NORTH FALLS

Offshore Wind Farm

ENVIRONMENTAL STATEMENT

Chapter 31 Socio-economics

Document Reference:	3.1.33.1
Volume:	3.1
APFP Regulation:	5(2)(a)
Date:	October 2024
Revision:	01

Project	North Falls Offshore Wind Farm
Document Title	Environmental Statement Chapter 31 Socio-economics
Document Reference	3.1.33.1
APFP Regulation	5(2)(a)
Supplier	Royal HaskoningDHV
Supplier Document ID	PB9244-RHD-ES-ZZ-RP-YE-0215

Revision	Date	Status/Reason for Issue	Originator	Checked	Approved
0	July 2024	Submission	Hatch	NFOW	NFOW
01	October 2024	Section 51/55 Response	Hatch	NFOW	NFOW

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Glossary of Acronyms

AONB	Area of Outstanding Natural Beauty
APS	Annual Population Survey
A&E	Accident and Emergency
BEIS	Department for Business, Energy and Industrial Strategy
BRES	Business Register and Employment Survey
CEA	Cumulative Effects Assessment
CfD	Contracts for Difference
DCO	Development Consent Order
DESNZ	Department for Energy Security and Net Zero
ECMG	East Coast Manufacturing Group
EEA	European Economic Area
EEFM	East of England Forecasting Model
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EPP	Evidence Plan Process
ES	Environmental Statement
ETG	Expert Topic Group
EU	European Union
EZ	Enterprise Zone
FTE	Full Time Equivalent
GB	Great Britain
GP	General Practitioner
GDP	Gross Domestic Product
GVA	Gross Value Added
HDD	Horizontal Directional Drill
HGV	Heavy Goods Vehicle
ICB	Integrated Care Board
ICES	International Council for the Exploration of the Sea
ITL	International Territorial Level
LEP	Local Enterprise Partnership
LIS	Local Industrial Strategy

LOCAI	Local Onshore Cable Area of Influence
LQ	Location Quotient
LSIP	Local Skills Improvement Plan
LSOAs	Lower Layer Super Output Areas
LV	Light Vehicle
MCA	Maritime and Coastguard Agency
MHWS	Mean High Water Springs
MPS	Marine Policy Statement
MSOA	Middle Layer Super Output Areas
NALEP	New Anglia Local Enterprise Partnership
NEET	Not in education, employment or training
NPS	National Policy Statement
NPPF	National Planning Policy Framework
NSIP	Nationally Significant Infrastructure Project
NFOW	North Falls Offshore Wind Farm Limited
OBR	Office for Budget Responsibility
ONS	Office for National Statistics
O&M	Operation & Maintenance
OSEP	Outline Skills and Employment Plan
PEIR	Preliminary Environmental Information Report
PRoW	Public Right of Way
SAC	Special Areas of Conservation
SELEP	South East Local Enterprise Partnership
SIC	Standard Industrial Classification
SMI	Severe Mental Illness
SNPP	Sub-National Population Projections
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
UK	United Kingdom
WTG	Wind Turbine Generators
ZOI	Zone of Influence

Glossary of Terminology

Array areas	The offshore wind farm area, within which the wind turbine generators, array cables, platform interconnector cable, offshore substation platform(s) and/or offshore converter platform will be located.
Array cables	Cables which link the wind turbine generators with each other, the offshore substation platform(s) and/or the offshore converter platform.
Temporary construction compound	Area set aside to facilitate construction of the onshore cable route. Will be located adjacent to the onshore cable route, with access to the highway where required.
Economic value	Economic value (as measured by GVA) generated through the first round of capital expenditure, i.e. North Falls' spend prime contractors within each impact area of the study (direct GVA). This also includes GVA which is supported through the supply chain expenditure of these contractors (indirect GVA). This does not include induced effects (which are generated through the salary expenditure of employees whose jobs are supported by the development).
Employment onshore	Direct employment impacts associated with the first round of capital expenditure on onshore infrastructure, i.e. North Falls' spend on onshore infrastructure with prime contractors within each impact area of the study. As well indirect employment impacts which are associated with the suppliers of companies that supply goods and services as part of the supply chain of the onshore infrastructure of North Falls. This does not include induced effects.
Employment offshore	Direct employment impacts associated with the first round of capital expenditure on offshore infrastructure, i.e. North Falls' spend on onshore infrastructure with prime contractors within each impact area of the study. As well as employment which is associated with the suppliers of companies that supply goods and services as part of the supply chain of the onshore infrastructure of North Falls.
Former array areas	The two distinct offshore wind farm areas (including the 'northern array area' and 'southern array area') which comprised the North Falls offshore wind farm at scoping and PEIR stage.
Full-time equivalent (FTE) jobs	Full time equivalent (FTE) is a unit that indicates the workload of an employed person. An FTE of 1.0 is equivalent to one full-time employee, whilst a part-time employee working half the hours a full-time employee does would be recorded as 0.5 FTE.
Gross Value Added (GVA)	The measure of the value of goods and services produced in an area, industry or sector of an economy. At the level of a firm, it is broadly equivalent to employment costs plus a measure of profit.
Haul road	The track along the onshore cable route used by construction traffic to access different sections of the onshore cable route.
Horizontal directional drill (HDD)	Trenchless technique to bring the offshore export cables ashore at landfall. The technique will also be the primary trenchless technique used for installation of the onshore export cables at sensitive areas of the onshore cable route.
Indirect effects	Effects that result indirectly from North Falls as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects.

Indirect employment and gross value added	Employment and gross value added which is associated with the suppliers of companies that supply goods and services as part of the supply chain of North Falls.
Induced employment and gross value added	Employment and gross value added which is not directly caused by the expenditure associated with a project. These are impacts associated with local expenditure as a result of those whose incomes are derived from the direct and indirect impacts of the intervention.
Interconnector cable	Cable between the northern and southern array areas and which is no longer needed following the removal of the northern array area.
Interconnector cable corridor	The corridor of the seabed between the northern and southern array areas which is no longer needed following the removal of the northern array area.
Location quotient (LQ)	Location quotient (LQ) is a measure of a region's industrial specialisation relative to a larger region (e.g. Great Britain). A LQ of 1.0 indicates that both regions have the same level of specialisation, whereas a LQ > 1.0 means that the smaller region has a higher concentration of a particular sector than is seen in the larger region.
Jointing bay	Underground structures, constructed at regular intervals along the onshore cable route to connect the sections of cable together so that each cable is a continuous length, as well as facilitating the installation of the cables into the buried cable ducts.
Landfall	The location where the offshore export cables come ashore at Kirby Brook.
Landfall compound	Compound at landfall within which horizontal directional drill (HDD) or other trenchless technique would take place.
Leakage	An economic effect that occurs when benefits occur outside the study area.
Link boxes	Underground chambers or above ground cabinets next to the onshore export cables housing low voltage electrical earthing links.
Local onshore infrastructure and services	For the purposes of this assessment onshore infrastructure and services includes health services and housing infrastructure.
Marshalling port	Marshalling ports (also known as staging ports) are used to collect and store wind turbine components prior to loading them on to wind turbine installation vessels. Able Seaton Port in the North East and the Port of Leith in Scotland are examples of marshalling ports.
National Grid connection point	The grid connection location for the Project. National Grid are proposing to construct new electrical infrastructure (a new substation) to allow the Project to connect to the grid, and this new infrastructure will be located at the National Grid connection point.
National Grid substation connection works	Infrastructure required to connect the Project to the National Grid connection point.
Nationally Significant Infrastructure Project (NSIP)	Nationally Significant Infrastructure Projects are major infrastructure developments in England and Wales which are consented by DCO. These include proposals for offshore renewable energy projects with an installed capacity of over 100MW in England.
Non-local workforce / workers	Refers to the workforce required to work on the North Falls project whose usual place of residence is located outside of the local area (see Section 31.2 for more information on what constitutes the local area).

Planning Inspectorate	The Planning Inspectorate deals with planning appeals, national infrastructure planning applications, examinations of local plans and other planning-related and specialist casework.
Preliminary Environmental Information Report (PEIR)	The PEIR presented findings of the assessment to allow an informed view to be developed of North Falls, the assessment approach that was undertaken, and the preliminary conclusions on the likely significant effects of North Falls and environmental measures proposed.
Offshore cable corridor	The corridor of seabed from array area to the landfall within which the offshore export cables will be located.
Offshore convertor platform	Should an offshore connection to an HVDC interconnector cable be selected, an offshore converter platform would be required/ This is a fixed structure located within the array area, containing HVAC and HVDC electrical equipment to aggregate the power from the wind turbine generators, increase the voltage to a more suitable level for export and convert the HVAC power generated by the wind turbine generators into HVDC power for export to shore via a third party HVDC interconnector cable.
Offshore export cables	The cables which bring electricity from the offshore substation platform(s) to the landfall, as well as auxiliary cables.
Offshore project area	The overall area of the array area and the offshore cable corridor.
Offshore substation platform(s)	Fixed structure(s) located within the array area, containing HVAC electrical equipment to aggregate the power from the wind turbine generators and increase the voltage to a more suitable level for export to shore via offshore export cables.
Onshore cable route	Onshore route within which the onshore export cables and associated infrastructure would be located.
Onshore export cables	The cables which take the electricity from landfall to the onshore substation. These comprise High Voltage Alternative Current (HVAC) cables, buried underground.
Onshore project area	The boundary within which all onshore infrastructure required for the Project will be located (i.e. landfall; onshore cable route, accesses, construction compounds; onshore substation and cables to the National Grid substation).
Onshore substation	A compound containing electrical equipment required to transform and stabilise electricity generated by the Project so that it can be connected to the National Grid.
Onshore substation construction compound	Area set aside to facilitate construction of the onshore substation. Will be located adjacent to the onshore substation.
Onshore substation works area	Area within which all temporary and permanent works associated within the onshore substation are located, including onshore substation, construction compound, access, landscaping, drainage and earthworks.
Receptor	These are as defined in Regulation 5(2) of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 and include population and human health, biodiversity, land, soil, water, air, climate, material assets, cultural heritage and landscape that may be at risk from exposure to pollutants which could potentially arise as a result of the Project.
Resident based earnings	Income earned by individuals who reside in a particular area.

Ro-Ro ships	Roll-on roll-off (Ro-Ro) ships are cargo ships designed to carry wheeled cargo, such as cars, motorcycles, trucks, semi-trailer trucks, buses, trailers, and railroad cars, that are driven on and off the ship.
Safety zones	A marine zone outlined for the purposes of safety around a possibly hazardous installation or works / construction area
Scoping Opinion	A Scoping Opinion is adopted by the Secretary of State for North Falls.
Scoping Report	A report that is designed to ascertain which issues the Environmental Impact Assessment process should cover.
Scour protection	Protective materials to avoid sediment being eroded away from the base of the wind turbine generator foundations and offshore substation platform foundations as a result of the flow of water.
Secretary of State	The person who makes the decision to grant development consent.
Stakeholder engagement	Refers to the voluntary engagement undertaken in addition to the statutory consultation requirements under the Planning Act 2008.
Temporal scope	The temporal scope covers the time period over which changes to the environment and the resultant effects are predicted to occur and are typically defined as either being temporary or permanent.
Temporary or permanent effects	Effects may be considered as temporary or permanent. In the case of socio-economics, any effects occurring during the Project's development and construction phase are defined as temporary, whilst any effects occurring over the Project's assumed lifetime are defined as permanent.
The Applicant	North Falls Offshore Wind Farm Limited (NFOW).
The project Or 'North Falls'	North Falls Offshore Wind Farm, including all onshore and offshore infrastructure.
Transition joint bay	Underground structures that house the joints between the offshore export cables and the onshore export cables
Trenchless crossing	Use of a technique to install limited lengths of cable below ground without the need to excavate a trench from the surface, used in sensitive areas of the onshore cable route to prevent surface disturbance. Includes techniques such as HDD.
Trenchless crossing compound	Areas within the onshore cable route which will house trenchless crossing (e.g. HDD) entry or exit points.
Wind turbine generator (WTG)	Power generating device that is driven by the kinetic energy of the wind
Workplace based earnings	Income earned by an individual based on their location of employment.
Zone of Influence (ZOI)	The area surrounding North Falls which could result in likely significant effects.

31 Socio-economics

31.1 Introduction

1. This chapter of the Environmental Statement (ES) considers the likely significant effects of the North Falls Offshore Wind Farm (hereafter 'North Falls or 'the Project') on socio-economic conditions within the study areas. The chapter provides an overview of the existing environment for the study areas, followed by an assessment of likely significant effects for the construction, operational, maintenance and decommissioning phases of the Project.

2. This chapter has been written by Hatch, with the assessment undertaken with specific reference to the relevant legislation, policy and guidance, of which the principal policy documents with respect to Nationally Significant Infrastructure Projects are the National Policy Statements (NPS). Details of this and the methodology used for the Environmental Impact Assessment (EIA) and Cumulative Effects Assessment (CEA) are presented in Section 31.8.

3. The assessment should be read in conjunction with the following linked chapters (Volume 3.1):

   - ES Chapter 2 Need for the Project (Document Reference: 3.1.4);
   - ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16);
   - ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17);
   - ES Chapter 19 Ground Conditions and Contamination (Document Reference: 3.1.21);
   - ES Chapter 20 Onshore Air Quality (Document Reference: 3.1.22);
   - ES Chapter 22 Land use and Agriculture (Document Reference: 3.1.24);
   - ES Chapter 26 Noise and Vibration (Document Reference: 3.1.28);
   - ES Chapter 27 Traffic and Transport (Document Reference: 3.1.29);
   - ES Chapter 28 Human Health (Document Reference: 3.1.30);
   - ES Chapter 30 Landscape Visual Impact Assessment (Document Reference: 3.1.32); and
   - ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34).

4. Additional information to support the socio-economic assessment includes:

   - ES Appendix 31.1 (Document Reference: 3.3.70) North Falls Offshore Wind Farm economic impact, prepared by BVG Associates (Volume 3.3), 2021/22. This provides economic modelling assumptions and results for onshore connection for North Falls alone.
   - Addendum to ES Appendix 31.1 (Document Reference: 3.3.70) North Falls Economic Impact prepared by Hatch (Volume 3.3) 2023/24. This sets out economic impacts for cumulative impacts with Five Estuaries Offshore Wind Farm (Five Estuaries) shared infrastructure and offshore electrical connection options. This was developed to account for optionality around shared infrastructure and offshore connection.

31.2 Consultation

5. Consultation with regard to socio-economics has been undertaken in line with the general process described in ES Chapter 6 EIA Methodology (Document Reference: 3.1.8). The key elements to date have included scoping and the ongoing technical consultation via Expert Topic Group (ETG) meetings. The feedback received has been considered in preparing the ES. Table 31.1 provides a summary of how the consultation responses received to date have influenced the approach that has been taken for the socio-economics EIA.

6. One-to-one targeted consultation sessions with key stakeholders for the socio-economic assessment were completed in March 2023, prior to the submission of the Preliminary Environmental Information Report (PEIR), so that views and concerns about the potential socio-economic impacts of North Falls could be further understood. Of the organisations approached, six responded to the request for one-to-one consultation. Consultees who participated in the March 2023 consultations included representatives from Tendring and East Suffolk District Councils, Suffolk and Essex County Councils, South East Local Enterprise Partnership (SELEP), Freeport East and the NHS Suffolk and North-East Essex Integrated Care Board (ICB). Invest Essex, Essex Chamber of Commerce, North Essex Economic Board and Essex Youth Service were also approached to participate in additional consultation but did not register interest and so did not participate.

7. It should be noted that North Falls has undertaken additional consultation activities relevant to socio-economics to those listed below. North Falls has:

   - Worked with East of England Energy Group to start raising awareness of supply chain opportunities locally (a supply chain event was held in Harwich in 2022 as part of ‘Energising Essex’ series);
   - Supported the Essex Green Skills Infrastructure Review and Sector Development Strategy for Essex; and
   - Supported the Norfolk/Suffolk/Essex based ‘Gearing up 2 Grow’ project which sought to understand demand projections for regional energy (onshore) and infrastructure construction work over the period to 2030.

8. Further details of the consultation activities relevant to outline employment and skills planning are set out within the Outline Skills and Employment Plan (OSEP) (Document Reference 7.18).

9. This chapter has been updated following the consultation on the PEIR in order to produce the final ES assessment. Full details of the consultation process are presented in the Consultation Report as part of the Development Consent Order (DCO) application.

Table 31.1 Consultation responses

Consultee	Date / Document	Comment	Response / where addressed in the ES
Essex County Council	Scoping opinion 2021	The approach set out in the Environmental Statement is generally satisfactory and we are pleased that it reflects the nature of, and progress in, discussion the Councils have had with the NF [North Falls] Team on the undertaking of assessments to date. It is noted however that a number of key topics, not least as they relate to the statutory function of ECC including Highways and Transportations, and Economy and Skills have not been subject to prior engagement.	Feedback taken from Council discussions with the NFOW team have been incorporated below, within this table. Impacts on highways and transportations are addressed in further detail within ES Chapter 27 Traffic and Transport (Document Reference: 3.1.29). A baseline for socio-economics has been provided within Section 31.5.2 and a skills and employment focused baseline is set out in the OSEP. Policies relating to socio-economics have also been assessed within Table 31.7 and the OSEP.
Essex County Council	Scoping opinion 2021	As the submitted SR [Scoping Report] indicates, additional studies and data collection remain necessary from a wide variety of topics to inform and supplement the eventual EIA submission and it is anticipated that the development proposals will be refined and change as a result. ECC look forward to engaging with other authority partners and the applicants on this.	Section 31.5 analyses a wide range of relevant datasets and policies. Where available, additional studies, chapters and appendices have also been used and are identified in Section 31.4.2.
Essex County Council	Scoping opinion 2021	It is noted that the offshore elements of this proposal appear well developed and researched, however concern is raised that the onshore implications are vague and un-proven at this time, as the submission itself does acknowledge.	Offshore and onshore implications of the construction, operational and decommissioning phase of the Project have been assessed within Section 31.6.3. This assessment looks separately at offshore and onshore elements at each phase using data provided within ES Appendix 31.1 (Document Reference: 3.3.70), prepared by BVG Associates and the addendum to ES Appendix 31.1 (Document Reference: 3.3.70) North Falls Offshore Wind, prepared by Hatch. Other socio-economic impacts assessed related to onshore infrastructure are also considered within Section 31.6 of the assessment.
Essex County Council	Scoping opinion 2021	The Essex Climate Action Commission has over 30 members over a wide range of senior professionals, local councillors, academics, businesses, people and two members of the Young Essex Assembly. The commission will run for two years initially and make recommendations	Noted (see response immediately below).

Consultee	Date / Document	Comment	Response / where addressed in the ES
		about how we can improve the environment and economy of Essex.	
Essex County Council	Scoping opinion 2021	The findings of the commission will not be published until Q3 2020 but the applicant should have knowledge of this initiative, their values and objectives and the implications for the future aspirations of the development.	The applicant is aware of the six themes included within the 'Net Zero: Making Essex Carbon Neutral Commission' report: Land use and green infrastructure, Energy, The Built Environment, Transport, Waste and Community Engagement. The values and objectives of the energy and Community engagement theme have been included within Section 31.4.1.
Essex County Council	Scoping opinion 2021	1.3(9) We'd welcome further clarification on the reference to 'lessons learned from a wide range of previous scoping opinions for offshore wind farms' that this section refers to. This would, from the outset, clarify which skills, employment and economic data cannot be scoped out until further information is known about the Project and the existing environment.	The assessment has been undertaken by Hatch, a specialist socio-economics consultancy with extensive experience of EIAs for offshore wind farms (having recently produced socio-economics EIA inputs for the Sheringham Extension Project and Dudgeon Extension Project (SEP and DEP), Awel y Mor and Rampion 2 offshore wind farm projects). Note that the receptors being assessed are consistent with a number of other developments and none of the receptors referenced by Essex County Council have been scoped out.
Essex County Council	Scoping opinion 2021	1.5(19) This is a great diagram, and deployed with other resources, would be a great educational tool. The EIA should narrate how you intend to actively engage with local schools and interest groups to educate them about how OWF [offshore wind farm] work and the pathways to careers in the sector.	We welcome your comments in this regard and will ensure that the EIA addresses active engagement with local education on employment and skills. There will also be a DCO requirement securing an OSEP.
Essex County Council	Scoping opinion 2021	1.9 (117) We welcome this referencing of the government's vision to build a competitive and innovative UK supply chain. Wherever possible, we'd also welcome an explicit reference to potential work with the local supply chain in Essex and adjoining counties.	The strengths of the local supply chain in Essex and Suffolk have been analysed within Section 31.5 (Existing environment). The assessment of significance (Section 31.6) also draws upon the supply chain as described in ES Appendix 31.1 ((Document Reference:3.3.70), prepared by BVG Associates, which identifies areas of the supply chain where local suppliers can be used.
Essex County Council	Scoping opinion 2021	3.9 (661) There is an opportunity here to support or complement the work of Active Essex and the ECC cycling	Effects related to cycling are completed as part of the ES Chapter 27 Traffic and Transport (Document Reference: 3.1.29). Impacts on public rights of way

Consultee	Date / Document	Comment	Response / where addressed in the ES
		scheme (Pedal Power) being promoted with partners in Tendring.	and therefore cyclists are also considered in ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34).
Essex County Council	Scoping opinion 2021	4.2.1 (740) We welcome the economic receptor identified and the explicit mention of benefits, as well as adverse effects, that people (residents) and businesses could experience from the Project and associated developments.	Likely significant effects on economic receptors have been assessed from Section 31.6 (Assessment of significance) to Section 31.10 (Inter-relationships).
Essex County Council	Scoping opinion 2021	4.2.2 (746) Data should include reference to some of the Essex specific skills and employment strategies and policy documents which will strengthen the scoping exercise. Data should also include: Current business base. This can be sourced from Tendring District Council and/or Essex County Council. Anticipated workforce. This should start to inform anticipated employment shortage areas and need for any skills interventions and planning. Workforce planning should also identify how the developers intend to work with relevant local Essex partners to maximise local recruitment across all skills levels, especially high-level jobs; during the construction and post-construction phase. NEET (Not in Education Employment or Training) data. This can be supplied by Essex County Council. Construction projections in Essex. The Essex Construction Skills Report 2020-2040 can be sourced from Essex County Council. Essex's economic policies: Essex Productivity and Prosperity Plan North Essex Economic Strategy Skills – data should also be sourced from Essex Open Data. This is publicly available via ECC's website.	Skills and employment strategies and policy documents for Essex have been included within Section 31.4.1.2 (Other legislation, policy and guidance) and the OSEP. The OSEP includes analysis of the current business base, the anticipated workforce, not in education, employment or training (NEETs), construction projections, skills and economic strategies. The Essex Construction Skills Report (Construction Growth in Essex 2020-2040) is considered in the OSEP. The Essex County Council Open Data portal has been reviewed. This provides useful data on the population, economy, environment, employment, health and wellbeing and equality & welfare. It is noted that the Open Data portal largely draws on the same data sources that are presented in the existing environment Section 31.5. North Falls has also supported consultation and engaged on a range of supply chain, employment and skills related projects included as is noted above in Section 31.2 above.

Consultee	Date / Document	Comment	Response / where addressed in the ES
Essex County Council	Scoping opinion 2021	4.2.2 (747) For skills and employment purposes, Essex Open Data should also be used as a source for data.	The Essex County Council Open Data portal has been reviewed. This provides useful data on the population, economy, environment, employment, health and wellbeing and equality & welfare. It is noted that the Open Data portal largely draws on the same data sources that are analysed in the existing environment Section 31.5.
Essex County Council	Scoping opinion 2021	4.2.3 (751) The likely recruitment strategies mentioned should also take into account potential recruitment shortages and steps to mitigate against that, preferably via skills intervention and workforce planning. There should also be regard to other NSIPs [Nationally Significant Infrastructure Projects] potentially recruiting at the same time.	Section 31.8 assesses the cumulative employment impacts on Suffolk and Essex. This considers NSIPs across Suffolk and Essex and therefore provides an indication of the demand for construction and operation and maintenance (O&M) workforce over the construction and operational phases. Section 31.5 considers the existing environment and the size of the local construction workforce. An OSEP has been developed as part of the DCO process. This will be secured through a DCO Requirement. Potential recruitment shortages and steps to mitigate via skills intervention and workforce planning is a key consideration of the OSEP.
Essex County Council	Scoping opinion 2021	4.2.4 (762) The absolute scale of economic impacts analysis needs to clearly identify which roles (jobs) will be needed and how engagement with local providers can cater for the demand and supply of skills.	Where practicable, Section 31.6 refers to the areas of the supply chain where local providers could provide support for North Falls. For example, local suppliers could be drawn upon for the onshore substation equipment and installation activities This has been informed by ES Appendix 31.1 (Document Reference: 3.3.70), prepared by BVG Associates. An OSEP has been developed as part of the DCO process and will be secured through a DCO Requirement. Details on engagement with local providers regarding the demand and supply of skills are presented in the OSEP.
London Borough of Waltham Forest (LBWF)	Scoping opinion 2021	The applicants have submitted an EIA Scoping Report which has been reviewed by officers. The report covers a wide breadth of issues proportionate to the status of this application as a NSIP, and include both off-shore physical and geological issues, as well as wider socio-economic and on-shore visual and physical impacts such as air quality and wider climate change. It is not considered that there are any	Noted.

Consultee	Date / Document	Comment	Response / where addressed in the ES
		significant issues raised by the scoping report which would directly impact upon LBWF, and therefore no comments are made in relation to the scoping opinion.	
Public Health England (PHE)	Scoping opinion 2021	Human Health and Wellbeing This section of PHE's response, identifies the wider determinants of health and wellbeing we expect the PEIR to address, to demonstrate whether they are likely to give rise to significant effects. PHE has focused its approach on scoping determinants of health and wellbeing under four themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements. The four themes are: Access Traffic and Transport Socioeconomic Land Use	Impact on health and wellbeing are assessed in detail ES Chapter 28 Human Health (Document Reference: 3.1.30). It should be noted that job creation is linked to increases in wellbeing. The quality and availability of health and social community infrastructure are also important factors in determining a populations health and wellbeing. Health and wellbeing is therefore closely tied to the impacts assessed within Section 31.6 Assessment of significance.
Public Health England	Scoping opinion 2021	Employment NSIP schemes have the potential to negatively impact through the relocation or loss of local businesses. Equally they can offer an opportunity for new business activity and employment both at the construction stage and operation of the development approved by the DCO [Development Consent Order]. There is clear evidence that good work improves health and wellbeing across people's lives and protects against social exclusion. Conversely, unemployment is bad for health and wellbeing, as it is associated with an increased risk of mortality and morbidity. For many individuals, in particular those with long-term conditions such as mental health	The assessors and authors of this chapter (Hatch) are not aware of evidence that offshore wind farms lead to the loss of local businesses. If this did occur, it is likely to be a negligible effect for the study area as a whole and would likely be outweighed by the positive effects on the wider economy (for example employment in the construction and operational stages). The assessment of employment impacts in Section 31.6 therefore does not consider the scale of job losses associated with the development of North Falls. The assessment does quantify job creation, including direct and indirect effects. An OSEP has been developed as part of the DCO process. Local barriers to employment are presented and considered in the OSEP.

Consultee	Date / Document	Comment	Response / where addressed in the ES
		problems, musculoskeletal (MSK) conditions and disabilities, health issues can be a barrier to gaining and retaining employment. Employment rates are lowest among disabled people, with only 51.3% in work, meaning there is a substantial employment rate gap in the UK between disabled and non-disabled people (81.4% in employment). Among these working age disabled people in the UK, 54% have a mental health or MSK condition as their main health condition. Enabling people with health issues to obtain or retain work, and be productive within the workplace, is a crucial part of the economic success and wellbeing of every community and industry. It is important that people are supported to gain employment and maintain economic independence for themselves and their families, especially as they age. This is of particular importance for individuals with long-term conditions and disabilities, due to the barriers they face in gaining employment and retaining a job. Where relevant any assessments should include: The impact of business relocation in order to identify the likely level of job losses within the study area The proposed support mechanisms to be established for business owners and employees A clear strategy and action plan that addresses barriers to employment within the local population and those that cease employment due to the DCO.	
Public Health England	Scoping opinion 2021	3a. Employment opportunities including training opportunities Employment is generally good for physical and mental health and well-being, and worklessness is associated with poorer physical and mental health and well-being. Work can be	Current baseline levels of employment are assessed in Section 31.5.2.1. National, sub-regional and local policy documents (see Table 31.7 and the OSEP) recognise the need to provide training opportunities during the transition to net zero, particularly in relation to the offshore wind sector.

Consultee	Date / Document	Comment	Response / where addressed in the ES
		therapeutic and can reverse the adverse health effects of unemployment for healthy people of working age, many disabled people, most people with common health problems and social security beneficiaries. Account must be taken of the nature and quality of work and its social context and jobs should be safe and accommodating. Overall, the beneficial effects of work outweigh the risks of work and are greater than the harmful effects of long-term unemployment or prolonged sickness absence. Employment has a protective effect on depression and general mental health. Transitions from unemployment to paid employment can reduce the risk of distress and improve mental health, whereas transitions into unemployment are psychologically distressing and detrimental to mental health. The mental health benefits of becoming employed are also dependent on the psychosocial quality of the job, including level of control, demands, complexity, job insecurity and level of pay: transition from unemployment to a high-quality job is good for mental health, whereas transition from unemployment to a low-quality job is worse for mental health than being unemployed. For people receiving social benefits, entry into paid employment can improve quality of life and self-rated health (physical, mental, social) within a short time-frame. For people receiving disability benefits, transition into employment can improve mental and physical health. For people with mental health needs, entry into employment reduces the use of mental health services. For vocational rehabilitation of people with severe mental illness (SMI), Supported Employment is more effective than Pre-vocational Training in helping clients obtain competitive	Employment impacts at the national and local level, split by offshore/onshore and the construction, operational and decommissioning phases are assessed in Section 31.6.

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		employment; moreover, clients in Supported Employment earn more and work more hours per month than those in Pre-vocational Training.	
Public Health England	Scoping opinion 2021	3b. Local Business Activity It is important to demonstrate how North Falls will contribute to ensuring the vitality of town centres. Schemes should consider the impact on local employment, promote beneficial competition within and between town centres, and create attractive, diverse places where people want to live, visit and work. In rural areas the applicant should assess the impact of the proposals on a prosperous rural economy, demonstrate how they will support the sustainable growth and expansion of all types of business and enterprise in rural areas, promoting the development and diversification of agricultural and other land based rural businesses.	Impact 5 (Pressure on local onshore infrastructure and services) considers how North Falls will impact on local demographics (Section 31.6). It is recognised that a temporary increase in population as a result of construction workers temporarily moving into the local study area may bring about a mix of both positive and negative impacts. Positive impacts include the increased expenditure within local town centres by construction workers. These expenditure effects are captured within the induced impacts shown in ES Appendix 31.1 (Document Reference: 3.3.70). However, given that the construction, O&M and decommissioning of an offshore wind farm project could only affect town centre vitality in a limited and indirect way, this has not been assessed in the ES. Section 31.5 identifies those sectors which are most likely to benefit from supply chain opportunities. Given the nature of the development and its supply chain, it is considered unlikely that this will support the diversification of agricultural or land based rural businesses, so this has not been assessed.
Public Health England	Scoping opinion 2021	3c. Regeneration Following rebuilding and housing improvements in deprived neighbourhoods, better housing conditions are associated with better health behaviours; allowing people to remain in their neighbourhood during demolition and rebuilding is more likely to stimulate life-changing improvements in health behaviour than in people who are relocated. The partial demolition of neighbourhoods does not appear to affect residents' physical or mental health. Mega-events, such as the Olympic Games, often promoted on the basis of their potential legacy for regeneration, appear to have only a short-term impact on mental health.	The regeneration of mega events, such as the Olympic Games, is not relevant to the assessment of North Falls as North Falls is not a physical regeneration project. The likely significant effects on accommodation is assessed within Section 31.6, although the focus is on housing market capacity rather than the relationship between housing quality and health. The impacts on reductions in tourist accommodation availability due to the temporary influx of a non-local workforce during the construction phase are not included in the socio-economic assessment as they are assessed in detail in ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34).

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Public Health England	Scoping opinion 2021	3d. Tourism and Leisure Industries The applicant should assess the impact of North Falls on retail, leisure, commercial, office, tourism, cultural, community and residential development needed in town centres. In rural locations assessment and evaluation of potential impacts on sustainable rural tourism and leisure developments that benefit businesses in rural areas, communities and visitors should be undertaken.	ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34) sets out the existing environment in relation to the visitor economy and associated visitor accommodation and assesses impacts on tourism and leisure. Further, analysis of onshore tourism and recreation identifies existing leisure infrastructure facilities. Table 31.26 gives an indication of the accommodation stock that would be available to the construction workforce. The impacts on accommodation (including consideration of use of visitor accommodation) are considered within Section 31.6.
Public Health England	Scoping opinion 2021	3e. Community / social cohesion and access to social networks The location of employment, shops and services, provision of public and active transport infrastructure and access to open space and recreational opportunities are associated with social connectedness. Access to local amenities can increase social participation. Neighbourhoods that are more walkable can increase social capital. Urban agriculture can increase opportunities for social connectivity. Infrastructure developments, however, can affect the quality of life of communities living in the vicinity, mediated by substantial community change, including feelings of threat and anxiety, which can lead to psychosocial stress and intra-community conflict.	Analysis of onshore social and community infrastructure facilities (see Section 31.5.5) identifies existing social community infrastructure within the Local Onshore Cable Area of Influence (LOCAI). This includes, school/education infrastructures, churches, police stations, health services and greenspaces infrastructures. The impact on social community infrastructure is considered within Section 31.6.
Public Health England	Scoping opinion 2021	3f. Community engagement Public participation can improve environmental impact assessments, thereby increasing the total welfare of different interest groups in the community. Infrastructure development may be more acceptable to communities if it involves substantial public participation.	Two rounds of North Falls community consultation were undertaken from 25 October to 10 December 2021 and from Monday 17 October to Friday 9 December 2022. The statutory consultation on the PEIR document (16 May to 14 July 2023) formed a key part of the community engagement by North Falls, as key stakeholders and members of the public were able to provide responses to the PEIR. These have been considered when producing the ES for the DCO application.

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Planning Inspectorate	Scoping opinion 2021	Paragraph 86 of the Scoping Report (detailing the overarching assessment methodology for the EIA) states that study areas defined for each receptor are based on the Zone of Influence (ZoI) and relevant characteristics of the receptor (e.g. mobility / range). However, the Inspectorate notes that for many of the aspect chapters included, study areas and ZoIs have not been stated. Where this detail has been provided, it is not clear how these study areas relate to the extent of the impacts and likely significant effects associated with North Falls, how they have been used to determine a ZoI, and what receptors have been identified within the ZoI. The PEIR should provide a robust justification as to how study areas have been defined and why the defined study areas are appropriate for assessing potential impacts.	Study areas and justifications for why study areas have been used are defined within Section 31.2. Table 31.3 states which study areas have been included within each assessment of Section 31.6.
Planning Inspectorate	Scoping opinion 2021	Some aspect sections of the Scoping Report have identified specific receptors, whereas others identify broad categories of receptors only. Specific receptors should be identified within the PEIR, alongside categorisation of their sensitivity and value. Section 1.8.2.1 of the Scoping Report explains the generic approach to defining receptor sensitivity in order to assess the potential impacts upon each receptor. The inspectorate expects a transparent and reasoned approach to be applied to assigning receptor sensitivity to be defined and applied across the aspect chapters.	The impacts (receptors) are set out in Table 31.3. The assessment methodology including approach to determining sensitivity and magnitude is set out in Section 31.4.
Planning Inspectorate	Scoping opinion 2021	The PEIR should include details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	The assumptions and limitations of the assessment are set out in Section 31.4.6.
Planning Inspectorate	Scoping opinion 2021	Section 1.7.2 and Table 1.4 of the Scoping Report explains that an Evidence Plan Process (EPP) with specialist stakeholders commenced in 2021 to agree the 'detailed methodologies for data collection and undertaking the impact	Socio-economic matters have been considered as part of the EPP. Stakeholder consultation related to socio-economic matters undertaken to

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		assessments' in respect of certain aspects to be scoped into the PEIR. This approach to agreeing the finer details of the assessment is welcomed. Other aspects, including fisheries, aviation and radar, and shipping and navigation, would fall outside of the EPP but the Applicant has committed to consultation at an early stage of the assessment process. The Applicant should ensure that any agreements reached during EPP or other consultation process are evidenced within the PEIR.	date are presented within this table (Table 31.1) for matters raised via the relevant ETGs.
Planning Inspectorate	Scoping opinion 2021	Section 1.9.3 of the Scoping Report sets out the planning policy and legislation context for North Falls. It would be beneficial for the aspect chapters of the PEIR to also include reference to aspect specific planning policy and legislation, where this has been used to inform the methodology used for assessment.	Section 31.4.1 presents the planning policy and legislation context that is relevant to the socio-economic assessment.
Planning Inspectorate	Scoping opinion 2021	Any mitigation relied upon for the purposes of the assessment should be explained in detail within the PEIR. The likely efficacy of the mitigation proposed should be explained with reference to residual effects. The PEIR should also address how any mitigation proposed is secured, with reference to specific DCO requirements or other legally binding agreements.	Embedded mitigation is considered within Section 31.3.3 (Summary of mitigation embedded in the design). No additional mitigation measures are presented in Section 31.6 (Assessment of significance). The measures committed to be the Project through the OSEP are secured by DCO Requirement.
Planning Inspectorate	Scoping opinion 2021	Section 4.2.1 Existing environment – offshore. The offshore socio-economic environment is described as being a busy shipping area used by commercial shipping and fishing vessels, recreational yachting and dredging. Impacts to shipping and navigation are considered in Section 2.10 and commercial fishing is considered in Section 2.9 and impacts on sensitive landscape receptors within 50km of the array areas are considered in Section 4.1 of the Scoping	The ES assessment of socio-economic impacts related to shipping and navigation and commercial fishing is presented in Section 31.6. The socio-economic assessment provides cross references to other relevant technical chapters where information from those chapters is drawn upon.

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		Report. The PEIR should ensure that the baseline environment and any impacts on receptors relating to socio-economic factors are clearly cross referenced to other relevant technical chapters in the socio-economic aspect chapter.	
Planning Inspectorate	Scoping opinion 2021	Section 4.2.2 Approach to data collection – consultation. The PEIR should demonstrate that data collection has involved consultation with local and regional commercial business interests and other relevant consultees such as the Maritime and Coastguard Agency and North East Essex Clinical Commissioning Group and show how this has informed the onshore and offshore socio-economic assessment.	Consultation with the North East Essex Clinical Commissioning Group and other key organisations with regard to the socio-economic assessment is detailed in Section 31.2. Consultation with the shipping stakeholders such as the Maritime and Coastguard Agency (MCA) is detailed in ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17) and the findings of the shipping and navigation assessment have informed the socio-economics assessment.
Planning Inspectorate	Scoping opinion 2021	Section 4.2.3 Potential impacts. Potential impacts from North Falls during construction, maintenance and decommissioning phases should be clearly set out in the PEIR. Any likely significant effects should be identified and fully justified in the PEIR. Mitigation if considered necessary should also be set out in the PEIR and should demonstrate how this mitigation would be secured through the DCO. Loss of or disruption to onshore and offshore activities which contribute to existing socio-economic characteristics of the study area, such as potential air quality, noise, visual, and traffic impacts on social and community infrastructure facilities, based on the assessment and conclusions of other relevant PEIR chapters should be clearly described and cross referenced to relevant aspect chapters and any supporting evidence within the PEIR.	Section 31.6 considers the likely significant effects arising during the construction, operational, maintenance and decommissioning phases.

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Planning Inspectorate	Scoping opinion 2021	Section 4.2.3 Potential impacts. In addition to the potential for impacts in terms of hotel facilities and holiday rental accommodation (addressed within Scoping Report Section 4.3 Tourism and Recreation), the PEIR should include an assessment of impacts to standard rental accommodation during the construction period where significant effects are likely to occur. For example, consideration of potential impacts to availability of affordable housing.	The impact on accommodation, including rental accommodation is considered within Section 31.6 of the assessment. The impacts on reductions in tourist accommodation availability due to the temporary influx of non-local workers during the construction phase are not included in the socio-economic assessment as they are assessed in ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34).
Planning Inspectorate	Scoping opinion 2021	Table 3.3 Potential impacts – mineral resources. Loss, damage or sterilisation of mineral resources is scoped into the PEIR as part of the assessment of ground conditions and contamination. The Inspectorate considers that the economic impact and associated effects of this matter should also form part of the socio-economic assessment, where significant effects are likely to occur.	The wider economic effects related to minerals are considered within Section 31.6 of the assessment.
Planning Inspectorate	Scoping opinion 2021	Para 747 Social infrastructure. In addition to the receptors identified at paragraph 747, the Inspectorate considers that healthcare facilities and emergency services within the study area selected for the assessment should be scoped into the PEIR as social infrastructure receptors.	The assessment considers the impact on healthcare facilities and emergency services within Section 31.6.
Planning Inspectorate	Scoping opinion 2021	Section 4.2.3.4 Potential cumulative impacts. Cumulative impacts are to be considered as set out in Section 1.8 of the Scoping Report. This should include socio-economic impacts as part of a cumulative effects	Cumulative effects are presented in Section 31.8.

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		assessment. It should be clear how conclusions on effects have been reached in the PEIR.	
Planning Inspectorate	Scoping opinion 2021	Section 4.2.4 Approach to assessment – professional judgement. The socio-economic assessment will present a qualitative assessment of the anticipated impacts and benefits, their extent and when they are expected to occur. The PEIR should demonstrate how professional judgement has been used in any qualitative assessment and how conclusions have been reached.	Where practicable the assessment uses a quantitative assessment approach. However qualitative assessments based on the available information and professional judgement is applied in certain instances. For example when determining the sensitivity of a receptor as is set out in Section 31.6 the assessment considers the available information provided in Section 31.5 and 31.4.1 as well as professional judgement to determine the sensitivity of a given receptor.
Planning Inspectorate	Scoping opinion 2021	Study area. The study area for both the onshore and offshore environment should be clearly set out in the PEIR and supported through relevant figures and other supporting evidence. The Applicant should make effort to agree the relevant study area with the consultation bodies.	Section 31.2, particularly Table 31.2 and Table 31.3 have defined the study areas of the socio-economic chapter. These study areas have been referred to within analysis from Section 31.5 onwards. In addition, ES Figures 31.1 and 31.2 (Document Reference: 3.2.27) provide a spatial overview of the study areas.
Suffolk County Council	Scoping opinion 2021	Skills Section 4.2 – Project Wide Socio-economics Section 4.2.1 – Existing Environment Following previous representation made to assist the definition of study areas we are disappointed to see that only Tendring District, as host local authority, is being considered as the study area. To truly assess the economic benefit or adverse impact of the Project the population centres and existing offshore clusters where services and labour will be potentially drawn from should be included in the assessment (Ipswich, Lowestoft & Felixstowe).	Section 31.2, particularly Table 31.2 and Table 31.3 have defined the Study areas of the socio-economic chapter. This includes Essex and Suffolk study areas.

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Suffolk County Council	Scoping opinion 2021	Section 4.2.2 – Approach to data collection We are pleased to see reference to using data from regional studies such as The Technical Skills Legacy for Suffolk and Norfolk (Suffolk Growth Programme Board, 2020) however, this data will only be valuable when considered as part of a wider study area as discussed above. Alongside desk based assessment of socio economic impacts we expect to be consulted, and this clearly demonstrated within the PEIR and its conclusions, on all relevant articulated areas that will be used to form the assessment.	The socio-economic data sources used are presented in Section 31.4.2. Relevant stakeholders have been consulted through dedicated ETGs for socio-economics and Suffolk County Council were engaged in further one to one consultation in March 2023. Comments from these consultations are addressed below in this table.
Suffolk County Council	Scoping opinion 2021	Section 4.2.3 – Potential Impacts We are pleased to see the potential impacts that will be assessed across all phases of the Project and look forward to working in collaboration with the Project to maximise these anticipated positive benefits alongside mitigating adverse impact.	Section 31.6 considers the likely significant effects arising during the construction, operational and decommissioning phases.
Suffolk County Council	Scoping opinion 2021	Section 4.2.3.4 Socio economics must from part of the cumulative impacts and effects assessment. It is also imperative that the projects included in this cumulative assessment aren't just drawn from planned offshore and energy projects. The cumulative assessment should take into account any and all projects that will require a similar skill set/service. An example of this would be when considering the impact of onshore civils construction, the cumulative impact should take into account any significant road, rail, utilities, projects that will also require a civils workforce at the same time.	ES Chapter 6 EIA Methodology (Document Reference: 3.1.8) gives an overview of the CEA process. Cumulative effects have been addressed within Section 31.8.3. The CEA considers a wide range of projects, not just the energy sector.
Suffolk County Council	Scoping opinion 2021	Section 4.2.4 – Approach to Assessment We agree with the applicant that there is not a set of recognised standards for assessment of socio-economic impacts. However, recent NSIP applications have	The impact assessment methodology is presented in Section 31.4. The assessment draws upon well-established approaches used for the assessment of socio-economic effects of offshore wind projects of a similar scale, and is refined to the specific context of North Falls.

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		demonstrated robust methodology and these approaches should be considered to support and aid confidence in the qualitative assessment made in this project.	
Suffolk County Council	ETG July 2021	SCC would like the Project to consider a wider area [to include Suffolk] to source employment and supply chain opportunities.	Section 31.2, particularly Table 31.2 and Table 31.3 have defined the Study areas of the socio-economic chapter. This includes Suffolk. Analysis of Suffolk's employment and supply chain characteristics is provided in Section 31.5.2.1.
Suffolk County Council	ETG July 2021	When identifying cumulative effects, the Project should not just focus on energy projects but also look at the overlapping civils projects (e.g. proposed garden communities, transport links) and the associated work force demands. There could potentially be a pinch point within Essex / Suffolk when looking at other large infrastructure projects planned between 2026 and 2029.	Cumulative effects have been addressed within Section 31.8.3. The CEA considers a wide range of projects, not just energy sector projects.
Essex County Council	ETG July 2021	A key question for ECC is related to planning the workforce for 2028, as many of them could still be at school. Future employment needs to be taken into account in any project strategy in order to maximise and align opportunities so that everyone is not trying to recruit at the same time.	An OSEP has been developed as part of the DCO process. Anticipated trends in the future working age population have been identified in Section 31.5.9.1 and are considered in the OSEP.
Tendring District Council & Essex County Council	Additional consultations (08/03/23 and 24/03/23)	Both councils agree that a joint skills strategy (with other local offshore wind projects such as Five Estuaries should be factored into the North Falls project to address the existing skills recruitment challenges in the Offshore Wind sector. The proposed strategy should align with the new Tendring future skills programme.	An OSEP been developed as part of the DCO process. This has been produced in close coordination with Five Estuaries and other projects have been consulted during the production of the OSEP. Further details are provided in the OSEP.
Tendring District Council & Essex County Council	Additional consultations (08/03/23 and 24/03/23)	The consultees highlighted existing reports, data and research sitting behind the emerging local skills investment plan which they would like to be considered within the PEIR. This included the Essex Skills Plan, SELEP Skills report and Evidence base, and the Essex Sector Development Strategy.	Table 31.7 and the OSEP includes documents highlighted in the consultation. The ES has considered any new information which became available after the PEIR was produced. This includes the LSIP.

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Suffolk County Council	Additional consultation (28/03/23)	To maximise the benefit from North Falls, East Suffolk Council would like to see a specific strategy for local employment benefits and opportunities. The developers should ensure that employment does not lead to poaching, and the Council are willing to work collaboratively with the private sector to address this. East Coast College and Suffolk New College are actively looking for ways to support growth of the offshore wind sector. Both are keen to ramp up course provision.	The assessment has considered the cumulative effects of increased pressure on local infrastructure and services (housing and health) within Section 31.8.3. An OSEP been developed as part of the DCO process.
East Suffolk Council	Additional consultation (07/03/23)	To maximise the benefit from North Falls, East Suffolk Council would like to see a specific strategy for local employment benefits and opportunities. The developers should ensure that employment does not lead to poaching, and the Council are willing to work collaboratively with the private sector to address this. East Coast College and Suffolk New College are actively looking for ways to support growth of the offshore wind sector. Both are keen to ramp up course provision.	Please see response directly above.
SELEP	Additional consultation (08/03/23)	SELEP have noted that the Project will overlap with Colchester Tendring Garden Community project and Freeport East. As such, the developers of North Falls should collaborate with the major infrastructure projects group and Haven Gateway Partnership to ensure the local supply chain opportunities are maximised. The LEP stated that there are socio-economic challenges along the coastline which will impact labour and skills supply. The LEP commented that data from the Essex Skills plan and SELEP skills page should be considered within the PEIR.	The OSEP includes a number of documents highlighted by SELEP and considers a range of relevant data.
Freeport East	Additional consultation (07/03/23)	Freeport East is currently co-sponsoring a skills event with RWE Renewables UK Swindon Limited to allow for the pool of skills tailored towards the offshore wind farm to become available. They encourage the North Falls project to	An OSEP has been developed as part of the DCO process. As RWE Renewables UK Swindon Limited is a 50% owner of North Falls, its relevant

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		undertake similar events and engage with the local community in regard to skills, innovation, and further opportunities for collaboration. Furthermore, Freeport East commented that as Harwich has high deprivation and that, any spillover benefits in this area would be disproportionately higher than the local areas with less deprivation.	skills activity is considered within the OSEP as well as that of other joint owner SSE Renewables Limited. A map of deprivation in which this trend can be seen is considered in further detail in the OSEP.
NHS Suffolk and North-East Essex ICB	Additional consultation (17/03/23)	The ICB's recent consultation about GP access with Harwich residents showed that residents are already find the waiting time for GP appointments to be too long. The consultees are concerned that with GPs and pharmacies currently under resourced, a large influx of permanent workers may cause capacity constraints. Although there may be lower numbers of residents registered with the GP compared to elsewhere, those that are registered, often suffer from complex conditions which require greater GP time.	The existing environment in relation to health care services includes consultee views and is presented in Section 31.5.4. The potential disruption to health care services considers the existing environment and is assessed in Section 31.6.
NHS Suffolk and North-East Essex ICB	Additional consultation (17/03/23)	Unrelated to health, the consultees raised the potential issue that if the North Falls project were to block book caravan sites, this would have a large impact on the existing community as many local families rely on caravan sites for permanent residency. .	The impact on visitor accommodation is assessed in ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34).
Tendring District Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	If the Council's objections to the scheme are ultimately unsuccessful, TDC insists on there being meaningful dialogue with the promoter – North Falls, to consider a Community Benefit Contribution package for the legacy of the Project. There are several community projects that would benefit from funding. A priority for TDC will involve seeking reinforcements to the sea defences and the cycle routes for the affected areas. There are also potential opportunities arising from the construction of servicing haul roads in affected areas – particularly in locations where such routes could be utilised and/or formalised to provide permanent highway re-enforcements – such as link roads or bypasses	North Falls may be willing to discuss a community benefits package with stakeholders, however this would not be a statutory requirement and would sit outside the EIA process. No commitment will be made until the operational phase.

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		that could resolve long-standing traffic issues (for example congestion in Thorpe le Soken village). This would require further consultation with both TDC and Essex County Highways. There are also costed community projects within the district that require funding (Jaywick being just one example), TDC would be happy to share these at an appropriate time. There is however, a much longer-term view whereby the ongoing benefits to North Falls and associated shareholders can be used as part of the social, environmental and corporate responsibility to improve a wide range of community assets.	
Tendring District Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	To summarise, in the absence of an off shore centred approach TDC would expect to work toward the following points with North Falls; Long term commitment to apprenticeships and permanent employment Establishment of a Community Benefit Contribution package Fully mitigated proposals to deal with the impact of construction on tourism within the District Fully mitigated proposals addressing the impacts on residents – (both physical and mental) in the immediate vicinity of construction and the substations Fully mitigated proposals with regard to the impact of construction on the highways along the route and at the substations Fully mitigated proposals with regard to the impact of this project and the in-combination impacts of North Falls and Norwich to Tilbury.	As noted above North Falls may be willing to discuss a community benefits package with stakeholders, however this would not be a statutory requirement and would sit outside the EIA process. No commitment will be made until the operational phase. An OSEP has been developed as part of the DCO process. This provides details of commitments to apprenticeships and permanent employment opportunities. The effect on the volume and value of tourism in Essex and Suffolk is assessed within ES Chapter 32 Tourism and Recreation (Document Reference:3.1.34). Physical and mental health impacts on residents are considered in ES Chapter 28 Human Health (Document Reference: 3.1.30). Cumulative effects assessment within Section 31.8 of the ES considers the impact of Norwich to Tilbury. Embedded mitigation, which will reduce potential negative socioeconomic impacts, is set out in Section 31.3.3.

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Tendring District Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	Local people should be trained to work on site rather than bringing a workforce in from further afield Procurement contracts should be placed with local firms.	An OSEP has been developed as part of the DCO process. This provides details of commitments to training on site workers and procuring local firms. This will be secured under a DCO requirement.
Suffolk County Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	6. Community Benefit and Project Legacy 6.1 Community benefits should be in addition to the required secondary mitigation for the development, including those based on any emerging requirement in the Government's recent consultation on Community Benefits, which the County Council has responded to. 6.2 The County Council encourages the promoter to consider such community benefit options and would be happy to discuss how community benefits suitable for the locality could be incorporated. Given the visual impacts on the Suffolk coast, community benefit must be considered for those affected communities.	As noted above North Falls may be willing to discuss a community benefits package with stakeholders, however this would not be a statutory requirement and would sit outside the EIA process. No commitment will be made until the operational phase.
Suffolk County Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	7.1 Whilst the onshore construction of the Project is proposed to be located in Essex, the County Council expects that there will be an impact on the workforce in Suffolk, therefore a coordinated approach on skills is required.	An OSEP been developed as part of the DCO process. This included engagement with Suffolk County Council. The OSEP is focused on Tendring, the wider Essex and Suffolk.

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Suffolk County Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	7.2 Local partners, including the County Council and the New Anglia Local Enterprise Partnership, share a high-level ambition to ensure energy infrastructure development actively supports a sustainable regional and subregional supply chain, with direct benefits of increased employment, education and training opportunities for residents.	North Falls support these ambitions. The OSEP seeks to maximise the benefits of increased employment, education and training opportunities for residents. Following consent, the Supply Chain Plan (required under the CfD) will consider the potential actions to maximise employment and supply chain benefits.
Suffolk County Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	7.3 Suffolk and its neighbouring counties have a natural geographical advantage, which means that they will play a huge part in achieving the target to reach net zero. Therefore, the cumulative opportunity and negative impacts (such as adverse impacts in the visitor economy, churn, and negative displacement in local employment) of this development must be at the forefront of the promoters thinking, as further details of the Project are finalised.	The assessment (Section 31.6) finds no significant effects on socio-economics and there is therefore no need for any additional mitigation to be proposed in the assessment. The effect of the visitor economy is assessed in ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34).
Suffolk County Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	7.4 The County Council expects the promoters to deliver a package of training, skills and growth opportunities that engages with local suppliers, contractors, and the whole supply chain strategically across all local and regional projects.	The OSEP includes consideration of education and training opportunities. North Falls is committed to continue to work with local stakeholders to maximise local skills and employment benefits of the Project.
Suffolk County Council	PEIR Consultation Response Letter July 2023 and ETG	7.5 It is anticipated that this project has the potential to be in construction (subject to consent being granted) at the same time as Sizewell C Nuclear Power Station and the Scottish Power Renewables Hub are reaching the peak of their construction employment. Therefore, the promotor could be in a position in which they may find it difficult to secure any	The cumulative effects assessment within Section 31.8 of the ES considers the effects of a range of cumulative projects including Sizewell C Nuclear Power Station and the Scottish Power Renewables Hub. As part of the assessment close attention has been paid to the scale and timing of workforce requirements, the origins of the workforce and accommodation requirements.

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	September 2023	home-based labour as these projects will be already well established. 7.6 The County Council expects this to be taken into account when developing a workforce profile, including origins, and the promoter will require strong evidence to accompany their assumptions.	
Suffolk County Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	7.7 The County Council welcomes the proposal for a dedicated outline skills and employment plan as part of the promoter's development consent order application and will require this plan to take a strategic approach to enhance the impact of ongoing activities within the County and the maximise the benefits of the plan.	A strategic approach has been taken for the production of the OSEP which looks to build on existing interventions activities in the region. North Falls and Five Estuaries have worked and will continue to work together closely to ensure a co-ordinated approach will be taken to skills and employment planning.
Suffolk County Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	7.8 The promoter has assumed that non-local workers will be unlikely to bring additional family members to the local area, the County Council would welcome further clarification of the basis of this assumption.	Section 31.6 of the assessment provides additional clarity on the source of the assumption that non-local workers will not bring their families to the study area.
Essex County Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	It is also noted that whilst the landward development rests in Essex, the socio-economic and highway impacts of that inshore development are more widely spread and will also affect the local road network and communities within the wider region. Hence whilst it is correct to respond to this consultation on its merits it is also necessary to comment on in combination effects.	Socio-economic effects are assessed in Section 31.6. Effects in combination with traffic and transport are considered as part of the assessment.

Consultee	Date / Document	Comment	Response / where addressed in the ES
Essex County Council	PEIR Consultation Response Letter July 2023 and ETG September 2023	ECC notes the government's intention to consult on the delivery of community benefits from energy developments and encourage North Falls (NF) to engage with officers to provide a proactive position in respect of community benefits. 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 NF to 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 would welcome the opportunity to work with NF to establish a CBC package, which: - Provides a clear and transparent framework which formally commits to the concept of a CBC package as part of the NF project. - Addresses the inherent inconsistency between renewable and low carbon energy generation with onshore transmission network projects for host communities. - Reflects the overall scale, nature and national significance of the NF project and the particular local needs and circumstances of the host communities. - Provides short and long-term benefits to host communities, reflecting the longevity of onshore transmission networks. Such an Environmental Improvement Fund could be used to support local initiatives including, but not limited to, the provision of community woodlands, tree and hedgerow planting, the establishment of traditional orchards and the enhancement of wildlife habitats. Local community groups,	North Falls may be willing to discuss a community benefits package with stakeholders, however this would not be a statutory requirement and would sit outside the EIA process. No commitment will be made until the operational phase.

Consultee	Date / Document	Comment	Response / where addressed in the ES
		parish councils and voluntary sector organisations would be encouraged to make applications to this fund.	
Essex County Council	PEIR Consultation Response Letter Appendix One July 2023 and ETG September 2023	ECC would welcome further discussions to explore opportunities to secure benefits for the host communities arising from the development. ECC considers that, notwithstanding embedded mitigation and potential modifications to the scheme as proposed above, it is unavoidable for the development to result in serious and lasting negative residual impacts on the community and locality, including on amenity, loss/reduced quality of recreational opportunity for the community, tourism, culture and heritage, and health and wellbeing. ECC expects appropriate and robust mitigation for such residual impacts, which could , for example, include but not be limited to, funding for alternative outdoor recreational offers, access and amenity improvements, green space, cultural and heritage enhancements.	Embedded mitigation relevant to socio-economics is set out within Section 31.3.3. The assessment in Section 31.6 finds that there are no significant socio-economic effects and therefore no requirement for additional mitigation over and above what is detailed as embedded mitigation set out within Section 31.3.3.
Essex County Council	PEIR Consultation Response Letter Appendix One July 2023 and ETG September 2023	Normally Census journey to work for the area in which the development is located is used to gain an understanding of where trips to the proposed development are to come from and go to. However, there are sites like this that may not fit with the normal process. It is also possible to use Census data from an alternative location that may be more appropriate for determining distribution patterns if the local area is not representative with local adjustment or a gravity model predicting origins based on population and proximity to the site or a hybrid methodology that combines approaches. Based on the information provided it is indicated that specific routes origins and destinations can be derived for the construction aspect. For the employment distribution this needs to be looked at in more detail in conjunction with the local MSOA data to capture the location specific	The Applicant have discussed this matter with Essex County Council at an ETG meeting (05 September 2023). The Applicant and Essex County Council have subsequently agreed an approach to the distribution of employee traffic. The agreed approach is detailed in the Traffic Assessment (ES Appendix 27.1, Document Reference 3.3.64) includes further details of distribution of employee traffic.

Consultee	Date / Document	Comment	Response / where addressed in the ES
		characteristics combined with another dataset to represent the more strategic employment characteristics. Different parts of the site may be more accessible by public transport and sustainable modes than others, this should be considered for employment.	
Essex County Council	PEIR Consultation Response Letter Appendix One July 2023 and ETG September 2023	It should be noted that the rented accommodation assumed to be available has not been detailed. As an observation, any long-term occupation of accommodation which is currently used by the Tourist trade may not be acceptable in terms of local policy if it were to use accommodation on 'safeguarded sites' as these are protected from alternative use that could materially harm the provision of tourist accommodation in the district. There is also no guarantee that this will be available, currently there are significant numbers of asylum seekers housed in hotels in both Colchester and Ipswich meaning that this accommodation is not available. Accommodation for workers will therefore need to be considered in more detail.	Section 31.5 analyses the availability of a range of residential accommodation types, including private rented and owner occupied accommodation. This focuses on availability within a 45 minute drive time of the development site. Following the ETG, ECC confirmed that 'safeguarded sites' should be substituted with 'retained sites' and noted Policy PP 9 of Tendring District Local Plan. This policy is considered in further detail within ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34).
Essex County Council	PEIR Consultation Response Letter Appendix One July 2023 and ETG September 2023	Socio Economics and Skills ECC welcomes the clarification on skills and employment in the previous consultation - scoping opinion – (table 31.1) and the reference to the Outline Skills and Employment Plan that will be submitted as part of the DCO application. ECC is already deploying resources in a Tendring Future Skills Programme which will be one of our key delivery vehicles for skills activity to support workforce planning for this and other projects. Likewise, ECC is working closely with the Essex Chambers of Commerce on the Local Skills Improvement Plan (LSIP) which will provide a valuable insight into the employment and skills landscape for the County. Therefore, ECC is keen to go above and beyond the requirements of the DCO and use this project as an example of good practice – with early engagement on skills and employment and not	An OSEP been developed as part of the DCO process. ECC has been consulted during the production of the OSEP to understand how the OSEP could draw upon local market intelligence, contribute to local priorities and build on existing activities, including the LSIP and Tendring Future Skills programme.

Consultee	Date / Document	Comment	Response / where addressed in the ES
		just activity that is about meeting minimum planning requirements."	
Essex County Council	PEIR Consultation Response Letter Appendix One July 2023 and ETG September 2023	ECC's skills and employment agenda is very clear. Firstly, we are keen to maximise skills and training opportunities for local residents and thereby support the workforce planning for this development. Secondly, we are also keen to maximise employment opportunities for local residents and directly support this project through the construction and operational phase. However, this project is not recruiting in isolation and we are aware of the huge skills shortage areas that businesses are reporting, including the 3-9 month lead up period to fill some existing vacancies (referenced in the PEIR). Through the Tendring Future Skills Programme, we will encourage the developer to coordinate with ECC in order to work with primary and secondary schools, local colleges and training providers, local universities, as well other voluntary groups providing information, advice and guidance, immediately. ECC will make the introductions and support the process as much as possible from the outset and well in advance of the Outline Skills and Employment Plan. Only through this early dialogue will the Outline Skills and Employment Plan reflect the reality of the challenge and interventions required.	An OSEP has been developed as part of the DCO process. This includes consideration of education and training opportunities. North Falls is committed to working with local stakeholders to maximise local skills and employment benefits of the Project. The OSEP includes consideration of skills shortages. ECC has helped to support the OSEP process by helping to coordinate consultation with local education providers.
NHS Suffolk and North-East Essex ICB	Consultation Response Letter July 2023	The ICB identified a need to ensure that the Environmental Statement (ES) provides details on how the potential increase in demand on all healthcare services in the areas surrounding the proposed development, as a result of an influx of additional temporary workers, will be mitigated against.	Section 31.6 provides an assessment of the pressure on local onshore infrastructure services.
NHS Suffolk and North-	Consultation Response	The ICB and its partners acknowledge that chapter 31 of the PEIR assess the demand on local healthcare services caused by an influx of temporary workers required for the	The data being referred to is set out within Section 31.5.4. As part of the ETG held with NHS Suffolk and North- East Essex ICB in May 2024, The Applicant

Consultee	Date / Document	Comment	Response / where addressed in the ES
East Essex ICB	Letter July 2023	duration of the Project. It is pleasing to see that the PEIR recognises the current significant capacity constraints within primary care services in the geographical area surrounding the Project, the higher than average waits for ambulance services and for Accident and Emergency (A&E) services at the local acute hospitals. All of this contributes to the assessment that the sensitivity of the health care receptor as being high.	provided an opportunity for NHS Suffolk and North- East Essex ICB to highlight any additional data for consideration in the ES.
NHS Suffolk and North-East Essex ICB	Consultation Response Letter July 2023	The PEIR also identifies that the pressure on local healthcare infrastructure, caused by the influx of construction workers, as minor adverse and not significant in terms of the Environmental Impact Assessment (EIA). This is something that the ICB and its partners would challenge, as this assessment appears to have been made purely on the impact to primary care services and in particular the impact on the availability of the number of GPs per patient registrations.	Section 31.6 provides an assessment of the pressure on local onshore infrastructure services. The assessment was further explained and justified in the ETG meeting held in May 2024. NHS Suffolk and North-East Essex ICB provided no further evidence to suggest the significance of effect should be increased.
NHS Suffolk and North-East Essex ICB	Consultation Response Letter July 2023	The assessment in chapter 31 doesn't appear, at this stage, to have considered the impact on wider healthcare services outside of a GP service, for instance the availability of alternative non-GP services in a primary care setting, the impact on ambulance waiting times and A&E attendance for emergency and non-emergency situations. This later point is especially relevant if the non-local temporary workforce are not expected to register with a local GP, as highlighted in chapter 31 of the PEIR. Instead they are more likely to attend one the local A&E or Urgent Treatment Centres (UTC) if they require access to local healthcare services.	As above, Section 31.6 provides an assessment of the pressure on local onshore infrastructure services, this now makes greater reference to emergency services. The assessment approach was further explained and justified in the ETG meeting held in May 2024. NHS Suffolk and North- East Essex ICB provided no further evidence to suggest the significance of effect should be increased.

Consultee	Date / Document	Comment	Response / where addressed in the ES
NHS Suffolk and North-East Essex ICB	Consultation Response Letter July 2023	In addition this is increasingly relevant due to the cumulative effect of other NSIPs currently being planned for the locality, including but not limited to Sizewell C, widening of the A12 and the North Falls wind farm.	The cumulative effects assessment is presented in Section 31.8. This includes consideration of cumulative impacts on infrastructure and services (housing and health).
NHS Suffolk and North-East Essex ICB	Consultation Response Letter July 2023	Hence the ICB and its partners would encourage the developer to continue to assess the impact of the Project on the availability of healthcare services and develop solutions for how the points made above will be mitigated against in its final Environmental Statement (ES) that will accompany the Development Consent Order application (DCO).	Given no significant effects have been assessed related to pressures on health infrastructure, there is no formal requirement for additional mitigation identified in the socio-economic assessment beyond the embedded mitigation outlined within Section 31.3.3. However, the Applicant engaged with NHS Suffolk and North-East Essex ICB around health and safety procedures and measures included within the Outline Code of Construction Practice at the ETG on the 23rd of May 2024 and noted the feedback received.
NHS Suffolk and North-East Essex ICB	Consultation Response Letter July 2023	In order to facilitate this the ICB and its partners are willing and available to undertake further engagements with the developer to fully assess the current capacity position in the overall local healthcare system, the impact of the influx of temporary workers on the system and the development of appropriate mitigating actions to address any acknowledged impacts	Please see response immediately above.
NHS Suffolk and North-East Essex ICB	Consultation Response Letter July 2023	Such an assessment will ensure that the likely demand on local healthcare services is fully understood and appropriate plans are agreed and put in place to address any identified shortfalls ahead of the DCO submission. These measures would also need to be captured as either requirements within the DCO approval process and/or via Section 106 planning obligations linked to attaining planning consent for the Project.	Please see response immediately above.
Ardleigh Parish Council	Consultation Response Letter - additional	Business Impact - With road diversions and closures and large parts of the countryside under development businesses could be seriously affected.	ES Chapter 27 Traffic and Transport (Document Reference: 3.1.29) assesses the impact of road diversions and closures on road users. The assessment includes a detailed of mitigation being put in place to ensure communities, businesses and other local stakeholders fully understand the scale of change and the embedded mitigations and how they are secured and enforced.

Consultee	Date / Document	Comment	Response / where addressed in the ES
	concerns July 2023		
Little Bromley Parish Council	Consultation Response Letter	Business Impact - With road diversions and closures and large parts of the parish under development our village businesses, many of which depend on local road access by customers , could be seriously affected.	As above.
NHS Suffolk and North-East Essex ICB	ETG May 2024	An ETG was undertaken in May 2024 between NHS Suffolk and North-East Essex ICB and the Applicant. This included discussion of the socio-economic matters raised in the NHS Suffolk and North- East Essex ICB Consultation Response Letter July 2023 outlined above.	Based on the ETG discussion with NHS Suffolk and North- East Essex ICB an agreement / disagreement log has been produced which outlines the details of the agreements reached and outstanding areas of disagreement remaining between NFOW and NHS Suffolk and North-East Essex ICB, as identified during the North Falls EPP. The log will be used to form the basis of a Statement of Common Ground between North Falls and the NHS Suffolk and North- East Essex ICB.

31.3 Scope

31.3.1 Study areas

10. The study areas for the socio-economics assessment have been defined on the basis of the socio-economic receptors and the geography over which the Project's likely significant effects will occur. This is based on the assumptions/limitations as outlined in Section 31.4.6.

11. Given their proximity to the offshore project areas and the interests of local stakeholders, the study assesses effects in both Suffolk and Essex, as defined in Table 31.2 below.

Table 31.2 Local study areas geography

Study Areas	Local Administration Councils Units Areas	Local Authority District Council Areas
Essex	Essex	Basildon
		Braintree
		Brentwood
		Castle Point
		Chelmsford
		Colchester
		Epping Forest
		Harlow
		Maldon
		Rochford
		Tendring (district in which onshore cable infrastructure is located and area in which O&M port infrastructure may be located)
		Uttlesford
	Southend-On-Sea (unitary authority area)	
	Thurrock (unitary authority area)	
Suffolk	Suffolk	Babergh
		East Suffolk (district in which O&M port infrastructure may be located)
		Ipswich
		Mid Suffolk
		West Suffolk

12. Table 31.3 below sets out the study areas used for each type of impact. It shows that the effect of North Falls on economic receptors (i.e. jobs and GVA1) is assessed at the national (i.e. UK) and local (i.e. Essex and Suffolk) level. This is because the development will draw upon a workforce and supply chain that could be spread across a wide area[2].

13. The chapter assesses potential disturbance to social and community infrastructure facilities during the development of onshore infrastructure as a result of effects on noise, air, visual, and traffic. These effects are likely to be local in nature and concentrated around the onshore project area. The 'LOCAI' is therefore used as the study area. The assessment takes a conservative approach and defines the LOCAI as the area within 500m from the onshore project area of the onshore elements of North Falls. This distance captures the area in which disturbance is most likely to occur. This study area buffer distance is used on other Offshore Wind Farm Socio-Economic EIAs (such as Awel y Mor and SEP and DEP).

14. The impacts on local infrastructure and services (housing and health) are assessed for the Suffolk and Essex study areas as these areas have potential to receive an influx of non-local workers, especially during the construction phase. The assessment specifically focuses on the districts in which non-local workers would be most likely to locate. 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 be accommodated 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.

15. The wider economic effects from disruption to shipping and navigation are focused on the potential impact on nationally significant ports (primarily Felixstowe and Harwich ports). Hence the impact areas assessed are at the local (Essex and Suffolk) study area level and the national level (UK).

16. The wider economic effects from disruption to fishing would be concentrated on coastal areas, as this is where fishing activity occurs. Therefore, the Suffolk and Essex study areas are assessed with a particular focus on coastal local authority districts.

17. The wider economic effects from sterilisation of mineral resources would be concentrated on businesses who may have developed mineral resources located in or in close proximity to the onshore project area. The relevant study area is therefore Essex, with a focus on the mineral resource within 250 m of the onshore project area (based on professional judgement and the assessment

[1] The measure of the value of goods and services produced in an area, industry or sector of an economy. At the level of a firm, it is broadly equivalent to employment costs plus a measure of profit.
[2] Given close proximity of onshore infrastructure to Suffolk and the uncertainty about the location of businesses engaged in the supply chain local economic effects have been assessed for a combined area which includes both Essex and Suffolk. This is because it would be difficult to disaggregate effects between the two areas.

set out in ES Chapter 19 Ground Conditions and Contamination, (Document Reference: 3.1.21).

18. An overview of the spatial areas considered in the assessment is also presented in ES Figures 31.1 and 31.2 (Document Reference: 3.2.27).

Table 31.3 Study areas by impact

Impact	UK	Suffolk	Essex	LOCAI
Construction / Decommissioning				
Economic value	✓	✓		n/a
Employment	✓	✓		n/a
Pressure on local onshore infrastructure and services (housing and health – note visitor accommodation is assessed in Chapter 32 Tourism and Recreation, Volume 3.1)	n/a	✓ (focused on Ipswich, Babergh, and East Suffolk, Tendring, Colchester, Maldon, and Braintree / NHS Suffolk and North East Essex ICB area)		n/a
Onshore disturbance (noise, air, visual, and traffic) to social and community infrastructure facilities	n/a	n/a	n/a	✓
Wider economic effects from disruption to shipping and navigation	✓	✓		n/a
Wider economic effects from disruption to fishing	n/a	✓ (coastal districts)	✓ (coastal districts)	n/a
Wider economic effects related to minerals	n/a	n/a	n/a	✓ (focused on a 250m buffer around the onshore project area as illustrated on ES Figure 19.1 (Document Reference: 3.2.15).
Operational phase				
Economic value	✓	✓		n/a
Employment	✓	✓		n/a
Pressure on local onshore infrastructure and services (housing and health)	n/a	✓ (focused on Ipswich, Babergh, and East Suffolk, Tendring, Colchester, Maldon, and Braintree)		n/a

Impact	UK	Suffolk	Essex	LOCAI
Onshore disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	n/a	n/a	n/a	✓
Wider economic effects from disruption to shipping and navigation	✓	✓	n/a	n/a
Wider economic effects from disruption to fishing	n/a	✓ (coastal districts)	✓ (coastal districts)	n/a
Wider economic effects related to minerals	n/a	n/a	✓	✓ (focused on a 250m buffer around the onshore project area as illustrated on ES Figure 19.1 (Document Reference: 3.2.15).

31.3.2 Realistic worst case scenario

19. The final design of North Falls will be confirmed through detailed engineering design studies and stakeholder consultation that will be undertaken post-consent. In order to provide a precautionary but robust impact assessment at this stage of the development process, realistic worst case scenarios have been defined in terms of the likely significant effects that may arise. This approach to EIA, referred to as the Rochdale Envelope, is common practice for developments of this nature, as set out in Planning Inspectorate Advice Note Nine (2018). The Rochdale Envelope for a project outlines the realistic worst case scenario for each individual impact, so that it can be safely assumed that all other scenarios within the design envelope will have less impact for potentially negative impacts. Further details are provided in ES Chapter 6 EIA Methodology (Document Reference: 3.1.8)

20. This assessment differs from most of the other North Falls topic chapters as both positive and negative effects are assessed. Where positive impacts are assessed (as is the case for impacts on economic benefits - jobs and GVA) the realistic worst case scenario is based on a realistic but conservative assessment for which all other scenarios are assumed to have higher impact. To provide context and information for stakeholders, the chapter does also report the potential scale of higher impact scenarios, although the assessment of effect relates to the realistic worst case scenario.

21. The main grid connection options considered in the ES are outlined below:

- Option 1: Onshore electrical connection at a national grid substation connection point within the Tendring peninsula of Essex, with a project alone onshore cable route and onshore substation infrastructure;
- Option 2: Onshore electrical connection at a national grid connection point within the Tendring peninsula of Essex, sharing an onshore cable route and onshore duct installation (but with separate onshore export cables) and co-locating separate project onshore substation infrastructure with Five Estuaries; or
- Option 3: Offshore electrical connection, provided by a third party.

22. The worst case scenario varies by impact. The socio-economics assessment worst case scenarios are summarised in Table 31.4. These are based on North Falls parameters described in ES Chapter 5 Project Description (Document Reference: 3.1.7) ,which provides further details regarding specific activities and their durations.

23. For all beneficial impacts Option 3 is considered to be the realistic worst case as this represents a scenario with the lowest beneficial impacts, whereas Option 2 is considered to be the realistic worst case for other adverse impacts as this results in a scenario with the maximum adverse impacts.

24. Under Option 2, the Project's onshore infrastructure comprises the following elements:

- Landfall, where the offshore export cables are brought ashore;

- Onshore cable route, which includes space for temporary works for the installation of cable ducts and buried onshore export cables, including areas for temporary construction compounds (TCCs), construction and operation and maintenance accesses (including Bentley Road improvement works);
- Onshore substation, proposed to be located west of Little Bromley;
- Onshore substation works area, which includes land required for temporary construction, export cables, means of access, drainage, landscaping and environmental mitigation for the onshore substation;
- The search area for the East Anglia Connection Node (EACN) (the Project's national grid connection point), within which will be located the Project's national grid substation connection works.

25. Collectively, the footprint of the Project's onshore infrastructure is referred to herein as the 'onshore project area' and is shown on ES Figure 5.2 (Document Reference: 3.2.3). The Project's onshore infrastructure outlined above is proposed to be located entirely within the Tendring peninsula of Essex.
26. Under Option 3, no onshore infrastructure is required.
27. Grid connection Option [2] is considered the realistic worst case scenario for the socio-economics assessment because the build out requires four sets of cable ducts and associated joint bays to be installed, impacting upon the largest footprint of the three grid connection options.
28. Under Option [2] the Project's onshore infrastructure comprises the following elements:

- Landfall, where the offshore export cables are brought ashore;
- Onshore cable route, which includes space for temporary works for the installation of cable ducts and buried onshore export cables, including areas for temporary construction compounds (TCCs), construction and operation and maintenance accesses (including Bentley Road improvement works);
- Onshore substation, proposed to be located west of Little Bromley;
- Onshore substation works area, which includes land required for temporary construction, export cables, means of access, drainage, landscaping and environmental mitigation for the onshore substation;
- The search area for the East Anglia Connection Node (EACN) (the Project's National Grid connection point), within which will be located the Project's National Grid substation connection works.

15. Collectively, the footprint of the Project's onshore infrastructure is referred to herein as the 'onshore project area' and is shown on ES Figure 5.2 (Document Reference 3.2.3). The Project's onshore infrastructure outlined above is proposed to be located entirely within the Tendring peninsula of Essex.

Table 31.4 Realistic worst case scenario - effects arising from development of North Falls alone

Element of the project infrastructure	Parameter	Notes
Construction		
Economic value and employment:	Option 3 Offshore electrical connection: No onshore works would be required and most or all of the offshore cable corridor would no longer be required, therefore the impacts would primarily relate to the offshore array areas only. Marshalling port: Use of a marshalling port outside of the Essex and Suffolk study areas represents the realistic worst-case scenario for economic value and employment benefits for all development scenarios. Wind farm size/capacity: 20 to 57 wind turbine generators (WTG). Indicative generation capacity of 504-850 MW. However, 504 MW represents the realistic worst-case scenario in terms of potential positive effects (economic value and employment). Development and construction phase: Development and construction phase of seven years. This includes development and project management. Installation and commissioning will last three years. Sourcing levels: Realistic worst case for this impact is based on a scenario in which UK suppliers are not competitive when accessing supply chain opportunities (as defined in ES Appendix 31.1 (Document Reference: 3.3.70)). Up to one offshore substation platform (OSP) and associated foundation to aggregate electricity from the wind turbine generators; One offshore converter platform (OCP) and associated foundation to increase the voltage to a more suitable level for export and convert the HVAC power generated by the wind turbine generators into HVDC power for export via an HVDC interconnector cable; o Array cables between the WTGs and OSP(s); o Scour protection around foundations, where required; and	The supply chain sourcing scenarios are used to assess the likely potential range of geographic sourcing assumptions set in ES Appendix 31.1 (Document Reference: 3.3.70). In terms of sourcing levels, the use of scenarios allows for an assessment of both maximum and minimum positive impacts that could be supported by North Falls at both the local (Essex and Suffolk study area) and national (i.e. UK) levels. The assumed capacity is a key assumption which drives the modelling of economic benefit and increased employment. The Crown Estate Guide to an Offshore Wind Farm (The Crown Estate, 2019) presents cost per MW benchmarks meaning there is a linear relationship between capacity and investment. This higher level of investment means the value of supply chain opportunities is greater and there are more employment opportunities, meaning economic benefits are higher. At this stage the total generation capacity of North Falls is yet to be finalised. This will depend on the number of turbines installed and their generation capacity. Infrastructure with lower expenditure level and therefore lower overall economic impact.

Element of the project infrastructure	Parameter	Notes
	o Surface laid cable protection, where required.	
Pressure on local onshore infrastructure and services (housing and health)	Onshore infrastructure North Falls alone build out Option 2. The realistic worst-case scenario is based on the highest number of non-local workers that can be realistically anticipated to locate in the local area during the peak construction year (the peak year is anticipated to be 2029 based on the impacts set out in ES Appendix 31.1, (Document Reference: 3.3.70). Wind farm size/capacity: 20 to 57 WTG with a total 850 MW capacity represents the realistic worst-case scenario in terms of potential for pressure on local onshore infrastructure and services (housing and health) resulting from an influx of non-local workers to the local area. Non-local workforce: A proportion of the workforce will be non-local workers who temporarily relocate into the local area. As noted in ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34), these external workers typically move to within a 45-minute travel-time of their main North Falls based workplace. The maximum impacts scenario is conservative as it assumes that all non-local construction workers working on the installation and commissioning of the onshore and offshore infrastructure of North Falls move into the local area. Although it is	Draws on the cost and sourcing assumptions set out in ES Appendix 31.1 (Document Reference: 3.3.70) to generate estimate of labour requirements. Demographic changes will reflect labour market catchments and functional geographies. It is expected that during standard construction works, the onshore workforce would be an average of 186 personnel over a period of 31 months.

Element of the project infrastructure	Parameter	Notes
	assumed that workers involved in the design phase and manufacturing activities of North Falls do not relocate into the local impact area as these activities are not expected to take place in Essex or Suffolk. Location of construction jobs: Realistic worst case for this impact is based on the use of an enhanced economic impact scenario (the scenarios are set out in more detail in Appendix 31.1, Volume 3.3), representing an optimistic but plausible outcome. This is the scenario in which a higher share of construction jobs are located in the local study area, so the potential for an influx of workers is greater. Peak impact: Realistic worst case for this impact considers the peak construction workforce as this will be when the number of non local workers is at its highest point, and therefore pressure on local infrastructure will be at its greatest. Geographical scope: the increased pressure on health care facilities and housing has potential to occur across Essex and Suffolk but is assumed to be most concentrated in those locations which are closest to onshore construction activity / ports where work will take place. In the peak month it is estimated that: • Peak onshore cable route and landfall construction demand = 326[3] • Peak onshore substation construction demand = 145[4]	

[3] Based on indicative average daily personnel requirements per month for Sections 1 to 7 of the cable route.
[4] Employment levels expected during the construction of one onshore substation.

Element of the project infrastructure	Parameter	Notes
	Total peak onshore construction demand = 471 personnel at any one time (of whom up to 91% could be non-local workers[5])	
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	Onshore infrastructure North Falls alone build out Option 2. Total onshore works area: Social and community infrastructure assets (such as schools, community support centres, public spaces, sports and recreation venues, and arts and culture venues) within 500m of the onshore project area have potential to be impacted. Onshore infrastructure North Falls alone build out Option 2 (see below for parameters related to Option 2). Onshore construction total duration: 4 years The realistic worst case is also based on the realistic worst case scenario for other relevant chapters related to the effects on noise, air, visual and traffic in proximity to the LOCAI.	Potential for North Falls' onshore infrastructure to cause disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities is assessed within Sections 31.6.1.4, 31.6.2.4 and 31.6.3.
Wider economic effects from disruption to shipping and navigation	Worst case impact on shipping and navigation as set out in ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17).	
Wider economic effects related to minerals	The realistic worst case is based on the realistic worst case scenario for ES Chapter 19 Ground Conditions (Document Reference: 3.1.21).	
Impacts at landfall Onshore impacts related to onshore social and community infrastructure facilities and Pressure on	North Falls alone build out Option 2 Landfall HDD (temporary works) physical parameters: • Maximum No. of Transition Joint Bays (TJB) = 2	Duration includes compound establishment, HDD, transition bays, and reinstatement.

[5] The share of non-local workers is based on the lifetime local and total UK content by supply chain category analysis for the worst-case scenario (see ES Appendix 31.1 (Document Reference: 3.3.70) North Falls Offshore Wind Farm Economic Impact for more information). The relevant supply chain categories for the estimation are onshore substation and onshore export cable installation.

Element of the project infrastructure	Parameter	Notes
local onshore infrastructure and services (housing and health).	• Individual TJB dimensions / permanent land take = 4 x 15m • Maximum HDD depth = 20m • Maximum indicative length of HDD = 1.1 km • HDD temporary works area = 75 x 150m • Drill exit location = subtidal exit below MHWS (up to 8m depth)	
	Duration: • 13 months (of which HDD = 6 months) • HDD to include 24 hour / 7 days working where required	
Impacts from the onshore cable route Onshore impacts related to disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities and Pressure on local onshore infrastructure and services (housing and health).	North Falls alone build out Option 2. Cable route construction physical parameters: • Route length = up to 24km • Jointing bays = Up to 192 (approximately every 500m) buried below ground • Joint bay dimensions = 4 x 15m • Maximum cable trench depth = 2m • Maximum cable trench depth = 2m • Minimum cable burial depth = 0.9m • Indicative cable route width = 72m (open cut trenching), 90m (trenchless crossings), 130m (complex trenchless crossings) • Temporary construction compound dimensions = 150 x 150m (main) to 100 x 100m (satellite) • No. of trenches = 4	Overall duration includes establishing / reinstating temporary construction compounds (TCCs) and haul roads, cable installation (trench excavation, duct installation, cable jointing), trenchless techniques (includes compound establishment, HDD, and reinstatement).

Element of the project infrastructure	Parameter	Notes
	• Cable trench dimensions = 3.75 – 1.2 x 2m (tapered top to bottom) • Haul road width = 6m wide road, 10m wide total including verges, drainage and passing places. • Haul road spacing at passing places = 500m • Hedge replanting restrictions = shrubs max 5m high within 6m of each cable centre.	
	Trenchless crossings physical parameters: • Maximum width of buried cable = 130m • Maximum trenchless crossing depth = 20m • HDD compound dimensions = 75 x 150m	
	Durations: • Bentley road improvements = 6 - 9 months • Cable route works = 18 – 27 months, with a 57-month gap in between i.e. 111 months start to finish • Cable installation = 12 months • Major HDD (each location) = 8 months (of which HDD = 4 months) • Minor HDD crossings = 2 months • Major HDD crossings to include 24 hour / 7 days working where required.	
Impacts from the onshore substation and unlicensed works associated with North Falls alone build out Option 2.	Onshore substation (temporary works) physical parameters: • Indicative area of the AIS substation = 280 x 210m • Number of buildings = 6	Normal operating conditions would not require lighting at the onshore substation, although low level movement detecting security lighting may be utilised for health and safety purposes. Temporary lighting during working hours would

Element of the project infrastructure	Parameter	Notes
Onshore impacts related to disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities and Pressure on local onshore infrastructure and services (housing and health).	• External equipment height (lightning masts) = 18m • Construction compound footprint = 250 x 150m National grid connection works physical parameters: • All enabling worth / platform constructed by national grid. • Cable installation works as described above. • Equipment may include: ○ cable sealing ends, ○ surge arrestors, ○ earth switch, ○ disconnectors, ○ circuit breakers, ○ current transformers, ○ voltage transformers; and ○ busbars.	be provided during maintenance activities only. Low level continuous noise emissions would also be generated by the onshore substation during operation.
	Durations: • Onshore substation construction duration = 21 - 27 months.	
Operational phase		
Economic value and employment	O&M Port: Use of a O&M port in one of the Essex or Suffolk study areas. Wind farm size/capacity: 20 to 57 WTGs. Indicative generation capacity of 504-850 MW. However, 504 MW represents the realistic worst-case scenario in terms of potential positive effects (economic value and employment).	The supply chain sourcing scenarios are used to assess the likely potential range of geographic sourcing assumptions. The use of scenarios allows for an assessment of both maximum and minimum positive impacts that could be supported by North Falls at both the

Element of the project infrastructure	Parameter	Notes
	Operational Phase: Operational phase of 30 years for the operation of North Falls. Economic Impact Scenario: Realistic worst case for this impact is based on the use of a worst-case scenario, representing an outcome where UK suppliers are uncompetitive and therefore the economic benefits are lower. Offshore connection: North Falls makes offshore connection and therefore no onshore infrastructure O&M is required.	local (Essex and Suffolk study area) and national (i.e. UK) levels. Wind farm capacity is a key assumption which drives the modelling of economic benefit and increased employment. At this stage the total generation capacity of North Falls is yet to be finalised. The overall generation capacity will be determined by the number of turbines installed and each turbines size and generation capacity.
Pressure on local onshore infrastructure and services (housing and health)	Wind farm size/capacity: 20 to 57 WTG. Indicative generation capacity of 504-850 MW. However, 850 MW represents the realistic worst-case scenario in terms of potential for pressure on local onshore infrastructure and services (housing and health) as the number of non-local workers temporarily moving into the area will be higher. Onshore infrastructure O&M: O&M on both onshore and offshore infrastructure will be required- This is based on onshore infrastructure North Falls alone Option 2 (see below for parameters related to Option 2).	Draws on the cost and sourcing assumptions set out in ES Appendix 31.1 (Document Reference: 3.3.70), prepared by BVG Associates to generate estimate of labour requirements. Demographic changes will reflect labour market catchments and functional geographies.
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities:	Total onshore works area: Social and community infrastructure assets (such as schools, community support centres, public spaces, sports and recreation venues, and arts and culture venues) along the onshore corridor have potential to be impacted. Onshore infrastructure O&M: O&M will be conducted based on the build out of the realistic worst case scenario for this impact that as noted above in construction phase impacts. impact (onshore infrastructure North Falls alone option 2, (see below for parameters related to Option 2). The realistic worst case is also based on the realistic worst case for other relevant chapters related to the effects on noise, air, visual and traffic in proximity to the LOCAI.	

Element of the project infrastructure	Parameter	Notes
Wider economic effects from disruption to shipping and navigation	Worst case impact on shipping and navigation as set out in ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17).	
Wider economic effects related to minerals	The realistic worst case is based on the realistic worst case for ES Chapter 19 Ground Conditions (Document Reference: 3.1.21).	
Impacts from the onshore cable route associated with North Falls alone build out Option 2. Onshore impacts related to disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities and Pressure on local onshore infrastructure and services (housing and health).	Onshore cable route operational physical parameters: • No. of link boxes = up to 92 • Link box footprint (per box) = 0.6 x 1 x 1.5m • Cross-sectional area of buried cement-bound sand = 0.6m^2	
Impacts from the onshore associated with North Falls alone build out Option 2. Onshore impacts related to disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities and Pressure on local onshore infrastructure and services (housing and health).	Onshore substation physical parameters: • Permanent substation footprint = 210x 280m	Normal operating conditions would not require lighting at the onshore substation, although low level movement detecting security lighting may be utilised for health and safety purposes. Temporary lighting during working hours would be provided during maintenance activities only. Low level continuous noise emissions would also be generated by the onshore substation during operation.
Decommissioning		
No final decision has yet been made regarding the final decommissioning policy for the onshore project infrastructure including landfall, onshore cable route, 400kV cable route and onshore substation. It is also recognised that legislation and industry good practice change over time. However, it is likely that the onshore project equipment, including the cable, will be removed, reused or recycled where practicable and the transition bays and cable ducts being left in place. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and will be agreed with the regulator. It is anticipated that for the purposes of a worst-case scenario, the impacts will be no greater than those identified for the development and construction phase.		

31.3.3 Summary of mitigation embedded in the design

29. This section outlines the embedded mitigation relevant to the socio-economic assessment, which has been incorporated into the design of North Falls (Table 31.5). Where other mitigation measures are proposed, these are detailed in the impact assessment (Section 31.6).

Table 31.5 Embedded mitigation measures

Parameter	Mitigation measures embedded into North Falls design
Onshore site selection	The onshore project area has been defined following an extensive site selection process, which has sought to take account of environmental, engineering, planning, and land requirements to seek to identify the least sensitive project location. The site selection process is described in detail in ES Chapter 4 Site Selection and Assessment of Alternatives (Document Reference: 3.1.6). The site selection process has included consideration of the following design principles: Minimising land take where practicable; Avoiding residential titles (including whole garden) where practicable; Avoiding direct significant impacts to mature woodland and ancient woodland; Avoiding scheduled ancient monuments and listed buildings; Avoiding direct significant impacts to internationally and nationally designated areas e.g. Special Areas of Conservation (SAC), Special Protected Areas (SPA), Sites of Special Scientific Interests (SSSI); Avoiding national landscape designations e.g. Areas of Outstanding Natural Beauty (AONB), Heritage Coast; Avoiding important tourism destinations and recreational assets e.g. NCN routes, caravan parks; Minimising the number and length of trenchless crossings; Minimising the number of crossings of utility, road, and rail lines; and Minimising impacts to residents in relation to access to services and road usage, including public right of way (PRoW) closures and diversions.
Offshore site selection	The offshore cable corridor was selected in consultation with key stakeholders to select a route which minimised impacts on a range of receptors such as designated sites and shipping and navigation. The site selection process is described in detail in ES Chapter 4 Site Selection and Assessment of Alternatives (Document Reference: 3.1.6).
Engagement	Engagement is ongoing and will continue after submission of the DCO and throughout the development of the Project. Stakeholders in relation to socio-economics that will be engaged include: Local authorities; Landowners; Local communities; Educational institutions; and Local suppliers and businesses, including local accommodation providers. Consultation will also help ensure that management plans are prepared and implemented sufficiently to mitigate any potential impacts.

Parameter	Mitigation measures embedded into North Falls design
Mitigation highlighted in other topic assessments that is relevant to socio-economics	A number of topic specific embedded mitigation measures highlighted in other topic chapters have been considered in the assessment of socio-economics. The parameters of embedded mitigation measures are mentioned here and are set out in more detail in the relevant topic chapter: ES Chapter 20 Air Quality (Document Reference: 3.1.22): Industry good practice dust management mitigation measures Mitigation measures specific to non-road mobile machinery ES Chapter 22 Land Use and Agriculture (Document Reference: 3.1.24): The embedded mitigation relating to Agri-environment schemes will be the avoidance of land parcels that are subject to Environmental Stewardship Schemes or Countryside Stewardship Schemes, wherever possible. ES Chapter 26 Noise and Vibration (Document Reference: 3.1.28): Implementation of a Code of Construction Practice. Reduction of construction phase noise and vibration and operational substation noise and vibration. ES Chapter 27 Traffic and Transport (Document Reference: 3.1.29): Implementation of a Construction Traffic Management Plan Delivery time restrictions Strategy for access Trenchless crossings Mitigation for crossing private access tracks Onshore substation access vehicle routeing strategy ES Chapter 30 Landscape and Visual Impact Assessment (Document Reference:3.1.32): Mitigation by construction method (e.g. use of trenchless techniques) and design (e.g. reduced onshore cable route working width) selection Mitigation of landscape and visual effects has been undertaken through design modifications and input to the design process. This will include consideration of the location of the various components within the onshore substation works area, and consideration of the materials used, colour palette and boundary treatments (as included in the North Falls Design Vision, 2024). OSEP: North Falls considers that details on use of mitigation / enhancement measures related to skills and employment are most appropriate to present as part of an OSEP. This has been submitted as part of the DCO application and will be secured through a DCO Requirement.

31.4 Assessment methodology

31.4.1 Legislation, guidance and policy

31.4.1.1 National Policy Statements

30. The assessment of potential impacts upon Socio-economics has been made with specific reference to the relevant legislation and guidance, of which the principal policy documents with respect to the Nationally Significant Infrastructure Projects (NSIPS) are the National Policy Statements (NPS). Those relevant to the Projects are:

- Overarching NPS for Energy (EN-1) (Department for Energy Security and Net Zero (DESNZ) 2023a);
- NPS for Renewable Energy Infrastructure (EN-3) (DESNZ 2023b);
- NPS for Electricity Networks Infrastructure (EN-5) (DESNZ 2023c);

31. The specific assessment requirements for Socio-economics, as detailed in the NPS, are summarised in Table 31.6 together with an indication of the section of the ES chapter where each is addressed.

32. The UK Government announced a review of the existing NPS documents within its December 2020 Energy White Paper (HM Government, 2020) and issued versions of Overarching NPS for Energy EN-1, NPS for Renewable Energy Infrastructure EN-3 and NPS for Electricity Networks Infrastructure EN-5 for consultation in September 2021. The finalised EN-1, EN-3 and EN-5 statements were released in November 2023, and will come into effect from January 2024.

Table 31.6 NPS assessment requirements

NPS Requirement	NPS Reference	ES Reference
Overarching NPS for Energy (EN-1)		
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 5.13.2	The socio-economic impacts of North Falls that have been scoped into the assessment have been assessed for relevant study areas set out in Table 31.3 Study areas by impact and ES Figures 31.1 and 31.2 (Document Reference: 3.2.27). This includes local (Essex and Suffolk) and national (UK) study areas as well as more localised study areas where this is relevant.
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 5.13.3	Details of consultation with relevant local authorities are detailed in Table 31.1.
The assessment should consider all relevant socio-economic impacts which may include the creation of jobs and training opportunities.	Paragraph 5.13.4	The socio-economic effects of North Falls' activity, during each phase of the Project are assessed in Section 31.6.

NPS Requirement	NPS Reference	ES Reference
The assessment should consider the contribution to the development of low-carbon industries at the local and regional level as well as nationally	Paragraph 5.13.4	The assessment considers the creation of low-carbon employment opportunities as part of the assessment on employment detailed in Section 31.6.
The assessment should consider all relevant socio-economic impacts, including the provision of additional local services and improvements to local infrastructure including the provision of educational and visitor facilities.	Paragraph 5.13.4	The effects of the additional demand for local services are explored in Section 31.6.
The assessment should consider the impact of changing influx of workers during the different construction, operational and decommissioning phases of the energy infrastructure.	Paragraph 5.13.4	The impacts on local infrastructure as a result of the influx of workers are considered in Section 31.6.
The assessment should consider cumulative effects.	Paragraph 5.13.4	Cumulative effects of North Falls are assessed in Section 31.8.
Applicants should describe the existing socio-economic conditions in the areas surrounding North Falls and should also refer to how the development's socio-economic impacts correlate with local planning policies.	Paragraph 5.13.5	The existing socio-economic conditions are described in Section 31.5. The local policy context has been described in Section 31.4.1 of this assessment.
Socio-economic impacts may be linked to other impacts, for example visual impacts as well as tourism and local businesses. Applicants are encouraged, where practicable, to demonstrate that local suppliers have been considered in any supply chain.	Paragraph 5.13.6	The inter-relationships between socio-economics and other aspects of the assessment (including commercial fisheries, shipping and navigation, land use, landscape and visuals, transport and traffic, noise, recreation and land use) are considered in Section 31.10.
Applicants should consider developing accommodation strategies where appropriate, especially during construction and decommissioning phases, that would include the need to provide temporary accommodation for construction workers if required	Paragraph 5.13.7	The effect on accommodation is assessed in Section 31.6.
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.	Paragraph 5.13.8	Embedded mitigation is described in section 31.3.3.
The Secretary of State should have regard to the potential socio-economic impacts of new energy infrastructure identified by the applicant and from any other sources that	Paragraph 5.13.9	The socio-economic impacts of North Falls' activity, during each phase of the Project are assessed in Section 31.6.

NPS Requirement	NPS Reference	ES Reference
the Secretary of State considers to be both relevant and important to its decision		
The Infrastructure Planning Commission 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	N/A
The Secretary of State should consider any relevant positive provisions which the applicant has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts	Paragraph 5.13.11	Positive socio-economic provisions are outlined in the OSEP.
The secretary of state may wish to include a requirement that specifies the approval by the local authority of any employment and skills plan detailing arrangements to promote local employment and skills development opportunities, including apprenticeships, education, engagement with local schools and colleges and training programmes enacted.	Paragraph 5.13.12	An OSEP been developed as part of the DCO process. This contains a number of outline commitments promoting local employment and skills development opportunities.
NPS for Renewable Energy Infrastructure (EN-3)		
EN-3 contains relevant policy in relation to the transmission of infrastructure for renewable energy installations, however there is no information specifically relevant to socio-economics. EN-3 does contain relevant policy in relation to other interrelated topics that are considered in the socio-economic assessment such as transport and traffic.		
NPS for Electricity Networks Infrastructure (EN-5)		
EN-5 contains relevant policy in relation to providing a fit for purpose and robust electricity network, however there is no information specifically relevant to socio-economics.		

31.4.1.2 Other legislation, policy and guidance

33. In addition to the NPS, there are a number of pieces of legislation, policy and guidance applicable to the assessment of socio-economics. Further detail is provided in ES Chapter 3 Policy and Legislative context (Document Reference: 3.1.5). A summary of the key national and local policy considerations outside of the NPS is provided in Table 31.7 below.

Table 31.7 Additional relevant national and / or local policy

Policy consideration	Relevance to socio-economic assessment
National policy	
The Marine Policy Statement (HM Government, 2011)	The Marine Policy Statement (MPS) states that properly planned developments in the marine area could provide environmental and social benefits as well as drive economic development, provide opportunities for investment and generate export and tax revenues. There are obvious social and economic benefits from such an increase in network capacity, most notably the facilitation of offshore renewable energy. There are also social and economic risks associated with an increase in underwater cabling, which may affect activities such as dredging and the use of certain fishing gear, and impact on other sea users, including existing cable and pipeline operators. The marine plan authority should ensure, through integration with terrestrial planning, and engagement with coastal communities, that marine planning contributes to securing sustainable economic growth both in regeneration areas and areas that already benefit from strong local economies.
Clean Growth Strategy (HM Government, 2017a)	The UK Government developed a Clean Growth Strategy to ensure economic growth went hand in hand with greater protection for the natural environment. Within this was a commitment to help businesses and entrepreneurs seize opportunities of a low carbon economy, specifically offshore wind. The strategy was driven by policies and processes to improve the route to market for renewable technologies such as offshore wind. Under its ambition to deliver clean, smart and flexible power the Clean Growth Strategy sought to deliver a diverse electricity system that supplied homes and businesses with secure, affordable and clean power. It sought to deliver this through the development of low carbon sources of electricity (including renewables) and acknowledged that the UK was well-placed to benefit and become one of the most advanced economies for smart energy and technologies.
UK Industrial Strategy: Offshore Wind Sector Deal, (HM Government, 2018)	The Offshore Wind Sector Deal is a joint industry/government commitment to help the offshore wind industry raise the productivity and competitiveness of UK companies. This aims to ensure the country continues to play a leading role as the global market grows in the decades to 2050. Key commitments include: Increasing UK content to 60% of value associated with offshore wind farm activity by 2030; £250m industry investment in building a stronger UK supply chain to support productivity and increase competitiveness; Providing forward visibility of future Contract for Difference (CfD) rounds with support of up to £557m; Increasing exports fivefold to £2.6bn by 2030; and Increasing the representation of women in the offshore wind workforce to at least a third by 2030. At the start of March 2020, the Government issued a one-year progress note (BEIS, 2020) on the Offshore Wind Sector Deal. This identified East Anglia as one of the offshore wind clusters (as well as north Scotland, the north-east, the Humber, Solent, and north-west / north-Wales). The note also highlighted that, since the publication of the Offshore Wind Sector Deal, the costs of offshore wind have continued to fall, reaching £39.65/MWh (2012- pricing) for offshore wind farms to be delivered in 2023/24. This represents an overall decrease of around 65% when compared with projects in the 2015 Contacts for Difference (CfD) auction.

Policy consideration	Relevance to socio-economic assessment
Energy White Paper (HM Government, 2020a)	The Energy White Paper put in place a strategy for a wider energy system that transforms energy and supports a green recovery. The paper built on the Ten Point Plan for Green Industrial Revolution (HM Government, 2020b), point one of which was advancing offshore wind. In the plan, the UK Government set out its aim to quadruple the UKs offshore wind capacity, from 10GW in 2019 to 40GW by 2030 including 1GW of floating offshore wind, alongside the expansion of other low-cost renewable technologies. They committed to backing new innovations to make the most of offshore wind and invest in bringing jobs and growth to the UKs ports and coastal regions. Following the recent energy crisis brought about by the war in Ukraine, the UK Government have increased the offshore wind capacity target to 50GW and the floating offshore wind target to 5GW in the British Energy Security Strategy (HM Government, 2022b). The British Energy Security Strategy is discussed in further detail below (within this table).
Net Zero Strategy: Build Back Greener (BEIS, 2021a)	The Net Zero Strategy: Build Back Greener supported the commitment of 40GW (now 50GW) of offshore wind by 2030 and committed to fully decarbonising the UK power system by 2035. Full decarbonisation will mean that all the UK's electricity would come from low carbon sources, subject to the security of supply. At the time of writing, the strategy set out what actions had already been taken to deliver on the Ten Point Plan: Supported manufacturers via government investment schemes. Six manufacturers had already announced major investments in the UK offshore wind sectors and delivering up to 3,600 jobs by 2030; Initiated the biggest-ever round of the Government's flagship renewable energy scheme for low carbon electricity (Contract for Difference- CfD) with £200m for offshore wind projects and £24m for floating offshore wind; Launched a £17.5m competition to support innovative floating wind ideas from industry and joined the ORE Catapult's FOW Centre of Excellence, contributing £2m; Leveraged over £1.5bn investment into our offshore wind industry, following the £160m to upgrade ports and infrastructure; and Published the Offshore Transmission Network Review, setting out two initial policy consultations to move to a coordinated approach for offshore wind projects.
Net Zero Review (HM Treasury, 2021b)	The Net Zero Strategy set out a comprehensive range of policies to support and capitalise on the UK's transition to net zero by 2050 across the whole economy. The Net Zero Review stated that global action to mitigate climate change was essential to long-term UK prosperity. At the review's time of writing, the majority of global gross domestic product (GDP) was covered by net zero targets. As the world continues to decarbonise, UK action can generate benefits for businesses and households across the country.
National Planning Policy Framework (HM Government, 2023)	The National Planning Policy Framework (henceforth NPPF) states that one of the overarching objectives of the planning system is to contribute to the achievement of sustainable development. This includes backing the transition to a low carbon future by supporting the transition to renewable and low carbon energy (and associated infrastructure). Whilst NPPF does not contain specific policy statements for NSIPs, it outlined three overarching dimensions (i.e. economic, social and environmental) which are a relevant consideration. Three of these are especially pertinent to the socio-economic assessment: Economic – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation, and by identifying and co- ordinating development requirements, including the provision of infrastructure;

Policy consideration	Relevance to socio-economic assessment
	A social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations, and by creating a high-quality built environment with accessible local services that reflect the community's needs and support its health, social and cultural well-being; and Environmental – protect and enhance the natural, built and historic environment, including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change (including a move to a low carbon economy). In addition, the NPPF stated that the planning system should shape places in ways that contribute to radical reductions in greenhouse gas emissions; minimise vulnerability and provide resilience to the impacts of climate change; and support the delivery of renewable and low carbon energy and associated infrastructure.
Build Back Better: Our Plan for Growth (HM Government, 2021a)	Build Back Better: Our Plan for Growth was developed to replace the UK Industrial Strategy, building a Britain fit for the future (HM Government, 2017b). The UK Government set out a plan 'to deliver growth that created high-quality jobs across the UK' by building on the three core pillars of infrastructure, skills and innovation. The plan also identified three priorities for Government, one of which was supporting the transition to net zero. The Plan for Growth stated that Government will focus on delivering The Ten Point Plan for the Green Industrial Revolution (HM Government, 2020b). Policy commitments made in this document were updated within the Energy white paper (HM Government, 2020a), the Net Zero Strategy (HM Government, 2021b) and the British Energy Security Strategy (HM Government, 2022b).
Skills for Jobs: Lifelong Learning for Opportunity and Growth (HM Government, 2021d)	The Skills for Jobs White Paper (HM Government, 2021d) sets out how the Government will reform further education, so it supports people to get the skills the economy needs throughout their lives, wherever they live in the country. A focus on jobs and growth will be delivered by: Putting employers at the heart of the system so that education and training leads to jobs that can improve productivity and fill skills gaps; Investing in higher-level technical qualifications that provide a valuable alternative to a university degree; Making sure people can access training and learning flexibly throughout their lives and are well-informed about what is on offer through great careers support; Reforming funding and accountability for providers to simplify how funds are allocated, give providers more autonomy, and ensure an effective accountability regime which delivers value for money; and Supporting excellent teaching in further education. The paper recognises that we do not have enough technicians, engineers or health and social care professionals to meet vital challenges such as building the green economy. A skills value chain (assessing future skills to meet the needs of the value chain) will be explored to see if it can be used to support Government priorities such as net zero.
British Energy Security Strategy (HM Government, 2022b)	The British Energy Security Strategy sets out how Great Britain will accelerate homegrown power for greater energy independence. The ambition in the strategy is for offshore wind to deliver up to 50GW by 2030, including up to 5GW of innovative floating wind. The ambition is that by 2030 over half of British renewable generation capacity will be wind. The strategy notes that:

Policy consideration	Relevance to socio-economic assessment
	11GW is already being generated from offshore wind with a further 12GW planned at the time of writing of the strategy document; Wind projects tend to have public support through the planning phase, and ultimately benefit the environment because they help reduce the damage to habitats that is caused by climate change; Leadership in the development of wind technology is delivering high skilled, high wage British jobs. The increased ambition of the strategy means the Government expect the sector will grow to support around 90,000 jobs by 2030; Government intends to cut the development process time by over half, by a number of ways including reducing consent time from up to four years to down to one year.
Levelling Up White Paper (HM Government, 2022a)	The Levelling Up White Paper set out how the UK Government intends to spread opportunity more equally across the UK. This includes a commitment to £26bn of public capital investment for the green industrial revolution and the UK transition to Net Zero.
Powering Up Britain: Energy Security Plan (HM Government, 2023)	The Powering Up Britain: Energy Security Plan sets out the steps the government is taking to ensure the UK is more energy independent, secure and resilient. The plan follows the 'British Energy Security Strategy' ambition for offshore wind to grow to up to 50 GW in the UK by 2030, with up to 5 GW from floating wind and set out proposals to accelerate deployment rapidly. The plan notes that the government provided grants to manufacturing facilities through the Offshore Wind Manufacturing Investment Scheme. It is expected that new manufacturing facilities, such as SeAH Wind's monopile factory and JDR Cables' subsea cable facility, will begin to complete their construction and operations by the end of 2024, boosting supply chain capacity for the offshore wind industry.
Sub-regional policy context – New Anglia Local Enterprise Partnership	
Strategic Economic Plan (NALEP, 2014)	The New Anglia Local Enterprise Partnership's (NALEP) Strategic Economic Plan identified the following targets for East Anglia between 2012 and 2026: Delivering 95,000 additional jobs; Creating 10,000 new businesses; Improving productivity by narrowing the gap in gross value added (GVA) per head with the UK average from 7.8% in 2012; and Delivering 117,000 new houses. To implement these ambitions, the Plan identified growth locations and priority sectors (advanced manufacturing and engineering, agri-tech, ICT and digital creative, and the life sciences sector). Notably, port and logistics were included as a priority sub-sector. The Plan highlighted that the area was well placed to capitalise on market growth in the renewables sector: Seven offshore wind investments took place over the past two decades (at the time of writing); The ports of Lowestoft and Great Yarmouth formed one of six Centres for Offshore Renewable Engineering (CORE) and had Assisted Area Status (which enables increased support); Great Yarmouth borough had two Enterprise Zones (Beacon Park and South Denes) which supported the development of the offshore energy sector and economic growth. The long-term vision was to have 150 to 200 businesses across the two Enterprise Zone

Policy consideration	Relevance to socio-economic assessment
	sites, directly creating 9,000 new jobs by 2025 and a further 4,500 jobs indirectly in the supply chains. Since the plan, a further Enterprise Zone (Space to Innovate) has been established within Greater Ipswich (Waterfront Island site). The overall objective of the enterprise zone is to create 18,500 jobs over the next 25 years. Enterprise Zones coupled with the announcement of Freeport East (one of eight new Freeports that will benefit from tax and customs incentives) by the Chancellor of the Exchequer in March 2021 will support North Falls by attracting inward international investment and driving domestic growth. Freeport East covers Britain's busiest container port, two major ferry ports and is located close to the East Coast green energy cluster. It aims to create 13,500 new jobs and generate Gross Value Added (GVA) of £5.5bn over 10 years (Freeport East, 2021).
Energy Sector Skills Plan (NALEP, 2018)	The Energy Sector Skills Plan (NALEP, 2018) has been developed with the Energy sector in Norfolk and Suffolk, working alongside the NALEP, the New Anglia Skills Board and supported by SkillsReach. The skills plan captures key priorities for the Energy sector in: Mobilising Industry Leadership: The plan explains the importance of developing and securing a sustainable private sector led approach, overseeing skills development and investment. Developing a higher technical engineering offer: Feedback from employers have highlighted the need for a better supply of local, graduate level, mechanical and electrical engineering skills. Building "intra-industry" and "inter-sector" workforce transferability: Feedback from employers highlighted the need to enable businesses within the Energy sector to access skills and workers locally from other industries at key times. Addressing overall "Energy Skills Fragility: Key jobs and functions that experience skills shortages have been identified. These have been defined as fragile areas that require an appropriate training response, accessible to learners and employers across New Anglia. Building inclusive local capacity & Securing the Future Energy Workforce: There are a number of pressure points linked to the future supply of employees into the sector overall. NALEP has identified a series of actions to engage with schools, open up opportunities to move into jobs within the Energy sector and address imbalances in the workforce linked to age and gender. The sector also often looks externally out of the area for its labour supply, the LEP recognises that it is important to work with employers to tackle the barriers that inhibit the growth in local residents securing employment in the Energy sector. Apprenticeships and Group Training: The plan sets out steps to create a more cooperative approach towards delivering suitably trained apprenticeships given the implementation of the apprenticeship levy.
Suffolk and Norfolk Local Industrial Strategy (Norfolk and Suffolk Unlimited, 2020)	The Suffolk and Norfolk Local Industrial Strategy (henceforth LIS) built on the UK's Industrial Strategy and reflected on the opportunities and needs of the area's growing economy, and how it would respond to a fast-changing world. Clean growth sat at the heart of the LIS which stated that the area's strengths in energy generation presented major opportunities for Norfolk and Suffolk. Given its successful and long track record, Norfolk and Suffolk was very well placed to be a global exemplar for clean, low carbon energy production. The LIS identified several actions, including: The development of an ambitious research and innovation programme that sought to build on existing clean energy research strengths;

Policy consideration	Relevance to socio-economic assessment
	• The enhancement of the capacity and capability of Norfolk and Suffolk's ports with a series of projects to attract and capture investment in O&M, as well as offshore wind manufacturing and construction.
Norfolk and Suffolk Covid-19 Economic Recovery Restart Plan (NALEP, 2020)	The Norfolk and Suffolk Covid-19 Economic Recovery Restart Plan brought together commitments and actions from local authority, private sector, third sector and education organisations to outline the key activities in place to help the region's economy restart after the Covid-19 pandemic. Within the plan local partners had a shared vision to drive low-carbon, inclusive economic growth across Norfolk and Suffolk. The plan continued to promote Norfolk and Suffolk as a global leader in offshore wind. For example the plan stated that it will drive the identification, development and promotion of clean growth opportunities, such as the Offshore Wind O&M Base in Great Yarmouth.
Energy Sector Recovery and Resilience Plan (NALEP, 2021)	NALEP published a recovery plan that was targeted at the Energy sector. The Energy Sector Recovery and Resilience Plan set out the opportunities presented by sector deals and the local ambition to become the UK's Clean Growth Region, as well as the challenges that lay ahead, such as labour shortages and skills gaps.
Skills Advisory Panel Report (NALEP, 2022a)	The NALEP Skills Advisory Panel Report emphasises a collaborative approach to ensure new entrants, the current workforce and those facing barriers in accessing employment gain the best opportunities through a dynamic and relevant curriculum offer, particularly in the sectors of agri-food, clean energy and ICT digital.
Economic Strategy for Norfolk & Suffolk (NALEP, 2022b)	The ambition within the Economic Strategy for Norfolk & Suffolk is to transform the area into a globally recognised, technology-driven and inclusive economy which is leading the transition to zero-carbon. They aim to reach net-zero through sustainable food production, clean energy generation and consumption and digital innovation. The strategy aims for 27,000 new job opportunities to be generated by the clean energy sector in Norfolk and Suffolk between 2019 to 2030.
New Anglia's LEP business plan 2022/23 (NALEP, 2022c)	NALEP's business plan (2022c) recognises that the national economic context of Covid-19 recovery, the ongoing implications of the UK's exit from the EU, labour and skills shortages and the outcomes of the Government's Levelling Up White Paper set a complex backdrop for business plans in 2022/23. The five strategic objectives for the coming year include: Business support and innovation- ensuring that businesses affected by the pandemic continue to have the support they need whilst increasing the availability and visibility of support for high growth firms as well increasing the number of businesses investing in clean growth and innovation/R&D; Labour market and skills- work with the Skills Advisory Panel, industry councils, sector groups and partners to identify solutions to the short-term skill shortages and work with colleagues on the planning and implementation of longer-term skills provision to meet the future needs of businesses; Supporting place- promote the area to government, businesses and people, building the case for investment and attracting business and talent that share ambitions for clean growth; Nationally significant projects- work with partners to maximise the economic benefits and business opportunities presented by Freeport East, Sizewell C, offshore wind developments and other investments of scale; and Future role of the LEP-work with partners locally and nationally to understand the implications of the White Paper and begin to plan accordingly. E.g., securing funding for LEP services such as inward investment, innovation and the Growth Hub. The plan includes targets that the LEP wishes to achieve in 2022/23.

Policy consideration	Relevance to socio-economic assessment
	1,026 new jobs; 37 new businesses; 130 new homes; and Achieve £51.03m in private sector match funding.
Sub-regional policy context – SELEP	
Economic Recovery and Renewal Strategy (SELEP, 2021a)	SELEP is dedicated to playing its part in reducing carbon emissions and working towards a net zero economy for future growth, communities, and businesses across the south-east. The Economic Recovery and Renewal Strategy highlights the LEPs dedication to clean growth by rebuilding the economy through increasing renewable energy clusters, adapting to resource efficient ways of operating, and encouraging transport revolution. These activities also deliver against the Tri-LEP South2East Local Energy Strategy (2019) and encourage the growth of low carbon sector jobs, skills, and prosperity. The Economic Recovery and Renewal Strategy builds on the work and delivery of previous SELEP strategies: In 2014, the LEP produced its first Strategic Economic Plan which underpinned a Growth Deal worth £600m in investment and supported nearly 200 projects. The investment aimed to deliver 78,000 and 29,000 homes by 2021; SELEP continued its commitment to provide a refresh of the Strategic Economic Plan in 2018 by producing an Economic Strategy Statement – SmarterFasterTogether which set out the path towards developing the LEP's Local Industrial Strategy (LIS); In 2019, SELEP produced a LIS evidence base and a draft LIS was presented to the Strategic Board in January 2020. This work has since been incorporated into the Economic Recovery and Renewal Strategy.
South East Skills Report (SELEP, 2021b)	SELEP's skills strategy 2018-2023 (SELEP, 2018) set out an employer and growth led approach to skills, informed by a large evidence base. In view of the significant impact that Covid-19 had on the landscape, the strategy vision and priorities were reviewed within the skills report. Updated Vision: to help deliver a flourishing and inclusive economy across the biggest LEP in the country by equipping employers, adults and young people with the skills, conditions and aptitudes required for significant and clean growth today and tomorrow. Updated priorities: Increase apprenticeships and industry relevant qualifications for all ages, particularly in priority sectors and at higher and degree level; Simplify the landscape for employers, stakeholders and individuals; Build a diverse and inclusive economy and reduce polarisation; Raise awareness of jobs and growth across SELEP and the area's national and international significance; and Foster and support the spirit of pride, entrepreneurship innovation and enthusiasm across SELEP to bring about change.
Local Energy Strategy	The tri-LEP region (SELEP, Coast to Capital and Enterprise M3) has access to significant renewable resources including offshore wind. As such, The Tri-LEP South2East Local Energy Strategy identified renewable generation as one of five priority themes to achieve clean growth from 2019 until 2050. Each theme contained project models which will act

Policy consideration	Relevance to socio-economic assessment
(South2East, 2019)	as exemplars, unlocking multiple related projects that were aggregated into large portfolios to attract major investment. Within renewable generation, offshore wind development was taken forward to encourage further inward investment and economic development in offshore wind off the south-east of England. Offshore wind opportunities for the tri-LEP area exist within The Crown Estate block release in coming years – the LEPs will be a key facilitator in commercialising and supporting supply chain infrastructure developments.
Local Policy – Suffolk	
Suffolk County Council - Climate Emergency Declaration (Suffolk County Council, 2019)	Commitments to reducing environmental impacts emerged in 2019, when Suffolk County Council declared a Climate Emergency and set the ambition to be net zero by 2030. The Declaration pledged to declare a climate emergency, set up a policy development panel, work with partners across the county and region to make the county of Suffolk Carbon neutral by 2030, and work with central government to deliver its 25-year Environment Plan as well as increase the powers and resources available to local authorities in order to make the 2030 target easier to achieve.
Suffolk's Inclusive Growth Framework (Suffolk Growth, 2020)	Funded by Suffolk Public Sector Leaders, Suffolk Growth is a partnership organisation that brings together local authority teams to develop and deliver a shared inclusive growth agenda. The partnership works closely with NALEP, Suffolk Chamber of Commerce, the University of Suffolk, Suffolk Constabulary, and wider public sector teams, including communities and health. The framework implied that investment in major transport routes and the development of integrated 'invest to grow strategies' for the A12 and A14/Rail corridor would facilitate employment and business growth, supporting key business assets and regional priorities including: The port of Ipswich, which is the UK's leading grain export port, handling over 2MT of cargo per annum; The Port of Lowestoft which is a leading service centre for offshore energy; and Suffolk's all energy coast which leads the UK in energy technology, delivering both significant generation schemes, including East Anglia Hub offshore wind farms which could power over three million homes.
Suffolk County Council Climate Emergency Plan (Suffolk County Council, 2021a)	As a result of collaborative work with public sector partners, a Suffolk Climate Emergency Plan was agreed in June 2021.The plan detailed further actions to support Suffolk's contribution to reducing emissions and identified four goals and five priority actions in enabling cleaner power: Goal one: Grow renewable energy capacity; Goal two: A smart and flexible grid; Goal three: National low carbon power infrastructure; Goal four: Public sector leadership on renewable electricity; Priority Action one: Set ambitious and supportive renewable energy planning policies in updated local plans; Priority Action two: Work with UKPN to accelerate the deployment of flexibility mechanisms to make network capacity available; Priority Action three: Actively support companies in local supply chains through targeted economic programmes; Priority Action four: Host renewables installations on public buildings, as well as public land holdings and brownfield land; and

Policy consideration	Relevance to socio-economic assessment
	Priority Action five: Deliver opportunities for on-site or near-site renewable schemes to serve large energy users like hospitals, universities and transport infrastructure. Priority action three looked to actively support companies in local supply chains through targeted economic programmes, targeting support and investment in skills at low carbon infrastructure sectors such as offshore wind and nuclear power, and secure a local supply of these larger generation plants.
Suffolk County Council Energy Infrastructure Policy (Suffolk County Council, 2021b)	The delivery of net zero in the UK by 2050 is expected to require a pipeline of generation and connection projects in Suffolk. Therefore, significant changes for the economy, environment and communities of Suffolk are expected as a result. The purpose of the policy was to outline how, in principle, the council will engage and influence other parties to ensure adverse impacts are understood and addressed by future decisions.
Suffolk County Council Corporate strategy 2022 to 2026 (Suffolk County Council 2022a) & Suffolk County Council Annual action plan, 2022 to 2023 (Suffolk County Council, 2022b)	The launch of the Corporate Strategy came just over 18 months after Covid-19 was declared a pandemic. The strategy focused on how the Council would support those most in need in Suffolk and how they could drive local investment, whilst maintaining commitments to reducing environmental impacts. The corporate strategy stated that Suffolk County Council could meet net zero by taking up low-carbon solutions e.g., heating, lighting and transport; reducing demand (i.e., reducing energy consumption, mileage, service design and delivery) and generating renewable energy.
Local Skills Improvement Plan – Norfolk and Suffolk (Suffolk Chamber of commerce, 2023)	The Norfolk and Suffolk LSIP is one of 38 led by Employer Representative Bodies nationally. The plan is intended to inform the work of local skills providers and funding bids. This LSIP aims to provide mechanisms to bridge the skills gaps and shortages in the region by providing access to high quality training, education and employment opportunities for the local workforce. This plan emphasises the importance of both technical and softer skills in shaping the region's economic growth, competitiveness and residents higher earning potential, as well as providing a platform for the local further education and higher education providers to convene and shape their engagement and provision with employers to ensure that local skills needs are addressed. Four key priorities are outlined: enhancing educational outcomes, developing technical skills, skills for employment and providing a 'roadmap for change'. The LSIP is considered in more detail in the OSEP.
Local policy – Essex	
The North Essex Economic Strategy, 2020 to 2040 (North Essex Economic Board, 2019)	The North Essex Economic Strategy, produced by the North Essex Economic Board (a partnership of the four councils: Braintree, Maldon, Tendring and Uttlesford districts), aimed to: Drive innovation and technology adoption; Develop a skilled and resilient workforce; Create a network of distinctive, cohesive communities; and Grow a greener, more sustainable economy.

Policy consideration	Relevance to socio-economic assessment
	Over 2020 to 2025, they aimed to support the development of new industries associated with the transition to a more energy-efficient, lower carbon economy (building on their strengths in the coastal energy industry). The strategy noted that the area was already playing a leading role in renewable energy with existing investment going into the Energy Skills Centre at Harwich (which offers inshore and offshore engineering qualifications). In 2018, Harwich International Port was also announced as the location for the Operation and Maintenance base for Galloper Offshore Wind Farm, a 56-turbine facility. Harwich is one of the UK's largest Trust Ports, with 40% of the country's container traffic travelling through the area. The port is protected by Harwich Haven Authority (2022).
The Essex Prosperity and Productivity Plan, (Success Essex Board, 2020)	The Prosperity and Productivity Plan for Essex sets out the framework for an economy in which productive businesses create high-value, sustainable jobs and in which everyone benefits from growth. It looks forward 20 years and sets out priorities for the next five years considering climate and technological change. Its four missions for a "dynamic, resilient, inclusive and connected economy" by 2040 include the following: **Dynamic mission:** Driving the creation and adoption of new ideas and opportunities – leading to higher value employment over the long term; **Resilient mission:** Adaptable for the long term – in the context of climate change, new technology and changing markets; **Inclusive mission:** Supporting a growing and changing population, investing in new and existing communities and quality of life; and **Connected mission:** Creating better, more sustainable networks within Essex – and open to our neighbours, the UK and the world. Of particular relevance to the socio-economic assessment of North Falls, the Plan states that across all economic growth interventions, the board will support the development of new industries associated with the transition to a more energy-efficient, lower carbon economy by: Promoting investment into renewable and low-carbon energy (including those associated with major energy infrastructure opportunities); Maximising investment from innovate UK and other relevant sources and seeking to support the wider SME base in investing in measures to improve their resource efficiency; Creating opportunities through public procurement where new technology can result in reduced energy and transport costs and deliver public service improvements; and Investing in the low carbon skills base.
Essex green infrastructure strategy, (Essex County Council, 2020a)	The Green infrastructure strategy enabled Essex County Council to protect, create, and improve green infrastructure for biodiversity and people, improve connectivity and inclusivity by supporting healthier, more active lifestyles and contribute to economic growth. Of particular relevance to the socio-economic assessment of North Falls: Essex has one of the county's longest coastlines stretching more than 300 miles. Managed coastal improvements can not only improve water quality, aquatic habitat and carbon sequestration but can also provide potential sites for renewable energy; Green infrastructure has significant potential to reduce energy consumption and the direct impact from energy transmission infrastructure on the landscape in Essex. Investment in green infrastructure can contribute to meeting the emissions reduction target of the UK Climate Change Act 2008. Wind and solar farms could be considered as a green infrastructure asset if managed correctly. These facilities are typically constructed on green infrastructure assets; and

Policy consideration	Relevance to socio-economic assessment
	Greening learning facilities: multi-benefit green infrastructure should be taught in all green infrastructure related sectors. For example, in the field of green infrastructure and environmental technology, covering subjects such as sustainable land management, renewable energy, bio-engineering and water management.
Essex Skills Plan 2022-2023 (Essex County Council, 2022c)	The Essex Skills Plan provides an employer led partnership approach to local skills delivery. The plan's 5 priorities are to: Raise awareness of jobs and growth across Essex and the area's national and international significance; Simplify the landscape for employers and individuals; Increase apprenticeships and industry-relevant qualifications for all ages and at all levels, particularly in priority sectors; Build a diverse and inclusive economy and reduce polarisation; Foster and support the spirit of pride, entrepreneurship, innovation and enthusiasm across Essex to bring about change. Energy has been described as a key and future growth sector but the plan stresses that there is an ageing workforce and a requirement to build up digital skills within the sector.
Local Skills Improvement Plan - Essex, Southend and Thurrock (Essex Chamber of Commerce 2023)	The Essex LSIP is one of 38 led by Employer Representative Bodies nationally. The plan is intended to inform the work of local skills providers and funding bids. The report provides detail on local economy requirements for skills in Essex. The plan sets out local skills priorities and a roadmap for change. The identified priorities are: • Skills priorities – Soft skills and behaviours, basic maths English and ESOL, digital skills and Digitech, green skills and leadership and management skills • Skills system priorities – skills planning system for Essex, system access and flexibility, information, careers advice and guidance, tutor shortages and capacity of providers to respond, inclusive employment and barriers to engagement • Essex sector and technical skills – Advanced manufacturing, engineering and aviation, agri-tech and food tech, community and voluntary, construction and the built environment, creative and cultural, digi-tech, education, health, social care and med tech and professional services transport and logistics The LSIP is considered in more detail in the OSEP.
Everyone's Essex 2021 to 2025 (Essex County Council, 2021a)	Essex County Council set out 20 commitments across 2021 to 2025. These are focused on four main areas: the economy, the environment, children and families and promoting health, care and wellbeing for all ages. The commitments of particular relevance to the socio-economic assessment of North Falls included: Green Growth: Develop Essex as a centre for innovation, supporting new technologies and business models to enable the economy to transition to net zero and secure green jobs for the future by ensuring that Essex has the right local skills and investment opportunities; Net Zero: The council will work across the county to hit net zero targets by ensuring that the council significantly reduces its carbon footprint, whilst also supporting an acceleration towards sustainable housing and energy and active and alternative forms of travel across the county;

Policy consideration	Relevance to socio-economic assessment
	Green Communities: The council will work with communities and businesses, providing advice and support to enable and empower local action to reduce greenhouse gas emissions and build climate resilience; and Levelling up the environment: The council will help communities to enjoy a high-quality environment, by making them more resilient against flooding, heat stress and water shortages, by enhancing the count's green infrastructure and by reducing air pollution.
Levelling Up Essex Strategy, (Essex County Council, 2021b)	Essex County Council is committed to achieving greater social mobility and addressing levelling up for the long-term. It was recognised that levelling up could not be delivered by Essex County Council alone and could only succeed if it was embedded in communities. It has committed to work collaboratively with communities, local partners and national government, to reduce CO_2 emissions, and work with green businesses to harness the energy transition.
Sector Development Strategy, (Essex County Council, 2021c)	The Essex sector development strategy will support Essex County Council, public sector partners, skills and learning providers and businesses to effectively plan together for the future of the county. It highlights five future growth sectors that will secure a greener, stronger, more equal and sustainable economy in the future for Essex. The five growth sectors include: construction (including retrofit), clean energy, advanced manufacturing and engineering, digi-tech and life sciences (including med-tech and care-tech). Strategic goal three: An economy fit for the future, identifies green growth as a key cross-cutting aim for each of the five priority sectors to ensure they meet the target for a net zero county. Success for this objective would include: Reduced emissions; Progression towards a decentralised and decarbonised 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); and Harnessing innovation to reach net zero ambitions. The strategy highlights that Essex is at the heart of the world's largest market for offshore wind and Harwich offers opportunities for important offshore wind projects (North Falls and Five Estuaries) to use its infrastructure. Power generators in the clean energy sector will need sites with access to and capacity within the energy distribution network and waterside locations will be required for nuclear and offshore wind. Existing energy skills and innovation assets include the Galloper Offshore Wind Farm operations base in Harwich and the Harwich Energy skills centre. There is potential for further growth in offshore wind from the southern North Sea. Light Industrial space will also be needed for the O&M of generation and distribution infrastructure. The south of the County, where development densities are higher, may support more District Heat Networks.
Climate Action Plan, (Essex County Council 2021d)	Essex County Council outlined their plan to drive effective progress against the Essex Climate Action Commission's recommendations. The commission recommended that "*Essex produces enough renewable energy within the county to meet its own needs by 2040*". Essex County Council have therefore committed to sourcing its own electricity from renewable sources, supporting the establishment of new community energy groups, helping 670 residents' source solar panels through a bulk scheme and supporting roll out of Government fuel poor grants.
Essex County Council Annual Plan 2022 to 2023 (Essex	Essex County Council 's Annual Plan sets out how they will deliver against the Everyone's Essex Plan (Essex County Council, 2021a) in 2022. This details the budget, resources and investment that will allow them to fulfil the strategic aims within the year. Essex County Council already has a strong track record in delivering projects to support climate change mitigation and adaptation including the Essex Forest Initiative, recycling

Policy consideration	Relevance to socio-economic assessment
County Council, 2022a)	and energy efficiency programmes, renewable projects and flood defence. By 2025, they want to be able to have: Significantly reduced Essex County Council 's carbon footprint through the estate, operations and supply chain to meet net zero 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 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 the natural environment and green infrastructure to enhance quality of life.
Essex Green infrastructure review, (Essex County Council, 2022b)	To provide insight alongside the Green Infrastructure strategy, Mace consultancy, on behalf of Essex County Council carried out a review to identify opportunities for green skills growth across the county. This noted North Falls as a major upcoming project that will increase the demand for green skills in Essex. The strategy states that, to maintain and operate North Falls alone, it is anticipated that ~100 jobs will be created. Overall, Mace predicts that by 2030, there will be 896 additional jobs in the Essex Offshore wind sector if Essex were to retain its current proportion of UK jobs predicted in these industries, this would represent a 242% over its baseline (based on historic growth trend in green jobs).
Construction Growth in Essex 2020-2040 (Essex County Council, 2020b)	The Construction Growth in Essex report defines the challenges that the Essex construction industry is likely to face over the next 20 years and recommends measures that can be taken to maximise the opportunities created in a sustainable manner. The report identifies examples of innovation in education and training in Essex and confirms that "early adoption" should be stimulated to accelerate the use of technology in training, to promote the sector to young people, and to encourage lifelong learning. The report looks to major projects in Essex that will support progress towards this through section 106 and social value commitments. Opportunities should focus on: Developing capabilities at level 2 and above in construction occupations; Building 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.
Net Zero: Making Essex Carbon Neutral Commission Report (Essex Climate Action Commission, 2021)	The Essex Climate Action Commission is an independent, voluntary, and cross-part body, bringing together groups from the public and private sector, as well as individuals from organisations, to promote and guide climate action in the county. As a commission, their purpose is to provide expert advice and up-to-date recommendations to move Essex to net zero by 2050. The 2021 Net Zero: Making Essex Carbon Neutral report contains information about each of the recommendations put forward by the Commission to Essex and is structured around six core themes including: land use and green infrastructure, energy, the built environment, transport, waste and community engagement. The energy recommendations focus on ways to invest in renewable energy, switch to a greener electricity supply and create community energy neighbourhoods. This calls for: 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;

Policy consideration	Relevance to socio-economic assessment
	Essex to produce enough renewable energy within the county to meet its own needs by 2040; All large-scale renewable developments to have an element of community ownership from 2021; 100% of fuel-poor households to be retrofitted and supplied with affordable renewable energy by 2030; Create hydrogen storage facilities to store excess renewable energy (off-shore wind and solar) by 2030; As well as further measures in regard to green hydrogen, bioenergy, solar panel implementation, retrofitting and the EV charging network.
District policies – East Suffolk Council	
East Suffolk Council (Suffolk Coastal) 2018 to 2036, (East Suffolk Council, 2018)	The Suffolk Coast is at the forefront of electricity energy generation across the country both in respect of onshore and offshore energy. It is essential that major energy infrastructure projects are delivered in a planned way which considers the potential impact of constructing, operating and decommissioning large and nationally significant infrastructure in East Suffolk. East Suffolk Council is committed to working in a collaborative partnership approach with the scheme promoters, local communities, Government, NALEP, service providers and public bodies to ensure the best outcomes of major energy infrastructure projects can be achieved.
East Suffolk Council (Waveney) 2019 to 2036, (East Suffolk Council, 2019a)	The Waveney Local Plan set out the level of growth which needed to be planned in the Waveney area of East Suffolk. It acknowledged that the area has huge potential for growth associated with the development of offshore wind farms, with the area in and around the Outer Harbour being defined as the PowerPark. Policy WLP2.2 stated that land at PowerPark was to be allocated for employment development and port-related development. Associated and ancillary uses necessary to support the offshore energy and engineering sectors would also be permitted.
East Suffolk Council Climate Commitment (East Suffolk Council, 2019b)	On Wednesday the 24 July 2019, East Suffolk Council unanimously voted to step up its work on environmental issues to help fight climate change. A climate emergency was declared and a new cross-party member: the Environment Task Group, was formed to provide an independent review and recommendation for future priorities for action on climate change. As part of the commitment, the Task Group created an Environmental guidance note (2020a) which offered concise information on a range of key environmental issues relating to the building industry, assisting those seeking to mitigate the contribution of construction to climate change and its impact on the environment by offering support and advice. The Environmental guidance note identified renewable energy as one area of focus. The Council is still exploring opportunities to collaborate on clean energy generation projects and is reviewing the current programme of clean energy generation on Council housing.
East Suffolk Council Strategic Plan 2020 to 2024 (East Suffolk Council, 2020b)	East Suffolk Council's Strategic plan aims to deliver the following priorities: Build the right environment: maintain and grow a vibrant and sustainable economy; Attract and stimulate inward investment; Maximise and grow the unique selling points of East Suffolk (including the energy sectors, marine environments and coastal environments); Develop and grow business partnerships; and • Support and deliver infrastructure.

Policy consideration	Relevance to socio-economic assessment
District policies – Tendring District Council	
Tendring Local plan, 2017 to 2033 (Tendring District Council, 2017)	The local plan acknowledged opportunities for Tendring to develop its strengths in offshore wind and in care & assisted living, with employment in the district forecasted to grow by 490 jobs annually (Experian, 2016 – Tendring District Council, 2017).
Tendring Corporate Plan 2020 to 2024, (Tendring District Council, 2020a)	Tendring District Council's Corporate plan aims to deliver the following priorities: Delivering high quality services; Community leadership through partnerships; Building sustainable communities for the future; Strong finances and governance; and A growing and inclusive economy.
Tendring Economic strategy 2020 to 2024 (Tendring District Council, 2020b)	Tendring District Council's Economic Strategy aims to deliver the following priorities: Supporting Tendring's growth locations; Targeting growth sectors (clean energy & assisted living); Ensure residents have the skills and information to participate; Support growth & innovation in Tendring's businesses; and Delivering housing to support economic objectives.
Tendring Climate emergency action plan 2020 to 2023, (Tendring District Council, 2020c)	The Climate Emergency in Tendring induced the Chief Executive of Tendring Council to prepare an Action Plan for consideration by Cabinet and a recommendation to the Full Council to form part of the Policy Framework. The Action Plan set out actions to make the Council carbon neutral by 2030. Actions included: Moving to the purchase of 100% renewable energy; Focus on the switch away from oil and natural gas use by 2030; Maximise onsite (buildings) renewable energy generation opportunities; Promote, support and facilitate energy efficiency improvements to homes; and Lobby partners and Government to champion a net zero approach in their plans and policies that impact on Tendring's emissions.

34. As shown above, sub-regional policy analysis shows a major focus on the transition to net zero and support for maximising the economic benefits from renewable energy production.

35. Further detail is provided in ES Chapter 3 Policy and Legislative Context (Document Reference: 3.1.5).

31.4.2 Data sources

31.4.2.1 Other available sources

36. The data sources that have been used to inform the assessment are listed in Table 31.8. As noted in Section 31.4.6 the data sources are accurate as of December 2023 (the time at which the latest data was collected).

Table 31.8 Other available data and information sources

Data set	Source	Spatial coverage	Notes
2021 Census TS007 - Age by single year.	ONS (2022a)	Ranges from Middle Layer Super Output Areas (MSOA) to England and Wales. Does not include Scotland and Northern Ireland	Used to collect the latest demographic data for the local areas, England and Wales.
Annual Mid-year population estimates.	ONS (2022b)	Ranges from local authorities to UK	Used to collect past population change data and the population currently residing in the UK.
Annual mid-year population estimates, estimated components of population change for the United Kingdom, by local authority prior to April 2021	ONS (2021)	Ranges from local authorities to UK	Used to understand the components of population change in the local study areas.
2018 to 2043 sub-national population projections	ONS (2020)	England and local authorities in England	Used to collect the latest population projections for England and the local study areas.
Business Register and Employment Survey (BRES)	ONS (2023a)	Ranges from lower super output areas (LSOAs) to Great Britain (GB) and does not include Northern Ireland	Used to collect data on employment.
Regional gross value added (balanced) per head and income components	ONS (2023b)	ITL1, ITL2 and ITL3 regions	Used to collect data on GVA for the local study areas and the national study area.
Annual Population Survey (APS)	ONS (2023c)	Ranges from local authorities to UK	Used to collect data on economic activity, employment, unemployment and economic inactivity rates and absolute values.
Claimant Count	ONS (2023d)	Ranges from local authorities to UK	Used as an indicator of unemployment levels.

Data set	Source	Spatial coverage	Notes
Annual survey of hours and earnings	ONS (2022c)	Ranges from local authorities to UK	Used to analyse earnings data.
Council tax: Stock of properties	ONS (2023e)	Local authority & national	Used to identify the total number of dwellings in the study areas.
Census 2021: Number of Households (TS041)	ONS (2022d)	Local authority	Used to identify the number of households in districts.
UK Property Data	UK Property Data (2023)	Local authority	Used to analyse average absorption rates (the ratio of demand to available supply) for districts in Essex and Suffolk, as well as tenure types.
Census 2021: UK property by Tenure (TS054)	ONS (2023f)	Local authority	Used to understand the tenure profile of housing in study areas.
Occupancy and Property Types	Portals & agents, Ministry of Housing, Communities & Local Government (2023)	Local authority	Used to analyse occupancy and property types.
Price Paid Data	UK Land Registry (2023)	Local authority	Used to analyse the number of houses sold in Essex and Suffolk.
Breakdown of accommodation availability around the onshore project area	Visit Britain (2016)	Local authority	Used to analyse the number of rooms and bedspaces in visitor accommodation in Essex and Suffolk.
General practice workforce data	NHS Digital (2023a)	Suffolk and North-East Essex ICB	Used to identify the general practitioner surgeries and the number of patients registered within the NHS Suffolk and Northeast Essex ICB area.
A&E Attendances and Emergency Admissions	NHS Digital (2023b)	National and Suffolk and North East Essex ICB	Used to analyse A&E attendances, performance and emergency admission wait times .
NHS Suffolk and North-East ICB	NHS Suffolk and North-East ICB (2023)	Suffolk and North-East Essex ICB	The website lists the location of district general hospitals in the NHS Suffolk and North-East Essex ICB area. Consultation with the ICB also provided further information on GP wait times and capacity constraints.

Data set	Source	Spatial coverage	Notes
The Handbook to the NHS Constitution for England	Department of Health & Social Care (2022)	National	Sets the overall target of 95% of all attendees at A&E facilities to be seen, discharged, admitted and/or transferred within four hours of arrival. Also sets the standards for C1 ambulance responses (where a C1 response is an immediate response to a life-threatening condition, such as cardiac or respiratory arrest) to be a mean average waiting and response time of less than or equal to seven minutes, with the response time to 90% of all incidents being a maximum of 15 minutes.
Ambulance Quality Indicators: Systems indicators	NHS England (2023c)	National and regional	Ambulance response times.
Google Maps	Google Maps (2023)	Ranges from community level analysis to national coverage.	Used to identify onshore social and community infrastructure facilities.
Construction Growth in Essex 2020-2040	Essex County Council (2020b).	Essex	Used to identify employment growth projections in the construction sector.
Economic and Fiscal Outlook	Office for Budget Responsibility (OBR) (2023)	National	Used to show projections for the UK economy.
Inflation and Price Indices	ONS (2023g)	National	Used to show information about the cost of living in the UK.

Note: Latest socio-economic data is accurate as of 1st November 2023 (the time at which the latest data was collected).

31.4.3 Impact assessment methodology

37. ES Chapter 6 EIA Methodology (Document Reference: 3.1.8) explains the general impact assessment methodology applied to North Falls. The following sections describe the methods used to assess the likely significant effects on socio-economics.

31.4.3.1 Definitions

31.4.3.1.1 Sensitivity

38. The sensitivity of each receptor is evaluated as either very high, high, medium, low or negligible based on the baseline position and its performance against benchmark areas, together with consideration of the importance of the receptor in policy terms.

Table 31.9 Definition of sensitivity for a socio-economic receptor

Sensitivity	Definition
High	Receptor is defined as being of high sensitivity where it is identified as a policy priority (as a result of economic potential and/ or need). There is evidence of considerable socio-economic challenges and/ or opportunities for the receptor within the study area.
Medium	Receptor is defined as being of medium sensitivity where it is not identified as a policy priority (as a result of economic potential and/ or need). There is, however, evidence of socio-economic challenges and/ or opportunities for the receptor within the study area.
Low	Receptor is defined as being of low sensitivity where it is not identified as a policy priority (as a result of economic potential and/ or need). There is evidence that the receptor is resilient within the study area, for example the receptor may perform better in the study area than the national average or comparator areas.
Negligible	Receptor will be of negligible sensitivity where it is not identified as a policy priority (as a result of economic potential and/ or need) and where there is no evidence of socio-economic challenges.

31.4.3.1.2 Magnitude

39. For all receptors the assessment of magnitude of impact draws on the approach set out in Table 31.10 below.

Table 31.10 Definition of magnitude for a socio-economic receptor

Magnitude	Definition
High	Proposals will cause a large change to the scale and/or quality of the receptor when compared with existing socio-economic baseline conditions.
Medium	Proposals will cause a moderate change to the scale and/or quality of receptor when compared with the existing socio-economic baseline conditions.
Low	Proposals will cause slight change to the quality and/ or integrity of the receptor when compared with existing socio-economic conditions.
Negligible	Proposals will cause no discernible change to the baseline socio-economic conditions.

40. The magnitude of impact to the receptor is determined by considering the estimated deviation from baseline conditions once embedded mitigation is taken into consideration. The criteria used for the assessment of magnitude is evaluated as either high, medium, low or negligible, and are set out in more detail below.

Table 31.11 Criteria for assessing magnitude of socio-economic impacts

Phase	Magnitude of change measure	Negligible	Low	Medium	High
Employment Impacts					
Construction		<0.1%	0.1%-0.5%	0.5%-1%	>1%
Operation					

Phase	Magnitude of change measure	Negligible	Low	Medium	High
Decommissioning	Change in direct & indirect jobs relative to all jobs	Qualitative approach. In general, decommissioning activities are of similar nature to, but no worse than, the impacts identified during the construction phase.			
GVA Impacts					
Construction	Change in direct & indirect GVA relative to total GVA for the study area	<0.1%	0.1%-0.5%	0.5%-1%	>1%
Operation					
Decommissioning		Qualitative approach. In general, decommissioning activities are of similar nature to, but no worse than, the impacts identified during the construction phase.			
Local infrastructure and services					
Construction	Pressure and disturbance on local infrastructure and services	Qualitative approach based on current capacity within the local study area and assessment of the potential increase in demand during construction, the operational phase and decommissioning. This also involves a qualitative assessment of the nature and scale of impacts on specific receptors within the local area of influence of the onshore cable route. This draws upon the findings of other chapters (e.g. noise, traffic and transport) and considers the pre-mitigation effects and the residual effects after additional mitigation has been applied to determine the magnitude of impact.			
Operation					
Decommissioning					

31.4.3.2 Significance of effect

41. The significance of an effect is a function of the sensitivity of the receptor and the magnitude of the impact (see ES Chapter 6 EIA Methodology (Document Reference: 3.1.8) for further details). The determination of significance is guided by the use of a significance of effect matrix, as shown in Table 31.12. Definitions of each level of significance are provided in Table 31.13.

42. Should major or moderate effects be identified within the assessment, these would be regarded within this chapter as significant. Should the assessment indicate any likely significant effect, mitigation measures would be identified, where practicable, in consultation with the regulatory authorities and relevant stakeholders. The aim of mitigation measures is to avoid or reduce the overall significance of effect to determine a residual effect upon a given receptor.

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Table 31.12 Significance of effect matrix

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

Table 31.13 Definition of effect significance

Significance	Definition
Major	Very large or large change in receptor condition, both adverse or beneficial, which are likely to be important considerations at a regional or district level because they contribute to achieving national, regional or local objectives, or could result in exceedance of statutory objectives and / or breaches of legislation.
Moderate	Intermediate change in receptor condition, which are likely to be important considerations at a local level.
Minor	Small change in receptor condition, which may be raised as local issues but are unlikely to be important in the decision making process.
Negligible	No discernible change in receptor condition.
No change	No impact, therefore, no change in receptor condition.

43. Where the need for additional mitigation has been identified specifically to reduce or eliminate any predicted likely significant effects, this has been proposed in consultation with the appropriate regulatory authorities and relevant stakeholders. The aim of additional mitigation measures is to avoid or reduce the overall significance of effect to determine a residual effect upon a given receptor. Residual effects are summarised in Table 31.39.

44. In addition, whilst minor impacts are not significant in their own right, it is important to distinguish these from other non-significant impacts as they may contribute to significant impacts cumulatively or through interactions.

31.4.4 Cumulative effects assessment methodology

45. The cumulative effects assessment (CEA) considers other plans, projects and activities that may impact cumulatively with North Falls. ES Chapter 6 EIA Methodology (Document Reference: 3.1.8) provides further details of the general framework and approach to the CEA (Section 6.7.3)

31.4.5 Transboundary effects assessment methodology

46. The transboundary assessment considers the potential for transboundary effects to occur on socio-economic receptors as a result of North Falls; either those that might arise within the Exclusive Economic Zone (EEZ) of European Economic Area (EEA) states or arising on the interests of EEA states e.g. a non-

UK fishing vessel. ES Chapter 6 EIA Methodology (Document Reference:3.1.8) provides further details of the general framework and approach to the assessment of transboundary effects.

47. For socio-economics, the potential for transboundary effects has been identified in relation to the potential impact upon the economies of other states within the EEA. This may arise through the purchase of project components, equipment and sourcing labour from companies based outside the UK. Under Regulation 32 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (2017 Regulation, No. 572, Regulation 32), the Secretary of State must consult with any EES state concerned regarding the potential significant effects of the development on the environment of that EEA state, and the measures envisaged to reduce or eliminate such effects. It is however, assumed that the sourcing of materials and labour from other EEA states would provide beneficial effects for the economies of such states, and as such the consideration of "measures envisaged to reduce or eliminate such effects" is not relevant within the context of transboundary economic effects. It should be noted that economic value and employment effects may be significant at a local level in the country within which the staging port is located (only during construction phase).

48. The location of the offshore infrastructure means that it will not be visible from other EEA countries. The onshore elements of North Falls are entirely present within the UK shores, and as such there is no potential for significant transboundary effects (either beneficial or adverse) on other EEA states.

49. Given the above, transboundary effects associated with socio-economics are not considered further.

31.4.6 Assumptions and limitations

31.4.6.1 Existing environment

50. It should be noted that data sets used in the baseline assessment of the existing environment are often updated on an annual or more frequent (e.g. quarterly or monthly) basis. A number of data sets have been published following submission of the PEIR. The baseline assessment has therefore been updated within the ES for DCO submission.

51. The most up-to-date socio-economic data available as of December 2023 has been used in the preparation of the baseline for the existing socio-economic environment. There is often a lag in the publication of a number of socio-economic datasets, meaning the most recent data available is one or two years out of date. For example, employment data published by the Office for National Statistics (ONS) usually has a one to two-year lag but is still the most recent data for employment. In this case the latest employment data available is from 2022, with data for 2023 due to be published in late 2024. These data limitations do not have a material effect on the predictability or accuracy of the impact assessment presented in this ES chapter. UK data is typically used to match the UK study area, however this is not always available through ONS datasets. In these cases (for example employment data), GB has been utilised as the next best alternative.

52. There are challenges with disaggregating GVA and employment data by sector to measure the impact of North Falls in the context of the renewable energy sector, and the wider economy. The data is available by broad Standard Industrial Classification (SIC) code level, which does not lend itself to defining a renewable energy sector, especially below UK level.

31.4.6.2 Ports

53. The DCO application will not include development activities at potential construction ports. Where necessary, port activities will be subject to separate consent(s) such as planning permission and/ or a Harbour Revision Order. The Applicant is currently considering ports suitable for the construction base for the offshore elements of North Falls. Port selection will be dependent upon securing development consent, financial close, and most likely a CfD award, and will be influenced by findings from further technical studies and commercial negotiations.

54. For this assessment, it is assumed that the O&M port will be located either in Essex or Suffolk and the construction port will not be in Essex or Suffolk.

31.4.6.3 Indicative lengths of construction, operational and decommissioning phases

55. The assessment of impacts on employment and GVA during the construction phase also includes development activities (e.g. planning and design) as well as physical construction activities. The development and construction period is assumed to last for a maximum period of seven years, with installation and commissioning lasting for three of those years.

56. Onshore construction activities for the Bentley Road improvement scheme, the onshore substation and onshore cable route will be up to 27 months. Pre-construction works will include demarcation of the area, ground investigations, pre-construction drainage, hedgerow and tree removal, ecological and archaeological mitigation and diversion of any public rights of way (where required). North Falls is assumed to be operational for 30 years with a decommissioning period of two years at the end of the operational phase.

57. The indicative offshore construction programme is for offshore works to begin in year 4 of the North Falls construction programme. Offshore construction is predicted to take approximately 2 years.

31.4.6.4 Induced effects

58. The ES socio-economic assessment excludes the induced impacts generated by North Falls across all phases. Induced impacts refer to the additional jobs and GVA generated by the salary expenditure of employees in the local economy. These are typically affected by greater uncertainty, and are more difficult to measure and defend robustly in terms of their scale and additionality. Induced effects are presented within ES Appendix 31.1 (Document Reference: 3.3.70) and are predicted to account for around 21%-26% of total economic (jobs and GVA) impacts.

31.4.6.5 Mapping social and community infrastructure assets

59. Social and community assets have been mapped based on the postcode of the asset. There may be minor differences between the actual location of the asset

and the postcode although for the purpose of the assessment this is unlikely to result in any major discrepancies.

31.5 Existing environment

60. This section describes the existing environment in relation to socio-economics. It is based on a desk-top study of sources, outlined in Table 31.8 as a basis for the assessment of significance.

31.5.1 Demographics

31.5.1.1 Population and labour market

61. In 2021, the total population of Essex and Suffolk amounted to approximately 1.86 million and 761,000 residents respectively. There were around 1.14 million working age people (between the ages of 16 and 64) in Essex (61% of the total population) and 451,000 in Suffolk (59% of the total population). In both areas the share of the population who are working age is lower than the national average (63%).

Table 31.14 Population – total and working age, 2021

Area	Population	Working Age Population (aged 16 to 64)	Working Age Population as a percentage of the total population
Essex	1,860,000	1,139,000	61%
Suffolk	761,000	451,000	59%
UK*	67,026,000	42,175,000	63%

Source: ONS (2022a). *Note UK population is based on ONS (2022b) Mid-year population estimates as census based 2021 figures are only presented for England & Wales.

62. From 2011 to 2021, the total resident population in Essex increased by 7.8%. This was a greater increase than the UK, which saw the resident population increase by 5.9%. Over the same time period, the total resident population in Suffolk increased by 4.5%, also lower than the UK increase (5.9%) (ONS, 2022a).

63. The number of working age residents in Essex increased by 4.3% between 2011 and 2021. This is above the national growth rate average (3.0%). In contrast, Suffolk has seen a smaller increase in the number of working age residents (0.2% increase) (ONS, 2022a).

Table 31.15 Population trends– total and working age,2011-2021

Area	Population change (%)	Working Age Population change (aged 16 to 64)
Essex	+7.8%	+4.3%
Suffolk	+4.5%	+0.2%
UK*	+5.9%	+3.0%

Source: ONS (2022a). *Note UK population is based on ONS (2022b) Mid-year population estimates as Census based 2021 figures are only presented for England & Wales.

31.5.1.2 Components of population change

64. As shown in Plate 31.1 below, ONS (ONS, 2021) data shows just under half (+64,900 or 47%) of Essex's population increase from 2011 to 2020 was due to internal net migration (people moving from other parts of the UK into Essex). Similarly, over three quarters (+33,300 or 77%) of Suffolk's population increase over the same period was due to internal net migration. Suffolk has experienced a much lower natural increase in its population (births minus deaths) compared to Essex. This is linked to its relatively older age profile. International migration is net positive in both Essex and Suffolk, however in Essex there is a much greater number of international migrants.

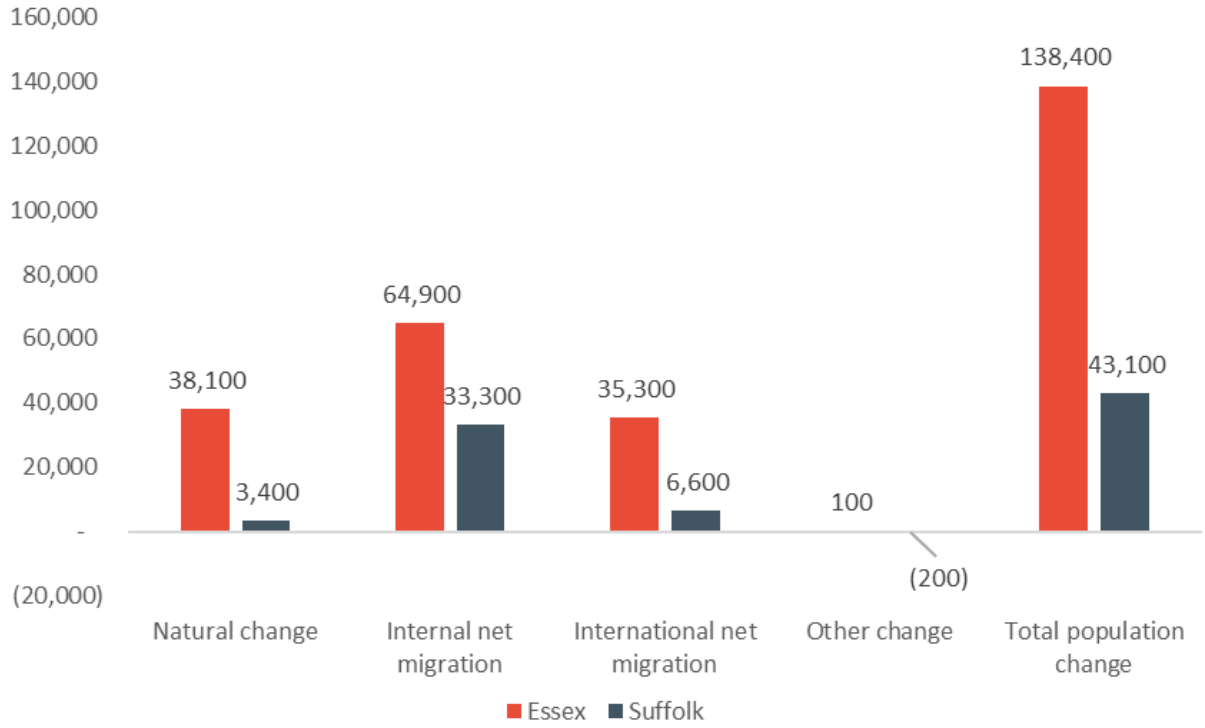

Plate 31.1 Components of population change 2011-2020 (ONS 2021).
Note: Numbers in this chart are rounded to the nearest 100.

31.5.2 Economy

31.5.2.1 Employment

65. Based on the latest Business Register and Employment Survey data (ONS, 2023b), there were an estimated 763,000 jobs in Essex and 347,000 jobs in Suffolk in 2022. In full time employment (FTE)[6] terms, this is equivalent to 620,000 FTE jobs in Essex and 279,000 FTE jobs in Suffolk.

[6] A unit that indicates the workload of an employed person. An FTE of 1.0 is equivalent to one full-time employee, whilst a part-time employee working half the hours a full-time employee does would be recorded as 0.5 FTE.

Table 31.16 Employment and employment density, 2022

Area	Total Number of employee Jobs	FTE Employees
Essex	763,000	620,000
Suffolk	347,000	279,000
GB	31,919,000	26,134,000

Source: ONS (2023a). Please Note: Jobs are rounded to the nearest 1,000. Although we typically use the UK as a national comparator to match the study area, GB is used here as ONS Employment data only covers GB.

66. Plate 31.2 shows that, between 2015 and 2022, the number of FTE employee jobs increased by 46,800 in Essex (+8.2%), and by around 22,000 (+8.5%) in Suffolk. In both cases this is slightly above the UK average of 8%.

67. Suffolk and GB both experienced a large fall in employment between 2019 and 2020 which can be attributed to the Covid-19 pandemic, while Essex experienced a small increase. However, all areas experienced a large increase in employment in 2021 and 2022, suggesting the demand for labour has been quick to recover in all areas.

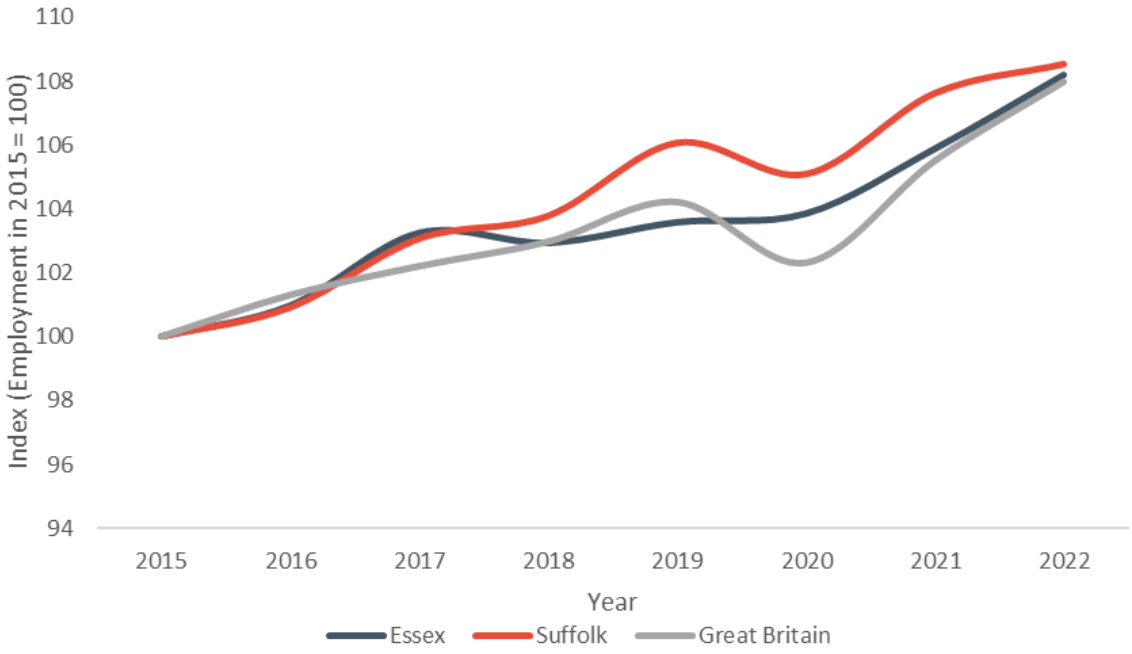

Plate 31.2 Employment change (2015-2022).
Source: ONS (2023a) Although we typically use the UK as a national comparator to match the study area, GB is used here as the ONS Employment data only covers GB.

Sectoral Distribution of Jobs

68. Plates 31.3 and 31.4, highlights the importance of the health and construction sectors as a source of employment in Essex. These sectors cumulatively account for 22% of all FTE jobs in Essex, which is above the national percentage of 18%.

69. Suffolk's largest sectors were health, business administration and manufacturing. This cumulatively accounts for 33% of all FTE jobs in Suffolk, and 30% of all FTE jobs in GB.

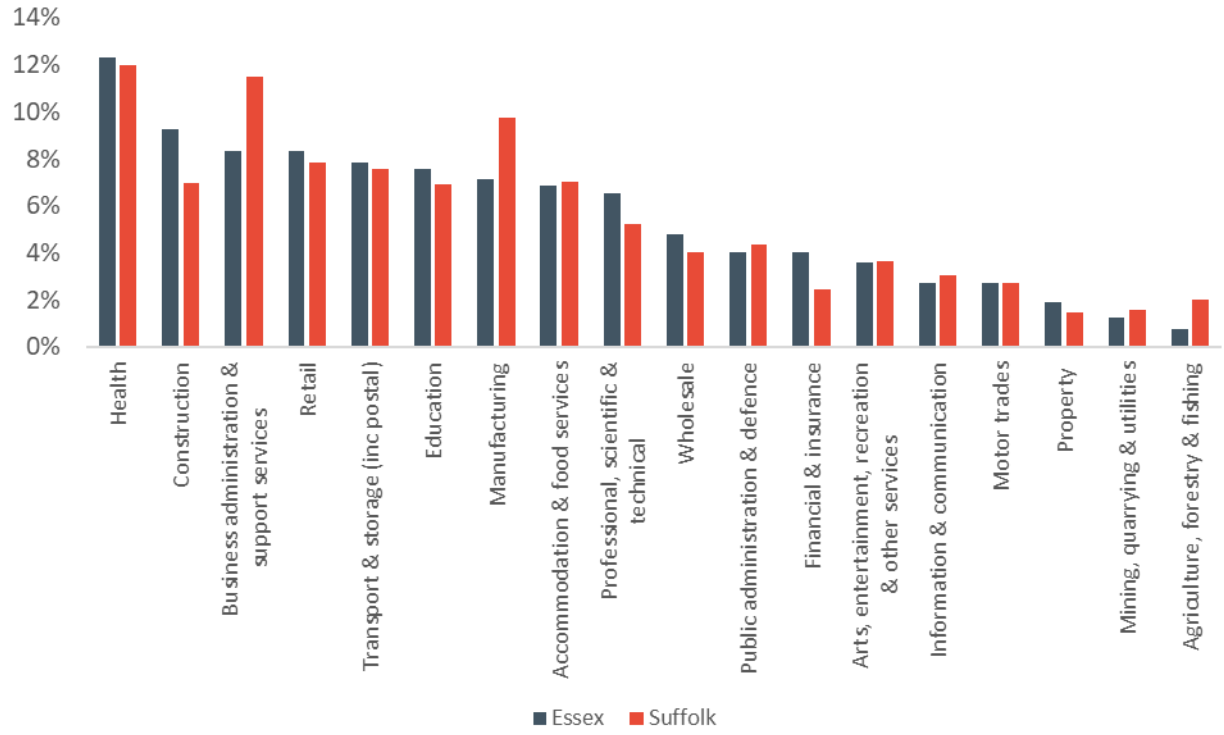

Plate 31.3 Sectoral distribution of jobs (% based), 2022.
Source: ONS (2023a)

70. A sector's importance to a local economy relative to the national average can be measured by calculating the location quotient (LQ). This measures the share of employment in a particular sector relative to the GB average. An LQ of 1 means the sector accounts for the same share of employment in the local area as it does in GB as a whole. If the LQ is greater than one, the sector accounts for a higher share of employment than the national average and vice versa.

71. Construction is notably more concentrated in Essex than in GB, with a LQ of 1.7 (meaning the share of total employment in the construction sector is 70% higher than in the UK). Other important sectors to note include transport and storage which account for 8% of FTE employment in both Essex and Suffolk, and has a LQ of 1.5 and 1.4 respectively. Motor trades are also concentrated in Essex and Suffolk with a LQ of 1.4 in both Essex and Suffolk. However, high skilled service sector such as professional, scientific and technical activities account for a lower share of employment than the national average in both areas (8% and 5% of FTEs in Essex and Suffolk respectively compared to 10% nationally) and therefore have a lower LQ of 0.7 in Essex and 0.5 in Suffolk.

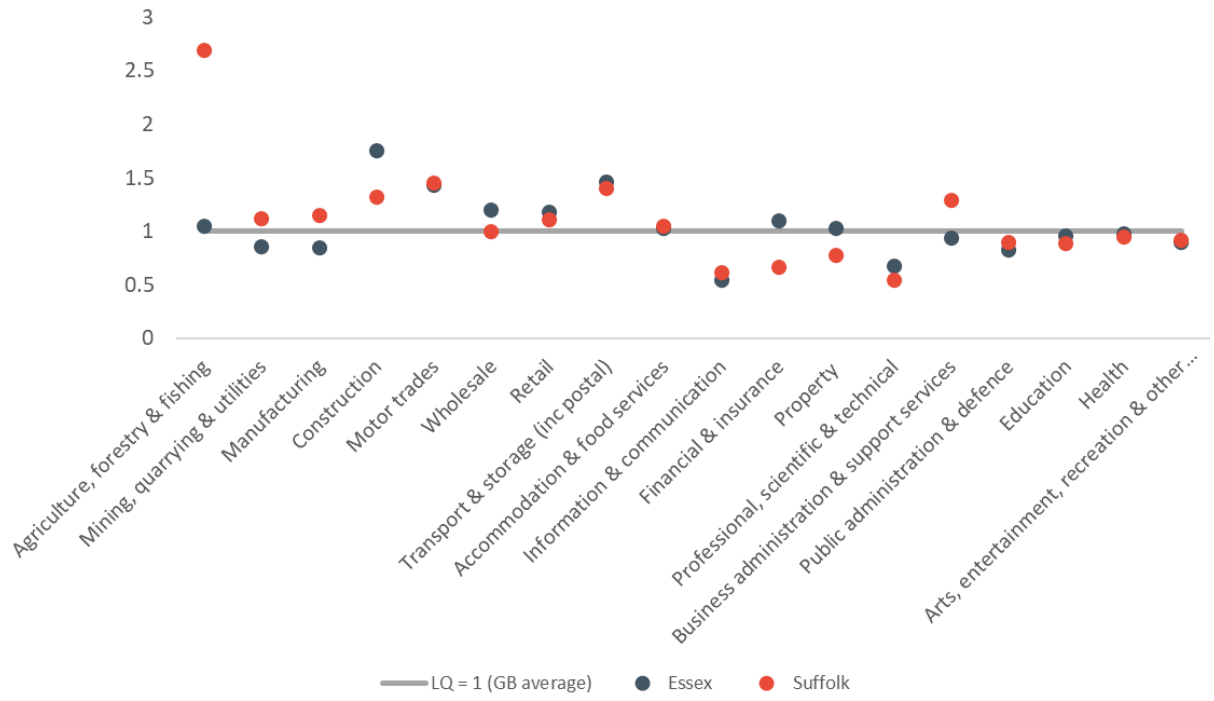

Plate 31.4 Sectoral distribution of jobs (LQ based), 2021.
Source: ONS (2023a) Although we typically use the UK as a national comparator to match the national study area, GB is used here as the BRES dataset only covers GB.

Supply chain capacity and capability

72. There are a number of existing offshore wind farms of the East coast of England including Scroby Sands (operational since 2004), Kentish Flats and Kentish Flats Extension (operational since 2005 and 2015 respectively), Gunfleet Sands Offshore Wind Farm (operational since 2010), Greater Gabbard Offshore Wind Farm (operational since 2012), London Array Offshore Wind Farm (operational since 2013), Galloper Offshore Wind Farm (operational since 2018) and East Anglia ONE Offshore Wind Farm (operational since 2020).

73. Suffolk has a number of supply chain strengths in the energy sector. There are well established sector bodies such as Orbis Energy (situated in Lowestoft), the East of England Energy Group, the New Anglia Advanced Manufacturing and Engineering group, and the East Coast Manufacturing Group (ECMG) supporting local businesses in harnessing the opportunities associated with offshore wind.

74. The supply chain of Greater Gabbard OWF included local firm, Windcat Workboats, as the provider of crew transfer vessels to transport technicians to and from the site. The industry has matured significantly since that time but continues to welcome new players, particularly from related sectors keen to transition into offshore wind. Windcat Offshore was established as a sister company to Windcat Workboats in 2022. More recently Galloper OWF awarded contracts to East coast based companies including family owned Turner Iceni (crew transfer vessel operations) and local Essex based business Marvan's Tree & Landscaping Services won a contract to provide landscaping services at the Wind Farm's Operations & Maintenance facility at Harwich International Port.

75. There may be opportunities for businesses across several sectors to benefit from the construction and O&M activities related to North Falls. In the context of offshore wind farm developments, the greatest supply chain opportunities are likely to be in construction and civil engineering, manufacturing, transport, energy generation and professional, scientific and technical services. The table below sets out the size of these sectors in the relevant study areas.

76. This shows that employment in construction, land-based transport and civil engineering is more concentrated in Essex than the national average. In Suffolk, all sectors have an LQ above 1, indicating the local economy has supply chain strengths in several key sectors which could potentially benefit from the development.

Table 31.17 Employment in key strategic sectors, 2022

Sector	GB Employment (FTEs)		Essex Employment (FTEs)			Suffolk Employment (FTEs)		
	No.	%	No.	%	LQ	No.	%	LQ
Manufacturing	2,226,750	9%	44,173	7%	0.8	27,375	10%	1.2
Construction	1,387,000	5%	57,325	9%	1.7	19,625	7%	1.3
Land Based Transport	109,500	0%	1,025	0%	0.4	2,605	1%	2.2
Civil Engineering	183,750	1%	5,018	1%	1.2	3,700	1%	1.9
Energy generation	475,750	2%	13,828	2%	1.2	6,950	2%	1.4
Marine Transport	12,688	0%	163	0%	0.5	370	0%	2.7

Source: ONS (2023a). Please Note: Numbers are rounded. Hatch calculations are used to estimate the FTE level by assuming that one part time employee equates to 0.5 FTE.

77. Further detail on the demand and supply of skills in relevant sectors in Essex and Suffolk is presented in the OSEP.

Gross Value Added

78. Data from the ONS shows Suffolk generated over £19.6 billion in GVA in 2021 while Essex generated around £44.8 billion in GVA.

79. GVA per head of the population is slightly lower in Essex (£24,000/ person) than Suffolk (£25,700/person). Although it should be noted that GVA per head is influenced by a range of factors including the age of the population and employment density of an area, and therefore GVA per FTE job (presented in Table 31.19 below) is a better indicator of the productivity of the workforce.

Table 31.18 GVA and GVA per head, 2021

Area	Total GVA (£ million)	GVA per head
Essex	£44,766	£24,031
Suffolk	£19,620	£25,701

Area	Total GVA (£ million)	GVA per head
UK	£2,040,499	£30,443
UK (excluding London)	£1,553,062	£26,671

ONS (2023b). Please Note: GVA is rounded to the nearest million £ and GVA per head is rounded to the nearest hundred.

80. Data on GVA per FTE job shows that both Essex (£73,900 GVA per FTE job) and Suffolk (£70,800 GVA per FTE job) are less productive than the national average, although this is skewed by London. When London is excluded, Essex exceeds the national average and Suffolk only marginally falls below the national average for GVA per FTE.

Table 31.19 GVA per FTE job, 2021

Area	GVA per FTE job
Essex	£73,900
Suffolk	£70,800
GB	£77,500
GB (excluding London)	£71,400

Hatch calculations based on ONS (2023b) and ONS (2022c) datasets. Please note: GVA per FTE job is rounded to the nearest hundred. Although we typically use the UK as a national comparator to match the study area, GB is used here as the BRES dataset only covers GB.

Labour Market

81. According to annual population survey (APS) data (for the period July 2022-June 2023), the economic activity7 rate of working age residents is 81% in Essex and 81% in Suffolk which is above the UK average of 79%. Similarly, the employment rate8 in Essex (77%) and Suffolk (79%) is slightly higher than the national average (76%).

Table 31.20 Economic activity/inactivity and employment rates, July 2022 to June 2023

Area	Economically Active		In Employment		Economically Inactive	
	No.	Percent Aged 16 to 64	No.	Percent Aged 16 to 64	No.	Percent Aged 16 to 64
Essex	909,800	81%	871,400	77%	218,500	19%
Suffolk	355,500	81%	347,300	79%	84,000	19%
UK	32,644,900	79%	31,405,800	76%	8,955,100	22%

ONS (2023c), Annual Population Survey

[7] The economically active population includes people who are employed or actively seeking work.
[8] The employment rate measures the number of people in employment as a proportion of the working age population.

82. According to the latest APS data, the unemployment rate in Essex (of 3.3%) and Suffolk (2.3%) are both lower than the average for the UK (3.7%).

Table 31.21 Number of unemployed residents, July 2022 to June 2023

Area	Unemployment (aged 16 to 64)	Unemployment rate (% of population aged 16 to 64)
Essex	33,100	4%
Suffolk	8,300	2%
UK	1,239,100	4%

ONS (2023c).

83. Plate 31.5 shows the trend in the claimant rate going back to the middle of 2017. Prior to the Covid-19 pandemic, the proportion of people claiming Universal Credit who are out of work in Essex[9] and Suffolk was relatively stable at around 3%. During the pandemic (2020-2021), the claimant count increased sharply in all areas, before falling steadily from August 2021 onwards. As of September 2023 the claimant rate was still above pre pandemic levels in all areas. It should be noted that Thurrock and Southend-on-Sea are presented separately from Essex in the claimant datasets. Both areas have rates that are similar to or marginally above the national average.

[9] References to Essex in the paragraph do not include Southend-on-Sea and Thurrock as these are unitary authorities and data is published for these separately.

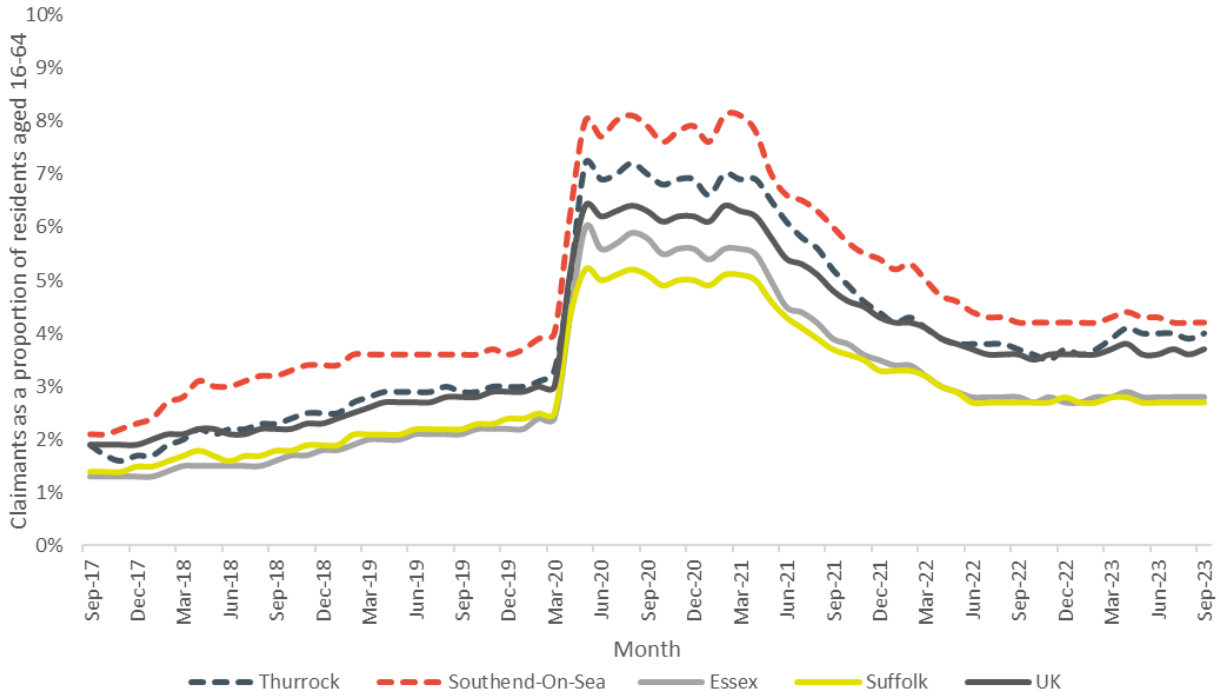

Plate 31.5 Claimant count change (2018-2023).
Source: ONS (2023d) Please note this data is not presented for the overall Essex Study area as Southend on Sea and Thurrock are presented separately from the rest of Essex in the data due to their status as unitary authorities.

31.5.3 Housing

84. The analysis of conditions in the housing market focuses on the districts within Essex and Suffolk where potential demand for housing from North Falls workers is likely to be during both construction and operational phases. Table 31.22 shows the number of premises and households in each of these areas based on the council tax records of 2023 and the 2021 Census.

Table 31.22 No. of premises and households (focused on districts within Essex and Suffolk where demand for housing from North Falls workers is likely to be)

District	No. of premises (2023)	No. of households (2021)
Colchester (Essex)	85,630	79,700
Tendring (Essex)	74,500	67,500
Maldon (Essex)	29,990	27,900
Braintree (Essex)*	69,440	65,000
Babergh (Suffolk)*	43,400	40,200
East Suffolk (Suffolk)	121,460	110,700
Ipswich (Suffolk)	62,110	59,500

District	No. of premises (2023)	No. of households (2021)
Total	486,530	450,500

Source: ONS (2023e) & ONS(2022d). *These districts have been included for the assessment of significance.

85. Table 31.23 shows over 70% of housing in the study area is owner-occupied (including households who own the property outright or with a mortgage). This is over 70% in Castle Point, Rochford, Tendring, Rochford, Maldon, Thurrock, Braintree (in Essex) and East Suffolk (in Suffolk). The areas with the highest levels of rented accommodation (either social or private rented) are Colchester and Southend in Essex, and Ipswich in Suffolk.

Table 31.23 Housing tenure

District	Owned (outright)	Owned (Mortgaged)	Shared ownership	Social rented	Private rented	Rent Free
Colchester (Essex)	34.7%	35.1%	0.5%	10.1%	19.5%	0.1%
Tendring (Essex)	49.0%	31.0%	1.0%	4.0%	15.0%	0.0%
Maldon (Essex)	47.5%	31.9%	0.8%	6.9%	12.9%	0.0%
Braintree (Essex)*	39.9%	37.4%	1.3%	9.0%	12.4%	0.0%
Babergh (Suffolk)*	34.7%	35.1%	0.5%	10.1%	19.5%	0.1%
East Suffolk (Suffolk)	50.7%	23.1%	0.3%	8.3%	17.6%	0.0%
Ipswich (Suffolk)	36.0%	30.8%	0.6%	15.1%	17.4%	0.1%
Average	41.8%	32.1%	0.7%	9.1%	16.3%	0.0%

Source: ONS (2023f)

*These districts have been included for the assessment of significance.

86. According to UK Property data (a website which aggregates data from various property websites such as Rightmove and Zoopla), as of September 2023, there were 11,955 homes on the market for sale and 1,221 homes available to rent in districts within the 45-minute drive time based study area.

87. As a percentage of the total housing stock, Tendring (5%) had the highest percentage of homes for sale, while Colchester (0.7%) had the highest percentage of homes to rent.

Table 31.24 Property type by current market stock (homes/flats available for sale) as of September 2023

	Market stock of homes for sale	Homes for sale (% of Premises)	Market stock of homes to rent	Homes for rent (% of Premises)	Total Market Stock	Total market stock (% of Premises)
Colchester (Essex)	2,368	3.44%	507	0.7%	2,875	4%
Tendring (Essex)	3,223	5.1%	186	0.3%	3,409	5%
Maldon (Essex)	1,018	3.9%	40	0.2%	1,058	4%
Braintree (Essex)*	401	1.8%	63	0.3%	464	2%
Babergh (Suffolk)*	1,424	2.8%	67	0.1%	1,491	3%
East Suffolk (Suffolk)	1,860	3.7%	166	0.3%	2,026	4%
Ipswich (Suffolk)	1,661	2.7%	192	0.3%	1,853	3%
Total (no.) / Average (%)	11,955	3.3%	1,221	0.3%	13,176	3.6%

Source: Portals & agents, Ministry of Housing, Communities & Local Government, accessed via UK Property Data (2023).

*These districts have been included for the assessment of significance. ** Rochford rental data was not available (however sales data below is available).

88. Price Paid Data shows that for the year 2022, 25,160 homes were sold in Essex and 13,019 in Suffolk (Land Registry 2023).

89. Recent trends in the housing market show that demand was strong for housing during 2021 with the peak in all local authorities for the number of house sales in Q2 2021. This aligned with the government introducing the stamp duty holiday during the Covid-19 Pandemic, which was aimed at stimulating the housing market. Since then, the number of house sales has fluctuated, before a steady decline in the number of houses being sold.

90. Absorption rates give an indication of the rate at which available homes are sold in a specific market during a given time period. This measures the total number of transactions in the latest three-month period as a percentage of current availability on the market. Typically, if the absorption rate falls below 10%, this implies an over-supply relative to demand and homes take a longer time to sell. Rates above 20% indicate a shortage of supply.

91. The average monthly absorption rates for the districts of Essex and Suffolk within a 45 minute drive of the onshore project are all under 10% for house sales, indicating an oversupply of homes on the market. However, average monthly absorption rates for the private rental market are >80% in all districts

except Colchester, indicating a significant undersupply of rental accommodation. This suggests that competition for private rented homes is very intense, which is likely to cause rents to increase.

Table 31.25 Average monthly absorption rates

	Sales	Rental
Colchester (Essex)	6%	27%
Tendring (Essex)	4%	78%
Maldon (Essex)	9%	N/A
Braintree (Essex)*	8%	117%
Babergh (Suffolk)*	4%	82%
East Suffolk (Suffolk)	5%	113%
Ipswich (Suffolk)	7%	138%
Average	6%	93%

Source: UK Property data (2023). *These districts have been included for the assessment of significance.

92. ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34) describes the existing environment in relation to the visitor economy and associated visitor accommodation. The chapter notes that the latest accommodation stock audit undertaken by Visit Britain in 2016 found there was a total of 587 serviced and non-serviced establishments in Essex County. This equates to 12,226 rooms and 55,368 bedspaces across the county. A breakdown by district is provided in Table 31.26 and Section 32.5 of ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34).

93. Table 32.19 in ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34) shows the accommodation availability around the onshore project area. This data is presented in Table 31.26 below and gives an indication of the accommodation stock that the construction workforce would have access to. Notably, during high seasons such as summertime, hotel occupancy rates are around 80% (Visit Britain, 2016), thus reducing the available rooms and bedspaces.

Table 31.26 Breakdown of serviced accommodation availability around the onshore project area

District / Borough	Number of rooms	Number of bedspaces
Colchester (Essex)	1,200	2,595
Maldon (Essex)	929	2,306
Maldon (Essex)	153	310
Braintree (Essex)	224	531
Ipswich (Suffolk)	850	1,884
Babergh (Suffolk)	838	1,871
East Suffolk (Suffolk)	349	739

District / Borough	Number of rooms	Number of bedspaces
Total	4,543	10,236

Source: Visit Britain (2016). *Please note figures are conservative estimates, assuming 30% are within reach of the onshore project area

31.5.4 Health provision

94. The General Practice (GP) data below is based on annual averages between October 2022 and September 2023. NHS Suffolk and North East Essex ICB provides primary, mental health, community and acute hospital services across Suffolk and North East Essex. GP workforce data (NHS Digital, 2023) identifies 91 GP surgeries within the NHS Suffolk and North East Essex ICB area. Together these practices employ a total of 547 FTE GPs.

95. Consultation with NHS Suffolk and North East Essex ICB (see Section 31.2) highlighted that GPs and pharmacies are under resourced. Although there may be lower numbers of residents registered with the GP compared to elsewhere, those that are registered, often suffer from complex conditions which require greater GP time (which may be linked to greater proportions of elderly people living in concentrated areas).

96. According to the data, there was an average of around 1,061,050 registered patients with GPs in the Suffolk and North East Essex ICB area. This implies that on average each GP serves 1,941 patients, which exceeds the national average (of 1,761 patients per GP) and is also above the benchmark maximum threshold (of 1,800 patients per GP) recommended by the Healthy Urban Development Unit (HUDU) (London HUDU, 2019). Consultation with NHS representatives (undertaken in March 2023) suggested that residents find the wait time of GP appointments to be too long.

97. Notably, only the districts of Mid Suffolk and West Suffolk have a ratio below the recommended threshold of 1,800 patients per GP, indicating that there are less significant capacity constraint issues in these areas when compared with the rest of the ICB area. Ipswich and Tendring face the highest pressures on GPs, with 2,144 and 2,356 patients per FTE GP respectively.

Table 31.27 GP coverage health board and the UK, August 2022- September 2023

		GP Practices	Registered patients	No. of FTE GP Practitioners	Patients per GP
Suffolk	Babergh (Suffolk)	8	94,690	50	1,876
	East Suffolk (Suffolk)	12	113,590	60	1,890
	Ipswich (Suffolk)	11	178,890	83	2,144
	Mid Suffolk (Suffolk)	9	98,630	56	1,772
	West Suffolk (Suffolk)	19	207,270	121	1,709

		GP Practices	Registered patients	No. of FTE GP Practitioners	Patients per GP
North East Essex	Colchester (Essex)	15	204,200	106	1,926
	Tendring (Essex)	17	163,790	70	2,356
NHS Suffolk and North East Essex ICB		91	1,061,050	547	1,941
England		6,393	62,425,700	35,443	1,761

Source: NHS Digital (2023a). Note the NHS workforce data only covers England and therefore the UK is not presented. Patient numbers are rounded.

98. Table 31.28 shows the location of district general hospitals in the NHS Suffolk and North-East Essex ICB area. The area is also served by a number of community hospitals and health centres.

Table 31.28 General district hospitals and health centres

Name	Location
Ipswich Hospital	Heath Road, Ipswich, Suffolk, IP4 5PD
Colchester Hospital	Turner Road, Colchester, Essex, CO4 5JL
Halstead Hospital	78 Hedingham Road, Halstead, Essex, CO9 2DL
Fryatt Hospital	419 Main Road, Dovercourt, Harwich, Essex CO12 4EX
Clacton and District Hospital	Tower Road, Clacton-On-Sea, CO15 1LH

Source: NHS Suffolk and North -East Essex ICB (2022)

99. The Handbook to the NHS Constitution for England (Department of Health & Social Care, 2022) sets an overall target of 95% of all attendees at A&E facilities to be seen, discharged, admitted and/or transferred within four hours of arrival. This standard recognises that, for 5% of patients, it may not be clinically appropriate to manage them within four hours of arrival at A&E.

100. The data for September 2023 (NHS England, 2023) shows that 73.7% of all A&E patients in England spend less than four hours waiting time. The equivalent data for the Suffolk and North East Essex ICB is marginally lower at 72.3%. There is, however, a notable disparity between the percentage of patients seen in under 4 hours in the ICB's major emergency departments (57.4%) and other emergency departments/minor injury units (98.9%). This suggests there are significant capacity constraints in the major emergency departments.

Table 31.29 A&E Patients seen in under 4 hours, 3 month average July - September 2023

	A&E patients seen in under 4 hours
England	73.7%
NHS Suffolk and North-East Essex ICB board area - overall	72.3%
Major Emergency departments (Type 1)	57.4%

	A&E patients seen in under 4 hours
Other A&E/Minor injury unit (Type 3)	98.9%

Source: NHS England (2023b)

101. Ambulance services aim to achieve the standards in the Handbook to the NHS Constitution (Department of Health & Social Care, 2022):

- Category 1 responses: Immediate response to a life-threatening condition, such as cardiac or respiratory arrest. Need immediate resuscitation and intervention to give the person the best chance of survival. The Handbook standards are set at a mean average waiting and response time of less than or equal to seven minutes, with the response time to 90% of all incidents being a maximum of 15 minutes;
- Category 2 responses: Serious conditions that do not pose an immediate risk to life, such as a heart attack or stroke, or for people suffering from sepsis or major burns. They require urgent assessment and rapid transportation, and should be responded to within 18 minutes;
- Category 3: Urgent calls such as abdominal pains, the late stages of labour, non-severe burns and diabetes. Patients will sometimes be treated in their own home. The target for services is to respond at least nine out of 10 calls within 120 minutes; and
- Category 4: Non-urgent calls such as diarrhoea and vomiting, urine infections and back pain. These less urgent calls should be responded to at least nine out of 10 times within 180 minutes.

102. Ambulance service quality indicators (NHS England, 2022) show that the East of England Ambulance Service NHS Trust (responsible for Suffolk and Essex) have response times which fall below these standards for all Category 1-4 incidents. It also has longer average response times than the England average for all categories.

Table 31.30 Ambulance response times, September 2023

NHS response category and waiting time commitments		NHS Constitution	England	East of England Ambulance service NHS Trust
Category 1	Mean average Category 1 response	7 minutes	9 minutes	9 Minutes
	Response time to 90% of Category 1 incidents	15 minutes	15 minutes	17 Minutes
Category 2	Mean average Category 2 response	18 minutes	37 minutes	45 Minutes
	Response time to 90% of Category 2 incidents	40 minutes	1 Hour, 21 Minutes	1 Hour, 38 Minutes
Category 3	Mean average Category 3 response	n/a	2 Hour, 16 Minutes	2 Hours, 19 Minutes

NHS response category and waiting time commitments		NHS Constitution	England	East of England Ambulance service NHS Trust
	Response time to 90% of Category 3 incidents	2 hours	5 Hours, 27 Minutes	5 Hours, 27 Minutes
Category 4	Mean average Category 4 response	n/a	2 Hours, 41 Minutes	3 Hours, 26 Minutes
	Response time to 90% of Category 4 incidents	3 hours	6 Hours, 25 Minutes	9 Hours, 55 Minutes

Source: NHS England (2023c) and Department of Health & Social Care (2022).

31.5.5 Onshore social and community infrastructure facilities

103. ES Figure 31.3 (Document Reference: 3.2.27) shows the locations of social community infrastructure within the LOCAI that could be affected by North Falls.

104. Table 31.31 displays further detail on the detailed onshore local social and community infrastructure facilities within the LOCAI.

Table 31.31 Social and community infrastructure facilities within the LOCAI

Name	Social community Infrastructure	Postcode	Distance from North Falls onshore project area (metres)
ACEs performance academy	School/Education	C013 0JU	16
All Saints Church	Churches	CO13 0JS	199
Great Holland Church	Churches	CO13 0JP	451
St Mary's Church	Churches	CO11 2PP	234
The First Care services	Health Services	CO13 0NJ	228
Tendring Primary School	School/Education	CO16 0BP	460
Springbank Care Home in Essex	Health Services	CO16 0BX	357
Tendring Meadows Care Home	Health Services	CO16 0BZ	311

Source: Google Maps (2023). Distance from the North Falls onshore project area (metres) is measured as the distance from the community facility (identified using postcodes) to the closest perimeter of the North Falls onshore project area. Note that Tendring Technology College and Thorpe Le Soken Police Station are located just outside the study area (575m from the onshore project area).

31.5.6 Economic value associated with local fishing sector

105. ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16) sets out the existing environment with regard to UK commercial fisheries. This shows

there is a large cockle fishery in International Council for the Exploration of the Sea (ICES) rectangle 32F1 (where the majority of the offshore project area is located including the whole offshore cable corridor and interconnector cable corridor and almost all of the array areas). While the inshore section of the offshore cable corridor area overlaps with two cockle management areas it is understood that there is no overlap between cockle beds that are being commercially targeted and the offshore cable corridor.

106. Any cockle grounds that do overlap have been closed under the Cockle Fishery Flexible Permit Byelaw for the last 10 years. The active cockle fishery contributing to the landings are in the southwest corner of ICES rectangle in 32F1 and are therefore not considered further.

107. The landings from ICES rectangle 32F1 are worth an approximate £2.78 million per year (average 2016-2020), although around half of this is from the aforementioned cockles. The main species of value are whelks, sole, lobsters, bass, thornback rays and horse mackerel.

108. Local UK vessels active in the inshore section of the study area (34F1) operate mostly from Felixstowe Ferry, West Mersea and Harwich. Given their small size (generally under 10m) and limited operational range, these vessels primarily fish grounds within the UK's 12nm limit and mostly within the 6nm limit. The main methods employed along the coastline is potting for whelks, lobster and edible crabs, trawling for sole and thornback ray, netting for sole, bass and thornback ray and at lower levels, beam trawling for sole, midwater trawling for horse mackerel, and longlining for sole, bass and thornback ray.

109. Further offshore (32F2), comparatively low landings are recorded in the study area, and of this, beam trawling and potting represent the main fishing methods. The vessels targeting this area are typically larger in size.

110. VMS data indicates low levels of fishing activity by larger vessels within the offshore project area when compared to areas to the north of the Project in the central and northern North Sea, and to the south in the English Channel.

111. In 2021 the UK commercial fishing fleet performed as follows (Seafish, 2021):

- Total income = £923m
- Operating profit: £240m
- Full-time equivalent jobs:6,835
- Active vessels: 4,269
- Total fish and shellfish caught: £921m / 651,800 tonnes

112. According to ONS employment data (ONS, 2023) In 2022 there were 53 FTEs employed in the marine fishing industry in Essex and fewer than 128 FTEs employed in the marine fishing industry in Suffolk. This represents 3.8% of the GB marine fishing industry (4,725 FTEs).

31.5.7 Economic value associated with local ports

113. Shipping and navigational impacts associated with North Falls are assessed in ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17). This assessment recognises that changes to shipping and navigation could have a

further economic impact within the local and national economy. As the ports of Felixstowe and Harwich are the largest and closest ports in the vicinity of the offshore project area, it is assumed that any potential economic impacts will be concentrated on these two ports. For this reason, the existing environment data on economic impacts of ports is collected for the ports of Felixstowe and Harwich and the aggregated data for all UK ports.

114. The ports of Felixstowe and Harwich are owned and operated by Hutchinson Ports, the world's leading port network, with 52 ports in 26 countries throughout Asia, the Middle East, Africa, Europe, the Americas and Australasia.

115. Felixstowe is the UK's busiest container port, dealing with 42% of the country's containerised trade (Port of Felixstowe, 2022), meaning it is of strategic importance for national and global supply chains.

116. On average the port handles four million twenty-foot equivalent units per annum and moves approximately 500 containers out of the port every day (BBC, 2022). In 2021, £9.2bn exports and £37.4bn imports passed through the port. More recent data shows that, in August 2022, £693m of exports and £3.82bn of imports passed through Felixstowe (OEC, 2022).

117. Although no economic impact studies are publicly available for the port of Felixstowe, Oxford Economics completed a study in 2013 (Oxford Economics, 2013) which estimates that ports in the south-east contribute approximately £1.3bn to annual GVA. This is now several years out of date but is still the most up to date estimate of the value to the regional economy.

118. The study further suggests that the sector's labour productivity is £65,400 per worker (2013 prices). As Felixstowe port supports an employment base of 2,550 people (BBC, 2022), it could be estimated that in 2022, the port of Felixstowe directly contributed more than £1.7bn to UK GVA (based on a GVA per FTE based on 2013 prices) .

119. The port will also support further economic activity as a result of supply chain and salary expenditure in the regional economy (known as indirect and induced effects). Using assumptions from the Oxford Economics study, it can be estimated that these support an additional 5,400 jobs in the South East (3,300 jobs as a result of indirect effects and 2,100 people as a result of induced effects).

120. In addition, the Port of Felixstowe also plays an important role in supporting efficient supply chains for businesses who use the port. Any disruption to its activities would therefore not just affect the port itself, but also have wider consequences for the regional economy. There are currently no studies which have assessed this, or which provide data on the geography of businesses who use the port.

121. Harwich International Port's main use is for ferry services. The port hosts daily passenger and freight services to the Hook of Holland (Netherlands); as well as freight only services to Rotterdam Europort. Approximately 1 million passengers pass through Harwich International every year, travelling on ferry services to the Netherlands.

122. Harwich International Port offers transport operators a gateway into the rest of Europe with 25 weekly Ro-Ro connections to the Netherlands.

123. As of 2010, the port was the base for the installation of the offshore Greater Gabbard and Thanet offshore wind farms, and has also been used for Gunfleet Sands Offshore Wind Farm. The operations and maintenance base for the Galloper wind farm is housed in the port and is made up of a dedicated pontoon, warehouse and office space (Hutchinson Ports Harwich International 2023).

124. Felixstowe and Harwich ports and the new Gateway 14 business park off the A14, have unified to form Freeport East. Freeport East is one of eight new Freeports in England announced by the Chancellor of the Exchequer on 3 March 2021. The Freeport is proposed to be a hub for global trade and national regeneration as well as creating a hotbed for innovation that is proposed to have impact across the UK (Freeport East 2021).

31.5.8 Local minerals resources and associated economic activity

125. As described in ES Chapter 19 Ground Conditions and Contamination (Document Reference: 3.1.21), there are a number of Mineral Safeguarding Areas, and a Mineral Consultation Area located within the onshore project area.

126. In terms of employment supported in the mining and quarrying sector there are 75 FTE jobs within this sector in Tendring (0.2% of total FTE jobs). This is a higher proportion than is found in Essex (0.04% of total jobs or around 255 FTE jobs) and GB (0.2% of total jobs or around 46,625 FTE jobs) (ONS 2023a).

127. According to the ONS data all the mining and quarrying sector jobs within Tendring are linked to the operation of gravel and sand pits (mining of clays and kaolin) sub sector.

128. Given the relatively small scale of jobs supported by the sector the economic value associated with the sector is also likely to be relatively small. It should be noted that it is typical for a relatively large amount of economic value to be generated per employee in this sector. This is because the sector is typically more capital intensive than other sectors.

31.5.9 Anticipated trends in baseline conditions

31.5.9.1 Future population

129. According to ONS 2018-based population projections, by 2033 there will be an additional 123,000 residents in Essex, 43,600 additional residents in Suffolk and 3.8 million additional residents in England. This is an increase in the population of 8% in Essex, 6% in Sussex and 7% nationally compared with the base year (2018).

130. In Essex, the working age population (aged 16 to 64) is expected to increase at a faster rate (5%) than the national average (3%) over the period 2018 to 2033. In contrast, Suffolk's working age population is expected to decline by 1% compared with the base year. A decline in the working age population raises some concerns for future economic growth as it means the size of the workforce available to employers in Suffolk may shrink, thus making it harder for employers to recruit the workers they need to grow.

131. The population aged 65 and over is expected to increase by 27% in Essex and 32% in Suffolk, representing an additional 81,000 and 57,000 residents respectively by 2033. Both areas follow the same pattern as national trends

where it is estimated that the population aged 65+ will increase by 32% resulting in a total of about 3.2 million residents by 2033.

Table 31.32 Population Projections, Change in Population, 2018 to 2033

Area	Aged 0-15		Aged 16-64+		Aged 65+		Total Population	
	No. (000s)	% Change	No. (000s)	% Change	No. (000s)	% Change	No. (000s)	% Change
Essex	2.2	0.8%	40.3	4.5%	80.6	26.6%	123.3	8.3%
Suffolk	-8.3	-6.1%	-4.6	-1.0%	56.6	32.2%	43.6	5.8%
England	-455.0	-4.2%	1,041	3.0%	3,229	31.7%	3,815	6.8%

Source: ONS (2020). Note the UK is not presented here as population projections are undertaken separately, at different times, across England, Wales, Scotland and Northern Ireland.

31.5.9.2 Economic forecasts

132. The OBR forecasts from March 2023 (see Plate 31.6), predicted inflation to fall to 2.9% by the end of 2023. Similarly, the outlook for (GDP) improved from previous forecasts, with a compound growth rate of 3.5% p.a. in the middle of the decade, before easing back to 1.75% p.a. by the end of the OBR forecast (2028). The OBR estimates unemployment levels will peak at 4.4% in 2024, coinciding with GDP growth slowing, before falling to the estimated structural rate of 4.1% by the end of the forecast period. Conversely, the employment rate was predicted to fall to a low of 60% in Q2 2024 before recovering to almost 60.5% by the end of the forecast period to 33.8 million people in employment, 900,000 higher than pre-pandemic levels (OBR, 2023).

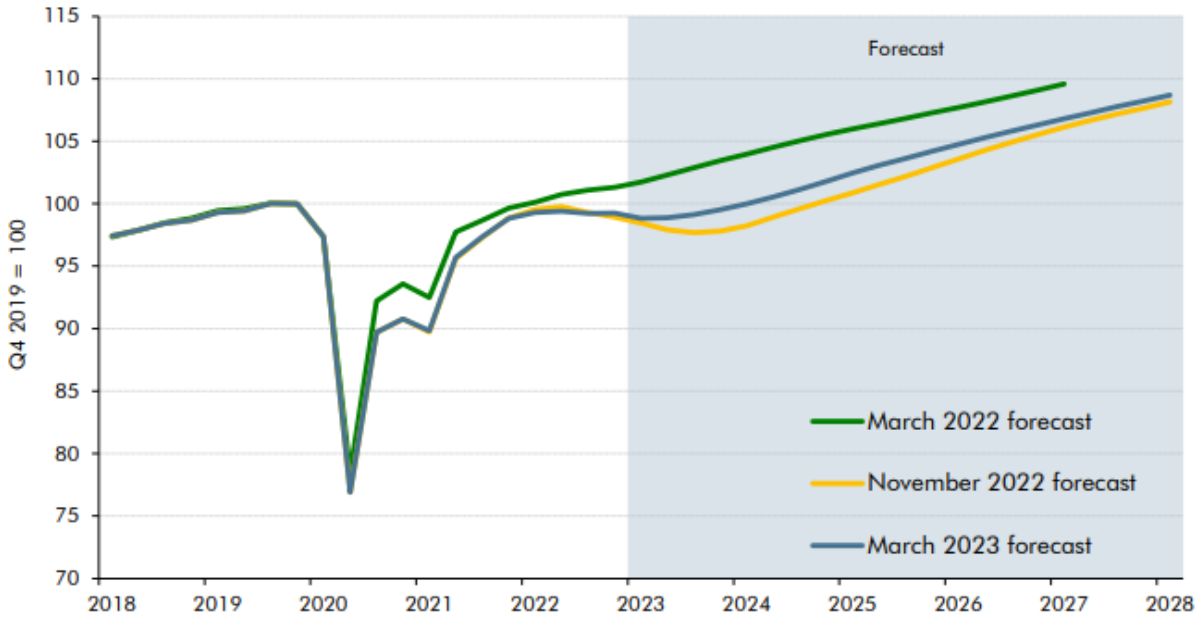

Plate 31.6 UK Economic Forecasts- Real GDP, March 2023.
Source: OBR (2023).

133. The latest economic forecasts (Essex County Council, 2021) for Greater Essex (see Plate 31.7) show a strong recovery in GVA following the contraction as a result of the Covid-19 pandemic (compound growth rate of 3.3% per annum

from 2020 to 2024 slowing to 1.6% per annum after 2024). It should be noted that this does not account for economic shocks experienced in 2022 (i.e., the Ukraine War and the cost of living crisis). Employment was anticipated to continue to grow at a consistent rate of 0.6% per annum.

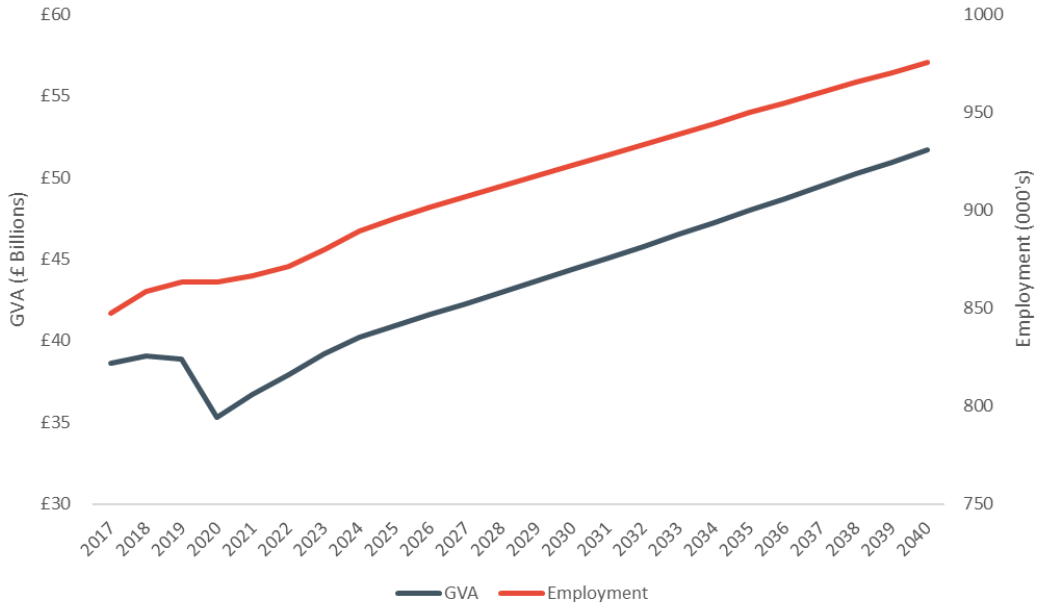

Plate 31.7 Cambridge Econometrics Projections for Essex, March 2021.
Source: Essex County Council (2021f).

134. The latest economic forecasts for Suffolk taken in 2019 predate the pandemic and are therefore of limited value, and therefore have not been analysed here.

31.5.9.3 Cost of living

135. Inflation reached a record high level of 11% at the end of 2022. Since then inflation rates have fallen considerably and are expected to continue falling in 2024 to a level closer to the Bank of England's 2% target rate.

31.5.9.4 Brexit

136. The OBR note that the trading relationship between the UK and EU, as set out in the 'Trade and Cooperation Agreement' (TCA) came into effect on 1 January 2021, and initial predictions from the OBR outlined that they predicted the TCA would reduce long-run productivity by 4% relative to remaining in the EU. Two years on from this deal, and the OBR have not revised this view (OBR, 2023).

31.5.9.5 Offshore wind sector

137. It is anticipated that the offshore wind sector will continue its growth trajectory towards the Government's policy objective of building towards an overall generation capacity of 50GW by 2030. Continued growth of the sector may mean there is continued growth and strengthening in the supply chain and skills base.

31.5.9.6 Climate change

138. Under a moderate climate change scenario, the health of the local, UK and global population may be adversely affected by reduced food production, warmer temperatures and increased natural disasters. The impacts of climate change are described in more detail within: ES Chapter 20 Air Quality (Document Reference:3.1.22), ES Chapter 21 Water Resources and Flood Risk

(Document Reference: 3.1.23), ES Chapter 28 Human Health (Document Reference: 3.1.30) and ES Chapter 33 Climate Change (Document Reference: 3.1.35).

31.6 Assessment of significance

139. The economic impact figures (i.e., impacts 1-2 for construction and operational phases and the impacts set out for the decommissioning phase) are based on the assumptions and results set out in ES Appendix 31.1 (Document Reference: 3.3.70) and the Addendum to ES Appendix 31.1 (Document Reference: 3.3.70) North Falls Economic Impact. The results are presented for three scenarios which make the following assumptions:

- Worst case scenario: representing an outcome where UK suppliers are uncompetitive;
- Baseline scenario: the most likely outcome based on the information available; and
- Enhanced scenario: an optimistic but plausible outcome.

140. A full methodology of the economic impact study is provided in ES Appendix 31.1 (Document Reference: 3.3.70), undertaken by BVG. The study started by building a supply chain narrative, assessing the potential to use local and national suppliers. This narrative was then used to undertake a local and UK content assessment to gauge the level of expenditure that could be retained both locally and nationally. Economic impact modelling was undertaken using methods developed specifically for the offshore wind sector. The results were then validated using over 10 years of UK offshore wind farm local and UK content data. An addendum, to the appendix, produced by Hatch was then produced to account for the Project optionality and the worst case scenario for economic benefits.

141. Figures presented in ES Appendix 31.1 (Document Reference: 3.3.70) were then used to derive results in the Addendum to ES Appendix 31.1 (Document Reference: 3.3.70) North Falls Economic Impact which are then used in the ES assessment. It should be noted that:

- The ES chapter assessment excludes onshore infrastructure economic benefits of North Falls as there is no onshore infrastructure in the worst case scenario for employment and GVA impacts (see Table 31.4). For stakeholder information the combined offshore and onshore impacts are presented at the beginning of Sections 31.6.1 and 31.6.2.
- ES Appendix 31.1 (Document Reference: 3.3.70) does not distinguish between onshore and offshore in the same way as is done for the chapter and therefore figures are equivalent but presented differently within this chapter. The distinction between offshore and onshore impacts was required for the DCO application to account for the consideration of the realistic worst case scenario for both North Falls alone and the cumulative effects of North Falls developed with Five Estuaries.
- As outlined in Section 5.4 of ES Chapter 5 Project Description (Document Reference: 3.1.7), optionality is required in order to future-proof the DCO. One area of optionality is in relation to the national grid connection point. As

discussed in ES Chapter 1 Introduction (Document Reference: 3.1.3), NFOW is committed to working with the Department for Energy Security and Net Zero (DESNZ) to explore grid connection options as part of the Offshore Transmission Network Review (OTNR) process. The design basis for the ES includes both onshore connection and offshore connection. The worst case scenario in terms of economic benefits (jobs and GVA) is the offshore grid connection as there would be limited onshore infrastructure and therefore fewer opportunities for local businesses and residents during construction.

- The local employment and GVA quantified in the assessment of impacts 1-2 are based on the use of local businesses in the supply chain and therefore the assessment of impacts 1-4 does not include employment of workers who are usually based outside of the local study area but have temporarily moved in to work in the study area.
- This assessment should be considered alongside the existing evidence of the scale of local economic benefits from other operational offshore wind farms in close proximity to North Falls. For example, North Falls' sister project, Greater Gabbard represents a £1.5 billion investment and has created hundreds of jobs during construction as well as 100 long-term new roles (at its operations and maintenance base in Lowestoft) and has utilised a number of local firms in the supply chain.
    - Of the 100 new recruits to the Greater Gabbard operations base, 95% were from the local area and since inception, more than 10 local apprentices have graduated from the wind farm's apprentice training scheme as wind turbine and balance-of-plant technicians. Greater Gabbard also offered junior engineer roles in disciplines including electrical engineering, supervisory control and data acquisition engineering and control & instrumentation. Ex-fishermen have been employed on Crew transfer vessels as part of the drive to find locally skilled people to fill requirements for roles. North Falls will similarly provide contracting opportunities for local companies and career opportunities for local people throughout each phase of its lifecycle (North Falls, 2022).

142. With these caveats in mind, the economic benefits of the development could in reality be significantly higher than the results for the realistic worst case scenario presented in this assessment.

31.6.1 Likely significant effects during construction

143. The assessment of economic benefits uses the impacts presented in ES Appendix 31.1 (Document Reference: 3.3.70) to assess onshore and offshore construction effects of North Falls alone with onshore infrastructure connection. However, the realistic worst case scenario in terms of jobs creation and economic benefits is the development of Option 3 offshore connection. This is considered in the assessment below.

144. It should be noted that the scale of annual employment and GVA impacts varies considerably over the seven year development and construction period, with

impacts considerably higher during the period in which onshore and offshore infrastructure is being constructed.

145. The BVG report (ES Appendix 31.1, Document Reference: 3.3.70) assumes peak impacts during the construction phase will occur in the penultimate year of construction (year six). As is evident in Table 31.33 the combined offshore and onshore peak impacts are estimated to be significantly higher than annual average impacts. For the purpose of the assessment, the average annual impact across the seven year development and construction period is used to assess the magnitude of employment and GVA impacts.

146. For stakeholders benefit, the results of the assessment of both onshore and offshore are presented upfront in this section for North Falls alone, assuming an onshore infrastructure connection for the baseline and enhanced scenarios and offshore connection for the worst case scenario for comparison. The average per annum and peak annum combined onshore and offshore GVA and employment impacts during the seven year development and construction period are shown in Table 31.33 below.

Table 31.33 Average and peak GVA and employment impacts generated per annum during the development and construction phase (including onshore and offshore infrastructure)

	Worst Case Scenario (£ million)		Baseline Scenario (£ million)		Enhanced Scenario (£ million)	
GVA impacts						
UK impact						
	Annual average impact	Peak annual impact	Annual average impact	Peak annual impact	Annual average impact	Peak annual impact
Direct GVA	£3.4	6.4	£28.7	£43.5	£44.9	£86.3
Indirect GVA	£1.5	6.3	£14.0	£43.1	£25.3	£88.9
Total GVA	£4.9	12.7	£42.7	£86.7	£70.2	£175.2
Local Impact (Essex & Suffolk)						
	Annual average impact	Peak annual impact	Annual average impact	Peak annual impact	Annual average impact	Peak annual impact
Direct GVA	£0.5	1.3	£5.0	£10.3	£5.1	£10.5
Indirect GVA	£0.2	0.9	£2.1	£10.4	£2.2	£10.6
Total GVA	£0.7	2.2	£7.1	£20.6	£7.3	£21.2
Employment impacts						
UK impact						
	Annual average impact	Peak annual impact	Annual average impact	Peak annual impact	Annual average impact	Peak annual impact
Direct jobs (FTE)	40	90	380	840	530	1,340

	Worst Case Scenario (£ million)		Baseline Scenario (£ million)		Enhanced Scenario (£ million)	
Indirect jobs (FTE)	10	45	120	420	200	700
Total Direct + Indirect Jobs (FTE)	50	135	500	1,260	730	2,030
Local Impact (Essex & Suffolk)						
	Annual average impact	Peak annual impact	Annual average impact	Peak annual impact	Annual average impact	Peak annual impact
Direct jobs (FTE)	6	15	60	160	70	170
Indirect jobs (FTE)	1	7	20	80	20	80
Total Direct + Indirect Jobs (FTE)	7	21	80	240	80	250

Based on calculations by BVG Associates. Figures may not sum as rounding has been applied.

31.6.1.1 Impact 1: Economic value

147. Table 31.34 summarises the potential annual GVA benefits supported by the development and construction of Option 3 offshore connection of North Falls. The impacts are presented for both the UK and the local (Essex and Suffolk) study area. As explained in Table 31.3, the offshore GVA benefits are assessed for the combined area of Essex and Suffolk due to the uncertainty involved in disaggregating GVA impacts between the two areas.

Table 31.34 Average GVA impacts generated per annum by offshore development and construction activity

	Worst Case Scenario (£ Million)	Baseline Scenario (£ Million)	Enhanced Scenario (£ Million)
UK impact			
Direct GVA	£3.4	£11.2	£26.8
Indirect GVA	£1.5	£5.5	£15.1
Total GVA	£4.9	£16.8	£41.9
Local Impact (Essex & Suffolk)			
Direct GVA	£0.5	£0.5	£0.6
Indirect GVA	£0.2	£0.2	£0.3
Total GVA	£0.7	£0.8	£0.9

Based on calculations by BVG Associates. Figures may not sum as rounding has been applied

148. This shows that average GVA impacts for the UK are expected to range from £4.9m to £41.9m per annum over the seven-year development and construction phase. Of this, less than £1 million per annum is expected to be captured by

businesses in Essex or Suffolk that access supply chain opportunities, with only a minor difference between the three scenarios. ES Appendix 31.1 (Document Reference: 3.3.70) shows that the greatest opportunities for local suppliers to benefit relate to offshore engineering, permitting and electrical activities.

31.6.1.1.1 Magnitude of impact

149. The assessment of magnitude is based on the worst case scenario impacts set out in Table 31.34. The magnitude of impact is set out in Table 31.35 below.

150. Based on a total GVA of £1,950 billion in the UK in 2020, North Falls' annual GVA contribution of c. £5 million per annum will represent below 0.1% of the current baseline. On this basis, the magnitude of impact of the Project on GVA at the UK national level is assessed as negligible.

151. If the more optimistic enhanced scenario is considered, the increase in GVA would also represent a below 0.1% increase on the current baseline and therefore still be assessed as negligible.

152. At the Essex and Suffolk level, the £0.9 million p.a. of GVA supported during North Falls' development and construction phase represents an increase of 0.001% from the current baseline. On this basis, the magnitude of impact of offshore construction activity on employment within the local study area is assessed as negligible. This would also be the same in the enhanced scenario.

Table 31.35 Assessment of magnitude of GVA impact related to offshore development and construction activity

	Realistic Worst Case Scenario GVA Impact	Existing Environment GVA	% Change	Magnitude of Impact
Local study area (Essex & Suffolk)	£0.7 million	£64.4 billion	0.001%	Negligible
UK	£4.9 million	£2,040 billion	0.0003%	Negligible

31.6.1.1.2 Sensitivity

153. Economic growth 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 (economic output) is assessed as high at the local level (Essex and Suffolk) and the UK level.

31.6.1.1.3 Significance of effect

154. With the sensitivity of the receptor assessed as high, and the magnitude of impact assessed as negligible at the UK national level, the effect of the Project is assessed as minor beneficial, which is not significant in the EIA terms. This conclusion is the same at the local level.

155. It is assumed that the effect on the economy generated during the North Falls development and construction phase is direct and temporary in nature.

31.6.1.2 Impact 2: Employment

156. Table 31.36 summarises the potential average annual (FTE) employment effects during development and construction of offshore infrastructure under the offshore connection scenario. The impacts are presented for both the UK and the combined local study area comprising both Essex and Suffolk.

Table 31.36 Potential employment impacts generated per annum by offshore development and construction activity (FTEs)

	Worst Case Scenario	Baseline Scenario	Enhanced Scenario
UK impact			
Direct jobs (FTE)	40	150	290
Indirect jobs (FTE)	10	50	120
Total Direct + Indirect Jobs (FTE)	50	190	410
Local Impact (Essex & Suffolk)			
Direct jobs (FTE)	6	6	7
Indirect jobs (FTE)	1	2	2
Total Direct + Indirect Jobs (FTE)	7	8	9

Based on calculations by BVG Associates.

Some totals may not add up due to rounding. Impacts have been rounded to the nearest 10 FTEs unless FTEs are <10. In this case, they have been rounded to the nearest 1 FTEs.

Total (FTE) jobs provided in the table above do not include any jobs that are based outside of the UK. This includes any jobs required to support onshore/ offshore construction which may be required to temporarily be based in the UK.

157. At the UK level, it is estimated that the offshore development and construction activity will support between 50 and 410 FTE jobs per annum over the assumed seven-year development and construction period.

158. Of these, it is estimated that less than 10 FTE jobs will be located within the local study area (Essex and Suffolk). The economic study (ES Appendix 31.1, Document Reference: 3.3.70), identifies that the greatest opportunities for local employment benefits relate to offshore developing, engineering and permitting activities and offshore electricals. Analysis of local supply chain capability undertaken as part of the existing environment analysis (see Section 31.5), also showed that both Essex and Suffolk have a high concentration of employment in several relevant sectors.

31.6.1.2.1 Magnitude of impact

159. The assessment of magnitude is based on the worst case scenario impacts set out in Table 31.36. The magnitude of impact is set out in Table 31.37 below.

160. For the UK study area, the worst case scenario based 50 FTE jobs per annum supported by offshore development and construction activity represents below 0.1% of the current baseline. On this basis, the magnitude of impact for the UK is assessed as negligible. If the more optimistic enhanced scenario (410 FTE jobs per annum) is considered the increase in employment would still represent a below 0.01% increase on the current baseline and would therefore still be assessed as negligible.

161. At the local level, the 7 FTE jobs supported during the development and construction phase would represent an increase of 0.001% above the current

baseline. On this basis, the magnitude of impact for the local area is assessed as negligible.

162. The development and construction phase is assumed to last seven years. It is therefore assumed that the impact of increased employment during the development and construction phase is temporary and short-term in nature.

Table 31.37 Assessment of magnitude of employment impact related to offshore development and construction activity

	Realistic Worst Case Scenario Employment Impact (FTEs)	Existing Environment Employment (FTEs)	% Change	Magnitude of Impact
Essex and Suffolk study areas	7	899,000	0.001%	Negligible
UK	50	26,919,000	0.0002%	Negligible

31.6.1.2.2 Sensitivity

163. As noted in Section 31.1, job creation is a high priority in both national and local policies and strategies. However, given that the current rate of unemployment and inactivity in the local study area is low (particularly in Suffolk, which has very low unemployment rate of 2%), the sensitivity of receptor at the local level (Essex and Suffolk) is assessed as medium locally and high for the UK.

31.6.1.2.3 Significance of effect

164. At the UK level, with the sensitivity of the receptor assessed as high and the magnitude of impact assessed as negligible, the significance of effect is assessed as minor beneficial. This is not considered to be significant in EIA terms.

165. At the local level (Essex and Suffolk), with the sensitivity of the receptor assessed as medium and the magnitude of impact assessed as negligible, the significance of effect is assessed as minor beneficial. This is not considered to be significant in EIA terms.

166. It is assumed that the employment impact supported during the development and construction phase are temporary and short-term in nature.

31.6.1.3 Impact 3: Pressure on local onshore infrastructure and services (housing and health)

167. The assessment of pressure on local onshore infrastructure and services considers the maximum impact and is therefore based on the peak employment impacts rather than annual averages. It should be noted that employment impacts vary significantly across the development and construction phase and the worst case for this impact is based on an onshore connection scenario (see Table 31.4).

168. Peak construction demand for onshore workers has been determined to be a total of 471 workers under worst case assumptions.

169. Under the maximum impact scenario, the construction of North Falls would see up to 471 workers involved in installation and commissioning activities of onshore infrastructure. Offshore workers are assumed to be accommodated on

construction vessels. It is assumed that the vast majority of non-local workers will not bring family members with them to the local area due to the temporary nature of the work.

170. The 471 non-local jobs are anticipated to be broken down by 326 workers for landfall and onshore cable route works and a further 145 for onshore substation works. A worst case assumption is that 91%, or 429 workers will be non-local workers. As noted in Table 31.4 this assumption is based on the sourcing assumptions set out in ES Appendix 31.1 (Document Reference: 3.3.70).

171. It is expected that non-local workers would be prepared to travel up to 45 minutes to reach construction sites. Thus, in addition to the Tendring District, the non-local workforce is assumed to locate in Colchester Borough, Maldon District, and Braintree District in Essex County and Ipswich Borough, Babergh District, and East Suffolk District in Suffolk County.

172. The impact on reductions in tourist accommodation availability due to a non-local based workforce is assessed within ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34) as negligible. As construction workers are expected to primarily use temporary visitor accommodation (onshore) or accommodation vessels (offshore) there is therefore likely to be very low demand for private rented or owner occupied housing during the construction phase of North Falls.

31.6.1.3.1 Magnitude of impact

173. The influx of construction workers may require basic health services when they are in the local area, they may also require public ambulance, GP and hospital services in very limited and urgent circumstances.

174. It is expected that the vast majority of the 429 non-local onshore construction workers and offshore construction workers would not register with a local GP while staying in visitor accommodation or offshore vessels due to the temporary nature of their stay.

175. However, using benchmark estimates of 1,800 patient registrations per one FTE GP (developed by the London Healthy Urban Development Unit (HUDU), 2019), it is estimated that an additional 429 non-local construction workers (if all they were to register) would generate demand for less than 0.3 FTE GPs. To put this into context there are:

- 12 GP practices and 60 FTE GPs in East Suffolk;
- 17 GP practices and 70 FTE GPs in Tendring;
- 15 GP practices and 106 FTE GPs in Colchester;
- 11 GP practices and 83 FTE GPs in Ipswich; and
- 8 GP Practices and 50 FTE GPs in Babergh.

176. Even when assuming a more localised unrealistic worst case where all FTE workers demanded GP services of one doctor located in Tendring, then this would still only represent a demand for less 0.4% of Tendring's FTE GP capacity.

177. People who are in work, active and of working age will generally have a lower demand for other health services such as A&E. Due to the scale of workforce

and the anticipated health profile of construction workers, the non-local construction workforce is therefore not anticipated to generate substantial demand for other healthcare (such as demand for ambulance services).

178. Given the very limited scale of increase in demand set out above the magnitude of impact is assessed as negligible in the context of the study area (East Suffolk, Tendring, Colchester, Ipswich and Babergh).

179. The magnitude of impact on housing (private rented and owner occupied) would also be negligible for the reasons set out above.

31.6.1.3.2 Sensitivity

180. Given the demand and availability of accommodation set out in Section 31.5, the findings of ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34) on accommodation during the construction phase (negligible significance of effect) and the lack of onshore construction workers requirement for rented accommodation the sensitivity of the accommodation receptor can be assessed as high for the private rented sector and medium for the owner occupied sector.

181. The sensitivity for housing is be based on an assessment of pressures in the housing market, given the housing data and absorption rates presented in Section 31.5.3.

182. Tendring has the highest potential to experience increased demands on healthcare infrastructure due to the location of onshore and local ports infrastructure, which means this is the location which non-local construction workers are most likely to migrate to.

183. The overall position with regards to health facilities in Essex and Suffolk is set out in more detail in Section 31.5. This indicates that that a high proportion of Accident and Emergency (A&E) patients are having to wait longer than the minimum target times and the local area is exceeding national average ambulance wait times. Tendring has the highest patients per GP of 2,206 patients per GP with Colchester and Ipswich also exceeding 2,000 patients per FTE GP. This suggests there are significant capacity constraint issues in North East Essex and Ipswich. On this basis, the sensitivity of the health care receptor is assessed as high.

31.6.1.3.3 Significance of effect

184. There is negligible magnitude of impact predicted on the housing (private rented and owner occupied accommodation) receptor and effects on visitor accommodation are considered in ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34). The sensitivity is assessed as high for private rented accommodation and medium for owner occupied accommodation. The significance of effect on housing infrastructure is therefore minor adverse for private rented accommodation and minor adverse for owner occupied accommodation.

185. With the sensitivity of the health care receptor assessed as high and the magnitude of impact on health care assessed as negligible, the significance of effect of the Project on pressure on infrastructure due to the influx of construction workers is therefore assessed as minor adverse.

186. The effects on housing and health infrastructure are not considered to be significant in EIA terms.

31.6.1.4 Impact 4: Onshore disturbance (noise, air, visual, and traffic) to social and community infrastructure facilities.

187. This section considers the extent to which onshore construction activity related to North Falls may have a direct effect on social and community infrastructure facilities located within 500 m of the North Falls onshore project area (defined as the LOCAI). This assessment draws primarily on the assessment of the following aspect chapters submitted as part of the North Falls ES assessment:

- ES Chapter 20 Onshore Air Quality (Document Reference: 3.1.22);
- ES Chapter 26 Noise and Vibration (Document Reference: 3.1.28); and
- ES Chapter 27 Traffic and Transport (Document Reference: 3.1.29).

188. The assessment presented in ES Chapter 30 Landscape Visual Impact Assessment (Document Reference: 3.1.32) is not considered further in the assessment of magnitude of impact because:

- There is no social community infrastructure identified within 500m of the substation;
- Visual effects along the cable route and landfall are considered to be short term, reversible and transient in nature (i.e. the cable route construction takes place over a relatively short time period) – so much so that effects at particular locations/viewpoints were not considered, it was only the effects on landscape character that were assessed in ES Chapter 30 Landscape Visual Impact (Document Reference: 3.1.32) (assessed as negligible).

31.6.1.4.1 Magnitude of impact

189. There is potential disruption to social community infrastructure related to construction traffic. For example construction vehicles which may use up parking spots usually used to access social community infrastructure, could cause traffic delays when users of social community infrastructure are travelling to use the social community infrastructure or could cause noise disruptions to the social community infrastructure premises.

190. ES Chapter 27 Traffic and Transport (Document Reference: 3.1.29) includes an assessment Of amenity, severance, highway safety and driver delays impacts during the construction phase. With the application of additional mitigation measures (limit HGV numbers to no greater than the average HGVs per link, Enhanced maintenance measures as well as enhanced driver inductions) the residual effect upon all receptors was assessed to be not significant in EIA terms.

191. ES Chapter 26 Noise and Vibration (Document Reference: 3.1.28) assessed the noise and vibration effects of the construction of North Falls. With the application of Best Practicable Means and additional mitigation measures to be specified in the final Code of Construction Practice, the residual effect upon all receptors was assessed to be not significant in EIA terms.

192. ES Chapter 20 Onshore Air Quality (Document Reference: 3.1.22) determines that the residual effects during the construction phase are assessed as not significant for all of the impacts assessed.

193. The baseline analysis of the existing environment (Section 31.5) has identified social and community infrastructure facilities located within a 500 m buffer from the onshore project area (defined as the LOCAI), which includes education facilities, greenspace/playground facilities, churches, health facilities, and one police station. Leisure and nature facilities and allotments are not considered here as they are considered to be recreational assets.

Table 31.38 Magnitude of impact on users of social and community infrastructure facilities within the LOCAI impacted by onshore construction activity of North Falls

Name	Distance from North Falls onshore project area (metres)	Magnitude of impact	Justification
ACEs performance academy	16	Negligible	Given the close proximity of the social impact receptor to the North Falls onshore project area (within 100m) it is recognised there could be a risk of disturbance to the receptor. Importantly this risk is reduced as: No residual effects greater than minor adverse were found in the traffic and transport assessment. Following mitigation, the assessment of effects related to noise and air quality found no significant residual effects.
Tendring Primary School	460	Negligible	As distance from the Project increases, the potential for impact disruption related to noise, air and visual impacts are significantly reduced. In addition, following mitigation the assessments related to noise and air quality found no significant residual effects. In addition, no residual effects greater than minor adverse were found in the traffic and transport assessment. Therefore, traffic disruption to users of social community infrastructure is predicted to be minimal. There are a number of projects located over 150 m from the North Falls onshore project area. Given the assessments of potential for disturbance related to noise, air, visual and traffic, the social and community receptors greater than 150m from the Project are not anticipated to experience any adverse impacts related to construction activity.
Great Holland Church	451	Negligible	
The First Care Services (The Firs)	228	Negligible	
All Saints Church	199	Negligible	
St Mary's Church	234	Negligible	
Tendring Meadows Care Home	311	Negligible	
Springbank Care Home in Essex	357	Negligible	

Note: Distance from the North Falls onshore project area (metres) is measured as the distance from the community facility (identified using postcodes) to the closest perimeter of the North Falls onshore project area. Magnitude of impact has been assessed assuming relevant mitigation measures identified in other topic chapters are implemented.

31.6.1.4.2 Sensitivity

194. The current position with regards to the social and community infrastructure in the LOCAI is set out in the baseline analysis (See Section 31.5.5).

195. The Local Plan for Tendring (Tendring District Council, 2017) emphasises the importance of community infrastructure within the LOCAI:

"It is important that local communities are supported by a range of community facilities as they provide local employment opportunities, are a focal point for community life and can reduce the need for people to travel long distances for essential goods and services. The loss of community facilities can have a substantial impact on people's quality of life, wellbeing and overall viability of the local area. With the growing number of older people in Tendring District, access to locally based facilities will become increasingly important to ensure sustainable communities. The council will expect new development to retain, and where practicable, improve existing local community facilities. It is important that these are integrated into the design of new development where practicable."

196. In particular regard to Education and Health, the local plan states that Tendring District Council wishes to improve and provide good quality educational opportunities and prospects for Tendring's residents and work with partners to ensure adequate provision of healthcare facilities to support growing communities.

197. Given the importance of social and community infrastructure facilities on community sustainability and well-being, the sensitivity of all receptors located within the LOCAI is therefore assessed as medium.

31.6.1.4.3 Significance of effect

198. As outlined in Table 31.11, the significance of effect is determined by considering its sensitivity alongside the magnitude of impact, giving the results in Table 31.39.

Table 31.39 Assignment of significance of residual effect on users of social and community infrastructure facilities within the LOCAI impacted by onshore construction activity of North Falls

Name	Sensitivity	Magnitude of impact	Significance of effect
ACEs performance academy	Medium	Negligible	Minor adverse
Great Holland Church			
The first Care Services (The Firs)			
Tendring Primary School			
All Saints Church			
St Mary's Church			
Tendring Meadows			

Name	Sensitivity	Magnitude of impact	Significance of effect
Springbank Care Home in Essex			
Thorpe Le Soken Police Station			
Nanny Jo's Day Nursery			
Tendring Technology College			

199. It is assumed that the effect on social and community infrastructure facilities sustained during North Fall's development and construction phase is indirect and temporary in nature.

31.6.1.5 Impact 5: Wider economic effects from disruption to shipping and navigation

200. The assessment of wider economic effects from disruption to shipping and navigation is related to the potential for North Falls to impact negatively on the economic value associated with major local ports (Felixstowe and Harwich). All other ports have been scoped out of the assessment due to the proximity ports to North Falls, shipping lane patterns and the level of economic activity associated with other local ports in comparison to the ports of Felixstowe and Harwich.

31.6.1.5.1 Magnitude of impact

201. For the purposes of the ES assessment, the reasonable worst-case scenario is to assume the parameters set out in Table 15.2 ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17).

202. For all of the impacts assessed in the shipping and navigation assessment are assessed as tolerable and as low as reasonably practicable or broadly acceptable.

203. Particularly relevant is the assessment on the impact on vessels transiting to/from local ports in the area, including use of approach channels, port operations and pilotage. This impact is assessed as being tolerable and as low as reasonably practicable assuming the implementation of the Navigation Installation Plan.

204. For the purposes of this assessment it is therefore assumed that ships will be able to access the ports of Felixstowe and Harwich. Overall, imports and exports entering the port, ferry and transport services will be largely unaffected as alternative routes can be used.

205. As noted in Section 31.5, it is estimated the Port of Felixstowe directly contributed around £1.7bn to UK GVA in 2022 (2013 prices) and Harwich is an internationally important port for connecting to the Netherlands.

206. Given the assumptions set out above the assessment finds that there would be a negligible magnitude of impact on the scale of employment and GVA linked to ports of Felixstowe and Harwich resulting from the construction of North Falls at both the local (Essex and Suffolk) and UK levels.

207. In addition, if there were any negative impact it is unlikely this would have an impact on the national level of imports and exports and ferry/cruise and Ro-Ro

services due to access to other major ports across the UK. However, it should be noted that there is potential for a greater economic impact at a Essex and Suffolk level. The other major ports in the South East, London and the rest of the East of England include the Port of London and The Port of Dover, no other port in England is as big as Felixstowe in terms of container port traffic.

31.6.1.5.2 Sensitivity

208. When considered together Harwich and Felixstowe are part of Freeport East and are a major source of jobs and GVA to the UK. They form an essential element of the UK's port infrastructure, with Felixstowe dealing with 48% of the country's container trade and Harwich acting as a major link to the Netherlands. Given the importance of ports to the economic growth in the local and national context and the policy priority placed on economic growth at local and national levels (as noted in Section 31.4.1), the sensitivity is therefore assessed as high at both the local (Essex and Suffolk) and UK level.

31.6.1.5.3 Significance of effect

209. With the sensitivity of the receptor assessed as high, and the magnitude of impact assessed as negligible at the local (Essex and Suffolk) and UK national level, the effect of North Falls is assessed as minor adverse, which is not significant in EIA terms.

210. It is assumed that the wider economic effects from disruption to shipping and navigation during the North Falls development and construction phases is indirect and temporary in nature.

31.6.1.6 Impact 6: Wider economic effects from disruption to fishing

31.6.1.6.1 Magnitude of impact

211. Disruption to fishing activity has the potential to lead to economic effects to the fishing industry and economic agents that are closely tied to the fishing industry. This would mainly occur if the volume or value of the Essex and Suffolk catch reduced or the impacts led to increases in costs of the catch.

212. ES Chapter 14 Commercial Fisheries 3.1.16) assesses the magnitude of a variety of impacts during the construction phase of North Falls that may influence both the volume and the value of the catch across Essex and Suffolk coasts:

213. Impact 1: Temporary loss or restricted access to fishing grounds – this could influence the volume and therefore value of the fishing catch in Essex and Suffolk

214. Impact 2: Displacement of fishing activities into other areas - this could influence the volume and therefore value of the fishing catch in Essex and Suffolk

215. Impact 3: Increased steaming times to fishing grounds – This could increase the costs of the catch and effect the volume and value of the catch if the time spent fishing was reduced.

216. Impact 4: Interference with fishing activities (navigational conflict) – This could affect the volume and value of the catch if the time spent fishing was rescued.

217. Impact 5: Safety issues for fishing vessels – This could lead to lower volume and value of a catch and also lead to high costs if additional money needs to be spent on health and safety.

218. Impact 6: Impacts on commercial fishing as a result of impacts on exploited fish and shellfish species.

219. Of the above impacts, the magnitude of impacts ranged from negligible to low. Following the proposed mitigation, none of the impacts listed above resulted in an effect greater than minor adverse and as such the wider economic effects from disruption to fishing are anticipated to be of a low magnitude of impact.

31.6.1.6.2 Sensitivity

220. ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16) assesses the sensitivity of a variety of impacts during the construction phase of North Falls. The assessment of sensitivity of these impacts is also relevant to the assessment of wider economic effects from disruption to fishing:

221. During the construction phase the sensitivity of impacts was assessed as low or negligible for impacts but the following:

- Impact 1: Temporary loss or restricted access to fishing grounds – for UK local inshore vessels this was assessed as high (for nearshore areas).
- Impact 2: Displacement of fishing activities into other areas - UK local inshore vessels this was assessed as High (restricted to nearshore areas; static fishers) and Medium (for extended operational ranges)
- Impact 4: Interference with fishing activities (navigational conflict) – assessed as medium sensitivity for static / passive gear fisheries.
- Impact 5: Safety issues for fishing vessels – assessed as medium sensitivity.

222. Sensitivity in the ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16) is assessed by considering the dependency on fishing grounds that overlap with the Project due to very limited operational range and lack of operational versatility; and/or high dependence on a single fishing ground; and/or very limited ability to adapt to the potential impact. However, for the socio-economic assessment a receptor is defined as being of high sensitivity where it is identified as policy priority (as a result of economic potential and/ or need). There is evidence of considerable socio-economic challenges and/ or opportunities for the receptor within the study area.

223. Commercial fishing from a socio-economic perspective is often high on the agenda of Government policy. The UK fishing industry has been in long term decline. However, in terms of local economic strategy the fishing industry comprises a very small proportion of the Essex and Suffolk economies and the sector is not highlighted in any of the county level economic strategy documents.

224. Based on the evidence presented in this section, sensitivity of the wider economic effects from disruption to fishing is assessed as medium.

31.6.1.6.3 Significance of effect

225. With the sensitivity of the receptor assessed as medium, and the magnitude of impact assessed as low at a local (coastal) level, the effect of the North Falls assessed as minor adverse, which is not significant in EIA terms.

226. It is assumed that the wider economic effects from disruption to fishing during the North Falls development and construction phases is indirect and temporary in nature.

31.6.1.7 Impact 7: Wider economic effects related to minerals

227. The assessment findings of ES Chapter 19 Ground Conditions and Contamination (Document Reference: 3.1.21) have informed the potential for wider socio-economic effects related to minerals effects. The main impact on socio-economics is associated with the sterilisation of future mineral resources which could affect businesses (especially who are located in Essex) in the industry who may be wishing to develop the mineral resources in the LOCAI.

31.6.1.7.1 Magnitude of impact

228. ES Chapter 19 Ground Conditions and Contamination 3.1.21) identified a low magnitude of impact on the sterilisation of future mineral resources during the construction phase. Additional mitigation for ongoing consultation with Essex Minerals and Waste Planning Authority to determine the quality and usability of mineral resources is proposed. This may be supported by targeted ground investigations in areas of concern. As part of a commercial agreement between the North Falls and Five Estuaries Projects, a Mineral Resource Assessment has been completed and is submitted as part of the DCO application. The Minerals Resource Assessment forms ES Appendix 19.2 (Document Reference: 3.3.21).

229. It is assumed under a realistic worst case scenario that there is limited disruption to businesses ability to operate in Essex, and as a result there would be minimal wider economic impacts in terms of job losses or lost GVA. On this basis, the magnitude of impact is assessed as negligible in the context of the economic activity of the minerals sector within Essex.

31.6.1.7.2 Sensitivity

230. The minerals sector is not identified as a local priority sector, there are only a limited number of jobs within the sector locally (75 FTE jobs in Tendring) and sterilisation of future mineral resources is assessed as medium sensitivity within ES Chapter 19 Ground Conditions and Contamination (Document Reference: 3.1.21). On this basis the sensitivity of wider economic effects related to minerals is assessed as low.

31.6.1.7.3 Significance of effect

231. With the sensitivity of the receptor assessed as low, and the magnitude of impact assessed as negligible at both the UK and local level, the effect of North Falls is assessed as negligible, which is not significant in EIA terms.

232. It is assumed that the effect on the wider economy from impacts related to minerals generated during the North Falls construction phases is direct and temporary in nature.

31.6.2 Likely significant effects during the operational phase

233. During operation, it is expected that there will be no further requirement for land to be disturbed or excavated, except in the event that onshore cables require repair or maintenance or the onshore substation access works needing to be reinstated. However, these activities would not extend beyond the construction footprint assessed above, and for the former would be relatively rare and localised in occurrence. For the latter, the haul road required to access the onshore substation, required in the unlikely event of transformer failure, would potentially be in place for up to 7 months, and its location would be over land

already disturbed during construction. As such, effects arising from these activities are likely to be no worse than that assessed during construction.

234. The employment supported during the Project`s operational phase could contribute to the growth of the local and sub-regional economy. O&M and service support will be required for the ongoing operation of the wind turbines, balance of plant, and associated transmission assets. This area of the supply chain usually has a high level of local content, and the spending continues over the operational lifetime of the wind farm, which is anticipated to be 30 years. Expenditure relates to wind farm administration (out of a local O&M base), vessel operation, training (including health and safety), turbine maintenance, balance of plant maintenance fees, rent and transmission charges.

235. The assessment of economic benefits uses the impacts presented in ES Appendix 31.1 (Document Reference: 3.3.70) to assess onshore and offshore operational phase effects separately. The difference between the economic activity supported by an offshore connection and onshore connection during the operational phase is marginal, but for the purpose of this assessment it has been assumed that offshore connection is the realistic worst case.

236. For stakeholders benefit, the annual average impacts on GVA and employment during the operational phase are shown in Table 31.40 below. This includes impacts associated with the O&M of onshore and offshore infrastructure, although it should be noted that onshore infrastructure O&M roles would be limited to around 3 FTEs.

Table 31.40 Average GVA impacts generated per annum during the operational phase

	Worst Case Scenario (£ million)	Baseline Scenario (£ million)	Enhanced Scenario (£ million)
GVA impacts			
UK impact			
Direct GVA	£12.6	£13.1	£12.8
Indirect GVA	£5.7	£6.4	£7.2
Total GVA	£18.3	£19.6	£20.0
Local Impact (Essex & Suffolk)			
Direct GVA	£6.4	£6.3	£6.5
Indirect GVA	£2.4	£2.6	£2.7
Total GVA	£8.9	£8.9	£9.3
Employment impacts			
UK impact			
Direct jobs (FTE)	70	150	150
Indirect jobs (FTE)	40	40	50
Total Direct + Indirect Jobs (FTE)	110	190	20

	Worst Case Scenario (£ million)	Baseline Scenario (£ million)	Enhanced Scenario (£ million)
Local Impact (Essex and Suffolk)			
Direct jobs (FTE)	70	70	70
Indirect jobs (FTE)	20	20	20
Total Direct + Indirect Jobs (FTE)	90	90	90

Based on calculations by BVG Associates. Figures may not sum as rounding has been applied.

31.6.2.1 Impact 1: Economic value

237. The operational phase of North Falls has the potential to support GVA through economic activities associated with the ongoing O&M. This will take place at an O&M base where O&M staff will be located.

238. The realistic worst case scenario assumes that the offshore connection option is built out and therefore this option is considered below.

239. It is likely that the O&M base would be located within Suffolk or Essex where suitable ports such as Harwich or Lowestoft are available.

240. Table 31.41 below summarises the potential GVA effects supported by offshore activities during the operational phase of North Falls. At the UK level, this is estimated to support an average GVA impact of between £18 to £20 million per annum over an assumed 30 year operational phase.

241. The direct GVA effects supported by North Falls during the operational phase are anticipated to result primarily from the O&M of the offshore infrastructure. This covers activity relating to wind farm administration, vessel operation, training and health and safety, turbine maintenance, and balance of plant maintenance.

242. It should be noted that this economic value creation is tied to the wider economic value creation of low carbon industries in the UK and the UK's offshore wind industry in particular.

243. The offshore infrastructure expenditure retained locally (either in Essex or Suffolk) is estimated to support GVA of £9 million per annum throughout North Fall's operational phase.

Table 31.41 Potential GVA impacts generated per annum by operational activity (FTEs) related to offshore infrastructure

	Worst Case Scenario (£ Million)	Baseline Scenario (£ Million)	Enhanced Scenario (£ Million)
UK impact			
Direct GVA	£12.4	£12.9	£12.5
Indirect GVA	£5.6	£6.3	£7.1
Total Direct + Indirect GVA	£17.9	£19.2	£19.6
Local Impact (Essex or Suffolk)			

	Worst Case Scenario (£ Million)	Baseline Scenario (£ Million)	Enhanced Scenario (£ Million)
Direct GVA	£6.3	£6.2	£6.4
Indirect GVA	£2.4	£2.5	£2.7
Total Direct + Indirect GVA	£8.7	£8.7	£9.1

Based on calculations by BVG Associates – Page 28-31 Economic impacts tables ES Appendix 31.1 (Document Reference: 3.3.70). Figures may not sum as rounding has been applied.

31.6.2.1.1 Magnitude of impact

244. The assessment of magnitude is based on the worst case scenario impacts set out in Table 31.41. The magnitude of impact is set out in Table 31.42 below.

245. Under the realistic worst case scenario, the £17.9 million supported by the operational phase of North Falls represents less than 0.1% of the current baseline. On this basis, the magnitude of impact of North Falls on GVA at the UK national level is assessed as negligible. This would be the same in all scenarios.

246. At the local (Essex and Suffolk) level, the £8.7m per annum created during the operational phase represents an increase of 0.01% on the current baseline. On this basis, the magnitude of impact is assessed as negligible.

Table 31.42 Assessment of magnitude of GVA impact related to offshore operational activity

	Realistic Worst Case Scenario GVA	Existing Environment GVA	% Change	Magnitude of Impact
Local study area (Essex and Suffolk)	£8.7 million	£64.4 billion	0.01%	Negligible
UK	£17.9 million	£2,040 billion	0.0009%	Negligible

Please note that indirect impacts are based on the assessment of local impacts set out in Section 2.2.1 Local impacts, ES Appendix 31.1 (Document Reference: 3.3.70).

31.6.2.1.2 Sensitivity

247. Based on the reasoning set out in Section 31.6.1.1.2 the sensitivity of the receptor (i.e., economic output) is assessed as high at the local level (Essex and Suffolk) and the UK level.

31.6.2.1.3 Significance of effect

248. With the sensitivity of the receptor assessed as high, and the magnitude of impact assessed as negligible at both the UK and local level (Essex and Suffolk), the effect of North Falls is assessed as minor beneficial, which is not significant in EIA terms.

249. It is assumed that the impact of increased employment during the operational phase of North Falls is permanent and long-term.

31.6.2.2 Impact 2: Increased employment

250. North Falls has the potential to support employment in activities associated with the ongoing O&M of the infrastructure. As noted above the realistic worst case scenario is based on the offshore connection option being built out.

251. Table 31.43 summarises the potential annual (FTE) employment effects due to O&M of the offshore infrastructure. At the UK level, these will range between 110 and 190 FTE jobs per annum over the 30 year operational phase.

252. The offshore infrastructure expenditure retained locally within Essex and Suffolk is estimated to support an average of between 80 and 90 FTE jobs per annum (depending upon the assessment scenario) throughout the operational phase.

253. The jobs can be considered in the context of the wider development of the low-carbon wind industry in the UK and will largely be long term jobs within the renewable sector and as such will help to develop skills that are needed as part of the UK's transition to Net Zero.

Table 31.43 Potential employment impacts generated per annum by operational activity (FTEs) related to offshore infrastructure

	Worst Case Scenario	Baseline Scenario	Enhanced Scenario
UK impact			
Direct jobs (FTE)	70	140	140
Indirect jobs (FTE)	40	40	50
Total Direct + Indirect Jobs (FTE)	110	190	190
Local Impact (Essex or Suffolk)			
Direct jobs (FTE)	70	70	70
Indirect jobs (FTE)	20	20	20
Total Direct + Indirect Jobs (FTE)	80	80	90

Based on calculations by BVG Associates.

Some totals may not add up due to rounding. Impacts have been rounded to the nearest 10 FTEs unless FTEs are <10. In this case, they have been rounded to the nearest 5 FTEs.

Total (FTE) jobs provided in the table above do not include any jobs that are based outside of the UK. This includes any jobs required to support onshore/ offshore construction which may be required to temporarily be based in the UK.

31.6.2.2.1 Magnitude of impact

254. The assessment of magnitude is based on the worst case scenario impacts set out in Table 31.43. The magnitude of impact is set out in Table 31.44 below.

255. Under the realistic worst case scenario the 110 FTE jobs supported by the O&M of offshore infrastructure represents less than 0.1% of the current baseline. On this basis, the magnitude of impact on employment at the UK level is assessed as negligible. This would be the same in all scenarios.

256. At the local (Essex and Suffolk) level, under the realistic worst case scenario the 80 FTE jobs supported during the operational phase represent 0.01% of employment levels in the local area. On this basis, the magnitude of impact is assessed as negligible.

257. It is assumed that the effect of increased employment during the operational phase is permanent, long-term and irreversible in nature.

Table 31.44 Assessment of magnitude of employment impact related to offshore operational activity

	Realistic Worst Case Scenario Employment Impact (FTEs)	Existing Environment Employment (FTEs)	% Change	Magnitude of Impact
Local study area (Essex and Suffolk)	80	899,000	0.01%	Negligible
UK	110	26,919,000	0.0004%	Negligible

31.6.2.2.2 Sensitivity

258. As noted in Section 31.6.1.2.2, although job creation is an important local and national priority, the economic inactivity and unemployment rate in Essex and Suffolk is currently low and below the national average. The Economic Strategy for Norfolk & Suffolk (NALEP, 2022b) aims for 27,000 new job opportunities to be generated by the clean energy sector in Norfolk and Suffolk between 2019 to 2030, making job creation an important local priority for Suffolk in the North Falls context. On this basis the sensitivity of receptor is assessed as medium in the local area (Essex and Suffolk) and high in the UK.

31.6.2.2.3 Significance of effect

259. At the UK level, with the sensitivity of the receptor assessed as high and the magnitude of impact assessed as negligible, the significance of effect is therefore assessed as minor beneficial. This is not considered to be significant in EIA terms.

260. At the local level of Essex and Suffolk, with the sensitivity of the receptor assessed as medium and the magnitude of impact assessed as negligible, the significance of effect is therefore assessed as negligible beneficial. This is not considered to be significant in EIA terms.

261. It is assumed that the employment effect supported during the operational phase is permanent and long-term.

31.6.2.3 Impact 3: Pressure on local onshore infrastructure and services (housing and health)

262. In Section 31.6.1 the assessment of change in demographics during the construction phase was based on the peak year in order to assess the worst case scenario. During the operational phase, employment is forecast to be broadly stable over time and therefore annual averages have been used.

263. The magnitude of impact on demographics in the local study area will be determined by a) the total number of jobs that need to take place in the area and b) the number of these that are accessed by people from outside the study area and therefore need to temporarily relocate into the area to carry out the work.

264. ES Appendix 31.1 (Document Reference: 3.3.70) estimates the operational phase of offshore and onshore infrastructure will support 215 direct jobs per annum in total. This includes all jobs regardless of whether they are accessed by local, UK based or international workers. It can also be assumed that most job-related activities will take place close to the O&M base or offshore, with some of these offshore workers using the O&M base or port as an onshore base. The exceptions to this are jobs associated with 'major component

maintenance', which the assessment anticipates will not be undertaken locally, along with fees, rent and transmission charges. Excluding the jobs associated with 'major component maintenance' activities, leaves at least 152 jobs that would need to be physically located in the local study area.

265. It should be noted that Greater Gabbard recruited 95% of long term skilled roles with people based in the local area. As a worst case scenario, it is estimated that 64 of these jobs will be accessed by local workers. This means a maximum of 88 workers would need to move to the local area to undertake O&M activities[10]. The majority of these would be temporary visits; the assessment presented in ES Appendix 31.1 (Document Reference: 3.3.70) also notes that most routine activities including administration, vessel operation and routine/minor maintenance will be done by the local workforce. More specialised but infrequent O&M activities, such as balance of plant maintenance, would be undertaken by contractors from other parts of the UK who visit the area temporarily when required.

266. Nevertheless, to account for the fact that some work will be longer term or permanent in nature, it is assumed that 30% of workers (26) will relocate to the area on a long term basis and that a number of these will bring their families. Applying the average UK household size of 2.4 means that 62 people would be expected to relocate to the area on a long term basis, with a further 62 moving to the area temporarily (70% of 88). The total increase in population is therefore estimated to be 124.

Accommodation

267. The demand for accommodation during the operational phase will be driven by the number of non-local operational phase workers who (temporarily or permanently) relocate into the local area to undertake work and the extent to which accommodation vessels will be used to house offshore operational workers.

268. As a worst case scenario, it is assumed that all 88 FTE non-local operational workers require accommodation. Since most of these will be temporary contract workers rather than permanent staff undertaking routine activities, it is assumed most demand will be for visitor accommodation. However, given that some work will be longer term in nature, it is also assumed that a small percentage of workers will require longer term or permanent accommodation in the form of owner occupied and private rented properties (see Table 31.45).

Table 31.45 Estimated accommodation requirements during the operational phase of North Falls

Type of accommodation	% Split	Number of people seeking accommodation
Visitor accommodation	70%	62
Owner occupied housing	15%	13

[10] 152-64=88

Type of accommodation	% Split	Number of people seeking accommodation
Private rented housing	15%	13

Please note the assumed split between types of accommodation is based on the assessor's professional judgement based on the fact that most of non-local workers during the operational phase will be temporary contract workers rather than permanent staff undertaking routine activities and that short term temporary workers are more likely to utilise visitor accommodation.

269. For energy projects of this nature, the typical working assumption is for home-based workers to be drawn from within a 90-minute travel to work area, whilst non-local workers typically find accommodation within a 45-minute travel to work catchment area. It is therefore assumed that the demand for accommodation is focused on districts within 45 minutes of either Harwich (in Essex) or Lowestoft (in Suffolk).

Healthcare

270. As a worst case scenario, it is assumed that all 88 FTE non-local operational workers move into the local study areas, although the majority of these are likely to do so on a temporary basis, with around 26 (30%) moving to the area for a long period of time with their families.

271. It is assumed that only people moving to the area on a long term basis will wish to register with a GP. Therefore, the maximum increase in demand is assumed to relate to these 26 workers and their families (62 patients in total).

272. Using benchmark estimates of 1,800 patient registrations per FTE GP (developed by the London Health Urban Development Unit (HUDU), 2019), it is estimated that the additional 62 patients would generate demand for 0.03 FTE GPs.

273. In addition to this, the increase in the local population could also lead to increased demand for other health services including secondary care and ambulance services. There are no established benchmarks that allow the assessment to quantify this increase in demand. However, given that all people moving into the area are likely to be of working age or lower, the increased demand for hospital and ambulance services from an additional 124 people is expected to be minimal.

31.6.2.3.1 Magnitude of impact

Accommodation

274. Based on the worst case scenario set out earlier in this section, in the case of accommodation, operation of North Falls would result in increased demand for 62 visitor accommodation places, 13 homes for owner occupation and 13 homes for rent (see Table 31.45). This demand would be focused on areas within a 45 minute drive time of the O&M port, which may be in Harwich or Lowestoft.

275. ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34) showed that the average number of overnight trips between 2017 and 2019 (pre-Covid-19) was 2.4m in Essex and 700,000 in East Suffolk. In this context the increased demand due to the Project a small fraction of current demand for visitor accommodation in both areas.

276. Increased demand for 13 homes for owner occupation and 13 homes for rent would be a small fraction of current stock of housing and demand for accommodation in both areas (the baseline position is set out in Section 31.5.3).

277. The magnitude of impact on accommodation is therefore also assessed as negligible.

Health Care

278. As noted above, it is estimated that the increase in population would generate demand for 0.03 FTE GPs. There would also be an increase in demand for secondary care and ambulance services but given that the incoming workers will be of working age and the majority in good health, this would be minimal. On this basis, the magnitude of impact is assessed as negligible.

31.6.2.3.2 Sensitivity

Accommodation

279. As described in Section 31.6.1.3.2, the delivery of good quality housing is a priority at a national and local level.

280. Section 31.5.3 (Housing) used absorption rates to measure the capacity of the local housing market to accommodate increased demand. The absorption rate for the sales market is below 20% in all local authority areas, indicating there is capacity to accommodate increased demand. However absorption rates are much higher for private rented housing (27 to 138%) indicating an undersupply. The sensitivity of the receptor is therefore assessed as medium for the owner-occupied market and high for the private rented market.

Health Care

281. Tendring and East Suffolk are the most likely to experience increased demand for health services due to the location of onshore infrastructure and potential locations for an O&M base.

282. The position with regards to health facilities in Essex and Suffolk is described in Section 31.5. The baseline analysis indicates that a high proportion of A&E patients are having to wait longer than the minimum target times and the local areas are exceeding national average ambulance wait times. Tendring has the highest patients per GP ratio of 2,206 with Colchester and Ipswich also exceeding 2,000 patients per FTE GP. This indicates very significant capacity constraint issues in North East Essex and Ipswich. On this basis, the sensitivity of the receptor is assessed as high.

31.6.2.3.3 Significance of effect

Accommodation

283. The sensitivity of the accommodation receptor is assessed as medium for owner occupied housing and high for private rented housing in the local study area. The magnitude of impact on accommodation is assessed as negligible for both tenures. The significance of effect is therefore assessed as minor adverse for owner occupied accommodation and minor adverse for private rented accommodation. These are not significant in EIA terms.

Health Care

284. With the sensitivity of the healthcare receptor assessed as high and the magnitude of impact on healthcare assessed as negligible in both local study areas, the significance of effect is therefore assessed as minor adverse. This is not considered to be significant in EIA terms.

31.6.2.4 Impact 4: Onshore disturbance (noise, air, visual, and traffic) to social and community infrastructure facilities

31.6.2.4.1 Magnitude of impact

285. In Section 31.6.1.4 the assessment of the onshore disturbance (related to noise, air, visual, and traffic) to social and community infrastructure facilities during the construction phase is presented. During the operational phase of North Falls, the impacts related to noise, air quality, visuals and traffic at landfall and along the onshore cable route are deemed to be much lower than the impact during the construction phase (as set out in ES Chapter 20 Onshore Air Quality (Document Reference: 3.1.22), ES Chapter 26 Noise and Vibration (Document Reference: 3.1.28), ES Chapter 27 Traffic and Transport (Document Reference: 3.1.29) and ES Chapter 30 Landscape Visual Impact Assessment (Document Reference: 3.1.32). This is primarily because activity along the buried cable route and at landfall during operation is expected to be limited to occasional maintenance visits. The onshore substation will be unmanned and also subject to occasional maintenance visits. The haul road required to access the onshore substation, required in the unlikely event of transformer failure, would potentially be in place for up to 7 months, but its location would be over land already disturbed during construction.

286. For the reasons set out above it is assumed there will be negligible magnitude of impact from disruption to social and community infrastructure receptors within 500m of landfall or the onshore cable project area, due to noise, air, visual, and traffic effects. No social and community infrastructure receptors have been identified within 500m of the onshore substation and therefore onshore disturbance (related to noise, air, visual, and traffic) to social and community infrastructure is assessed as negligible.

31.6.2.4.2 Sensitivity

287. As noted in Section 31.6.1.4.2, given the importance of social and community infrastructure facilities on community sustainability and well-being, the sensitivity of all receptors located within the LOCAI is therefore assessed as medium.

31.6.2.4.3 Significance of effect

288. The sensitivity of the onshore social and community infrastructure receptors within 500m of the North Falls onshore project area is assessed as medium and the magnitude of impact on social and community infrastructure facilities within the LOCAI assessed as negligible. Therefore, the significance of effect of North Falls related to disturbance on onshore social and community infrastructure facilities is assessed as minor adverse. This is not considered to be significant in EIA terms.

31.6.2.5 Impact 5: Wider economic effects from disruption to shipping and navigation

31.6.2.5.1 Magnitude of impact

289. Based on the findings of ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17), the disruption to shipping and navigation during the operational phase is deemed to be no greater than the potential disruption to shipping and navigation during the construction phase. Therefore, the assessment finds that there would be a negligible magnitude of impact on the scale of employment and GVA linked to Felixstowe Port and Harwich International Port resulting from the O&M of North Falls at both the local (Essex and Suffolk) and UK levels.

31.6.2.5.2 Sensitivity

290. Given the importance of imports and exports to economic growth in the local and national content and the policy priority placed on economic growth at local and national levels (as noted above in Section 31.6.1.6.2) the sensitivity is therefore assessed as high at both the local (Suffolk) and UK level.

31.6.2.5.3 Significance of effect

291. With the sensitivity of the receptor assessed as high and the magnitude of impact assessed as negligible at the Suffolk and UK national level, the wider economic effect of the operational phase of North Falls from disruption to shipping and navigation is predicted to be of minor adverse significance, which is not significant in EIA terms.

292. It is assumed that the effect on wider economic effects from disruption to shipping and navigation during the North Falls operations and maintenance phase is indirect and permanent in nature.

31.6.2.6 Impact 6: Wider economic effects from disruption to fishing

31.6.2.6.1 Magnitude of impact

293. ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16) assesses the magnitude of a variety of impacts during the operational phase of North Falls that may influence both the volume and the value of the catch across Essex and Suffolk coasts:

- Impact 7: Temporary loss or restricted access to traditional fishing ground– this could influence the volume and therefore value of the fishing catch in Essex and Suffolk
- Impact 8: Long-term loss or restricted access to traditional fishing ground- this could influence the volume and therefore value of the fishing catch in Essex and Suffolk
- Impact 9: Displacement of fishing activities into other areas– this could influence the volume and therefore value of the fishing catch in Essex and Suffolk
- Impact 10: Increased steaming times to fishing grounds – This could affect the volume and value of the catch if the time spent fishing was reduced.
- Impact 11: Interference with fishing activities (navigational conflict)

- Impact 12: Safety issues for fishing vessels - This could lead to lower volume and value of a catch and also lead to high costs if additional money needs to be spent on health and safety.
- Impact 13: Impacts on commercial fishing as a result of impacts on commercially exploited species - this could influence the volume and therefore value of the fishing catch in Essex and Suffolk.

294. Of the above impacts, the magnitude of impacts ranged from negligible to low. none of the impacts listed above resulted in an impact greater than minor adverse and as such the magnitude of wider economic effects from disruption to fishing are anticipated to be low.

31.6.2.6.2 Sensitivity

295. ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16) assesses the sensitivity of a variety of impacts during the operational phase of North Falls:

296. During the operational phase the sensitivity of impacts was assessed as low or negligible for impacts but the following:

- Impact 7: Temporary loss or restricted access to traditional fishing ground– for UK local inshore vessels this was assessed as high (for nearshore areas) and medium (for extended operational ranges).
- Impact 8: Long-term loss or restricted access to traditional fishing ground – for UK local inshore vessels this was assessed as high (for nearshore areas) and medium (for extended operational ranges).
- Impact 9: Displacement of fishing activities into other areas - for UK local inshore vessels this was assessed as high (for nearshore areas) and medium (for extended operational ranges).
- Impact 11: Interference with fishing activities (navigational conflict) - for static / passive gear this was assessed as medium.
- Impact 12: Safety issues for fishing vessels – assessed as medium sensitivity.

297. Based on the evidence presented above and in Section 31.6.1.6, the sensitivity of the wider economic effects from disruption to fishing is assessed as medium.

31.6.2.6.3 Significance of effect

298. With the sensitivity of the receptor assessed as medium, and the magnitude of impact assessed as low at the local (coastal) level, the effect of North Falls is assessed as minor adverse, which is not significant in EIA terms.

299. It is assumed that the wider economic effects from disruption to fishing during North Falls' operational phase is direct and permanent in nature.

31.6.2.7 Impact 7: Wider economic effects related to minerals

31.6.2.7.1 Magnitude of impact

300. ES Chapter 19 Ground Conditions and Contamination (Document Reference: 3.1.21) identified a medium magnitude of impact on the sterilisation of future mineral resources during the operational phase. This resulted in a (significant) moderate adverse pre mitigation effect. The assessment proposed additional mitigation. This will involve ongoing consultation with Essex Minerals and Waste Planning Authority to determine the quality and usability of mineral resources.

This additional mitigation reduces the effect to minor adverse (not significant). This may be supported by targeted ground investigations in areas of concern. As part of a commercial agreement between the North Falls and Five Estuaries Projects, a Mineral Resource Assessment has been completed and is submitted as part of the DCO application. The Minerals Resource Assessment forms ES Appendix 19.2 (Document Reference: 3.3.21).

301. Therefore, the magnitude of impact is assessed as negligible in the context of the economic activity of the minerals sector within Essex. This is the same as the magnitude of impact during the construction phase (Section 31.6.1.7.1).

31.6.2.7.2 Sensitivity

302. Based on the reasoning set out in Section 31.6.1.7.2, the sensitivity of the receptor (i.e., economic output) is assessed as medium.

31.6.2.7.3 Significance of effect

303. With the sensitivity of the receptor assessed as medium, and the magnitude of impact assessed as negligible at both the UK and local level, the effect of North Falls is assessed as minor adverse, which is not significant in EIA terms.

304. It is assumed that the effect on the wider economy from impacts related to minerals generated during North Falls' operational phase is direct and permanent in nature.

31.6.3 Likely significant effects during decommissioning

305. This section describes the likely significant effects associated with the decommissioning of the onshore and offshore infrastructure with regards to socio-economics. Further details are provided in ES Chapter 5 Project Description (Document Reference: 3.1.7).

306. It is generally accepted that industry good practice, rules, and legislation change and develop over time. As a result. no decision has been made regarding the final decommissioning policy for the onshore export cables. However, the most likely scenario is that the cables would be pulled through the ducts and removed, with the ducts themselves sealed and capped and left in-situ.

307. In relation to the onshore substation, no decision has been made regarding the final decommissioning plan for the onshore project substation, as it is recognised that industry good practice, rules and legislation change over time.

308. A full EIA would be carried out ahead of any decommissioning works being undertaken. The detailed activities and methodology for decommissioning would be determined later within the Project lifetime, in line with relevant policies at that time, but would be expected to include:

- Dismantling and removal of electrical equipment;
- Removal of cabling from the site;
- Removal of any building service equipment;
- Demolition of the buildings and removal of fences; and
- Landscape and reinstatement of the site.

309. The decommissioning methodology cannot be finalised until immediately prior to decommissioning but would be in line with relevant policy at that time.

310. Offshore decommissioning activities are likely to take place across the final two years of the programme lifetime and include the removal of all WTG and OSP components and part of the foundations that are above seabed level. Cable and scour protection would likely be left in situ, while buried cables would be cut at the ends and left in situ.

311. As an alternative to decommissioning, the owners may wish to consider re-powering the wind farm. Should the owners choose to pursue this option, this would be subject to a new consenting application.

312. The decommissioning process is generally the reverse of the installation process during construction.

313. ES Appendix 31.1 (Document Reference: 3.3.70) provides an estimate of the levels of economic value that may result because of the decommissioning of North Falls. This is set out in Table 31.46 below and shows that impacts (per annum) during the decommissioning phase are less than during the (average annual) impacts during the construction phase.

Table 31.46 Potential economic value impacts generated per annum by decommissioning activity

	Worst Case Scenario (£ Million)	Baseline Scenario (£ Million)	Enhanced Scenario (£ Million)
Offshore impacts			
UK impact			
Direct GVA	£8.7	£10.4	£11.2
Indirect GVA	£3.9	£4.7	£6.4
Total Direct + Indirect GVA	£12.6	£15.1	£17.6
Local Impact (Essex)			
Direct GVA	£3.6	£3.6	£3.6
Indirect GVA	£1.4	£1.4	£1.4
Total GVA	£5.0	£5.0	£5.0

Based on calculations by BVG Associates. Figures may not sum as rounding has been applied.

314. ES Appendix 31.1 (Document Reference: 3.3.70) also provides an estimate of the levels of employment levels that may result because of the decommissioning of North Falls. This is set out in Table 31.47 below.

Table 31.47 Potential employment impacts generated per annum by decommissioning activity (FTEs)

	Worst Case Scenario	Baseline Scenario	Enhanced Scenario
Offshore impacts			
UK impact			

	Worst Case Scenario	Baseline Scenario	Enhanced Scenario
Direct jobs (FTE)	80	100	110
Indirect jobs (FTE)	25	30	40
Total Direct + Indirect Jobs (FTE)	105	125	150
Local Impact (Essex)			
Direct jobs (FTE)	35	35	35
Indirect jobs (FTE)	10	10	10
Total Direct + Indirect Jobs (FTE)	40	40	40

Based on calculations by BVG Associates.

Total (FTE) jobs provided in the table above do not include any jobs that are based outside of the UK. This includes any jobs required to support onshore/ offshore construction which may be required to temporarily be based in the UK.

Figures may not sum as rounding (to the nearest 5) has been applied.

315. In principle (given the scale of economic benefits for the decommissioning phase set out above), it is assumed that the magnitude of impact of all impacts considered will mirror (but are likely to be lower than) the effect relating to the development and construction phase. Similarly, the sensitivity of the receptor is based on the current policy context and socio-economic conditions, as per the assessment of both construction and operational phases. On this basis, the impact of the decommissioning phase of North Falls is assessed as set out in Table 31.48 below.

316. Given the lower levels of employment and economic activity associated with the decommissioning phase and the nature of decommissioning activity it is assumed that all other impacts assessed would be less than the equivalent impact during the development and construction phase. Therefore, the significance of effect is assumed to be at most equal to the equivalent impact found during the development and construction phase. Where it is logical to reduce the magnitude of impact a reduction has been applied. The sensitivity on the other hand mirrors the development and construction phase assessment.

317. In some instances, magnitude of impact is assessed differently to the development and construction phase. For example, when assessing the impacts related to the influx of decommissioning workers it is more accurate to mirror the assessment of significance during the operational phase due to the scale of employment predicted (which is lower than both the construction and operational phases). Therefore, for impacts related to changing demographics (e.g. pressure on local onshore infrastructure and services) during the decommissioning phase the assessment of magnitude mirrors the operational phase assessment.

Table 31.48 Impacts of decommissioning phase of North Falls

Impact	Magnitude	Sensitivity	Significance of effect	Study Area	Nature of Impact
Economic value	Negligible	High	Minor beneficial	Essex & Suffolk UK	Temporary Short-term
Employment	Negligible	Medium	Negligible	Essex & Suffolk UK	Temporary Short-term
Pressure on local onshore social and community infrastructure facilities (housing and health)	Negligible	Low (owner occupied housing) High (health and private rented accommodation)	Negligible (owner occupied accommodation) Minor adverse (private rented housing and health)	Essex & Suffolk (focused on Colchester Borough, Maldon District, and Braintree District in Essex County and Ipswich Borough, Babergh District, and East Suffolk District in Suffolk County)	Temporary Short-term
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	Negligible	Medium	Minor adverse	LOCAI	Temporary Short-term
Wider economic effects from disruption to shipping and navigation	Negligible	High	Minor adverse	Suffolk UK	Temporary Short-term
Wider economic effects from disruption to fishing	Low	Medium	Minor adverse	Coastal districts in Essex and Suffolk	Temporary Short-term
Wider economic effects related to minerals	Negligible	Medium	Negligible	Essex	Temporary Short-term

Impacts related to jobs and GVA (first four rows) are based on calculations by BVG Associates.

31.7 Potential monitoring requirements

318. No monitoring requirements have been identified for socio-economics.

31.8 Cumulative effects

31.8.1 Identification of potential cumulative effects

319. The first step in the CEA process is the identification of which residual effects assessed for North Falls on their own have the potential for a cumulative likely significant effect with other plans, projects and activities. This information is set out in Table 31.49. Only effects assessed in Section 31.6 as having greater than negligible significance or above are included in the CEA.

320. Please note that offshore and onshore economic benefits have been grouped together as it is often not possible to disaggregate these when assessing the economic effects of other projects included in the cumulative assessment.

321. Table 31.49 concludes that, in relation to the socio-economic assessment, there is potential for cumulative effects on all receptors at the local and sub-regional levels.

Table 31.49 Potential cumulative effects

Impact	Potential for cumulative effect	Rationale
Construction		
Economic value	Yes	Multiple construction projects over a sustained period could increase investment and economic benefits for local, sub-regional and national economies. There is also scope to strengthen local supply chains.
Employment	Yes	Multiple construction projects could increase the number of employment opportunities.
Pressure on local onshore infrastructure and services (housing and health)	Yes	Multiple construction projects could result in increased in-migration resulting in change to the demographic profile. Increased population at the local level may increase pressure on the provision of social, community, housing and health infrastructure.
Onshore disturbance (noise, air, visual, and traffic) to social and community infrastructure facilities	Yes	Where onshore projects are in close proximity to each other there may be potential for cumulative effects on noise, air quality, visual amenity and traffic, which causes disruption to social and community infrastructure.
Wider economic effects from disruption to shipping and navigation	Yes	Should the development of multiple offshore projects cause further disruption to shipping lanes there may be potential for greater levels of impact on the operations of the ports of Felixstowe and Harwich, which in turn could impose economic costs on the local area.

Impact	Potential for cumulative effect	Rationale
Wider economic effects from disruption to fishing	Yes	The development of multiple offshore projects could have a potential negative cumulative effect on the volume and value of fishing catches. This in turn could affect the incomes of communities that are dependent on fishing.
Wider economic effects related to minerals	Yes	Residual effects on Mineral Safeguarding Areas and Mineral Consultation Areas may be exacerbated by other projects if located within the same safeguarding area.
Operation		
Economic value	Yes	Substantial long-term and permanent employment and economic benefits (both direct and indirect) may be supported as a result of O&M supported by cumulative projects. A strategic approach to the delivery and O&M of cumulative projects could lead to increased investment and development of the local supply chain. In addition, increased employment opportunities may lead to opportunities for up-skilling and re-skilling of the local labour market.
Employment	Yes	
Pressure on local onshore infrastructure and services (housing and health)	Yes	Due to the long-term and permanent nature of the jobs, there may be potential for long-term changes to the local population due to inward-migration. The operational phase typically supports fewer jobs, and therefore have a lower impact on demographics. Furthermore, the potential for re-skilling and up-skilling local workers could reduce the need for in-migration. Increased levels of in-migration due to the employment needs of cumulative projects may increase pressure on and/ or reduce access to social, community, housing and health infrastructure for existing residents.
Onshore disturbance (noise, air, visual, and traffic) to social and community infrastructure facilities	Yes	Social and community infrastructure facilities (i.e., social, community and health infrastructures) within the LOCAI may experience limited cumulative onshore disturbance in areas where projects overlap with the LOCAI and add to the levels of disruption.
Wider economic effects from disruption to shipping and navigation	Yes	Should the O&M of multiple offshore projects cause further disruption to shipping lanes there may be potential for greater levels of impact on the operations of the ports of Felixstowe and Harwich, which in turn could impose costs on the local economy and supply chains.
Wider economic effects from disruption to fishing	Yes	The operation of multiple offshore projects could have a potential cumulative impact on the volume and value of fishing catches. This in turn could affect the incomes of communities that are dependent on fishing.
Wider economic effects related to minerals	Yes	Residual effects on Mineral Safeguarding Areas and Mineral Consultation Areas may be exacerbated by other projects if located within the same safeguarding area.
Decommissioning		

Impact	Potential for cumulative effect	Rationale
Detailed plans for the approach (i.e. method) to the decommissioning of North Falls are still being developed. More detail about the decommissioning of North Falls will be provided in due course, however, assumptions guiding the assessment of the decommissioning phase are outlined in Table 31.4. Detailed information about the decommissioning phase of the other cumulative projects identified varies. It has been assumed that overall, the exact approach to decommissioning will be determined by the relevant legislation and guidance at the time of decommissioning. That said, the cumulative impacts generated as a result of decommissioning activity are assumed to be the same, albeit lower than those identified during the construction stage.		

31.8.2 Other plans, projects and activities

322. The second step in the cumulative assessment is the identification of the other plans, projects and activities that may result in cumulative impacts for inclusion in the CEA (described as 'project screening'). This information is set out in Table 31.50 below. It provides the relevant details of each project, including current status (e.g. under construction), planned construction period, closest distance to North Falls, status of available data and rationale for including or excluding from the assessment.

323. The project screening has been informed by the development of a CEA Project List which forms an exhaustive list of plans, projects and activities in a very large study area relevant to North Falls. The list has been appraised, based on each project's relevance and the assessor's ability to carry out a robust assessment of cumulative effects given the information available. The list has been informed by considering the relevant ZOIs for each impact as is set out in Table 31.3. It should be noted that projects that are already operational are not considered in Table 31.50 because they are part of the existing environment (see Section 31.5).

Table 31.50 Summary of projects considered for the CEA in relation to socio-economics (project screening)

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
Offshore wind farms								
Norfolk Vanguard Offshore Wind Farm EN010079	DCO consented	2024 - 2027	96	117	N/A	High	N	Scoped out due to the onshore infrastructure and operational base of Norfolk Vanguard being located in Norfolk, outside of the local study areas (Suffolk and Essex).
Norfolk Boreas Offshore Wind Farm EN010089	DCO consented and has CfD	2024 - 2027	113	135	N/A	High	N	Scoped out because the onshore infrastructure and operational base of Norfolk Boreas will be located in Norfolk, outside of the local study areas (Suffolk and Essex).
East Anglia TWO Offshore Wind Farm EN010078	Approved (DCO issued in 2022)	Mid 2020s	8	20	47	High	Y	The East Anglia TWO Offshore Wind Farm's impact area is likely to overlap with the assessment's Suffolk study area on a number of receptors, and

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
								construction periods could overlap.
East Anglia ONE North Offshore Wind Farm EN010077	Approved (DCO issued in 2022)	Mid 2020s	24	36	N/A	High	Y	The East Anglia ONE North Offshore Wind Farm's impact area is likely to overlap with the assessment's Suffolk study area on a number of receptors.
East Anglia THREE Offshore Wind Farm EN010056	Construction phase	Construction commenced in 2022.	44	56	N/A	High	Y	Whilst construction is assumed to be completed before installation and commissioning of North Falls has begun, the East Anglia THREE Offshore Wind Farm is likely to interact with some of the receptors identified during the operational phase
Five Estuaries Offshore Wind Farm EN010115	Pre-examination	2028 – 2030	0	8	0 (directly overlaps with North Falls' onshore project area)	High	Y	The onshore project area for Five Estuaries covers largely the same area as North Falls. There is also a possibility that both projects are constructed at the same time.

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
Proposed interconnectors and other energy transmission infrastructure								
Norwich to Tilbury EN020027	Pre-application	2027-2031	N/A	N/A	0 (Scoping area directly overlaps with North Falls onshore project area.)	Low	Y	The latest proposals include building a new 400,000 volts (400 kV) electricity overhead transmission line, work at existing substations and building a new substation to connect new proposed offshore wind farms to the electricity transmission network. The proposed substation area for Norwich to Tilbury is in close proximity to North Falls' proposed onshore substation works area. Therefore, cumulative effects on socio-economics could occur
NeuConnect Interconnector	Constructionphase	2022-2028	0	0	N/A	High	N	Scoped out as the landfall and onshore infrastructure for NeuConnect

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
								Interconnector is planned to be located in Kent. The project is screened out as insufficient details available about this proposal to undertake any meaningful cumulative impact assessment.
Nautilus Interconnector	Pre-application	2025-2028	N/A	Cable route unknown	44	Medium	N	Scoped out as the landfall and onshore infrastructure for Nautilus is planned to be located in East Suffolk and there are insufficient details available about this proposal to undertake any meaningful cumulative impact assessment.
Sea Link EN020026	Pre-application	2026-2030	20	c. 3.5	20	Medium	N	Scoped out as the landfall and onshore infrastructure for Sea Link would be in East Suffolk and Kent. Thus, there is little potential for spatial cross over in cumulative effects on socio-economics.

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
LionLink Interconnector (formerly EuroLink)	Pre-application The application is expected to be submitted to the Planning Inspectorate in Q4 2025.	Information unavailable	Information unavailable	Information unavailable	Information unavailable	N/A	N	Scoped out as insufficient details available about this proposal to undertake any meaningful cumulative impact assessment.
Other onshore developments								
Bradwell B new nuclear power station EN010111	Pre application	Predicted 9 – 12 years	N/A	N/A	21	High	N	Scoped out as insufficient details available about this proposal to undertake any meaningful cumulative impact assessment.
Sizewell C Project	Approved (DCO issued in 2022)	2022 – 2034	N/A	N/A	49	High	Y	Sizewell C Nuclear Power Station will be located in Suffolk. Therefore it may interact with some receptors, particularly effects on employment,

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
								GVA and demographic change.
Bramford to Twinstead Overhead Line	Recommendation stage	2024-2028	N/A	N/A	14	High	Yes	The Bramford to Twinstead Overhead Line may overlap with the study area used in the assessment.
A12 Chelmsford to A120 Widening Scheme	Approved (DCO issued in January 2024)	Information unavailable	N/A	N/A	27	High	N	Scoped out as insufficient details available about this proposal to undertake any meaningful cumulative impact assessment.
Lake Lothing Third Crossing	Approved (DCO issued 2020)	Over 2 years	N/A	N/A	76	High	N	Lake Lothing Third Crossing will be located in Suffolk however the distance from North Falls means that the potential for cumulative effects is limited.
Longfield Solar Farm	Approved (DCO issued 2023)	2024-2026	N/A	N/A	35	High	Y (operational phase only)	The Longfield Solar Farm is located in Chelmsford, Essex and therefore the impact area is likely to

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
								overlap with the assessment's Essex study area on a number of receptors. However the construction phase is unlikely to overlap with the installation and commissioning activity of North Falls and therefore only effects during the operational phase are scoped in.
Oikos Marine & South Side Development	Pre application. The application is expected to be submitted in 2025.	N/A (information in scoping report regarding construction period is now outdated (construction period 2023-2026))	N/A	N/A	56	High	N	Scoped out – The Oikos Marine & South Side Development is located on Canvey Island, Essex. Therefore, the impact area is likely to overlap with the assessment's Essex study area on a number of receptors. However, the Project is scoped out as insufficient details available about this proposal to undertake

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
								any meaningful cumulative impact assessment.
Progress Power Station	Approved (DCO issued 2015)	Construction is expected to last approximately 24 months and the power station is due to the enter commercial operation by October 2024.	N/A	N/A	46	Medium	Y (operational phase only)	The Power progress station is situated at Eye Airfield Industrial Estate, Mid Suffolk. Commercial operation is expected to begin within October 2024 and as such it may interact with some receptors identified during the operational phase.
Rivenhall IWMF and Energy Centre	Examination	Information unavailable	N/A	N/A	27	Low	N	Scoped out as insufficient details available about this proposal to undertake any meaningful cumulative impact assessment.
Sunnica Energy Farm	Decision stage.	Original timeline was for construction to take place between 2023-2025. However this has been	N/A	N/A	55	High	Y (operational phase only)	Sunnica Energy Farm's construction phase is not expected to coincide with the construction phase of North Falls.

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
		delayed. It is assumed that the Project is still likely to have a 2 year construction period if approved and built out.						However, as the Energy farm is located in Suffolk its operational phase will overlap with North Falls and likely effect a number of receptors.
Thurrock Flexible Generation Plant	Approved (DCO issued in 2022)	2-year period – assumed to be 2021 -2023 in the planning submission but this has been delayed.	N/A	N/A	66	High	Y (operational phase only)	The Thurrock Flexible Generation Plant is located in Thurrock, Essex. Therefore, the impact area is likely to overlap with the assessment's Essex study area on a number of receptors. However, the construction of this project is likely to be completed before the installation and commissioning activity of North Falls begins and therefore the Project is scoped out of the construction phase effects.

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
Expansion of Luton Airport	Examination closed	2023-2026	N/A	N/A	95	High	N	Scoped out as the Luton Airport expansion project's impact area does not interact with the Suffolk or Essex Study areas.
Land adjacent to Lawford Grid Substation Ardleigh Road Little Bromley Essex CO11 2QB (50 MW battery storage project)	Approved	Information unavailable	N/A	N/A	0.3	High	N	Scoped out as the Project will most likely be fully constructed prior to North Falls' planned construction start date. The development is small-scale and was not considered an EIA development, thus no cumulative operational effects on socio-economics are anticipated
Proposed erection of three buildings (use classes E.g. (iii), B2 and B8), a new access and highway works, parking and servicing and	Awaiting decision	Predicted to complete within six months of construction commencing	N/A	N/A	0.1	Medium	N	Scoped out as the Project is expected to be fully constructed prior to North Falls' planned construction start date. The development is small-scale and was not considered an EIA development, thus no cumulative operational

Project	Status	Construction Period	Closest Distance from the array areas (km)	Distance from the offshore cable corridor (km)	Closest distance from the onshore project area (km)	Confidence in Data	Included in the CEA (Y/N)	Rationale
hard and soft landscaping at Horsley Cross CO11 2NZ								effects on socio-economics are anticipated.

Please note the temporal overlap is based on potential to for construction activity to overlap during the commissioning and installation phase (2027-2030) of North Falls in which the vast majority of impact will occur. The spatial overlap is based on the potential for impact on socio-economic receptors assessed in this assessment within the local study areas (Essex, Suffolk and the LOCAI). For the construction period projects have been assumed to be approved without significant delay to begin construction.

31.8.3 Assessment of cumulative impacts

324. The Five Estuaries is also in its application phase, having submitted a DCO to the Planning Inspectorate for the Project, which was accepted on 22 April 2024. Although subject to a separate DCO, the Five Estuaries shares the same landfall location and onshore cable route (including Bentley Road widening works) as North Falls, with the two projects also having co-located onshore substations within the same onshore substation works area. The two projects also have the same national grid connection point.

325. Five Estuaries Offshore Wind Farm Limited (VEOWL) and NFOW have sought to collaborate and coordinate where practicable, which has led to collaborative design of the projects' onshore infrastructure, and also to sharing of detailed project design information onshore. As a result, a detailed CEA for effects arising from the development of the Five Estuaries can be undertaken. The CEA section of this chapter is therefore split into two sections:

- the first describing a detailed CEA covering effects predicted to arise from development of Five Estuaries and North Falls;
- the second, detailing effects predicted to arise from the development of Five Estuaries, North Falls and other projects.

326. The latter section will be based on the project information available for each scheme in the public domain, and by definition is therefore less detailed than the Five Estuaries and North Falls CEA section.

327. Full details on the approach to CEA used within this chapter are set out in ES Chapter 6 EIA Methodology (Document Reference:3.1.8).

31.8.3.1 Five Estuaries Offshore Wind Farm

31.8.3.1.1 Realistic worst case scenario

328. Using the design information provided by Five Estuaries Offshore Wind Limited [and checked/updated against the submission of the Five Estuaries ES] a realistic worst case cumulative scenario has been developed for the purpose of this chapter.

329. This considers three potential cumulative build-out scenarios, as outlined in ES Chapter 5 Project Description (Document Reference 3.1.7):

330. Scenario 1: North Falls 'Option 2' build out is progressed, and Five Estuaries Offshore Wind Limited undertakes landfall, onshore substation construction and cable pull which overlaps with North Falls equivalent works. In this scenario, onshore cable route associated works, including temporary construction compounds, accesses and haul road, all remain in place and are used by the second project during its construction.

331. Scenario 2: North Falls 'Option 1' build out is progressed, and Five Estuaries Offshore Wind Limited undertakes landfall, onshore substation and onshore cable route construction and cable pull, all of which does not overlap with North Falls' equivalent works. There would be a gap of between 1 and 3 years between each Projects' construction. In this scenario, onshore cable route associated works, including temporary construction compounds, accesses and haul road, all remain in place and are used by the second project during its construction.

332. Scenario 3: North Falls ‘Option 1’ build out is progressed, and Five Estuaries Offshore Wind Limited undertakes a separate landfall, onshore substation and onshore cable route construction and cable pull with a multi-year (i.e. >3 year) gap between the two construction activities. In this scenario, there is no reuse in onshore temporary works between the two projects, and all onshore cable route associated works are rebuilt and reinstated in full by the second project.

333. Full details on the build out scenarios considered within this assessment are detailed in ES Chapter 5 Project Description (Document Reference: 3.1.7) ES Chapter 6 EIA Methodology (Document Reference: 3.1.8).

334. The realistic worst case scenario for likely cumulative effects scoped into the EIA for the socio-economic assessment are summarised in Table 23.55. These are based on project parameters for Five Estuaries described in ES Chapter 5 Project Description (Document Reference: 3.1.7), which provides further details regarding specific activities and their durations.

Table 31.51 Realistic worst-case scenario of cumulative effects arising from development of North Falls and Five Estuaries Wind Farm

Impact	Parameter	Notes
Economic value and employment (potentially beneficial impacts) both projects build out offshore electrical connection – simultaneous build (Scenario 1)		
Construction		
Economic value and employment	Offshore connection for both North Falls and Five Estuaries: No onshore works would be required and most or all of the offshore cable corridor of both projects would no longer be required, therefore the impacts would primarily relate to the offshore array areas only. Marshalling port: Use of a marshalling port outside of the Essex and Suffolk study areas represents the realistic worst-case scenario for economic value and employment benefits for all development scenarios. Wind farm size/capacity: North Falls - 20 to 57 WTG. Indicative generation capacity of 504-850 MW. However, 504 MW represents the realistic worst-case scenario in terms of potential positive effects economic value and employment). Five Estuaries - The scale of construction activity (FTE years and GVA) has been estimated for the EIA submitted for Five Estuaries based on methodology produced by BVG Associates which is a standard approach to estimating the economic footprint of OWF including the manufacture of the turbines, balance of plant, and installation and commissioning activities (onshore and offshore). 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 Development and construction phase: Projects assumed to be built independently with no overlapping impacts. Sourcing levels: A scenario in which UK suppliers are not competitive when accessing supply chain opportunities (as defined in ES Appendix 31.1 (Document Reference: 3.3.70)).	

Impact	Parameter	Notes
Impacts relating to non-local construction personnel	In the peak month it is estimated there will be: • Peak onshore cable route and landfall construction demand = 408 • Peak onshore substation construction demand = 290 • Total peak onshore construction demand = 698 personnel at any one time (of whom up to 91% could be non-local workers)	It is expected that during standard construction works, the onshore workforce would be an average of 268 personnel over a period of 31 months.
Operational phase		
	O&M Port: Both projects use an O&M port in the Essex or Suffolk study areas. Wind farm size/capacity: see above Operational Phase: Operational phase of 30 years for the operation of North Falls and 40 years for the operation of Five Estuaries. Economic Impact Scenario: An outcome where UK suppliers are uncompetitive and therefore the economic benefits are lower. Offshore connection for both North Falls and Five Estuaries: North Falls and Five Estuaries build out an offshore connection design and therefore no onshore infrastructure O&M is required.	
Other socio-economic impacts (potentially negative impacts) Scenario 3 (independent build)		
Construction		
Impacts relating to the landfall	Landfall HDD (temporary works) physical parameters: • Maximum No. of Transition Joint Bays (TJB) = 4 • Individual TJB dimensions / permanent land take = 4 x 15m • Maximum number of HDD = 6	Duration includes compound establishment, HDD, transition bays, and reinstatement.

Impact	Parameter	Notes
	• Maximum HDD depth = 20m • Maximum indicative length of HDD = 1.1 km • HDD temporary works area = 150 x 300m • Drill exit location = subtidal exit below MHWS (up to 8m depth)	
	Duration: • 13 months (of which trenchless techniques = 6 months) + 13 months (of which trenchless techniques = 6 months) • Trenchless techniques to include 24 hour / 7 days working where required	
Impacts relating to the onshore cable route	Cable route construction physical parameters: • Route length = up to 24km • Jointing bays = Up to 192 (approximately every 500m) buried below ground • Joint bay dimensions = 4 x 15m • Maximum cable trench depth = 2m • Minimum cable burial depth = 0.9m • Indicative cable route width = 80m (open cut trenching), 90m (trenchless crossings), 65m + 130m (complex trenchless crossings) • Temporary construction compound dimensions = 150 x 150m (main) to 100 x 100m (satellite) • No. of trenches = 4 • Cable trench dimensions = 3.5 – 1.2 x 2m (tapered top to bottom)	

Impact	Parameter	Notes
	• Haul road width = 6m wide road, 10m wide total including verges, drainage and passing places. • Haul road spacing at passing places = 500m • Hedge replanting restrictions = shrubs max 5m high within 6m of each cable centre.	
	Trenchless crossings physical parameters: • Maximum width of buried cable = 130m • Maximum trenchless crossing depth = 20m • HDD compound dimensions = 75 x 150m	
	Durations: • Bentley road widening = 6 - 9 months • Cable route works = 18 – 27 months (per project, i.e. up to 54 months) • Cable installation = 12 months (per project, i.e. up to 24 months) • Major HDD (each location) = 8 months (of which HDD = 4 months) (per project) • Minor HDD crossings = 2 months (per project) • Major HDD crossings to include 24 hour / 7 days working where required.	
Impacts relating to the onshore substation and unlicensed works	Onshore substation (temporary works) physical parameters: • Indicative area of the substations = 280 x 210m (1st project) + 280 x 210m (2nd project) • Number of buildings = 6 (1st project) + 8 (2nd project)	

Impact	Parameter	Notes
	• External equipment height (lightning masts) = 18m • Construction compound footprint = 250 x 150m (1st project) + 250 x 150m (2nd project) National Grid connection works physical parameters (for two projects): • All enabling worth / platform constructed by national grid. • Cable installation works as described above • Equipment may include: ○ cable sealing ends, surge arrestors, earth switch, disconnectors, circuit breakers, current transformers, voltage transformers, busbars	
	Durations: • Substation construction duration = 21 - 27 months (per project, i.e. up to 54 months)	
Impacts relating to non-local construction personnel	In the peak month it is estimated there will be: • Peak onshore cable route and landfall construction demand = 408 • Peak onshore substation construction demand = 290 • Total peak onshore construction demand = 698 personnel at any one time (of whom up to 91% could be non-local workers)	It is expected that during standard construction works, the onshore workforce would be an average of 268 personnel over a period of 31 months.
Operational phase		
Impacts relating to the onshore cable route	Onshore cable route operational physical parameters: • No. of link boxes = up to 192 • Link box footprint (per box) = 0.6 x 1 x 1.5m	

Impact	Parameter	Notes
	• Cross-sectional area of buried cement-bound sand = 0.6m^2	
Impacts relating to the onshore substation	Onshore substation physical parameters: Project 1: • Permanent substation footprint (indicative building dimensions) = 210 x 280m Project 2: • Permanent substation footprint (indicative building dimensions) = 210 x 280m	Normal operating conditions would not require lighting at the onshore substation, although low level movement detecting security lighting may be utilised for health and safety purposes. Temporary lighting during working hours would be provided during maintenance activities only. Low level continuous noise emissions would also be generated by the onshore substation during operation.
Decommissioning		
No final decision has yet been made regarding the final decommissioning policy for the onshore project infrastructure including landfall, onshore cable route and onshore substation. It is also recognised that legislation and industry good practice change over time. However, it is likely that the onshore project equipment, including the cable, will be removed, reused or recycled where practicable and the transition bays and cable ducts being left in place. The detail and scope of the decommissioning works will be determined by the relevant legislation and guidance at the time of decommissioning and will be agreed with the regulator. It is anticipated that for the purposes of a worst-case scenario, the impacts will be no greater than those identified for the development and construction phase.		

31.8.3.2 During construction

31.8.3.2.1 Construction impacts 1 to 2: Cumulative effects on employment and economic value

335. Both Five Estuaries and North Falls have conducted independent assessments of the scale of employment and GVA impacts which are set out in the EIA (see ES Appendix 31.1 (Document Reference: 3.3.70) North Falls Economic Impact and Five Estuaries Offshore Wind Farm, 2024). However, the worst case for both projects in terms of beneficial socio-economic impacts would be for offshore connection to be built out, with no requirement for an onshore infrastructure workforce, which means that employment and GVA impacts are relatively limited.

336. Based on the anticipated scale of the work the magnitude of impact on employment and economic value is anticipated to remain negligible in the context of the level of employment and GVA supported across the study area.

337. Should the projects be developed together the scale of employment and economic value predicted to arise as a result of the cumulative development of North Falls and Five Estuaries is considered in the Addendum to ES Appendix 31.1 (Document Reference: 3.3.70) North Falls Economic Impact.

338. The Applicant has submitted an OSEP as part of the DCO application and worked in close collaboration with Five Estuaries and with local stakeholders in order to seek alignment across both projects. This approach will help ensure the beneficial socio-economic employment and skills impacts of both projects are maximised.

31.8.3.2.2 Construction impact 3: Pressure on health and accommodation

339. As noted in Table 31.51, under the realistic worst case scenario the Five Estuaries onshore project area is assumed to be co located with the North Falls onshore project area and Five Estuaries. The projects undertake a simultaneous landfall, onshore substation construction and cable pull, as such there is greater potential for higher numbers of non-local construction workers. Therefore this would potentially result in greater demand for accommodation and social infrastructure as the peak scale of construction activity will be higher than if North Falls were developed alone.

340. Offshore workers are assumed to be accommodated on construction vessels and, as in Section 31.6.1.3, are therefore expected to generate no additional demand for health services or accommodation.

341. However construction of North Falls and Five Estuaries' onshore infrastructure could increase pressure on health services and the supply of accommodation. Cumulative effects on visitor accommodation are assessed in ES Chapter 32 Tourism and Recreation (Document Reference:3.1.34).

342. As noted in Table 31.51, under the realistic worst case scenario, the construction of North Falls and Five Estuaries would result in a peak of 698 workers involved in installation and commissioning activities of onshore infrastructure.

343. The 698 jobs are anticipated to be broken down by 408 workers for landfall and onshore cable route works and a further 290 for onshore substation works. A worst case assumption is that 91%, or 635 workers will be non-local workers.

344. As noted in 31.6.1.3 it is expected that the vast majority of these 635 non-local workers will not register with a local GP due to the temporary nature of their stay.

345. Under the worst case assumption where all non-local onshore construction workers registered with a GP this increase in demand would represent demand for less than 0.4 FTE GPs (using the HUDU patient per FTE benchmark). There are 70 FTE GPs in Tendring alone and therefore the cumulative effect on pressure on health and accommodation of Five Estuaries and North Falls remains as minor adverse (which is not significant in EIA terms).

31.8.3.2.3 Construction impact 4: Onshore disturbance (noise, air, visual, and traffic) to social and community infrastructure facilities.

346. The largest potential total effect occurs in the independent build out scenario.

347. Following the same approach as North Falls, industry good practice mitigation has been recommended for Five Estuaries in order to reduce potential for adverse effects. Impacts related to noise, air quality, traffic and visuals for Five Estuaries will be similar in nature to those predicted for North Falls. The socio-economic assessment of Five Estuaries found that there would be no significant effects identified on community facilities.

348. Therefore, it is anticipated that under the realistic worst case scenario no significant effects will occur on social and community infrastructure facilities. The impact will occur over a longer period of time. Nevertheless, this is deemed to remain minor adverse (which is not significant in EIA terms).

31.8.3.2.4 Construction impact 5-6: Wider economic effects from disruption to shipping and navigation and fishing

349. Both of the wider economic effects from disruptions to shipping and commercial fishing are not considered as effects within the socio-economic assessment of Five Estuaries. Readers of the Five Estuaries socio-economics chapter are directed to the commercial fisheries assessment for economic effects related to commercial fishing and wider economic effects related to shipping and navigation is not assessed in the socio-economics chapter.

350. The impact on shipping and navigation is strongly tied to the location of the ports of Felixstowe and Harwich. Given the proximity of Five Estuaries there could be potential for cumulative effects on disruption to shipping lanes. This is considered in ES Chapter 14 Shipping and Navigation (Document Reference: 3.1.16). The shipping and navigation assessment finds that cumulative impacts will either be tolerable and as low as reasonably practicable or broadly acceptable.

351. No significant effects on commercial fishing are found in the assessment and cumulative assessment of Five Estuaries.

352. Therefore the cumulative effect of Five Estuaries and North Falls on the wider economic effects from disruption to shipping and navigation and fishing remain as minor adverse (which is not significant).

31.8.3.2.5 Construction impact 7: Wider economic effects related to minerals

353. This effect is not considered in the socio-economic assessment of Five Estuaries.

354. As set out in ES Chapter 19 Ground Conditions and contamination (Document Reference: 3.1.21), the construction works required for both North Falls and Five Estuaries have the potential to lead to increased cumulative impacts on strategic mineral resources.

355. Ongoing consultation with Essex Minerals and Waste Planning Authority is required for both projects in order to reduce the potential impacts to minor adverse effects (not significant in EIA terms). This would also serve to limit the potential for cumulative effects to occur during the construction of both projects. Therefore, the residual significance of effect on the sterilisation of future mineral resources is not considered to increase from the minor adverse impact (not significant) predicted for North Falls alone.

356. Residual wider cumulative economic effects related to minerals during the construction phase are therefore predicted to remain minor adverse (which is not significant in EIA terms).

31.8.3.3 During operation

31.8.3.3.1 Operation impacts 1 to 2: Cumulative effects on employment and economic value

357. There are relatively small economic and employment effects predicted during the operational phase compared to the size of the local economy. Five Estuaries is predicted to support Within the region of 110 to 220 direct, indirect and induced FTE jobs from offshore operations and around 5 FTE jobs supported from onshore operations. Similarly the projects will support a limited level of GVA.

358. The effect of each of these wind farms on GVA and employment on Essex or Suffolk would therefore be predicted to be minor beneficial in the context of the size of the local economy.

31.8.3.3.2 Operation impact 3: Pressure on health and accommodation

359. Once operational, North Falls and Five Estuaries are likely to support far fewer jobs than during the construction phase and are therefore likely to result in a limited number of people moving into the area during the operational phase.

360. The assessment of five estuaries only considers socio-economic impacts on public healthcare during the construction phase, not the operational phase.

361. jobs during the operational phase, some of which may already be based locally and therefore would not place additional pressure on health and accommodation. Therefore, the scale of workers required and the spatial spread of workers across Essex and Suffolk would lead to a minor adverse impact on pressure on health and visitor accommodation.

31.8.3.3.3 Operation impact 4: Onshore disturbance (noise, air, visual, and traffic) to social and community infrastructure facilities.

362. There will be increased O&M activity for both wind farms together compared to North Falls alone.

363. No significant effects on social and community infrastructure are identified during the operational phase in the socio-economic assessment of Five Estuaries.

364. Potential impacts in the operational phase are expected to be lower than the construction phase as activity is limited to periodic work on the onshore substations and ad hoc maintenance on the onshore cable.

365. The cumulative effect of North Falls and Five Estuaries on disturbance to social and community infrastructure facilities is therefore lower than the construction phase and remains not significant in EIA terms.

31.8.3.3.4 Operation impact 5-6: Wider economic effects from disruption to shipping and navigation and fishing

366. Based on the findings of ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17), the disruption to shipping and navigation during the operational phase is deemed to be lower than potential disruption to shipping and navigation during the construction phase. Therefore, the assessment finds that there would be negligible cumulative effects during the operational phase.

367. Likewise effects on commercial fishing are predicted to be lower during the operational phase and therefore the effect is assessed as not significant.

31.8.3.3.5 Operation impact 7: Wider economic effects related to minerals

368. The permanent easements, access roads and onshore substations required for both North Falls and Five Estuaries have the potential to lead to increased cumulative impacts on strategic mineral resources. However, when compared to the overall county mineral resources, the area that could potentially be permanently sterilised is considered to be small.

369. As with the construction phase, ongoing consultation with Essex Minerals and Waste Planning Authority is required for both projects in order to reduce the potential impacts to Mineral Safeguarding Areas to minor adverse significance during the operational phase. Therefore, the residual significance of effect to Mineral Safeguarding Areas is not considered to increase from the minor adverse impact predicted for North Falls alone. This is not significant in EIA terms.

370. Residual wider cumulative economic effects during the operational phase related to minerals are therefore predicted to remain minor adverse (which is not significant in EIA terms).

31.8.3.4 During decommissioning

371. Decommissioning strategies have not yet been finalised for North Falls or Five Estuaries however, the cumulative impacts are expected to be the same as those of the construction phase CEA and therefore there will be no significant effects from the cumulative decommissioning of North Falls and Five Estuaries.

31.8.3.5 Summary

372. Table 31.52 below provides a summary of the potential significant cumulative effects identified during the socio-economics CEA in relation to Five Estuaries.

Table 31.52 Summary of cumulative effects arising from development of North Falls and Five Estuaries Wind Farm

Potential impact	Cumulative effect	Additional mitigation
Construction		
Economic value	Minor beneficial (not significant)	N/A
Employment	Minor beneficial (not significant)	N/A
Pressure on local onshore infrastructure and services (health, not housing)	Minor adverse (not significant)	N/A
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	Minor adverse (not significant)	N/A
Wider economic effects from disruption to shipping and navigation	Minor adverse (not significant)	N/A
Wider economic effects from disruption to fishing	Minor adverse (not significant)	N/A
Wider economic effects related to minerals	Negligible (not significant)	N/A
Operation		
Economic value	Minor beneficial (not significant)	N/A
Employment	Minor beneficial (not significant)	N/A
Pressure on local onshore infrastructure and services (health and housing)	Health - Minor adverse (not significant) Housing – negligible (not significant)	N/A
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	Negligible (not significant)	**N/A**
Wider economic effects from disruption to shipping and navigation	Minor adverse (not significant)	N/A
Wider economic effects from disruption to fishing	Minor adverse (not significant)	N/A

Potential impact	Cumulative effect	Additional mitigation
Wider economic effects related to minerals	Negligible (not significant)	N/A

31.8.3.6 Other projects

373. Based on the project screening in Table 31.50, in addition to Five Estuaries the other listed projects included in the CEA are:

- East Anglia ONE North Offshore Wind Farm – Cable infrastructure landfall near Sizewell to the main development area inland from Knodishall. (Scottish Power Renewables 2023a);
- East Anglia TWO Offshore Wind Farm – as above (Scottish Power Renewables 2023b);
- Sizewell C - Near Leiston in East Suffolk; and
- Norwich to Tilbury - Reinforcement of the electricity transmission network between Norwich Main, Norfolk Tilbury, Essex and Bramford, Suffolk substations.
- Bramford to Twinstead Overhead Line - Construction and operation of a new double circuit electricity transmission network reinforcement of c.29km, consisting of overhead lines, underground cables, a grid supply point substation and associated development.

31.8.3.6.1 During construction

374. Cumulative effects from other projects during construction are shown in Table 31.53.

Table 31.53 Cumulative effects from other projects on socio-economics during the construction phase

Impact	Overall cumulative effects
Cumulative effects on employment	When considered together the projects outlines above with potential for cumulative effects are anticipated to support thousands of local jobs across Essex and Suffolk over a sustained period of time, the majority of these jobs are expected to result from the construction of Sizewell C which is a significant distance from North Falls. The following scale of employment is quantified from other socio-economic ES chapter assessments: • Five Estuaries = An average onshore workforce of between around 70 and 90 FTE jobs supported in the Wider Study Area for the economic assessment (Essex and Suffolk) 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. There will also be <10 FTE years of local jobs (Essex and Suffolk) created by the offshore works. • East Anglia ONE North Offshore Wind Farm = onshore construction support average of 265 jobs (direct, indirect and induced), with around a third (86) of these jobs being local (within 60 minutes' drive). Within NALEP the proposed East Anglia ONE North project may generate 200 FTE during construction of offshore infrastructure. • East Anglia TWO Offshore Wind Farm = mirrors East Anglia ONE North Offshore Wind Farm • Sizewell C = The project has potential to support around 7,800 jobs (including home-based, as well as non-local workers). • Bramford to Twinstead – The project will support around local 35 construction jobs at its peak and a total of 350 jobs (including non-local) • Norwich to Tilbury – n/a With the sensitivity of the receptor assessed as high for the Essex and Suffolk study area, and the magnitude of impact assessed as high, the cumulative effect on Essex and Suffolk is therefore assessed as major beneficial, which is considered to be significant in EIA terms.
Cumulative effects on economic value	With the sensitivity of the receptor assessed as medium for the Essex and Suffolk study area, the magnitude of impact assessed is assumed to mirror employment (above) and is therefore assessed as high, the cumulative effect on Essex and Suffolk is therefore assessed as major beneficial, which is considered to be significant in EIA terms.

Impact	Overall cumulative effects
Cumulative effects on pressure on local onshore infrastructure and services (housing and health)	Assessing the overall cumulative effect of projects on demand for housing and social and community infrastructure is complex due to: a) the large geographical area over which the projects are located. Although the travel to work areas for these projects overlap with North Falls, many of the projects are a long distance away and much of the increased demand for infrastructure will occur in areas outside North Falls' travel to work area, b) uncertainty about the timescales over which demand could occur and whether this coincides with North Falls, and c) the fact that several of the assessments have not assessed or quantified increased demand for housing or healthcare services. With these caveats in mind, it is considered that, cumulatively, the projects will generate limited demand for housing and health infrastructure, and this will be driven mainly by Sizewell C, which will account for the majority of construction jobs of the CEA project (quantified above). <u>Increase in population</u> The offshore wind projects in the CEA together with North Falls and Norwich to Tilbury and Bramford to Twinstead can be anticipated require to over 1,000 non-local construction jobs, some of which will have occur concurrently. In comparison the Sizewell C project has a much larger workforce and a longer construction period than all of the other projects in the CEA. The civils workforce peaks at just above 3,600 workers in year five of the construction phase. <u>Housing infrastructure</u> Sizewell C's accommodation campus and caravan park will accommodate up to 3,000 workers at full capacity. It is estimated that approximately 1,200 workers will secure private rented sector tenancies. The project is over a one-hour drive from the onshore infrastructure for North Falls so it is expected that a high proportion of the demand for housing will be outside the impact area for North Falls and focused mainly on Suffolk. The primary demand for accommodation is expected to be visitor accommodation. The magnitude of impact on housing infrastructure is therefore considered to be negligible. The sensitivity of owner occupied accommodation is medium and the sensitivity of private rented accommodation is high. Therefore this gives rise to a minor adverse effect on private rented accommodation and owner occupied accommodation.

Impact	Overall cumulative effects
	Health infrastructure Section 31.6.1.3.1 found North Falls would, in isolation, have a negligible effect on increased pressure on local health services. This is on the basis that very few non-local workers who are in the area temporarily are likely to register with a local GP or require health services. This is also expected to be the case for other projects included in the CEA. The only exception to this is Sizewell C which will provide on-site occupational healthcare services including mental and sexual health services, which would reduce demand for GP and other NHS services. On this basis, the magnitude of impact on healthcare infrastructure is negligible. The sensitivity of health infrastructure is high, and the magnitude of impact is considered to be negligible giving a minor adverse effect which is not significant in EIA terms.
Onshore disturbance (noise, air, visual, and traffic) to social and community infrastructure facilities	Impacts related to noise, air quality, traffic and visuals for Five Estuaries are likely be similar in nature to those predicted for North Falls. No other projects are predicted to result in a cumulative effect on onshore disturbance (noise, air, visual, and traffic) to social and community infrastructure facilities. Therefore, the overall cumulative effect is minor adverse. This is not considered to be significant in EIA terms.
Wider economic effects from disruption to shipping	No other publicly available offshore wind farm assessment considered in the CEA has considered the impact of wider economic impacts from disruption to shipping and navigation during construction. This impact is strongly tied to the location of the ports of Felixstowe and Harwich. Given the proximity of Five Estuaries there could be potential for cumulative effects on disruption to shipping lanes. As noted in the assessment of shipping and navigation project vessel movements will be managed via marine coordination to ensure any impact on third party vessels accessing local ports is minimised, and other developers should be applying the same measures. The relevant conclusions on shipping and navigation assessment are considered as part of the cumulative assessment of Wider economic effects from disruption to shipping. The shipping and navigation assessment finds that cumulative impacts will either be tolerable and as low as reasonably practicable or broadly acceptable. The overall impact of the CEA projects (including North Falls) is therefore assessed as minor adverse. This is not considered to be significant in EIA terms.
Wider economic effects from disruption to commercial fishing	The sensitivity of the fishing industry is assessed as medium, and it is assumed there would be at most a low magnitude of economic effects associated with potential disruption to fishing during the construction phase. ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16) notes a number of embedded mitigation measures relevant for mitigating potential disruption to commercial fishing. It is assessed that cumulative effects on economic effects from disruption to fishing will be of minor adverse significance.

Impact	Overall cumulative effects
Wider economic effects related to minerals	As noted within ES Chapter 19 Ground Conditions and Contamination (Document Reference: 3.1.21): • Residual wider cumulative economic effects related to minerals during the construction phase are therefore predicted to remain minor adverse (which is not significant in EIA terms). • Mitigation measures associated with mineral resources specifically are not included within the Scoping Report for Norwich to Tilbury. It is however, anticipated that mitigation measures for Norwich to Tilbury would be similar to those of North Falls given the nature of the project. Should this be the case, residual cumulative effects are not considered to increase from what is predicted for North Falls, which are deemed not significant in EIA terms.

31.8.3.6.2 During operational phase

Table 31.54 Cumulative effects from other projects on socio-economics during the operational phase

Project	Overall cumulative effects
Cumulative effects economic value and on employment	The CEA for the operational phase assumes the effects on economy and employment from the operational phase of CEA projects will be lower than the effects assessed during the construction phase. On this basis, the overall magnitude of impact on employment during the projects' operational phase is assessed as low. With the sensitivity of the receptor assessed as high, the significance of effect is assessed as matrix beneficial. This is considered to be significant in EIA terms. It is assumed that the impact of increased employment and economic value supported as a result of the schemes identified is permanent, long-term and irreversible in nature.
Cumulative effects on pressure on local onshore infrastructure and services (housing and health)	Once operational, most of the projects in the CEA are likely to support far fewer jobs than during the construction phase and are therefore likely to result in far fewer people moving in to the area. Almost all assessments reviewed (with the exception of the socio-economic assessment of Sizewell C) exclude the assessment of the projects' impact on demographics during the operational phase. The assessment for Sizewell C identifies a negligible impact on health infrastructure during the projects' operational phase. The effect of the East Anglia ONE North and THREE projects is anticipated to be of a similar scale to North Falls, but focused on Suffolk rather than Essex. On this basis, the overall magnitude of impact on social, community and health infrastructure during the projects' operational phase (i.e. including North Falls) is assessed as negligible. With the sensitivity of the health infrastructure receptor assessed as high, and the magnitude of effect assessed as negligible, the overall CEA cumulative effect is assessed as minor adverse. This is not considered to be significant in EIA terms. Given the magnitude of impact on accommodation is assessed as low during the operational phase of North Falls the magnitude of impact on cumulative sites including North Falls is also assessed as low. The overall impact of the CEA projects (including North Falls) is therefore assessed as minor adverse. This is not considered to be significant in EIA terms.
Related to onshore disturbance (noise, air, visual, and traffic) to social and community infrastructure facilities	Estuaries Offshore wind farm overlaps with the onshore project and Norwich to Tilbury will be adjacent to the onshore substations of both Five Estuaries and North Falls, There are a number of other projects that have been scoped out including two housing projects within the LOCAI which have not been included in the CEA due to the small scale of the projects and a battery storage project at Lawford.

Project	Overall cumulative effects
	The magnitude of impact assessed as negligible, the overall impact of the CEA projects (including North Falls) is therefore assessed as negligible. This is not considered to be significant in EIA terms.
Wider economic effects from disruption to shipping and navigation	It is assumed that the additional disruption to shipping and navigation caused by the operation of Five Estuaries would not change the assessment of the wider economic impact associated with imports and exports transiting through the ports of Felixstowe and Harwich. With the sensitivity of the disruption to port infrastructure receptor assessed as high, and the magnitude of impact assessed as negligible, the overall impact of the CEA projects (including North Falls) is therefore assessed as minor adverse. This is not considered to be significant in EIA terms.
Wider economic effects on commercial fishing	The sensitivity of the fishing industry is assessed as medium, and it assumed there would be at most a low magnitude of economic effects associated with potential disruption to fishing. ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16) notes a number of mitigation measures relevant for mitigating potential disruption to commercial fishing during the operational phase. It is assessed that cumulative effects on shipping will be of minor adverse significance.
Wider economic effects related to minerals	Cumulative effects on sterilisation of future mineral resources are assessed as minor adverse within ES Chapter 19 Ground Conditions and Contamination (Document Reference: 3.1.21). The assessment of wider economic cumulative effects to businesses operating in the minerals industry is also assessed as minor adverse which is not significant in EIA terms.

31.8.3.6.3 During decommissioning

375. Decommissioning strategies have not yet been finalised for North Falls, Five Estuaries or other projects such as Norwich to Tilbury; however, the cumulative effects are expected to be the same as those of the initial construction phase.

31.9 Interactions

376. This section establishes the interactions between socio-economics and other physical, environmental and human receptors. The objective is to identify where the accumulation of effects on a single receptor may result in the need for additional mitigation measures.

377. Table 31.55 below summarises the inter-relationships that are considered of relevance to socio-economics and identifies where these have been considered within this assessment.

Table 31.55 Socio-economic interactions

Topic and description	Related chapter (Volume 3.1)	Where addressed in this chapter	Rationale
Construction			
Economic value	n/a	n/a	No additional inter-related effects on GVA during construction have been identified that would change the standalone assessment from minor beneficial.
Employment			No additional inter-related effects on employment during construction have been identified that would change the standalone assessment from minor beneficial.
Pressure on local onshore infrastructure and services (housing and health)	ES Chapter 32 Tourism and Recreation (Document Reference: 3.1.34)	See Section 31.6.1.3 of this assessment.	The influx of construction workers requiring serviced accommodation has the potential to impact on the demand for visitor accommodation used to house the construction workers, and therefore has potential to displace a small number of visitors should visitor accommodation become fully occupied. No additional inter-related effects on local onshore infrastructure and services (housing

Topic and description	Related chapter (Volume 3.1)	Where addressed in this chapter	Rationale
			and health) during construction have been identified that would change the standalone assessment from minor beneficial.
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	ES Chapter 20 Air Quality (Document Reference: 3.1.22) ES Chapter 26 Noise and Vibration (Document Reference:3.1.28) ES Chapter 27 Traffic and Transport (Document Reference:3.1.29) Chapter 30 Landscape Visual Impact Assessment (Document Reference: 3.1.32)	See Section 31.6.1.4 of the assessment.	Potential impacts related to noise, air quality, visuals and traffic have potential to impact on the area's community infrastructure. This is assessed in full within the Section 31.6.1.4.
Wider economic effects from disruption to shipping and navigation	ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17)	See Section 31.6.1.5 of the assessment.	Potential to disruption to shipping and navigation has the potential to impact on the wider economic benefits of local ports. This is assessed in full within the Section 31.6.1.5.
Wider economic effects from disruption to fishing	ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16)	See Section 31.6.2.6 of the assessment.	Potential to disruption to the fishing industry has potential to impact on the economic benefits associated with the fishing industry. This is assessed in full within the Section 31.6.2.6.
Wider economic effects related to minerals	ES Chapter 19 Ground Conditions (Document Reference:3.1.21)	See Section 31.6.1.7 of the assessment.	Potential sterilisation of mineral resources has potential to impact on the economic benefits associated with the mineral extraction industry.

Topic and description	Related chapter (Volume 3.1)	Where addressed in this chapter	Rationale
			This is assessed in full within the Section 31.6.1.7.
Operation			
Economic value	n/a	n/a	No additional inter-related effects on economic value during the operational phase have been identified that would change the standalone assessment from minor beneficial.
Employment			No additional inter-related effects on employment during the operational phase have been identified that would change the standalone assessment from minor beneficial.
Pressure on local onshore infrastructure and services (housing and health)	n/a	n/a	No additional inter-related effects on local onshore infrastructure and services (housing and health) during the operational phase have been identified that would change the standalone assessment from minor adverse for health and moderate adverse for housing.
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	ES Chapter 20 Air Quality (Document Reference: 3.1.22) ES Chapter 26 Noise and Vibration (Document Reference: 3.1.28) ES Chapter 27 Traffic and Transport (Document Reference: 3.1.29) ES Chapter 30 Landscape Visual Impact Assessment (Document Reference:3.1.32)	See Section 31.6.2.4 of the assessment.	Potential impacts during the operational phase related to noise, air quality and traffic have potential to impact on the area's community infrastructure. This is assessed in full within the Section 31.6.1.4.

Topic and description	Related chapter (Volume 3.1)	Where addressed in this chapter	Rationale
Wider economic effects from disruption to shipping	ES Chapter 15 Shipping and Navigation (Document Reference: 3.1.17)	See Section 31.6.2.5 of the assessment.	Potential to disruption to shipping and navigation has the potential to impact on the wider economic benefits of local ports. This is assessed in full within the Section 31.6.2.5.
Wider economic effects from disruption to fishing	ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16)	See Section 31.6.2.6 of the assessment.	Potential to disruption to the fishing industry has potential to impact on the economic benefits associated with the fishing industry. This is assessed in full within Section 31.6.2.6.
Wider economic effects related to minerals	ES Chapter 19 Ground Conditions (Document Reference: 3.1.21)	See Section 31.6.2.7 of the assessment.	Potential sterilisation of mineral resources has potential to impact on the economic benefits associated with the mineral extraction industry. This is assessed in full within the Section 31.6.2.7.
Decommissioning			
Likely significant effects associated with the decommissioning phase are currently unknown. However, they should be of similar nature to but no greater in terms of significance than those identified for the construction phase.			

31.10 Inter-relationships

378. The effects identified and assessed in this chapter have the potential to inter-relate with each other. The areas of potential inter-relationships between effects are presented in Table 31.56.

379. Within Table 31.57 the effects are assessed relative to each development phase (Phase assessment, i.e. construction, the operational phase or decommissioning) to see if (for example) multiple construction impacts affecting the same receptor could increase the level of effect significance upon that receptor. Following this, a lifetime assessment is undertaken which considers the potential to affect receptors across all development phases.

Table 31.56 Inter-relationships socio-economic between impacts - screening

	Economic value	Employment onshore	Pressure on local onshore infrastructure and services (housing and health)	Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	Wider economic effects from disruption to shipping and navigation	Wider economic effects from disruption to fishing	Wider economic effects related to minerals
Construction and operation							
Economic value		Yes	No	No	Yes	Yes	Yes
Employment	Yes		Yes	Yes	No	No	No
Pressure on local onshore infrastructure and services (housing and health)	No	Yes		No	No	No	No
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	No	Yes	No		No	No	No
Wider economic effects from disruption to shipping and navigation	Yes	No	No	No		No	No
Wider economic effects from disruption to fishing	Yes	No	No	No	No		No
Wider economic effects related to minerals	Yes	No	No	No	No	No	

Table 31.57 Inter-relationship between impacts – phase and lifetime assessment

Receptor	Highest significance level			Phase Assessment	Lifetime Assessment
	Construction	Operational phase	Decommissioning		
Economic value	Negligible	Negligible	Negligible	No greater than individually assessed impact Investment will generate economic benefits at all local and national levels.	No greater than individual assessed impact. It is estimated that the construction, the operational phase and decommissioning of North Falls will generate: Economic value offshore: £274-£288 million GVA at the Suffolk and Essex level, and to £593-£910 million GVA nationally in the offshore connection scenario. Employment offshore: 2,650-2,800 at the Essex and Suffolk level, and to 3,720-8,870 jobs nationally. Although benefits created at each stage, different groups will be employed at different stages. It should be noted that should onshore infrastructure also be developed then the total lifetime impact will be higher: • Economic value onshore: £19-£48 million GVA at the Essex level, and to £179-£201 million GVA nationally if onshore infrastructure is developed. • Employment: 220-540 jobs at the Essex level, and to 2,050-2,250 jobs nationally. The bulk of the onshore GVA and jobs created will be during the construction phase.
Employment	Negligible	Negligible	Negligible		

Receptor	Highest significance level			Phase Assessment	Lifetime Assessment
	Construction	Operational phase	Decommissioning		
Pressure on local onshore infrastructure and services (housing and health)	Negligible	Negligible	Negligible	No greater than individual assessed impact.	No greater than individual assessed impact.
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	Negligible	Negligible	Negligible	No greater than individual assessed impact.	No greater than individual assessed impact.
Wider economic effects from disruption to shipping and navigation	Negligible	Negligible	Negligible	No greater than individual assessed impact.	No greater than individual assessed impact.
Wider economic effects from disruption to fishing	Negligible	Negligible	Negligible	No greater than individual assessed impact.	No greater than individual assessed impact.
Wider economic effects related to minerals	Negligible	Negligible	Negligible	No greater than individual assessed impact.	No greater than individual assessed impact.

31.11 Summary

380. This chapter has provided a characterisation of the existing environment for socio-economics based on existing data, which has established that there will be a range of residual impacts on socio-economics during construction, operational and decommissioning phases of North Falls.

381. Potential impacts for North Falls are summarised in Table 31.58.

382. This shows that Suffolk, Essex and the UK has the potential for minor beneficial effects through increased employment opportunities and economic value. It should be noted that an Outline Skills and Employment Plan has been submitted as part of the North Falls DCO application and will be secured through a DCO Requirement.

383. It is predicted that an increase in the local population due to change in demographics will occur as result of the development of North Falls. It is predicted that a number of related minor adverse impacts will occur as a result of the increase in non-local workers temporarily moving into the area and workers moving into the area permanently during the operational phase. These minor adverse effects are not considered to be significant in EIA terms.

Table 31.58 Summary of likely significant effects on socio-economics

Potential impact	Receptor	Sensitivity	Magnitude of impact	Significance of effect	Additional mitigation measures	Residual effect
Construction						
Economic value	Economy	High	Negligible (UK and local)	Minor beneficial	N/A	Minor beneficial (not significant)
Employment	Economy	Medium (local) High (UK)	Negligible (UK and local)	Minor beneficial	N/A	Minor beneficial (not significant)
Pressure on local onshore infrastructure and services (health and housing)	Health infrastructure	Health – high Private rented housing – high Owner occupied housing - medium	Health infrastructure – negligible Housing - negligible	Health infrastructure – Minor adverse Private rented housing – minor adverse Owner occupied housing – minor adverse	N/A	Health infrastructure – Minor adverse (not significant)
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	Social and community infrastructure within the LOCAI	Medium	Negligible (LOCAI) note this assessment assumes additional mitigation measures identified in other topic chapters are implemented.	N/A	Mitigation related to noise, traffic, visuals and air quality is identified in the relevant topic chapters.	Minor adverse (not significant)

Potential impact	Receptor	Sensitivity	Magnitude of impact	Significance of effect	Additional mitigation measures	Residual effect
					Including use of industry good practice mitigation measures for relevant topics such as submission of a Construction Environmental Management Plan and reducing peak LV and HGV.	
Wider economic effects from disruption to shipping and navigation	Imports and exports	Medium	Low	Minor adverse	N/A	Minor adverse (not significant)
Wider economic effects from disruption to fishing	Volume and value of fishing catch	High	Negligible	Minor adverse	Mitigation detailed within ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16) is considered in the assessment	Minor adverse (not significant)

Potential impact	Receptor	Sensitivity	Magnitude of impact	Significance of effect	Additional mitigation measures	Residual effect
Wider economic effects related to minerals	Mineral resources	Medium	Negligible	Minor adverse	Use of industry good practice mitigation measures for relevant topics.	Minor adverse (not significant)
Operation						
Economic value	Economy	High	Negligible (UK and local)	Minor beneficial	N/A	Minor beneficial (not significant)
Employment	Economy	Medium (local) High (UK)	Negligible (UK and local)	Minor beneficial	N/A	Minor beneficial (not significant)
Pressure on local onshore infrastructure and services (accommodation and health)	Health infrastructure and accommodation	Health - high Private rented housing – high Owner occupied housing - medium	Health infrastructure – Negligible Housing – negligible	Health infrastructure - minor adverse Private rented housing – minor adverse Owner occupied housing – minor adverse	N/A	Health infrastructure - minor adverse (not significant) Private rented housing – minor adverse (not significant) Owner occupied housing – minor adverse (not significant)
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	Social, community and health infrastructure	Medium	Negligible	Minor adverse	Use of industry good practice mitigation measures for relevant topics.	Minor adverse (not significant)

Potential impact	Receptor	Sensitivity	Magnitude of impact	Significance of effect	Additional mitigation measures	Residual effect
Wider economic effects from disruption to shipping and navigation	Imports and exports	High	Negligible	Minor adverse	N/A	Minor adverse (not significant)
Wider economic effects from disruption to fishing	Volume and value of fishing catch	High	Negligible	Minor adverse	Mitigation detailed within ES Chapter 14 Commercial Fisheries (Document Reference: 3.1.16) is considered in the assessment	Minor adverse (not significant)
Wider economic effects related to minerals	Mineral resources	Medium	Negligible	Minor adverse	Use of industry good practice mitigation measures for relevant topics.	Minor adverse (not significant)
Decommissioning						
Given the uncertainty associated with the approach to decommissioning and the position of the sector nationally and locally, a detailed assessment of this phase has not been undertaken. Based on the scale of economic benefits predicted decommissioning impacts of North Falls are anticipated to be no worse/ better than the impacts identified during the operational and construction phases.						

Table 31.59 Summary of potential cumulative effects on socio-economics

Potential impact	Cumulative effect	Additional mitigation
Construction		
Economic value	Major beneficial (significant)	n/a
Employment	Major beneficial (significant)	n/a
Pressure on local onshore infrastructure and services (health and housing)	Minor adverse (not significant)	n/a
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	Minor adverse (not significant)	n/a
Wider economic effects from disruption to shipping and navigation	Minor adverse (not significant)	n/a
Wider economic effects from disruption to fishing	Minor adverse (not significant)	n/a
Wider economic effects related to minerals	Minor adverse (not significant)	n/a
Economic value	Moderate beneficial (significant)	n/a
Employment	Moderate beneficial (significant)	n/a
Pressure on local onshore infrastructure and services (accommodation and health)	Minor adverse (not significant)	n/a
Disturbance (noise, air, visual, and traffic) to onshore social and community infrastructure facilities	Negligible (not significant)	n/a
Wider economic effects from disruption to shipping and navigation	Negligible (not significant)	n/a

Potential impact	Cumulative effect	Additional mitigation
Wider economic effects from disruption to fishing	Minor adverse (not significant)	n/a
Wider economic effects related to minerals	Minor adverse (not significant)	n/a
Decommissioning		
Decommissioning strategies have not yet been finalised for North Falls, Five Estuaries or Norwich to Tilbury; however, the cumulative effects are expected to be the same as those of the initial construction phase.		

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