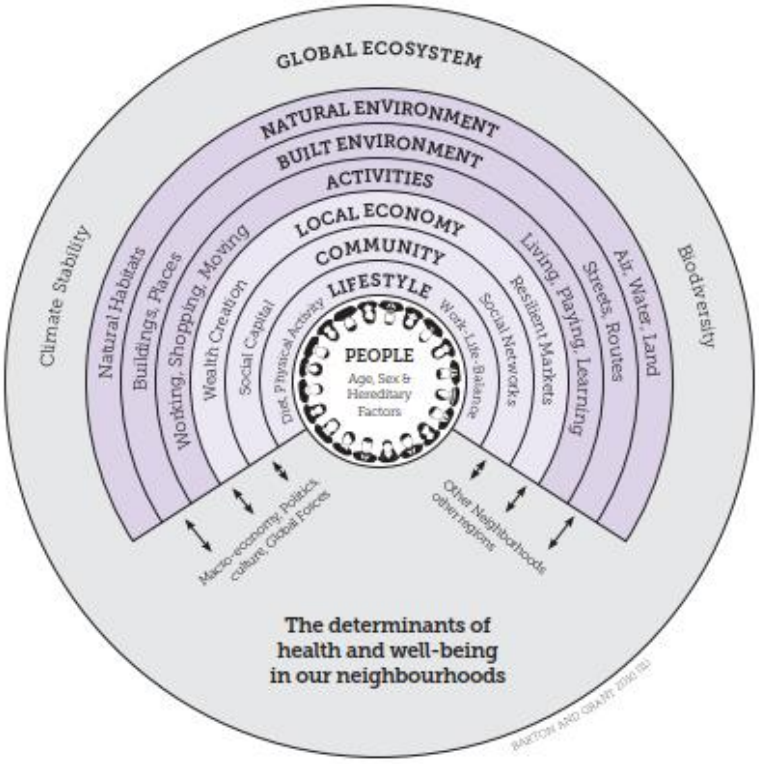
choices are embedded in social norms and community networks, and in living and working conditions, which in turn are shaped by and related to the wider socioeconomic and cultural environment.



Source: (Dahlgreen, G & Whitehead, M , 2021)

Plate 11.1 Determinants of Health

11.4.27 This model has been developed to show elements of the built environment and communities that are the most significant determinants of health, as shown in Plate 11.2. (Barton, H & Grant, M, 2006).



Source: (Barton, H & Grant, M, 2006)

Plate 11.2 Determinants of Health in Neighbourhoods

11.4.28 Within a population there can also be health inequalities, defined by the WHO as *"differences in health status or in the distribution of health determinants between different population groups. For example, differences in mobility between elderly people and younger populations or differences in mortality rates between people from different social classes".*

Baseline Data Gathering and Forecasting Methods

11.4.29 This chapter seeks to assess the potential health and wellbeing effects of the Kent Onshore Scheme against the current health and wellbeing baseline conditions within the study areas.

Desktop Survey

11.4.30 In order to understand the existing health and wellbeing baseline, data illustrating the existing health and wellbeing conditions has been collected through a desk-based research exercise using publicly available sources, documents, and web-based applications.

11.4.31 Sources of information consulted include:

- (Office for National Statistics, 2022); Census 2021;
- (Ministry of Housing, Communities and Local Government (MHCLG), 2019); English Indices of Deprivation;

- (The Office for Health Improvement & Disparities (OHID), 2020); Health Profiles;
- (NHS Digital, 2024); General Practice Workforce (June 2024); and
- (Department for Culture, Media and Sport, 2023); Community Life Survey.

Field Surveys

11.4.32 The following field surveys have been carried out by related technical topics relevant to this assessment:

- **Application Document 6.2.3.1 Part 3 Kent Chapter 1 Landscape and Visual** sets out details of the field work undertaken within summer 2022, and winter 2023 and summer 2024 to inform the scoping process, assess the existing character of the landscape and visit representative viewpoints. Winter viewpoint photography was also captured on the 14 and 15 March 2023 and 8 April 2024. Summer viewpoint photography was captured between 2 and 4 October 2023.
- **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** sets out details of the traffic survey undertaken in January 2024 as part of the ES in order to obtain comprehensive set of baseline traffic flows within the agreed study area.
- **Application Document 6.2.3.8 Part 3 Kent Chapter 8 Air Quality** sets out that no air quality surveys have been undertaken as part of the ES. Data has been collected from the following sources: Defra UK Air website, local authority websites and annual Air Quality Status Reports, and the MAGIC website.
- **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration** sets out details of noise surveys carried out in March and April 2024 to assess baseline conditions of relevance to the potential noise impacts of the Kent Onshore Scheme.

Assessment Criteria

11.4.33 The health and wellbeing assessment follows the general assessment methodology set out in **Application Document 6.2.1.5 Part 1 Introduction Chapter 5 EIA Approach and Methodology**. However, the specific impact magnitude and impact sensitivity criteria for this assessment have been set out in this section.

11.4.34 The assessment aims to quantify effects as far as possible. However, some effects can only be evaluated on a qualitative basis. The classification and significance of an effect reflects the relationship between the scale of impact (magnitude) and the sensitivity of the affected receptor. As such, the significance of health and wellbeing effects has been assessed based on the expert judgment and professional experience of the author, and relies on the following considerations:

- sensitivity of human health receptors including general populations and potentially vulnerable sub-populations: the assessment takes account of the qualitative (rather than quantitative) sensitivity of relevant populations and sub-populations and their ability to respond to change as applicable to each determinant; and
- magnitude of impact: this entails consideration of the scale of the exposure of the population to an impact; whether the impact is one-off or continuous; the likely nature of the human health impact; the permanence of the change; and the proportion of the relevant study area population that would be affected.

11.4.35 Criteria for receptor sensitivity and impact magnitude are set out below. The classification of effect matrix is provided following the receptor sensitivity and impact magnitude criteria.

Sensitivity of health and wellbeing receptors

11.4.36 Sensitivity of population health and wellbeing is driven by a number of factors which are set out in Table 11.8 below and are based on guidance set out by IEMA guidance. This good practice approach is based on existing national and international guidance, hence why the sensitivity levels differ slightly from that set out in **Application Document 6.2.1.5 Part 1 Introduction Chapter 5 EIA Approach and Methodology**.

Table 11.8 Health and Wellbeing Sensitivity of Receptor Criteria

Sensitivity Level	Criteria
High	High levels of deprivation (including pockets of deprivation); reliance on shared resources (between the population and the Proposed Project); existing wide inequalities between the most and least healthy; a community whose outlook is predominantly anxiety or concern; people who are prevented from undertaking daily activities; dependants; people with very poor health status; and/or people with a very low capacity to adapt.
Medium	Moderate levels of deprivation; few alternatives to shared resources; existing widening inequalities between the most and least healthy; a community whose outlook is predominantly uncertainty with some concern; people who are highly limited from undertaking daily activities; people providing or requiring a lot of care; people with poor health status; and/or people with a limited capacity to adapt.
Low	Low levels of deprivation; many alternatives to shared resources; existing narrowing inequalities between the most and least healthy; a community whose outlook is predominantly ambivalence with some concern; people who are slightly limited from undertaking daily activities; people providing or requiring some care; people with fair health status; and/or people with a high capacity to adapt.
Very Low	Very low levels of deprivation; no shared resources; existing narrow inequalities between the most and least healthy; a community whose outlook is predominantly support with some concern; people who are not limited from undertaking daily activities; people who are independent (not a carer or dependent); people with good health status; and/or people with a very high capacity to adapt

Magnitude of health and wellbeing impacts

11.4.37 Magnitude of impact is driven by a number of factors which are set out in Table 11.9 below and are based on guidance set out by IEMA guidance and the terminology set out in **Application Document 6.2.1.5 Part 1 Introduction Chapter 5 EIA Approach and Methodology**.

Table 11.9 Health and Wellbeing Magnitude of Impact Criteria

Magnitude Level	Criteria
Large	High exposure or scale; long-term duration; continuous frequency; severity predominantly related to mortality or changes in morbidity (physical or mental health) or very severe illness/injury outcomes; majority of population affected; permanent change; substantial service quality implications.
Medium	Low exposure or medium scale; medium-term duration; frequent events; severity predominantly related to moderate changes in morbidity or moderate change in quality of life; large minority of population affected; gradual reversal; small service quality implications.
Small	Very low exposure or small scale; short-term duration; occasional events; severity predominantly related to minor change in morbidity or moderate change in quality of life; small minority of population affected; rapid reversal; slight service quality implications.
Negligible	Negligible exposure or small scale; very short-term duration; one off frequency; severity predominantly relates to minor change in quality of life; very few people affected; immediate reversal once activity complete; no service quality implications.

Classification and Significance of effects

11.4.38 Health and wellbeing effects reflect the relationship between the sensitivity of the relevant population's health, and the magnitude of the impact, as set out in Table 11.10. Where two options are shown for the classification of effect (e.g. minor/negligible), professional judgement is used to determine which of the two options is most appropriate.

Table 11.10 Classification of Effect

Magnitude of Impact	Sensitivity of Receptor			
	High	**Medium**	**Low**	**Very Low**
Large	Major	Major / Moderate	Moderate / Minor	Minor / Negligible
Medium	Major / Moderate	Moderate	Minor	Minor / Negligible
Small	Moderate / Minor	Minor	Minor	Negligible
Negligible	Minor / Negligible	Minor / Negligible	Negligible	Negligible

11.4.39 Duration of effect is also considered, with more weight given to longer-term or permanent changes than to shorter-term or temporary ones.

11.4.40 In accordance with the methodology set out within **Application Document 6.2.1.5 Part 1 Introduction Chapter 5 EIA Approach and Methodology**, the following criteria is then applied to determine the significance of effect:

- 'Major' or 'moderate' effects are classed as 'significant';
- 'Minor' effects are classed as 'not significant', although they may be a matter of local concern; and
- 'Negligible' effects are classed as 'not significant'.

Assumptions and Limitations

11.4.41 The assessment of the significance of health and wellbeing effects has been carried out against a benchmark of current health and wellbeing baseline conditions prevailing around the Kent Onshore Scheme, as far as is possible within the limitations of such a dataset. Baseline data is subject to a time lag between collection and publication. As with any dataset, these conditions may be subject to change over time which may influence the findings of the assessment. Baseline conditions reported in Section 11.7 regarding health and wellbeing are based on the latest data available at the time of writing.

11.4.42 The assessment of likely health and wellbeing effects arising from the Kent Onshore Scheme is based on professional judgement, drawing on relevant legislation, policy and guidance as set out in Section 11.2. It considers both the potential beneficial and adverse impacts that the Proposed Project is likely to have on health and wellbeing.

11.4.43 The assessment of effects on health and wellbeing draws on assessments of relevance to health and wellbeing and its wider determinants. The chapters of relevance are defined in paragraph 11.3.7. Relevant assumptions and limitations set out in related assessments are set out in respective topic chapters.

11.4.44 If the Proposed Project is required to be decommissioned, the activities and effects associated with the decommissioning phase are expected to be of a similar level to those during the construction phase works. Therefore, the likely significance of effects relating to the construction phase assessment would be applicable to the decommissioning phase, and hence decommissioning effects are not always discussed separately within Section 11.9 of this chapter.

11.5 Basis of Assessment

11.5.1 This section sets out the assumptions that have been made in respect of design flexibility maintained within the Proposed Project and the consideration that has been given to alternative scenarios and the sensitivity of the assessment to changes in the construction commencement year.

11.5.2 Details of the available flexibility and assessment scenarios are presented in **Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project** and **Application Document 6.2.1.5 Part 1 Introduction Chapter 5 EIA Approach and Methodology**.

Flexibility Assumptions

11.5.3 The environmental assessments have been undertaken based on the description of the Proposed Project provided in **Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project**. To take account of the flexibility allowed in the Proposed Project, consideration has been given to the potential for effects to be of greater or different significance should any of the permanent or temporary infrastructure elements be moved within the Limits of Deviation (LoD) or Order Limits.

11.5.4 The assumptions made regarding the use of flexibility for the main assessment, and any alternatives assumptions are set out in Table 11.11.

Table 11.11 Flexibility assumptions

Element of flexibility	How it has been considered within the assessment
Lateral LoD HVDC cables	The assumption that high voltage direct current (HVDC) cables have the potential to be laid anywhere within the lateral LoD has been considered for the assessment. In order to assess the reasonable worst-case scenario on land take, the maximum design parameters have been selected to inform the assessment.
Lateral LoD Minster Converter Station and Minster Substation	The assumption considered within this assessment is that Minster Converter Station and Minster Substation are to be constructed within the lateral LoD footprint based on the indicative location of converter station and substation as shown in **Application Document 2.5.2 Work Plans - Kent**. However, Minster Converter Station and Minster Substation could be constructed anywhere within the lateral LoD and this has been considered within the assessment of effects for health and wellbeing. In order to assess the reasonable worst-case scenario on land take, the maximum design parameters have been selected to inform the assessment.
Vertical LoD Minster Converter Station and Minster Substation	The assumption considered within the assessment is that there is a 28 m maximum vertical LoD for Minster Converter Station and 18 m maximum vertical LoD for Minster Substation as explained in **Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project**. In order to assess the reasonable worst-case scenario on amenity impacts, the maximum design parameters have been selected to inform the assessment.
Lateral LoD overhead line	The assumption considered within this assessment is that overhead line options are to be built within the lateral LoD as shown in **Application Document 2.5.2 Work Plans - Kent**. In order to assess the reasonable worst-case scenario on land take required for the Proposed Project, the maximum design parameters have been selected to inform the assessment.

Element of flexibility	How it has been considered within the assessment
Vertical LoD overhead line	The assumption considered within this assessment is that the overhead line options are to be built within the vertical LoD as described in **Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project**. In order to assess the reasonable worst-case scenario on amenity impacts, the maximum design parameters have been selected to inform the assessment.
Order Limits - temporary construction works	The assumption considered within the assessment is that construction works could take place anywhere within the Order Limits, therefore the maximum design parameters have been considered to inform the assessment.

Sensitivity Test

11.5.5 It is likely that under the terms of the DCO, construction could commence in any year up to five years from the granting of the DCO which is assumed to be 2026. Consideration has been given to whether the effects reported would be any different if the works were to commence in any year up to year five. Where there is a difference, this is reported in Section 11.12.

11.6 Study Area

11.6.1 The study areas for the assessment of potential health and wellbeing effects have been defined to include human populations likely to be at risk from the possible direct and indirect health impacts that might arise from the Kent Onshore Scheme. The study areas for health and wellbeing are therefore based both on the extent and characteristics of the Kent Onshore Scheme, and the populations assessed to be likely to be directly and indirectly affected by it. Therefore, the study areas for the health assessment vary by the type of impact being assessed.

11.6.2 The population health baseline comprises the three wards in which the Kent Onshore Scheme is located. These include: Cliffsend & Pegwell and Thanet Villages, both located in Thanet District, and Little Stour & Ashtone, located in Dover District. A best fit Lower Super Output Area (LSOA)[1] study area is used for assessing level of deprivation. Where data is not available at the local ward level, district level data is provided for Thanet and Dover. Comparator data is provided for the South East and England as a whole, where relevant.

11.6.3 For sensitive receptors, the study area is defined based on the geographic extent of other topics for each environmental aspect of relevance to health and wellbeing, namely landscape and visual, traffic and transport, air quality, noise and vibration, and socio-economics, recreation and tourism. These study areas are set out in the relevant chapters of this ES and are summarised in Table 11.12 below. This table presents the different components of the health and wellbeing effects assessment for this ES, the

[1] Lower Super Output Areas (LSOAs) are ONS defined small geographic areas across England designed to allow data reporting across small areas. Each LSOA in England is of a similar population size, with an average of approximately 1,500 residents of 650 households. The best fit LSOA area across the local ward study area comprises the following LSOAs: Thanet 017C, Thanet 014A, Thanet 014B and Dover 001C.

geographical scale at which each component is assessed, and the rationale behind these geographical scales.

Table 11.12 Health and Wellbeing impacts by geographical scale

Potential Impact	Study Area	Rationale
Potential adverse impacts on access to healthcare services and other social infrastructure	1 km radius from the Kent Onshore Scheme Order Limits.	Study area includes communities and road users that could be affected by severance or access impacts, or journey delay, as set out in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** and **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**.
Potential adverse impacts related to accessibility of PRoW, recreational routes and open space, which could impact health and wellbeing	Users of PRoW, recreational routes and open space within and up to 500 m radius from the Kent Onshore Scheme Order Limits. Human receptors in the vicinity of the road network related to the Proposed Project.	The study area includes human receptors that could be affected by impacts on PRoW or the local road network as a result of the Proposed Project, as set out in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** and **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**.
Potential adverse impacts on air quality from the Proposed Project, which could impact health and wellbeing	The study area for construction dust emissions is 350 m from the Order Limits and 50 m of the route(s) used by construction vehicles on the public highway, 500 m from the site entrances. The study area for construction vehicle emissions comprises an area within 200 m of the affected road network.	Study area includes human receptors which could be impacted by construction phase dust or emissions generated by construction vehicle emissions. These study areas are in accordance with the relevant guidance (IAQM construction dust guidance and DMRB LA105 guidance respectively), as set out in **Application Document 6.2.3.8 Part 3 Kent Chapter 8 Air Quality**.
Potential adverse impacts arising from increased noise	The study area for construction noise effects	Study area includes human receptors that could be

Potential Impact	Study Area	Rationale
and vibration due to the Proposed Project, which could impact health and wellbeing	includes noise sensitive receptors (NSR) within 300 m of the Order Limits. The study area for construction vibration comprises 100m from the closest construction activity with the potential to generate vibration impacts at NSR. For construction traffic noise, the existing road network would be assessed for each applicable road. The operational noise study area includes NSR within 1 km of the converter station and substation.	impacted by increased exposure to noise and vibration. These study areas are in accordance with the relevant guidance, as set out in **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration**.
Potential beneficial impacts on access to employment, training and income opportunities, which could impact health and wellbeing	60-minute travel area (drive time estimate using GIS data, based on the Kent Onshore Scheme Order Limits and indicative site access points).	Study area includes human receptors that could benefit from local economic and employment impacts. Research by the Chartered Institute of Personnel and Development (CIPD) found that 90% of national employees commuted for 60 minutes or less each way. This was reported by CIPD in the 2017 Employee outlook 'Employee views on working life' (Chartered Institute of Personnel Development, 2017), as set out in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**.
Potential adverse impacts on social cohesion and community identity	The study area for the landscape and visual assessment of the Kent Onshore Scheme comprises an area of 3 km from the Order Limits.	Study area includes human receptors that could be impacted by landscape and visual impacts. The study area has been informed by a review of the design of the Kent Onshore Scheme, desk-based research, field-based appraisal, Zone of Theoretical Visibility (ZTV) mapping and professional judgement, as well as being agreed with

Potential Impact	Study Area	Rationale
		statutory consultees, as set out in **Application Document 6.2.3.1 Part 3 Kent Chapter 1 Landscape and Visual**. The 3 km study area is larger than and therefore encompasses the study areas of other relevant technical chapters.

11.7 Baseline Conditions

11.7.1 This section describes the baseline conditions of relevance to health and wellbeing. First, a population health baseline of the local population is set out. Secondly, an infrastructure baseline is laid out, which considers the existing local infrastructure relevant to the health and wellbeing assessment, this draws largely on **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** and includes residential properties, community facilities and recreational routes such as PRoW. This is followed by a summary of baseline conditions from other chapters of the ES which are relevant to the assessment of health and wellbeing, and then discussion of the future baseline.

Existing Baseline

Population health baseline

Population

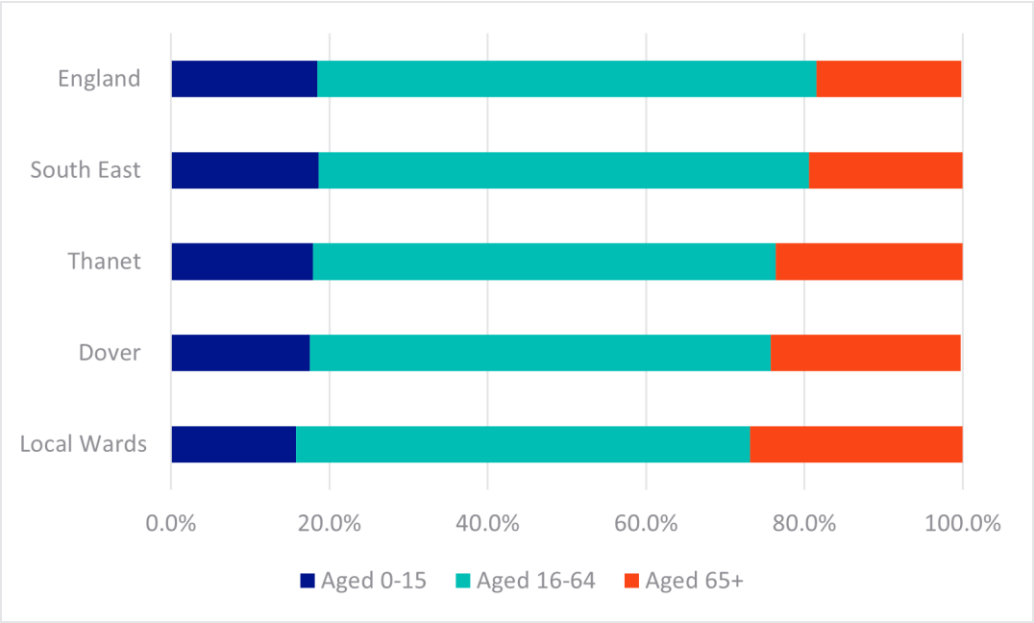
11.7.2 According to the latest data from the 2021 Census (Office for National Statistics, 2022), Cliffsend & Pegwell has a population of 4,886, Thanet Villages has a population of 8,060 and Little Stour & Ashtone has a population of 7,245. Therefore, the total population for the three wards in which the Proposed Project is located (local wards) is approximately 20,191.

11.7.3 Plate 11.3 shows the breakdown of total population by age groups for the local ward study area, Dover, Thanet, the South East and England, using 2021 Census data for age by single year.

11.7.4 The proportion of residents aged 0-15 in the local ward study area is 15.8%. This is lower than the proportions in Dover (17.5%), Thanet (17.9%), the South East (18.6%) and England (18.5%).

11.7.5 The proportion of residents of working aged (16- to 64-year-olds) in the study area is 57.3%. This is lower than the proportions in Dover (58.2%), Thanet (58.5%), the South East (62%) and England (63%).

11.7.6 The proportion of residents aged 65 and over in the local wards is 26.9%. This is higher than the proportions in Dover (24%), Thanet (23.6%), the South East (19.4%) and England (18.3%). The health and wellbeing of this large population of over-65-year-olds is likely to be more sensitive than other sub-groups of the population and may have a higher reliance on health services and social infrastructure.



Source: (Office for National Statistics, 2022); Census 2021.

Plate 11.3 Age breakdown by geography

Ethnicity

11.7.7 The 2021 Census (Office for National Statistics, 2022) provides the latest data showing residents self-identified ethnicity. As shown in Table 11.13, at the time of the Census, the proportion of White residents living in the local wards (95.7%) was higher than the proportion for Dover (94.9%), Thanet (93%), the South East (86.3%) and England (81%). The proportions of residents of each ethnic minority group recorded by the 2021 Census living in the local wards was lower than the proportions across the four comparator geographies, with the exception of mixed/multiple ethnic groups, where Dover has a lower proportion.

Table 11.13 Ethnicity (Census 2021)

Ethnic Group	Local Wards	Dover	Thanet	South East	England
White (%)	95.7	94.9	93.0	86.3	81.0
Mixed/multiple ethnic groups (%)	1.8	1.5	2.4	2.8	3.0
Asian/Asian British (%)	1.4	2.1	2.3	7.0	9.6
Black/African/ Caribbean/Black British (%)	0.4	0.7	1.1	2.4	4.2

Ethnic Group	Local Wards	Dover	Thanet	South East	England
Other ethnic group (%)	0.7	0.9	1.2	1.5	2.2

Source: (Office for National Statistics, 2022); Census 2021. Figures may not sum due to rounding.

Deprivation

11.7.8 The Government's English Index of Multiple Deprivation (IMD) (Ministry of Housing, Communities and Local Government (MHCLG), 2019) provides an overall deprivation score for each LSOA and Local Authority in England; with the most recent data being from 2019. The overall score is based on a number of domains and sub-domains which together provide a measure of deprivation. Each area is ranked according to its score, and the index provides a measure of relative deprivation across all areas.

11.7.9 Based on the 2019 Indices of Multiple Deprivation (IMD) (Ministry of Housing, Communities and Local Government (MHCLG), 2019), Dover is ranked as the 107th most deprived local authority of 317 districts in England (where 1 is the most deprived). Within Dover, 5 of the LSOAs are within the top 10% most deprived LSOAs in England (7.5% of LSOAs in Dover). The 2019 IMD ranks Thanet as being comparatively more deprived than Dover. Thanet is ranked as the 34th most deprived local authority of 317 districts in England (where 1 is the most deprived). Within Thanet, 18 of the LSOAs are within the top 10% most deprived LSOAs in England (21.4% of LSOAs in Thanet). Across both Dover and Thanet, only 1 LSOA ranks in the top 10% least deprived LSOAs in England.

11.7.10 More granular deprivation data is available at the LSOA level. A best fit LSOA study area has been used to assess deprivation around the Proposed Project. The best fit study area across the local wards comprises the following LSOAs: Thanet 017C, Thanet 014A, Thanet 014B and Dover 001C.

11.7.11 Table 11.14 shows a summary of relevant IMD data across the LSOA study area, as well as Thanet and Dover districts.

Table 11.14 IMD (2019)

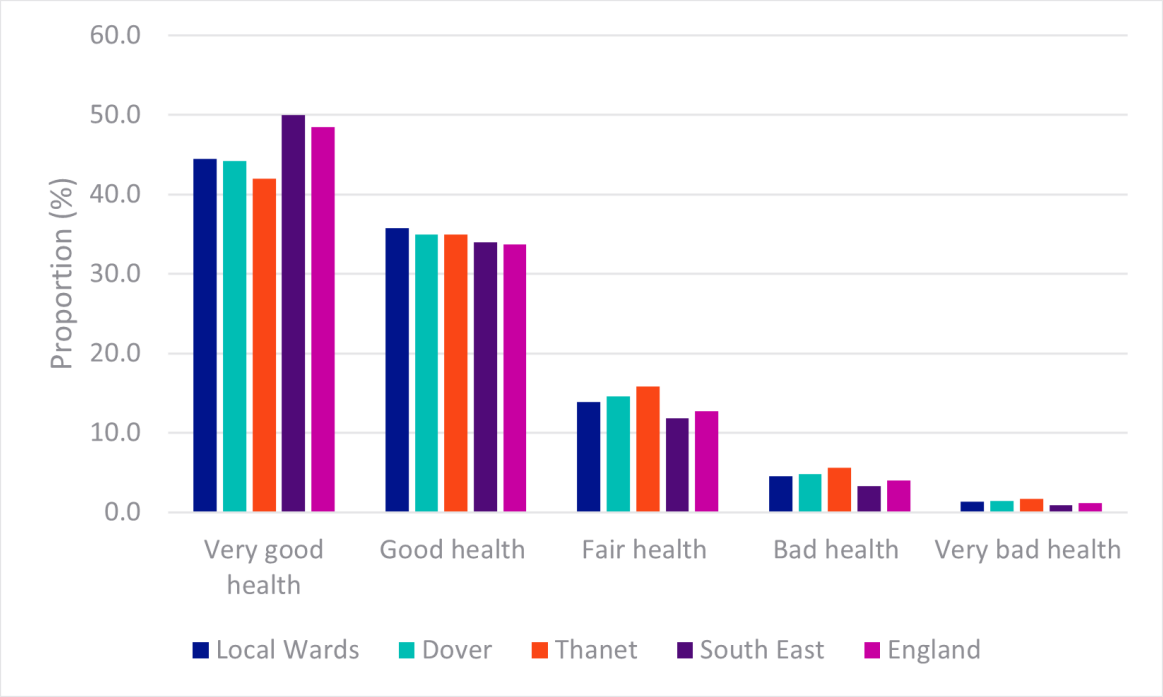
	Thanet 017C	Thanet 014A	Thanet 014B	Dover 001C	Thanet	Dover
	Decile				Rank	
Overall deprivation	8th	4th	4th	4th	34th	107th
Health deprivation	7th	6th	4th	5th	73rd	138th
Barriers to housing and services (2019)	4th	1st	8th	1st	147th	127th
Living environment deprivation (2019)	9th	2nd	5th	4th	156th	199th

Source: (Ministry of Housing, Communities and Local Government (MHCLG), 2019); IMD

Health Profile and Outcomes

11.7.12 Data from the 2021 Census (Office for National Statistics, 2022) provides the most recent data showing residents' self-assessment of health with individuals identifying their overall health ranging from 'Very Good' to 'Very Bad'.

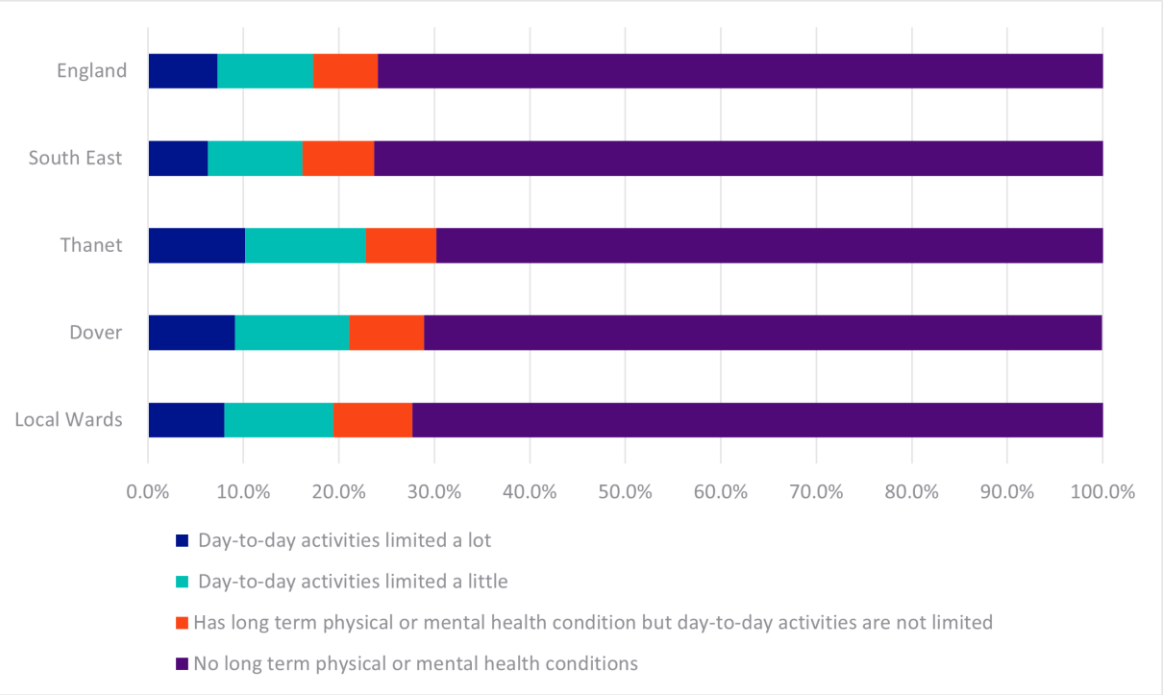
11.7.13 Across the local wards, most residents identified that they are in 'very good' or 'good' health. At the time of the 2021 Census, 5.8% of local residents identified themselves in 'bad' or 'very bad' health. This proportion is lower than for Dover (6.2%) and Thanet (7.3%), but higher than the rate across the South East (4.2%) and England overall (5.2%). The full breakdown of self-assessed health across the local wards, Dover, Thanet, the South East and England is shown in Plate 11.4.



Source: (Office for National Statistics, 2022); Census 2021.

Plate 11.4 Self-Assessment of Health

11.7.14 Plate 11.5 illustrates self-assessment of the extent to which residents' day to day activities are impacts by long-term health problems or disability, according to data from the 2021 Census. The proportion of residents in the local wards that experience limitations to their daily activities a little or a lot as a result of a health problem or disability is 19.4%. This is lower than the proportion across Dover (21.2%) and Thanet (22.8%), but higher than the proportion across the South East (16.2%) and England (17.3%).



Source: (Office for National Statistics, 2022); Census 2021.

Plate 11.5 Self-Assessment of Long-Term Health or Disability

11.7.15 The Office for Health Improvement & Disparities (OHID) (The Office for Health Improvement & Disparities (OHID), 2020) publishes data on a range of health indicators at ward and local authority level. A summary of relevant indicators is shown in Table 11.15.

11.7.16 Generally, across the local wards and for the South East, life expectancy at birth for both females and males is higher than the England average. However, life expectancy at birth for females and males in Dover and Thanet is lower than the England average.

11.7.17 Data showing inequality between populations with respect to life expectancy at birth is not available at local ward level. Inequality in life expectancy at birth[2] for males in Dover (7.3 years), Thanet (8.5 years) and the South East (7.9 years) is lower (less unequal) than the national average across England (9.7 years). Inequality in life expectancy at birth for females is higher (more unequal) in Thanet (9.7 years), but lower in Dover (6.1 years) and the South East (6 years) compared to the England average (7.9 years).

11.7.18 In terms of the number of deaths among the local population aged 75 and under, generally fewer deaths than the nationally averaged rate took place over the years 2016-2020 across the local ward study area. Across Dover and Thanet there were a higher than national average proportion of deaths among under 75s (Standardised Mortality Ratio (SMR)[3] of 102 and 118.8 respectively).

[2] Inequality reported based on ONS reporting on the Slope Index of Inequality (SII) between populations.

[3] The standardized mortality rate (SMR) is the ratio of the number of deaths observed in a population over a given period to the number that would be expected over the same period if the study population had the same age-specific rates as the standard (England national) population.

11.7.19 With respect to deaths from respiratory diseases all geographies included in Table 11.15, except Cliffsend & Pegwell, performed worse than the national average over the years 2016-2020. Rates of deaths from all causes considered preventable (2016-2020) are better than the national average across the local wards, but worse across Dover and Thanet.

11.7.20 The proportion of Year 6 children who are obese (3-years data combined 2019 to 2020, to 2021 to 2022), when compared to the national average (21.6%), is higher in Cliffsend & Pegwell, Thanet Villages and Thanet; lower in Little Stour & Ashtone and the South East; and the same as the England average in Dover.

Table 11.15 Community Health Profile

	Cliffsend & Pegwell	Thanet Villages	Little Stour & Ashtone	Dover	Thanet	South East	England
Life Expectancy at Birth (males) (2018-2020) (years)	80	80.6	81.7	79.4	77.4	80.6	79.5
Life Expectancy at Birth (females) (2018-2020) (years)	85.5	85.9	84.5	82.6	82.1	84.1	83.2
Inequality in Life Expectancy at Birth (males 2018-2020) (SII)	*Data not available at ward level*			7.3	8.5	7.9	9.7
Inequality in Life Expectancy at Birth (females 2018-2020) (SII)	*Data not available at ward level*			6.1	9.7	6	7.9
Deaths from all causes, under 75 years, Indirectly standardised ratio 2016 to 2020 (Standardised mortality ratio (SMR))	88.9	83.9	82.4	102	118.8	n/a	100
Deaths from respiratory diseases, all ages, Indirectly standardised ratio, 2016 to 2020 (SMR)	97.9	110.1	123.2	115.1	124.8	n/a	100
Deaths from causes considered preventable, under 75 years, Indirectly standardised ratio, 2016 to 2020 (SMR)	78.9	99.4	76.4	103.6	123.3	n/a	100
Smoking prevalence (%) (at age 15) (2014)	11.5%	8.0%	8.5%	7.3%	7.3%	5.8%	5.4%

	Cliffsend & Pegwell	Thanet Villages	Little Stour & Ashtone	Dover	Thanet	South East	England
Prevalence of Obesity in Children (%) (Year 6) 3-years data combined 2019 to 2020, to 2021 to 2022	23.1%	26.1%	17.5%	21.6%	22.5%	18.2%	21.6%

Source: (The Office for Health Improvement & Disparities (OHID), 2020); Public Health Profiles.

Local health priorities

11.7.21 Relevant local health priorities are set out at county level within the Kent Joint Health and Wellbeing Strategy (Kent County Council, 2021). Relevant priorities within the strategy include:

- tackling health issues where Kent is performing worse than the England average;
- tackle health inequalities; and
- tackle the gaps in provision.

Community cohesion

11.7.22 According to the Community Life Survey (Department for Culture, Media and Sport, 2023), in the South East (the most granular level of data) 64% of respondents in 2021 felt like they belonged strongly or fairly strongly to their immediate neighborhood. This is lower than the average for England (65%).

Infrastructure Baseline

Settlements

11.7.23 There are no residential properties within the Kent Onshore Scheme Order Limits, as set out in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**.

11.7.24 The nearest settlements to the Kent Onshore Scheme are Cliffsend, which borders the Kent Onshore Scheme Order Limits along Sandwich Road, and Minster which is located approximately 300 m to the north of the Marsh Farm Road proposed access route. The settlement of Richborough also lies in close proximity to the Kent Onshore Scheme Order Limits, along Whitehouse Drove to the south of the Kent Onshore Scheme.

11.7.25 A number of isolated residential properties lie within 500 m of the Kent Onshore Scheme Order Limits, these are discussed further in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**.

Healthcare facilities

11.7.26 There are no General Practitioner (GP) practices that are within 1 km of the Kent Onshore Scheme Order Limits, which is considered a typical walking distance to GP practices. The closest surgery is Minster Surgery, which is approximately 1.2 km north-

west of the Kent Onshore Scheme Order Limits in Minster. There are also a number of GP practices to the north-east in Ramsgate and in Sandwich to the south.

11.7.27 The nearest hospital (with an accident and emergency department) to the Proposed Project is Queen Elizabeth, The Queen Mother Hospital, Margate, which is approximately 6 km north-east of the Kent Onshore Scheme Order Limits.

11.7.28 The latest GP practice (July 2024) data published by NHS Digital (NHS Digital, 2024) indicates that Minster Surgery has 7 GPs that provide care to 9,106 registered patients. This corresponds to 1,301 patients per GP, which is under the Royal College of General Practitioners target of 1,800 patients per GP. Table 11.16 presents baseline information on the closest GP practices to the Proposed Project. All surgeries are currently accepting new patients.

Table 11.16 GP Baseline

GP Practice	Distance (km)	GPs (headcount)	Patients per GP (headcount)	Accepting New Patients?
Minster Surgery	1.2	7	1,301	Yes
Dashwood Medical Centre	2.0	4	2,689	Yes
Newington Road Clinic	2.0	1	6,932	Yes
Sandwich Medical Practice	2.5	10	1,308	Yes

Source: (NHS Digital, 2024). Patient List Size and GP Count by Practice.

Emergency services

11.7.29 The East of England Ambulance Service Trust (EEAST) serves a population of approximately 6.3 million people across 7,500 square miles, covering Bedfordshire, Hertfordshire, Essex, Norfolk, Suffolk, and Cambridgeshire. The region is supported by six Integrated Care Systems (ICSs).

11.7.30 In the 2023/24 period, the Trust received 1,384,547 emergency 999 calls and assisted around 10% of these through its Clinical Assessment Service. Additionally, 479,375 non-emergency patient transport service (PTS) journeys were completed, and more than 850,000 calls were handled through the commercial contact centre (CallEEAST).

11.7.31 The service operates with over 5,000 staff members and 1,000 volunteers across three ambulance operations centres in Bedford, Chelmsford, and Norwich. Its fleet consists of 498 frontline vehicles (targeting 525 by Q4 2024), 73 rapid response vehicles, 194 non-emergency ambulances, and 51 vehicles for hazardous area response, major incidents, and resilience (East of England Ambulance Service NHS Trust (EEAST), n.d.).

Education facilities

11.7.32 The closest primary school to the Kent Onshore Scheme Order Limits is Minster Church of England Primary School, situated in Minster, which is approximately 1.1 km to the north-west.

11.7.33 The closest secondary schools to the Kent Onshore Scheme Order Limits are in Ramsgate to the north and Sandwich to the south. The Royal Harbour Academy is approximately 3.5 km to the north-east of the Proposed Project.

11.7.34 Great Oaks Small School (E_35) is an independent special school, located just off Jutes Lane in Minster, and is approximately 30 m north from the Kent Onshore Scheme Order Limits. Life Skills Manor for Autism is another independent special school, located approximately 260 m south from the Order Limits.

Community and recreational facilities, and open space

11.7.35 There are a number of community facilities within 500 m of the Kent Onshore Scheme Order Limits, as set out in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**.

11.7.36 There are three areas of open space within 500 m of the Kent Onshore Scheme Order Limits:

- Pegwell Bay Country Park borders the landfall section of the Kent Onshore Scheme Order Limits to the south, which also falls south of Cliffsend;
- Cliffsend Recreation Ground lies approximately 350 m to the north east of the Kent Onshore Scheme Order Limits within the settlement of Cliffsend; and
- Minster Recreation Ground is located approximately 250 m north of the Kent Onshore Scheme Order Limits in the settlement of Minster.

Employment

11.7.37 There are a number of businesses within 500 m of the Kent Onshore Scheme Order Limits, as detailed in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**. These businesses include petrol stations, golf clubs, restaurants, shops, a farm, and holiday accommodation. Larger employment centres are located in the larger towns of Ramsgate to the north and Sandwich to the south.

11.7.38 There are also three visitor attractions within 500 m of the Order Limits, as detailed in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**. St Augustine's Cross is located approximately 120 m to the east of the Cottingham Road access route section of the Kent Onshore Scheme Order Limits. Richborough Roman Fort is located approximately 480 m to the east of the Whitehouse Drove access route section of the Kent Onshore Scheme Order Limits. Additionally, Viking Ship Hugin is located approximately 50 m to the north of the proposed permanent monitoring access route of the Kent Onshore Scheme.

Public Rights of Way (PRoW)

11.7.39 **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** sets out the ten PRoW and recreational routes which pass through the Kent Onshore Scheme Order Limits and the 13 which are located within a 500m radius of the Order Limits. These are discussed further in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**.

Employment and income baseline

11.7.40 **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** sets out the existing baseline with respect to employment and income:

- In 2021, there were 933,582 (61.0%) residents of working age within the economic study area. This is higher than in Dover and Thanet (58.1% and 58.4% respectively) but below the proportions for the South East and England as a whole.
- The proportion of working-aged residents with a degree-level qualification or higher is lower in Dover (34.6%) and Thanet (35.6%) than the averages across the South East (45.2%) and England as a whole (43.2%).
- With respect to the sub-domains of deprivation, Dover is the 66th most deprived local authority with respect to employment deprivation and Thanet is the 13th most deprived (of 317 districts, where 1 is the most deprived). With respect to income deprivation, Dover is the 91st most deprived and Thanet is the 26th most deprived.
- From April 2023 to March 2024 the economic activity rate (amongst 16- to 64-year-olds) was 68.4% in Dover which was lower than the rates across the South East (82.3%) and England (78.8%). The economic activity rate in Thanet of 77.4% was slightly lower than both the South East and England.
- The June 2024 claimant count for residents as a proportion of residents aged 16 to 64 was 5.2% in Dover and 6.5% in Thanet, compared to a rate of 3.6% in the South East and 5.0% across England.
- The average Gross Value Added (GVA) per head in East Kent (which includes both Dover and Thanet and is the smallest area at which data is available) in 2022 was £22,514. This is appreciably lower than the average for the South East (£35,845) and England as a whole (£33,976). Data is not available at the local authority level.

Traffic and transport baseline

11.7.41 **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** details the baseline highway network across the chapter's study area. The study area includes a number of roads, namely: the A256 Richborough Way, A299 Hengist Way, Sandwich Road, Jutes Lane, Ebbsfleet Lane, Ebbsfleet Lane North and Brook Lane.

11.7.42 There are several locations where more than five Personal Injury Accidents (PIAs) were recorded within the five year period (April 2018 to March 2023), which may suggest that these locations are more sensitive to an increase in traffic from a highway safety perspective. There are also several locations which appear to have a good safety record with two or fewer PIAs within the five year period, which suggest that these locations may be less sensitive to an increase in traffic from a highway safety perspective. In terms of PIAs involving goods vehicles, there is only one location (Monkton Roundabout) where more than five PIAs were recorded within the five year period.

11.7.43 The chapter details the baseline traffic data for the surrounding highway network within the study area based on available Department for Transport (DfT) traffic counts. As part of the ES, a series of traffic surveys have been undertaken to obtain a more comprehensive set of baseline traffic flows for the existing highway network within the agreed study area.

11.7.44 The chapter details the active travel network baseline. The King Charles III England Coast Path follows the coastline in the proximity of the study area. National Cycle Network (NCN) Route 15 runs along the coastline between Sandwich and Whitstable. This also sets out the PRoW and recreational routes which pass through the Kent Onshore Scheme Order Limits and those which are located within a 500m radius of the Order Limits which could be impacted by the Kent Onshore Scheme. There are no formal equestrian facilities (i.e. bridleways) within, or in the vicinity of the study area.

Air quality baseline

11.7.45 **Application Document 6.2.3.8 Part 3 Kent Chapter 8 Air Quality** sets out the existing baseline with respect to air quality. A summary of the aspects relevant to this health and wellbeing chapter is set out below:

- There are two Air Quality Management Areas (AQMAs) declared in Dover and one AQMA declared in Thanet;
- Monitoring of particulate matter, PM_{10}, and nitrogen dioxide (NO_2) by Dover District Council did not record any exceedances of the AQS objective in 2023;
- Monitoring of PM_{10} and NO_2 by Dover District Council did not record any exceedances of the AQS objective in 2023; and
- 2024 background NO_2, particulate matter and NOx concentrations in the vicinity of the Proposed Project are well below the relevant annual mean air quality objectives and critical value.

Noise and vibration baseline

11.7.46 **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration** sets out the existing baseline with respect to noise. A summary of the aspects relevant to this health and wellbeing chapter is set out below:

- The noise climate is expected to vary throughout the study area due to a mix of residential, rural, industrial, and commercial environments;
- The main sources of noise include road traffic from the A256 which runs between Ramsgate to the north and Dover to the south. There are potential railway noise sources from train services on the Ashford to Ramsgate Line and the Kent Coast Line. There are also potential industrial sources of noise, particularly in the vicinity of the A256. Away from these sources of noise into more rural areas, ambient sound levels are lower;
- Defra strategic noise mapping indicates that ambient noise levels are moderate to high in the vicinity of the A256 but reduce to relatively low levels beyond approximately 300 m from the road;
- There are a number of Noise Important Areas (NIA) on the existing public highway along routes which may be used for construction traffic associated with the Kent Onshore Scheme;
- A baseline noise survey was conducted as one location to inform the assessment of operational noise, with representative background sound levels during the daytime agreed at 35 dB LA90,15min and 29 dB LA90,15min at night-time;

- Vibration impacts are assessed against fixed thresholds. It is assumed that existing vibration levels are negligible in the study area; and
- Regarding the future noise and vibration baseline, no significant changes to the future noise and vibration baseline are anticipated.

Landscape and visual baseline

11.7.47 The study area for the landscape and visual assessment of the Kent Onshore Scheme comprises an area of 3 km from the Order Limits. It is important to note the study area defines the area within which it is judged that significant landscape and/or visual effects could occur, rather than the extent of visibility of the Kent Onshore Scheme.

11.7.48 **Application Document 6.2.3.1 Part 3 Kent Chapter 1 Landscape and Visual** sets out the existing baseline with respect to landscape and visual amenity. The landscape varies considerably across the landscape and visual study area, it includes low-lying landform within the Ash Levels and Minster Marshes in the southern and central part. This landscape comprises a series of drainage ditches separating small to medium sized field enclosures, within the former Wantsum Channel. The landscape rises towards the settlement of Minster, comprising some comparatively larger scale field enclosures. The landscape also includes the low-lying coastal areas extending around Pegwell Bay which are characterised by larger intertidal areas of marsh and mudflat along the coastline.

Future Baseline

11.7.49 The populations of Dover and Thanet are expected to increase from 116,410 and 140,587 respectively at the time of the last Census in 2021 to 131,714 (Dover) and 150,814 (Thanet) when the Kent Onshore Scheme is complete and operational in 2031. This represents an increase of 13.1% in Dover and 7.3% in Thanet. In the South East region and England as a whole, there are expected to be population increases of 3.7% and 5.1% respectively over the same time period. Data is not available at ward level.

11.7.50 Table 11.17 sets out population projection data broken down by age group. It shows that by 2031, both the 0 to 15 year-old and the 16 to 64 year-old population will make up lower proportions of the total population across all study area geographies than they did in 2021. There is projected to be an increase in the proportion of residents aged 65 and over across all study area geographies over the time period.

Table 11.17 Population projections by age breakdown

Area	Age	2021	2031
Dover	Aged 0 to 15 (%)	17.4%	15.8%
	Aged 16 to 64 (%)	58.6%	56.8%
	Aged 65+ (%)	24.0%	27.4%
Thanet	Aged 0 to 15 (%)	17.9%	16.6%
	Aged 16 to 64 (%)	58.4%	56.0%

Area	Age	2021	2031
	Aged 65+ (%)	23.7%	27.4%
South East	Aged 0 to 15 (%)	18.6%	17.3%
	Aged 16 to 64 (%)	62.0%	59.4%
	Aged 65+ (%)	19.4%	23.3%
England	Aged 0 to 15 (%)	18.6%	17.5%
	Aged 16 to 64 (%)	63.0%	60.7%
	Aged 65+ (%)	18.4%	21.8%

Source: (Office for National Statistics, 2018). Population Projections.

11.7.51 Due to the broad range of individual and environmental determinants that can influence physical and mental health outcomes, the future community health baseline over the projected term is highly uncertain. Due to this uncertainty, for the purposes of this assessment, it is assumed the future baseline for the Kent Onshore Scheme study area would be unchanged from the current baseline to the completion of the Kent Onshore Scheme.

11.7.52 The future health and wellbeing baseline reflects, where applicable, that set out within other technical assessments within this ES.

11.8 Proposed Project Design and Embedded Mitigation

11.8.1 The Proposed Project has been designed, as far as possible, following the mitigation hierarchy in order to, in the first instance, avoid or reduce health and wellbeing impacts and effects through the process of design development, and by embedding measures into the design of the Proposed Project.

11.8.2 As set out in **Application Document 6.2.1.5 Part 1 Introduction Chapter 5 EIA Approach and Methodology**, mitigation measures typically fall into one of three categories: embedded measures; control and management measures; and mitigation measures. Embedded, and control and management measures are set out below. Additional mitigation measures are discussed in Section 11.10.

Embedded Measures

11.8.3 Embedded measures have been integral in reducing, and where possible avoiding, the health and wellbeing effects of the Proposed Project. Measures that that have been incorporated are:

- Sensitive routeing and siting of infrastructure and temporary works to avoid or reduce impacts on health and wellbeing receptors; and
- Commitments made within **Application Document 7.5.3.2 CEMP Appendix B Register of Environmental Actions and Commitments (REAC)**.

Control and Management Measures

11.8.4 Measures relevant to the control and management of impacts during construction have been included within **Application Document 7.5.3.1 CEMP Appendix A Outline Code**

of Construction Practice. The following measures have been taken into account in assessing the health and wellbeing effects of the Proposed Project:

- GG02 A Construction Environmental Management Plan (CEMP), a Landscape and Ecological Management Plan (LEMP) and a Construction Traffic Management and Travel Plan (CTMTP) will be produced and submitted to the relevant authority for approval prior to construction of the relevant stage of the Proposed Project to which it relates. The plan produced will be substantially in accordance with the outline versions submitted as part of the application for development consent. In accordance with the Requirement 6 of Schedule 3 of the draft DCO, the contractor will need to comply with the approved plans (including any amendments to the plans subsequently approved).;
- GG03: The CEMP shall include measures to manage dust, waste, water, noise, vibration and soil during construction. The contractor(s) shall undertake daily site inspections to check conformance to the Management Plans. The title and contact number of person(s) accountable for issues relating to dust, waste, water, noise, vibration and soil will be displayed at site boundary.;
- GG04: A suitably experienced Environmental Manager will be appointed for the duration of the construction phase. In addition, a qualified and experienced Environmental Clerk of Works will be available during the construction phase to advise, supervise and report on the delivery of the mitigation methods and controls outlined in the CEMP. The Environmental Clerk of Works will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required good practice and mitigation measures. The Environmental Clerk of Works will be supported as necessary by appropriate specialists, including ecologists, soil scientists and arboriculturists;
- GG05: Construction workers will undergo training to increase their awareness of environmental issues as applicable to their role on the project. Topics will include but not be limited to:
    - pollution prevention and pollution incident response;
    - dust management and control measures;
    - location and protection of sensitive environmental sites and features;
    - adherence to protected environmental areas around sensitive features;
    - working hours and noise and vibration reduction measures;
    - working with potentially contaminated materials;
    - waste management and storage;
    - flood risk response actions; and
    - agreed traffic routes, access points, etc.;
- GG10: Any activity carried out or equipment located within a construction compound that may produce a noticeable nuisance, including but not limited to dust, noise, vibration and lighting, will be located away from sensitive receptors such as residential properties or ecological sites where practicable;
- GG12: Plant and vehicles will conform to relevant applicable standards for the vehicle type as follows:

- Euro 4 (NOx) for petrol cars, vans, and minibuses;
- Euro 6 (NOx and PM) for diesel cars, vans and minibuses; and
- Euro VI (NOx and PM) for lorries, buses, coaches and Heavy Goods Vehicles (excluding specialist abnormal indivisible loads.

Vehicles will be correctly maintained and operated in accordance with manufacturer's recommendations and in a responsible manner. All plant and vehicles will be required to switch off their engines when not in use and when it is safe to do so. In addition, plant and vehicles will conform to relevant applicable standards for the vehicle type;

- GG20: Bonfires and the burning of waste material will be prohibited;
- GG21: Construction lighting will be of the lowest levels necessary to safely perform each task. It will be designed, positioned and directed to reduce the intrusion into adjacent properties, protected species and habitats e.g. watercourses;
- GG24: An Incident Resource Plan will be developed by the contractor for the construction phase. This will be prepared prior to construction works commencing and thereafter complied with. It will outline procedures that will be implemented in case of unplanned events including but not limited to site flooding and pollution incidents Local authorities will be informed of any large scale incidents under the Incident Resource Plan. Smaller scale issues will be recorded in a register that will be made available to local authorities for review on request.;
- GG27: Members of the community and local businesses will be kept informed regularly of the works through active community liaison. This will include notification of noisy activities, heavy traffic periods and start and end dates of key phasing. A contact number will be provided which members of the public can use to raise any concerns or complaints about the Proposed Project. All construction-related complaints will be logged by the contractor(s) in a complaints register, together with a record of the responses given and actions taken This will be made available to local authorities for review on request.; and
- TT03: All designated Public Rights of Way (PRoWs) will be identified, and any potential temporary and/or permanent diversions applied for/detailed in the DCO. All designated PRoWs crossing the working area will be managed with access only closed for short periods while construction activities occur. Any required temporary diversions will be clearly marked at both ends with signage explaining the diversion, the duration of the diversion (for temporary diversions) and a contact number for any concerns. This is outlined in the Outline Public Rights of Way Management Plans.

11.8.5 **Application Document 7.5.9.2 Outline Public Rights of Way Management Plan - Kent** identifies the mitigation measures which would be required to maintain the operation of impacted PRoW. It also details how these mitigation measures would be managed, including who would be responsible for their management.

11.9 Assessment of Impacts and Likely Significant Effects

11.9.1 The assessment of the effects of the Proposed Project on health and wellbeing receptors described in this section considers the embedded and control and management mitigation measures described in Section 11.8.

Construction Phase

Access to healthcare services

11.9.2 Construction activities from the Proposed Project may restrict access to hospitals, GPs, and other social infrastructure for residents in the study area, while also increasing demand for these healthcare services.

Increased demand for healthcare services

11.9.3 **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** sets out that during the construction phase of the Kent Onshore Scheme, it is estimated that on average 50 net additional jobs would be supported per annum. Of these, 15 jobs per annum would be expected to be taken-up by residents within the study area, and 35 by residents outside this area (i.e., those that live outside of a 60-minute drive time of the Kent Onshore Scheme). The construction workers required to build the Kent Onshore Scheme may place extra demand on healthcare services if they move to the area, or if emergency treatment is required.

11.9.4 Baseline analysis shows that of the four GP practices local to the Kent Onshore Scheme, whilst two are operating below benchmark patient to GP ratios, on average, the GPs are operating marginally above benchmark patient to GP ratio, however, all GP surgeries are accepting registrations from new patients. In the local ward study area, the mortality rate for all causes among individuals under 75 years old, as well as deaths from preventable causes in the same age group, are lower than the national average. However, a higher proportion of local residents report being in 'bad' or 'very bad' health compared to regional and national averages, although this may be attributed to the relatively older population in the area. The study area shows varying levels of deprivation according to the IMD (2019) “barriers to housing and services” domain, with some areas falling within the most deprived decile, while others are among the least 20% deprived LSOAs. Deprivation levels related to the “health” and “overall deprivation”, as per the IMD (2019), range from the 4th to the 8th decile across the LSOAs, which is considered adequate. On the basis of moderate deprivation and instances of poor health, the sensitivity of the general population in the study area is therefore assessed to be medium.

11.9.5 The average proportion of the population aged over 65 within the Study Area is higher than in Dover, Thanet, the South East and England, and is projected to increase as a proportion of the population much faster than in England. This sub-population is likely to have higher reliance on health services and limited capacity to adapt, thus has therefore been assessed as having a high sensitivity to effects on healthcare services.

11.9.6 Workers already residing locally would be registered at a local GP and would not therefore place additional demand for services upon local GPs. It is not expected that many workers would move to live in the immediate area and access the surgeries located in the vicinity of the Proposed Project. However, assuming a worst-case, whereby all of the approximate 67 construction workers who are not likely to live locally require places at local GPs, this would increase the average patients per GP provision across the four surgeries from 1,812 to 1,879 patients per GP, which would remain marginally above than the national target (1,800 patients per GP).

11.9.7 In regard to emergency healthcare services, the capacity and demand on local services, including ambulance and emergency response teams, are not anticipated to experience any significant impact. Considering that the construction workforce constitutes only

0.2% of the population in the study area (as defined in paragraph 11.6.2), it is assumed that existing emergency services are well-equipped to handle any incidental needs that may arise without additional pressure on resources.

11.9.8 Due to the temporary nature of the construction period, minor service implications, and the overall limited scale of impacts upon healthcare services, the magnitude of these adverse impacts is assessed to be negligible.

Increased traffic and severance, reducing access to healthcare facilities

11.9.9 Residents of properties in the villages surrounding the Proposed Project attempting to access healthcare facilities are likely to use the same strategic roads as construction traffic associated with the Kent Onshore Scheme and workers attempting to access the site. Increased traffic flows and severance effects may inhibit local residents' ability to access healthcare facilities.

11.9.10 The sensitivity of the general population in the study area is assessed to be medium, owing to the reasons set out in paragraph 11.9.4.

11.9.11 Similarly, the over 65 sub-population in the study area is likely to have higher reliance on health services and the sensitivity has therefore been assessed to be high, owing to reasons set out in paragraph 11.9.4.

11.9.12 **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** sets out a reasonable worst-case assessment of the traffic and transport effects of the Kent Onshore Scheme during the construction phase. It is forecast that there would be up to 108 Heavy Goods Vehicles (HGVs) travelling to and from the site per day across all access routes, representing 216 movements per day. In addition, during the peak construction period, there are expected to be a maximum of 81 staff vehicle trips (associated with construction workers travelling to and from Site), representing 162 daily movements, and 65 Light Goods Vehicles (LGV) trips (130 movements). With the proposed mitigation in place (as summarised in Section 11.8 and set out in respective chapters), there are likely to be no significant effects on transport and access during the construction phase, with all receptors facing negligible to minor effects due to severance. In addition, **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** sets out the likely impact of the Proposed Project on driver delay (as a result of incremental increases in traffic) for all receptors within the study area, which is concluded to not result in a significant effect, and is anticipated to be short-term.

11.9.13 Given this, and the fact that any effects across the construction phase would not be long term, the overall magnitude of impact is assessed to be negligible.

Access to other social infrastructure

11.9.14 The Proposed Project may place extra demand on social infrastructure due to the presence of construction workers. In addition, increased traffic from the construction workforce may reduce accessibility to social infrastructure, other than healthcare facilities for the local population.

11.9.15 Given the mixed levels of deprivation with respect to the "barriers to housing and services" domain (Ministry of Housing, Communities and Local Government (MHCLG), 2019) across the study area and the variable levels of health across the ward study area and Dover and Thanet, existing social infrastructure services and their users (both

the general population and sub-population in this instance) have been assessed as having a medium sensitivity.

11.9.16 As set out in Section 11.7, social infrastructure in the local area includes community halls, religious facilities, a post office, and schools. **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** sets out a reasonable worst-case assessment of the traffic and transport effects of the Kent Onshore Scheme during the construction phase. With embedded mitigation in place, there are no road links that would experience significant traffic and severance effects. In closest proximity, Great Oaks Small School (E_35), approximately 30 m from the Kent Onshore Scheme Order Limits, is currently accessed via Jutes Lane (K-BM03). As detailed in **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport,** this is identified as a secondary access route that would be used by a very low proportion of construction vehicles (limited to LGV's where possible), whereby access would be retained and there would be no disruption to journeys with regard to accessing the school. In addition, **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** considers potential severance effects for the school due to the diversion works of the existing UKPN OHL. This concludes no significant effects are anticipated as works are proposed to take place during school holidays as agreed with the school. In addition, **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** sets out the likely impact of the Proposed Project on driver delay (as a result of incremental increases in traffic) for all receptors within the study area, which is concluded to not result in a significant effect, and is anticipated to be short-term.

11.9.17 Considering the short-term nature of the construction phase, and the fact that no significant effects are expected in relation to severance or traffic, the overall magnitude of change anticipated on other social infrastructure is assessed to be negligible**.**

Overall assessment of access to healthcare services

11.9.18 Overall, the likely effect on health and wellbeing arising from increased demand and reduced access to healthcare services, and access to social infrastructure during the construction phase is assessed to be a temporary **negligible** (**not significant**) effect for the general population. For the more vulnerable sub-population, based on professional judgement, a temporary **minor adverse** (**not significant**) effect would result as a result of the additional demand on local GP surgeries.

Access to open space, leisure and play

11.9.19 Construction activities of the Proposed Project may intersect, or otherwise impact upon, the accessibility of open space in the study area, which could impact the health and wellbeing of local residents.

11.9.20 Baseline data highlights that the overall health of the general population varies. The proportion of local residents identifying themselves in 'bad' or 'very bad' health is higher than regional and national averages, however this may be attributed to the relatively older local population. Deprivation with respect to the IMD (2019) "health" and "overall deprivation" is adequate across the LSOA study area, ranging from the 4th to the 8th decile. Based on this moderate deprivation and poorer levels of health, the sensitivity of the users of open space, leisure and play facilities (both the general population and sub-population in this instance) is assessed to be medium.

11.9.21 There are four areas of open space within 500 m of the Kent Onshore Scheme Order Limits: Pegwell Bay Country Park, Cliffsend Recreation Ground, Minster Recreation

Ground, and Monks Wall Nature Reserve. **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**, sets out that there would be no effects on these open space designations as a result of the Kent Onshore Scheme including in terms of land use or access. Furthermore, the assessment of severance in **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**, states that there are likely to be no significant severance effects on any receptors during the construction phase, with all receptors facing negligible to minor adverse effects. Given the limited impacts expected of which the severity would only result in little to no change in quality of life regarding access to open space, the magnitude of impact is assessed to be negligible during the construction phase.

11.9.22 Two golf clubs, St Augustine's and Stonelees Golf Clubs, would require two permanent access routes to be established for monitoring during drilling and maintaining the HVDC cable alignment during construction and operation. These routes will primarily be accessed on foot or by quad bike with a trailer, monitored on a monthly basis to ensure stable ground conditions. **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** sets out that there are not expected to be any significant effects. Given the infrequency of permanent access requirements, the magnitude of the effect on health and wellbeing is considered negligible. This considers that users still have access to spaces that support physical and mental health, also taking into account the availability of alternative facilities within 1 km of the site, including Manston Golf Centre and Greensole Golf Course, which can provide continued opportunities for recreation and physical activity.

11.9.23 Overall, the likely effect on health and wellbeing arising from impacts on accessing open space, leisure, and play facilities during the construction phase is assessed to be **negligible** (**not significant**).

Air quality

11.9.24 The activities of the Proposed Project have the potential to reduce air quality, due to construction dust or increased NO_2 and particulate matter concentrations, which could lead to adverse health effects on residents.

11.9.25 Baseline data outlined in **Application Document 6.2.3.8 Part 3 Kent Chapter 8 Air Quality** indicates air quality in the local authority areas and in the vicinity of the Proposed Project are below the Air Quality Standards (AQS) objectives, which are defined at a level to represent negligible or zero risk to health. However, rates of deaths from respiratory diseases are higher than the national average across the ward study area and in Dover and Thanet. The sensitivity of the local population in the study area with respect to air quality is therefore assessed to be medium.

11.9.26 The average proportion of the population aged over 65 within the study area is higher than in Dover, Thanet, the South East and England, and is projected to increase as a proportion of the population much faster than in England. This sub-population is likely to be more sensitive to changes in air quality owing to limited ability and capacity to adapt, and is therefore assessed as a high sensitivity.

11.9.27 The assessment of potential air quality effects during the construction phase of the Kent Onshore Scheme is set out in **Application Document 6.2.3.8 Part 3 Kent Chapter 8 Air Quality**. The chapter presents an assessment of construction dust, construction vehicle emissions, and construction Non-Road Mobile Machinery (NRMM) emissions.

11.9.28 The construction dust risk assessment within **Application Document 6.2.3.8 Part 3 Kent Chapter 8 Air Quality** identified high sensitivity human receptors within the study

area, including Great Oaks Small School (E_35) and residential properties in Minster, Ebbsfleet, Richborough and Cliffsend. Assessment determined that the worst-case potential risk of human health impacts is low for earthworks, construction and track out, however would be medium for dust soiling, and high for ecological sites. However, with the implementation of mitigation measures, effects are considered to be negligible. The effects findings of the construction vehicle emissions and construction equipment and plant (NRMM) would also be negligible. Given the available data, taking into account that residents across the study area would experience no significant effects on air quality after implementation of appropriate mitigation, the magnitude of impact is expected to be negligible during the construction phase.

11.9.29 Overall, the likely effect on health and wellbeing arising from increased exposure to dust and particulate matter emissions during the construction phase is assessed to be temporary **negligible** (**not significant**). For the more vulnerable sub-population, a temporary **minor adverse** (**not significant**) effect would result, based on professional judgement.

Noise and vibration

11.9.30 The construction activities of the Proposed Project have the potential to lead to increases in noise and vibration, which could lead to adverse health and wellbeing effects in terms of annoyance and/or disrupt local amenities.

11.9.31 Baseline data outlined in **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration** indicates that the main sources of noise include road traffic from the A256 which runs between Ramsgate to the north and Dover to the south. There are potential railway noise sources from train services on the Ashford to Ramsgate Line and the Kent Coast Line. There are also potential industrial sources of noise, particularly in the vicinity of the A256. Away from these sources of noise into more rural areas, ambient sound levels are lower. There are also a number of NIAs on the existing public highway along routes which may be used for construction traffic associated with the Kent Onshore Scheme. Existing proximity to the baseline noise conditions of the local transport network suggests the local population may already have a degree of exposure to transport noise that may affect annoyance outcomes, as well as being at times that may disturb sleep or reduce amenity. The sensitivity of both the general population and sub-population in this instance is therefore considered to be medium.

11.9.32 **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration** indicates that there are potential significant adverse effects (without mitigation) at a small number of properties during the construction phase. However, the assessment shows that these can be avoided through the use of standard mitigation measures in the form of best practical means (contractor measures to control noise and vibration on site). The assessment also indicates that construction traffic noise impacts are negligible on all routes. As a result, it is concluded that noise and vibration residual effects during the construction phase are not expected to be significant for all NSR.

11.9.33 Based on the conclusions of the assessment set out in **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration** local impacts are likely to be minimal owing to the limited increased exposure to noise. Therefore, the magnitude of change anticipated with respect to noise and vibration impacts on health and wellbeing during the construction phase is assessed to be small.

11.9.34 Overall, the likely effect on health and wellbeing arising from noise and vibration impacts during the construction phase is assessed to be temporary **minor adverse** (**not significant**).

Transport modes, access, connections and physical activity

11.9.35 Residents of properties in the towns and villages surrounding the Proposed Project are likely to use the same strategic roads as construction traffic associated with the Proposed Project. Increased traffic flows and severance effects may inhibit the ability of local residents to access facilities, and construction activities may intersect, or otherwise impact upon, the accessibility of PRoW and active travel networks in the study area.

11.9.36 As set out in the baseline above, along with the baselines of both **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** and **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** there are a number of PRoW and recreational routes within the Kent Onshore Scheme Order Limits, as well as within the defined study areas. The impacted active travel networks have mitigation measures in place to ensure diversions where possible and closures of a short-term nature, with detail defined within **Application Document 7.5.9.2 Outline Public Rights of Way Management Plan - Kent**. Given this, combined with the standard of health across the study area, the sensitivity of the population is deemed to be medium.

11.9.37 It is possible that local residents could experience adverse impacts related to their access to open space and PRoW for active travel due to changes in traffic caused by the construction of the Proposed Project. **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** sets out the assessment of severance in relation to the Proposed Project including PRoW receptors and national/regional walking and cycling route receptors. With the proposed mitigation in place, there are likely to be no significant effects regarding severance on PRoW and walking/cycling routes during the construction phase, with all receptors experiencing a negligible to minor adverse effect from a traffic and transport perspective.

11.9.38 Furthermore, **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** sets out assessment for the PRoW and recreational routes which pass within the Kent Onshore Scheme Order Limits. This assesses that there would be no significant effects to the PRoW or recreational routes. There would also be no impact on the PRoW and recreational routes within 500m of the Order Limits.

11.9.39 These assessments within **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** and **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** are considered in terms of the likely impact on health and wellbeing, by which physical activity and community connectivity may be compromised for users as a result of identified significant adverse effects. However, as per control and management measure TT03, any potential temporary diversions to PRoW and other recreational routes crossing the working area would be managed with access only closed for short periods while construction activities occur. These would be clearly marked at both ends with signage explaining the diversion, the duration of the diversion and a contact number for any concerns. Based on these considerations, any impacts arising on community connectivity and accessibility, including PRoW and other active travel networks would be experienced by a small proportion of the population and for a short-term. Therefore, the magnitude of the impact is expected to be small in terms of impact from a health and wellbeing perspective.

11.9.40 Overall, the likely effect on health and wellbeing arising from transport, access, and connection impacts during the construction phase is assessed to be temporary **minor adverse** (**not significant**).

Employment and income

11.9.41 There is evidence that employment matters to health, not only from an economic standpoint, but also in terms of quality of life (Public Health England, 2019). Good quality work protects against social exclusion through the provision of income, social interaction, a core role and identity and purpose. Therefore, the generation of jobs is assessed to be a beneficial outcome.

11.9.42 Baseline data with respect to employment indicates relatively high level of "employment deprivation" in Dover and Thanet districts, displayed by the IMD (2019), and higher claimant count within the districts compared to the South East average. Therefore, the local labour force in Dover and Thanet is assessed to be of medium sensitivity due to its capacity to benefit from additional employment, training and income opportunities.

11.9.43 As set out in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**, the construction period is expected to take approximately 72-months. National Grid estimates that the Kent Onshore Scheme would require a peak of 241 full-time equivalent (FTE) jobs, and an average of 67 gross direct FTE jobs on-site over the construction period. The jobs arising over the 72-month construction period would be temporary. **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**, estimates that, after accounting for displacement, leakage and multiplier effects, the Kent Onshore Scheme would support, on average, 50 net additional jobs during the construction period. Of these, 15 jobs per annum would be expected to be taken-up by residents within the study area, and 35 by residents outside this area. The additional jobs within the study area would represent local job growth, although the overall change would be small in the context of the overall number of jobs locally. Therefore, the magnitude of change anticipated with respect to employment and income during the construction phase is assessed to be small.

11.9.44 Overall, the likely effect on health and wellbeing arising from employment and income impacts during the construction phase is assessed to be temporary **minor beneficial** (**not significant**).

Social Cohesion and Community identity

11.9.45 Roads bordering the Kent Onshore Scheme may be used by construction traffic which could increase traffic and community severance between neighbourhoods. This could reduce access to neighbourhood community facilities and in turn, reduce social cohesion. Additionally, impacts on landscape and visual amenity arising from the Proposed Project, during construction, could have an impact on resident's mental health. This could be linked to pride around their local area and uncertainty surrounding the Kent Onshore Scheme and the impacts it would have visually.

11.9.46 Baseline data shows that a lower proportion of people in the South East feel like they belong strongly or fairly strongly to their immediate neighbourhood, compared to the proportion in England. This suggests a lower sense of community in the area, compared to the rest of the country. Additionally, with respect to landscape and visual amenity, given the relatively rural setting, the local area could be sensitive to changes in visual effects potentially impacting quality of life for residents, should local tranquillity be impacted. Therefore, the sensitivity of the population is assessed to be medium.

11.9.47 **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport** sets out a reasonable worst-case assessment of the traffic and transport effects of the Kent Onshore Scheme during the construction phase. The assessment states that the likely

effect of the Proposed Project on driver delay (as a result of incremental increases in traffic) for all receptors within the study area is considered to be not significant and is anticipated to be short-term. With the proposed mitigation in place, there are likely to be no significant effects on transport and access during the construction phase. Additionally, the assessment of severance in **Application Document 6.2.3.7 Part 3, Chapter 7 Traffic and Transport**, states that there are likely to be no significant severance effects to any receptors.

11.9.48 **Application Document 6.2.3.1 Part 3 Kent Chapter 1 Landscape and Visual** provides an assessment of the potential disruption to landscape and visual receptors as a result of the Proposed Project. The LEMP, along with other mitigation measures, would help minimise impacts. However, the assessment concludes that a small number of significant effects would remain in the construction phase, specifically for Viewpoints 3 – 6 and 11, which are representative of recreational users, PRoW users, and residential receptors; and TDLCA Local Character Area E1: Stour Marshes, and DDLCA Local Character Area A2: Ash Levels, which are representative of receptors including recreational users and PRoW users. These effects during construction are anticipated to be short-term and include effects such as direct views of construction activities, lighting, and temporary vegetation loss necessary for construction activities. The assessment highlights specific pockets of receptors that may be more sensitive to amenity impacts during the construction phase. Whereby, in addition to local PRoW network users and railway users, this includes recreational users along the Saxon Shore Way, cyclist users of the Viking Coastal Trail, residential receptors within Sevenscore, and scattered residential receptors east of the settlement of Minster. As a result of these landscape and visual impacts, local amenity may be affected due to the reduced enjoyment of these areas by recreational and residential users.

11.9.49 Consideration is given to the potential impact on the accommodation sector and residential properties within the study area, particularly regarding potential effects on the social environment and community cohesion. As set out in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**, it is anticipated that accommodation providers would be able to accommodate the construction workforce for the Kent Onshore Scheme without any adverse effects on the sector and this would not result in a significant effect. Similarly, there are no residential properties within the study area which would be affected by the Kent Onshore Scheme or to which access would be required that would impact social environment and community cohesion for these settlements.

11.9.50 Increased traffic flows and severance effects may inhibit local residents' ability to access neighbouring communities and social contacts, however the extent of this would be limited given the duration of this effect is temporary and there are likely to be no significant effects arising in terms of traffic and transport. Given the above, it is recognised that particular areas or receptors may be more sensitive to impacts as a result of the Proposed Project. However, in terms of the overall population and the limited number of significant effects, which are expected to be isolated and temporary, the magnitude of impact is assessed as small during the construction phase.

11.9.51 Overall, the likely effect on health and wellbeing arising from social cohesion and community identity impacts during the construction phase is assessed to be temporary **minor adverse** (**not significant**).

Operation and Maintenance Phase

Access to open space, leisure and play

11.9.52 Operational and maintenance activities of the Proposed Project may intersect, or otherwise impact upon, the accessibility of open space in the study area, which could impact the health and wellbeing of local residents.

11.9.53 As set out in paragraph 11.9.20, the sensitivity of the population (general population and sub-population in this instance) is assessed to be medium.

11.9.54 **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism**, sets out that there would be no effects on open space designations as a result of the Kent Onshore Scheme including in terms of access during the operational phase.

11.9.55 Furthermore, the operational and maintenance phases have been scoped out of the assessment within **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**, due to the limited number of operatives manning the site and only infrequent additional trips to site. On this basis, it can be anticipated that no severance impacts are expected to any receptors during this phase.

11.9.56 Given the limited impacts expected of which the severity would only result in little to no change in quality of life regarding access to open space, the magnitude of impact is assessed to be negligible during the operational and maintenance phase.

11.9.57 Overall, the likely effect on health and wellbeing arising from impacts on accessing open space, leisure, and play facilities during the operational and maintenance phase is assessed to be **negligible** (**not significant**) for the population.

Air quality

11.9.58 The operational and maintenance activities of the Proposed Project have the potential to impact air quality which could lead to adverse health effects on residents.

11.9.59 As set out in paragraph 11.9.25, the sensitivity of the local population with respect to air quality is assessed to be medium. The vulnerable sub-population is assessed to be high (as per paragraph 11.9.26).

11.9.60 For effects during operation and maintenance, the assessment of substation back-up generator emissions concludes that there are no significant effects. There would also be no significant effects on air quality arising from vehicle emissions due to the Proposed Project being manned by a limited number of operatives and infrequent vehicle trips. Given the available data, taking into account that residents across the study area would experience no significant effects on air quality, the magnitude of impact is expected to be negligible during the operational and maintenance phase.

11.9.61 Overall, the operational emission assessment determines that impacts to human health would not result in significant effects due to limited changes in particulate concentrations, and thus the likely effect on health and wellbeing arising from air quality impacts during the operational and maintenance phase is assessed to be **negligible** (**not significant**). For the more vulnerable sub-population, a **minor adverse** (**not significant**) effect would result, based on professional judgement.

Noise and vibration

11.9.62 The operational and maintenance activities of the Proposed Project have the potential to lead to increases in noise and vibration, which could lead to adverse health and wellbeing effects in terms of annoyance and/or disrupt local amenities.

11.9.63 As set out in paragraph 11.9.31, considering baseline data within **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration**, the sensitivity of the general population is considered to be medium.

11.9.64 Within **Application Document 6.2.3.9 Part 3 Kent Chapter 9 Noise and Vibration**, the assessment concludes there will not be any significant effects from operational noise. Noise and vibration effects from routine operational maintenance are not expected to generate high levels of noise or vibration and would generally be relatively short-term activities. Noise and vibration effects from more substantial maintenance activities would be expected to be similar to those during the construction phase. In these circumstances the contractor would undertake detailed noise and vibration assessments and determine best practicable means to reduce the effects of noise and vibration at nearby NSR. Noise and vibration from all maintenance activities would therefore be negligible to minor adverse for all NSR.

11.9.65 Overall, the likely effect on health and wellbeing arising from noise and vibration impacts during the operational and maintenance phase is assessed to be **minor adverse** (**not significant**).

Transport modes, access, connections and physical activity

11.9.66 Residents of properties in the towns and villages surrounding the Proposed Project attempting to access facilities are likely to use the same strategic roads as any operational traffic associated with the Proposed Project. Increased traffic flows and severance effects may inhibit the ability of local residents to access these facilities or impact the accessibility of PRoW and active travel networks in the study area.

11.9.67 Owing to the reasons set out in paragraph 11.9.36, the sensitivity of the general population is deemed to be medium.

11.9.68 The operational and maintenance phases have been scoped out of the assessment within **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**, due to the limited number of operatives manning the site and only infrequent additional trips to site. On this basis, there are no link roads that could experience significant traffic and transport effects during operation in relation to severance.

11.9.69 Furthermore, as stated in paragraph 11.9.38, **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism** concludes there would be no significant effects to the PRoW or recreational routes as a result of the Kent Onshore Scheme during the operational phase. Given this, there is potential for only minor changes to quality-of-life and so the overall magnitude of impact is assessed to be negligible.

11.9.70 Overall, the likely effect on health and wellbeing arising from transport, access, and connection impacts during the operational and maintenance phase is assessed to be **negligible** (**not significant**).

Social cohesion and community identity

11.9.71 As set out in paragraph 11.9.46, the sensitivity of the population is assessed to be medium**.** This is based on baseline data which shows that a lower proportion of people in the South East feel like they belong strongly or fairly strongly to their immediate neighbourhood compared to the proportion in England, combined with the sensitivity of the local area to changes in visual effects, potentially impacting quality of life for residents.

11.9.72 The operational and maintenance phases have been scoped out of the assessment within **Application Document 6.2.3.7 Part 3 Kent Chapter 7 Traffic and Transport**, due to the limited number of operatives manning the site and only infrequent additional trips to site. On this basis, it can be anticipated that no traffic flow and severance impacts are expected to any receptors during this phase.

11.9.73 **Application Document 6.2.3.1 Part 3 Kent Chapter 1 Landscape and Visual** provides an assessment of the potential disruption to landscape and visual receptors as a result of the Proposed Project in the operational and maintenance phase. Whilst the LEMP, along with other mitigation measures, would help manage impact, there are still likely to be a small number of significant effects, according to the assessment. This includes receptors Viewpoint 4 – 6, which are representative of recreational users, PRoW users, and residential receptors; and TDLCA Local Character Area E1: Stour Marshes within year 1 of operation, and Viewpoint 4 and 5 by year 15, which are representative of receptors including recreational users and PRoW users. These effects during operation and maintenance are anticipated to be long-term and include both direct and filtered views of the large-scale energy infrastructure, occasional vehicle movement, permanent localised vegetation loss, and displaced agricultural land. The assessment highlights specific pockets of receptors that may be more sensitive to amenity impacts during the operational phase. Amongst local PRoW network users and railway users, this includes recreational users along the Saxon Shore Way, cyclist users of the Viking Coastal Trail, and residential receptors within Sevenscore. As a result of these landscape and visual impacts, local amenity may be affected due to the reduced enjoyment of these areas by recreational and residential users.

11.9.74 As set out in **Application Document 6.2.3.10 Part 3 Kent Chapter 10 Socio-economics, Recreation and Tourism,** no permanent effects on residential properties (in terms of physical changes or disruptions to residential communities) within the study area are anticipated from the Kent Onshore Scheme, including any required access during the operational and maintenance phase, that would affect the social environment or community cohesion in these settlements.

11.9.75 Given the above, it is recognised that particular areas or receptors may be more sensitive to impacts as a result of the Proposed Project. However, in terms of the overall population the magnitude of impact is assessed as small during the operational and maintenance phase in terms of any adverse impact on community identity, sense of belonging and sense of control for the local population.

11.9.76 Overall, the likely effect on health and wellbeing arising from social cohesion and community identity impacts during the operational and maintenance phase is assessed to be **minor adverse** (**not significant)**.

Decommissioning Phase

11.9.77 In the event that the Kent Onshore Scheme is decommissioned, it is anticipated that similar methods, workforce numbers, equipment, construction compounds and working

hours to that used during construction would be required during decommissioning. In addition, the total estimated duration of decommissioning is 2 years compared to 5 years for construction.

11.9.78 It is therefore considered reasonable to assume that the impacts of the decommissioning phase would be the same as, or not greater than, the construction phase, in line with assessment presented throughout paragraphs 11.9.2 to 11.9.51. Therefore, and given that the exact timing of this scenario is unknown, the assessment of the construction phase has been adopted to determine the anticipated impact of the Kent Onshore Scheme during its decommissioning phase. These residual effects and conclusions are applicable for the decommissioning phase.

11.9.79 The decommissioning phase assessment of impacts and likely significant effects would be reviewed at the time of decommissioning.

11.10 Additional Mitigation

11.10.1 After considering embedded and control and management measures no likely significant adverse effects have been identified. Additional mitigation measures are therefore not required to further reduce, mitigate or offset likely significant adverse environmental effects on health and wellbeing receptors.

11.11 Residual Effects and Conclusions

11.11.1 As described above, no additional mitigation measures are required to avoid or reduce likely significant effects on health and wellbeing receptors. Therefore, residual effects are as discussed in Section 11.9.

11.11.2 The assessment has concluded that there are no likely significant residual effects in relation to health and wellbeing receptors during construction, operation and maintenance and decommissioning of the Kent Onshore Scheme.

11.12 Sensitivity Testing

11.12.1 Under the terms of the DCO, construction could commence in any year up to five years from the granting of the DCO, which is assumed to be 2026. It is considered that the effects reported in Section 11.9 would not differ should the works commence in any year up to year five. This is because the baseline is not expected to alter materially in that period based on current information and there would be no change in the impact magnitudes that have been assessed.

11.13 References

Ash Parish Council. (2021). *Ash Parish Council Neighbourhood Development Plan 2018 - 2037.* Retrieved from https://www.dover.gov.uk/Planning/Planning-Policy-and-Regeneration/PDF/Ash-NDP-Plan-Final-Sept-2021.pdf

Barton, H & Grant, M. (2006). *A health map for the local human habitat. The Journal for the Royal Society for the Promotion of Health, 126 (6). pp. 252-253. ISSN 1466-4240 developed from the model by Dahlgren and Whitehead, 1991.*

Chartered Institute of Personnel Development. (2017). *Employee Outlook Survey: employee views on working life.*

Dahlgreen, G & Whitehead, M . (2021). *The Dahlgren-Whitehead model of health determinants: 30 years on and still chasing rainbows.*

Department for Culture, Media and Sport. (2023). *Community Life Survey 2021/22.* Retrieved from https://www.gov.uk/government/statistics/community-life-survey-202122

Department for Energy Security and Net Zero. (2023). *National Policy Statement for Electricity Networks Infrastructure (EN-5).*

Department for Energy Security and Net Zero. (2023). *Overarching National Policy Statement for Energy (EN-1).*

Department for Levelling Up, Housing and Communities. (2024). *National Planning Practice Guidance.*

Department of Health and Social Care . (2019). *The NHS Long Term Plan.*

Dover District Council. (2024). *Dover District Local Plan to 2040.* Retrieved October 24, 2024, from [redacted]

East of England Ambulance Service NHS Trust (EEAST). (n.d.). *About Us*. Retrieved from [redacted]

HM Government. (2022). *Health and Care Act.*

IEMA. (2022). *Determining Significance for Human Health in Environmental Impact Assessment.*

IEMA. (2022). *Effective Scoping of Human Health in Impact Assessment.*

Institute of Health Equity. (2020). *Build Back Fairer: The COVID-19 Marmot Review. The Pandemic, Socioeconomic and Health Inequalities in England.*

Institute of Health Equity. (2020). *Health Equity in England: The Marmot Review 10 Years On.* commissioned by the Health Foundation.

Kent County Council. (2018). *A 2050 Picture of Kent and Medway.* Retrieved from https://www.kent.gov.uk/__data/assets/pdf_file/0009/79920/GIF-2050-Picture.pdf

Kent County Council. (2018). *Rights of Way Improvement Plan 2018 - 2028.* Retrieved from https://www.kent.gov.uk/__data/assets/pdf_file/0005/90491/Rights-of-Way-Improvement-Plan-2018-2028.pdf

Kent County Council. (2021). *Joint Health and Wellbeing Strategy.* Retrieved from https://www.kent.gov.uk/__data/assets/pdf_file/0014/12407/Joint-health-and-wellbeing-strategy.pdf

Ministry of Housing, Communities and Local Government (MHCLG). (2019). *English Indices of Deprivation.*

Ministry of Housing, Communities, and Local Government. (2024). *National Planning Policy Framework.*

National Grid. (2022). *Sealink Environmental Impact Assessment Scoping Report.* National Grid.

NHS Digital. (2024, July 31). *General Practice Workforce.* Retrieved from https://digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services/31-july-2024

NHS Healthy Urban Development Unit (HUDU). (2019). *Rapid Health Impact Assessment (HIA) Tool.*

Office for National Statistics. (2018). *Population Projections.* Office for National Statistics.

Office for National Statistics. (2022). *Census 2021.*

Public Health England. (2017). *Spatial Planning for Health: An evidence resource for planning and designing healthier places.*

Public Health England. (2019). *Health Matters: Health and Work.* Retrieved from https://www.gov.uk/government/publications/health-matters-health-and-work/health-matters-health-and-work

Public Health England. (2020). *PHE Strategy 2020 - 2025.* Retrieved from https://www.gov.uk/government/publications/phe-strategy-2020-to-2025

Thanet District Council. (2020). *Thanet District Council Local Plan.* Retrieved from https://www.thanet.gov.uk/wp-content/uploads/2018/03/LP-adjusted.pdf

The Marmot Review. (2010). *Fair Society, Healthy Lives: Strategic Review of Health Inequalities in England post 2010.*

The Office for Health Improvement & Disparities (OHID). (2020). *Public Health Profiles.*

World Health Organisation. (1946). *Constitution of the World Health Organisation.*

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