FIVE ESTUARIES OFFSHORE WIND FARM

ENVIRONMENTAL STATEMENT

VOLUME 6, PART 3, CHAPTER 3: SOCIO-ECONOMIC, TOURISM AND RECREATION

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CONTENTS

TABLES

FIGURES

DEFINITION OF ACRONYMS

Acronym	Definition
APS	Annual Population Survey
ASHE	Annual Survey of Hours and Earnings
BIM	Building Information Modelling
BRES	Business Register and Employment Survey
CAD	Computer Aided Design
CAM	Computer Aided Manufacturing
CITB	Construction Industry Training Board
CNC	Computer Numerical Control
CTV	Crew Transfer Vessels
DfE	Department for Education
ECC	Essex County Council
EIA	Environmental Impact Assessment
ENZCE	Essex Net Zero Centre of Excellence
ES	Environmental Statement
ETG	Expert Topic Group
FTE	Full Time Equivalent
GVA	Gross Value Added
ICB	Integrated Care Board
IMD	Indices of Multiple Deprivation
LAI	Local Area of Impact
MW	MegaWatts
NEA	North Essex Authorities
NF	North Fall Offshore Wind Farm

Acronym	Definition
NH	National Highways
NPS	National Policy Statement
NPPF	National Planning Policy Framework
NSIP	Nationally Significant Infrastructure Projects
ONS	Office for National Statistics
OWF	Offshore Wind Farm
OWGP	Offshore Wind Growth Partnership
PAMP	Public Access Management Plan
PAYE	Pay-As-You-Earn
PEIR	Preliminary Environmental Information Report
PINS	The Planning Inspectorate
PRoW	Public Right of Way
SELEP	South East Local Enterprise Partnership
SIC	Standard Industrial Classification
VAT	Value Added Tax
VE	Five Estuaries Offshore Windfarm
WCH	Walking, Cycling and Horse Riding
WSA	Wider Study Area

GLOSSARY OF TERMS

Term	Definition
Cable Works TCC	Temporary Construction Compounds (TCC) associated with onshore cable works.
Development Consent Order	An order made under the Planning Act 2008 granting development consent for a Nationally Significant Infrastructure Project (NSIP) from the Secretary of State (SoS) for Energy Security and Net Zero (ESNZ).
EIA	Environmental Impact Assessment (the process of evaluating the likely environmental impacts of a proposed project or development)
ES	Environmental Statement (the documents that collate the processes and results of the EIA).
Export Cable Corridor (ECC)	The area(s) where the export cables will be located.
FTE	Full-time Equivalent - one FTE job year is the same as one full-time job for one year.
Maximum Design Scenario (MDS)	The maximum design parameters of the combined project assets that result in the greatest potential for change in relation to each impact assessed.
Mitigation	Mitigation measures are commitments made by the project to reduce and/or eliminate the potential for significant effects to arise as a result of the project.
National Highways	A governmental agency charged with operating, maintaining and improving motorways and major trunk roads in England.
Onshore Export Cable Corridor (onshore ECC)	The working area for the onshore cable construction.
IMD	Index that measures deprivation by combining indicators including a range of social, economic, environmental, and housing factors to give a single deprivation score for lower-layer super output areas ('LSOAs') in England.
PEIR	Preliminary Environmental Information Report. The PEIR was written in the style of a draft Environmental Statement (ES) and formed the basis of statutory consultation. Following that consultation, the PEIR documentation was updated into this final

Term	Definition
	ES to accompany the application for the Development Consent Order (DCO).
Order Limits	The extent of development including all works, access routes, Temporary Construction Compounds (TCCs), visibility splays and discharge points.
GVA	The value generated by any unit engaged in the production of goods and services in a particular area, or industry/sector within an economy.
VE	Five Estuaries Offshore Wind Farm
Wheelbase	The distance between the front and rear axles of a vehicle.
400 kV connection	400 kV cable connection between the proposed VE substation and the grid connection point

3 SOCIO-ECONOMIC, TOURISM AND RECREATION

3.1 INTRODUCTION

3.1.1 This chapter of Environmental Statement (ES) has been prepared by Quod (a specialist planning, socio-economics and infrastructure consultancy) for Five Estuaries (the Applicant) and presents an assessment of the socio-economic effects arising from the construction, operation and decommissioning of the Five Estuaries Offshore Wind Farm (referred to throughout this volume as "VE").

3.1.2 VE is a Nationally Significant Infrastructure Project (NSIP). An ES is provided as part of a Development Consent Order (DCO) application under the Planning Act 2008. This chapter forms part of the ES which is required as part of the DCO application in compliance with the Environmental Impact Assessment Regulations

3.1.3 The onshore elements of VE assessed in this chapter are described in Volume 6, Part 3, Chapter 1: Onshore Project Description. The offshore elements of VE assessed in this chapter are described in Volume 6, Part 2, Chapter 1: Offshore Project Description.

3.1.4 This chapter describes the scope, relevant legislation, assessment methodology, and the baseline conditions existing at the site and its surroundings. It considers any potential significant environmental effects VE would have on the baseline environment, any mitigation measures required to prevent, reduce or offset any significant adverse effects, and the likely residual effects after these measures have been implemented. Consideration has also been given to potential cumulative socio-economic effects with other proposed developments.

3.1.5 This chapter has reviewed the environmental effects on such receptors relating to landscape and visual, cultural heritage, traffic and transport, noise and air quality (relating to onshore effects) and additionally seascape and navigation effects related to offshore receptors. These effects are assessed within the following chapters of the ES, which should be read in conjunction with this chapter:

- Volume 6, Part 3, Chapter 2 (LVIA)
- Volume 6, Part 3, Chapter 7 (Onshore Archaeology and Cultural Heritage)
- Volume 6, Part 3, Chapter 8 (Traffic and Transport)
- Volume 6, Part 3, Chapter 9 (Airborne Noise and Vibration)
- Volume 6, Part 3, Chapter 10 (Air Quality)
- Volume 6, Part 2, Chapter 8 (Commercial Fisheries)
- Volume 6, Part 2, Chapter 9 (Shipping and Navigation)
- Volume 6, Part 2, Chapter 10 (Seascape and Landscape Visual Impact Assessment (SLVIA))
- Volume 6, Part 2, Chapter 11 (Offshore Archaeology and Cultural Heritage)
- Volume 6, Part 2, Chapter 12 (Infrastructure and Other Marine Users).

3.1.6 This chapter is supported by two appendices:

- Volume 6, Part 3, Annex 6.3.1: FTE Employment and GVA Headlines; and
- Volume 6, Part 3, Annex 6.3.2: Community Facilities within 5km of the Onshore Order Limits.

3.2 STATUTORY AND POLICY CONTEXT

3.2.1 This section of the Socio-Economics Chapter presents a summary of the relevant planning and economic policy of relevance to VE. This includes an analysis of policy at the national, regional and local levels.

3.2.2 The legislation and policy context is shown Table 3.1.

Table 3.1: Legislation and Policy Context

Legislation/ Policy	Key Provisions	Section Where Addressed
National Policy Statement for Renewable Energy Infrastructure (NPS EN-1) (2023)	Paragraph 5.13.2 of EN-1 states that where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES. Paragraph 5.13.3 of EN-1 states that the applicant is strongly encouraged to engage with relevant local authorities during early stages of project development so that the applicant can gain a better understanding of local or regional issues and opportunities. Paragraph 5.13.4 of EN-1 states that the assessment should consider all relevant socio-economic impacts, which may include: > the creation of jobs and training opportunities. Applicants may wish to provide information on the sustainability of the jobs created, including where they will help to develop the skills needed for the UK's transition to Net Zero > the contribution to the development of low-carbon industries at the local and regional level as well as nationally > the provision of additional local services and improvements to local infrastructure,	In compliance with EN-1 paragraphs 5.13.2 and 5.13.4, all relevant socio-economic impacts of VE have been assessed within 3.10 – Environmental Assessment: Construction Phase and 3.11 – Environmental Assessment: Operational Phase unless scoped out (see 3.4 – Assessment Methodology). Cumulative effects have been considered at 3.12 – Environmental Assessment: Cumulative Effects. In compliance with EN-1 paragraph 5.13.3, the applicant has with relevant local authorities during early stages of project development so that the applicant can gain a better understanding of local or regional issues and opportunities and this is set out within 3.3 – Consultation and Engagement. In compliance with EN-1 paragraph 5.13.5, policy has been considered at 3.2 – Statutory and Policy Context. The socio-economic baseline has been considered at 3.6 – Existing Environment.

Legislation/ Policy	Key Provisions	Section Where Addressed
	including the provision of educational and visitor facilities > any indirect beneficial impacts for the region hosting the infrastructure, in particular in relation to use of local support services and supply chains > effects on tourism > the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development > cumulative effects - if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries	In compliance with EN-1 paragraph 5.13.6, supply chain effects are considered within 3.9 (Impact 3: Construction Effects on Supply Chain and GVA) and 3.10 (Impact 9: Operational GVA/Supply Chain Effects). Linked effects are considered within the effects on tourism and community and recreational effects at 3.9 and 3.10. In compliance with EN-1 paragraph 5.13.8, mitigation has been considered where required to address any potential likely significant effects in order to make them acceptable in planning terms. This is set out within 3.8 – Mitigation and where relevant throughout 3.10 – Environmental Assessment: Construction Phase and 3.11 – Environmental Assessment: Operational Phase.

Legislation/ Policy	Key Provisions	Section Where Addressed
	and major projects within the region Paragraph 5.13.5 of EN-1 states that applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development's socio-economic impacts correlate with local planning policies. Paragraph 5.13.6 of EN-1 states that socio-economic impacts may be linked to other impacts, for example visual impacts but may also have an impact on tourism and local businesses; and that applicants are encouraged, where possible, to demonstrate that local suppliers have been considered in any supply chain. Paragraph 5.13.8 of EN-1 states that the Secretary of State should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development. For example, high quality design can improve the visual and environmental experience for visitors and the local community alike	
National Policy Statement for Renewable Energy Infrastructure (NPS EN-3) (2023)	Paragraph 2.10.69 states that there is a requirement for applicants to draft a decommissioning strategy at the end of operational life of a generating station, in addition to reviewing the socio-economic benefits that may arise within this phase of development.	This section is considered in 3.12 – Environmental Assessment: Decommissioning Phase
Tendring Local Plan (2013-2033)	Policy PP 12 'Improving Education and Skills' states that Tendring will work with partners (including Essex University, Colchester Institute and	This section is considered within Volume 9, Document

Legislation/ Policy	Key Provisions	Section Where Addressed
	local schools and academies) to deliver new and improved facilities for early years, primary, secondary and further education, with the council set to support proposals that will result in improved education facilities. Objective 2 of the Local Plan which highlights Tendring's strategic objective of creating conditions for economic growth and employment opportunities across a range of economic sectors in such as renewable energy and care and assisted living. This objective also highlights the need to provide for the development of employment land on a variety of sites to support a diversity of employment opportunities and to achieve a better balance between the location of jobs and housing.	9.27: Outline Skills and Employment Strategy

NATIONAL PLANNING POLICY

3.2.3 The National Planning Policy (NPPF) (December 2023) (Department for Levelling Up, Housing and Communities, 2023) sets out the principles of sustainable development and the national economic, social and environmental objectives. It requires planning authorities to collaborate effectively with applicants to secure developments that will have a beneficial impact on social, economic and environmental conditions and that would support economic growth and productivity.

3.2.4 The NPPF notes in paragraph 152 that the planning system that 'should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change' and 'support renewable and low carbon energy and associated infrastructure'.

3.2.5 When determining planning applications for renewable and low carbon development, the NPPF states that local planning authorities should not require applicants to demonstrate overall need for renewable or low carbon energy and should permit the application of impacts from the development are deemed to be acceptable. In addition to this, significant weight should be given to the benefits of utilizing an established site when assessing applications for the repowering or life-extension of an existing renewable site.

3.2.6 In relation to the rural economy, paragraph 84(b) of the NPPF states that planning policies and decisions should enable 'the development and diversification of agricultural and other land-based rural businesses'.

3.2.7 The statement also suggests that any negative effects arising from the development in relation to socio-economics must be mitigated (paragraph 5.12.9).

3.2.8 The NPS for Energy (EN-1) (2023) (Department for Energy Security and Net Zero, 2024) presents all factors that need to be considered in the assessment of any likely socio-economic impacts from energy projects at both the local and regional levels. The statement requires developers to demonstrate that local suppliers have been considered in any supply chain (paragraph 5.13.6).

3.2.9 This policy statement also suggests that the construction, operation and decommissioning of energy infrastructure may have socio-economic impacts at the local and regional levels including job creation and the provision of local services.

3.2.10 The policy statement also states that the applicant's assessment should consider all relevant socio-economic impacts which include (paragraph 5.13.4):

- The creation of jobs and training opportunities, with applicants encouraged to provide information on the sustainability of jobs created and where they will help develop the skills for the UK's transition to Net Zero;
- The contribution to the development of low-carbon industries at the local, regional and national levels;
- The provision of additional local services and improvements to local infrastructure (including the provision of educational and visitor facilities);
- Any indirect beneficial impacts for the region hosting the infrastructure, with a particular focus on the use of local support services and supply chains;
- Effects on tourism and other users of the area impacted;
- The impact of changing influx of workers during the different construction, operational and decommissioning phases of the energy infrastructure; and
- Cumulative effects in order to assess the short-term negative effects (e.g. potential shortage of construction workers to meet the needs of other industries and major projects within the region).

3.2.11 The NPS for Renewable Energy Infrastructure (EN-3) (2024) (Department for Energy Security and Net Zero, 2024) sets out specific requirements that are of direct relevance to renewable energy scheme, which includes a requirement for applicants to draft a decommissioning strategy at the end of operational life of a generating station, in addition to reviewing the socio-economic benefits that may arise within this phase of development. This national policy statement highlights policy on the transmission of infrastructure for renewable energy installations, in addition to other interrelated themes considered in the socio-economic assessment which includes transport and traffic.

3.2.12 The NPS for Electricity Networks Infrastructure (EN-5) (2024) (Department for Energy Security and Net Zero, 2024) provides the primary policy for decisions taken by the Secretary of State on applications it receives for electricity networks infrastructure, including policy on providing suitable and robust electricity networks.

3.2.13 The Build Back Better – Our Plan for Growth Report (HM Treasury, 2021) sets out the government's plans to generate economic growth, in addition to supporting levelling up prosperity and the transition to Net Zero by 2050. It sets out a plan to deliver growth that will create high quality jobs across the UK. The three core pillars of this growth plan are as follows:

- Infrastructure – stimulating short-term economic activity and driving long-term productivity improvements through record investment in broadband, providing opportunities through the Levelling Up Fund and UK Shared Prosperity Fund and supporting investment through the UK Infrastructure Bank;
- Skills – supporting productivity growth through high quality skills and training, introducing the Lifetime Skills Guarantee to enable lifelong learning through free fully funded level three courses and focusing on the quality of apprenticeships; and
- Innovation – supporting and providing incentives for the development of creative ideas and technologies, supporting access to finance to help unleash innovation, developing the regulatory system to support innovation, attracting the brightest and best people and supporting Small and Medium Enterprises (SMEs).

3.2.14 The Marine Policy Statement (Department for Environment, Food & Rural Affairs, 2011) provides the framework for preparing Marine Plans and making decisions that will have an impact on the marine environment, in order to achieve sustainable development within the United Kingdom Marine Area. The statement also ensures that marine resources will be used in a manner that promotes sustainable economic development, enabling the UK to move towards a low-carbon economy. Sustainable marine environments which promote healthy, functioning marine systems will be created, while marine resources will also be used to address social and economic issues.

3.2.15 Properly planned developments in the marine area will also provide opportunities for investment, in addition to generating export and tax revenue. Increased underwater cabling may also result in economic risks, which may have impact activities such as dredging and the use of particular fishing gear.

3.2.16 The marine plan authority should ensure that marine planning contributes to securing sustainable economic growth in regeneration areas and areas that already benefit from strong local economies through integration with terrestrial planning and engagement with coastal communities.

3.2.17 The Clean Growth Strategy (Department for Energy Security and Net Zero and Department for Business, Energy & Industrial Strategy, 2018) was developed to set out actions that the UK government are taking to ensure that clean growth is at the heart of the UK's modern industrial strategy. Some of the key policies and proposals outlined within this strategy include:

- Accelerating clean growth – includes setting up a Green Finance Taskforce to provide recommendations for the delivery of public and private investment, developing a set of voluntary green sustainable finance management methods, providing £20 million to support clean technology investment and developing green mortgage products;
- Improving business and industry efficiency – supporting businesses by improving the energy efficiency of new and existing commercial buildings, exploring voluntary building standards to support improvements in energy efficiency and simplifying requirements for businesses to measure and report on energy use; and
- Delivering clean, smart, flexible power - reducing power costs for households and businesses through the use of smart system plans and improving the route to market for renewable energy such as offshore wind by having up to £557 million

for further Pot 2 Contract for Difference auctions and working with the industry as they develop an ambitious Sector Deal for offshore wind.

3.2.18 The strategy also highlights the need for the low carbon sources of electricity, with the UK in a great position to benefit from these energy sources and become one of the most advanced economies for smart energy and technology.

3.2.19 The Energy White Paper (Department for Energy Security and Net Zero and Department for Business, Energy & Industrial Strategy, 2020) is a strategy for the wider energy system that was put in place to support the UK's green recovery. This strategy also builds on the Prime Minister's Ten Point Plan to set energy-related measures that were announced in a long-term strategic vision for our energy system, consistent with net zero emissions by 2050. The government is committed to building a cleaner, greener future by targeting 40GW of offshore wind by 2030, including 1GW floating wind and the expansion of other low-cost renewable technologies. This will provide the foundation for a sustainable and competitive supply chain, enabling floating offshore wind projects to increase scale and reduce costs.

3.2.20 The Net Zero: Build Back Greener strategy (Department for Energy Security and Net Zero and Department for Business, Energy & Industrial Strategy, 2021) presents the government's priorities for 'green' investment and skills, which relates to finance and regulation, as well as incentivisation of local supply chain transition towards renewable technologies.

3.2.21 The Net Zero: Build Back Greener strategy also supports the aims of delivering 40GW of offshore wind by 2030, along with more onshore, solar and other renewable energy resources, This new approach to onshore and offshore electricity networks will incorporate also new low carbon generation and demand in an efficient manner. The strategy is committed to working with the grain of consumer choice, ensuring the biggest polluters the most for transition through fair carbon pricing, ensuring that the most vulnerable are protected through government support and working with businesses to continue delivering deep cost reductions in low carbon tech.

3.2.22 The Offshore Wind Sector deal (Department for Business & Trade, Department for Business, Energy & Industrial Strategy and Department for Energy Security & Net Zero, 2020) builds on the UK's global leadership position in offshore wind, aiming to ensure that the UK continues to play a leading role as the global market continues to grow. Some of the key commitments listed within the sector deal include:

- Providing forward visibility of future Contracts for Difference rounds with support of up to £557m;
- Increasing UK content to 60% by 2030 (including increases in the capital expenditure phase);
- Increasing the representation of women in the offshore wind workforce to a third by 2030;
- Increasing exports fivefold to £2.6bn by 2030; and
- Investing up to £250m in building a stronger UK supply chain, establishing the Offshore Wind Growth Partnership (OWGP) to support productivity and increase competitiveness.

3.2.23 Over the next decade, the expansion of offshore wind around the world is set to generate 17 per cent in growth, annually, increasing from 22GW to 154GW in total installed capacity by 2030.

3.2.24 The Skills for Jobs White Paper (Department for Education, 2021) demonstrates how the government will amend the education system in a way that supports people in obtaining the skills the economy needs to grow and prosper. The key priorities within the paper include:

- Putting employers at the heart of the post-16 skills leading to the creation of jobs that can improve productivity and fill skills gaps;
- Ensuring that people have access to training and are informed on various career opportunities;
- Reforming funding and accountability to simplify how funds are allocated which will ensure that the regime delivers value for money; and
- Investing in higher-level technical qualifications as an alternative to university degrees.

3.2.25 The British Energy Security Strategy (2022) (Department for Business, Energy & Industrial Strategy, 2022) demonstrates how the UK support the growth of homegrown power for greater energy interdependence. The strategy also highlights an ambition of delivering 50GW through offshore wind by 2030, supporting around 90,000 jobs. Some of the delivery highlights in relation to offshore wind include the following:

- 11GW already generated, with another 12GW in the pipeline;
- Over £1.6 billion invested, securing 3,600 jobs;
- Up to £320 million in government to support for fixed bottom and floating wind ports and infrastructure; and
- Additional government support for other low-cost renewable technology.

REGIONAL AND LOCAL POLICY

3.2.26 The South East Local Enterprise Partnership (SELEP) Economic Recovery Strategy (The South East Local Enterprise Partnership, 2022) sets out the measures that need to be taken in order to drive sustainable economic growth in the medium to long term. The seven key objectives that underpin this strategy are as follows:

- Support business innovation;
- Drive trade and growth;
- Deliver a skilled workforce;
- Improve digital and physical connectivity;
- Put clean growth at the heart of what we do;
- Support equality; and
- Promote greater resilience in our places.

3.2.27 The guiding principles behind this strategy include:

- Delivering clean growth by rebuilding the economy through boosting low carbon industries while cutting carbon emissions to move to net-zero;
- Closing the digital divide to build a smart connected South East;
- Developing the skills of our workforce and residents to retain and build a labour market needed in a post-pandemic and post-EU economy; and
- Addressing inequalities to build a fairer and more inclusive economy.

3.2.28 One of the strategic priorities listed within the strategy is around the area being a coastal catalyst, with the SELEP aiming to improve the economic fabric of the coastal and rural areas within the south east through sector adaptation and growth. In order to achieve this, SELEP have committed to doing the following:

- Identifying and addressing gaps in digital infrastructure – facilitating discussions with providers to explore models and pilots for delivering digital infrastructure in places where there is poorer supporting infrastructure;
- Facilitating greater connectivity – working with providers to ensure that there is a strategic approach to investment in infrastructure that will lead to greater connectivity and supporting the shift to low carbon in coastal areas (e.g. low carbon energy and electric vehicles);
- Supporting coastal and rural businesses to innovate and grow – working with universities, coastal communities and rural working groups to explore opportunities for business growth and innovation and facilitate greater collaboration in R&D;
- Supporting and championing the work of the Thames Estuary Production Corridor;
- Maximising the economic and social benefits generated from infrastructure projects;
- Addressing the impacts of poorer physical connectivity on coastal and rural economies – working in collaboration with Transport for the South East and Transport East to improve walking and cycling routes;
- Helping to increase access to learning for coastal and rural communities – supporting greater availability of digital learning models and apprenticeships;
- Supporting the recovery, adaption and growth of our visitor economy – understanding the impacts and changes caused by the pandemic and delivering projects through the SELEP Rural Group; and
- Increasing understanding of natural resources and assets – driving net zero initiatives and productivity improvements in addition to working with local nature partnerships, spearheaded by existing strengths in nuclear and offshore wind.

3.2.29 The SELEP Skills Strategy (The South East Local Enterprise Partnership, 2023) provides an employer led partnership approach to skills for a flourishing, inclusive economy. The SELEP priorities within the skills plan are as follows:

- Increase apprenticeships and industry relevant qualifications for all ages, particularly in priority sectors and at higher and degree level;
- Simplify the skills landscape for employers, stakeholders and individuals;
- Build an inclusive economy, creating opportunities for all;
- Raise awareness of jobs and growth across the SELEP area and its size, scale, national and international significance; and
- Foster and support the spirit of pride, entrepreneurship innovation and enthusiasm across the SELEP area to bring about change.

3.2.30 The Local Energy Strategy (Coast to Capital, Enterprise M3 and South East Local Enterprise Partnerships, 2019) drafted by SELEP, Coast to Capital and Enterprise M3 and covers a geographic area from Essex to Hampshire. The main goals of the energy strategy are to ensure the tri-LEP area plays a leading role in the UK's decarbonization efforts and to foster clean growth by supporting both public and private investment.

3.2.31 One of the five priority themes within the energy statement is renewable generation, with the strategy proposing that the tri-LEP area should facilitate the building and extension of heat networks within new build developments. The strategy also states that inward investment and the economic development of the South East in offshore wind should be encouraged, with the industry experiencing a period of significant growth over the past decade and opportunities in offshore wind existing within the Crown Estate block in the coming years.

3.2.32 The Essex Green Infrastructure Strategy (Essex County Council, 2020) highlights the positive approach needed to enhance, protect and create an inclusive and integrated network of high-quality green infrastructure. Benefits that high quality green infrastructure include facilitating the delivery of multiple objectives, shaping the growth of sustainable communities and meeting the existing and future needs of communities.

3.2.33 Green infrastructure can also play a role in reducing the negative impacts of energy sector by:

- Reducing energy consumption;
- Reduce buildings energy costs through natural shading and insulation;
- Contributing directly to energy production, such as providing bioenergy, and providing carbon uptake and storage (carbon sequestration); and
- Some facilities and ways of energy production that can serve as green infrastructure assets within an overall green infrastructure network.

3.2.34 The strategy states that wind and solar farms can be regarded as green infrastructure assets if these facilities are managed correctly.

3.2.35 The Recovery Plan for Essex's Tourism and Hospitality Industry (Visit Essex, 2021) sets out how Essex plan to increase market share and grow the visitor economy, in addition to supporting tourism specific businesses post Covid-19. The six key priorities for the tourism and hospitality sector within Essex include:

- Understanding customers, delivering their needs and ensuring their product is consumer ready;
- Developing digital infrastructure;
- Supporting businesses to ensure their sustainability and success;
- Delivering stand out marketing campaigns to aid recovery and re-positioning Essex by creating awareness of assets;
- Positioning Essex as an important component in place making and place marketing; and
- Building links and celebrating collaboration.

3.2.36 The North Essex Economic Strategy (Braintree District Council, Colchester City Council, Essex County Council, Tendring District Council and Uttlesford District Council, 2019) was produced by the North Essex Economic Board (Braintree, Maldon, Tendring and Uttlesford) and sets the following priorities:

- Driving innovation and technology adoption
- Developing a skilled and resilient workforce
- Creating a network of distinctive, cohesive communities
- Growing a greener, more sustainable economy

3.2.37 The strategy highlights that decarbonization will be pivotal to the UK's future competitiveness and commits to ensuring that North Essex businesses are well-positioned to access new opportunities. Between 2020 and 2025, North Essex committed to supporting the development of new industries associated with the transition to a more energy efficient, lower carbon economy (including the coastal energy industry), in addition to encouraging the use of sustainable materials and creating opportunities through public procurement of lower carbon solutions.

3.2.38 Essex County Council presented 20 commitments within the Everyone's Essex 2021 to 2025 report (Essex County Council, 2021), focusing on four key areas: economy, environment, health and family. The commitments of particular relevance to socio-economics are presented below:

- Good jobs – working hard to address the impacts of the Covid pandemic on unemployment by supporting business recovery and building a stronger economy for the future, enabling people to build the skills they need to be part of it;
- Infrastructure – delivering and maintaining high quality infrastructure to improve opportunities for people in Essex as well as supporting a growing economy;
- Future growth and investment – helping grow existing businesses and the economic sectors of the future in Essex;
- Green growth – developing Essex as a centre for innovation, supporting new technologies and business models to enable our economy to transition to net zero and secure green jobs for the future
- Levelling up the economy – working to level up the economy by addressing the drivers of socioeconomic inequality (including income, education, employment, health and housing)
    - Net Zero – working across the council and the county to hit net zero targets in addition to supporting progress towards sustainable housing and energy
- Green communities – working with communities and businesses, in addition to providing advice and support in order to reduce greenhouse gas emissions.

3.2.39 The Essex Sector Development Strategy (Essex County Council, 2022) was drafted to support businesses and learning providers in planning for the future, with the five main growth sectors including construction, advanced manufacturing and engineering, digital technology and life sciences. One of the key commitments within the strategy is based around hitting net zero targets.

3.2.40 Essex is also committed to making green growth intrinsic to all future growth, with the county seeking to deliver:

- Reduced emissions in line with our ambition to become net zero;

- Decentralised and de-carbonised energy system;
- Sustainable new homes and a thriving retrofit sector to improve existing homes;
- Essex at the forefront of low carbon (solar, offshore wind, nuclear and hydrogen) energy development and employment; and
- Harnessing innovation to reach our net zero ambitions.

3.2.41 The Essex County Council's Plan (Essex County Council, 2021) highlights how Essex will deliver measures stated within the Everyone's Essex Plan. The plan confirms that the Essex Climate Action Commission provides opportunities for the development of various proposals, with Essex already having a strong record of delivering projects that support climate change mitigation.

3.2.42 By 2025, Essex is hoping to have achieved the following goals:

- Significantly reduced ECC's carbon footprint through our estate, operations and supply chain, and are on track to meet our target of a net zero Essex County Council by 2030;
- Made significant progress in the transition to more sustainable energy, travel and housing, and towards a circular economy that minimises waste, developing sustainable and healthy neighbourhoods;
- Worked with our communities to make them more resilient against environmental challenges including flooding, heat stress and water shortages;
- Worked with our communities and businesses to enable and empower local action to reduce greenhouse gas emissions and build climate resilience; and
- Developed the quality and accessibility of our natural environment and green infrastructure so that it enhances quality of life for all our residents.

3.2.43 The Essex Climate Action Commission report (Essex Climate Action Commission, 2021) provides advice and recommendations to help Essex reach net zero emissions by 2050. The six main themes presented within the report include energy, land use and green infrastructure, the built environment, transport, waste and community engagement.

3.2.44 The energy recommendations within the report focus on ways to invest in renewable energy, switch to greener electricity supplies and create community energy neighbourhoods. Some of the recommendations include:

- Essex to be made a centre of innovation for emerging renewable technologies;
- A network of community energy neighbourhoods to be built across every district in Essex, to generate, store, share and use energy locally by 2035;
- Essex to produce enough renewable energy within the county to meet its own needs by 2040;
- One-third of commercial buildings to be retrofitted as far as possible with renewable systems by 2030;
- Create hydrogen storage facilities to store excess renewable energy (offshore wind and solar) by 2030;and.
- Facilities to be created to produce green hydrogen to fuel heavy goods vehicles by 2040.

3.2.45 The Construction Growth in Essex 2020-2040 report (Essex County Council, 2020) highlights the challenges that the Essex construction industry will face in the coming years and recommends various measures that can be taken to maximise opportunities within the sector.

3.2.46 The county state that opportunities should be focused on:

- Developing capabilities at level 2 and above in construction occupations;
- Building a legacy and capability in the county beyond the lifetime of the project; and
- Offering a long-term focus on transferable skills, fabrication and assembly, manufacturing and engineering supply-chains.

3.2.47 Essex's Climate Action Plan (Essex County Council, 2022) outlines the actions that ECC will be taking to drive effective progress against Essex Climate Change Commission's (ECAC) recommendations, with some of the key commitments including good jobs, strong and sustainable infrastructure and net zero.

3.2.48 The Tendring Local Plan (2013 – 2033) (Tendring District Council, 2022) identifies the challenges that the District faces and sets out a vision for the future of Tendring by providing a policy and delivery framework from 2013 to 2033. The following policies are of relevance to VE:

- Policy PP 12 – Improving Education and Skills – Tendring will work with partners (including Essex University, Colchester Institute and local schools and academies) to deliver new and improved facilities for early years, primary, secondary and further education, with the council set to support proposals that will result in improved education facilities
- Policy PPL 10 – Renewable Energy Generation and Energy Efficiency Measures – Proposals for renewable energy schemes will be considered having regard to their scale, impact and the amount of energy that will be generated. Development proposals will be expected to demonstrate how renewable energy solutions appropriate to the site have been included within the scheme.

3.3 CONSULTATION AND ENGAGEMENT

3.3.1 During the pre-application period, formal consultation has included:

- Submission of a Scoping Report (Five Estuaries OWF, 2021) and receipt of Scoping Opinion from PINS and including stakeholder responses;
- Non-Statutory Public Consultation response – Essex County Council, 2022;
- Non-Statutory Public Consultation response – NHS Suffolk and North East Essex, 2022;
- Non-Statutory Public Consultation response – East Suffolk Council, 2022;
- Consultation meeting regarding jobs and skills with NHS Suffolk and North East Essex Integrated Care Board and Essex County Council; and
- VE Evidence Plan (Socio-Economic, Tourism and Recreation Expert Topic Group (ETG)) process, comprising discussions with Essex County Council (inclusive of Tendring District Council) and NHS Suffolk and North East Essex Integrated Care Board.

3.3.2 A further two meetings with the Essex County Council and Suffolk and North East Essex Integrated Care Board were held. The first was in reference to a potential Employment and Skills Strategy and the impacts on employment, whilst the second was part of the ETG.

3.3.3 A Scoping Opinion for VE was sought from the Planning Inspectorate (PINS), which included responses to the proposed assessment methodology for further consideration.

3.3.4 In addition, Essex County Council and NH were engaged over the general approach to the assessment and mitigation proposals. The engagement, through ETG meetings and other meetings took place between July 2022 and January 2024.

3.3.5 Table 3.2 provides a summary of consultation comments received to date relating to Socio-economics, tourism and recreation, and associated responses.

Table 3.2: Consultation and Engagement

Date and consultation phase/ type	Consultation and key issues raised	Section where comment addressed
PINS Scoping Opinion, November 2021	*PINS suggests that the construction and decommissioning phases of the Proposed Development will be short-term activities and will not generate an influx of workers seeking housing and schools' services. As a result, the inspectorate agrees that this matter can be scoped out*	The impact of construction on demand for private housing and schools has been scoped out of the assessment.
PINS Scoping Opinion, November 2021	*PINS agrees that the proposed development is not expected to have an impact on indoor recreational facilities so suggests that this impact can be scoped out*	The impact of construction, operation or decommissioning on indoor recreational facilities such as gyms has been scoped out of the assessment
PINS Scoping Opinion, November 2021	*PINS states that the above-ground presence of the onshore infrastructure during the operational phase will be restricted to the onshore substation. This will be assessed within the Landscape and Visual ES chapter of the ES, so can therefore be scoped out of the assessment. On the basis that the visual impact of the impact of onshore infrastructure during operational phase will be assessed*	The impact on the Local Area of Influence due to presence of onshore infrastructure during operational phase has been scoped out of the assessment.

	in the Landscape and Visual chapter of the ES, the Inspectorate agrees that this matter can be scoped out of further assessment in the ES.	
PINS Scoping Opinion, November 2021	*The Inspectorate suggests impacts from the decommissioning phase in relation to socioeconomics and tourism cannot be scoped out and states that the ES should include an assessment of this matter or information demonstrating agreement with the relevant consultation bodies and the absence of an LSE.*	Socio-economic and tourism impacts during the decommissioning phase have been considered within 3.11 (Environmental Impact: Decommissioning Phase), which identifies that effects are likely to be similar to those considered within 3.9 (Environmental Impact: Construction Phase) at Impacts 1 to 6.
PINS Scoping Opinion, November 2021	*PINS agrees that transboundary impacts would be localised and would not affect EEA states.*	Transboundary impacts have been scoped out of assessment.
PINS Scoping Opinion, November 2021	*PINS suggests that the ES should include an assessment of the likely skills shortages at the construction and operation stage to allow early-stage intervention plans to mitigate against this likelihood. The assessment of the impact on the labour market should set out clearly the expected number and nature of employment opportunities during each phase of the development.*	Following PINS comments an assessment of impacts on the labour market at both the construction and operational phases is set out within Impact 1: Direct Construction Employment Effects, Impact 3: Construction Effects on Supply Chain and GVA, Impact 7: Operational Employment and Impact 9: Operational GVA / Supply Chain Effects. These sections confirm that the effect of employment and skills demand generated by VE are short term and not significant during the construction phase, and represent a potential benefit during both the construction and operation phases. While mitigation is not required to make the effects acceptable in planning terms, an enhancement approach has been taken with the securing of an Outline Skills and

		Employment Strategy (Volume 9, Document 9.27).
PINS Scoping Opinion, November 2021	*The inspectorate suggests that the ES should include information on the impacts of VE on the fishing industry as well as an assessment if LSE are likely to arise from the Proposed Development alone or cumulatively with other projects.*	Information relating to the impacts of VE on the fishing industry is set out within ES Part 2, Chapter 8 (Commercial Fisheries) which consider whether likely significant effects may arise from VE (including cumulative effects).
PINS Scoping Opinion, November 2021	*The inspectorate suggests that the cumulative assessment should include any project with potential to affect the same receptors as the Proposed Development and should not be confined to other OWF. In addition to this, the assessment of cumulative impacts to tourism should consider perception and propensity for visiting and subsequent impact upon tourism.*	Cumulative effects can be found in Section 3.13: Cumulative Effects. This includes effects of all NSIP projects currently listed on Essex County Council and Suffolk County Council websites. This includes offshore wind projects as well as onshore infrastructure where there is potential for the same receptor (for example the labour market or visitor economy / facilities) to be affected. This section includes a consideration of perception and propensity to visit, which draws on the overall approach and principles to likelihood of adverse perception occurring and then translating into behavioural and economic change set out in 3.4 (Assessment Methodology) Impact 4 and 10, and draws upon baseline information set out within 3.6 (Existing Environment) 'Tourism Baseline'.
Community Effects		
12/05/2023 Essex CC s.42 Formal Consultation	*"ECC believe that the potential impacts and disturbance placed on local communities by the construction and operation of onshore transmission networks cannot be adequately dealt with through the planning system and it is necessary for Five Estuaries to*	RWE, the lead developer for VE, has on previous schemes supported the communities in which it operates and has committed to work with communities to develop its approach to supporting the local area. At this stage, the details of

	provide a voluntary Community Benefit Contribution (CBC) package to host local communities. The CBC package would recognise the role of local communities that are being asked to host nationally significant infrastructure projects that will contribute significantly to the government's commitment to Net Zero and energy security" *"ECC expects appropriate and robust mitigation for negative residual impacts on the community and locality, which could be, for example, include but not be limited to, funding for alternative outdoor recreational offers, access and amenity improvements, green space, cultural and heritage enhancements."*	any community benefit package associated with VE have not been finalised. The Applicant will engage local people and groups to help shape how the project can best support the community prior to construction. The Applicant recognises and agrees that any approach to developing community benefits is considered outside of (but informed by the findings of) the formal assessment within the EIA and planning process required by the 2008 Planning Act. It is important to clearly define the approach to community benefit contributions in the context of the mitigation and compensation that is required under EIA regulations and the 2008 Planning Act. The Applicant will continue to work with ECC, TDC and other community stakeholders on this approach.
12/05/2023 Tendring DC s.42 Formal Consultation	*"Tendring District Council requests that it is consulted for a Community Benefit Contribution package for the legacy of the project. A priority for TDC will involve seeking reinforcements to the sea defences and the cycle routes for the affected areas."*	
Employment, Skills and Training		
12/05/2023 Essex CC s.42 Formal Consultation	*"We are of the opinion that skills and workforce planning needs to commence immediately. We need a 'skills pipeline' lead up time to construction and operations."* *"The developer should clearly set out the assumptions about the number of workers required and the skills profile(s) at this early stage. This will inform engagement with local skills providers, educators and ECC. A construction and operational workforce profile would also need to be scoped as this information is*	Details for the number and type of construction and operational jobs by skill or role have been set out within Section 3.10 (Environmental Assessment: Construction Phase) and Section 3.11 (Environmental Assessment: Operational Phase). Further information on the approach to identifying and promoting local employment and skills initiatives is set out within Volume 9, Document 9.27: Outline Skills and Employment Strategy

	required for ECC to help prepare the workforce for the future."	
12/05/2023 Suffolk CC s.42 Formal Consultation	*"Suffolk County Council requests that the following are considered: the Economic Strategy for Norfolk and Suffolk, the Technical Legacy Report for Norfolk and Suffolk along with the County Councils Energy Infrastructure Policy."* *"Suffolk County Council requests that expected number and nature of employment opportunities during each phase of the project are included. These employment opportunities need to be related to the expected availability of labour in the area."* *"Suffolk County Council welcomes the commitment to prepare and implement an Employment, Skills and Education Strategy. Request to engage in order to maximise the benefits"* *"The assessment should include consideration of other infrastructure projects, not just offshore wind farm projects, and identify how any mismatch between supply and demand can be addressed. In addition, how local workforce can be maximised. The construction period for this project is predicted to occur during the middle of the construction period for Sizewell C Nuclear Power Station. It is anticipated that there would be significant cumulative pressure on the available workforce."*	Published research, strategy and policy referring to employment and skills is set out within Section 3.7 (Existing Environment) Section 3.13: Environmental Assessment: Cumulative Effects considers the potential for in-combination effects related to employment and skills, drawing on project information and published information from Local Authorities within the WSA.
12/05/2023 Tendring CC s.42 Formal Consultation	*"Tendring District Council requests engagement on training a local work force in the relevant areas and longer term commitment to apprenticeships."*	Further information on the approach to identifying and promoting local employment and skills initiatives is set out within Volume 9, Document 9.27:

	"Tendring District Council requests further detail on specific schemes that will benefit the employment prospects of the current working and future working population"	Outline Skills and Employment Strategy
Tourism		
12/05/2023 Essex CC s.42 Formal Consultation	*"Seasonal increases as a result of tourism will need to be looked at and mitigated as required to safeguard and where possible enhance the impact the development would have on the tourism sector to protect its attractiveness of the same and safeguard socio economic interests and enhance the same wherever possible."*	Tourism receptors are identified within Section 3.7: Existing Environment, which includes a review of tourist sector employment over time and seasonal differences in occupancy of tourist accommodation. Section 3.10 (Environmental Assessment: Construction Phase) and Section 3.11 (Environmental Assessment: Operational Phase) consider potential likely significant effects on tourism, where relevant, drawing on environmental assessments which consider the effects on designated landscapes such as the AONB (National Landscapes) in the vicinity.
12/05/2023 Suffolk Coast & Heaths AONB Partnership	*"The AONB Partnership consider that the introduction of industrial development impacting the AONBs is likely to have an impact on the tourism industry and should be assessed."*	
12/05/2023 Suffolk CC s.42 Formal Consultation	*"Suffolk County Council has concerns that the project, given its location close to the Suffolk Coast & Heaths AONB, Dedham Vale AONB and other rural areas of Suffolk of importance to the tourism economy, could have impacts upon visitor perception, and visitor numbers, both during construction and during operation, which, in particular in combination with other projects happening simultaneously in the area, could be significant."*	

3.4 ASSESSMENT METHODOLOGY

3.4.1 The assessment of likely significant socio-economic effects within the study areas has been undertaken by reference to the likely changes from the baseline conditions and the effects of those changes as a result of the VE.

3.4.2 There is no specific guidance available which establishes a methodology for undertaking an assessment of the various potential likely significant socio-economic effects of a development. Accordingly, the approach adopted for this assessment was based on professional experience and best practice, and in consideration of the policy and baseline context of each type of effect and characteristics of each receptor.

3.4.3 Unless otherwise stated within this chapter, the methodology applied accords with the standard methodology set out within Part 1, Chapter 3 of the ES (EIA Methodology).

3.4.4 The impact assessment outlines the socio-economic receptor relevant to each socio-economic impact and the spatial levels the potential significant effect may occur, along with details of the methodology used and the rationale for the approach. This is influenced by the existing conditions experienced by the receptor and its sensitivity to change. This is the project standard methodology which looks at the magnitude and sensitivity of all socio-economic impacts in order to identify whether these impacts are either major, moderate, minor or negligible. These impacts are also identified to be either adverse, neutral or beneficial.

SCOPE AND METHODOLOGY

IMPACTS SCOPED IN FOR ASSESSMENT

3.4.5 The scope of the socio-economic assessment considers the following construction and operational phase impacts:

a) Construction Impacts:

- Direct construction employment effects
  - Employment supported
  - Effect on labour market and skills
- Construction workforce spending
- Construction effects on supply chain and GVA
- Effects on tourism and tourist accommodation
  - Effects on tourist perception
  - Effects on tourist accommodation
- Effects on community and recreation facilities and amenity
  - Effects on Community Facilities
  - Effects on Public Rights of Way
- Effects on public services
  - Effects on healthcare

b) Operational Impacts:

- Operational employment
- Indirect effects of operational employment (workforce spending)
- Operational GVA / supply chain effects

- Effects on tourism
- Effects on community and recreation facilities/activities and amenity

3.4.6 Effects relating to the decommissioning phase mirror the construction phase where practicable and are subject to the level of information available about both receptors and effects at that stage.

IMPACTS SCOPED OUT OF ASSESSMENT

3.4.7 As set out in the Scoping Opinion (The Planning Inspectorate (PINS), 2021), the following aspects are scoped out of the assessment:

- Impact of construction on demand for housing and schools;
- Impact of construction, operation or decommissioning on indoor recreational facilities such as gyms;
- Impact on the Local Area of Influence due to presence of onshore infrastructure during operational phase; and
- Transboundary impacts.

STUDY AREAS

3.4.8 The assessment of potential socio-economic effects covers a number of different aspects of VE on different sensitive receptors including the labour market and local, regional and national economy, local residents and the community facilities, recreational facilities and commercial facilities that they access.

3.4.9 Due to the different types of effects and sensitive receptors within this assessment, there are a number of different study areas. These have been determined by the extent of the potential effect and the sensitivity of the receptor. In some cases, the spatial scale of the assessment was driven by the location and number of receptors, and the physical extent of environmental change to these individual receptors. For example effects on tourism may be defined based on the location of onshore and offshore infrastructure and the areas where likely significant effects are identified on receptors identified as having a role and value to the tourist economy (for example landscape and visual and cultural heritage effects and receptors).

3.4.10 In general, a Wider Study Area (WSA) (defined as Suffolk and Essex County Councils) is used to consider labour market, supply chain and effects on the wider economy (such as those relating to tourism). The WSA is shown in Figure 3.1.

610000
620000
630000
230000
220000
210000
N
Harwich
Wivenhoe
Brightlingsea
Clacton-On-Sea
Frinton-On-Sea
Walton-On-The-Naze
Mersea Island
Mersea Flats
A120
A133
A137
A12
A17
Nottingham
Leicester
Peterborough
Norwich
Bedford
Milton Keynes
Luton
London
Reading
Suffolk
Essex
0 10 20 40
Kilometers

LEGEND

- Onshore Order Limits
- Tendring
- East of England
- Essex
- Suffolk

0 1 2 4
Kilometers

Data Source:
Contains OS data © Crown Copyright and database right 2020

PROJECT TITLE:

FIVE ESTUARIES OFFSHORE WINDFARM

DRAWING TITLE:

Site Context

VER	DATE	REMARKS	Drawn	Checked
1	08/02/2024	For Issue	BPHB	MB

DRAWING NUMBER: 3.1

SCALE:	PLOT SIZE:	DATUM:	PROJECTION:
1:100,000	A3	OSGB 1936	BNG

FIVE ESTUARIES
OFFSHORE WIND FARM

3.4.11 It is expected that non-local workers would be prepared to travel up to 45 minutes to reach construction sites. Therefore, non-local workers are assumed to locate in either Tendring, Colchester Borough, Maldon District, and Braintree District within Essex County and Ipswich Borough, Babergh District, and East Suffolk District within Suffolk County. This Local Study Area (LSA) is therefore used to assess effects on tourist sector accommodation used by non-local construction workers.

3.4.12 Planning for primary healthcare services such as GP provision is undertaken at an administrative scale of Integrated Care Boards (ICBs) within the National Health Service (NHS). VE's onshore area is wholly within the Suffolk and North East Essex ICB, though the LSA extends into part of the Suffolk and North East Essex ICB and Mid and South Essex ICB. This scale is therefore used to assess effects on public services used by non-local construction workers.

3.4.13 A Local Area of Impact (LAI) is also used to consider effects related to environmental impacts reported elsewhere in the ES that may contribute to an effect on community, recreational or tourist receptors. Unless otherwise dictated by the extent of effects or Zone of Influence identified by other assessments, this is set at 500m from the Order Limits (see Figure 3.4).

DATA SOURCES

PUBLIC DATA

3.4.14 Baseline socio-economic conditions that are of relevance to the assessment contained within the ES chapter were established through analysis of nationally recognised research, survey information and datasets including the following:

- Census data (2011);
- Census data (2021);
- Business Register and Employment Survey (2022);
- Annual Survey of Hours and Earnings (2023);
- UK Business Counts (2023);
- Annual Population Survey (2023);
- Claimant Count (2023) Jobseekers Allowance (2023);
- Indices of Multiple Deprivation (2019);
- Regional Gross Value Added by Industry (2023);
- Regional Gross Value Added by Industry: Local Authorities (2018);
- GCSE Exam Attainment Levels (2022); and
- Visitation of local authorities and counties for overnight trips and day visits (2023).

GUIDANCE AND LITERATURE

3.4.15 Guidance used and referred to within this chapter includes the following:

- BVG Associates, 2015. Methodology for measuring the UK content of UK Offshore Wind Farms
- Construction Industry Joint Council (2023). Resolution and Promulgation Working Rule Agreement.

- CITB, 2023. Workforce Mobility and Skills in the UK Construction Sector – East of England Report 2022.
- Healthy Urban Development Unit, (2009). HUDU Model.
- Visa Europe. (2014). UK Working Day Spending Report.

ASSESSMENT CRITERIA AND ASSIGNMENT OF SIGNIFICANCE

SENSITIVITY

3.4.16 In general, the sensitivity of the socio-economic receptors takes account of the importance attached to each receptor in policy terms and the characteristic of the baseline environment and ability of the receptor to absorb or respond to change, and where practicable draws on measurable indicators such as the scale of these receptors identified in the baseline, to gauge the receptor's sensitivity. Receptor sensitivity definitions are summarised in Table 3.3.

Table 3.3: Receptor Sensitivity Definitions

Sensitivity	Description/ reason
High	- The socio-economic receptor has limited capacity to absorb or respond to change without noticeable socio-economic loss or gain. - Receptor is of high importance (for example as dictated by national policy), with limited potential to substitute with other options or experiencing change as to render impossible its intended use.
Medium	- The socio-economic receptor has some capacity to absorb or respond to change and may result in some perceptible socio-economic loss or gain. - Receptor is of medium importance (for example as dictated by local policy, usage and accessibility), with some potential to substitute with other options or experiencing change as to alter its intended use.
Low	- The socio-economic receptor has the capacity to absorb or respond to change with hardly perceptible socio-economic loss or gain. - Receptor is of low importance (for example as dictated by local policy, usage and accessibility), with moderate potential to substitute with other options or experiencing little change as to alter its intended use.
Negligible	- The socio-economic receptor has the capacity to absorb or respond to change with no socio-economic loss or gain.

MAGNITUDE

3.4.17 The magnitude of change upon each receptor was determined by considering the change experienced from the baseline conditions, subject to the consideration of mitigation. The criteria used for the assessment of magnitude of change, can either be positive (beneficial) or negative (adverse) as shown in Table 3.4.

Table 3.4: Impact Magnitude Definitions

Magnitude	Description / Reason
High	> Substantial change to the socio-economic receptor in terms of employment levels, output or productivity. > Loss without replacement, or substantial increase/decrease in journey length of PRoW and/or travel patterns > Loss without replacement, or substantial change in accessibility to or amenity of community and recreational infrastructure.
Medium	> Notable change to the socio-economic receptor in terms of employment levels, output or productivity. > Notable increase/decrease in journey length of PRoW and/or travel patterns. > Notable change in capacity of or accessibility to or amenity of community and recreational infrastructure.
Low	> Slight / hardly perceptible change to the socio-economic receptor in terms of employment levels, output or productivity. > Slight / hardly perceptible increase/decrease in journey length of PRoW and/or travel patterns > Slight / hardly perceptible change in capacity of or accessibility to or amenity of community and recreational infrastructure.
Negligible	> No perceptible change to the socio-economic receptor in terms of employment levels, output or productivity. > No perceptible increase/decrease in journey length of PRoW and/or travel patterns. > No perceptible change in capacity of or accessibility to or amenity of community and recreational infrastructure.

SIGNIFICANCE

3.4.18 Effects are considered significant in EIA terms if they have a significance rating of moderate or major. The significance rating of each likely effect was assessed based on the magnitude of change due to VE and the evaluation of the sensitivity of the affected receptor as shown in Table 3.5. Effects can be adverse or beneficial.

Table 3.5: Matrix to Determine Significance of Effect

Magnitude		Receptor Sensitivity	Sensitivity			
			High	Medium	Low	Negligible
Adverse		High	Major	Major	Moderate	Minor
		Medium	Major	Moderate	Minor	Negligible
		Low	Moderate	Minor	Minor	Negligible
Neutral		Negligible	Minor	Minor	Negligible	Negligible
		Low	Moderate	Minor	Minor	Negligible
Beneficial		Medium	Major	Moderate	Minor	Negligible
		High	Major	Major	Moderate	Minor

IMPACT 1: DIRECT CONSTRUCTION EMPLOYMENT EFFECTS

CONSTRUCTION ROLES SUPPORTED

3.4.19 During the construction phase, employment will be supported as a result of the following labour and goods elements of the supply chain, as informed by standard methodology for determining economic impacts from offshore wind published by BVG Associates (BVG Associates, 2015)

- Development and Project Management:
  - Onshore developing, engineering, and permitting (Onshore)
  - Offshore developing, engineering, and permitting (Offshore)
  - Project management (technical and nontechnical) (Onshore)
- Turbine Supply:
  - Turbine nacelle and hub (Offshore)
  - Turbine blades (Offshore)
  - Turbine tower (Offshore)
  - Turbine other (Offshore)
- Balance of Plant Supply:
  - Foundation (Offshore)
  - Array cable (Offshore)
  - Onshore export cable (Onshore)
  - Cable protection (Offshore)

- Offshore export cable (Offshore)
- Onshore substation equipment and components (onshore electricals and buildings, access and security) (Onshore)
- Offshore substation (offshore electricals, foundation and topside) (Offshore)
- Others (cables design) (Offshore)

- Installation and Commissioning:
  - Turbine installation and commissioning (Offshore)
  - Foundation installation (Offshore)
  - Array cable installation (Offshore)
  - Offshore export cable installation (Offshore)
  - Offshore substation installation (Offshore)
  - Onshore substation installation (Enabling works, Buildings, Steel fabrications, Civil works, Site management and Electrical works) (Onshore)
  - Onshore export cable installation (Horizontal direct drilling, Civil works and Cable terminations) (Onshore)
  - Operations base construction (Materials, Equipment and Labour) (Onshore)

3.4.20 Annex 6.3.1 sets out the overall assumptions on construction and operation GVA and FTE years of employment supported by each element of the Project.

DEVELOPMENT AND PROJECT MANAGEMENT

3.4.21 For the project management and surveying work and engineering and design services, particularly those related to substations and onshore cable routing with associated transmission services related to construction activity, some local contractors are likely to be used where practicable. However it is not likely that a substantial proportion of this activity and employment would be local. This element is not included within the assessment as it would likely be drawn from existing consultancy and services provided nationally and likely to be prior to the assessment phases (construction, operation and decommissioning) of VE.

TURBINE / BALANCE OF PLANT SUPPLY

3.4.22 The supply of turbines and other balance of plant supply (i.e. turbine foundations, array cables, export cables, onshore substations, and offshore substations) is unlikely to be locally sourced – with no companies capable of manufacturing nacelles or towers in the UK at present (although some components will be sourced from the UK) and limited supply of materials related to cables or electricals within the substation (though support activities may be drawn locally – such as security systems, access and building materials).

INSTALLATION AND COMMISSIONING (CONSTRUCTION ACTIVITY)

3.4.23 The principal direct (onshore) employment effects supported by VE are expected to be generated by the onshore civils work related to the installation and commissioning of the export cable and onshore substation.

- For substation construction – employment sourced from the labour market of the WSA (which is a proxy for the regional economy based on observed trends in construction labour mobility) is likely to be in the form of enabling works, buildings, steel fabrications, civil engineering works, and site management. It is estimated that the WSA-based content for this activity could be around 30%, while the remainder would be sourced from the UK and internationally.
- The installation of onshore export cables also present opportunities for the WSA's companies and labour market. This involves excavating the cable route, performing horizonal directional drilling where excavation is not possible, and cable terminations. Supporting civils activities such as road cleaning, traffic management, signage and security is also likely to be sourced more locally. It is estimated that the WA-based content for this activity could be around 30%, while the remainder would be sourced from the UK and internationally.
- The construction of an operations base (should a new base be required rather than use of an existing port) would likely draw on local suppliers for materials, equipment and labour. The location of the operations base will not be confirmed until closer to the start of construction.
- VE will include the junction improvements and the widening of Bentley Road, with Route Section 5 extending from the north of the crossing of the A120 to Bentley Road and Route Section 6 extending from Bentley Road to the crossing of Ardleigh Road. Junction improvement works are also proposed where Bentley Road meets the A120, with further widening of the public highway needed to along Bentley Road to where it meets a Temporary Construction Compound. Employment related to this element is likely to be sourced from within the WSA and would mainly comprise civils construction skills.

3.4.24 The principal direct (offshore) employment effects supported by VE during the construction phase are expected to be generated by the installation and commissioning of turbines and foundations, array cables and offshore substation. In general, UK and local suppliers provide support services including marshalling while installation crew is often internationally sourced, resulting in very low local content for these activities and relatively low UK-based content overall.

SPATIAL SCALE AND APPROACH TO SIGNIFICANCE

3.4.25 Construction employment is highly mobile, and travel-to-work patterns are far wider than average with Construction Industry Training Board ('CITB') surveys showing workers travelling up to 50 miles / 90-minutes daily on a regular basis. In the East of England, 29% of construction workers live outside of the region that they work in, and 66% travel more than 20 miles to work (35% travel more than 50 miles).

3.4.26 The nature of construction is that employees move from project-to-project and site-to-site but remain with a single employer who would be sub-contracted to work on a specific project. Survey data from CITB suggests that in the East of England, only 13% expect to work on the same site for more than one year.

3.4.27 As such, the sensitive receptor is considered to be the construction labour market, and is assessed at the WSA and National scale.

IMPACT 2 AND 8: CONSTRUCTION / OPERATIONAL WORKFORCE SPENDING

3.4.28 The level of workforce expenditure for resident workers has been estimated based on survey information carried out by research agency Loudhouse for Visa Europe, identifying an average spend per day of £11 per employee. Adjusting for inflation this was revised to £13.10 per employee (Visa Europe, 2014).

3.4.29 The level of workforce expenditure for non-local construction workers has been estimated based on the current (2023) Construction Industry Joint Council (CIJC) Working Rule Agreement (WR.15) which states that with effect from the 10th of July 2023 subsistence payments for workers staying away from their permanent address for the short-term purposes of construction employment would be £49.08 per night (Construction Industry Joint Council, 2023).

3.4.30 The receptor for workforce spending effects is the economy of the WSA.

IMPACT 3 AND 9: CONSTRUCTION / OPERATIONAL EFFECTS ON SUPPLY CHAIN AND GVA

3.4.31 Production of materials, and their installation at VE, along with goods and labour associated with the construction activity and operational activity, will result in indirect economic effects. These effects would largely be determined by where the contracts for materials are procured. As the direct effects of employment and indirect effects of Gross Value Added (GVA) related to worker output and spending are addressed above, the remaining element is expenditure on supply chain activities.

3.4.32 GVA resulting from direct jobs has been calculated by applying the average GVA per worker (specific to the construction sector) in the East of England Region to the number of direct jobs supported by VE.

3.4.33 The receptor for output effects is the relevant construction and operational economy determined by Standard Industrial Classifications (SICs) for each phase relevant to the type of activity. Effects have been assessed at a National and Regional (construction) and WSA (operation) scale to reflect the likely distribution of resident location of construction workers based on CITB survey data and the reported likelihood of supply chain being sourced locally, and operational workforce drawn from the WSA.

IMPACT 4 AND 10: CONSTRUCTION / OPERATIONAL EFFECTS ON TOURISM

3.4.34 The overarching National Policy Statement for Energy (EN-1) (Department for Energy Security and Net Zero, 2024) states that the construction, operation and decommissioning of energy infrastructure may have socio-economic impacts and that:

"Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES… which may include effects on tourism" (paragraph 5.13.2-6).

3.4.35 It also sets out that that:

"The Secretary of State may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in this NPS)" (paragraph 5.13.10).

3.4.36 As such, policy dictates that any potential effects on tourism should be evidence-based and therefore draw upon secondary data sources including public data, local/regional published assessments, and literature review, as well as a summary of reported likely significant effects across the range of environmental topic areas that may contribute to visitor amenity or the operation of existing tourist sector businesses and facilities.

3.4.37 Effects on tourism during the construction phase may relate to:

a) The temporary use of local tourist accommodation by non-local construction workers; and

b) Perceived and actual environmental change to areas and receptors with tourist value.

USE OF TOURIST ACCOMMODATION

3.4.38 It is anticipated that construction workers moving temporarily to the area would seek short-term accommodation in a range of types of tourist accommodation including serviced and self-catering sectors. The assessment considers the existing supply and occupancy level to determine the level of impact based on average construction workforce assumptions.

3.4.39 The receptor for this assessment is therefore the tourist accommodation market of the LSA as workers moving to the area are likely to seek accommodation relatively close to the site (within 45 minutes).

VISITOR PERCEPTION

3.4.40 Some stakeholders have raised concerns that the VE construction phase may lead to a reduction in visitor numbers and therefore their spending, affecting the overall output of the tourist economy and businesses within it.

3.4.41 Results from perception surveys often conclude that there is a potential for negative impacts on tourism from offshore wind developments. However, these perception surveys tend to be conducted prior to development and primarily utilise stated preference approaches, which introduce a significant limitation to the data due to their reliance on hypothetical questioning. In contrast to perception-based studies, a different body of research investigated the actual effects of wind farm developments on tourists' revealed preference and behaviours during the construction phase.

3.4.42 Empirical evidence on this that meets the test in NPS EN-1 is difficult to extricate from the many other factors that influence tourism, and would be based on ex-ante perception which may not translate to actual effects. Stakeholders have identified a number of risks, but there is limited empirical evidence to support the position that these would lead to likely significant effects.

3.4.43 The latest large-scale ex-post studies have found that the development of wind farms in rural areas of Wales (Regeneris and The Tourism Company, 2014) and Scotland (Biggar Economics, 2017) have not had a measurable impact on the tourism economy post-development.

3.4.44 The sensitivity of visitors and tourists to change is subject to the level of motivation to continue using the area and the perception of individuals in relation to the actual construction impacts on tourist resources and the characteristics of the tourist 'draw'.

3.4.45 Studies (Glasgow Caledonian University, 2008), (Aitchson, C et al, 2004) have found that around between 86.7% - 99% of people report that the construction of wind farms would not affect their decision to return or go to an area in the future, and that around 75% to 78% of tourists surveyed either had a neutral or positive view of wind farms (Glasgow Caledonian University, 2008) (NFO World Group for Wales Tourist Board, 2003).

3.4.46 This is also supported by a collation of studies (Alem et al., 2020) reviewing the tourism and recreation impacts of offshore windfarms, noting that the majority of studies conclude no significant effects to tourists and people engaging in recreational activities.

3.4.47 The most recent publication on perceptions authored by the Scottish Government in 2022, identifies that at least 80% of respondents either strongly approve or tend to approve of offshore wind farms, and 81% stated that they are unconcerned about visiting or holidaying in areas where an offshore wind farm is visible.

3.4.48 Some studies suggest that attitude formation may also be dependent on the type and frequency of usage of the beachfront and the coastal area. For example, seasonal independent visitors such as local residents and repeat tourists tend to have a stronger connection to the coast and thus stronger attitudes regarding the wind farm compared to non-frequent visitors such as high season tourists (Ladenburg 2009).

3.4.49 Business owners can have significant opposition to wind farm development because they perceive that they would have an adverse effect on the landscape and tourism industry. Three studies of specific wind farms show that this perception reduces over time (Aitchison 2004, Eltham et al. 2007, and SCIRA, 2012) and is heavily influenced by the level of community engagement led by the developer (Aitchison 2004 and 2012, and Eltham et al. 2007). Once wind farms have been developed, acceptance tends to improve, and if additional benefits can be found (such as visitor centres or operational employment), then the opinions of tourism businesses also improve.

3.4.50 Another study undertaken by ERM (2014) on behalf of the National Grid examined the tourism impacts of major energy infrastructure in the UK and suggests that neither business owners nor recreational users expect such projects to change their business performance or visiting and spending decisions respectively

3.4.51 There is no direct causality behind attitudes towards or against offshore wind projects, since they are influenced by a complex set of factors such as demographics and the proximity of the wind farm to shore. Studies examining post-development behaviours and expenditures also reported that wind farm developments have no measurable effects upon the local tourism economy.

3.4.52 Additionally, it is important to note that off the Essex and Suffolk coast there are already a number of operational offshore wind projects that form part of the existing seascape. The majority of these offshore wind projects have been operational before 2019 and no discernible effects on the local tourism economies of Essex and East Suffolk can be seen in the tourism statistics reported within the Existing Environment section of this chapter.

3.4.53 As such, the approach to impact assessment considers actual environmental effects to be material to the assessment of significance rather than perceived effects and this therefore forms the basis for the assessment.

ENVIRONMENTAL CHANGE / EFFECTS ON RECEPTORS

3.4.54 The tourist economy is determined by the number and type of receptors including attractions and facilities, accommodation and recreational interests that form the areas wider tourist 'draw'. This chapter has reviewed the environmental effects on such receptors relating to landscape and visual, cultural heritage, traffic and transport, noise and air quality (relating to onshore effects) and seascape and navigation effects related to offshore receptors.

3.4.55 This socio-economic assessment reports where there is likely to be more than one likely significant residual effect on amenity across these environmental assessments, and describes mitigation related to them. It does not attempt to quantify the in-combination amenity effects of different environmental effects on the tourist economy given the number of variables and externalities but presents a summary of potential effects based on professional judgement.

3.4.56 This assessment takes into account the likelihood of impacts translating to negative perceptions and then translating to visitor behavioural changes. This considers literature review and public datasets, as well as published materials relating to the value, volume and key characteristics of tourism in the WSA and Tendring in particular.

IMPACT 5 AND 11: CONSTRUCTION / OPERATIONAL EFFECTS ON COMMUNITY AND RECREATIONAL FACILITIES AND AMENITY

3.4.57 Effects on community and recreational facilities including Public Rights of Way (PRoW) are determined by the extent to which there are local community and commercial facilities, landscape or cultural heritage receptors in the area likely to be affected by the construction and operation of the Project in terms of accessibility and changes to environmental amenity.

PUBLIC RIGHTS OF WAY AND ACCESS

3.4.58 Regarding PRoW – the effects assessed by this chapter are distinct from those assessed by ES Volume 6, Part 3, Chapter 8: Traffic and Transport which assess effects related to users of PRoW as follows:

- Severance of communities (for example, as a result of changes in traffic flows on roads crossed by PRoW);
- Non-motorised user delay and amenity (for example, where users of the highway including walkers, cyclists and horse riders may experience change in journey time or amenity as a result of a change in traffic flows); and

- Road user and pedestrian safety (where this relates to changes in traffic flows interacting with paths and highway used by walkers, cyclists and horse riders).

3.4.59 The assessment within this chapter instead considers the ability for people to continue to use PRoW for recreational and connectivity purposes, in order to access commercial, recreational, community facilities and social networks and to undertake recreational active travel as intended by the purpose of the PRoW. It considers whether the PRoW network is affected by temporary disruption (for example iterative closure) or diversion which would increase journey length.

EFFECTS ON COMMUNITY AND RECREATIONAL FACILITIES

3.4.60 The direct and indirect environmental effects from the VE on residents, businesses, community facilities, and recreational facilities were primarily assessed in other chapters of the ES.

3.4.61 This socio-economic assessment reports where there is likely to be more than one likely significant residual effect on amenity across these environmental assessments, and describes mitigation related to them. It does not attempt to quantify the in-combination amenity effects of different environmental effects on socio-economic receptors.

3.4.62 The assessment sets out how the design of the VE, and any mitigation measures required, will address any potential negative effects on amenity and accessibility arising from the construction and operation of the Project.

3.4.63 The receptor for these effects is the local community, with the scale determined by the scale of assessments within the other assessments within the ES.

IMPACT 6: CONSTRUCTION EFFECTS ON PUBLIC SERVICES (HEALTHCARE)

3.4.64 Non-local construction workers staying in the area temporarily may seek basic health services when they are in the local area, and may also require public ambulance, GP and hospital services in very limited and urgent circumstances.

3.4.65 An assessment has been made considering the net additional effect in terms of potential shift patterns and type of accommodation used, tenure at VE and likelihood of registering with a local GP to quantify the scale (magnitude) of effect based on the existing GP list sizes locally (influencing the sensitivity of the receptor).

IMPACT 7: OPERATIONAL EMPLOYMENT

3.4.66 During the operational phase, employment will be supported as a result of the following labour and goods elements of the supply chain, as informed by standard methodology for determining economic impacts from offshore wind published by BVG Associates:

- Operations, Maintenance and Service:
  - Operations (wind farm administration, Vessel operation and Training and health and safety);
  - Turbine maintenance (Routine and minor maintenance, and Major component maintenance);

- Balance of plant maintenance (Foundations, Offshore cable, Substation and Transmission maintenance onshore)
- Fees, rent and transmission charges

3.4.67 The majority of this employment supported is related to the offshore infrastructure, with the exception of the transmission maintenance onshore.

3.4.68 Operational activities would support permanent employment which could relate to options available for existing bases like Harwich, Lowestoft and Great Yarmouth from which wind farm administrative staff could be based, subject to decisions on recruitment.

3.4.69 Crew transfer vessels (CTVs) would be used to transfer technicians to the wind farm offshore. Local experience and knowledge built up from Greater Gabbard and from other maritime sectors is drawn upon to estimate the local content of this employment.

3.4.70 Training and health, and safety roles would be national in nature with some limited support from local suppliers.

3.4.71 Scheduled minor maintenance is likely to be undertaken using local labour while some contractor work is led by UK suppliers on a peripatetic basis. It is not anticipated that major component maintenance will be undertaken locally – sourcing of spare parts, consumables and major unplanned maintenance are likely to use national and international sources.

3.4.72 Foundation, offshore cable, substation, and transmission maintenance and components is likely to be national in nature with some opportunities for local support services.

3.4.73 The assessment considers the totality of direct, indirect and induced GVA and therefore FTEs supported through direct contracts sourced by VE and its major contractors, as well as nonmajor suppliers to the project partners and the suppliers to the project's major contractors, and GVA/employment supported by the personal expenditure of workers employed as a result of VE activity, both direct and indirect. In general, around 50% of the total economic effect falls into the 'direct' category.

3.5 UNCERTAINTY AND TECHNICAL DIFFICULTIES ENCOUNTERED

PROJECT ASSUMPTIONS

3.5.1 For the purposes of this assessment, no additional Project Assumptions are included to those set out within Volume 6, Part 3, Chapter 1 (Onshore Project Description), and Volume 6, Part 2, Chapter 1 (Offshore Project Description), or as set out within Assessment Criteria an Assignment of Significance section (Section 3.5) and Parameters for Assessment section of this chapter (Section 3.8).

LIMITATIONS OF DATA / METHODOLOGY

3.5.2 There are no standard technical significance criteria relating to the assessment of socio-economic effects. The assessment was made against a benchmark of current socio-economic baseline conditions prevailing at, within, or around the appropriate spatial study area for each effect.

3.5.3 As with any dataset, baseline data will always change over time. The most recent published data sources were used in this assessment; however, it should be noted that in some instances this data may be older than the true baseline. This is an unavoidable limitation that is not considered to adversely impact the validity of the assessment undertaken to identify the likely significant socio-economic effects.

3.6 EXISTING ENVIRONMENT

DEMOGRAPHIC BASELINE

POPULATION AND POPULATION DENSITY

3.6.1 Tendring district has a population of 148,300 (Census 2021, Population estimates). The WSA includes the counties of Essex and Suffolk which have total populations of 1,504,000 and 760,700, respectively.

AGE PROFILE

3.6.2 Compared to wider scales, Tendring has a greater proportion of older people (14%) when compared to proportions in Essex (10%), Suffolk (11%), East of England (9%) and England (9%). Tendring also has a lower proportion of working aged people when compared to wider scales (see Table 3.6):

Table 3.6: Age Profile

Area	% aged 0-15	% Working Age (16-74)	% Older People (Age 75+)
Tendring	16%	70%	14%
Essex	19%	72%	10%
Suffolk	17%	72%	11%
East of England	19%	72%	9%
England	19%	73%	9%

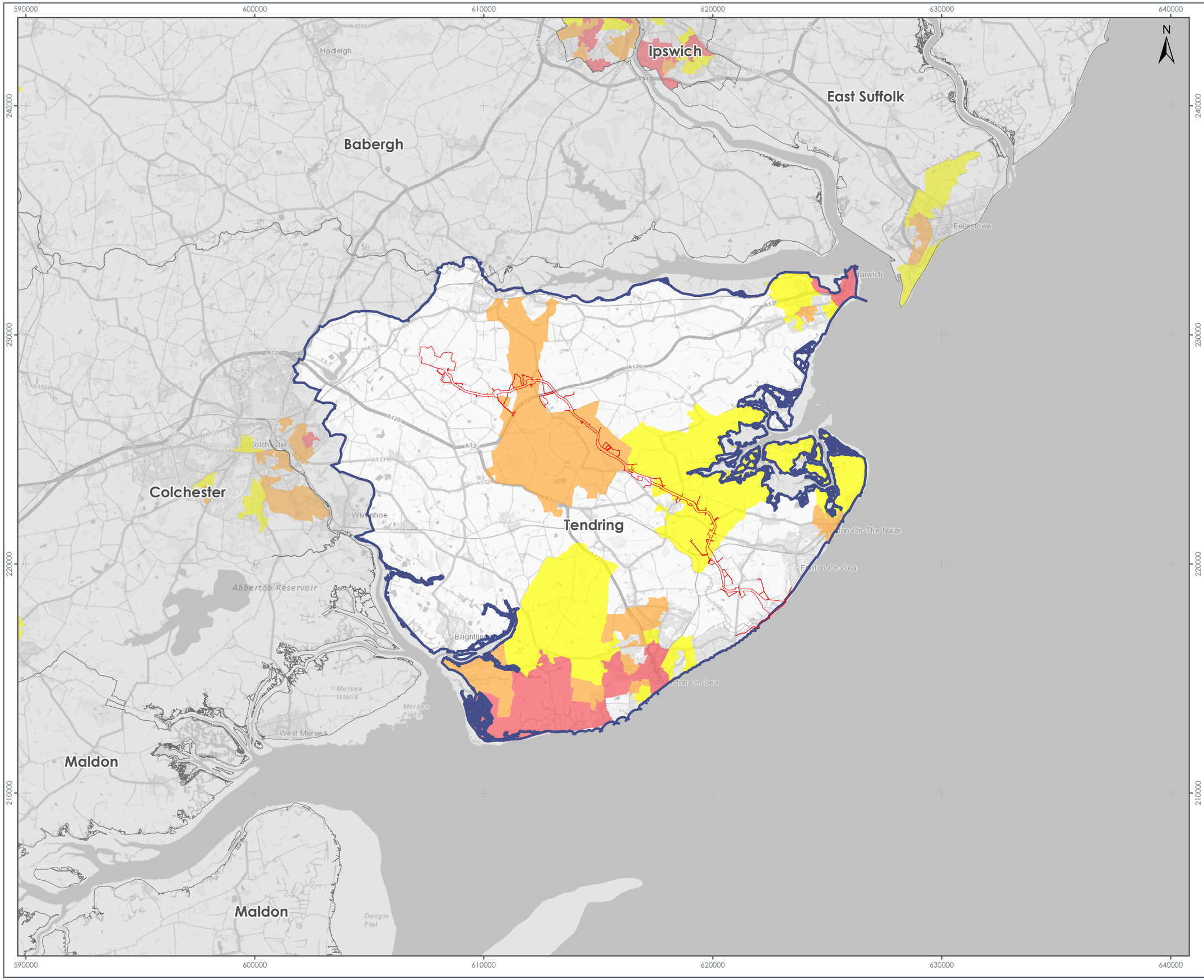
DEPRIVATION

3.6.3 The Government's Index of Multiple Deprivation (IMD) (2019), measures deprivation by combining indicators including a range of social, economic, environmental, and housing factors to give a single deprivation score for lower-layer super output areas ('LSOAs') in England. All areas are ranked relative to one another according to their level of deprivation. Seven domains of deprivation are included in the combined score:

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

3.6.4 Figure 3.2 shows the relative levels of deprivation surrounding the site, which indicates that VE falls within areas that are within the 20% and 30% most deprived areas within England, while there are also some areas to the west and within south western part of Tendring that are amongst the 10% most deprived areas in England.

3.6.5 This deprivation in the immediate areas surrounding the site is primarily driven by the living environment, crime, and health domains of the IMD, although at a wider scale the domain of employment and skills drives deprivation indicators.



LEGEND

- Onshore Order Limits
- Local Authority Districts
- Tendring

IMD (2019)

- Top 10% Most Deprived
- Top 20% Most Deprived
- Top 30% Most Deprived

0 1 2 4
Kilometers

Data Source:
Contains OS data © Crown Copyright and database right 2020

PROJECT TITLE:

FIVE ESTUARIES OFFSHORE WINDFARM

DRAWING TITLE:

Indices of Multiple Deprivation (IMD)

VER	DATE	REMARKS	Drawn	Checked
1	08/02/2024	For Issue	BPHB	MB

DRAWING NUMBER: 3.2

SCALE:	PLOT SIZE:	DATUM:	PROJECTION:
1:150,000	A3	OSGB 1936	BNG

FIVE ESTUARIES
OFFSHORE WIND FARM

ECONOMIC BASELINE

JOBS

3.6.6 The latest employment estimates for Tendring are for 2022, published in 2023 (ONS, 2023, Business Register and Employment Survey). At that time, there were an estimated 49,500 employee jobs across Tendring, while the total employment including self-employed jobs was slightly higher at 51,000.

3.6.7 There were recorded to be approximately 605,000 and 333,500 employee jobs in Essex and Suffolk, respectively, which was also lower that the total employment figures for each of these county areas. Just over 8% of both employee jobs and total employment in Essex were located in Tendring. These figures are summarised in Table 3.7.

Table 3.7 – Employment Estimates

Area	Employee Jobs (2022)	Total Employment (2022)
Tendring	49,500	51,000
Essex	605,000	622,500
Suffolk	333,500	347,000
WSA	**938,500**	**969,500**
England	27,152,500	27,952,000

3.6.8 According to data from BRES, there has been relatively high growth in total employment between 2015 and 2022 within Tendring (24%), which was greater than growth rates in Essex (7%), Suffolk (6%) and East of England (7%) and England (8%).

3.6.9 The growth rates in employment jobs across these spatial areas is similar to the growth for employee jobs, with Tendring recorded to have the highest growth rate at 24% when compared to lower rates in Essex, Suffolk, the East of England and England (7%, 6%, 7% and 8%, respectively). These figures are summarised in Table 3.8.

Table 3.8 – Employment Growth 2015-2022

Area	Total Employment (2015)	Total Employment (2022)
Tendring	41,000	51,000
Essex	583,500	622,500
Suffolk	327,000	347,000
WSA	910,500	969,500
England	25,933,500	27,952,000

SECTORS

3.6.10 Employment jobs by industry at the county, WSA and national levels are set out in Table 3.9.

Table 3.9 – Employment by Industry

	Essex		Suffolk		England	
	Jobs	%	Jobs	%	Jobs	%
Agriculture, forestry & fishing	9,000	1.4%	11,000	3.2%	362,000	1.3%
Mining, quarrying & utilities	7,000	1.1%	4,750	1.4%	308,000	1.1%
Manufacturing	41,500	6.7%	29,500	8.5%	2,057,500	7.4%
Construction	55,500	8.9%	22,500	6.5%	1,381,000	4.9%
Motor trades	15,000	2.4%	8,500	2.5%	496,500	1.8%
Wholesale	27,000	4.3%	12,000	3.5%	1,057,000	3.8%
Retail	59,000	9.5%	32,500	9.4%	2,357,500	8.4%
Transport & storage	34,500	5.5%	22,500	6.5%	1,423,000	5.1%
Accommodation & food services	50,500	8.1%	29,000	8.4%	2,197,500	7.9%

	Essex		Suffolk		England	
	Jobs	%	Jobs	%	Jobs	%
IT & communication	17,000	2.7%	9,500	2.7%	1,305,500	4.7%
Financial & insurance	25,000	4.0%	7,500	2.2%	918,500	3.3%
Property	13,000	2.1%	5,500	1.6%	571,500	2.0%
Professional, scientific & technical	41,500	6.7%	17,500	5.0%	2,641,500	9.5%
Business administration & support services	52,500	8.4%	36,500	10.5%	2,529,500	9.0%
Public administration & defence	21,000	3.4%	14,000	4.0%	1,173,500	4.2%
Education	49,000	7.9%	27,000	7.8%	2,322,000	8.3%
Health	79,500	12.8%	42,500	12.3%	3,616,000	12.9%
Arts, entertainment, recreation	25,500	4.1%	14,500	4.2%	1,234,000	4.4%

CONSTRUCTION SECTOR JOBS

3.6.11 There were around 3,175 jobs within the construction sector[1] within Tendring, 55,750 construction jobs in Essex and 201,000 construction jobs within the East of England. These estimates include self-employed jobs. The breakdown of employment in construction and related activities is presented in Table 3.10.

3.6.12 It is important to distinguish between data which includes self-employment and that which does not because self-employment is very important in the construction sector due to contractors and sub-contractors not employing people directly.

3.6.13 When looking at the growth of the number of jobs within the construction sector between 2016 and 2022[2], the index growth within Tendring (124.8) is greater than the index growth at the national level (113.7) but lower than index growth rates within Essex, Suffolk and the East of England over the same period (128.9, 128.2 and 125.2, respectively).

[1] Employment jobs within the following SIC Codes: SIC 41, SIC 42 and SIC 23
[2] Using 2016 as the base year (2016 = 100)

Table 3.10 – Employment in Construction and Related Activities

Area	Construction of buildings (SIC 41)	Civil engineering (SIC 42)	Specialised construction activities (SIC 43)
Essex	16,000	4,750	35,000
Suffolk	6,000	4,250	12,500
WSA	22,000	9,000	47,500
England	455,000	163,500	762,500

3.6.14 When analysing 2 digit SIC code data from the 2022 BRES for Tendring District against the national average, the construction sector[3] has a location quotient of 1.26, which suggests that the concentration of jobs within the construction sector in Tendring is higher than the concentration nationally.

3.6.15 In addition to this, the construction sector within Essex has a location quotient of 1.81 when compared against the national average, which suggests that the concentration of construction jobs within Essex is almost twice the concentration at the national level, highlighting the local strength that the county area has within this sector.

3.6.16 When dissecting the construction sector by 2 digit SIC codes, both the construction of buildings (SIC code 41) and specialised construction activities (SIC code 43) are recorded to have location quotients above 1, suggesting that jobs are more concentrated in these sectors at the district level when compared to the national average.

3.6.17 In addition, Essex is also recorded to have location quotients of 1.58 and 2.06 for SIC code 41 and SIC code 43, respectively, highlighting the strength of the construction sector within the Local Area. These figures are highlighted in Table 3.11.

Table 3.11 – Location Quotients for 2 Digit SIC Sectors within the Construction Sector Compared to the National Average

Area	Essex	Suffolk	WSA
Construction of buildings (SIC 41)	1.58	1.06	1.39
Civil engineering (SIC 42)	1.30	2.10	1.59
Specialised construction activities (SIC 43)	2.06	1.32	1.80

[3] Categorised as SIC Codes 41, 42 and 43

Area	Essex	Suffolk	WSA
Combined Construction Sector	1.81	1.33	1.64

ENERGY SECTOR JOBS

3.6.18 Data from the 2022 Business Register and Employment Survey suggests that there are currently 20 jobs within the Energy sector within Tendring, with all of these jobs falling within the 'production of electricity' sector.

3.6.19 The number of jobs within the energy sector was significantly higher Essex (535), Suffolk (2,540), East of England (5,550) and England (70,250). These estimates exclude self-employed jobs. The breakdown of employment in construction and related activities is presented in Table 3.12.

Table 3.12 – Jobs in the Energy Sector

Area	Production of electricity (SIC 3511)	Transmission of electricity (SIC 3512)	Distribution of electricity (SIC 3513)	Trade of electricity (SIC 3514)
Essex	180	5	250	100
Suffolk	900	15	1,125	500
WSA	1,080	20	1,375	600
East of England	2,250	50	2,500	750
England	20,500	3,750	39,000	7,000

BUSINESS AND SUPPLY CHAIN

3.6.20 According to UK Business Counts, there were approximately 97,030 active businesses within the WSA in 2021. This figure includes both VAT-registered and PAYE-based enterprises. Between 2016 and 2021, the number of businesses grew by 7%, which was equal to growth rates in Tendring, Essex and the East of England, higher than the rate within Suffolk (5%) but lower than the national rate of growth (9%).

3.6.21 When looking more specifically at businesses within sectors that will be of direct relevance to VE, the number of construction businesses within the WSA was recorded to have grown by 25% between 2016 and 2023, which was equal to the growth rate at the national level but lower than the growth rate at the regional level (27%). Contrastingly, the number of energy businesses within the wider study area was recorded to have grown by 53% over the same period, which was greater than growth rates at both the regional and national levels (37% and 26%, respectively).

3.6.22 The East of England has had notable offshore wind development over the past two decades. Several offshore windfarms are located off the East of England coast, including Hornsea, London Array and Greater Gabbard, as well as the Galloper Offshore Wind Farm. As well as the constructed offshore wind farms, there are several sites which are under construction, including the East Anglia offshore windfarms.

GROSS VALUE ADDED

3.6.23 The following table sets out estimated GVA (current price) and sectoral GVA within the energy and utilities (production), manufacturing and construction sectors in the LSA, WSA, and nationally.

Table 3.13 – Estimated GVA

Area	Total GVA	Energy and Utilities Sector GVA	Manufacturing Sector GVA	Construction Sector GVA
Tendring	£1,882m	£256m	£177m	£156m
Colchester	£4,184m	£474m	£271m	£380m
Maldon	£1,064m	£176m	£127m	£140m
Braintree	£3,579m	£489m	£403m	£363m
Ipswich	£4,443m	£589m	£129m	£290m
Babergh	£1,785m	£577m	£524m	£126m
East Suffolk	£5,081m	£796m	£463m	£343m
LSA	£22,018m	£3,357m	£2,094m	£1,798m
Essex	£42,669m	£5,214m	£4,112m	£4,792m
Suffolk	£18,756m	£3,251m	£2,039m	£1,558m
WSA	£61,425m	£8,465m	£6,151m	£6,350m
UK	£2,040,499m	£292,521m	£199,850m	£120,934m

ECONOMIC ACTIVITY AND EMPLOYMENT

3.6.24 According to data from the 2021 Census, the economic activity rate within Tendring (49%) is lower than rates within Essex (60%), Suffolk (57%), and England (59%). The employment rate within Tendring is also lower than rates at the county, regional and national rates (94% compared to 96% in Essex, Suffolk and 95% in England), as shown in Table 3.14.

Table 3.14 – Economic Activity Rates

Area	All Usual Working Age Residents	Economically Active Residents	Economic Activity Rate (%)
Essex	1,224,176	728,490	60%
Suffolk	630,362	362,417	57%
WSA	1,854,538	1,090,907	59%
England	46,006,957	26,945,252	59%

3.6.25 According to data from the Annual Population Survey (APS), 17.9% of Tendring's economically inactive population want a job, which is greater than proportions in Essex (15.9%) and England (17.6%), equal to the proportion in the East of England and lower than the proportion in Suffolk (21.3%).

3.6.26 Claimant count data provides the most recent information on the number of people claiming unemployment-related benefits in a particular spatial area, which includes Jobseekers' Allowance and Universal Credit. The count is calculated for all working age residents aged between 16 and 64 years. This dataset is unable to capture all unemployed individuals as some local residents may not claim these benefits or may be ineligible. This dataset is not considered to be a national statistic.

3.6.27 Claimant count data from December 2023 reveals a claimant rate (as a proportion of all working age residents aged 16 to 64) of 4.1% for Tendring, which is greater than claimant rates within Essex (2.9%), Suffolk (2.8%) and England (3.8%), as shown in Table 3.15.

Table 3.15 – Claimant Count Data, August 2023

Area	Unemployed Claimants	% of Working Age Residents
Tendring	3,300	4.1%
Essex	26,620	2.9%
Suffolk	12,520	2.8%
England	1,353,295	3.8%

EMPLOYMENT BY SECTOR (RESIDENTIAL POPULATION)

3.6.28 According to the 2021 Census, the total resident workforce was equal to 58,300 in Tendring, which was the 5th largest resident workforce when compared to other neighbouring districts within Essex, as shown in Table 3.16.

3.6.29 The largest industry within Tendring is human health and social work activities which accounts for 16.7% of the total resident workforce in the area, which was higher than proportions in Essex (13.5%), Suffolk (14.6%) and England (14.6%).

3.6.30 When assessing industries of particular relevance to the VE, construction is recorded to account for 12.1% of the total resident workforce in Tendring which is higher than proportions in Essex (11.9%), Suffolk (9.5%) and England (8.7%).

3.6.31 The proportion of the resident workforce in Tendring that were recorded to work in the Electricity, gas, steam and air conditioning supply industry is at 0.5%, which is higher than the proportion in Essex (0.4%), lower than the proportion in Suffolk (1%).

Table 3.16: Residential Workforce by Sector

Area	Tendring	Essex	Suffolk	England
Agriculture, Forestry and fishing	1.1%	0.7%	1.8%	0.8%
Mining and quarrying	0.1%	0.1%	0.2%	0.2%
Manufacturing	5.6%	5.9%	7.6%	7.3%
Electricity, gas, steam and air conditioning supply	0.5%	0.4%	1.0%	0.6%
Water supply; Sewerage, Waste management and Remediation activities	1.0%	0.7%	0.7%	0.7%
Construction	12.1%	11.9%	9.5%	8.7%
Wholesale and retail trade; repair of motor vehicles and motorcycles	16.3%	14.5%	15.2%	15.0%
Transport and storage	6.2%	5.3%	5.8%	5.0%
Accommodation and food service activities	5.1%	3.8%	4.7%	4.9%
Information and communication	2.8%	4.0%	3.5%	4.7%
Financial and insurance activities	2.8%	6.6%	3.2%	3.8%
Real estate activities	1.6%	1.7%	1.3%	1.6%
Professional, scientific and technical activities	4.3%	6.6%	5.6%	6.7%
Administrative and support service activities	5.3%	5.3%	5.4%	5.3%
Public administration and defence; compulsory social security	4.9%	5.4%	6.4%	5.8%

Area	Tendring	Essex	Suffolk	England
Education	9.3%	9.2%	8.6%	9.9%
Human health and social work activities	16.7%	13.5%	14.6%	14.6%
Other	4.6%	4.4%	5.1%	4.6%

EMPLOYMENT BY OCCUPATIONAL SKILL (RESIDENTIAL POPULATION)

3.6.32 According to the 2021 Census data, Tendring is recorded to have a lower proportion of residents working in higher skilled occupations (managerial, professional and associate professional occupations) at 36% when compared to proportions in Essex (47%), Suffolk (43%) and England (46%), as shown in Table 3.17.

3.6.33 Despite this, the proportion of residents working in skilled trades occupations was greater in the Tendring (14%) was greater than the national (10%) average. The proportion of caring, leisure and other service occupations and sales and customer service occupations within Tendring was also greater than proportions of both of these occupations at the regional and national levels.

Table 3.17: Residential Workforce by Occupational Skill

Area	Tendring	Essex	Suffolk	England
Managers, directors and senior officials	12%	15%	13%	13%
Professional occupations	13%	18%	17%	20%
Associate professional / technical	11%	14%	13%	13%
Administrative and secretarial occupations	10%	11%	9%	9%
Skilled trades occupations	14%	11%	12%	10%
Caring, leisure and other service	13%	9%	10%	9%
Sales and customer service occupations	9%	7%	8%	7%
Process, plant and machine operatives	8%	6%	8%	7%
Elementary occupations	10%	9%	11%	10%

LABOUR MARKET DYNAMISM

3.6.34 The labour market is dynamic: people move in and out of the labour market and move between jobs regularly. As demand for workers increases, jobs may be filled by people currently in employment moving jobs, people who are registered as unemployed, and people who do not form part of the labour market because they are classed as economically inactive.

3.6.35 There are generally two components of worklessness – economically active people who are unemployed (but are actively seeking work via claiming Job Seekers Allowance), and people who are economically inactive, but are ready to and want to work. The number of people who are economically inactive but who want to work is significantly greater than the numbers who are registered as unemployment benefit claimants. The Government's preferred definition of unemployment – the International Labour Organisation (ILO) measure – shows higher numbers of people unemployed than either the Job Seekers Allowance measure or the economically inactive who want to work.

3.6.36 The ILO definition of unemployment includes both those who are economically active, but unemployed and seeking work (for example, claiming Job Seekers Allowance), and people who are economically inactive but want to work and are work-ready (but are not actively seeking work). Taken together, these groups offer a considerable source of spare capacity for the labour market.

3.6.37 In the WSA there are currently 78,800 people who are unemployed but looking for work, or are economically inactive but want a job, and on average through the economic cycle there are between 53,800 and 153,100 (ONS Annual Population Survey, 2023).

3.6.38 These numbers are volatile, and there are significant annual changes in the level of economic inactivity, which is much more sensitive to changes in economic output than unemployment. It can therefore be seen that the number of people who are active in the labour market is not fixed – it expands and contracts according to economic environment, so when there are more jobs available, it can be expected that more people would be economically active.

3.6.39 This is the normal operation of the labour market, and the choices of individuals within it, and is not directly related to the impacts of the VE.

3.6.40 This is partly because the supply of labour is not fixed. When new jobs are created, it encourages more people to start work and enables those who are in work to increase their hours. It also allows people who currently have to travel out of the area to change jobs to something closer and more convenient.

3.6.41 Employment and economic activity should also be seen in the context of moves between jobs, sectors and locations.

3.6.42 The nature of construction is that employees move from project-to-project and site-to-site but remain with a single employer who would be sub-contracted to work on a specific project. Survey data from CITB (2023) suggests that in the East, 37% of construction workers are employed on a temporary basis, and only 8% expect to work on the same site for more than one year.

3.6.43 Research by the Resolution Foundation suggests that up to 60% of people starting new jobs have come from other jobs, with the remainder being entrants into the labour market. This is strongly linked to the economic cycle, and in the last recession in 2010 only 48% of jobs were filled by people already in work.

INCOME / EARNINGS

3.6.44 The Annual Survey of Hours and Earnings (ASHE) provides median gross earnings data for full-time workers at the local authority level, with data available for both residents of a spatial area, and workers employed in a spatial area.

3.6.45 In 2021, the median gross annual earnings for residents across Tendring (£30,053) was recorded to be higher than the median gross annual earnings across Suffolk (£29,222), but lower than earnings across Essex (£32,985) and England (£31,445). Contrastingly, the median gross annual earnings for workers across Tendring (£28,014) is lower than earnings at the county, regional and national levels.

3.6.46 When assessing the growth of earnings over the last decade, the growth in resident earnings across Tendring (22%) was greater than growth rates at the county, regional and national levels. This was also true for the growth of workplace-based earnings, with growth in earnings across Tendring (36%) being considerably greater than growth across Essex (17%), Suffolk (14%) and England (19%).

3.6.47 Data from the 2022 ASHE suggests that the median annual pay for construction workers in the South East is equal to £36,517, which is higher than the annual pay for construction workers across all regions apart from London at £41,083.

Table 3.18 – Residents – Median Earnings (Full-time workers), 2022

Area	2011	2021	% Growth
Tendring	£24,575	£30,053	22%
Essex	£29,301	£32,985	13%
Suffolk	£25,128	£29,222	16%
East of England	£26,500	£31,445	19%
England	£27,799	£32,053	15%

Table 3.19 – Workplace – Median Earnings (Full-time workers), 2022

Area	2011	2021	% Growth
Tendring	£24,575	£30,053	22%
Essex	£29,301	£32,985	13%
Suffolk	£25,128	£29,222	16%
East of England	£26,500	£31,445	19%
England	£27,799	£32,053	15%

QUALIFICATIONS

3.6.48 According to data from the 2021 Census, approximately 26% of residents above the age of 16 were recorded to have no formal qualifications, which was greater than proportions in Essex (19%), Suffolk (20%) and England (18%). The proportion of Tendring's residents with degree level qualifications or other equivalent higher education qualifications (20%) is lower than proportions in Essex (28%), Suffolk (28%) and England (34%) as shown in Table 3.20.

Table 3.20 – Workplace – Median Earnings (Full-time workers), 2022

Area	No Qualifications	GCSE/A-Level	Higher	Other
Tendring	34%	45%	16%	5%
Essex	24%	49%	23%	4%
Suffolk	24%	47%	24%	6%
East of England	23%	46%	26%	5%
England	22%	44%	27%	6%

PUBLISHED SKILLS DEMAND / SUPPLY CONTEXT

3.6.49 The Essex Skills Plan (Essex County Council, 2023) shows the general consensus across the public and private sector as to what is required to ensure that all individuals residing in Essex gain the skills they need to progress, in addition to contributing positively to the local economy and clean growth. The main priorities outlined within the plan are as follows:

- Simplifying the landscape for employers and individuals
- Raising awareness of jobs and growth across Essex and the area's size, scale, national and international significance
- Increasing apprenticeships and industry-relevant qualifications for all ages and at all levels, particularly in priority sectors
- Building a diverse and inclusive economy and reduce polarisation
- Fostering and supporting the spirit of pride, entrepreneurship innovation and enthusiasm across Essex to bring about change

3.6.50 The plan states that there are a total of 9,115 jobs in the energy, utilities, water and waste sector, which is higher than the national average but highlights that there are vacancies in various roles that are of relevance to this sector including water and sewerage operatives, engineering technicians and business sales executives.

3.6.51 The plan suggests that there will be a specific future skills need within the energy sector for intelligent energy systems that track energy usage operating solar, wind and carbon capture technologies. In addition to this, the ageing workforce is likely to have an impact of the skills needed, while digital and robotics are also likely to change the skills that will be required in the future.

3.6.52 The Green Skills Infrastructure Review for Essex (Essex County Council, 2022) highlights the fact that over the next decade, there is likely to be a large amount of growth in green jobs within the Essex economy which will contribute towards the UK making the transition to net zero.

3.6.53 The report suggests that green skills are currently the core function of the job role, with there estimated to be between 3,000 to 4,000 green skilled jobs within Essex. Three scenarios of future green skills demand within Essex have been predicted to 2030 which consist of the following:

- A baseline prediction of 5,750 directly green skilled jobs in Essex by 2030 based on the historic growth of green skills in Essex
- Future growth prediction of 14,000 Essex green skilled jobs by 2030 based on the government's Ten Point Plan for a Green Industrial Revolution
- 45,000 green jobs by 2030 if the government's stated ambition of creating 2 million UK green jobs by 2030 is realised

3.6.54 When reviewing the current provision for green upskilling, there were 47,740 enrolments in 2020/21 in subject areas relevant to green skills, while 44,015 undergraduate and postgraduate places were taken up in the three Essex universities in 2019/20 and there were recorded to be 12,991 active learners in 2017.

3.6.55 This suggests that there is good capacity of classroom and apprenticeship upskilling to support the predicted growth of green skills, but this is also heavily dependent on these learning opportunities being closely aligned with green skills needs. ECC recommends that those responsible for funding and providing education and upskilling opportunities gain a detailed understanding of the needs for green skills so that the curriculum can be shaped in a way that will benefit the growth of this sector.

3.6.56 If Essex were to retain its current proportion of UK jobs predicted within the green skills industry, the demand for green skills would be expected to rise from a baseline of 5,761 in 2019 to 13,905 by 2030, presenting an increase of over 242%. It is expected that there would be 896 jobs within the offshore wind sector in Essex by 2030, which would account for 1.5% of the UK's offshore wind employment.

3.6.57 The Essex Net Zero Centre of Excellence (ENZCE) was highlighted as one of the key recommendations in respect to the growth of green skills within Essex. The ENZCE will be able to provide support for Essex's future education and upskilling providers, in addition to providing online access to a hub of experts for SMEs, acting as a focal point for examples of good practice for stakeholders and considering micro-modules to enable rapid upskilling from level 1 top-ups for school leavers with progression opportunity at level 2 and above.

3.6.58 The report also highlights the flow of information between stakeholders as being key in supporting the recent increase in demand for green skills. Some of the communication tools of relevance to green skills include:

- Green Skills Prospectus – An online prospectus aimed at 11-16 year old student introducing opportunities for green skills employment in Essex
- Green Skills Directory – A directory aimed at 16+ to identify all green skills education, training and upskilling opportunities in Essex

- Green Skills Business Forum – A forum bringing businesses and education / training providers together to ensure that needs and opportunities are fully understood
- Green Skills Awareness Training – Online courses targeted at residents of Essex to raise their baseline understanding of green skills

3.6.59 Strategic leadership as a mechanism that can provide more certainty in the demand for green skills to monitor progress, The report sets out various recommendations which include local authorities and anchor institutions taking leadership positions that provide longevity for the demand of green skills, Essex public bodies establishing green procurement policies that must be met and demonstrated within the development of bids, establishing social value targets and creating accessible data to enable changes in the supply and demand of green skills.

3.6.60 The importance of collaboration and partnership is also highlighted in relation to the promotion of green skills, with partners encouraged to include businesses, funders and skills/training/education providers. Partnerships could also address the shortage of 'greens skills' course leaders, as well as identifying challenges and solutions within the green skills knowledge gaps.

3.6.61 The latest Essex Sector Development Report (Essex County Council, 2023) identifies 5 key sectors that have the potential to contribute to growth that will accelerate the wider economy, which include the following:

- Construction – currently worth £5.4 billion and expected to contribute an extra £4.1 billion and 37,000 jobs over the next 20 years
- Energy – currently worth £288 million and expected to contribute an extra £18 million and 1,00 jobs over the next 20 years
- Advanced Manufacturing & Engineering – currently worth £2 billion and expected to contribute an extra £312 million
- Digitech – currently worth £1.2 billion and expected to contribute an extra £340 million and 2,700 jobs over the next 20 years
- Life Sciences – currently worth £94 million and expected to contribute an extra £94 million and 3,500 jobs over the next 20 years

3.6.62 The main three priorities set out within the report are as follows:

- A thriving economy – using sectors to market Essex as a centre of innovation and entrepreneurial spirit through more high-quality jobs, increased funding and good quality buildings for businesses
- An economy for everyone – ensuring that all Essex's residents can gain the skills and experience needed to succeed in growth sectors by delivering a system that supports businesses and aligns with the jobs and opportunities of the future
- An economy fit for the future – centring green growth as intrinsic to our future growth to ensure that we meet our target for a net zero county by 2035 by progressing the decarbonised energy system and putting Essex at the forefront of low carbon energy development and employment.

3.6.63 Within the report, North Essex is highlighted as a locational strength for the clean energy sector, with the northeast coast being home to both the Galloper and Gunfleet Wind farms with Operations & Maintenance centres at Harwich and Brightlingsea. In addition to Five Estuaries, the report also highlights the North Falls (NF) wind farm and Freeport East as key pieces of infrastructure that will assist in driving green growth within Essex.

3.6.64 The Technical Skills Legacy Report (Suffolk Growth Partnership, 2022) produced by the Suffolk Growth Partnership sets out workforce needed within the construction and engineering sectors to deliver the forecasted regional infrastructure over the next 15 years (In Suffolk and Norfolk), which is in the excess of 220 projects.

3.6.65 These projects are worth over £70 billion at current prices, with the top 20 projects recorded to have a combined value of £60 billion. The main types of infrastructure include both nuclear energy and renewable energy (wind/solar) projects, with these renewable energy projects recorded to have a value of £21.7 billion.

3.6.66 All employers interviewed as part of the evidence base for the report agreed that there are significant skills gaps within existing workforces, extending from entry-level skills such basic computer software skills to senior management skills and advanced technical skills.

3.6.67 The table below highlights all of the relevant skill profiles that are of relevance to the Five Estuaries development, setting out specialist roles that will be needed as part of these developments, the need for additional provision and any challenges, opportunities and risk that will come with each skill profile.

Table 3.21: Summary of Skills Profiles within the Technical Skills Legacy Report

Skill Profile	Specialist Roles	Challenges, opportunities and risks
Construction Operatives	civil engineering contractors, cable layers, drain layers, mains layers and pipe layers	Infrastructure projects will increase demand for scaffolders in which skill existing training capacity is struggling to keep up with demand, or simply is not available. Resources are therefore required to ensure the skills required of operatives are readily available, as employers are seeing gaps in this area. A high percentage of low skilled construction workers from EU countries left the UK as a result of Brexit so there is a need to develop further provision
Engineering Professionals	Mechatronic engineers, civil engineering consultants, design engineers, project engineers, geotechnical engineers, offshore engineers, industrial engineers, production &	The move to Net Zero offers opportunities for growth at expense of skilled labour from engineering, oil, gas, and petrochemicals sectors, particularly around the Carbon capture, use and storage (CCUS), and hydrogen. The risks and challenges revolve around the lack of highly qualified engineers and the lack of specialists, with there

Skill Profile	Specialist Roles	Challenges, opportunities and risks
	planning engineers, power transmission engineers and welding engineers	currently being fewer engineers qualified to deliver an installation check than those carrying out installations.
Information Technology Professionals	Architects, communication consultants, computer installation managers, computer operations managers, cyber security specialists, information security officers, IT infrastructure engineers and network architects/engineers	As information technology is adopted more rapidly and increasingly across all sectors, the roles within the 213 skillset will be in even higher demand. Applications of IT services in relevant areas include bill of quantities software, building management systems, digital twinning, building information modelling (BIM), computer-aided manufacturing (CAM), computer-aided design (CAD), and computer numerical control (CNC); The risks and challenges of this sector, however, revolve primarily around the ability of providers to secure the services of sufficiently experienced tutors for their IT professionals programmes.
Science, Engineering and Production Technicians	Assistant cable testing engineers, Civil engineering technicians, Commissioning engineers, Construction consultants, Electrical technicians, Engineer's assistants, Fire prevention engineers, High voltage distribution engineers, Installation technicians, Technical assistants and Wind turbine technicians	Technological innovation brings opportunities for the technician roles around examples such as the use of drones for remote monitoring and maintenance; replacing paper reporting with digitisation being used to schedule and streamline routine tasks; 3D printing of machine parts simplifying repairs and maintenance. Providers are still facing challenges of employing staff with relevant skills, because they are facing severe competition with industry salaries when looking for staff with relevant expertise.
Information Technology Technicians	Computer administrators, Computer support technicians, Computer controllers, ICT technicians and Network administrators	Supporting the IT infrastructure needed to implement the above will involve a greater role for IT operations technicians and IT user support technicians. Potential moves toward smart cities and other Internet of Things (IoT) technologies in industry will also increase demand for this skillset. Providers will need to be able to ensure that provision is not outpaced by technology, especially when demand is high for professionals in these areas to work outside of education.

Skill Profile	Specialist Roles	Challenges, opportunities and risks
Construction and Building Trade Supervisors	Construction foremen, Civil engineering foremen, Constructional engineering foremen, Main pipe foremen, Trench inspectors, Tunnel inspectors, Construction supervisors, Erection supervisors and Plumbing supervisors	Employers may look to upskill experienced tradespeople to train as supervisors and managers. The challenge facing employers is they are currently working at capacity; they are struggling to find time for training as they need their staff on site to ensure projects are completed on time.
Plant and Machine Operatives	Battery engineers, Control room operators, Duct erectors, Electrical insulators, Engine operators, Foremen, Machinists, Pipe benders, Substation inspectors, Turbine engineers and Turbine operators	Technology – particularly the linking of Geographic Information Systems (GIS) and robotics is rapidly creating automated machinery and plant which can be operated by skilled technicians rather than individual operators. Plant and machine operatives will also need to adapt to increased technological innovation as roles become more heavily digitised.

TOURISM BASELINE

3.6.68 Tendring's 2021-2026 Tourism Strategy (Tendring District Council, 2021), identifies a thriving tourism economy, incorporating a *"blend of heritage, stunning natural environment and high quality leisure attractions"* and events including Clacton Pier and Clacton Pavilion, in addition to the Clacton Airshow which takes place on the Marine Parade West and showcases various renowned aircraft including Red Arrows, Lancaster PA474s and Firebirds, attracting over a quarter of a million visitors each year.

3.6.69 The Strategy notes that a £36 million coastal defence project that Tendring launched in partnership with the Environmental Agency has protected the coastline and led to the creation of 23 beaches, contributing positively to the tourism sector. These include Harwich Beach, Dovercourt Bay, Albion Beach, the Naze and Frinton Beach.

3.6.70 The Strategy also notes that Tendring also has a diverse, unique natural environment offer which includes the following:

- Cranleigh Close – a 2.2 acre site in Clacton-on-Sea which provides quiet countryside recreation and contributes to the bio-diversity of the wider area
- Brook Country Park – consists of a rough grassland, providing informal, quiet countryside recreation for local residents and visitors
- Holland Haven Country Park – country park situated between Clacton and Frinton, which offers a coastal grazing marsh and high quality wildlife, with the 100 acres of unspoilt scenic coastline being ideal for bird watching
- Pickers Ditch Meadows – Local nature reserve which runs along the bank of Pickers Ditch, with beautiful scenery and nature

- Wrabness Local Nature Reserve – located on the southern bank of the River Stour, showcasing a mixture of grassland, wooded areas and marshland
- Hamford Water – area of over 2,000 hectares which comprises tidal inlets, islands and saltings representing substantial areas of the Tendring coastline

TOURIST ECONOMY

3.6.71 An Economic Impact Report has been produced by Visit Essex in 2021 that presents information on visitor numbers, expenditure, and an estimate of the number of jobs supported by this and indirect/induced expenditure in different sectors. This report finds that Essex:

- Attracted over 1.5 million tourist trips
- Attracted over 4.3 million nights by accommodation
- Generated over £241.2 million in the form of spend by tourist accommodation
- Generated over £1,478,177,000 from day visitors for total trips and spend
- Supported over 26,000 full-time equivalent jobs

3.6.72 A similar report was produced for Tendring District in 2022 which presents various headlines on expenditure within the area, visitor numbers and employment generation, based on the Cambridge Economic Impact Model using data from national tourism surveys. The report highlights the following headlines for Tendring:

- Attracted over 5.4 million day & staying trips
- Generated over £94 million in the form of staying spend
- Generated over £197 million in the form of total day trip spend
- Generated over 6,800 full-time equivalent jobs

3.6.73 According to data from Visit Britain on domestic overnight trips (GBTS – Great Britain Tourism Survey) and day visits (Great Britain Day Visits Survey), on average, between April 2021 and March 2023 (24 months/2 years), 500,0000 overnight trips were taken per 12 months / per year to Tendring. These equated to £88 million total spend per year and 1.6 million nights per year.

3.6.74 This number of overnight trips and total spend was greater within Tendring when compared to all other districts within the Local Impact Area, and was also the 6th highest for both annual average spend and the volume of trips when compared to all local authorities within the region. At the county level, there were recorded to be 2.3 million and 1.3 million overnight trips taken per year to Essex and Suffolk, respectively, with Essex being recorded to have the second highest volume of trips and annual average spend when compared to the remaining counties in the East of England.

3.6.75 Over the same time period, there were a total of 300,000 holiday trips to Tendring, which was also the highest within the Local Impact Area and the 3rd highest when compared to the number of holiday trips in other local authorities in the East of England.

3.6.76 When assessing the number leisure day visits over 3 hours, there were a total of 5.8 million trips to Tendring between April 2021 and March 2023, which was the second highest in the LSA, behind Colchester with 10 million trips over the same time period.

3.6.77 The total average annual spend per year for GBTS Overnight Trips, GBTS Holiday Trips, GBDVS 3hr+ Leisure Visits and GBDVS Tourism Day Visits for the LSA in this period was £1.859bn of which £292m was spent in Tendring.

TOURIST SECTOR EMPLOYMENT

3.6.78 Public datasets (ONS, 2022) can also be used to estimate the number of jobs in 'tourism' sectors[4]. On this basis, Tendring has around 5,990 tourism-sector jobs and Essex has around 60,100 tourism-sector jobs, making up 11.7% and 9.6% of all jobs in these areas, respectively. This is set out in Table 3.22.

Table 3.22 – Jobs in Tourist Sectors

Area	Tourist Sector Jobs	All Jobs	% Tourist Sector Jobs
Tendring	5,990	51,000	11.7%
Colchester	9,025	86,000	10.5%
Maldon	2,785	22,000	12.7%
Braintree	4,980	56,500	8.8%
Ipswich	5,740	73,000	7.9%
Babergh	3,590	34,500	10.4%
East Suffolk	12,300	99,000	12.4%
LSA	44,410	422,000	10.5%
Essex	60,100	623,000	9.6%
Suffolk	35,000	347,000	10.1%
East of England	278,000	2,920,000	9.5%
England	2,730,000	28,000,000	9.8%

3.6.79 The tourist sector is inherently seasonal, but also retains a relatively consistent level of employment as an absolute total and proportion of total employment over time.

[4] Tourism sector includes SIC codes 5510 : Hotels and similar accommodation, 5520 : Holiday and other short stay accommodation, 5530 : Camping grounds, recreational vehicle parks and trailer parks, 5590 : Other accommodation, 5610 : Restaurants and mobile food service activities, 5621 : Event catering activities, 5629 : Other food service activities, 5630 : Beverage serving activities, 7911 : Travel agency activities, 7912 : Tour operator activities, 7990 : Other reservation service and related activities, 9001 : Performing arts, 9002 : Support activities to performing arts, 9003 : Artistic creation, 9004 : Operation of arts facilities, 9102 : Museum activities, 9103 : Operation of historical sites and buildings and similar visitor attractions, 9104 : Botanical and zoological gardens and nature reserve activities, 9200 : Gambling and betting activities, 9311 : Operation of sports facilities, 9321 : Activities of amusement parks and theme parks, 9329 : Other amusement and recreation activities, 7711 : Renting and leasing of cars and light motor vehicles and 7721 : Renting and leasing of recreational and sports goods

3.6.80 Within the LSA over the period 2015-2022 the proportion of jobs in the LSA that are 'tourist sector' jobs has remained constant as a proportion of the total number of jobs (varying only between 10.0% and 10.8%) suggesting that the tourist sector is relatively stable.

3.6.81 When looking at the variance around the mean for tourism jobs between 2015 and 2022 (the difference between the maximum and minimum across that period, as a proportion of the mean jobs for the whole period) in the LSA, there is an observed variance of 13% (around 5,500 jobs) which is twice the variance of non-tourist sectors (around 5%).

3.6.82 A number of the existing offshore wind projects off the Suffolk and Essex coast, including Gunfleet Sands OWF (commissioned 2010), London Array (commissioned 2013), Greater Gabbard (commissioned 2012), Galloper Wind Farm (commissioned 2018) and East Anglia ONE (commissioned 2020) are already visible from various coastal tourism and recreational assets along the coastline of the WSA and do not appear to have influenced tourism during that time based on the trends above.

TOURIST SECTOR ACCOMMODATION

ACCOMMODATION STOCK

3.6.83 Data is produced at the local authority scale by Visit Britain as part of their Accommodation Stock Audit (latest data 2016). Table 3.23 summarises the overall stock by sector (total rooms) for the LSA and WSA.

Table 3.23 – Rooms in Tourist Sector Accommodation

		Serviced	Non-serviced		
	Total	**Hotels and similar**	**Holiday dwellings**	**Tourist campsites**	**Other collective accommodation**
Tendring	1,573	929	33	608	3
Colchester	1,698	1,200	20	466	12
Maldon	988	510	47	431	0
Braintree	774	747	27	0	0
Ipswich	850	847	3	0	0
Babergh	1,013	838	86	84	5
East Suffolk	4,115	1,892	1234	988	1
LSA	11,011	6,963	1,450	2,577	21
Essex	12,226	10,345	187	1,665	29
Suffolk	8,322	5,470	1,470	1,363	19
WSA	20,548	15,815	1,657	3,028	48

OCCUPANCY

3.6.84 Room occupancy rates for tourist accommodation are produced monthly by Visit England at the regional scale through the England Occupancy Survey. According to the latest England Occupancy Survey, the average occupancy rate in East of England was estimated to be 69% in the East of England, with a peak of 84% for hotel rooms (July 2023).

LOCAL TOURIST ASSETS AND FACILITIES

3.6.85 The Essex Tourist Guide (Essex Tourist Guide, 2022) highlights the following attractions for tourists to visit in Essex within Tendring:

- Clacton Pavilion;
- Century Cinema Clacton;
- Clacton Shopping Village;
- Princes Theatre;
- West Cliff Theatre;
- Holland Haven Country Park;
- Walton & Frinton Yacht Club;
- Frinton on Sea Lawn Tennis Club;
- Frinton Golf Club;
- Frinton Summer Theatre;
- Great Holland Pits Nature Reserve;
- Clacton Pier; and
- Walton Pier.

3.6.86 The path of the Onshore ECC passes the Great Holland Pits Nature Reserve, which is a 40-acre area of grassland, ancient woodland and wetlands. The site includes walking trails and areas for parking cars of visitors.

PUBLIC SERVICES AND COMMUNITY AND RECREATION FACILITIES

COMMUNITY AND RECREATIONAL FACILITIES

3.6.87 A summary of the various community and recreational facilities that are within 5km of the Order Limits is presented in Figure 3.3 and Annex 6.3.2, with the majority of the community facilities within this area being concentrated along the coastal areas of Clacton-on-Sea and Frinton-on-Sea, as well as another grouping in Manningtree.

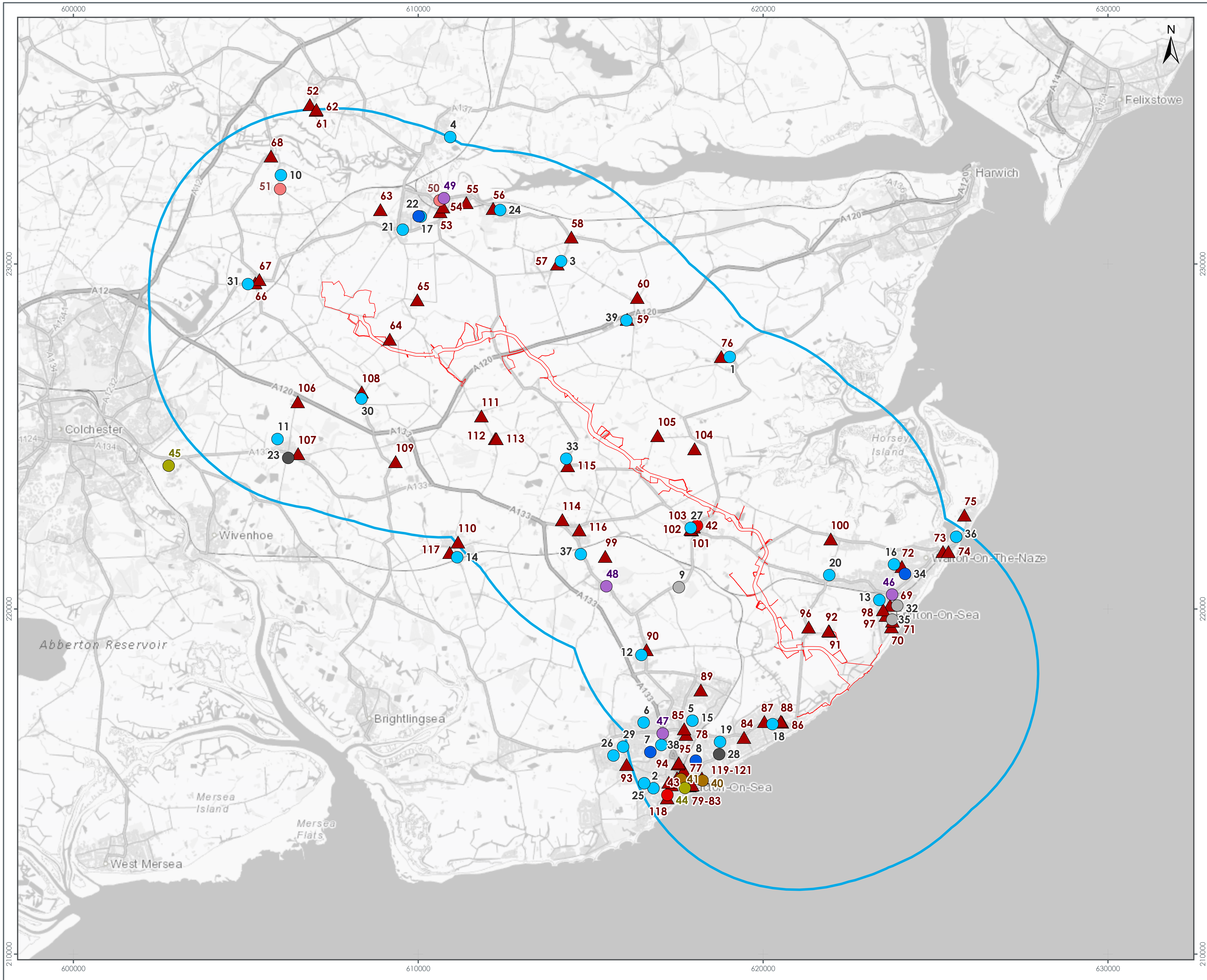
3.6.88 The 12 different categories of community facilities identified have been highlighted below:

- Tourist Information Centre
- Library
- Museum
- Further Education
- Non-State Primary Education
- Non-State Secondary Education

- Special Needs Education
- Secondary Education
- Primary Education
- Police Station
- Fire Station
- Place of Worship
- Post Office

3.6.89 There are only four identified community facilities that fall within 500m of the site which include the two All Saint's Church sites on Church Lane, Great Holland Methodist Church and St Mary The Virgin Church in Little Bromley. Also within 500m of the site is Frinton Golf Club and three public open spaces – Holland Haven, Brighton Road Open Space and Haven Gardens.

3.6.90 This more detailed 500m scale map of community facilities and recreational assets is included at Figure 3.4.



LEGEND

- Onshore Order Limits
- 5km from the Onshore Order Limit Boundary
- Independent school
- State-funded primary
- State-funded secondary
- State-funded special school
- Fire Stations within 5km of the Site
- Other Educational Facilities within 5km of the Site
- Places of Worship within 5km of the Site
- Police Stations within 5km of the Site
- Tourist Information Centres within 5km of the Site
- Museums within 5km of the Site

0 1 2 4
Kilometers

Data Source:
Contains OS data © Crown Copyright and database right 2020

PROJECT TITLE:
FIVE ESTUARIES OFFSHORE WINDFARM

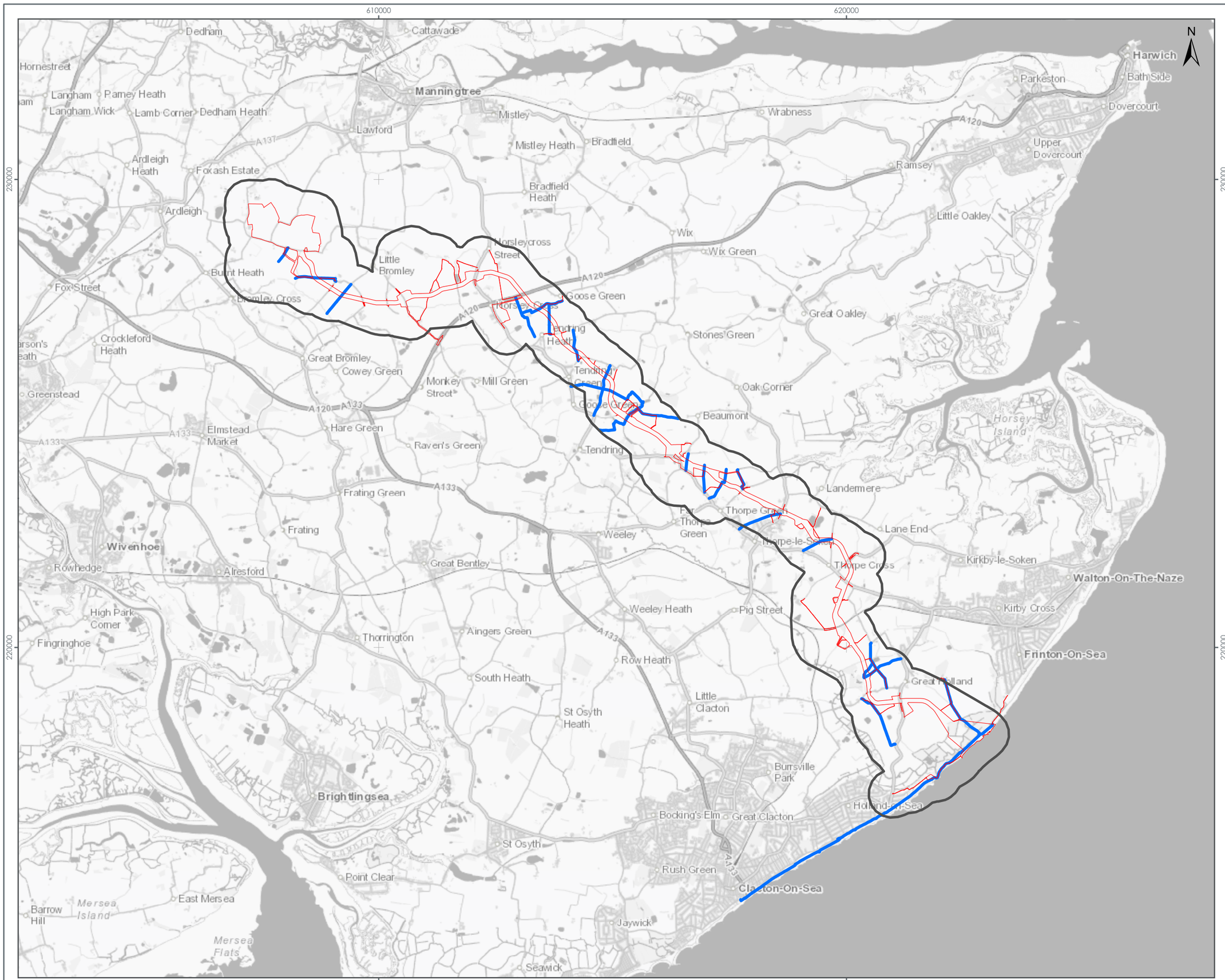
DRAWING TITLE:
Community Facilities and Recreational Facilities

VER	DATE	REMARKS	Drawn	Checked
1	08/02/2024	For Issue	BPHB	MB

DRAWING NUMBER: 3.3

SCALE: 1:100,000 | PLOT SIZE: A3 | DATUM: OSGB 1936 | PROJECTION: BNG

FIVE ESTUARIES
OFFSHORE WIND FARM



LEGEND

- Onshore Order Limits
- 500m Buffer from Onshore Order Limits
- Public Rights of Way (PRoW) that intersect the Onshore Order Limit Boundary

0 1 2 4

Kilometers

PROJECT TITLE:

FIVE ESTUARIES OFFSHORE WINDFARM

DRAWING TITLE:

Public Rights of Way

VER	DATE	REMARKS	Drawn	Checked
1	08/02/2024	For Issue	BPHB	MB

DRAWING NUMBER: 3.4

SCALE:	PLOT SIZE:	DATUM:	PROJECTION:
1:75,000	A3	OSGB 1936	BNG

FIVE ESTUARIES
OFFSHORE WIND FARM

PUBLIC RIGHTS OF WAY

3.6.91 ECC publish publicly accessible data on PRoW which is updated on a quarterly basis, in addition to an interactive map which updated slightly more frequently. It is important to note that these maps are not equivalent to the statutory Definitive Map which is held at the Essex County Hall.

3.6.92 Public Rights of Way (PRoW) fall into the following sub-categories:

- Bridleway
- Byway
- Restricted Byway
- Footpaths

3.6.93 National Cycle Route (NCR) 150 intersects with VE near the proposed landfall site as it runs along the coast. NCR 150 is an off-road cycle route present along the coast between Frinton-on-Sea and Clacton-on-Sea where it follows the seafront Esplanade and crosses the proposed cable route close to the proposed landfall locations. It is approximately 10.5 km and also accommodates recreational walking along the paved, asphalt surfaces.

3.6.94 The England Coast Path follows the entire coast of England and therefore interacts with VE near the proposed landfall site as it runs along the coast. Tendring Hundred Hinterland is a large circular route is crossed six times by the Onshore ECC.

3.6.95 The following table identified PRoW that fall within 500m of the Order Limits, identifying the reference number, length, location (parish) and status in the Definitive Map:

Table 3.24 – PRoW within 500m of the Order Limits

Reference	Parish	Total Length (m)	Status
FP 28 158	Ardleigh	758	Footpath
BR 30 158	Ardleigh	391	Bridleway
FP 18 159	Beaumont Cum Moze	148	Footpath
FP 22 159	Beaumont Cum Moze	810	Footpath
FP 7 159	Beaumont Cum Moze	193	Footpath
FP 13 159	Beaumont Cum Moze	322	Footpath
FP 12 159	Beaumont Cum Moze	1028	Footpath
FP 17 159	Beaumont Cum Moze	630	Footpath
FP 14 159	Beaumont Cum Moze	259	Footpath
FP 15 159	Beaumont Cum Moze	820	Footpath

Reference	Parish	Total Length (m)	Status
FP 29 159	Beaumont Cum Moze	1233	Footpath
FP 24 159	Beaumont Cum Moze	184	Footpath
FP 16 159	Beaumont Cum Moze	249	Footpath
FP 6 160	Bradfield	1567	Footpath
BR 2 164	Frinton And Walton	2578	Bridleway
FP 1 164	Frinton And Walton	1423	Footpath
FP 11 164	Frinton And Walton	385	Footpath
FP 6 164	Frinton And Walton	328	Footpath
FP 7 164	Frinton And Walton	638	Footpath
FP 38 164	Frinton And Walton	901	Footpath
FP 3 164	Frinton And Walton	1825	Footpath
FP 41 164	Frinton And Walton	24	Footpath
FP 5 164	Frinton And Walton	1334	Footpath
FP 10 164	Frinton And Walton	1076	Footpath
FP 8 164	Frinton And Walton	113	Footpath
FP 4 164	Frinton And Walton	926	Footpath
FP 16 164	Frinton And Walton	776	Footpath
FP 3 166	Great Bromley	421	Footpath
FP 5 166	Great Bromley	495	Footpath
FP 4 166	Great Bromley	479	Footpath
BR 24 166	Great Bromley	134	Bridleway
FP 29 167	Great Clacton	6421	Footpath
FP 23 170	Lawford	909	Footpath
FP 19 170	Lawford	1538	Footpath
BY 57 170	Lawford	891	Byway

Reference	Parish	Total Length (m)	Status
FP 25 170	Lawford	1021	Footpath
FP 21 172	Little Bromley	495	Footpath
FP 11 172	Little Bromley	616	Footpath
FP 7 172	Little Bromley	476	Footpath
FP 5 172	Little Bromley	770	Footpath
FP 4 172	Little Bromley	558	Footpath
FP 14 172	Little Bromley	787	Footpath
FP 13 172	Little Bromley	785	Footpath
FP 12 172	Little Bromley	663	Footpath
BR 8 172	Little Bromley	505	Bridleway
FP 15 172	Little Bromley	359	Footpath
FP 16 172	Little Bromley	940	Footpath
BY 22 172	Little Bromley	79	Byway
FP 17 172	Little Bromley	807	Footpath
FP 20 172	Little Bromley	911	Footpath
FP 14 176	Mistley	1359	Footpath
FP 18 179	Tendring	716	Footpath
FP 23 179	Tendring	99	Footpath
FP 17 179	Tendring	499	Footpath
FP 3 179	Tendring	1147	Footpath
FP 1 179	Tendring	684	Footpath
FP 22 179	Tendring	1212	Footpath
FP 2 179	Tendring	505	Footpath
FP 20 179	Tendring	123	Footpath
FP 8 179	Tendring	2917	Footpath

Reference	Parish	Total Length (m)	Status
FP 21 180	Thorpe Le Soken	910	Footpath
FP 10 180	Thorpe Le Soken	401	Footpath
FP 22 180	Thorpe Le Soken	68	Footpath
FP 11 180	Thorpe Le Soken	919	Footpath
FP 12 180	Thorpe Le Soken	215	Footpath
FP 17 180	Thorpe Le Soken	1101	Footpath
FP 14 180	Thorpe Le Soken	1718	Footpath
BR 5 180	Thorpe Le Soken	700	Bridleway
FP 7 180	Thorpe Le Soken	952	Footpath
FP 13 180	Thorpe Le Soken	662	Footpath
FP 18 180	Thorpe Le Soken	211	Footpath
FP 1 180	Thorpe Le Soken	583	Footpath
FP 2 180	Thorpe Le Soken	1084	Footpath
FP 2 180	Thorpe Le Soken	99	Footpath
FP 4 180	Thorpe Le Soken	484	Footpath
FP 3 180	Thorpe Le Soken	798	Footpath
FP 15 180	Thorpe Le Soken	463	Footpath
FP 8 180	Thorpe Le Soken	580	Footpath
FP 16 183	Wix	443	Footpath
FP 13 183	Wix	376	Footpath
FP 14 183	Wix	940	Footpath
FP 32 183	Wix	989	Footpath
FP 31 183	Wix	677	Footpath
FP 37 183	Wix	498	Footpath
FP 15 183	Wix	979	Footpath

OFFSHORE RECREATION

3.6.96 Offshore recreational activities that have been identified as key assets for recreation within proximity of the Order Limits include beaches (the closest being Frinton Beach with Walton-on-the-Naze Beach further north and Jaywick Sands Beach further south), watersports (Winging It - providing equipment and coaching for wind surfing, wing surfing and paddle boarding - and Nucleus Watersports - providing equipment for canoeing and kayaking - in Walton-on-the-Naze and Clacton respectively), scuba diving (Clacton Scuba School), angling (Clacton Angling) and yacht / sailing clubs (Walton and Frinton Yacht Club).

3.6.97 Bathing in the coastal waters is a popular recreational activity in Essex for residents and tourists alike, with the beaches of Essex being considered a major economic asset in terms of tourism, and a recreational asset regarding the free public usage of the beaches.

3.6.98 The Order Limits do not directly intersect any beaches used for onshore recreation or bathing. It is noted that diving has not been identified in the VE array areas given the distance required to travel from the shore to the site, and that the sand banks provide limited interest to divers.

3.6.99 There are several clubs and stores related to angling within proximity of the Order Limits, for both shore fishing and boat fishing, with the volume activity for these considered to be seasonal, weather-dependent and species-dependent (some fish may only be in the area at certain times of year).

3.6.100 There are some examples of clubs which offer sea fishing excursions within the LAI, including Clacton Boat Club and Kaimoana Charter Fishing, with a further variety of stores offering fishing supplies and boats.

3.6.101 Clacton Pier and Walton Pier offers space for shore fishing (unlicensed but with a daily charge).

3.6.102 The RYA's (Royal Yachting Association) Coastal Atlas (2019) identifies medium-use recreational sailing routes within the vicinity of the Inner Gabbard and Galloper banks.

PRIMARY HEALTHCARE

3.6.103 There are no GP surgeries within 500m of the Order Limits.

3.6.104 The data regarding the number of patients and GPs for any given ICB or sub-ICB are updated monthly, with the latest data available at the time of writing being for December 2023.

3.6.105 According to NHS General Practice Workforce Data from September 2023, there are a total of 91 General Practitioner (GP) Practices in the Suffolk and North East Essex ICB, 147 in the Mid and South Essex ICB and 30 within the 07H – Hertfordshire and West Essex Sub-ICB as set out in Table 3.25.

3.6.106 When looking at the sub ICB areas within Essex and Suffolk, NHS Mid and South Essex ICB – 99F Castle Point and Rochford was recorded to have the lowest number of patients per FTE GP at 2,156, while NHS Mid and South Essex ICB – 07G Thurrock was recorded to have the highest number of patients per FTE GP at 2,800.

3.6.107 The number of FTE GPs set out here includes fully qualified GPs only. GPs in training also provide clinical services to varying degrees under supervision of a qualified GP Trainer, they will therefore provide some additional patient capacity not reflected in average patient per GP figures presented here.

Table 3.25 – GP Capacity

Administrative Area	Patients	FTE GPs	Patients per FTE GP
Sub ICBs			
NHS Suffolk and North East Essex ICB – 06T North East Essex (Includes Colchester and Tendring Local Authorities)	375,075	135.18	2,775
NHS Suffolk and North East Essex ICB – 06L Ipswich and East Suffolk (Includes part of Babergh and Ipswich, Mid Suffolk and East Suffolk Local Authorities)	415,616	159.45	2,607
NHS Suffolk and North East Essex ICB – 07K West Suffolk (Includes part of Babergh and West Suffolk Local Authorities)	277,077	128.44	2,157
NHS Mid and South Essex ICB – 06Q Mid Essex (Includes Chelmsford, Maldon and Braintree Local Authorities)	415,380	169.17	2,455
ICBs			
Suffolk and North East Essex ICB	1,067,768	423.06	2,524
Mid and South Essex ICB	1,277,217	508.13	2,514
WSA, Regional and National			
WSA	2,676,348	1,058.72	2,528
East of England	7,248,520	2,941.62	2,464
England	63,080,232	27,262.94	2,314

3.7 KEY PARAMETERS FOR ASSESSMENT

3.7.1 The scale of construction activity (FTE years and GVA) has been estimated based on methodology produced by BVG Associates which is a standard approach to estimating the economic footprint of offshore windfarms including the manufacture of the turbines, balance of plant, and installation and commissioning activities (onshore and offshore).

3.7.2 Annex 6.3.1 sets out the overall assumptions on construction and operation GVA and FTE years of employment supported by each element of the Project.

3.7.3 That approach includes estimates of content anticipated to be sourced from or retained within a regional economy, the UK and sought internationally.

3.7.4 As such, this presents an assessment case for the approach to employment effects, the effect of non-local workforce, and workforce expenditure, and GVA that represents a 'worst case' assessment.

3.7.5 It is anticipated that the local element of workforce and supply chain would exceed this given the Applicant's commitment to an Outline Skills and Employment Strategy (Volume 9, Report 27) and its record in regional supply chain engagement. A more local workforce supported through skills intervention, and a more locally sourced supply chain would notionally result in less severe adverse effects (for example in terms of the uptake of tourist accommodation by non-local workers) and more acute beneficial effects (for example in terms of the beneficial retention of GVA and employment) regionally.

3.7.6 A range of construction scenarios have been produced and applied where relevant (Scenarios 1 to 3) which accord with the approach set out within Volume 6 ES, Part 1, Chapter 3 (EIA Methodology). Further to this, a range has been considered in terms of the offshore construction value and FTE employment supported for both construction and operation based on a range of the number of turbines to be installed, commissioned and operated.

3.7.7 Estimates for significance of construction and operational employment and GVA have not included the provision of an operations base as a decision on whether this would be required (and where it would be located) have not been made at this stage. Nonetheless, for illustrative purposes quantitative estimates have been included.

3.8 MITIGATION

3.8.1 The VE has undergone a detailed site selection and design process to determine the locations and manage the impacts of the landfall, OnSS and cable route to enable the selection of the area with the lowest level of adverse impacts, including using trenchless techniques to cross nationally promoted routes such as the proposed English Coastal Path, and routing away from major tourism assets and key waterbodies.

3.8.2 The assessment takes account of any design controls and environmental principles that are incorporated into the design of VE and any Control Documents / Management Plans that are intended to be secured by the Development Consent Order.

3.8.3 These include:

- Volume 9, Report 24: Outline Construction Traffic Management Plan in terms of managing the transport and environmental effects on community receptors related to construction traffic;
- Volume 9, Report 21: Code of Construction Practice (CoCP) in terms of managing construction activity including reducing potential effects on community and recreational receptors in terms of air quality, construction noise and vibration, dust and lighting;
- Volume 9, Report 25: Outline Public Access Management Plan (PAMP) – in terms of management of effects on recreational routes and PRoW for access;
- Volume 9, Report 16: Outline Fisheries Liaison and Co-existence Plan in terms of management of potential socio-economic effects on commercial fisheries; and

3.8.4 Any mitigation measures that would reduce the level of any significant effects are set out and considered prior to assessing residual effects.

3.8.5 The mitigation contained in the 'Mitigation' section of each individual chapter of the ES that this assessment draws upon for effects relating to tourism and community and recreational effects have been identified in each individual chapter. These mitigations have been adopted as part of the evolution of the project design of relevance to the topic, these include project design measures, compliance with elements of good practice and use of standard protocols. In addition to the documents listed above, these mitigations are set out within the 'Mitigation' sections of:

- Volume 6, Part 3, Chapter 2 (LVIA)
- Volume 6, Part 3, Chapter 7 (Onshore Archaeology and Cultural Heritage)
- Volume 6, Part 3, Chapter 8 (Traffic and Transport)
- Volume 6, Part 3, Chapter 9 (Airborne Noise and Vibration)
- Volume 6, Part 3, Chapter 10 (Air Quality)
- Volume 6, Part 2, Chapter 8 (Commercial Fisheries)
- Volume 6, Part 2, Chapter 9 (Shipping and Navigation)
- Volume 6, Part 2, Chapter 10 (SLVIA)
- Volume 6, Part 2, Chapter 11 (Offshore Archaeology and Cultural Heritage)
- Volume 6, Part 2, Chapter 12 (Infrastructure and Other Marine Users)

3.8.6 Additionally, an Outline Skills and Employment Strategy (Volume 9, Report 27) has been developed through engagement with regional stakeholders, with measures that seek to identify and secure a greater contingent of local workforce, increasing skills locally and lowering the number of workers needed from beyond the boundaries of the WSA while supporting the regional co-ordination of major construction projects and their workforce skills delivery.Environmental Assessment: Construction Phase

IMPACT 1: DIRECT CONSTRUCTION EMPLOYMENT EFFECTS

ONSHORE CONSTRUCTION PHASE (INSTALLATION AND COMMISSIONING) JOBS

3.8.7 It is anticipated that the onshore substation, onshore export cable and Bentley Road Widening Works would be constructed over a period of 19 months in total (up to two years), supporting an average of between 390 (Scenario 1) and 340 (Scenario 2/3) direct, on-site FTE roles during that time, with a peak of 600 (Scenario 1) or 540 (Scenario 2/3) FTE jobs supported for a short time.

3.8.8 The following charts identify the anticipated workforce profile for these jobs by each element of onshore installation and commissioning:

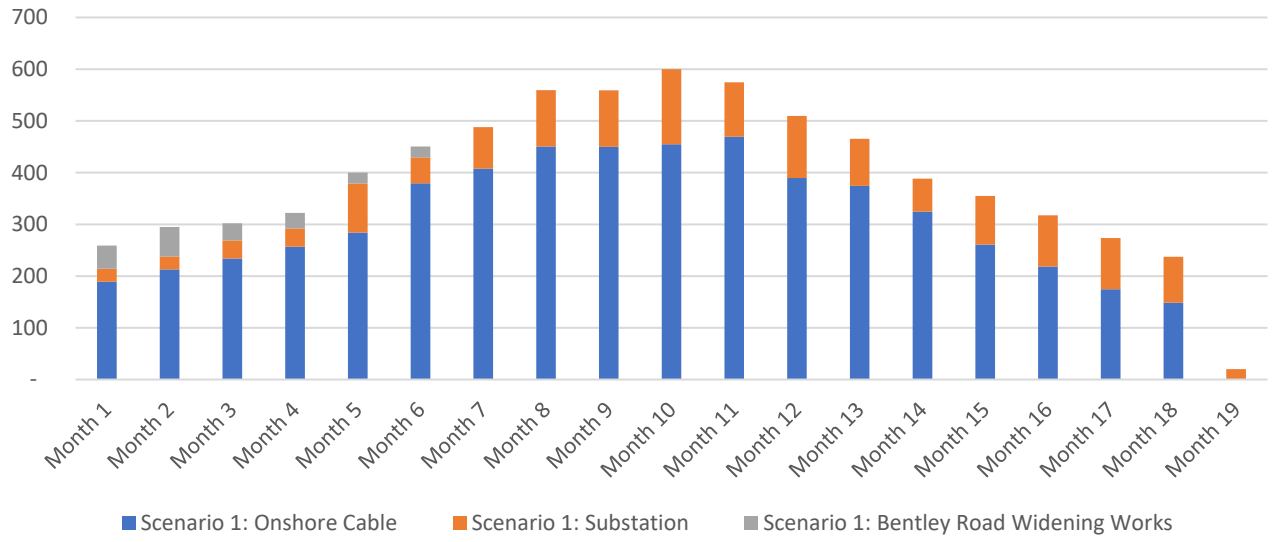


Figure 3.5: Workforce Profile for Installation and Commissioning (Onshore) by Work Element (Scenario 1)

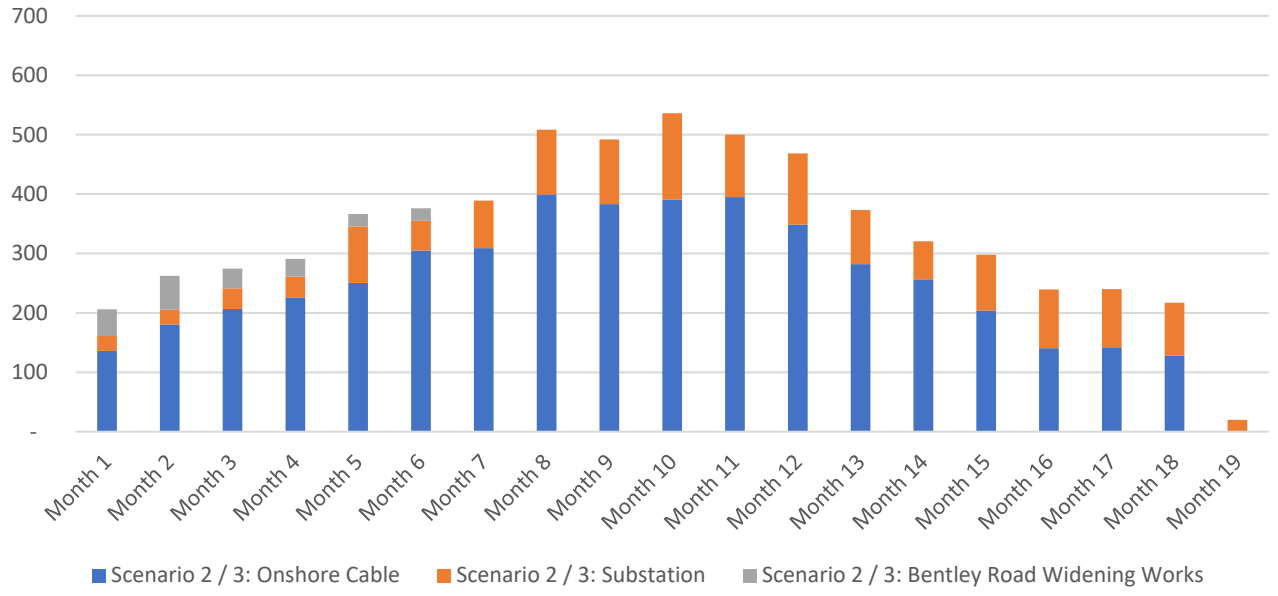


Figure 3.6: Workforce Profile for Installation and Commissioning (Onshore) by Work Element (Scenario 2 and 3)

3.8.9 Based on estimates for local employment set out earlier in this chapter, it is anticipated that around 22% of this employment would be sourced from the existing labour market (the WSA) and around 73% would be sourced from within the UK (with the remaining sourced internationally).

3.8.10 This equates to an average of between around 70 (Scenario 1) and 90 (Scenarios 2/3) FTE jobs supported in the WSA during the construction period with peaks of 130 and 120 respectively. The remainder of the workforce is likely to move to the area on a temporary basis for short-term contracts.

3.8.11 It is not yet known whether there would be a need to construct a new operations base for the operation of VE, though should this be required it is estimated that it would support around 330 FTE years of construction employment (in all scenarios), or around an average of around 165 FTEs during the construction phase (assuming the construction phase would be the same as the rest of the onshore infrastructure). Given uncertainty surrounding the element, it has not been included within the significance assessment.

3.8.12 The skills required for the installation and commissioning of the known onshore works are primarily civils construction-based and would include cable pulling, cable terminations and HDD, construction of buildings, and electrical works.

3.8.13 A breakdown of the average number of roles supported during the 19 month construction phase by skill type for the 'worst case' construction scenario for onshore elements (not including the operations base) is as follows (rounded to nearest 10):

- Horizontal directional drilling – 60 roles (10 anticipated from within WSA)
- Onshore export cable / substation civil works – 250 roles (60 anticipated from within WSA)
- Cable terminations – 40 roles (10 anticipated from within WSA)
- Buildings – 10 roles (<5 anticipated from within WSA
- Steel fabrications – 10 roles (<5 anticipated from within WSA)
- Site management – 10 roles (<5 anticipated from within WSA)
- Electrical works – 30 roles (10 anticipated from within WSA)

3.8.14 As set out within Section 3.6 (Existing Environment), there are currently 22,000 jobs within Construction of buildings (SIC 41); 9,000 jobs within Civil engineering (SIC 42), and 47,500 jobs within Specialised construction activities (SIC 43) sectors across the WSA. It is noted that research commissioned to support the development of policy and economic strategy in both Suffolk and Essex identifies a need for the future provision of new construction skills to meet the demand forthcoming from major infrastructure projects in the area.

3.8.15 VE's onshore construction and installation would support a relatively small number of construction opportunities, mainly in civils construction roles for which there is a substantial existing labour market. However, VE recognises that some specialised and high-demand skills may become more sought after by other projects (see Section 3.13: Cumulative Effects).

3.8.16 While therefore there is unlikely to be an adverse effect on skills provision (it is anticipated that the demand for labour would either be met by the existing, widely spatially distributed and peripatetic construction workforce during the shore construction period), VE has produced an Outline Skills and Employment Strategy in order to promote local opportunities and enable people to access them, while engaging with skills providers and local stakeholders to ensure appropriate forward planning for the upcoming skills pipeline.

3.8.17 In addition, the Applicant is actively involved in industry bodies including RenewableUK, EnergyUK and the East of England Energy Group. Over recent years the Applicant has supported several supply chain and industry events, via sponsorship and speaking opportunities, and participation in meet the buyer events, business breakfasts, awards and sponsorship in order to promote local opportunity for both latent labour and existing companies to gain entry to and progression within the sector.

ASSESSMENT OF SIGNIFICANCE (ONSHORE)

3.8.18 The onshore construction workforce anticipated to be sourced from existing labour markets is likely to equate to around 0.1% of the existing resident construction workforce of the WSA, and the existing number of construction jobs located in the WSA. On this basis, the magnitude of impact of onshore construction activity on employment in the WSA is assessed as **low**. The magnitude of impact of onshore construction activity on employment at the national scale is assessed as **negligible.**

3.8.19 The sensitivity of the receptor (the labour market of the WSA) is influenced by the extent to which it is able to respond to change. The construction labour market is notably peripatetic and responsive, with short tenure of employment and movement between employment, unemployment and economic inactivity driven by factors such as the availability of work, throughput of skilled personnel and the wider economic cycle.

3.8.20 Local policy and research identified earlier in this chapter suggests that there is policy support for the delivery of new, sustainable construction skills particularly linked to green energy and clean technology, and this also accords with national policy approaches towards the provision of skilled jobs in the offshore wind sector (the British Energy Security Strategy (2022) expects the offshore wind sector to grow to support around 90,000 jobs by 2030).

3.8.21 As such, the sensitivity of the receptor at the WSA and national scale is considered to be **medium**.

3.8.22 In-line with the approach set out in Table 3.5 (Matrix for determining significance of effect), as a result of a low magnitude effect on a medium sensitivity receptor, the effect of construction employment is assessed as **minor beneficial** and **not significant** in EIA terms.

3.8.23 The Applicant has developed an Outline Skills and Employment Strategy (Volume 9, Report 27) which will be secured as a Requirement within the draft DCO and aims to provide an outline strategy that can be developed further with the relevant key consultees into a Skills and Employment Strategy that will facilitate positive and meaningful commitments and activities within the Essex region by the Applicant.

OFFSHORE CONSTRUCTION PHASE (INSTALLATION AND COMMISSIONING) JOBS

3.8.24 Offshore installation and commissioning will be related to the works required for the turbine installation and commissioning, foundation installation, array cable installation, offshore export cable installation and offshore substation works. This element of activity is likely to support between 210 to 410 FTE years of employment over the construction phase (depending on the number of turbines being installed).

3.8.25 Assuming a 2-year construction phase this is likely to support an average of between 105 to 205 FTE roles during the construction phase.

3.8.26 The proportion of local employment (drawn from the WSA) and UK-level employment is anticipated to be relatively low at around <10 FTE years and 30-60 FTE years of employment respectively, due to local content for technical services being limited in supply in the UK and WSA (e.g. no established offshore export cable installation contractors or array cable contractors are currently based in the UK). The greatest contribution of UK content in installation and commissioning is the provision of local crew to support marine activities and some support vessels.

3.8.27 It is noted that research commissioned to support the development of policy and economic strategy in both Suffolk and Essex identifies a need for the future provision of new construction skills to meet the demand forthcoming from major infrastructure projects in the area which include multiple offshore wind and energy transmission projects.

3.8.28 VE's offshore construction and installation would support a relatively small number of construction opportunities locally given the existing skillsets and companies with the ability to achieve appointments for the contract packages for offshore turbine, balance of plant and substation commissioning and offshore electricals, along with supporting marine sector capabilities.

3.8.29 While therefore there is unlikely to be an adverse effect on skills provision (it is anticipated the majority of the skillsets would be imported), VE has produced an Outline Skills and Employment Strategy in order to promote local opportunities and enable people to access them, while engaging with skills providers and local stakeholders to ensure appropriate forward planning for the upcoming skills pipeline.

ASSESSMENT OF SIGNIFICANCE (OFFSHORE)

3.8.30 The offshore construction workforce anticipated to be sourced from existing labour markets is likely to equate to around 0.01% of the existing resident construction workforce of the WSA, and the existing number of construction jobs located in the WSA. On this basis, the magnitude of impact of onshore construction activity on employment in the WSA is assessed as **negligible**. Consequently, the magnitude of impact of onshore construction activity on employment at the national scale is also assessed as **negligible.**

3.8.31 The sensitivity of the receptor (the labour market of the WSA) is influenced by the extent to which it is able to respond to change. The construction labour market is notably peripatetic and responsive, with short tenure of employment and movement between employment, unemployment and economic inactivity driven by factors such as the availability of work, throughput of skilled personnel and the wider economic cycle.

3.8.32 Local policy and research identified earlier in this chapter suggests that there is policy support for the delivery of new, sustainable high-skilled marine construction skills particularly linked to green energy and clean technology, and this also accords with national policy approaches towards the provision of skilled jobs in the offshore wind sector (the British Energy Security Strategy (2022) expects the offshore wind sector to grow to support around 90,000 jobs by 2030).

3.8.33 As such, the sensitivity of the receptor at the WSA and national scale is considered to be **medium**.

3.8.34 As a result of a negligible effect on a medium sensitivity receptor, the effect of construction employment is assessed as **minor beneficial** and **not significant** t the WSA scale and national scale in EIA terms.

3.8.35 The Applicant has developed an Outline Skills and Employment Strategy (Volume 9, Report 27) which aims to provide an outline strategy that can be developed further with the relevant key consultees into a Skills and Employment Strategy that will facilitate positive and meaningful commitments and activities within the Essex region by the Applicant.

IMPACT 2: CONSTRUCTION WORKFORCE SPENDING

ONSHORE

3.8.36 Onshore construction workforce spending comprises the likely daily expenditure on food and drink by locally employed construction workers, and the subsistence spend (accommodation and food and drink) of construction workers moving to the area temporarily, who are involved in the installation and commissioning of the onshore substation, onshore cable route and onshore substation, onshore export cable and Bentley Road Widening Works.

3.8.37 In terms of additionality, it is noted that local construction workers may be anticipated to spend on food and drink in the area (Essex and Suffolk) whether they are employed at VE or another project, and so there is likely to be only a small net effect which has been discounted from this assessment.

3.8.38 Those workers likely to move to the area temporarily would be expected to spend an amount around the subsistence allowance that non-local construction workers often receive through Working Rule Agreements.

3.8.39 On this basis, an average non-local workforce of between 260 to 300 workers could be expected to spend between £7.4m and £8.6m on food, drink and accommodation within the WSA and most likely within the Local Study Area during the construction phase.

OFFSHORE

3.8.40 As set out above, the offshore construction workforce would be unlikely to be sourced substantially from within the UK and it is not known whether the international element of offshore construction workers would stay temporarily within the UK during the construction phase. As such it is not possible to quantify a reliable estimate of the non-local expenditure on food, drink and accommodation from this element of the workforce.

3.8.41 For the purposes of this assessment, it is anticipated that the proportion of the offshore construction workforce drawn from the UK (excluding those who live in Essex and Suffolk) would reside temporarily in the local area and would be expected to spend an amount around the subsistence allowance that non-local construction workers often receive through Working Rule Agreements.

3.8.42 On this basis, the average non-local but UK resident workforce could be expected to spend between £0.4m and £0.8m on food, drink and accommodation within Essex and Suffolk during the construction phase.

ASSESSMENT OF SIGNIFICANCE

3.8.43 The magnitude of the effect of the expenditure above is influenced by the baseline level of spend by incoming visitors on accommodation, food and drink within the Local Study Area and WSA (without the VE).

3.8.44 Based on these data it is anticipated that additional workforce spend would be equivalent to around 0.3% of tourist sector spend in Essex or 1.6% of tourist spending in Tendring per year, resulting in a **low** magnitude of effect.

3.8.45 The sensitivity of the receptor is influenced by its ability to absorb change (or continue to operate in the experience of change without substantial perceptible difference). Given the size and flexibility of the economy it is considered that both the WSA and LSA are **low** sensitivity receptors.

3.8.46 As such the effect of construction workforce expenditure is considered to be a **minor beneficial** effect that is **not significant** in EIA terms.

IMPACT 3: CONSTRUCTION EFFECTS ON SUPPLY CHAIN AND GVA

ONSHORE

3.8.47 GVA generated by onshore activity is related to the manufacturing of the onshore export cable and components of the onshore substation including electricals, building, access and security.

3.8.48 It is anticipated that this activity could generate around £7.4m in GVA during the manufacture of these components within the supply chain.

3.8.49 While onshore electricals are not likely to be sourced locally, there is the potential for a relatively large proportion of activity relating to the onshore substation (non-electrical) components to be sourced locally. For assessment purposes it is anticipated that around £2.2m could be supported within the local (Essex and Suffolk) supply chain and £4.6m within the national economy.

3.8.50 In terms of employment supported, this GVA would equate to around 30 FTE years of employment within the local supply chain and 60 FTE years of employment in the national supply chain.

3.8.51 GVA is also generated as a result of employment supported by the installation and commissioning of onshore infrastructure as a result of construction activity required. This is anticipated to support between £34m to £75m GVA in total (relating to the onshore cable and substation but not including the operations base in-line with assessments of direct employment above), of which around £14m to £16m would be anticipated to be retained in the WSA and £47m to £54m retained nationally.

OFFSHORE

3.8.52 GVA generated by offshore activity is related to the manufacturing of turbine components, and balance of plant relating to the foundation, array cable, offshore export cable, cable protection, and elements of the offshore substation (predominantly electricals).

3.8.53 Depending on the number of turbines to be installed, it is anticipated that this activity could generate between around £55m to £101m in GVA during the manufacture of these components within the supply chain.

3.8.54 Due to the lack of local suppliers for offshore infrastructure in the WSA and UK, for assessment purposes it is anticipated that only a very small proportion (around 0.1%) – likely relating to the offshore electricals – would be supported in the regional supply chain and around 35% (between £19m and £37m) would be supported in the national supply chain.

3.8.55 In terms of employment supported, this GVA would equate to around 250-480 FTE years of employment within the national supply chain and <5 FTE years of employment in the local supply chain.

3.8.56 GVA is also generated as a result of employment supported by the installation and commissioning of offshore infrastructure as a result of the construction activity required. This is anticipated to support between £20m and £38m GVA in total, of which around £0.5m to £0.9m would be anticipated to be retained locally and £2.8m to £5.4m retained nationally.

ASSESSMENT OF SIGNIFICANCE

3.8.57 The magnitude of the effect of GVA generated/supported by the activity of VE's demand for materials and labour is influenced by the baseline GVA within the WSA (without the VE) and nationally across relevant sectors.

3.8.58 Given the substantial scale of the economy of the WSA which supports £61bn annually in GVA (of which £6.3bn is construction activity), and the fact that the assessment case considers that up to around £19m of VE GVA is anticipated to be retained in the WSA, the magnitude of the effect (representing 0.3% of construction GVA in the WSA) is considered to be **negligible** at the WSA scale.

3.8.59 Given the substantial scale of the national economy which supports £2,000bn annually in GVA (of which £120bn is construction activity), and the fact that the assessment case considers that up to around £101m of the VE spend is anticipated to be retained nationally, the magnitude of the effect (representing 0.08% of construction GVA in the UK) is considered to be **negligible** at the national scale.

3.8.60 Economic growth and job creation is accorded a high priority in both national and local policies and strategy documents, particularly where it relates to clean growth.

3.8.61 National and local policy and research identified earlier in this chapter suggests that there is policy support for the delivery of new, sustainable high-skilled construction skills particularly linked to green energy and clean technology, and this also accords with national policy approaches towards the provision of skilled jobs in the offshore wind sector through both the generation of construction activity and inward investment in manufacturing technology to support it.

3.8.62 As such, the sensitivity of the receptor at the WSA and national scale is considered to be **medium**.

3.8.63 Based on this assessment case, the effect of construction phase GVA supported by VE is considered to be **minor beneficial** at the WSA scale and national scale, which is considered to be **not significant** in EIA terms.

IMPACT 4: CONSTRUCTION EFFECTS ON TOURISM

TOURIST OFFER / VALUE AND VOLUME

ONSHORE (EFFECTS ON TOURISM DRAW)

3.8.64 Effects that may influence coastal tourism relate to:

- Visual effects, noise, vibration, air quality effects experienced by people during the temporary construction of onshore infrastructure; and
- Where construction activities in the onshore area could reduce accessibility or present physical obstructions to recreational and tourist facilities including accommodation, natural and cultural heritage, PRoW and tourist attractions.

3.8.65 The ES (at Volume 6, Part 3, Chapter 2: LVIA) considers the potential for visitors using recreational facilities and undertaking recreational activities to experience significant changes to their views at specific locations as a result of construction activity, summarising that short-term, reversible but significant effects may rise on some walkers (e.g. on Short Lane (PRoW) which connects the coast with the village of Great Holland to the north, passing through the western part of Frinton Golf Course next to the coast and passing through farm fields on the approach to Great Holland).

3.8.66 However, the assessment summarises that overall there are no significant effects on landscape planning designations whose special characteristics may include visual appreciation by visitors (such as AONBs), with no significant effects reported on landscape character.

3.8.67 Where significant visual effects arise, these relate to the scale and appearance of the OnSS, as well as the relatively open and exposed nature of the flat and low-lying farmed landscapes where the OnSS will be located.

3.8.68 In respect of the construction of the landfall and the onshore ECC, the occurrence of significant effects on visual receptors will occur in localised areas typically where main and minor TCCs occur.

3.8.69 As such, given the relatively localised areas, minimal sections of recreational routes likely to be affected, short term nature and lack of significant effect on protected National Landscapes relied upon for tourist draw, the overall visual effects are not anticipated to result in a substantial change in visitor perception or experience during the construction phase.

3.8.70 The ES (at Volume 6, Part 3, Chapter 8: Traffic and Transport) considers that during the construction phase there is likely to be a negligible or minor effect on driver severance and delay as a result of the VE's construction traffic using the network (at peak hour), and a minor adverse effect on three links (Damant's Farm Lane, Payne's Lane and Barlon Road) as a result of temporary closure related to the installation of the export cable across roads using open trenching technology.

3.8.71 It is noted that any temporary road closure would be for a maximum of seven days and should more than one temporary road closure be required during the construction of VE, these would not be simultaneous unless agreed with Essex County Council in advance or via approval of the final CTMP.

3.8.72 The ES (at Volume 6, Part 3, Chapter 8: Traffic and Transport) also concludes that effects on pedestrian amenity are not likely to be significant.

3.8.73 As such, effects on the accessibility and journey time to, from and within the onshore area during the relatively short-term construction phase are not considered to be substantial to the extent that they may affect the propensity for people to visit the area or affect their experience within the area when they do.

3.8.74 The ES (at Volume 6, Part 3, Chapter 9: Airborne Noise and Vibration Chapter 10: Air Quality) consider the potential for human receptors including people and community facilities and recreational places to experience significant changes in emissions associated with construction activity including road traffic, summarising that effects would be short term, temporary and appropriately managed to a less than significant effect through the implementation of construction practices secured by the CoCP.

3.8.75 As such, effects on environmental amenity relating to air quality and noise are short-term, highly localised and can be mitigated to a level where they would not be significant in EIA terms, and as such would not be anticipated to affect the factors that contribute to the tourism value of the local area to the extent that this would deter tourists.

3.8.76 Effects on tourism may be anticipated to occur if there is any significant adverse change in the area's cultural heritage assets (such as Listed Buildings) as a result of construction activity relating to VE, given the propensity for cultural heritage to be an important asset in tourist attraction.

3.8.77 The ES (at Volume 6, Part 3, Chapter 7: Onshore Archaeology and Cultural Heritage) summarises that no significant effects have been identified arising from the change to setting affecting the heritage interests which make up the heritage significance of an asset during construction – most affected assets are likely to experience minor adverse effects (which are not considered to be significant) related to either or both the construction of onshore infrastructure and the array.

ASSESSMENT OF SIGNIFICANCE

3.8.78 As set out within Section 3.4, the potential effect of negative tourist perception is not considered likely to result in changes to tourist behaviour that would influence the value and volume of tourism.

3.8.79 As set out above, the direct environmental effects with the potential to have an impact on the tourist offer / draw and specific tourist sector receptors and characteristics is likely to be limited in spatial scale to areas very close to the onshore construction area, and in temporal scale to the relatively short-term nature of construction activity.

3.8.80 The reported environmental effects are also limited in significance, with the only significant effects likely to arise from visual impacts on users of some PRoW which would be highly localised and temporary.

3.8.81 As such, the magnitude of the impact on tourist value/volume as a result of effects to those characteristics, facilities, activities and important factors such as accessibility and amenity is considered to be **low** in the context of the tourist economy of Tendring and the LSA.

3.8.82 As demonstrated by Section 3.4 and Section 3.6 (Tourism Baseline), the tourist economy is substantial in scale in terms of the number of visits, spend by visitors, and employment supported. It is also inherently stable and flexible – it responds well to seasonal and annual variations from externalities with the ability to absorb or respond to change. As a result, the sensitivity of the receptor (the tourist economy of Tendring and the LSA) is considered **low** overall (though it is noted that individual receptors that contribute to its offer may be more sensitive).

3.8.83 As a result, the effect of construction activity on tourism is considered to be **minor adverse** at the District and LSA scale and **negligible** at all other scales which is considered to be not significant in EIA terms.

ONSHORE (EFFECTS ON TOURIST ACCOMMODATION)

3.8.84 There is a substantial supply of tourist accommodation within the area within 45 minutes of VE's onshore infrastructure (the LSA) where the non-local element of the workforce may be expected to live temporarily. On average around 31% of hotel rooms are unoccupied, or around 16% in the summer peak (based on July 2023 figures). This suggests that there are potentially on average 6,896 tourist accommodation rooms within the LSA and 1,103 unoccupied rooms at peak.

3.8.85 The visitor / tourist sector offers an abundant and flexible supply of accommodation for short-term, peripatetic workers seeking short term accommodation during on-shift periods.

3.8.86 It is estimated that during the construction phase there would be an average of between 260 to 300 workers related to onshore construction (installation and commissioning) works seeking temporary accommodation, with short-term peaks of between 420 to 470 workers.

3.8.87 The offshore (installation and commissioning) construction workforce would be unlikely to be sourced substantially from within the UK and it is not known whether the international element of offshore construction workers would stay temporarily within the UK or Essex and Suffolk during the construction phase.

3.8.88 For assessment purposes – though unlikely – it is assumed that all of these workers do move temporarily to the UK (excluding those who already live in Essex and Suffolk) which would add an average of 105 to 205 workers seeking temporary accommodation during the construction phase.

3.8.89 As such, the average non-local workforce would be equivalent to around 5-7% of the total supply of tourist rooms within the LSA, or 33% to 46% of the unoccupied rooms (16% of the total available accommodation) at the peak season.

ASSESSMENT OF SIGNIFICANCE

3.8.90 The magnitude of the effect is influenced by the duration of the likely uptake of accommodation which is temporary and short-term, and the scale of available accommodation which is substantially more than the demand, resulting in a **low** magnitude effect.

3.8.91 The sensitivity of the receptor is influenced by the ability for the market to respond to change. Given the availability of accommodation, even at peak, the accommodation market is demonstrably able to respond to absorb change with minimal adverse effect and potentially a short-term, positive effect relating to additional expenditure above the baseline. As such, the sensitivity of the receptor is considered to be **low**. There may be seasonal beneficial effects in economic terms, as a result of the uptake of unoccupied accommodation resulting in additional spend.

3.8.92 Based on this assessment case, the effect of non-local construction workforce on the tourism accommodation market is considered to be **minor (beneficial)** at the scale, which is considered to be **not significant** in EIA terms.

OFFSHORE (EFFECTS ON TOURIST DRAW)

3.8.93 Effects that may influence coastal tourism relate to:

- Visual effects during the temporary construction of offshore infrastructure; and
- Where construction activities in the offshore area could present physical obstructions and displacement of visitors engaging in marine tourism and recreational activities such as recreational sailing.

3.8.94 It is noted that in terms of visual effects, visitors drawn to destinations within sight of construction activities for activities such as walking, swimming, or sports are unlikely to be deterred by activities such as increased vessel numbers and are therefore deemed to be of low sensitivity to visual impacts of offshore works.

3.8.95 Due to their mobility, visitors engaging in coastal tourism and recreational activities are likely to be able re-route away from construction activities without significantly losing their amenity value and are therefore deemed to be of low sensitivity to visual impacts of offshore works.

3.8.96 ES Volume 6, Part 2, Chapter 10 (Seascape, Landscape and Visual Assessment) considers the construction phase effects of VE on seascape character, perceived landscape character, visual receptors / views and the special qualities of designated landscapes.

3.8.97 Effects are anticipated to occur relating to occur as a result of the construction activities, including the presence of jack-up vessels and/or heavy lift vessels during the construction phase for the installation of foundations substructures and WTGs; windfarm service vessels and accommodation vessels; and partially constructed offshore elements but are not considered to be more significant than effects during operation and maintenance (differing only in their temporary nature, and iterative installation activities that would not be visible during the operational phase).

3.8.98 The assessment considers the landscape designations, perceptual qualities and aesthetic / scenic qualities of landscape and seascape as well as cultural associations and recreational and community value, and concludes that:

- Effects on seascape character are not considered to be significant;
- Effects on perceived landscape character are not considered to be significant;
- Effects on the special qualities of designated landscapes (including Suffolk Coast and Heaths AONB (National Landscape)) are not considered to be significant;
- Effects on visual receptors and views (including long-distance recreational routes – NCN 150, the Suffolk Coast Path and England Coast Path, settlements and cultural sites and country parks) are not considered to be significant.

3.8.99 ES Volume 6, Part 2, Chapter 12 (Infrastructure and Other Marine Users) considers the potential for construction activity to displace or alter access to the marine environment, noting that The construction of VE will increase vessel movements within the area by a maximum of 4,311 return trips over the 5-year construction period from the seabed preparation works and the installation of infrastructure, and that there will be 500m safety zones in order to maintain safety of other marine users and the construction site. These effects are likely to reduce accessibility to the marine area potentially causing displacement of existing or potential uses and could lead to minor route changes being required for other vessel activities in the area.

3.8.100 However, these impacts will be of local extent, short-term duration, and are reversible, therefore representing only a very slight change from baseline conditions. In addition, these impacts will be subject to additional controls such as NtM and a TMP (which will ensure any risks of collision or disturbance impacts are appropriately managed. The magnitude of this impact is therefore considered to be negligible in EIA terms.

3.8.101 As such, there is a limited likelihood of significant effect on offshore recreational activity within or around the array area affected by safety zones or increased vessel traffic.

ASSESSMENT OF SIGNIFICANCE

3.8.102 As set out within Section 3.4, the potential effect of negative tourist perception is not considered likely to result in changes to tourist behaviour that would influence the value and volume of tourism.

3.8.103 As set out above, the direct offshore environmental effects with the potential to have an impact on the tourist offer / draw and specific tourist sector receptors and characteristics is likely to be limited in scope (to visual and offshore accessibility effects), which are not reported to be significant in EIA terms by the corresponding assessments.

3.8.104 As such, the magnitude of the impact on tourist value/volume as a result of effects to those characteristics, activities and important factors such as accessibility and amenity is considered to be **low** in the context of the tourist economy of Tendring and the LSA.

3.8.105 As demonstrated by Section 3.4 and Section 3.6 (Tourism Baseline), the tourist economy is substantial in scale in terms of the number of visits, spend by visitors, and employment supported. It is also inherently stable and flexible – it responds well to seasonal and annual variations from externalities with the ability to absorb or respond to change. As a result, the sensitivity of the receptor (the tourist economy of Tendring and the LSA) is considered **low** overall (though it is noted that individual receptors that contribute to its offer may be more sensitive – for example designated landscaped such as the AONBs/National Landscapes in the vicinity, and important tourist-related recreation assets like the England Cost Path – however it is confirmed that the visual effect on these receptors is not significant).

3.8.106 As a result, the effect of construction activity on tourism is considered to be **minor adverse** at the District and LSA scale and **negligible** at all other scales which is considered to be not significant in EIA terms.

IMPACT 5: CONSTRUCTION EFFECTS ON COMMUNITY AND RECREATIONAL FACILITIES

ONSHORE COMMUNITY AND RECREATIONAL FACILITIES

3.8.107 Effects on community and recreational facilities are determined by the extent to which there are local community and commercial facilities in the area likely to be affected by the construction of the VE in terms of accessibility and changes to environmental amenity, summarised below with reference to the findings of the ES (Volume 6):

- Part 3, Chapter 2: LVIA;
- Part 3, Chapter 8: Traffic and Transport;
- Part 3, Chapter 9: Airborne Noise and Vibration; and
- Part 3, Chapter 10: Air Quality.

3.8.108 The ES (at Volume 6, Part 3, Chapter 2: LVIA) considers the potential for people using community and recreational facilities and undertaking recreational activities to experience significant changes to their views at specific locations as a result of construction activity, summarising that short-term, reversible but significant effects may rise on some walkers (e.g. on Short Lane (PRoW) which connects the coast with the village of Great Holland to the north, passing through the western part of Frinton Golf Course next to the coast and passing through farm fields on the approach to Great Holland).

3.8.109 The careful siting of the onshore ECC, combined with the location of almost all open-cut trenching in arable farmland and the extensive use of trenchless crossing technique at 40 locations has greatly reduced the potential for significant effects on visual receptors to arise along the length of the onshore ECC.

3.8.110 The ES (at Volume 6, Part 3, Chapter 8: Traffic and Transport) considers that during the construction phase there is likely to be a negligible or minor effect on driver severance and delay as a result of the VE's construction traffic using the network (at peak hour), and a minor adverse effect on three links (Damant's Farm Lane, Payne's Lane and Barlon Road) as a result of temporary closure related to the installation of the export cable across roads using open trenching technology.

3.8.111 It is noted that any temporary road closure would be for a maximum of seven days and should more than one temporary road closure be required during the construction of VE, these would not be simultaneous unless agreed with Essex County Council in advance or via approval of the final CTMP.

3.8.112 Where direct access would be affected by a temporary road closure, the Applicant would liaise with those users directly to ensure minimal disruption as possible whilst an access is temporarily closed, which could include 24-hour working and/ or providing alternative crossing, where appropriate. This would include liaising with the emergency services, to ensure access could be maintained during the closure.

3.8.113 The ES (at Volume 6, Part 3, Chapter 8: Traffic and Transport) also considers the potential for community severance – which it summarises is negligible or minor for all affected links except for Bentley Road (which is 'moderate' in EIA terms, but likely to reduce to negligible given there are only several residential properties and no local facilities and therefore unlikely to be many pedestrian movements.

3.8.114 The ES (at Volume 6, Part 3, Chapter 8: Traffic and Transport) also concludes that effects on pedestrian amenity are not likely to be significant.

3.8.115 The ES (at Volume 6, Part 3, Chapter 9: Airborne Noise and Vibration) considers the potential for human receptors including people, property and community facilities and recreational places to experience significant changes in noise associated with construction activity including road traffic.

3.8.116 That assessment concludes that there would be potential significant (adverse) effects related to construction activity and traffic for the Bentley Road Widening Works but that this would be reduced to less than significant levels through the application of mitigation measures including quieter equipment, relocation of plant, and the use of barriers.

3.8.117 Further significant effects may arise relating to onshore ECC construction noise and at landfall activities (construction and removal of Beach Works TCC) but following mitigation these effects would reduce to a less than significant level through the above measures and careful positioning of route / drilling of crossings, use of enclosures or quieter techniques where necessary.

3.8.118 The ES (at Volume 6, Part 3, Chapter 10: Air Quality) considers the potential for human receptors including people, property and community facilities to experience significant changes in air quality, particulates, emissions and dust associated with construction activity including road traffic.

3.8.119 The assessment concludes that providing effective mitigation measures are implemented, potential effects relating to construction phase dust are considered to be not significant in terms of the EIA regulations. These measures are included within the CoCP, secured as a requirement of the DCO (see 3.8 – Mitigation). Emissions associated with construction traffic are also not considered to be significant, and both are temporary effects that would be very localised with no long-term deterioration of conditions.

PUBLIC RIGHTS OF WAY

3.8.120 The construction of VE will interact with a number of routes are all formally designated as Public Rights of Way (PRoW) within the onshore Export Cable Corridor (ECC).

3.8.121 The majority of the PRoW within the Onshore ECC interact with the construction of VE on a temporary basis and will require temporary control measures to be put in place including temporary diversions, crossings, signage and other management set out within the Outline Public Access Management Plan.

3.8.122 Any diversions for PRoW will be within the Onshore ECC and may be up to approximately 200m in length in one or either direction of the original PRoW, depending on the site and physical constraints.

3.8.123 The following table summarises the PRoW to be affected by the Project in terms of access and connectivity, identifying significance based on the magnitude of change and the sensitivity of the receptor (influenced by the PRoW policy designation for recreational routes, and its role in community connectivity):

Table 3.26 – Assessment of Effects on PRoW

PRoW Reference	Proposed Effect and Management via PAMP	Sensitivity	Magnitude	Significance
FP11 164	Temporary crossing by cable trenches and for construction traffic on haul road/off-route haul road. Managed crossing and appropriate signage for alternative route. Closed temporarily for construction of cable trenches. Diversion via either <50 m temporary path, or signed via FP38 164 and FP10 164 (120m additional length).	Medium	Negligible / Low	Minor Adverse (Not Significant)
FP13 180	Temporary crossing by Onshore ECC and construction traffic on haul road. Footpath kept open using a managed crossing although and temporarily diverted when the works are undertaken at this location (cable installation or installing/removing the haul road) via a <50 m temporary path.	Medium	Negligible	Minor Adverse (Not Significant)

PRoW Reference	Proposed Effect and Management via PAMP	Sensitivity	Magnitude	Significance
FP38 164	Temporary crossing by construction traffic on off-route haul roads, but kept open using a managed crossing, except for short-term, temporary diversions to install/remove the haul road (<50 m additional journey length).	Medium	Negligible	Minor Adverse (Not Significant)
FP7 180	Temporary crossing by VE construction traffic on an off-route haul road at a haul road crossing. Section of the footpath at the location of CR-5 would be temporarily diverted to avoid the crossing and off-route haul road (<50 m additional journey length).	Medium	Negligible	Minor Adverse (Not Significant)
FP 4 180	Potential temporary closure; Temporary crossing for VE construction traffic on off-route haul road. Managed crossing (and temporarily diverted to install/remove the off-route haul road); or temporarily diverted along the edge of the off-route haul road for the duration of the construction works.	Medium	Negligible	Minor Adverse (Not Significant)
FP3 180	Not closed; Temporary managed crossing for VE construction traffic on off-route haul road; temporarily diverted to install/remove the off-route haul road (<50m)	Medium	Negligible	Minor Adverse (Not Significant)

PRoW Reference	Proposed Effect and Management via PAMP	Sensitivity	Magnitude	Significance
FP1 180	Not closed; Temporary crossing by onshore cable trenches and VE construction traffic on haul road managed by managed crossing. Temporarily diverted (<50m) when the works are undertaken at this location (cable installation or installing/removing the haul road).	Medium	Negligible	Minor Adverse (Not Significant)
FP 18 159	Not closed; Temporary crossing by onshore cable trenches and for VE construction traffic on haul road using gated crossing. Temporarily diverted when the works are undertaken at this location (cable installation or installing/removing the haul road).	Medium	Negligible	Minor Adverse (Not Significant)
FP18 180	Temporary crossing by Onshore cable trenches, VE construction traffic on haul road and potentially through TCC4. Managed by gated crossing with temporary diversion of between 50-250m around TCC (along the boundary of the TCC with the B1035 Tendring Road)	Medium	Negligible/Low	Minor Adverse (Not Significant)
FP22 179	Not closed; Temporary gated crossing by VE construction traffic on haul road and uses track for operation and maintenance. Temporarily diverted when the works	Medium	Negligible	Minor Adverse (Not Significant)

PRoW Reference	Proposed Effect and Management via PAMP	Sensitivity	Magnitude	Significance
	are undertaken at this location.			
FP8 179	Not closed; Temporary crossing by cable trenches and construction traffic on haul road / off route haul road. Managed crossing or temporarily diverted along the edge of the off-route haul road for the duration of the construction works at around <50 m additional journey length	Medium	Negligible	Minor Adverse (Not Significant)
FP3 179	Not closed; Temporary crossing by cable trenches and for construction traffic on haul road using managed crossing. Temporary diversion via <50 m temporary path when the works are undertaken at this location (cable installation or installing/removing the haul road).	Medium	Negligible	Minor Adverse (Not Significant)
FP1 179	Not closed; Temporary crossing by cable trenches and for VE construction traffic on haul road using managed crossing. Temporary diversion via <50 m temporary path when the works are undertaken at this location (cable installation or installing/removing the haul road).	Medium	Negligible	Minor Adverse (Not Significant)

PRoW Reference	Proposed Effect and Management via PAMP	Sensitivity	Magnitude	Significance
FP31 183	Not closed; Temporary crossing by cable trenches and for VE construction traffic on haul road using managed crossing. Temporary diversion via <50 m temporary path when the works are undertaken at this location (cable installation or installing/removing the haul road).	Medium	Negligible	Minor Adverse (Not Significant)
FP32 183	Not closed; Temporary crossing by cable trenches and for VE construction traffic on haul road using managed crossing. Temporary diversion via <50 m temporary path when the works are undertaken at this location (cable installation or installing/removing the haul road).	Medium	Negligible	Minor Adverse (Not Significant)
183_15	Temporary crossing for VE construction traffic on haul road using a managed crossing. Temporary diversion via <50 m temporary path when the off-route haul road is installed/removed.	Medium	Negligible	Minor Adverse (Not Significant)
FP17 172	Temporary crossing by cable trenches and OnSS access road and for VE construction traffic on haul road using a managed crossing. Temporary diversion via <50 m	Medium	Negligible	Minor Adverse (Not Significant)

PRoW Reference	Proposed Effect and Management via PAMP	Sensitivity	Magnitude	Significance
	temporary path during cable installation or installing/removing the haul road.			
FP16 172	Temporary crossing by cable trenches and OnSS access road and for VE construction traffic on haul road using a managed crossing. Temporary diversion via <50 m temporary path during cable installation or installing/removing the haul road.	Medium	Negligible	Minor Adverse (Not Significant)
FP15 172	Temporary diverted footpath around the TCC between 50 and 200 m additional journey length.	Medium	Low	Minor Adverse (Not Significant)

3.8.124 The Final PAMP(s) will be approved by Essex County Council prior to commencement of each relevant stage and will include a plan(s) showing the confirmed control measures for each PRoW and also identify the specific length of the PRoW that is affected.

ASSESSMENT OF SIGNIFICANCE

3.8.125 This section considers the potential for effects to arise as a result of onshore environmental effects from the Project on community facilities and recreational receptors, including the effect of closure or diversion of PRoW, and effects on accessibility and/or environmental amenity experienced by users of those facilities / routes, and the ability for facilities / routes to continue to operate in its intended use.

3.8.126 Based on a review of the identified receptors likely to experience change, overall the magnitude of effect is considered to be **negligible** (with the facilities and routes experiencing either slight or hardly perceptible change in capacity or of accessibility or amenity based on the significance of environmental effects) to **medium** (with notable increase/decrease in journey length of PRoW and/or travel patterns on some routes).

3.8.127 In all cases, the receptor has the ability to absorb or respond to change resulting from environmental or accessibility effects without affecting its intended use, and/or is of relatively low to medium importance except for two high sensitivity receptors (both PRoWs). In the case of PRoW, mitigation ensures that substitution is available in the form of diversions which are short-term and offer an appropriate alternative (see 3.8 – Mitigation, and Volume 9, Document 9.25 – Outline Public Access Management Plan).

3.8.128 As such, given the low to medium magnitude and low to medium sensitivity across individual receptors taking into account mitigation measures where relevant, overall the effect of the construction phase activities on community facilities and recreational facilities and routes is considered to be of **minor adverse** significance and **not significant** in EIA terms.

OFFSHORE COMMUNITY AND RECREATIONAL FACILITIES

3.8.129 Offshore recreation may be affected where construction activities in the offshore area could present physical obstructions and displacement of visitors engaging in marine tourism and recreational activities such as recreational sailing.

3.8.130 There will also be regular vessel movements and maintenance works within the offshore area of VE, though

3.8.131 As set out above (Impact 4: Construction Effects on Tourism) ES Volume 6, Part 2, Chapter 12 (Infrastructure and Other Marine Users) considers the potential for construction activity to displace or alter access to the marine environment, noting that the construction of VE will increase vessel movements within the area by a maximum of 4,311 return trips over the 5-year construction period from the seabed preparation works and the installation of infrastructure, and that there will be 500m safety zones in order to maintain safety of other marine users and the construction site. These effects are likely to reduce accessibility to the marine area potentially causing displacement of existing or potential uses and could lead to minor route changes being required for other vessel activities in the area.

3.8.132 However, it is considered unlikely that these temporary activities would affect the behaviour of visitors to the coast and those engaging in marine tourism and recreational activities, due to the existing high levels of marine activity in the area and the distance of the array from shore as set out within the ES at Volume 6, Part 2, Chapter 12 (Infrastructure and Other Marine Users) and Chapter 9 (Shipping and Navigation).

3.8.133 These impacts will be of local extent, short-term duration, and are reversible, therefore representing only a very slight change from baseline conditions. In addition, these impacts will be subject to controls such as NtM and a TMP (which will ensure any risks of collision or disturbance impacts are appropriately managed. The magnitude of this impact is therefore considered to be negligible in EIA terms.

3.8.134 As such, there is a limited likelihood of significant effect on offshore recreational activity within or around the array area affected by safety zones or increased vessel traffic.

3.8.135 The majority of recreational marine users are in the nearshore. Sources of nearshore disruption could include cable laying and onshore/offshore connection, foundation and turbine installation and the use of vessels to transport and support these activities in the nearshore and offshore area.

ASSESSMENT OF SIGNIFICANCE

3.8.136 At the nearshore, physical disruptions that may occur during the construction phase will be temporary and localised around the areas of activity. Away from the nearshore area, effects on recreational sailing are minimal as a result of non-significant reported effects on collision / disturbance supported by mitigation.

3.8.137 It will be possible for marine recreation users in the offshore area to access and move through the offshore construction area, between areas of activity and in-line with protocols for communication set out within the ES at Volume 6, Part 2, Chapter 12 (Infrastructure and Other Marine Users) and Chapter 9 (Shipping and Navigation), and therefore the spatial extent of impacts on those recreational users will be localised, infrequent and also temporary and relatively short term, resulting in a **low** magnitude impact.

3.8.138 Due to their mobility, people engaging in marine recreational activities are likely to be able re-route away from construction activities without significantly losing their amenity value and are therefore deemed to be of **low** sensitivity to disturbance impacts of offshore works. The existing identified recreational facilities are located away from the area anticipated to experience most nearshore construction activity.

3.8.139 As such, given the low magnitude and low sensitivity across receptors, overall the effect of the construction phase activities on offshore recreation is considered to be of **minor adverse** significance and **not significant** in EIA terms.

IMPACT 6: CONSTRUCTION EFFECTS ON PUBLIC SERVICES

3.8.140 The non-local construction workforce is not anticipated to generate substantial demand for primary healthcare facilities in the local area that would place additional pressure on those services (for example GP services).

3.8.141 Workers staying in the area temporarily during the construction phase would be living in tourist/visitor accommodation during on-shift periods and would return home during off-shift periods and weekends. These workers are unlikely to be on long-term contracts given the technical nature of work packages and contract and would therefore not be expected to live in the area for long periods, bring their families, or change their home-based approach to primary healthcare access including prescribing and GP access.

3.8.142 Nonetheless, for worst-case assessment purposes it is assumed that the average onshore, non-local construction workforce (estimated at between 260 and 300 workers for the duration of the construction phase) and the off-shore non-local construction workforce (between 105-205 workers) may possibly seek some GP services locally within the LSA where they are likely to reside.

3.8.143 In this assessment case, the additional demand for GP provision within the ICBs covered by the LSA (Suffolk and North Est Essex ICB and Mid and South Essex ICB) (based on retaining existing GP list sizes in these areas) could result in a temporary demand for 0.20 GPs at that scale (an increase in the list size and therefore demand for GPs of 0.02%) to retain existing levels of provision.

3.8.144 Should all non-local workers reside in the most local Sub-ICB (06T – NHS North East Essex), this could result in a temporary demand for 0.18 GPs at that scale (an increase in the list size and therefore demand for GPs of 0.13%) to retain existing levels of provision.

ASSESSMENT OF SIGNIFICANCE

3.8.145 Given the very limited scale of increase in demand set out above the magnitude of impact is assessed as **low** in the context of the LSA and the temporary nature of the construction workforce. The sensitivity of the receptor is considered to be **medium** given that list sizes are already over the identified HUDU suggested benchmark of 1,800 patients per FTE GP but that there are substantial options for registration within the LSA with some individual operators operating at below that threshold.

3.8.146 As such the effect is considered to be **minor adverse** at the LSA scale and **not significant** in EIA terms.

3.9 ENVIRONMENTAL ASSESSMENT: OPERATIONAL PHASE

IMPACT 7: OPERATIONAL EMPLOYMENT

ONSHORE

3.9.1 The operation of the onshore element of VE is likely to generate a small amount of direct employment in the form of maintenance of the onshore cable and substation. This is likely to support around 140 years of FTE employment over the operational phase, translating to an average of around 5 FTE jobs during the lifetime of the VE.

3.9.2 Given the technical and temporary, short-term nature of these maintenance works which would occur at regular but limited intervals throughout the operational phase, this is unlikely to support substantial a substantial element of local employment within the WSA.

ASSESSMENT OF SIGNIFICANCE (ONSHORE)

3.9.3 The onshore operational workforce anticipated to be sourced from existing labour markets is likely to equate to around 0.001% of the existing resident workforce of the WSA. On this basis, the magnitude of impact of onshore operational activity on employment in the WSA is assessed as **negligible**. The magnitude of impact of onshore operational activity on employment at the national scale is assessed as **negligible.**

3.9.4 The sensitivity of the receptor (the labour market of the WSA) is influenced by the extent to which it is able to respond to change.

3.9.5 Local policy and research identified earlier in this chapter suggests that there is policy support for the delivery of new, sustainable net zero / low carbon sector skills particularly linked to green energy and clean technology, and this also accords with national policy approaches towards the provision of skilled jobs in the offshore wind sector (the British Energy Security Strategy (2022) expects the offshore wind sector to grow to support around 90,000 jobs by 2030).

3.9.6 As such, given the importance to the economy of this type of work, balanced with the long-term nature of the operational phase and the ability for evolution of the labour market over time, the sensitivity of the receptor at the WSA and national scale is considered to be **low**.

3.9.7 As a result of a negligible magnitude effect on a medium sensitivity receptor, the effect of operational onshore employment is assessed as **negligible** and **not significant** in EIA terms.

OFFSHORE

3.9.8 The operation of VE is likely to generate direct employment in the form of offshore operations (including wind farm administration, vessel operation and training and health and safety), turbine maintenance (both minor/routine and major maintenance), and maintenance of the foundation, offshore cable, and offshore substation.

3.9.9 In total, the operational phase is anticipated to support between 110 and 220 direct, indirect and induced FTE jobs on average during the operational phase, of which around 35 to 70 would be expected to be the WSA (with between 80 and 150 within the national labour market).

3.9.10 Based on the lowest capacity / turbine scenario, VE is anticipated to support at least the following indicative types of direct FTE jobs in Essex and Suffolk during its operational lifetime:

- 16 FTEs within the Operation and Maintenance Team;
- 14 FTE Technicians (across two shifts);
- 4 FTE Vessel crew (across two shifts, used to transfer technicians to the wind farm offshore); and
- 1 FTE cleaner.

3.9.11 The extent to which this employment is drawn locally will be determined by any decision on the use of an existing or new operations base, and its location.

3.9.12 The Applicant owns a stake in a number of operational offshore wind projects on the East coast of England, including Galloper and Greater Gabbard. To support Galloper, a 60-strong team operates and maintains the wind farm from a state-of-the-art, purpose-built Operations & Maintenance (O&M) facility in Harwich International Port.

3.9.13 These two projects have led to the creation of 15 skilled apprentice opportunities, and around 180 long-term skilled jobs to support the operation and maintenance of the OWFs. These projects have worked extensively with schools and educational institutes, as well as teachers and pupils along the East coast, to deliver career insight sessions and STEM presentations to promote knowledge of the renewables industry and associated job opportunities.

ASSESSMENT OF SIGNIFICANCE (OFFSHORE)

3.9.14 The offshore operational workforce anticipated to be sourced from existing labour markets is likely to equate to around 0.007% of the existing resident workforce of the WSA. On this basis, the magnitude of impact of offshore operational activity on employment in the WSA is assessed as **negligible**. The magnitude of impact of onshore operational activity on employment at the national scale is assessed as **negligible.**

3.9.15 The sensitivity of the receptor (the labour market of the WSA) is influenced by the extent to which it is able to respond to change.

3.9.16 Local policy and research identified earlier in this chapter suggests that there is policy support for the delivery of new, sustainable net zero / low carbon sector skills particularly linked to green energy and clean technology and marine skills, and this also accords with national policy approaches towards the provision of skilled jobs in the offshore wind sector (the British Energy Security Strategy (2022) expects the offshore wind sector to grow to support around 90,000 jobs by 2030).

3.9.17 As such, given the importance to the economy of this type of work, balanced with the long-term nature of the operational phase and the ability for evolution of the labour market over time, the sensitivity of the receptor at the WSA and national scale is considered to be **low**.

3.9.18 As a result of a negligible magnitude effect on a medium sensitivity receptor, the effect of operational offshore employment is assessed as **negligible** and **not significant** in EIA terms.

3.9.19 The Applicant has developed an Outline Skills and Employment Strategy (Volume 9, Report 27) which aims to provide an outline strategy that can be developed further with the relevant key consultees into a Skills and Employment Strategy that will facilitate positive and meaningful commitments and activities within the Essex region by the Applicant.

IMPACT 8: OPERATIONAL WORKFORCE SPENDING

ONSHORE

3.9.20 As set out above, onshore maintenance and operation is likely to result in a negligible level of FTE employment and therefore a negligible scale of expenditure on food and drink in the local area.

OFFSHORE

3.9.21 As set out above, the retention of expenditure for the offshore operational workforce in the Essex and Suffolk area would be determined by any decision on the use of an existing or new operations base, and its location. Locally resident workforce would be likely to spend on food and drink in the local area, with non-local workers temporarily moving to the aver to undertake works spending on accommodation in addition (should they be based in the area for a period of time that necessitates it for their maintenance role).

3.9.22 On the assumption that an existing or new operations base is located in Essex or Suffolk, based on average daily expenditure on food and drink, the operational FTE employment for workers resident in the area could generate annual expenditure of between £900,000 and £1.8m per year over the operational lifetime of the VE.

ASSESSMENT OF SIGNIFICANCE

3.9.23 The magnitude of the effect of the expenditure above is influenced by the baseline level of spend by incoming visitors on accommodation, food and drink within the Local Study Area and WSA (without the VE).

3.9.24 Based on these data it is anticipated that additional workforce spend would be equivalent to around 0.1% of tourist sector spend in Essex or 0.6% of tourist spending in Tendring per year, resulting in a **negligible** magnitude of effect.

3.9.25 The sensitivity of the receptor is influenced by its ability to absorb change (or continue to operate in the experience of change without substantial perceptible difference). Given the size and flexibility of the economy it is considered that both the WSA and LSA are **low** sensitivity receptors.

3.9.26 As such the effect of construction workforce expenditure is considered to be a **negligible** effect that is **not significant** in EIA terms.

IMPACT 9: OPERATIONAL GVA / SUPPLY CHAIN EFFECTS

ONSHORE

3.9.27 GVA related to onshore operations and maintenance is produced by activities supporting the maintenance of the onshore cable and substation, which as described in this Chapter, are likely to be temporary, short-term and at limited intervals throughout the operational phase. This is anticipated to support an average of between £0.3m to £0.5m per year in GVA at all scales of which around 30% would be anticipated to be retained locally and 70% nationally.

OFFSHORE

3.9.28 GVA related to the operation and maintenance of the offshore infrastructure is produced by activities that form the supply chain including materials, expertise relating to wind farm administration, vessel operation and training and health and safety), turbine maintenance (both minor/routine and major maintenance), and maintenance of the foundation, offshore cable, and offshore substation.

3.9.29 This is anticipated to support an average of between £11m to £21m per year in GVA at all scales of which around 33% would be anticipated to be retained locally and 70% nationally.

3.9.30 The Applicant is actively involved in industry bodies including RenewableUK, EnergyUK and the East of England Energy Group and has supported supply chain and industry events, via sponsorship and speaking opportunities, and participation in meet the buyer events, business breakfasts, awards and sponsorship. This activity is ongoing, including participation in the recently launched EastWind – the East of England's Offshore Wind Cluster forum.

ASSESSMENT OF SIGNIFICANCE

3.9.31 The magnitude of the effect of GVA generated/supported by the activity of VE's demand for materials and labour is influenced by the baseline GVA within the WSA (without VE) and nationally across relevant sectors.

3.9.32 Given the substantial scale of the economy of the WSA which supports £61.4bn annually in GVA (of which £14.6bn is related to manufacturing and energy production), and the fact that the assessment case considers that around £7m of VE spend is anticipated to be retained in the WSA per year, the magnitude of the effect (equating to 0.05% of manufacturing and energy GVA) is considered to be **negligible** at the WSA scale.

3.9.33 Given the substantial scale of the national economy which supports £2,000bn annually in GVA (of which £492bn is manufacturing and energy production), and the fact that the assessment case considers that around £14.7m of VE spend is anticipated to be retained nationally per year, the magnitude of the effect (equating to 0.003% of manufacturing and energy GVA) is considered to be **negligible** at the national scale.

3.9.34 Economic growth and job creation is accorded a high priority in both national and local policies and strategy documents, particularly where it relates to clean growth. As such, the sensitivity of the receptor at the WSA and national scale is considered to be **medium**.

3.9.35 Based on this assessment case, the effect of operational phase GVA supported by VE is considered to be **minor beneficial** at the WSA scale and national scale, which is considered to be **not significant** in EIA terms.

IMPACT 10: OPERATIONAL EFFECTS ON TOURISM

ONSHORE

3.9.36 During the operational phase, the onshore infrastructure works will be in place and will require minimal maintenance work resulting in a return to environmental conditions similar to the pre-construction phase in most cases, and therefore unlikely to influence receptors that would alter the ability for people to access and experience the factors that influence tourist and recreational assets, facilities or perceptions in terms of environmental effects reported in the following onshore chapters of Volume 6 (ES) Part 3:

- Chapter 2 (LVIA);
- Chapter 7 (Onshore Archaeology and Cultural Heritage);
- Chapter 8 (Traffic and Transport);
- Chapter 9 (Airborne Noise and Vibration); and
- Chapter 10 (Air Quality).

3.9.37 ES Part 3, Chapter 2 (LVIA) reports that there would be no significant effects on coastal land as a result of the landfall, and there will be no significant effects on agricultural land or the hedgerows as a result of the onshore ECC. There would also be no significant effects on landscape character as a result of the landfall or onshore ECC during the operational phase.

3.9.38 The assessment identifies effects on the local landscape around the OnSS (owing to its large-scale and modern appearance which will be at variance with the predominantly rural character of the receiving landscape) where there is greatest potential for significant effects on landscape character to arise, noting that these effects would be significant (major or / major/moderate) to an area defined broadly by Hungerdown Lane approximately 0.7 km to the west, Grange Road PRoW approximately 0.9 km to the north, Little Bromley approximately 1.2 km to the east and Barlon Road, Manning Grove and Lilley's Farm approximately 1.0 to 1.3 km to the south. However, these will be reduced to not significant within the 10 to 15 year period during which mitigation planting will grow and mature to reduce the influence of the OnSS within the local landscape.

3.9.39 Additionally, there are six viewpoints that are assessed to undergo significant effects occur within 1.4 km of the OnSS making significant visual effects localised. Where significant visual effects arise, these relate to the scale and appearance of the OnSS, as well as the relatively open and exposed nature of the flat and low-lying farmed landscapes where the OnSS will be located. These include some recreational assets (PRoWs).

3.9.40 Mitigation planting has been designed and secured within the Outline LEMP (Volume 9, Document 9.22) which is to be secured as a Requirement of the draft DCO to create an effective screen around the OnSS and will remove all significant effects on surrounding visual receptors within the first 15 years of operation.

3.9.41 There would be no significant effects on landscape planning designations as none are considered receptors within the area potentially affected by onshore infrastructure.

3.9.42 As such, given the relatively localised areas, minimal sections of recreational routes likely to be affected, and lack of significant effect on protected National Landscapes relied upon for tourist draw, the overall visual effects are not anticipated to result in a substantial change in visitor perception or experience.

3.9.43 Effects on tourism may be anticipated to occur if there is any significant adverse change in the area's cultural heritage assets (such as Listed Buildings) as a result of operational activity relating to VE, given the propensity for cultural heritage to be an important asset in tourist attraction.

3.9.44 The ES (at Volume 6, Part 3, Chapter 7: Onshore Archaeology and Cultural Heritage) summarises that no significant effects have been identified arising from the change to setting affecting the heritage interests which make up the heritage significance of an asset – most are considered to result in negligible or no effects (with minor indirect adverse effects on Jennings Farmhouse and Church of St Mary which are not considered to be significant).

3.9.45 As such, effects on characteristics or specific assets of cultural heritage that contribute to tourism draw during the operational phase are not anticipated to be widespread or substantial to the extent that they could be anticipated alter the propensity for people to visit.

3.9.46 Volume 6 (ES), Part 3, Chapter 2 (Traffic and Transport) notes that effects associated with Operations and Maintenance activities are negligible and therefore were scoped out of the assessment, given that expected number of vehicle movements would be minimal. It is noted that the following planned vehicle movements are estimated:

- Landfall/ Onshore ECC – One annual inspection/testing visit to each cable joint pit/ transition joint bay by personnel using a LGV; and
- OnSS – Weekly visits would be required by approximately two vehicles (approx. eight traffic movements per week). During two-week annual maintenance period this would increase to approximately four to eight traffic movements per day.

3.9.47 Unplanned maintenance activities may require vehicles similar to construction, but these would be extremely rare occurrences.

3.9.48 As such, effects on the accessibility and journey time to, from and within the onshore area during the operational phase are not considered to be substantial to the extent that they may affect the propensity for people to visit the area or affect their experience within the area when they do.

3.9.49 ES Part 3, Chapter 9 (Airborne Noise and Vibration) identifies that significant noise effects would be limited to the operation of the OnSS, and would be of major adverse significance to some very local receptors (not including any tourist or recreational receptors) and in any case would be mitigated to a less than significant level through the application of mitigation including quieter electrical components, enclosures, silencers sound proofing grilles for fans. localised screening, noise barriers, or repositioning.

3.9.50 ES Part 3, Chapter 10 (Air Quality) identifies that road traffic impacts are considered to be not significant in EIA terms (driven by extremely low levels of additional operational traffic), and no further assessment is required. Onshore operational activities limited to maintenance are expected to be intermittent / infrequent and their assessment in air quality terms have been screened out from requiring further assessment with regards to human and ecological receptors and are negligible and not significant in EIA terms.

3.9.51 As such, effects on environmental amenity relating to air quality and noise are not anticipated to be perceptible in most cases, and where they are highly localised and can be mitigated to a level where they would not be significant in EIA terms, and as such would not be anticipated to affect the factors that contribute to the tourism value of the local area to the extent that this would deter tourists.

ASSESSMENT OF SIGNIFICANCE

3.9.52 As set out within Section 3.4, the potential effect of negative tourist perception is not considered likely to result in changes to tourist behaviour that would influence the value and volume of tourism.

3.9.53 As set out above, the direct onshore environmental effects with the potential to have an impact on the tourist offer / draw and specific tourist sector receptors and characteristics is likely to be limited in spatial scale to areas very close to the OnSS, and are also limited in significance, with the only significant effects likely to arise from visual impacts on users of some short sections of PRoW which would be highly localised.

3.9.54 As such, the magnitude of the impact on tourist value/volume as a result of effects to those characteristics, facilities, activities and important factors such as accessibility and amenity is considered to be **negligible** in the context of the tourist economy of Tendring and the LSA.

3.9.55 As demonstrated by Section 3.4 and Section 3.6 (Tourism Baseline), the tourist economy is substantial in scale in terms of the number of visits, spend by visitors, and employment supported. It is also inherently stable and flexible – it responds well to seasonal and annual variations from externalities with the ability to absorb or respond to change. As a result, the sensitivity of the receptor (the tourist economy of Tendring and the LSA) is considered **low** overall (though it is noted that individual receptors that contribute to its offer may be more sensitive).

3.9.56 As a result, the effect of the onshore operational infrastructure on tourism is considered to be **negligible** at all scales which is considered to be not significant in EIA terms.

OFFSHORE

3.9.57 Effects that may influence coastal tourism relate to:

- Visual effects during the operational phase of the offshore infrastructure; and
- Where siting of and access to offshore infrastructure could present physical obstructions and displacement of visitors engaging in marine tourism and recreational activities such as recreational sailing.

3.9.58 Once infrastructure is constructed, there is potential for the array areas to be visible along the Essex and Suffolk coastline, which could have implications on the seascape character, perceived landscape character, visual receptors / views and the special qualities of designated landscapes which may be relevant to tourism draw.

3.9.59 Detailed operational visual effects on representative viewpoints and routes are considered within the ES at Volume 6, Part 2, Chapter 10: Seascape, Landscape and Visual Assessment.

3.9.60 The assessment considers the landscape designations, perceptual qualities and aesthetic / scenic qualities of landscape and seascape as well as cultural associations and recreational and community value, and concludes that:

- Effects on seascape character are not considered to be significant;
- Effects on perceived landscape character are not considered to be significant;
- Effects on the special qualities of designated landscapes (including Suffolk Coast and Heaths AONB (National Landscape)) are not considered to be significant;
- Effects on visual receptors and views (including long-distance recreational routes – NCN 150, the Suffolk Coast Path and England Coast Path, settlements and cultural sites and country parks) are not considered to be significant.

3.9.61 It is noted that the visual amenity offered by an area is not the sole decisive factor for tourists and users of recreational assets, but as effects are limited in any case, it is not anticipated that the magnitude of effects would be substantial, particularly given evidence from other projects that visitors are unlikely to be deterred, and that a number of the existing OWFs visible from the Suffolk and Essex coast already form part of the baseline tourism and recreation value in the study area.

3.9.62 There will also be regular vessel movements and maintenance works within the offshore area of VE, though it is considered unlikely that these temporary activities would affect the behaviour of visitors to the coast and those engaging in marine tourism and recreational activities, due to the existing high levels of marine activity in the area and the distance of the array from shore as set out within the ES at Volume 6, Part 2, Chapter 12 (Infrastructure and Other Marine Users) and Chapter 9 (Shipping and Navigation).

3.9.63 The majority of recreational marine users are in the nearshore. Sources of nearshore disruption could include:

- Export cable repairs or reburial;
- Transiting maintenance vessels; and
- The presence of surface laid cable protection.

3.9.64 Consultation with recreational stakeholders has been carried out to identify any recreational vessels not required to broadcast via AIS. Further details are provided in ES Volume 6, Part 2, Chapter 9: Shipping and Navigation.

3.9.65 The ES (at Volume 6, Part 2, Chapter 9: Shipping and Navigation) considers the potential for effects on recreational boats, summarising that VE is unlikely to result in significant adverse conditions for recreational vessels during the operational phase, stating that "*for recreational vessels under sail navigating internally within the arrays, there is also potential for effects such as wind shear, masking, and turbulence to occur. From previous studies of offshore wind developments, it has been concluded that WTGs do reduce wind velocity downwind of a WTG (MCA, 2022) but that no negative effects on recreational craft have been reported on the basis of the limited spatial extent of the effect and its similarity to that experienced when passing a large vessel or close to other large structures (such as bridges) or the coastline. In addition, no practical issues have been raised by recreational receptors to date when operating in proximity to existing offshore wind developments".*

ASSESSMENT OF SIGNIFICANCE

3.9.66 As set out within Section 3.4, the potential effect of negative tourist perception is not considered likely to result in changes to tourist behaviour that would influence the value and volume of tourism. In most cases (including based on recently operational wind farms in East Anglia), evidence suggests that perception of offshore wind is not considered to be negative.

3.9.67 As set out above, the direct offshore environmental effects with the potential to have an impact on the tourist offer / draw and specific tourist sector receptors and characteristics is likely to be limited in scope (to seascape and offshore accessibility effects), which are not reported to be significant in EIA terms by the corresponding assessments.

3.9.68 As such, the magnitude of the impact on tourist value/volume as a result of effects to those characteristics, activities and important factors such as accessibility and amenity is considered to be **low** in the context of the tourist economy of Tendring and the LSA.

3.9.69 As demonstrated by Section 3.4 and Section 3.6 (Tourism Baseline), the tourist economy is substantial in scale in terms of the number of visits, spend by visitors, and employment supported. It is also inherently stable and flexible – it responds well to seasonal and annual variations from externalities with the ability to absorb or respond to change. As a result, the sensitivity of the receptor (the tourist economy of Tendring and the LSA) is considered **low** overall (though it is noted that individual receptors that contribute to its offer may be more sensitive – for example designated landscaped such as the AONBs/National Landscapes in the vicinity, and important tourist-related recreation assets like the England Cost Path – however it is confirmed that the visual effect on these receptors is not significant).

3.9.70 As a result, the effect of operational offshore infrastructure on tourism is considered to be **minor adverse** at the District and LSA scale and **negligible** at all other scales which is considered to be not significant in EIA terms.

IMPACT 11: OPERATIONAL EFFECTS ON COMMUNITY AND RECREATIONAL FACILITIES / ACTIVITIES

ONSHORE

3.9.71 During the operational phase, the onshore infrastructure works will be in place and will require minimal maintenance work resulting in a return to environmental conditions similar to the pre-construction phase, and therefore unlikely to influence receptors that would alter the ability for people to access and experience community and recreational facilities for their intended use in terms of environmental effects reported in the following onshore chapters of Volume 6 (ES) Part 3:

- Chapter 2 (LVIA);
- Chapter 8 (Traffic and Transport);
- Chapter 9 (Airborne Noise and Vibration); and
- Chapter 10 (Air Quality).

3.9.72 ES Part 3, Chapter 2 (LVIA) reports effects on the local landscape around the OnSS (owing to its large-scale and modern appearance which will be at variance with the predominantly rural character of the receiving landscape) where there is greatest potential for significant effects on landscape character to arise, noting that these effects would be significant (major or / major/moderate) to an area defined broadly by Hungerdown Lane approximately 0.7 km to the west, Grange Road PRoW approximately 0.9 km to the north, Little Bromley approximately 1.2 km to the east and Barlon Road, Manning Grove and Lilley's Farm approximately 1.0 to 1.3 km to the south. Aside from Grange Road PRoW, there are no community and recreational facilities within this area likely to be significantly affected.

3.9.73 These effects will be reduced to not significant within the 10 to 15 year period during which mitigation planting will grow and mature to reduce the influence of the OnSS within the local landscape.

3.9.74 Additionally, there are six viewpoints that are assessed to undergo significant effects occur within 1.4 km of the OnSS making significant visual effects localised. Where significant visual effects arise, these relate to the scale and appearance of the OnSS, as well as the relatively open and exposed nature of the flat and low-lying farmed landscapes where the OnSS will be located. These include some recreational assets (PRoWs).

3.9.75 Mitigation planting has been designed to create an effective screen around the OnSS and will remove all significant effects on surrounding visual receptors within the first 15 years of operation.

3.9.76 ES Part 3, Chapter 2 (Traffic and Transport) notes that effects associated with Operations and Maintenance activities are negligible and therefore were scoped out of the assessment, given that expected number of vehicle movements would be minimal. It is noted that the following planned vehicle movements are estimated:

- Landfall/ Onshore ECC – One annual inspection/testing visit to each cable joint pit/ transition joint bay by personnel using a LGV; and
- OnSS – Weekly visits would be required by approximately two vehicles (approx. eight traffic movements per week). During two-week annual maintenance period this would increase to approximately four to eight traffic movements per day.

3.9.77 Unplanned maintenance activities may require vehicles similar to construction, but these would be extremely rare occurrences. It is noted that PRoW FP3 164, BR2 164, FP1 164, FP5 164 and FP10 164, include tracks that are already used for agricultural or other vehicles, and VE anticipates that these would be used in a similar way for operational and maintenance purposes. Given the limited use over and above existing traffic, no mitigation is considered to be required and this is not likely to result in a significant effect on users of PRoW.

3.9.78 As such, effects on the accessibility and journey time to, from and within the onshore area during the operational phase are not considered to be substantial to the extent that they may affect the ability for people to access community and recreational facilities or for those facilities to operate to their usual extent.

3.9.79 ES Part 3, Chapter 9 (Airborne Noise and Vibration) identifies that significant noise effects would be limited to the operation of the OnSS, and would be of major adverse significance to some very local receptors (not including any community or recreational receptors) and in any case would be mitigated to a less than significant level through the application of mitigation including quieter electrical components, enclosures, silencers sound proofing grilles for fans. localised screening, noise barriers, or repositioning.

3.9.80 ES Part 3, Chapter 10 (Air Quality) identifies that road traffic impacts are considered to be not significant in EIA terms (driven by extremely low levels of additional operational traffic), and no further assessment is required. Onshore operational activities limited to maintenance are expected to be intermittent / infrequent and their assessment in air quality terms have been screened out from requiring further assessment with regards to human and ecological receptors and are negligible and not significant in EIA terms.

3.9.81 As such, effects on environmental amenity relating to air quality and noise are not anticipated to be perceptible in most cases, and where they are highly localised and can be mitigated to a level where they would not be significant in EIA terms, and as such would not be anticipated to affect the amenity of people using community and recreational facilities or for those facilities to operate to their usual extent.

ASSESSMENT OF SIGNIFICANCE

3.9.82 This section considers the potential for effects to arise as a result of environmental effects from the Project on onshore community facilities and recreational receptors, and effects on accessibility and/or environmental amenity experienced by users of those facilities, and the ability for facilities to continue to operate in its intended use.

3.9.83 During the operational phase, following the application of mitigation (where necessary), it is summarised through the individual assessments in the ES (Volume 6) that in most cases the significance of environmental effects is likely to be negligible or minor adverse, or where they are significant as reported by the parameters of that assessment (in the case of effects on visual receptors of some PRoW), they are unlikely to be of a spatial scale to affect the overall user experience or potential for the facility to operate in or provide for the experience it currently does.

3.9.84 Based on a review of the identified receptors likely to experience change, overall the magnitude of effect is considered to be **low** (with the facilities and routes experiencing either slight or hardly perceptible change in capacity or of accessibility or amenity based on the significance of environmental effects).

3.9.85 In all cases, the receptor has the ability to absorb or respond to change resulting from environmental or accessibility effects without substantially affecting its intended use, and/or is of relatively low to medium importance.

3.9.86 As such, given the low to medium magnitude and low to medium sensitivity across individual receptors, overall the effect of the construction phase activities on community facilities and recreational facilities and routes is considered to be of **minor adverse** significance and **not significant** in EIA terms.

OFFSHORE

3.9.87 As set out earlier in this chapter, the majority of recreational marine users are in the nearshore. Sources of nearshore disruption could include:

- Export cable repairs or reburial;
- Transiting maintenance vessels; and
- The presence of surface laid cable protection.

3.9.88 Consultation with recreational stakeholders has been carried out to identify any recreational vessels not required to broadcast via AIS. Further details are provided in ES Volume 6, Part 2, Chapter 9: Shipping and Navigation.

3.9.89 The ES (at Volume 6, Part 2, Chapter 9: Shipping and Navigation) considers the potential for effects on recreational boats, summarising that VE is unlikely to result in significant adverse conditions for recreational vessels during the operational phase, stating that "*for recreational vessels under sail navigating internally within the arrays, there is also potential for effects such as wind shear, masking, and turbulence to occur. From previous studies of offshore wind developments, it has been concluded that WTGs do reduce wind velocity downwind of a WTG (MCA, 2022) but that no negative effects on recreational craft have been reported on the basis of the limited spatial extent of the effect and its similarity to that experienced when passing a large vessel or close to other large structures (such as bridges) or the coastline. In addition, no practical issues have been raised by recreational receptors to date when operating in proximity to existing offshore wind developments".*

ASSESSMENT OF SIGNIFICANCE

3.9.90 At the nearshore, physical disruptions during the operational phase will be limited and barely perceptible to alter existing recreational access and uses. Away from the nearshore area, effects on recreational sailing are minimal as a result of non-significant reported effects on collision / disturbance and wind shear supported by mitigation.

3.9.91 It will be possible for marine recreation users in the offshore area to access and move through the array area, in-line with protocols for communication set out within the ES at Volume 6, Part 2, Chapter 12 (Infrastructure and Other Marine Users) and Chapter 9 (Shipping and Navigation), and therefore the spatial extent of impacts on those recreational users will be minimal, resulting in a **negligible** to **low** magnitude impact.

3.9.92 Due to their mobility, people engaging in marine recreational activities are likely to be able re-route away from the array area if preferred without significantly losing their amenity value and are therefore deemed to be of **low** sensitivity to disturbance impacts.

3.9.93 As such, given the low magnitude and low sensitivity across receptors, overall the effect of the operational array and nearshore infrastructure on offshore recreation is considered to be of **negligible** to **minor adverse** significance and **not significant** in EIA terms.

3.10 ENVIRONMENTAL ASSESSMENT: DECOMMISSIONING PHASE

3.10.1 The detail and scope of decommissioning works will be determined by the relevant legislation, best practice and guidance at the time of decommissioning. It is anticipated that:

- The decommissioning phase would take around 3 years to complete (including both onshore and offshore elements, through driven primarily by offshore works).
- Both onshore and offshore cabling are anticipated to be left in-situ, although VE will consider the best environmental option at the time of decommissioning and any works would be subject to discussions with stakeholders and regulators, and consideration of commercial requirements. It is likely judged that removal of the cables would bring about further environmental impacts. At present it is therefore proposed that the cables will be left in-situ, but this will be reviewed over the design life of the project.

- Removal of offshore infrastructure is expected to involve the approximate reverse of the installation process and would include assessments of risk related to potential hazards and pollutants and the development of suitable procedures for mitigating this.
- Any works will require environmental impact assessment at the time to investigate the potential effects of the retrieval operations.
- it is considered likely that the proposed onshore substation would be removed and will be reused or recycled and that the onshore cables would also be removed and recycled, with the transition bays and cable ducts (where used) left in situ.
- Landfall infrastructure will be left in-situ where considered appropriate. Any requirements for decommissioning at the landfall will be agreed with statutory consultees.

3.10.2 Based on the principles above, for the purposes of a worst-case scenario, it is considered that they type of effects during the decommissioning phase would be similar to those during the construction phase, and the magnitude of effect associated with decommissioning would be no greater than those identified for the construction phase. The sensitivity of each receptor is also assumed not to change substantially.

3.10.3 Mitigation would take the form of mitigation identified by any environmental assessment (e.g. noise, air quality) reported within this ES, and in the form of best practice measures akin to the Code of Construction Practice relevant for the decommissioning phase.

3.10.4 As such, all residual effects would be of a similar or lower significance as reported for the construction phase.

3.11 ENVIRONMENTAL ASSESSMENT: CUMULATIVE EFFECTS

APPROACH TO CUMULATIVE ASSESSMENT

SPATIAL SCALE AND DRIVERS OF CUMULATIVE EFFECTS

3.11.1 As set out within Volume 6, Part 1, Annex 3.1 of the ES (Cumulative Effects Assessment Methodology), the approach to identifying cumulative developments relevant to the assessment of socio-economic, tourism and recreation effects is based on a review of projects of local and wider regional significance within the local labour market areas.

3.11.2 Determining a Zone of Influence (ZoI) for certain topic areas is less appropriate because of the nature of the assessment. The cumulative impact assessment for socio-economic effects is based on a different approach from other disciplines of the ES, in that it utilises broader “macro” projections of cumulative influences relevant to particular potential effects (e.g. effects on local and regional labour market), rather than focusing on potential cumulative effects of specific developments on individual receptors.

3.11.3 Primarily, cumulative socio-economic effects (related to employment, skills, supply chain and GVA) are driven by the potential for net additional (i.e. above trend) changes to demand for labour and skills during the construction phase particularly at the regional level, as identified in the overarching national policy statement for energy (para 5.12.3). This is supported by policy and research reviewed in this Chapter relating to technical skills planning and demand studies.

3.11.4 In the case of labour demand, construction labour demand would be a small part of a wider regional and national construction labour market with smaller individual schemes forming part of an overall background trend in demand. Other developments are therefore taken to be included in the background trend (estimates for construction employment, output and labour supply from the East of England Forecasting Model, 2022).

3.11.5 For some potential cumulative effects (such as worker expenditure, and supply chain / GVA), there is substantial uncertainty about the spatial and temporal effects that may combine to affect the receptors identified by VE as being potentially sensitive to change. These effects are reported as beneficial for VE but not significant in EIA terms, and any additional cumulative effect is likely to result in slight but unquantifiable additions to this beneficial effect.

3.11.6 For some potential cumulative effects (such as the effect on community and recreational facilities, public services and tourism), the effects identified by VE are based on highly localised effects on specific receptors that would not be affected by the identified cumulative projects.

3.11.7 The other Nationally Significant Infrastructure Projects (NSIPs) in the WSA (as detailed below), have the potential for significant impacts on employment and skills and therefore need to be considered individually.

3.11.8 The NSIPs for consideration in terms of employment and labour market effects have been selected from the Long List of cumulative developments that has been consulted on with stakeholders, and lists of NSIPs publicised on Essex County Council and Suffolk County Council websites that are not currently in abeyance:

- Wind Farms:
  - East Anglia ONE NORTH (ScottishPower Renewables);
  - East Anglia THREE (ScottishPower Renewables);
  - East Anglia TWO (ScottishPower Renewables); and
  - North Falls (NF) (noting that the assessment for VE includes one scenario where onshore construction activities are inherently combined – as such this cumulative assessment considers the alternative scenario).
- Solar
  - Sunnica Energy Farm (Sunnica Ltd); and
  - Longfield Solar Farm (EDF Renewables).
- Power Stations / Waste:
  - Drax – Progress Power Station (Drax);
  - Sizewell C (EDF Energy); and
  - Rivenhall Integrated Waste Management Facility and Energy Centre.
- Energy Transmission and Interconnectors:
  - Nautilus Interconnector (National Grid Ventures);

- Sea Link (National Grid Electricity Transmission);
- Lionlink (National Grid Ventures); and
- Norwich to Tilbury Reinforcement Project (National Grid Electricity Transmission).

- Transport:
  - Lower Thames Crossing;
  - Freeport East; and
  - Road Improvements: A12 (Chelmsford) to A120 (Marks Tey).

NORTH FALLS (NF) OWF

3.11.9 In accordance with the provisions of NPS EN-5 to seek to develop co-ordination solutions for onshore grid connections, VE has been working with North Falls on a co-ordinated solution to reduce the overall environmental and community impacts of the proposals. The project includes almost fully overlapping, or combined Onshore ECCs and a co-located site for the OnSS to the west of Little Bromley. It is proposed the two projects' ducts will be installed adjacent to each other within the corridor. The level of co-ordination between the two projects has led to a higher degree of understanding and interactions with the North Falls proposals that can be used within the CEA than would be normal for other developments at a similar stage in the planning process.

3.11.10 Due to the independent timescales for each project, three delivery scenarios have been developed (details of each scenario can be found within Volume 3, Chapter 1: Onshore Project Description). For the purposes of the cumulative assessment of VE and North Falls, the worst case delivery scenario, with limited co-ordination has been assessed for the direct and indirect impacts

NORWICH TO TILBURY REINFORCEMENT PROJECT

3.11.11 In order for VE to connect to the National Grid, the proposed National Grid Norwich to Tilbury Reinforcement Project and the associated EACN substation must be operational. National Grid has defined a construction and operational zone within which their EACN substation will be situated. This is adjacent to the VE OnSS zone.

3.11.12 Despite its stage in the planning process., due to VE's reliance on this project for its connection to the National Grid, it has been given detailed consideration and treated with more certainty than other projects at similar stage in the planning process in the CEA. To assist with the assessment, it has been necessary to make assumptions as to the siting, scale, form and construction of the project, particularly the EACN substation. These assumptions have been checked and agreed to be appropriate and reasonable by National Grid. For the purposes of the cumulative assessment of VE and National Grid Norwich to Tilbury Project, the worst case delivery scenario, with limited co-ordination has been assessed for the direct and indirect impacts.

IMPACT 1: DIRECT CONSTRUCTION EMPLOYMENT EFFECTS

3.11.13 During the construction phase of VE, cumulative effects related to the labour market may arise in-combination with NSIPs in the region likely to share similar construction skillsets.

3.11.14 This is set within the context of the future baseline. In terms of the future baseline for labour market indicators, the East of England Forecasting Model (EEFM) projects the total jobs in construction (estimated based on projecting forward previous trends, taking into account the concentration of jobs in the sector compared to the concentration nationally). Over the next 13 years (the period within which all of the projects listed above are anticipated to be delivered) the EEFM forecasts an increase in construction jobs of approximately 12,700 (or a 12% increase).

3.11.15 In addition to EEFM labour market indicators, the Construction Industry Training Board (CITB) and Construction Skills Network (CSN) generate research into the future for construction skills, employment and their drivers on a 4-year basis. This includes assumptions about infrastructure based on the Government's National Infrastructure and Construction Pipeline (NCIP).

3.11.16 The latest report considers the period from 2023 to 2027 and sets out that:

- With an annual average growth rate of 2.2% for construction output between 2023-27, the East of England is forecasted to grow slightly ahead of the UK average growth rate of 1.3%.
- The East of England has had a much smaller infrastructure sector in recent years at 7%, compared to 15% for the UK. Whilst this sector hasn't seen the same level of work in the East of England when compared to the UK, looking ahead at the 2023-2027 forecast, this sector is set to see the highest growth rate in the region.
- The occupations with the strongest additional recruitment requirement levels are non-construction professional, technical, IT and other office-based staff (1,620 per year) Wood trades and interior fit-out (660 per year) and Civil engineers (340 per year).

3.11.17 Furthermore, Both Essex County Council and Suffolk County Council (making up VE's WSA) have prepared quantitative assessments of the predicted increase in demand for construction skills in the context of baseline growth and the additional 'above trend' increase in construction output required by NSIPs in the region (these are referred to earlier in this chapter – the Construction Growth in Essex 2020-2040 report and the Technical Skills Legacy Report (2022)).

3.11.18 The NSIPs identified have the potential to generate cumulative economic effects in terms of opportunity for long-term, high-skilled and transferable employment for the region, and demand for employment and skills in the regional construction labour market (as the result of creation of employment opportunities and sustainable careers, skills and training benefits).

3.11.19 It is not possible to accurately predict the extent to which the NSIPs listed above would generate construction employment – in some cases information is not in the public domain about the quantity or spatial scale of employment generated, and in some cases it is not clear where there is potential for spatial (i.e. labour market) or temporal overlap between these projects.

3.11.20 Given these uncertainties, it is anticipated that the cumulative projects could result a more significant effect than the **minor beneficial (not significant)** effect reported by VE Impact 1: Direct Construction Employment Effect, when considered in terms of the beneficial effect to people and the economy of the creation of new jobs and access to skills.

3.11.21 The Applicant is cognisant of the opportunities presented by the co-ordination of infrastructure construction projects, and also the challenges faced by the regional skills infrastructure in delivering a pipeline workforce to access these opportunities and retain value locally.

3.11.22 It should be noted that all consented NSIPs set out here – and in most cases planned development below this threshold – has identified its own skills and labour requirement and set out an appropriate and accepted approach to intervention in skills, employment and training (through commitment to a strategy, or through financial interventions) in order to enhance the benefits for local people and improve the reliability of project delivery.

3.11.23 The Applicant is cognisant of this and will secure an Outline Skills and Employment Strategy (Volume 9, Document 9.27) - which will be secured as a Requirement of the draft DCO - in collaboration with local stakeholders and in the context of regional skills co-ordination.

IMPACT 2: CONSTRUCTION WORKFORCE SPENDING

3.11.24 The sub-regional effect of expenditure in the local area by resident and non-local construction workers will be determined by the total number of workers, the timescale and duration of construction of the cumulative developments, and their spatial distribution across labour and accommodation markets.

3.11.25 It cannot be determined accurately where this effect is likely to accrue given the labour and accommodation markets for the cumulative projects is likely to overlap with VE's LSA and WSA but to an unknown extent. As such, this is likely to result in a far less sensitive cumulative receptor area due to its increased size, and a magnitude that would be determined by the temporal profile of the cumulative projects, and individual assumptions about the nature of the construction workforce.

3.11.26 Given these uncertainties, it is anticipated that the cumulative projects would result in no more than the **minor beneficial (not significant)** effect reported by VE Impact 2 and 3: Construction Effects on Workforce Spending and Supply Chain and GVA.

3.11.27 The cumulative projects are likely to generate / support substantial GVA across the WSA and nationally during their construction, based on published estimates set out within the relevant DCO application documents for those projects, where available.

3.11.28 It is anticipated that a proportion of the overall GVA would be retained in the WSA - for the purposes of this assessment, it is assumed that the same retention rate as for VE would occur for the NSIPs in the region. It is, however, uncertain as to whether the temporal profile for the cumulative projects would overlap resulting in maximum GVA during the VE construction period.

3.11.29 At this stage it cannot be determined accurately where this effect is likely to accrue given the supply chain areas for the cumulative projects is likely to overlap with VE's WSA but to an unknown extent. As such, this is likely to result in a less sensitive cumulative receptor area due to its increased size, and a magnitude that would be determined by the temporal profile of the cumulative projects, and individual project assumptions about supply chain engagement, Set against projected growth in construction sector GVA set out above.

3.11.30 Given these uncertainties, it is anticipated that the cumulative projects would result in no more than the **minor beneficial (not significant)** effect reported by VE across the WSA.

IMPACT 4 AND 10: CONSTRUCTION AND OPERATIONAL EFFECTS ON TOURISM

3.11.31 As set out in Section 3.5 of this Chapter (Impacts 4 and 10) it is not clear from evidence that would meet the tests of EN-1 that construction or operational phase effects would result in adverse visitor perceptions that would result in changes to visitor behaviour in terms of the location and scale of expenditure.

3.11.32 The effects reported by the cumulative projects are either not considered to be significant, or are highly localised in their nature, or where they are significant (in the case of Sizewell C which is a significantly larger intervention than VE) are mitigated through secured plans and funds.

3.11.33 Given the spatial scale and location of effects from these construction and operation projects, and the fact that VE's assessment of environmental effects does not result in multiple, in-combination significant residual effects on local tourist receptors, there is not considered to be potential for significant cumulative effects over and above those assessed for VE alone within this chapter.

IMPACT 5 AND 11: CONSTRUCTION AND OPERATIONAL EFFECTS ON COMMUNITY AND RECREATIONAL FACILITIES

3.11.34 The effects reported by the cumulative projects are either not considered to be significant, or are highly localised in their nature, or where they are significant (in the case of Sizewell C which is a significantly larger intervention than VE) are mitigated through secured control documents and best practice measures specific to each project and determined by consistent legal thresholds (e.g. for noise and air quality).

3.11.35 Given the spatial scale and location of effects from these construction and operation projects, and the fact that VE's assessment of environmental effects does not result in multiple, in-combination significant residual effects on local community or recreational receptors, there is not considered to be potential for significant cumulative effects over and above those assessed for VE alone within this chapter.

3.12 CLIMATE CHANGE

3.12.1 Due to the nature of Socio-economics, Tourism and Recreation, the receptors assessed within this chapter are not considered to be directly sensitive to climatic changes, and an assessment of climate change has therefore not been carried out.

3.13 INTER-RELATIONSHIPS

3.13.1 Inter-related effects refer to the potential for likely significant effects to arise from multiple impacts and activities from the construction, operation and decommissioning of VE on the same receptor, or group of receptors. Such inter-related effects include both:

- **Project lifetime effects:** i.e. those arising throughout more than one phase of the project (construction, operation, and decommissioning) to interact to potentially create a more significant effect on a receptor than if just one phase were assessed in isolation; and
- **Receptor led effects:** Assessment of the scope for all effects to interact, spatially and temporally, to create inter-related effects on a receptor (or group). Receptor-led effects might be short term, temporary or transient effects, or incorporate longer term effects.

3.13.2 No project lifetime socio-economic, tourism or recreation effects would be anticipated to occur at a receptor, as the effects related to each phase, while influencing the same receptors, would not be concurrent.

3.13.3 Receptor let effects concern the accumulation of impacts on a single receptor between socio-economic, tourism and recreation assessments and other environmental disciplines. This has been inherently considered when assessing effects relating to community facilities, recreation and tourism, which draw on other assessments to present a combined effect.

3.13.4 Effects related to specific socio-economic receptors considered within this chapter (i.e. the effect of jobs, spending and GVA on the local and wider economy) are not anticipated to be influenced by other assessments within the ES – this refers to Impacts 1, 2, 3 and 6 in Section 3.9 (Environmental Assessment: Construction Phase) and Impacts 7, 8 and 9 in Section 3.10 (Environmental Assessment: Operational Phase).

3.14 TRANSBOUNDARY EFFECTS

3.14.1 Transboundary effects have been scoped out of this assessment, consistent with PINS recommendation (PINS, 2021) as outlined at Table 3.2.

3.15 SUMMARY OF EFFECTS

EMPLOYMENT, SPENDING AND SUPPLY CHAIN

CONSTRUCTION EMPLOYMENT - ONSHORE

3.15.1 The construction phase of VE will support employment, workforce spending and supply chain effects (expressed through GVA) within the labour market and regional and national economy.

3.15.2 Employment would be supported through onshore civils construction activity relating to the OnSS and ECC, supporting primarily civils construction-based and would include cable pulling, cable terminations and HDD, construction of buildings, and electrical works.

3.15.3 An average of between around 340 (Scenario 1) and 390 (Scenarios 2/3) FTE jobs would be anticipated to be supported in total during the construction period with peaks of 540 and 600 respectively.

3.15.4 The extent to which installation and commissioning employment is retained within the existing labour market is influenced by the extent of specialist construction skills required and the ability for local firms and workers to provide these skills to the Project.

3.15.5 An average of between around 90 (Scenario 1) and 70 (Scenarios 2/3) FTE jobs would be anticipated to be supported in the WSA during the construction period with peaks of 130 and 120 respectively.

3.15.6 Overall, given the scale of the labour market and its inherent flexibility and dynamism, along with the peripatetic nature of construction employment, and the relatively short-term construction phase and scale and types of employment opportunities supported by the construction phase, there is likely to be a **minor beneficial** effect in supporting economic output and opportunities for work.

CONSTRUCTION EMPLOYMENT - OFFSHORE

3.15.7 Offshore installation and commissioning will be related to the works required for the turbine installation and commissioning, foundation installation, array cable installation, offshore export cable installation and offshore substation works. This element of activity is likely to support between 210 to 410 FTE years of employment over the construction phase (depending on the number of turbines being installed).

3.15.8 Assuming a 2-year construction phase this is likely to support an average of between 105 to 205 FTE roles during the construction phase.

3.15.9 The proportion of local employment (drawn from the WSA) and UK-level employment is anticipated to be relatively low at around <10 FTE years and 30-60 FTE years of employment respectively, due to local content for technical services being limited in supply in the UK and WSA (e.g. no established offshore export cable installation contractors or array cable contractors are currently based in the UK). The greatest contribution of UK content in installation and commissioning is the provision of local crew to support marine activities and some support vessels.

3.15.10 The effect of construction employment is assessed as **minor beneficial** and **not significant** in EIA terms.

OPERATIONAL EMPLOYMENT - ONSHORE

3.15.11 The operation of the onshore element of VE is likely to generate a small amount of direct employment in the form of maintenance of the onshore cable and substation. This is likely to support around 140 years of FTE employment over the operational phase, translating to an average of around 5 FTE jobs during the lifetime of the VE.

3.15.12 Given the technical and temporary, short-term nature of these maintenance works which would occur at regular but limited intervals throughout the operational phase, this is unlikely to support substantial a substantial element of local employment within the WSA, resulting in an impact assessed as **negligible** and **not significant** in EIA terms.

OPERATIONAL EMPLOYMENT - OFFSHORE

3.15.13 The operation of VE is likely to generate direct employment in the form of offshore operations (including wind farm administration, vessel operation and training and health and safety), turbine maintenance (both minor/routine and major maintenance), and maintenance of the foundation, offshore cable, and offshore substation.

3.15.14 The operational phase is anticipated to support between 110 and 220 FTE jobs on average during the operational phase, of which around 35 to 70 would be expected to be drawn from the WSA (with between 80 and 150 drawn from the national labour market), resulting in an impact assessed as **negligible** and **not significant** in EIA terms.

WORKFORCE SPENDING – ONSHORE AND OFFSHORE

3.15.15 Workforce spending from the construction phase is generated by workers likely to move to the area temporarily expected to spend an amount around the subsistence allowance that non-local construction workers often receive through Working Rule Agreements.

3.15.16 An average non-local workforce could be expected to spend up to between £7.8m and £9.4m on food, drink and accommodation within the WSA and most likely within the Local Study Area during the construction phase.

3.15.17 The effect of construction workforce expenditure is considered to be a **minor beneficial** effect that is **not significant** in EIA terms.

3.15.18 Onshore and offshore maintenance and operation is likely to result in a negligible level of FTE employment and therefore a negligible scale of expenditure on food and drink in the local area.

SUPPLY CHAIN AND GVA – ONSHORE

3.15.19 GVA generated by onshore activity is related to the manufacturing of the onshore export cable and components of the onshore substation including electricals, building, access and security.

3.15.20 For assessment purposes it is anticipated that around £2.2m could be supported within the local (Essex and Suffolk) supply chain and £4.6m within the national economy.

3.15.21 GVA is also generated as a result of employment supported by the installation and commissioning of onshore infrastructure as a result of construction activity required. This is anticipated to support between £34m to £75m GVA in total (relating to the onshore cable and substation but not including the operations base in-line with assessments of direct employment above), of which around £14m to £16m would be anticipated to be retained in the WSA and £47m to £54m retained nationally.

3.15.22 The effect of construction phase GVA supported by VE is considered to be **minor beneficial** at the WSA scale and national scale, which is considered to be **not significant** in EIA terms

SUPPLY CHAIN AND GVA – OFFSHORE

3.15.23 GVA generated by offshore activity is related to the manufacturing of turbine components, and balance of plant relating to the foundation, array cable, offshore export cable, cable protection, and elements of the offshore substation (predominantly electricals).

3.15.24 Depending on the number of turbines to be installed, it is anticipated that this activity could generate between around £55m to £101m in GVA during the manufacture of these components within the supply chain.

3.15.25 GVA is also generated as a result of employment supported by the installation and commissioning of offshore infrastructure as a result of the construction activity required. This is anticipated to support between £20m and £38m GVA in total, of which around £0.5m to £0.9m would be anticipated to be retained locally and £2.8m to £5.4m retained nationally.

3.15.26 The effect of construction phase GVA supported by VE is considered to be **minor beneficial** at the WSA scale and national scale, which is considered to be **not significant** in EIA terms.

3.15.27 GVA related to onshore operations and maintenance is produced by activities supporting the maintenance of the onshore cable and substation, which as described in this Chapter, are likely to be temporary, short-term and at limited intervals throughout the operational phase. This is anticipated to support an average of between £0.3m to £0.5m per year in GVA at all scales of which around 30% would be anticipated to be retained locally and 70% nationally.

3.15.28 GVA related to the operation and maintenance of the offshore infrastructure is anticipated to support an average of between £11m to £21m per year in GVA at all scales of which around 33% would be anticipated to be retained locally and 70% nationally.

3.15.29 The effect of operational phase GVA supported by VE is considered to be **minor beneficial** at the WSA scale and national scale, which is considered to be **not significant** in EIA terms.

CONSTRUCTION AND OPERATIONAL SKILLS

3.15.30 The demand for construction employment would translate to a demand for skills (nationally and regionally) in a market that stakeholders consider to be tight, resulting in increased competition for skilled labour from background trends and ‘above trend’ NSIP schemes in Essex and Suffolk.

3.15.31 VE’s onshore construction and installation would support a relatively small number of construction opportunities, mainly in civils construction roles for which there is a substantial existing labour market. However, VE recognises that some specialised and high-demand skills may become more sought after by other projects.

3.15.32 While therefore there is unlikely to be an adverse effect on skills provision (it is anticipated that the demand for labour would either be met by the existing, widely spatially distributed and peripatetic construction workforce during the shore construction period), VE has produced an Outline Skills and Employment Strategy (Volume 9, Document 9.27) in order to promote local opportunities and enable people to access them, while engaging with skills providers and local stakeholders to ensure appropriate forward planning for the upcoming skills pipeline.

EFFECTS ON TOURISM AND RECREATION

3.15.33 Research indicates that the potential effect of negative tourist perception is not considered likely to result in changes to tourist behaviour that would influence the value and volume of tourism.

3.15.34 The tourist economy is substantial in scale in terms of the number of visits, spend by visitors, and employment supported. It is also inherently stable and flexible – it responds well to seasonal and annual variations from externalities with the ability to absorb or respond to change.

3.15.35 As such, effects on tourism are likely to relate to the following construction phase effects:

- Visual effects, noise, vibration, air quality effects experienced by people during the temporary construction of onshore infrastructure; and visual effects during the temporary construction of offshore infrastructure;
- Where construction activities in the onshore area could reduce accessibility or present physical obstructions to recreational and tourist facilities including accommodation, natural and cultural heritage, PRoW and tourist attractions; and obstructions and displacement of visitors engaging in marine tourism and recreational activities such as recreational sailing; and
- Where construction activities in the offshore area could present physical obstructions and displacement of visitors engaging in marine tourism and recreational activities such as recreational sailing.

3.15.36 Effects on tourism are likely to relate to the following operational phase effects:

- Visual effects during the operational phase of the offshore infrastructure (and limited effects onshore related to the OnSS); and
- Where siting of and access to offshore infrastructure could present physical obstructions and displacement of visitors engaging in marine tourism and recreational activities such as recreational sailing.

CONSTRUCTION

3.15.37 The direct onshore environmental effects with the potential to have an impact on the tourist offer / draw and specific tourist sector receptors and characteristics is likely to be limited in spatial scale to areas very close to the onshore construction area, and in temporal scale to the relatively short-term nature of construction activity.

3.15.38 The reported onshore environmental effects are also limited in significance, with the only significant effects likely to arise from visual impacts on users of some PRoW which would be highly localised and temporary.

3.15.39 Direct offshore environmental effects with the potential to have an impact on the tourist offer / draw and specific tourist sector receptors and characteristics is likely to be limited in scope (to visual and offshore accessibility effects), which are not reported to be significant in EIA terms by the corresponding assessments.

3.15.40 As a result, the effect of construction activity on tourism is considered to be **minor adverse** at the District and LSA scale and **negligible** at all other scales which is considered to be not significant in EIA terms.

3.15.41 Some workers would temporarily seek visitor accommodation during their time on the project where they move to the area on a short-term basis and then return home in inter-shift periods. This is likely to result in a small uplift in demand for / use of tourist accommodation across an area within 45 minutes from the Order Limits.

3.15.42 This demand would be low-level, in a market that has spare capacity even in peak seasons and is therefore not likely to result in a significant effect on the ability for the tourist accommodation market to operate. It may result in beneficial socio-economic impacts where additional revenue can be generated in otherwise spare capacity.

3.15.43 The effect of the construction phase activities on community facilities and recreational facilities and routes is considered to be of **minor adverse** significance and **not significant** in EIA terms

OPERATION

3.15.44 During the operational phase, the onshore infrastructure works will be in place and will require minimal maintenance work resulting in a return to environmental conditions similar to the pre-construction phase in most cases, and therefore unlikely to influence receptors that would alter the ability for people to access and experience the factors that influence tourist and recreational assets, facilities or perceptions in terms of environmental effects reported in the following onshore chapters of Volume 6 (ES) Part 3.

3.15.45 The direct onshore environmental effects with the potential to have an impact on the tourist offer / draw and specific tourist sector receptors and characteristics is likely to be limited in spatial scale to areas very close to the OnSS, and are also limited in significance, with the only significant effects likely to arise from visual impacts on users of some short sections of PRoW which would be highly localised.

3.15.46 As such, the magnitude of the impact on tourist value/volume as a result of effects to those characteristics, facilities, activities and important factors such as accessibility and amenity is considered to be **negligible** in the context of the tourist economy of Tendring and the LSA.

3.15.47 Direct offshore environmental effects with the potential to have an impact on the tourist offer / draw and specific tourist sector receptors and characteristics is likely to be limited in scope (to seascape and offshore accessibility effects), which are not reported to be significant in EIA terms by the corresponding assessments.

3.15.48 It is noted that individual receptors that contribute to its offer may be more sensitive – for example designated landscaped such as the AONBs/National Landscapes in the vicinity, and important tourist-related recreation assets like the England Cost Path – however it is confirmed that the visual effect on these receptors is not significant.

3.15.49 As a result, the effect of operational offshore infrastructure on tourism is considered to be **minor adverse** at the District and LSA scale and **negligible** at all other scales which is considered to be not significant in EIA terms.

EFFECTS ON COMMUNITY FACILITIES, RECREATION AND PUBLIC SERVICES

CONSTRUCTION

3.15.50 During the construction phase, following the application of mitigation (where necessary), it is summarised through the individual assessments in the ES (Volume 6) that in all cases the significance of environmental effects is likely to be negligible or minor adverse.

3.15.51 Some PRoW may be affected during the construction phase as a result of temporary, short-term and minor diversions supported by signage onto temporary routes or existing alternatives. In some cases diversions to PRoW are not affected, but temporary gated crossings are required to ensure the safety and amenity of users is not affected.

3.15.52 Environmental effects from the Project on onshore community facilities and recreational receptors, including the effect of closure or diversion of PRoW, and effects on accessibility and/or environmental amenity experienced by users of those facilities / routes, and the ability for facilities / routes to continue to operate in its intended use.

3.15.53 It will be possible for marine recreation users in the offshore area to access and move through the offshore construction area, between areas of activity and in-line with protocols for communication and therefore the spatial extent of impacts on those recreational users will be localised, infrequent and also temporary and relatively short term. Due to their mobility, people engaging in marine recreational activities are likely to be able re-route away from construction activities without significantly losing their amenity value.

3.15.54 Effects are therefore considered to be of **minor adverse** significance and **not significant** in EIA terms.

3.15.55 Temporary, short-term demand for healthcare in the form of GP provision may occur where non-local construction workers move to the area to undertake work packages for onshore and potentially offshore construction.

3.15.56 However, this workforce would be peripatetic, short-term, returning home at inter-shift periods and would most likely access primary healthcare from their permanent residence. As such, effects are unlikely – but in a worst-case scenario could result in demand for a very small uplift in GP provision which is considered to be **minor adverse** and **not significant**.

OPERATION

3.15.57 During the operational phase following the application of mitigation (where necessary), it is summarised through the individual assessments in the ES (Volume 6) that in most cases the significance of environmental effects is likely to be negligible or minor adverse, or where they are significant as reported by the parameters of that assessment (in the case of effects on visual receptors of some PRoW), they are unlikely to be of a spatial scale to affect the overall user experience or potential for the facility to operate in or provide for the experience it currently does.

3.15.58 As such, given the low to medium magnitude and low to medium sensitivity across individual receptors, overall the effect of the construction phase activities on community facilities and recreational facilities and routes is considered to be of **minor negligible** significance and **not significant** in EIA terms.

3.15.59 At the nearshore, physical disruptions during the operational phase will be limited and barely perceptible to alter existing recreational access and uses. Away from the nearshore area, effects on recreational sailing are minimal as a result of non-significant reported effects on collision / disturbance and wind shear supported by mitigation. It will be possible for marine recreation users in the offshore area to access and move through the array area, in-line with protocols for communication.

3.15.60 As such, given the low magnitude and low sensitivity across receptors, overall the effect of the operational array and nearshore infrastructure on offshore recreation is considered to be of **negligible** to **minor adverse** significance and **not significant** in EIA terms.

OVERALL SUMMARY OF EFFECTS

Table 3.27 Summary of Effects

Description of Impact	Magnitude	Sensitivity of Receptor	Significance
Construction			
Impact 1: Direct Construction Employment (Onshore) in the WSA	Low	Medium	Minor Beneficial (Not Significant)
Impact 1: Direct Construction Employment (Offshore) in the WSA	Negligible	Medium	Minor Beneficial (Not Significant)
Impact 2: Construction Workforce Spending in the WSA and LSA	Low	Low	Minor Beneficial (Not Significant)
Impact 3: Construction Effects on Supply Chain and GVA in the WSA	Negligible	Medium	Minor Beneficial (Not Significant)
Impact 4: Construction Effects on Tourism (Onshore effects on Tourism Value and Draw) in Tendring and the LSA	Low	Low	Minor Adverse (Not Significant)

Description of Impact	Magnitude	Sensitivity of Receptor	Significance
Impact 4: Construction Effects on Tourism (effects on Tourist Accommodation) in the LSA	Low	Low	Minor Beneficial (Not Significant)
Impact 4: Construction Effects on Tourism (Offshore effects on Tourism Value and Draw) in Tendring and the LSA	Low	Low	Minor Adverse (Not Significant)
Impact 5: Construction Effects on Community and Recreational Facilities (Onshore)	Negligible to Medium	Low to High	Minor Adverse (Not Significant)
Impact 5: Construction Effects on Community and Recreational Facilities (Offshore)	Low	Low	Minor Adverse (Not Significant)
Impact 6: Construction Effects on Public Services (Healthcare)	Low	Medium	Minor Adverse (Not Significant)
Operation			
Impact 7: Operational Employment (Onshore) in the WSA	Negligible	Low	Negligible (Not Significant)
Impact 7: Operational Employment (Offshore) in the WSA	Negligible	Low	Negligible (Not Significant)
Impact 8: Operational Workforce Spending in the LSA and WSA	Negligible	Low	Negligible (Not Significant)
Impact 9: Operational GVA / Supply Chain Effects in the WSA	Negligible	Medium	Minor Beneficial (Not Significant)

Description of Impact	Magnitude	Sensitivity of Receptor	Significance
Impact 10: Operational Effects on Tourism (Onshore)	Negligible	Low	Negligible (Not Significant)
Impact 10: Operational Effects on Tourism (Offshore)	Low	Low	Minor Adverse (Not Significant)
Impact 11: Operational Effects on Community and Recreational Facilities / Activities (Onshore)	Low	Low to Medium	Minor Adverse (Not Significant)
Impact 11: Operational Effects on Community and Recreational Facilities / Activities (Offshore)	Negligible to Low	Low	Negligible to Minor Adverse (Not Significant)

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