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Sizewell C Economic Impact Assessment

Appendices to Final Report

Prepared for Suffolk Coastal and Waveney District Councils and Suffolk County Council

November 2018

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1 Appendix 1: Local Economic and Planning Context

1.1 Local Economic Context

1.1.1 The population of Suffolk Coastal and Waveney Districts in 2016 was approximately 245,000 (with a population density lower than that of England). There were concentrations of population in surrounding towns and cities. As shown in the figure below. Sizewell is located in a largely rural area with the nearest population centre located approximately 45 minutes away at Lowestoft. The area has experienced a tightening of the labour market in recent years as it has been recovering from the recession, with steady increases in employment across Suffolk Coastal District. Waveney has a new Energy Skills Centre at East Coast College in Lowestoft and Energy has historically been an important sector in the area.

1.1.2 These factors, combined with the scale of the project makes it likely that the area of local economic impact will encompass the districts of Suffolk Coastal and Waveney as there will not be significant numbers of local workers ready to take up employment on the Sizewell C construction project.

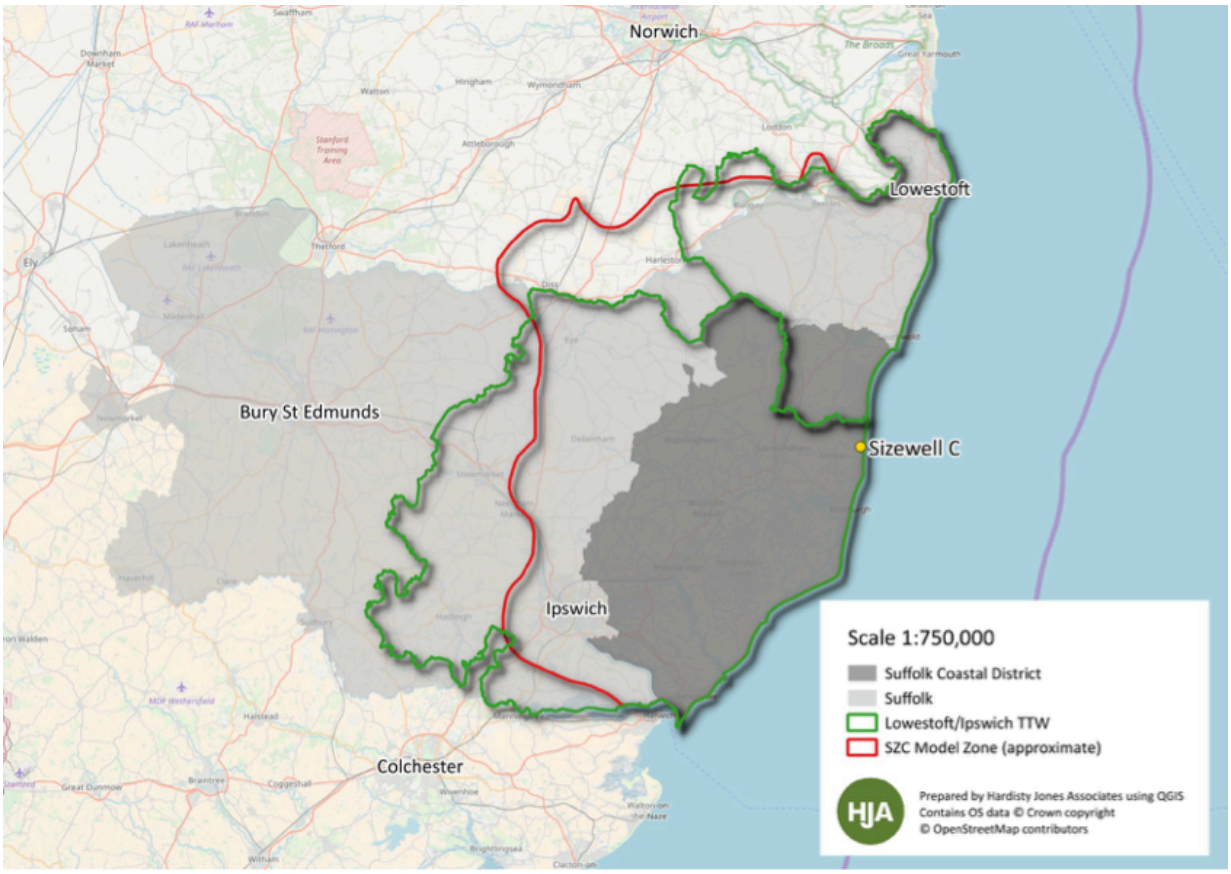
Figure 1.1: Population in Nearby Places

	Population	Travel Time to Sizewell
Lowestoft	70,000	45 minutes
Ipswich	130,000	50 minutes
Colchester	104,000	70 minutes
Norwich	140,000	70 minutes
Bury St Edmunds	40,000	75 minutes

Functional Economic Market Area

1.1.3 Sizewell is located within the Ipswich Travel to Work Area (TTWA), defined using 2011 Census data, as shown in our map below. Within this area the A14, A12 and A140 are the key transport routes; with the A14 east-west flows being the most significant. The map also demonstrates Sizewell's proximity to the Lowestoft TTWA. The significant scale of the Sizewell C construction project means that it is likely that it will attract some workers from this TTWA, as well as from the Ipswich TTWA. The map also shows the Suffolk County and Suffolk Coastal administrative boundaries, as well as an approximation of the traffic modelling area used in the EDF Energy Stage 2 Consultation.

Figure 1.2: The Location of Sizewell C



1.1.4 Building on the TTWA data, the Ipswich Economic Area has been defined in recent work for Ipswich, Babergh, Mid Suffolk and Suffolk Coastal councils[1]. The majority of employment in this area is located around the Ipswich Eastern Fringe, Felixstowe and Woodbridge to the south of Sizewell and Suffolk Coastal District. In practice these lines are not hard economic boundaries, and whilst Lowestoft is part of the Waveney Economic Area, which tends to have stronger links to Great Yarmouth, it is possible that the scale of this project and the importance of the energy sector in Lowestoft (previously Oil & Gas, now Renewables) means that residents of these areas may also work on the Sizewell C project.

Economic Strategy

1.1.5 The construction of Sizewell C is taking place in an environment where there are already plans for significant economic growth. A key document is the Strategic Economic Plan (SEP) for the New Anglia LEP area i.e. Norfolk and Suffolk[2].

1.1.6 A review of the Norfolk and Suffolk economy has recognised that there is scope to improve the local economic performance of the LEP area. The SEP shows how future growth will be driven by increased productivity, along with more jobs, more new businesses and new homes. The rate of increase in GVA set out in the SEP is highly ambitious, and beyond historic trends. GVA per head

[1] Nathaniel Lichfield & Partners (2016) Ipswich and Waveney Economic Areas Employment Land Needs Assessment

[2] New Anglia LEP (2017) Norfolk and Suffolk Economic Strategy and Metro Dynamics (2017) Norfolk and Suffolk Economic Strategy: Preliminary Data Analysis

in the LEP area has consistently been below the England average (excluding London) over the period from 1997 to 2015.

1.1.7 A number of target sectors have been identified in the SEP. These include Advanced Manufacturing & Engineering and Energy. The Energy sector includes Oil & Gas, Offshore Renewables and Nuclear. This sector generates high GVA per worker, which will help to address the need to increase productivity. Innovation Centres have been established to support the growth in the target sectors, including an Offshore Energy Innovation Centre at Lowestoft.

1.1.8 The SEP identifies Sizewell as one of the strategic economic growth locations in the LEP area because of the proposals for the development of Sizewell C, along with other major energy infrastructure.

1.1.9 As well as direct support for the growth of the Energy and Nuclear sectors, the SEP highlights the importance of tourism and culture to local economic growth, and the need to improve transport and communications infrastructure, including the proposed Four Villages Bypass on the A12.

1.1.10 In the Suffolk Growth Strategy[3], 'green' and sustainable economic growth is the main ambition for the county's economy. This Strategy reiterates the target sectors set out in the SEP that will drive economic growth. Sizewell C is explicitly mentioned in the vision for Suffolk in 2028, alongside a buoyant low carbon and renewable energy sector. It is also highlighted as one of the county's principal economic growth locations.

1.1.11 Improving skills to support growth is key to the delivery of the Growth Strategy, and this will help support local engagement in and economic benefit from the construction of Sizewell C. Other actions include improving enterprise and supporting inward investment, which will also support growth at Sizewell C. Proposals for improving transport and digital connectivity infrastructure, which are set out in the Growth Strategy, will also help to maximise the local economic impact from the construction of Sizewell C.

1.1.12 The [Draft?] East Suffolk Economic Growth Plan[4] sets out some priorities for the future growth of the local economy, including: supporting entrepreneurs; encouraging growth in established businesses; and attracting inward investment. Key sectors include Energy, Advanced Manufacturing & Engineering, and the visitor economy. Sizewell is one of the key places in the local area. The operation of Sizewell B and the construction of Sizewell C are identified as major economic assets in East Suffolk.

1.1.13 Skills and labour shortages are identified in the local area. The skills profile is weak in parts of the area, and there is limited higher education provision. The supply of workspace is limited. The A12, the major route through the local area, is congested.

1.2 Planning Guidance

1.2.1 Any mitigation for adverse economic impacts of the construction project will be agreed through the planning process. Whilst the DCO application for Sizewell C will be considered as a Nationally Significant Infrastructure Project (NSIP) by the Planning Inspectorate rather than a local planning application, it is also useful to consider the Local Plan context, as this should carry some [possibly

[3] Suffolk Councils (no date) Suffolk Growth Strategy
[4] Suffolk Coastal and Waveney Councils (2018) East Suffolk Economic Growth Plan 2018-23 Draft V7 January 2018

limited] weight in determining the mitigation of economic impacts through the planning process. At Hinkley Point C in Somerset a planning application was submitted to the local planning authorities to undertake preliminary works, before the main DCO application was submitted. This gave the local authorities a strong opportunity to influence the planning context for the project.

National Infrastructure Planning Guidance

1.2.2 There is limited guidance on assessing the local economic impact of major infrastructure projects, including new nuclear power stations. EN-1[5] on Energy states that there may be local and regional socio-economic impacts, and that the applicant should assess these as part of their environmental statement. EN-1 mentions jobs and training opportunities; the provision of additional local services; effects on tourism; the impacts of an influx of migrant workers; and cumulative effects with other projects. It also states that some limited weight can be given to socio-economic impacts that are not supported by evidence. Mitigation of adverse economic impacts should be considered. EN-6[6] adds little to EN-1, although it notes that the construction of the power station is likely to have a larger impact, and that impacts could be positive or negative. It states that the assessment of the socio-economic impact should consider pressures on local, regional and national resources, demographic change, and economic benefits.

Local Plan Context at Hinkley Point C

1.2.3 At the District of Sedgemoor in Somerset, there is a strong planning policy framework for the delivery of the Hinkley Point C nuclear power station. This has helped to shape the mitigation package that has been agreed through the DCO process.

1.2.4 The Local Plan [consultation draft][7] contains two policies related to the construction of Hinkley Point C:

- *MIP2-Hinkley Point C: Associated and Ancillary Development.* This policy details the criteria which will be used by the Council to judge any planning applications for developments related to Hinkley Point C. Applications will be judged on whether they satisfactorily mitigate the effects on the transport network and local housing market as well as the extent to which legacy benefits can be derived from buildings or education and training programmes.
- *MIP3-Hinkely Point C: Planning Obligations and Mitigation:* The Council is committed to maximising the benefits and minimising the negative impacts from the development. The methods proposed to do this are laid out in the Supplementary Planning Document.

1.2.5 A Supplementary Planning Document (SPD) to the existing Local Plan was prepared in 2011[8]. The Councils have detailed a number of measures believed to be necessary for the local area to maximise the benefits of Hinkley Point C. The Council expects EDF Energy to develop an Employment and Skills Charter that focuses on improving the access of local people to jobs and training opportunities. This should include: support for the expansion of education facilities; establishing an employment brokerage service; development of programmes targeting disadvantaged communities; and assisting local labour to source alternative employment once the construction period is finished. The tourist economy is important to the area and so displacement

[5] Department of Energy & Climate Change (2011) Overarching National Policy Statement for Energy (EN-1)
[6] Department of Energy & Climate Change (2011) National Policy Statement for Nuclear Power Generation (EN-6)
[7] Sedgemoor District Council. (2017) Proposed Submission Local Plan
[8] West Somerset Council & Sedgemoor District Council (2011) Hinkley Point C Supplementary Planning Document

of tourists by construction workers take up of tourist accommodation is to be monitored and a visitor management plan and destination marketing should be developed to maintain the sector.

1.2.6 The Council has maintained, and recently updated a Priorities Plan for Hinkley Point C[9]. Since construction has begun at Hinkley Point C, the first impacts in the area have been increased traffic flows and HGV movements in Bridgwater. Some mitigation along the transport network is happening alongside the construction of the Hinkley Point C and so is causing additional congestion problems in the short-term. Also, as the construction of the accommodation campus will not be complete until early 2019 construction workers are increasingly using tourism accommodation or Houses in Multiple Occupancy (HMOs). With unemployment currently below 1% in Somerset it is not anticipated that the local recruitment target will be met and there is an increased focus on supporting local employers with backfilling jobs.

1.2.7 The economic development strategy for Sedgemoor[10] is also helpful in shaping the mitigation of local economic impacts. The development of Hinkley Point C can be used as a catalyst for change in local area. The expansion in education provision in the area funded in part by EDF Energy and the likely increase in inward investment in the area provide opportunities for economic growth in Sedgemoor. The Council should provide support to local businesses to ensure that they are ready to join the supply chain, and should utilise the Hinkley Point Training Agency to upskill the current workforce to take advantage of employment opportunities.

1.2.8 The Hinkley Point C project is likely to lead to an increase in demand for employment space in the area so the Council must work to address issues around supply or risk increasing rents and displacement of existing businesses.

[9] Sedgemoor District Council (2017) Hinkley Point C Priorities Plan 2017/18: Planning Mitigation
[10] Sedgemoor District Council (2015) Sedgemoor Economic Development Strategy 2015-2032

2 Appendix 2: Lessons from Other Projects

2.1 Sizewell B

2.1.1 The impact of the construction of the Sizewell B nuclear power station has been considered by Professor John Glasson[11]. The regular collection of monitoring data was undertaken throughout the construction of Sizewell B, including:

- Number of construction workers on the site
- Their characteristics
- Two-yearly sampled surveys of the workforce, to identify expenditure, use of local facilities etc.
- Two-yearly sampled surveys of the local population, to gather data on perceptions of the development process and its local impact

2.1.2 Issues identified through the analysis of monitoring data include (p.218):

- The need to disaggregate the impact of the project from changes that would have happened anyway (i.e. deadweight)
- The need to measure indirect socio-economic impacts caused by direct socio-economic impacts
- The need to consider the distribution of impacts

2.1.3 The work undertaken by Glasson identifies that there are both positive and negative impacts of employment in the construction of a new nuclear power station, noting that the speed of delivery can be problematic. If local recruitment is too low, there may be resentment about the leakage of impact out of the local area, and if it is too high then it can cause inflationary pressures and other pressures on local businesses. There is also risk of a 'boom and bust' scenario, where benefits during the construction period are followed by dis-benefits after.

2.1.4 Glasson, considered the local labour market experience from Sizewell B. The monitoring reports show that local people were employed on the project, including people who were previously unemployed. Efforts were made to retrain workers who had undertaken a role on the project which subsequently became redundant.

2.1.5 Glasson found that the proportion of local workers as a percentage of all workers fell during the project, particularly when there was a shift away from the civil engineering phase and towards the more highly skilled mechanical and electrical engineering phase (p. 219). Local residents filled more of the less skilled roles, and fewer of the more skilled roles.

2.1.6 Some actions were taken to try and maximise local employment, including:

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[11] Glasson, J (2005) Better monitoring for better impact management: the local socio-economic impacts of constructing Sizewell B nuclear power station in Impact Assessment and Project Appraisal, September 2005
Glasson et al (1992) Local Socio-Economic Impacts of the Sizewell B PWR Construction Project: Fourth Annual Monitoring Report
Glasson et al (1993) Local Socio-Economic Impacts of the Sizewell B PWR Construction Project: Fifth Annual Monitoring Report
Glasson et al (1994) Local Socio-Economic Impacts of the Sizewell B PWR Construction Project: Sixth Annual Monitoring Report

- A Job Centre was established on site to try and maximise the recruitment of local workers. The Job Centre managed to place 5,500 job applicants into employment [not necessarily at Sizewell B], of whom 60% had previously been unemployed
- A Local Training and Employment Committee was established to match job opportunities, local supply and training provision. Local school levers were sponsored to undertake apprenticeships in construction trades. A Training Centre was established at Leiston.

2.1.7 According to Glasson, additional workforce expenditure in Norfolk and Suffolk topped £75 million (p.220), and £72 million of supply chain spend went to businesses in Norfolk and Suffolk. Local supply chain businesses were able to take on more staff as a result of the demand generated by the construction of Sizewell B.

2.1.8 The monitoring reports show that occupancy rates in tourist accommodation were high on weekdays during the construction period.

2.1.9 Glasson found that there is potential for the displacement of workers because of the higher salaries paid in the project, and difficulty in back-filling vacant posts because of generally high employment and skills shortages in the local economy (p.220). He estimated that 600 employees were drawn from other local businesses in the early years; and a survey of local businesses reported that 10% found that the project made it more difficult to retain or recruit staff.

2.1.10 After 12 months post work on the site, Glasson reported that one-third of construction workers had not gone back into economic activity, presumably meaning that they had not found new work, although this is not entirely clear from the paper.

2.1.11 A number of local perceptions of the construction process were reported in Glasson's work, including:

- In the early years of the project traffic impact was a significant local concern
- Employment opportunities were well received
- Environmental impacts, including noise and the effects on the coast and beach were highlighted as concerns
- The (bad) behavior of the workforce was highlighted for a short period
- There were concerns about pressures on local services
- Concerns about safety were expressed
- The effects of the end of the construction period on local employment and businesses was a concern

2.2 Other New Nuclear Builds and Major Construction Projects in Europe

2.2.1 Three nuclear power stations are currently being built in Europe, at:

- Flamanville in France
- Olkiluoto in Finland
- Hinkley Point in the UK

2.2.2 The Hinkley Point development is dealt with separately below. It has been suggested by EDF Energy that the French and Finnish builds are not directly comparable because of differences in local circumstances.

Flamanville

2.2.3 Flamanville 3 is based in north-west France. Construction began in 2007 and the reactors are currently due to start-up at the end of 2018, at a total cost of €10.5 billion[12][13][14]. This is a substantial revision to the original construction cost estimates of €3.3 billion, and an estimate that it would be operational by 2012. The project has involved up to 150 contracts in total, with a €300 million contract for all civil engineering awarded to French company Bouygues Construction[18]. In 2015, as the civil engineering work was finishing there were just over 3,000 workers on site[15]. According to EDF Energy, during the civil engineering phase of this construction project they achieved 45-50% home-based recruitment from the surrounding area of La Manche[16].

2.2.4 This is a single unit EPR nuclear power station (as is Olkiluoto 3) and so comparisons to the Sizewell C project may be limited. Sizewell C is assumed to require double the amount of construction hours as Flamanville 3, with double the peak workforce[17].

Olkiluoto

2.2.5 This project is still in the construction phase after suffering multiple setbacks in relation to quality and safety, and is currently projected to be completed in 2019, almost a decade after the originally proposed delivery date. This project is to be delivered to TVO (Teollisuuden Voima Oyj) a Finnish nuclear power company via a turnkey contract with a consortium including AREVA and Siemens. AREVA used approximately 2,000 suppliers for this project, 40% of which were Finnish companies[18]. According to press reports in 2008, just over 1,000 of the 3,400 workers on site were Finnish with the other main groups being French, German and Polish respectively[19].

2.2.6 TVO and AREVA had never worked together until this project and the delivery of the power station was under a turnkey contract[20]. This is different to the current plans for Sizewell C as EDF Energy has historically worked as both owners, architects and engineers of its projects, as in the case of Flamanville 3. The large number of contracts awarded overseas in this project supports the suggestion that boosts in employment as a result of these large-scale projects will not necessarily happen in the local area[21]. This phenomenon has also been observed in the construction of wind turbines where contracting of non-local companies is necessitated by an understandable lack of specialist skills in the inherently rural areas where construction occurs[22].

2.2.7 An environmental impact assessment of further proposed development at Olkiluoto has set out some very brief and high-level messages about the economic impact of development of a new

[12] EDF Energy (2017) https://www.edf.fr/en/edf/edf-prepares-for-the-next-stage-of-system-performance-testing-at-the-flamanville-epr-with-a-view-to-the-fuel-loading-and-the-reactor-start-up-at-the-end-of-the-4th-quarter-of-2018
[13] EDF Energy (2018) https://www.edf.fr/en/the-edf-group/dedicated-sections/journalists/all-press-releases/edf-has-detected-quality-deviations-on-certain-welds-of-the-main-secondary-system-of-the-flamanville-epr-and-has-begun-additional-controls
[14] The project has identified quality deviations on the welding of pipes that carry steam towards the turbine during an inspection and it is unknown at this point if this will impact on the timetable and costs for the delivery of the project
[15] EDF Energy (2011) Welcome to Flamanville 3 EPR
[16] EDF Energy (2011) Draft workforce profile report
[17] EDF Energy (2014) Socio-economic technical note 1: Construction workforce profile pre-stage 2 draft
[18] NAMTEC (2009) The supply chain for a UK nuclear new build programme
[19] Lille and Sippola (2008) The Finnish model of unionism and transnational work in construction
[20] Source: Ruuska et al. (2011) A new governance approach for multi firm projects: Lessons from Olkiluoto 3 and Flamanville 3 nuclear power plant projects
[21] Bryan et al (2017) Regional electricity generation and employment in UK regions
[22] Munday et al (2011) Wind farms in rural areas: How far do community benefits from wind farms represent a local economic development opportunity?

power station[23]. It has highlighted the increased levels of traffic in the local area, including more HGV movements. It has identified that there is increased residential development in the local area, and that retailers and local service providers have seen some increase in business.

2.2.8 The report states that much of the economic benefit of constructing a new nuclear power station will end up outside the local area, including outside the country.

2.2.9 The only reported negative impact has been problems with foreign workers respect for rights of public access, and fishing from private places.

2.3 Hinkley Point C

EDF Energy Assessment of Impacts

2.3.1 EDF Energy has set out an assessment of the socio-economic benefits of the project to-date [note, *benefits*, not impacts][24]. The overall economic impact aims of the project are:

- 25,000 jobs overall, with 5,600 at peak construction
- 34% of workforce to come from the local area
- To create 1,000 apprenticeships
- £4 billion of spend into the regional economy (i.e. South West) over the lifetime of the project, with £200 million per annum during core construction and £40 million per annum during the 60-year operational life of the power station
- 64% of value of contracts to go to UK companies
- £130 million of investment in the community, including a £20 million community fund, £15 million for skills and education in Somerset and £20 million for local road infrastructure
- Establishment of the Hinkley Tourism Action Partnership (HTAP) comprising Visit Somerset, Visit Exmoor National Park, local authorities, and EDF Energy. This was formed to work with tourism providers, and it has set out a strategy for maximising the potential of the project to attract visitors, including national advertising and social media campaigns. There will be £700,000 investment in this.

2.3.2 Outcomes to-date (i.e. March 2018) identified by EDF Energy include:

- £465 million of contracts let and £437 million of spend in the regional (South West) economy
- £20m spent on local road infrastructure
- Establishments of the Inspire schools' education programme and Young HPC
- Investment in facilities such as the Somerset Energy Skills Centre [n.b. EDF Energy did not invest capital funds into the SEIC], Construction Skills and Innovation Centre at Bridgwater & Taunton College, the Hinkley Ready and Enterprise programme at West Somerset Community College, and the Hinkley Point Training Agency
- Launch of a Skills and Apprenticeships Hub, and creation of 200 apprenticeships
- Opening of a southern hub of the National College for Nuclear in Cannington
- Launch of the Hinkley Jobs Service

[23] YV4 (no date) Environmental Impact Assessment Report: Extension of the Olkiluoto Nuclear Power Plant by a Fourth Unit
[24] EDF Energy (2018) Hinkley Point C: Realising the Socio-Economic Benefits

Local Authorities' Anticipated impacts

2.3.3 A number of Local Impact Reports (LIRs) were prepared to inform the examination of the DCO for Hinkley Point C in Somerset. The most pertinent to this economic impact assessment was prepared by Somerset County Council, West Somerset Council and Sedgemoor District Council, and included several supporting topic papers[25]. The three main topics of relevance to this economic impact assessment are:

- Economic competitiveness
- Education, employment and skills
- Tourism

2.3.4 The potential areas of **economic competitiveness** impacts that were identified include:

- The potential leakage of economic benefit out of the local area, and concerns that the net local benefit could be less than that suggested by EDF Energy in its proposals
- Displacement of staff away from local businesses, and difficulties recruiting replacement staff
- The negative impacts of traffic congestion
- The risk of boom and bust, and the need for a positive economic legacy to address any post-construction decline
- Place-specific impacts, with the concentration of negative impacts in some places e.g. significant impacts of traffic congestion on the economy of some towns

2.3.5 The local authorities were seeking investment in support for supply chain cluster development, to support structural change in the local economy and provide a positive legacy impact. They were also seeking support for existing local businesses to both help them to access opportunities associated with the development, and to tackle any issues caused by displacement and congestion.

2.3.1 **Education, employment and skills** was seen as potentially the largest area of local benefit. The potential areas of impact that were identified include:

- The potential for the project to provide a positive skills legacy, leading to positive employment effects for local people during and after the construction
- Opportunities for apprenticeships and training for local people
- Potential to raise the aspiration of school pupils
- Delivery of an employment brokerage, which was also open to other employment opportunities for local people
- The need for supply chain partners to support the engagement of local people in that same way that EDF Energy is committed to
- Concerns that the project may not generate significant amounts of local employment
- Concerns that the employment that is taken by local residents is not high quality

[25] Somerset County Council, West Somerset Council and Sedgemoor District Council (2012) Hinkley Point C Local Impact Report
Somerset County Council, West Somerset Council and Sedgemoor District Council (2012) Topic Paper on Economic Competitiveness
Somerset County Council, West Somerset Council and Sedgemoor District Council (2012) Topic Paper on Tourism
Somerset County Council, West Somerset Council and Sedgemoor District Council (2012) Topic Paper on Education, Employment and Skills

- The need for an outreach programme to support those that are furthest from the labour market to access employment opportunities associated with the development
- Concerns that local businesses may experience recruitment and retention difficulties, including wage inflation, skills shortages, and insufficient labour availability
- Concerns about the impacts of worker's families on local schools

2.3.1 The potential areas of impact on **tourism** that were identified include:

- Negative impacts on the tourism sector, supported by survey evidence, including traffic congestion, visual and noise impact, impact on the availability of tourism accommodation, impacts on rights-of-way, reduced availability of bedspaces for tourists, and cumulative impacts from reduced visitor spending. There were concerns that the negative impact on the tourism sector could be county-wide rather than just local, driven by wider impacts and negative perceptions associated with the whole county
- The need to maximise the potential benefits of a proposed visitor centre

Actual Impacts Arising

2.3.2 Construction at Hinkley Point C has been underway since 2012, and there are some differences between the anticipated and actual impacts.

2.3.3 There have been many **changes in the construction process** since award of the DCO, which is to be expected in a project of this size and complexity, but some of these have led to changes in the local economic impact that was anticipated. Changes in the project have meant that the methods and metrics for monitoring need to evolve as the project evolves. The overall timing of the project has slipped and some of the phasing has changed, which has meant that planned mitigation has not always been in place, such as the worker accommodation campuses, or slippages in highways mitigation being delivered at the same time as traffic increases related to development activity. Workers already engaged on the project have found accommodation in the local area, and it has been suggested that there is now less forward demand than expected for campus accommodation. Changes to plans for a jetty to enable deliveries by water have meant more HGV movements than were planned, and more abnormal loads than were originally anticipated. There have been higher levels of traffic congestion than were anticipated, which has had a negative impact on the local economy. There is no mechanism in place to compensate businesses that are affected by traffic congestion in the local area.

2.3.4 The **workforce profile on-site is expected to be different** to that set out in the DCO application. Significantly more people are expected on-site or in the local area at peak activity than was set out in the DCO application. It has been suggested that between 8,000 and 9,000 people associated with the development will be on the site or in the local area at peak, compared to the 5,500 on-site set out in initial plans. As well as resting workers, this number will include visitors and those undertaking short tasks, who are not considered as being employed on the site. A number of EDF Energy and supply chain staff are based in nearby Bridgwater and also in Bristol, and visit the site and local area regularly, adding to transport volumes. There have been problems accessing the main site due to transport congestion, with workers being stuck in traffic jams.

2.3.5 So far in the process there has been **significant interest from local residents in working on the project**, and a high level of employment of home-based workers, although this is a function of the type of work that is being undertaken. Site preparation and early stage civil engineering require less skilled workers, and these are being found in the local area. It has been suggested that home-

based workers have made up 45% of the workforce to-date. This proportion is expected to decline as the project moves into its higher value stages.

2.3.6 It has been suggested that **non-home-based workers want to be accommodated as close to the main site as possible**, to minimise daily travel time, and actual patterns of worker accommodation are more concentrated than were anticipated in the gravity modelling work undertaken by EDF Energy to inform the DCO application.

2.3.7 It is **not clear that supply chain companies are being held to the same local recruitment standards** as EDF Energy, and it has been suggested that they are not maximising local recruitment nor making best use of the local recruitment mechanisms set up by EDF Energy.

2.3.8 There has been a **significant amount of regional spend** – some £465 million – but there is concern that local spend has been on lower quality activities rather than higher value activities which could leave the local area with a legacy of skills and expertise. The local authorities in Somerset are concerned that there may not be local structural change and a skills legacy from the construction process. There are also concerns that local colleges are not being given sufficient information about future skills requirements on the project, and so are not able to plan to deliver suitable skills in advance.

2.3.9 The **geography of local impact is broader** than was originally anticipated by the local authorities, and some higher value activities are being located outside of the local area. Although there has been investment in local infrastructure (such as the Somerset Energy Innovation Centre), other infrastructure is being located further afield, such as proposals for a nuclear innovation and technology centre at the Bristol & Bath Science Park in Bristol. The local authorities in Somerset have recognised the need to be realistic about the amount and quality of benefit that will be realised in close proximity to the development site rather than further afield.

2.3.10 However, there have also been **significant hotspots of impact** within the local area, with a focus on Bridgwater. Understanding the impact of workers on the local accommodation stock is not straightforward, as most workers are employed by suppliers rather than directly by EDF Energy. Six-monthly surveys of workers and their accommodation choices are being carried out, based on samples of the total population of workers. The current focus of the development process on early stage civil engineering means the employment of a significant number of lower skilled workers on the site. These workers have sought out cheap accommodation, and they want to stay as close to the site as possible to minimise daily travel time. There are now a significant number of HMOs in Bridgwater, with multiple workers living at one address. This is leading to parking problems in residential areas. When the project moves into its later stages requiring higher skilled and paid workers, it is expected that this will become less of a problem. It is claimed that the caps on numbers of workers in places such as Cannington have been breached. Temporary solutions to accommodation requirements are being put in place e.g. more caravan sites.

2.3.11 The **impacts of the supply chain were not comprehensively considered** in the DCO application process. The demand for employment sites and construction generated by supply chain businesses is significant, and the market for employment sites has become very tight. There are currently planning applications in place for eight hotels in the Bridgwater area.

2.3.12 There is anecdotal evidence of the **displacement of workers** from local businesses, across the whole county and not just immediately adjacent to the site, and difficulties back-filling these vacancies, but no quantitative evidence has yet been compiled. Sectors such as social care are

thought to be losing workers to project-related developments such as worker accommodation. The labour market is much tighter than when the DCO application was compiled by EDF Energy, and so the impact on existing employment is greater than expected.

2.3.13 **Up-skilling of workers has taken place** for workers already in work, but there has been less engagement of those not in work and in deprived communities than was hoped for by the local authorities. The local authorities would also like to see more support for the under-employed, as under-employment is a significant issue in the local area.

2.3.14 **Local supply chain development** has included the creation of a number of consortia of smaller businesses that are working collectively to enable them to deliver larger packages of work in areas such as catering, accommodation and passenger transport.

2.3.15 There has **not been a significant impact on the tourism sector**. It is not clear if this is because anticipatory mitigation has been successful or whether it is because there would be little impact anyway.

2.4 Other Proposals for New Nuclear Power Stations in the UK

Wylfa, Anglesey

2.4.1 In considering the proposals for a new nuclear power station at Wylfa, the Welsh Government has considered:

- How to maximise the economic benefits of the project during the construction phase i.e. maximising supply chain spend in Wales
- How to mitigate economic dis-benefits during the construction phase i.e. mitigating labour displacement, through recruitment interventions and training of local people
- How to mitigate negative impacts on the tourism sector, through direct funding of support for tourism projects
- Creation of a long-term economic legacy, through the employment of local people in the operation of the power station, but also through the development of supply chain expertise that can serve other nuclear new build markets, and the attraction of nuclear related test, research and development projects to the local area.

Moorside, Cumbria

2.4.2 Potential areas of impact considered during early discussions about the proposals for a new nuclear power station at Moorside in Cumbria include:

- Fisheries impact
- Baseline economic performance
- Sector mix
- Nuclear supply chain potential
- Visitor economy
- Population and demographic baseline, and forecast future change
- Labour market – skills, participation and earnings
- Future workers – young people, and apprenticeships
- Housing stock – including visitor accommodation and latent accommodation
- Social and community infrastructure

- Health, police, fire & rescue, sports & leisure, and religion
- Supply chain opportunities and development
- Innovation and R&D

2.5 Other Major Construction Projects in the UK

2.5.1 Other major construction projects are considered below, although it should be noted that some comparisons may be inappropriate e.g. between the East Suffolk and London labour markets.

London 2012 Olympics

2.5.2 The London 2012 Employment and Skills Taskforce drafted an action plan that had the express aim of getting 70,000 jobless London residents into work by the end of 2012. There were a significant number of organisations involved in training and employment support in the local area but of note in this context are; the Employment and Skills Brokerage and within this the Construction Employer Accord.

2.5.3 It is estimated that approximately 75% of the previously workless in London that obtained "Games-time" employment secured their jobs through the Employment and Skills brokerage[26]. The brokerage is said to be exemplar of good practice in areas such as governance and partnership working practices, handling volumes of vacancies and understanding employer needs.

2.5.4 The Construction Employer Accord[27] was designed to improve "*access of workless Londoners to the opportunities in the construction sector*" (pg. 2), where it is noted that companies within the sector often lack the ability to train and develop potential employees due to the fact that penalties for construction delays are often embedded into contracts. This programme was delivered via partners who worked on site to secure employment opportunities and then worked with individuals to ensure they had the right skills to meet the vacancy requirements. A review of the Accord suggested that this model worked well and over-achieved on targets related to employment support, skills development, job-starts and 26-week sustained employment. The programme had 88% of beneficiaries still in employment by 52 weeks which was most likely to be achieved by apprentices and when the delivery partner was also an employer.

2.5.5 CompeteFor was an online supply chain portal set up for the London 2012 Olympics with the aim of ensuring access to the opportunities provided by the Games to a diverse range of businesses[28]. This had an objective to offer opportunities to Small and Medium Enterprises (SMEs) and local businesses by providing access via the portal to the supply chain and directing them towards business support services.

2.5.6 HS2 and Crossrail will use CompeteFor as their supply chain portal as it has been maintained as a legacy from London 2012

HS2

2.5.7 A paper prepared to support the HS2 proposal in Parliament[29] states that both the nominated undertaker[30] and all subcontractors are required to positively discriminate as far as is allowed under the law in favour of employing people from "*local, disadvantaged or under-represented*

[26] SQW (2013) Olympic Jobs Evaluation
[27] Cross River Partnership (2015) Construction Employer Accord Final Evaluation
[28] CompeteFor (2018) https://www.competefor.com
[29] HS2 Ltd (2017) High Speed Two Phase One Information Paper G4: Approach to training and employment
[30] This is the body appointed by the Secretary of State to deliver HS2 which is HS2 Ltd

groups" (p. 3). The nominated undertaker will evaluate all bids for contracts with respect to training and employment objectives including:

- Employing apprentices
- Advertising job vacancies with a job brokerage nominated by HS2 Ltd
- Participating in recruitment and training events
- Hiring a training and employment manager to liaise with sub-contractors and stakeholders
- Monitor and report against training and employment targets to be determined by HS2 Ltd

2.5.8 A National College for High Speed Rail has been established with campuses in Birmingham and Doncaster, through the Department for Business Innovation and Skills (now the Department for Business, Energy and industrial Strategy).

Heathrow Runway Three

2.5.9 Heathrow established a Skills Taskforce in 2017 to look at how the construction of the new runway can leave a legacy in the UK[31].

2.5.10 Heathrow plans to use four regional logistics hubs to pre-assemble components off-site and then deliver them to Heathrow as they are needed. The approach will "*leave a legacy of construction excellence*" (p. 9) in the areas selected to act as hosts for these logistics hubs[32].

[31] Heathrow Expansion (2018) Local Benefits https://www.heathrowexpansion.com
[32] Heathrow (2018) The Case for Heathrow Expansion

3 Appendix 3: Expected Areas of Local Economic Impact

3.1 Definition of the Local Area

3.1.1 Various definitions of the local area are used by different stakeholders involved in this project. The level of gross direct socio-economic impact will vary according to the size of area being considered, and ultimately the net additional local impact will also vary according to the size of area.

EDF Energy Definition of the Local Area

3.1.2 EDF Energy has not specifically defined the local area of impact, although the gravity model described in the Stage 2 Consultation (para 5.4.18 p.46) suggests a 90-minute travel time for home-based workers and a 60-minute travel time from temporary accommodation for non-home-based workers whilst they are working on the site. Sources of home-based workers will therefore include Ipswich, Lowestoft, Felixstowe, Colchester, Great Yarmouth and parts of Norfolk (para 5.4.23, p.47).

3.1.3 The labour market baseline data (Stage 2 Consultation, para 5.3.4, p.40) looks at Suffolk, Norfolk and Essex, which is a very large geographical area. The concerns about using such a large area to draw a baseline include: the baseline will include labour capacity that is not available to the project; and there will be other major projects in this wider area that will require labour, thus decreasing the potential supply.

3.1.4 The accommodation analysis in the Stage 2 Consultation looks at:

- Leiston, Aldeburgh and Saxmundham (the nearest towns)
- The rest of the Suffolk Coastal District
- Waveney
- Elsewhere

3.1.5 The Construction Daily Commuting Zone for Sizewell B was defined in Glasson, 2005, as being 35 to 40 miles from the site, including all of Suffolk, a sizeable part of Norfolk and part of north-east Essex (p.218). However, workers, particularly non-home-based workers, are more likely to live in the centre rather than periphery of this area

Other Definition of the Local Area

3.1.6 The client group for this project covers a number of geographical areas, including the Districts of Suffolk Coastal and Waveney (i.e. East Suffolk), the county of Suffolk, and the New Anglia LEP area of Suffolk and Norfolk. Each of these is, to an extent, a functional economic geography, although the functional economic market area including Sizewell C has not been defined rigorously. These geographies overlay each other, forming a hierarchy of geographical areas.

3.1.7 The nearest large towns to Sizewell are Lowestoft in Waveney and Ipswich. Both are within the county of Suffolk.

Experience from Hinkley Point C

3.1.8 Appendix 2 has already highlighted that the emerging spatial impacts of Hinkley Point C are broader than initially envisaged, but that there are also local hotspots of concentrated impact.

3.1.9 At Hinkley Point C there is significant activity in the local area, at the construction site and in nearby Bridgwater. There is also a Delivery Command Centre in Bristol, over 40 miles away from the site,

where programme management activities are carried out. Some of the potential local impact is therefore located in Bristol, and this is also attracting some of the supply chain companies to locate close to this rather than close to the construction site. For Sizewell, the location of the Delivery Command Centre should be taken into account when considering the area of local impact.

Conclusions

3.1.10 The socio-economic impact of the project is likely to be more concentrated close to the construction site, and weaker further away. Whilst the construction of Sizewell B had impacts in Norfolk and parts of Essex, these are likely to see low levels of impact from Sizewell C. Using established geographical boundaries, it is most helpful to consider the economic impact of the project in:

- Suffolk Coastal and Waveney Districts – hereafter the definition of the local area
- The rest of Suffolk County
- Norfolk and Suffolk i.e. the LEP area

3.2 EDF Energy Assessment of Areas of Impact

3.2.1 The Stage 2 Consultation document prepared by EDF Energy has set out a number of areas of potential economic impact, including:

- Jobs and skills
- Supply chain
- Tourism

3.2.2 EDF Energy recognises that the construction of a nuclear power station can have both positive and negative socio-economic impacts. The project vision set out in the Stage 2 Consultation document includes the statement that:

EDF Energy will strive to ensure that the inherent benefits of its investment in Sizewell C are captured in a way which makes the most of its practical contributions to the local and regional economy (para. 2.2.1, p.9).

3.2.3 Under project objectives, it is stated that:

Achieving sustainable development involves optimising social, economic and environmental outcomes (para. 2.3.1, p.9)

3.2.4 The Stage 2 Consultation (para 5.1.2, p.35) states:

There would be a large increase in local employment and business opportunities during the construction phase and a long-term legacy of 900 new jobs once the station is operational. EDF Energy recognises that there are significant opportunities to maximise and support the uptake of local socio-economic benefits through targeted enhancement, initiatives and support, which define the aim and objectives of this study. However, EDF Energy recognises that there is also the potential for the Project to cause local disruption. This could have adverse socio-economic impacts, prior to mitigation.

3.2.5 In the chapter on socio-economics, it is stated that:

EDF Energy intends to ensure that the Project limits any significant adverse local economic and social impacts, while optimising local benefits that directly arise from the construction and operation of the power station (para 5.1.6, p.35).

3.2.6 Areas in which the local economy could benefit include (para. 5.1.6):

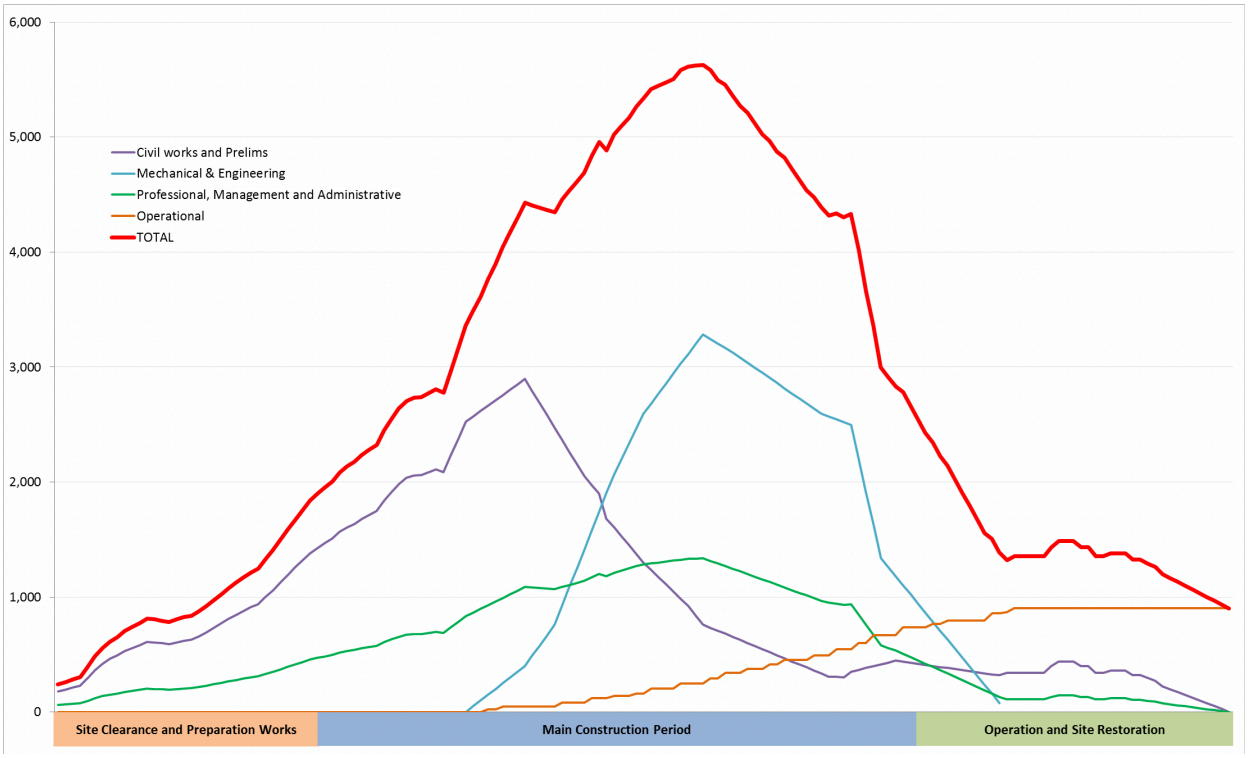
- Direct and indirect employment of local residents
- Opportunities for local businesses

3.2.7 EDF Energy set out initial proposals for an economic strategy for Sizewell C in a presentation in 2015[33]. The core economic issues listed here are skills and education, supply chain and tourism. Accommodation is also mentioned.

3.2.8 An initial workforce profile is set out in this presentation, showing the overall workforce requirement, with a breakdown into civil and preliminary works; mechanical and engineering; professional, management and administration; and operational requirements. This does not show years in detail, although shows the numbers of workers expected on site. It can be seen in the figure below.

[33] EDF Energy (2015) Sizewell C Economic Strategy [Presentation, 28 September 2015]

Figure 3.1: EDF Energy Assessment of Workforce Profile, 2015



Source: EDF Energy, 2015

3.2.9 The strategy includes some assessment of the labour market baseline, and suggests that this is cyclical, changing over time. The assessment states that there is some capacity in the labour market, including the unemployed and the under-employed, and also suggests that there is a latent pool of local labour that is currently economically inactive, but wants to work. However, given the currently low levels of unemployment, the motivations of those who are currently inactive but want to work should be thoroughly tested to ensure that they really are interested and able to take jobs created at Sizewell C.

3.2.10 EDF Energy's objectives for a full economic strategy are:

- To maximise the economic benefits of the construction and operation of the new power station, for the UK as a whole, and in the local area
- To deliver an effective and efficient NSIP, attracting the best possible workforce, and maximising local employment where possible
- Matching employment and supply chain opportunities with practical actions linked to the priorities of the LEP and local authorities, and the capabilities of local businesses
- To be consistent with the LEP and local authority economic development strategies

3.2.11 EDF Energy describes the Hinkley Point C supply chain structure in the presentation. This includes seven main industrial delivery partners, 180 Tier 1 contracts, and a range of site support services, including catering, accommodation, transport and other services. Tier 1 suppliers are asked about their proposals to work with local and regional suppliers, although this cannot be legally enforced.

3.2.12 The overall supply chain is international, but there is engagement of local and regional companies.

3.2.13 The economic strategy presentation suggests that Hinkley Point C will spend £100 million per annum in the local economy [not defined here] during the construction process, and £30 million

per annum during operation. The economic impact of annual outages of the reactors for maintenance is also presented.

3.2.14 The presentation mentions proposals for an approach to mitigate salary inflation and displacement effects, including:

- Jobs brokerage and backfilling
- A workforce development strategy and investment in employment and skills
- Supply chain enhancement

3.3 Suffolk Stakeholders' Assessment of Areas of Impact

3.3.1 The Sizewell C construction project presents a large opportunity to the local economy with estimates of GVA uplift of £100m per annum during the construction period and the potential for increased business rates. The councils have set out five principles for economic development[34]:

- Maximising the supply chain opportunities for local companies
- Attracting inward investment from companies who are seeking to service/supply the construction/operational phases
- Identifying an aspect or aspects of the project that could be a driver for innovation change within the local economy
- Mitigating negative impacts on local businesses, in tourism and the visitor economy in particular
- Ensuring the project acts as a driver for new business formation.

3.3.2 The Sizewell C Economic Development Group and the Joint Local Authorities Group (JLAG) has set local economic development objectives for the new build project, including:

- Maximising the potential for new business formation
- Supply chain growth
- Skills uplift
- Minimising and mitigating any negative impact on tourism as a result of displacement and congestion
- Minimising and mitigating the impact of labour displacement on existing businesses

3.3.3 The councils acknowledge that the new nuclear build has the potential to displace local labour and reduce investment and income from the visitor economy. Therefore, they have identified a list of interventions and mitigations that they hope will prevent the leakage of benefits away from the local area. These include:

- Development of a local supply chain plan
- Establishing a local procurement office to support local businesses, with access to tier one and two contractors
- Ensuring that the Nuclear Catapult and Manufacturing Advisory Service have a presence in the area
- Increasing the activity of the Growth Hub in the local area, and in particular in sectors that could be benefit from the project

[34] Suffolk Coastal District Council (2015) Sizewell C - Economic Development Principles

- Assess the opportunities and potential leads for inward investment and joint ventures, and support inward investment delivery
- Provide modern, serviced accommodation for businesses moving to the area or expanding
- Promote the project throughout the Suffolk economy, including in sectors such as Advanced Engineering and IT
- Mitigate the impact on the visitor economy
- Support economic growth in the Ipswich and Lowestoft corridors through the improvement of the transport network

3.3.4 The councils' response to EDF Energy's Stage 2 Consultation[35] identifies a number of concerns, including:

- Over-reliance on road transport to the project and the impact on the road network, expressing a desire for greater use of rail and marine transport
- The lack of detail about the delivery of mitigation and enhancement mechanisms to maximise the local economic benefit of the project
- The case for a higher proportion of home-based workers, particularly in the higher skilled stages of the project
- Clarity on the number of staff working on associated development sites (some 500), and whether these roles are included in the overall employment numbers set out in the Stage 2 Consultation document
- More work to be done on the displacement of skilled workers from local businesses into the project, and the mitigation of the potential adverse effects of this
- The impact on the tourism is not adequately considered. In particular, the nature of the local tourism offer (i.e. peace, tranquility and a high-quality natural environment, i.e. AONB) is particularly sensitive to a major construction project
- Some of the baseline data used is out-of-date (i.e. 2011 Census), and should be updated
- The Councils would like a Sizewell C specialist to be embedded in the Growth Hub
- A request to EDF Energy to work with other developers in the energy sector, to consider shared apprenticeships across the whole energy sector
- The need for greater clarity on actions to support greater skills and local employment
- The lack of consideration of the cumulative impacts of this project alongside other major infrastructure developments, and the potential impact of Brexit on labour availability
- The need for EDF Energy to invest in activities to inspire young people to consider careers in STEM and construction areas
- EDF Energy needs to set a challenging target for the recruitment of apprentices

3.4 Causes of Impact

3.4.1 The direct impacts of building a new nuclear power station are likely to be in: the development on the main site; development and activity on ancillary sites; and activity off-site. The impact of development on the main site will be seen in terms of direct employment and spend on supply chain. The development and activity on ancillary sites will be seen in terms of direct employment

[35] Suffolk Coastal District Council and Suffolk County Council (2017) Joint Response to EDF Energy's Stage 2 Public Consultation Process

and spend on supply chain. The main activities that generate economic activity off-site will be transport and worker accommodation.

3.5 Potential Areas of Local Impact

3.5.1 The overall gross direct impact during the construction process is likely to be net positive because of the jobs created on-site (including associated developments) and the spend in the local economy. However, this masks some significant negative as well as positive impacts. It is also important to consider the net additional local impact (i.e. the true impact on the local economy rather than just the headline jobs created and local spend), and also to consider the potential for boom and bust i.e. where a lot of local resources are directed into the project during the construction phase, but the local economy then reduces back to the starting level, or even below this, once the construction has completed, leaving little legacy impact or possibly a more negative position than would have been the case without the project.

Employment and Skills

3.5.2 A significant source of impact will be home-based workers in: civil engineering and construction; mechanical and electrical engineering; project management; and support services and security. Their impact can be measured as numbers of workers, wages and GVA.

3.5.3 Home-based workers are likely to be sourced from: the unemployed (leading to a reduction in unemployment); those that are displaced from existing businesses (which could have an impact on other local businesses); new entrants to the labour market; and in-migrants to the local area.

3.5.4 Another key source of impact will be non-home-based workers. They will spend in the local area on items such as accommodation, food, leisure, and other services.

3.5.5 The skills and experience legacy in the local workforce should help local residents to access employment opportunities on other major construction projects after the completion of Sizewell C.

Supply Chain Activity

3.5.6 Total supply chain spend in the local area will lead to local economic impact. This will comprise the construction project's spend on local suppliers and employment and GVA supported by local suppliers.

Tourism

3.5.7 There will be a direct positive effect of the project on the tourism sector through the provision of accommodation for non-home-based workers. However, there could be a negative impact on tourist numbers during the construction period. If accommodation is taken by construction workers, tourists may not be able to stay in the local area, and could go elsewhere. The impact of traffic congestion, mentioned above, could contribute to the negative impact on the tourism sector. The impact of adverse perceptions of the local area could dissuade visitors both during the construction period and immediately after. There is also a risk of the displacement of workers out of the tourism sector, and difficulties replacing them.

3.6 Other Areas of Local Economic Impact

3.6.1 The following areas may experience some economic impact, but at this stage there is insufficient evidence to develop these further.

Transport and Congestion

3.6.2 It is assumed that local employment generated by transport is included in support services employment. However, additional transport movements in the local area may well create road congestion which will have a direct impact on the local economy if the movement of businesses, workers and customers is impeded. It is also important to recognise the impact of the perception of congestion on the local economy, as customers are discouraged from visiting businesses in an area that they believe will be congested. Evidence is emerging that transport congestion is leading to negative economic impacts in the local area around Hinkley Point C.

3.6.3 Transport and congestion will be dealt with as a separate major issue, and the need for mitigation to minimise transport disruption is clear. However, any assessment of the impacts of traffic and congestion should consider the wider economic impacts of this.

Land and Premises

3.6.4 Evidence is emerging at Hinkley Point C that the investment and location of supply chain businesses in the local area has led to a significant increase in the demand for employment land and premises. This has reduced the availability of land and premises for other businesses, and driven up the cost of these.

3.6.5 It will be important to consider the potential demand for land and premises by the supply chain, and not just directly by the project. The Local Plan should ensure that there is sufficient land and property available to meet the needs of the wider project as well as ongoing local demand.

3.7 Net Additional Local Impact

3.7.1 The above sections mostly set out the gross direct impact of the construction of Sizewell C. It will also be important to assess the net additional local impact in order to properly understand the local impact, and to identify areas in which mitigation can be undertaken to maximise the local economic impact. Having identified the gross direct impact, it will then be important to assess:

- Leakage
- Displacement
- Substitution
- Multiplier
- Deadweight

Exclusions

3.7.2 Areas not covered include the local housing market (private rented and owner-occupied) and the health sector. Fiscal impacts such as tax and benefits adjustments are also not covered.

3.8 Mitigation of Local Economic Impact

3.8.1 To maximize local impacts and minimize negative local impacts a programme of mitigations will need to be put in place. Potential mitigations are discussed in more detail in the following chapters. However, it is helpful to consider the conclusions of the Planning Inspectors on the socio-economic impacts at Hinkley Point C and the mitigation subsequently agreed.

Planning Inspectors' Conclusions on Socio-economic Impacts of Hinkley Point C

3.8.2 Following the DCO Examination, the Planning Inspectors set out some conclusion on the likely socio-economic impacts of the construction of Hinkley Point C[36]. These tended to place more weight on the evidence provided by EDF Energy in the DCO application than on the evidence provided by the local authorities in the Local Impact Reports. Key conclusions reached by the Inspectors include:

- It was noted that there was a mismatch between the skills available locally and the skills needed to build a new nuclear power station. However, EDF Energy proposed a range of measures to overcome this challenge, in particular the *Supply Chain Engagement Strategy* and the *Construction Workforce Development Strategy*
- Worker displacement from existing businesses was not thought to be a significant issue. There would be increased demand for local goods and services
- Impacts on the tourism sector are not thought to be great, and it was anticipated that traffic impacts would be minimised through mitigation.

Section 106 Agreement for Hinkley Point C

3.8.3 A number of specific mitigation actions in the areas of economic development and tourism are detailed in the Section 106 Agreement for Hinkley Point C[37] and summarised below:

- Approximately £350,000 to be paid towards the cost of employing a strategic economic development officer who will be responsible for maximising the use of local suppliers and developing a low carbon cluster
- £320,000 to promote and develop a low carbon cluster
- Approximately £340,000 towards an economic development officer in Sedgemoor
- Approximately £560,000 for business support in Sedgemoor
- £1.5 million towards mitigating the economic impact of congestion in Bridgwater
- Approximately £340,000 towards an economic development officer in West Somerset
- Approximately £560,000 for business support in West Somerset
- £340,000 for a strategic tourism officer and towards the Sedgemoor and Somerset Information Centres
- £340,000 for a strategic tourism officer and towards West Somerset Information Centre
- £800,000 for a Tourism Action Partnership to carry out marketing and conduct tourism surveys.

3.8.4 In addition to these mitigation actions there is also an agreement to spend a total of £4.35 million on the construction workforce development strategy and £12.8 million for a community fund to be used to mitigate "*intangible and residual impacts*"(p. 24).

[36] https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010001/EN010001-000011-121219_EN010001_%20SoS%20HPC%20Decision%20Letter%20Annex%20A.pdf
[37] EDF (2012) Deed of Development Consent Obligations related to Hinkley Point C

4 Appendix 4: Employment and Skills Baseline

4.1 Employment

4.1.1 Total employment in East Suffolk in 2016 was 90,500 and in the County of Suffolk was 324,000[38].

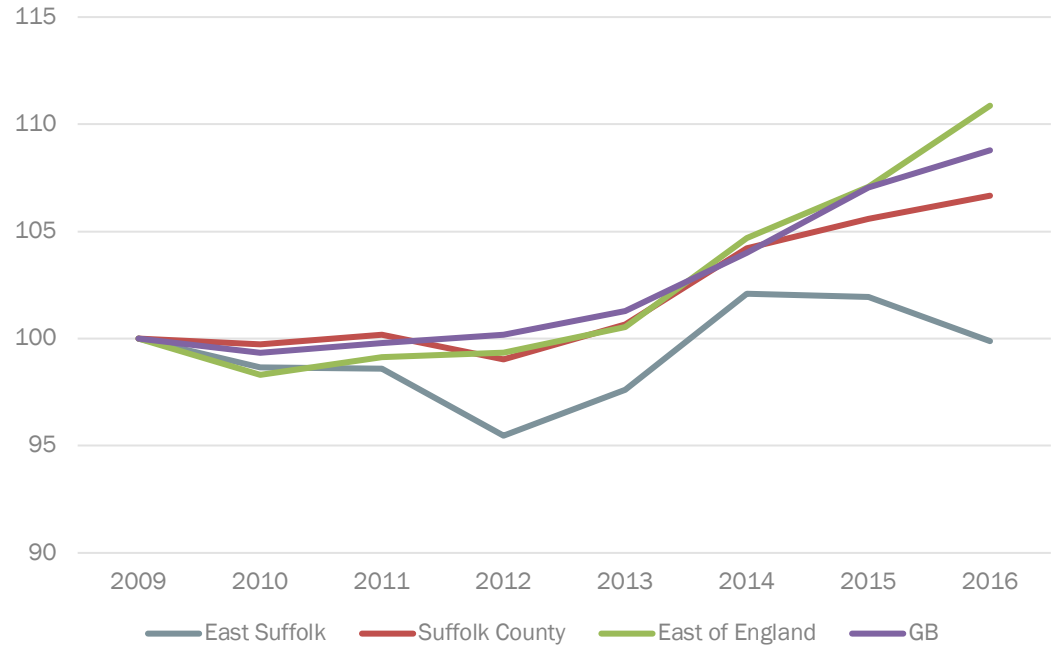
4.1.2 Figure 4.1 below shows that for East Suffolk this is a return to 2009 levels of employment following a decline in employment between 2015 and 2016 against the trend seen in other areas of stable year-on-year growth since 2012.

Figure 4.1: Total Employment in East Suffolk and Suffolk County 2012-2016

	2009	2010	2011	2012	2013	2014	2015	2016
East Suffolk	90,600	89,400	89,320	86,500	88,450	92,500	92,360	90,500
County of Suffolk	303,750	302,900	304,250	300,800	305,750	316,500	320,700	324,000

Source: ONS Business Register and Employment Survey, 2018

Figure 4.2: Total Employment 2009 to 2016 (Indexed to 2009)



Source: ONS Business Register and Employment Survey, 2018

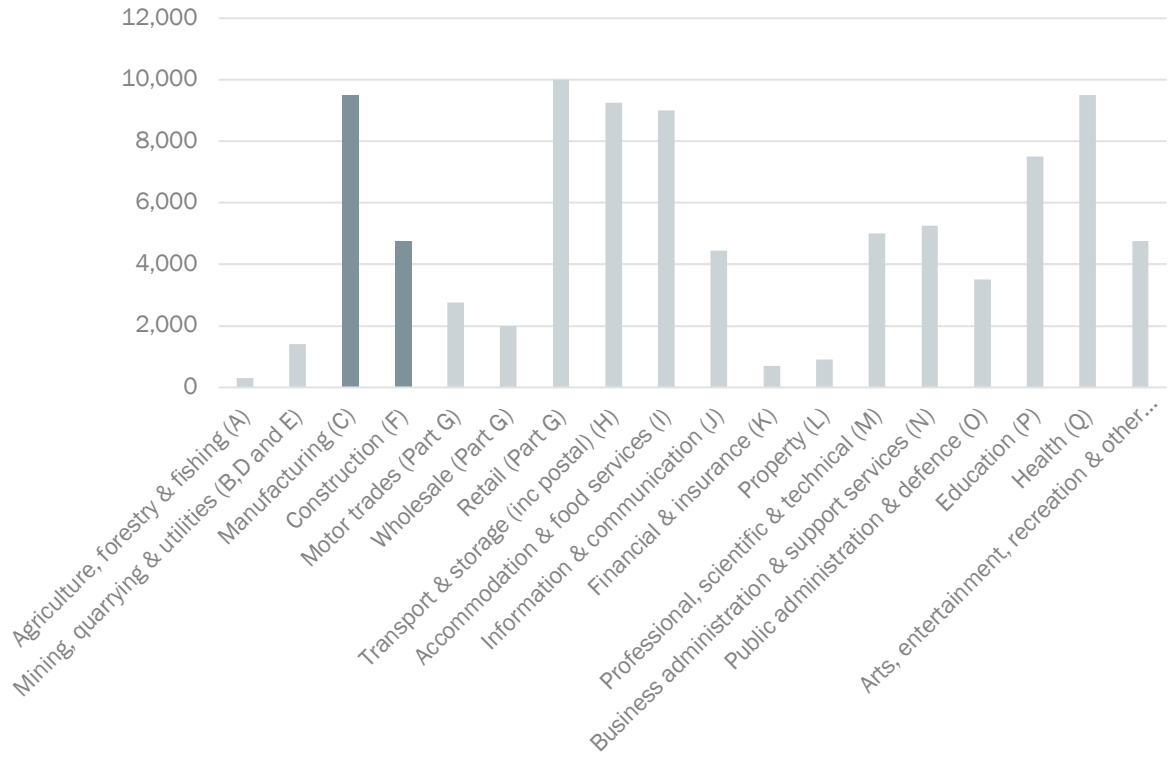
[38] Source: ONS Business Register and Employment Survey, 2018

Employment by Sector

4.1.3 When building a new nuclear power station, the Manufacturing and Construction sectors are the broad industrial categories that will contribute to the initial civil and mechanical & electrical engineering stages of the construction process.

4.1.4 Looking at the sector breakdown of employment shows that only the Retail sector employed more people in than the Manufacturing sector in East Suffolk in 2016.

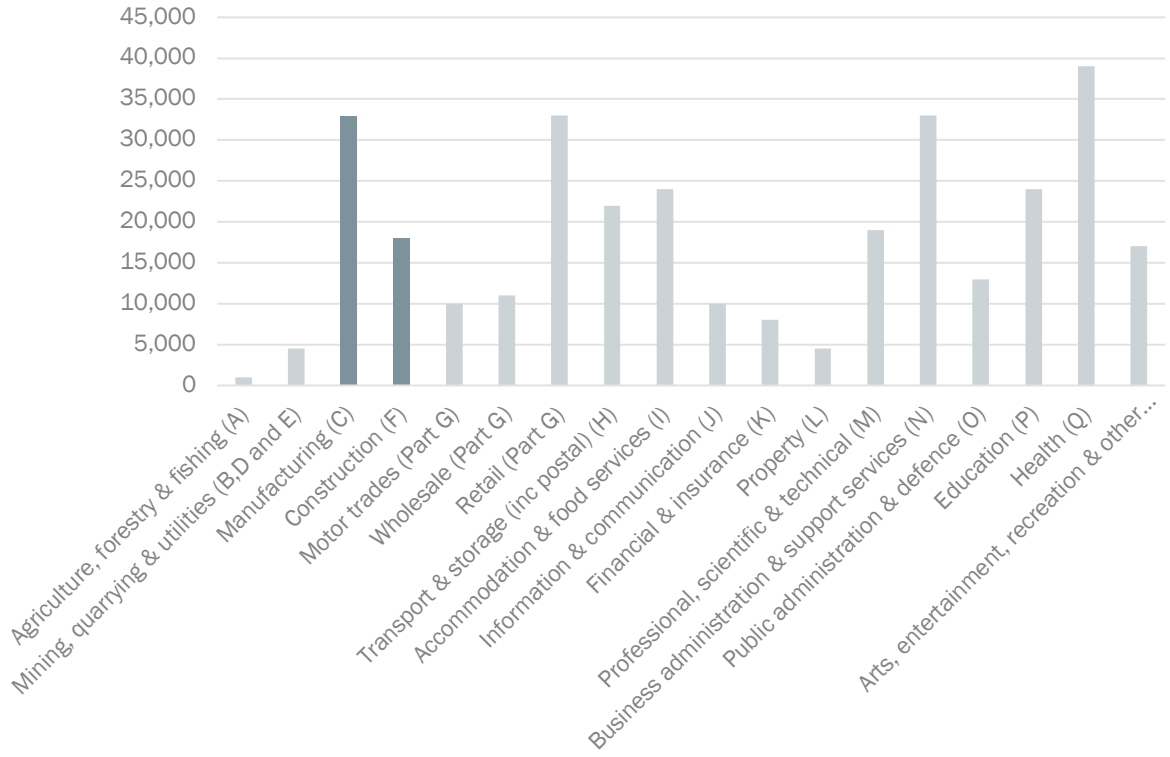
Figure 4.3: Sector Breakdown of Employment in East Suffolk (2016)



Source: ONS Business Register and Employment Survey, 2018

4.1.5 Looking at the wider County of Suffolk the Manufacturing sector is similarly large with the only the Health sector employing more people in 2016.

Figure 4.4: Sector Breakdown of Employment in Suffolk (2016)



Source: Business Register and Employment Survey, 2018

Figure 4.5: Total Employment by Sector 2016

	East Suffolk		County of Suffolk	
	Number	LQ	Number	LQ
Agriculture, forestry & fishing (A)	300	0.21	1,000	0.20
Mining, quarrying & utilities (B,D and E)	1,400	1.25	4,500	1.12
Manufacturing (C)	9,500	1.32	33,000	1.29
Construction (F)	4,750	1.11	18,000	1.18
Motor trades (Part G)	2,750	1.65	10,000	1.68
Wholesale (Part G)	2,000	0.57	11,000	0.87
Retail (Part G)	10,000	1.17	33,000	1.08
Transport & storage (inc postal) (H)	9,250	2.14	22,000	1.42
Accommodation & food services (I)	9,000	1.34	24,000	1.00
Information & communication (J)	4,450	1.19	10,000	0.75
Financial & insurance (K)	700	0.22	8,000	0.71
Property (L)	900	0.57	4,500	0.79
Professional, scientific & technical (M)	5,000	0.64	19,000	0.67
Business administration & support services (N)	5,250	0.66	33,000	1.16
Public administration & defence (O)	3,500	0.93	13,000	0.97

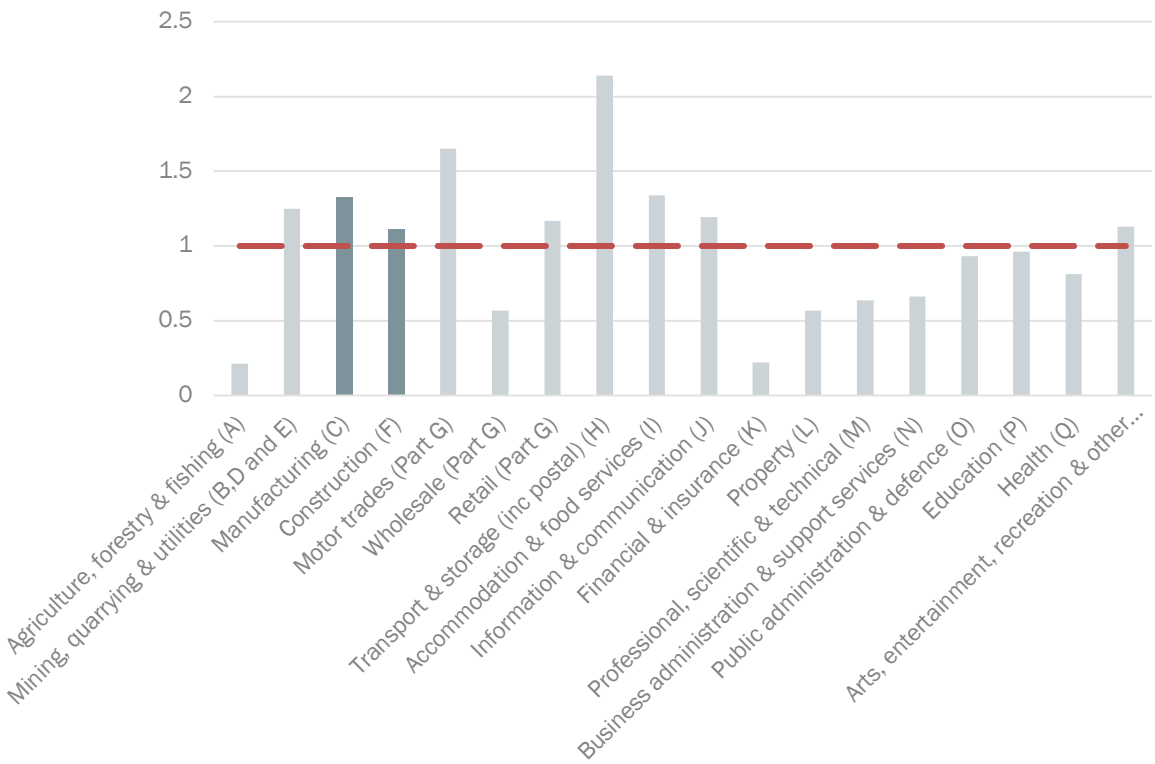
	East Suffolk		County of Suffolk	
	Number	LQ	Number	LQ
Education (P)	7,500	0.96	24,000	0.86
Health (Q)	9,500	0.81	39,000	0.93
Arts, entertainment, recreation & other services (R,S,T and U)	4,750	1.13	17,000	1.13

Source: Business Register and Employment Survey, 2018

4.1.6 To examine employment in the particular sectors that might be relevant to building a nuclear power station it is often helpful to look at the location quotient (LQ)[39]. Based on 2016 employment figures, Manufacturing is a significant sector in both East Suffolk and the County of Suffolk (LQ 1.32 and 1.29 respectively) with the Construction sector slightly more concentrated than the GB average in both areas (LQ 1.11 and 1.18 respectively). The charts below show the location quotient for all sectors in both East Suffolk and the County of Suffolk and demonstrate that whilst these sectors are both over represented compared to the GB average they are not the most significant sectors in the area.

[39] A Location Quotient is calculated by dividing the percentage of total employment in a sector in a local area by the percentage of total employment in the same sector nationally. A Location Quotient of less than 1.0 means a lower concentration of employment in that sector than nationally, and a Location Quotient of greater than 1.0 means a higher concentration of employment in that sector than nationally

Figure 4.6: Location Quotient for East Suffolk (2016 Employment)



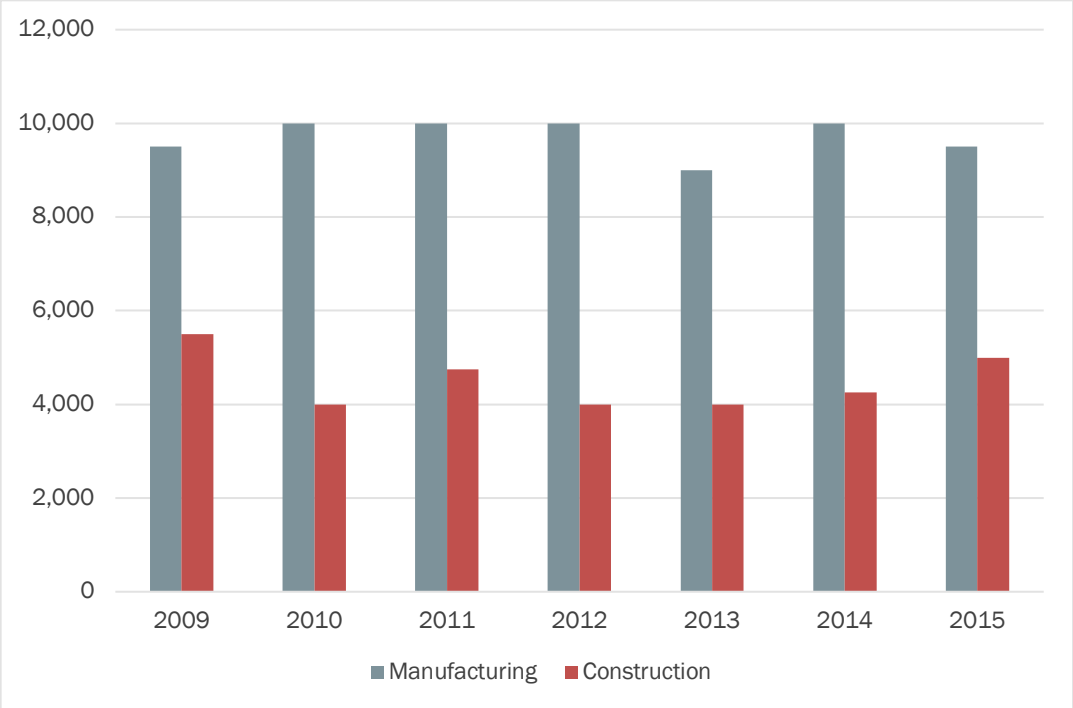
Source: Business Register and Employment Survey, 2018

Change in Employment Over Time

4.1.7 In East Suffolk approximately 9,500 people were employed in the Manufacturing sector in 2015 and approximately 5,000 people were employed in the Construction sector. In 2015 these sectors had a location quotient of 1.3 and 1.2 respectively. Overall the absolute numbers of those employed in Manufacturing and Construction has remained largely unchanged over the period 2009 to 2015 however, Manufacturing is becoming a relatively more important sector for the area than it is nationally, as the location quotient has risen from 1.2 to 1.3 over this period.

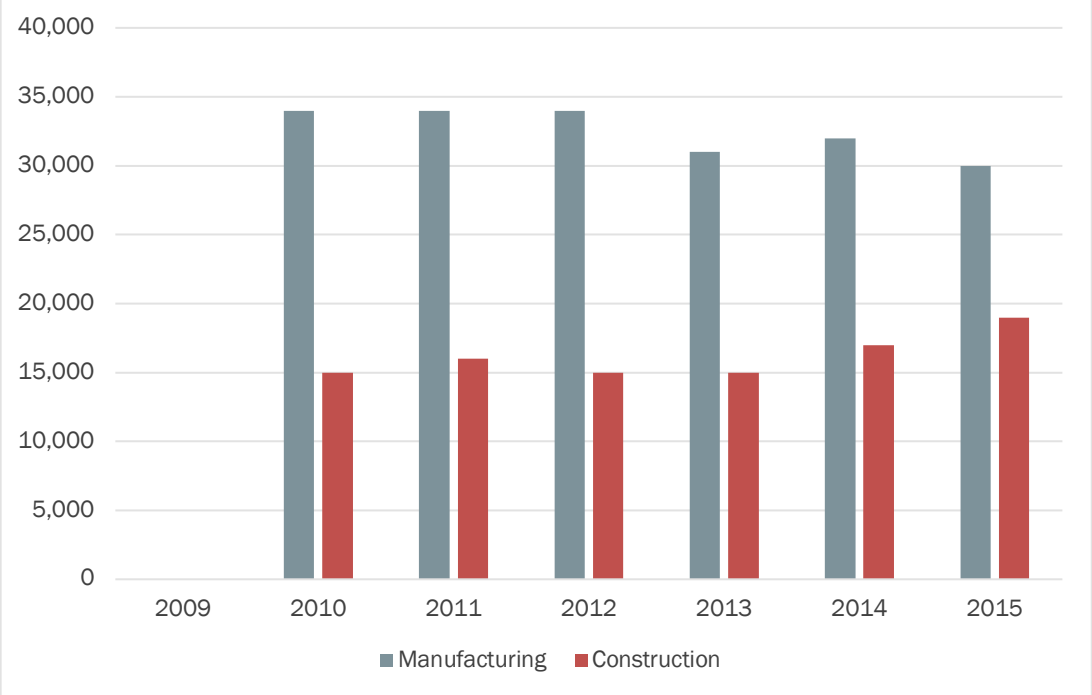
4.1.8 Across the County of Suffolk the number of people employed in the Manufacturing and Construction sectors in 2015 was approximately 30,000 and 19,000 people respectively. This reflects a slightly decline in those employed in the Manufacturing sector and conversely, a slight increase in the numbers employed in the Construction sector. In contrast to these absolute figures however, Construction is becoming a more significant sector in County of Suffolk whilst Manufacturing is becoming less significant.

Figure 4.7: Change in Employment in Manufacturing and Construction in East Suffolk 2009-2015



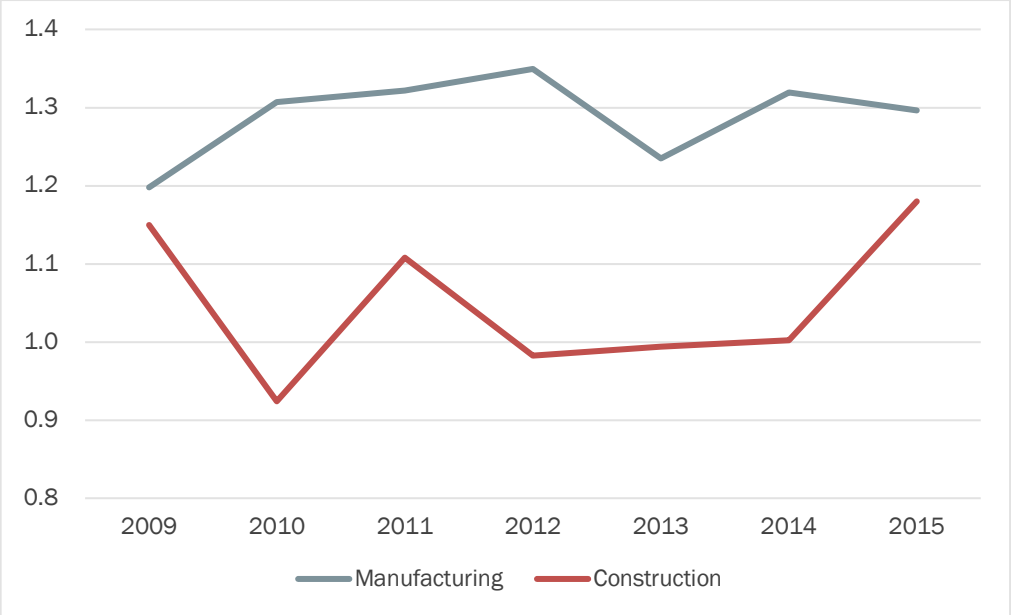
Source: Business Register and Employment Survey, 2018

Figure 4.8: Change in Employment in Suffolk 2009-2015



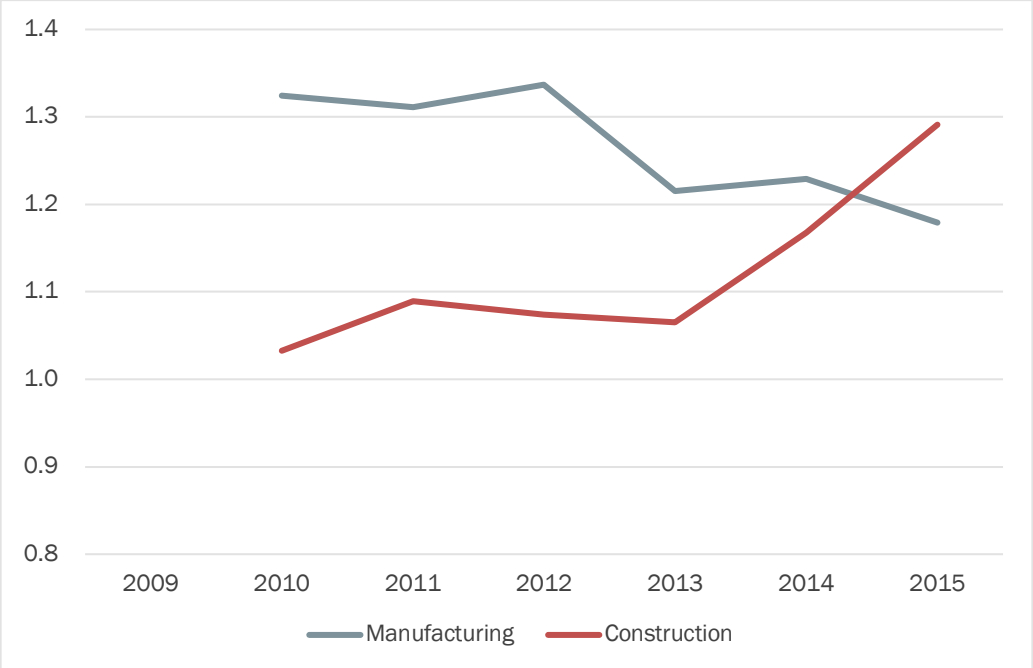
Source: Business Register and Employment Survey, 2018

Figure 4.9: Change in Location Quotient in East Suffolk, 2009-2015



Source: Business Register and Employment Survey, 2018

Figure 4.10: Change in Location Quotient in Suffolk, 2009-2015

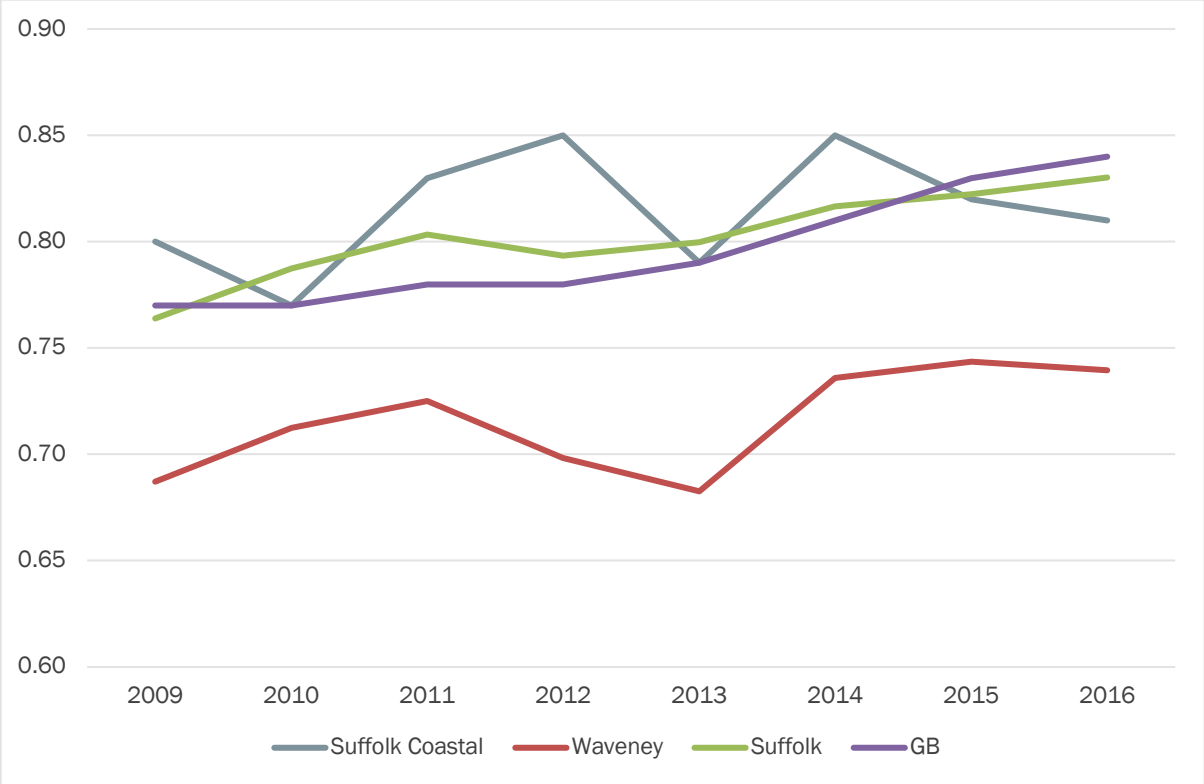


Source: Business Register and Employment Survey, 2018

4.2 Jobs Density

4.2.1 Jobs density figures[40] in Waveney District are consistently lower than Suffolk Coastal District and other comparator areas over the period 2009 to 2016. Taking into account that data at smaller geographical levels is more likely to fluctuate year-on-year, jobs density figures in Suffolk Coastal District have remained broadly in line with the County of Suffolk and GB as a whole.

Figure 4.11: Jobs Density 2009-2016



Source: ONS Jobs Density, 2018

[40] This is the number of jobs in an area divided by the resident population aged 16-64 in that area

4.3 Available Labour

4.3.1 In addition to those in work, the potential workforce for the construction of Sizewell C also includes:

- The unemployed
- School leavers

4.3.2 These are discussed in more detail in the following two sections.

4.3.3 In addition, there are sources of primary data that provide some evidence about the availability of labour locally, and these are discussed here.

Suffolk Chamber of Commerce Business Survey

4.3.4 The latest Chamber of Commerce survey covered 143 businesses in Suffolk. As far as we are aware this is a self-selecting sample and is not necessarily representative of all businesses in Suffolk.

4.3.5 On balance one-quarter of respondents in Manufacturing expect job growth in the next quarter (i.e. those expecting to increase employment less those expecting to decrease employment). On balance 28% of respondents in Services expect job growth in the next quarter. Therefore, there is an expectation of employment growth in the Suffolk economy.

4.3.6 All respondents in Manufacturing had attempted to recruit during the previous quarter, and 85% of respondents in the Service sector had attempted to recruit. The majority of those that attempted to recruit (70% of Manufacturing responses and 64% in Services) had difficulty finding staff.

East Suffolk Research into Micro Businesses

4.3.7 East Suffolk Councils commissioned research into the barriers to employment, recruitment and retention for micro-businesses.

4.3.8 18.7% of micro-businesses that responded to a survey stated that they had difficulty recruiting staff, mainly due to applicants lacking qualifications, skills and experience.

4.4 Unemployment

4.4.1 Jobseeker's Allowance (JSA) claimants, out-of-work benefits working-age claimants and International Labour Organisation (ILO) unemployment are all measures of unemployment. Each dataset will produce different numbers as they each have a unique definition. Those claiming JSA are those people who currently have no work and, are available and capable of work when they make their claim[41]. Out-of-work benefits claimant in the working-age client group is a total of all people claiming at least one key Department of Work and Pensions benefit (including JSA) and is used as a proxy for worklessness[42]. The ILO definition of unemployment is an international definition of unemployment applied by the

[41] Office for National Statistics, *Unemployment and the claimant count*
[42] Source: NOMIS, 2004. *DWP Benefits Overview*

UK to anyone who is not employed, has actively sought work during the preceding four weeks and is available to start work in the next two weeks. It also applies to anybody who is currently not working but is due to start a new job in the next two weeks[41].

Latest Unemployment

4.4.2 The figure below shows the unemployment figures for 2016 across Suffolk and the East of England.

Figure 4.12: Unemployment Figures 2016

	JSA<12 months	Jobseeker's Allowance Total	Out-of-Work Benefits	Unemployment (ILO)
East Suffolk	460	730	11,050	5,100*
County of Suffolk	2,210	3,170	31,510	12,300
East of England	22,480	30,650	264,800	118,000

Source: Jobseeker's Allowance Flows, DWP Claimants, Annual Population Survey
*Estimate unreliable due to small sample size

Figure 4.13: Jobseeker's Allowance Claimants Seeking Employment in Jobs relevant to a new nuclear build 2018

	Construction and Engineering <12 months[43]	Civils Total[44]	Mechanical and Electrical Total[44]
East Suffolk	10	35	0
County of Suffolk	35	140	5
East of England	655	1,540	45

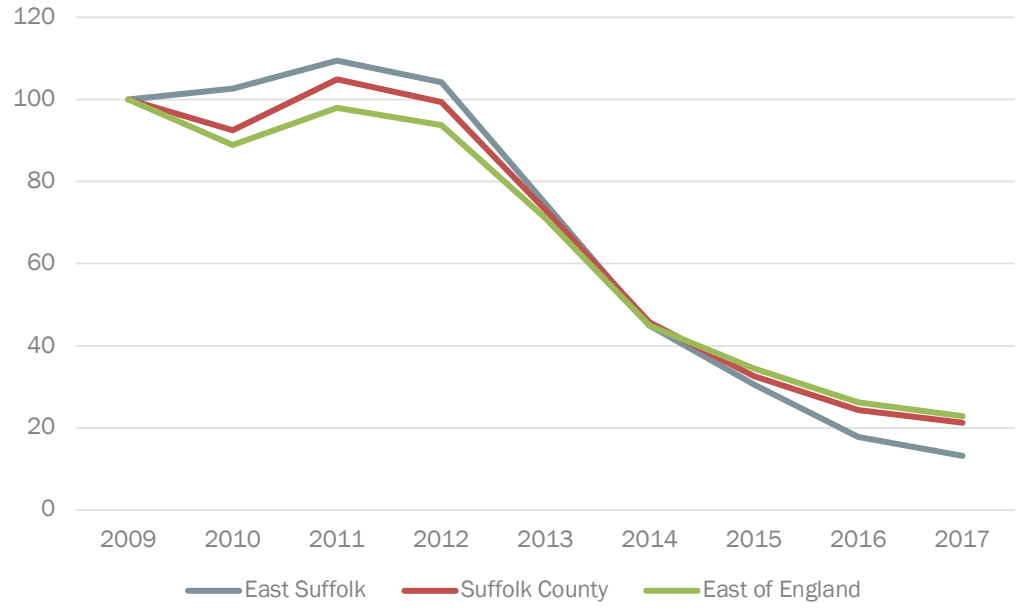
Source: Jobseeker's Allowance by Occupation

Change in Unemployment Over Time

4.4.3 The figures below all show that the trend since 2012 has been a decline in the levels of unemployment across all measures. This is most obvious in the JSA claimant data that has declined over 75% during the period.

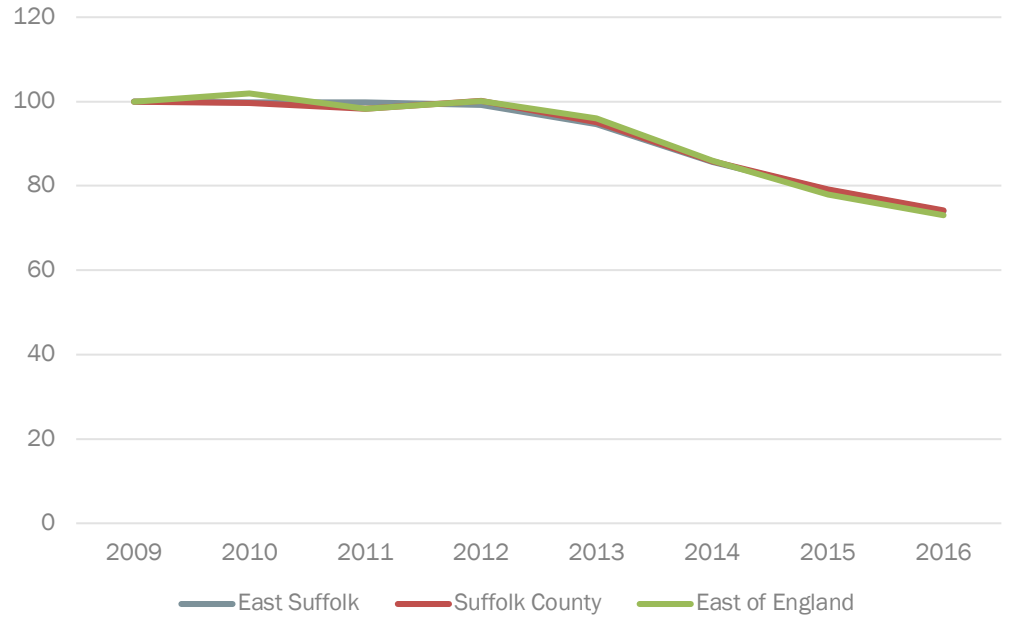
[43] Based on HJA approximation of 4 digit SOC codes to 3 digit SOC codes-see Appendix One for definition
[44] Based on SOC code definitions from the Construction Skills Network-See Appendix One for definition

Figure 4.14: JSA Claimant 2009-2017 (Indexed to 2009)



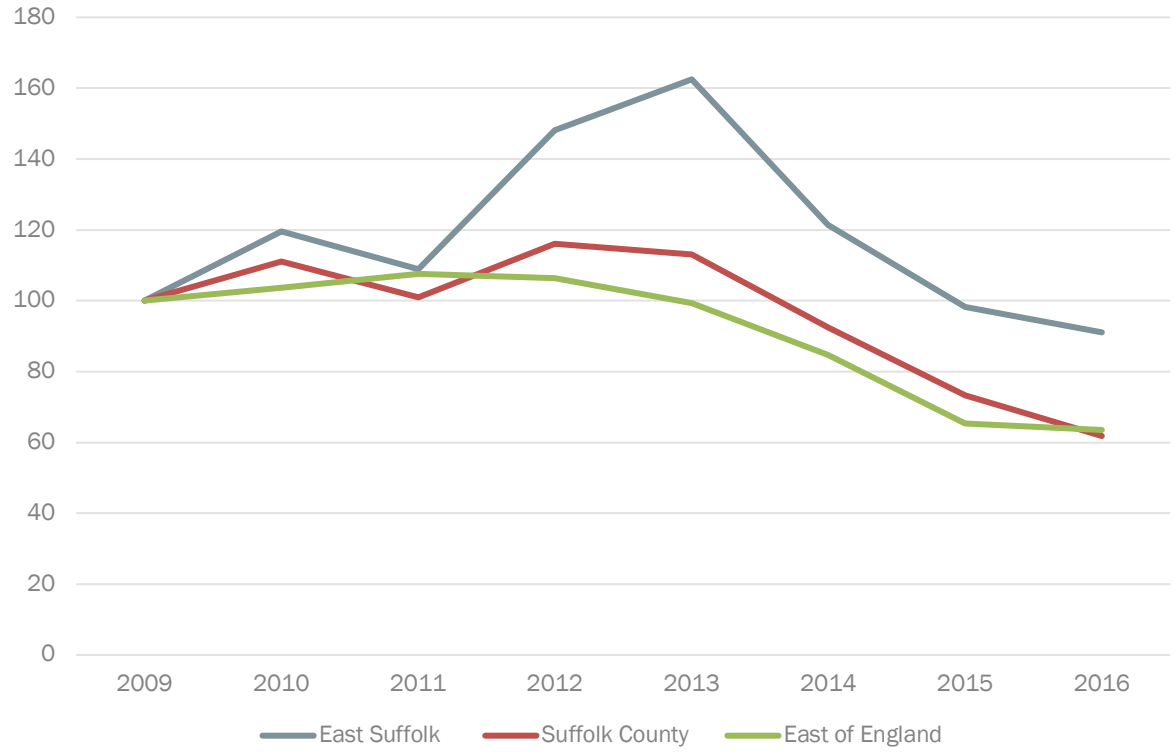
Source: Jobseeker's Allowance Flows, 2018

Figure 4.15: Out-of-Work Benefit Claimants 2009-2016 (Indexed to 2009)



Source: Benefit Claimants, 2018

Figure 4.16: ILO Unemployed 2009-2016 (Indexed to 2009)*



Source: Annual Population Survey, 2018

*Numbers for East Suffolk statistically unreliable

4.5 Commuting

4.5.1 Commuting data is taken from the Census of Population, 2011 and is based on approximately 45,650 working residents from Suffolk Coastal District and 39,490 working residents from Waveney District. The level of self-containment (people living and working in the same district) is high in both Suffolk Coastal District and Waveney District at 59% and 70% respectively.

Figure 4.17: Destination of East Suffolk Residents across the County of Suffolk

Place of Residence	Place of Work						
	Babergh	Ipswich	Mid Suffolk	Suffolk Coastal	Waveney	West Suffolk	Total
Suffolk Coastal	1,000	11,040	1,630	26,770	960	360	41,750
Waveney	50	310	370	1,380	27,820	120	30,050

Source: Census, 2011

4.5.2 Whilst the level of self-containment for Suffolk Coastal District is lower than that of Waveney District the majority of Suffolk Coastal District residents work within the County of Suffolk with less than 4,000 residents leaving the County to work. The same is not true for Waveney District however where over 9,000 residents commute outside the County to work, this reflects Waveney's strong links with Norfolk and in particular Great Yarmouth where approximately half these residents commute.

4.6 Workforce Entrants

School Leavers

4.6.1 7,300 pupils in Suffolk completed Key Stage 4 in 2015. 8% of these (c.580) went into apprenticeships; and 95% went into some form of education, employment or training[45].

4.6.2 2,990 pupils in Suffolk completed Key Stage 5 in 2015. 68% of these went into education and 24% (c.720) went into employment[46].

Apprenticeship Starts

4.6.3 In East Suffolk in 2015/16 around 400 people started apprenticeships in relevant subjects. Data for subjects, and for the last three years can be seen in the figure below.

[45] Department for Education (2017) Key Stage 4 Destination Measures 2015-16
[46] Department for Education (2017) Key Stage 5 Destination Measures 2015-16

Figure 4.18: Apprenticeship Starts

	2014/15	2015/16	2016/17
Construction, Planning and the Built Environment	70	90	90
Engineering, Manufacturing and Technologies	360	330	260
ICT	50	60	60
Science and Maths	0	0	0

Source: Department for Education, March 2018

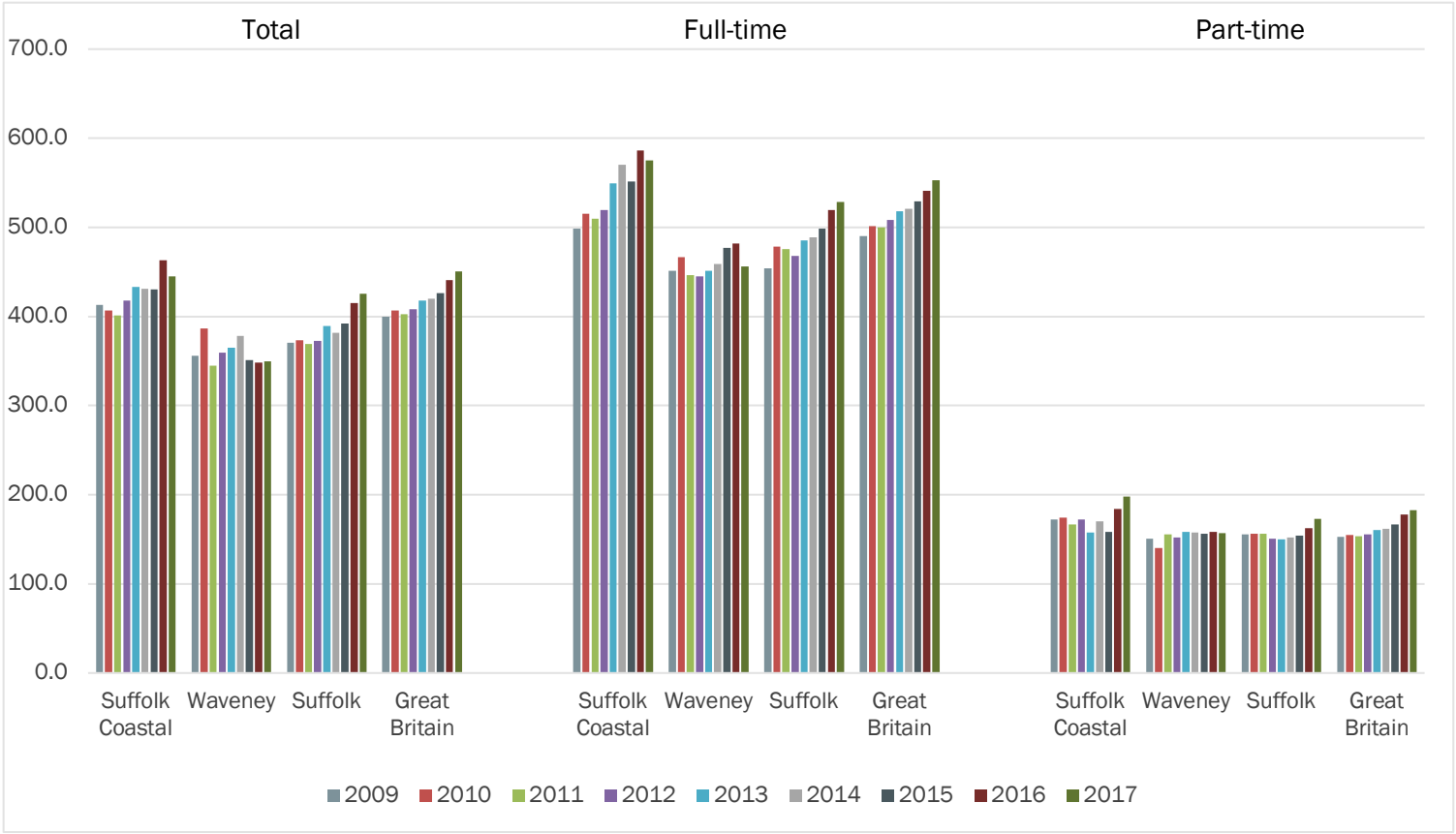
4.6.4 Data is not available on apprenticeship achievement at local authority and subject level, only at one or the other of these levels. This data is also only available at county level, and not at district level.

4.7 Earnings

Residents' Earnings

4.7.1 In 2017 total gross median pay was approximately £445 per week in Suffolk Coastal District and £350 per week in Waveney District. Resident earnings in Suffolk Coastal District have been consistently greater than earnings in Waveney District across both full-time and part-time employment with the largest difference seen in earnings from full-time employment. Earnings in Suffolk Coastal District are also higher than in the comparator areas of the County of Suffolk and GB with earnings in Waveney District broadly below these averages.

Figure 4.19: Residence-Based Median Gross Weekly Pay, Full-Time Pay and Part-Time Pay

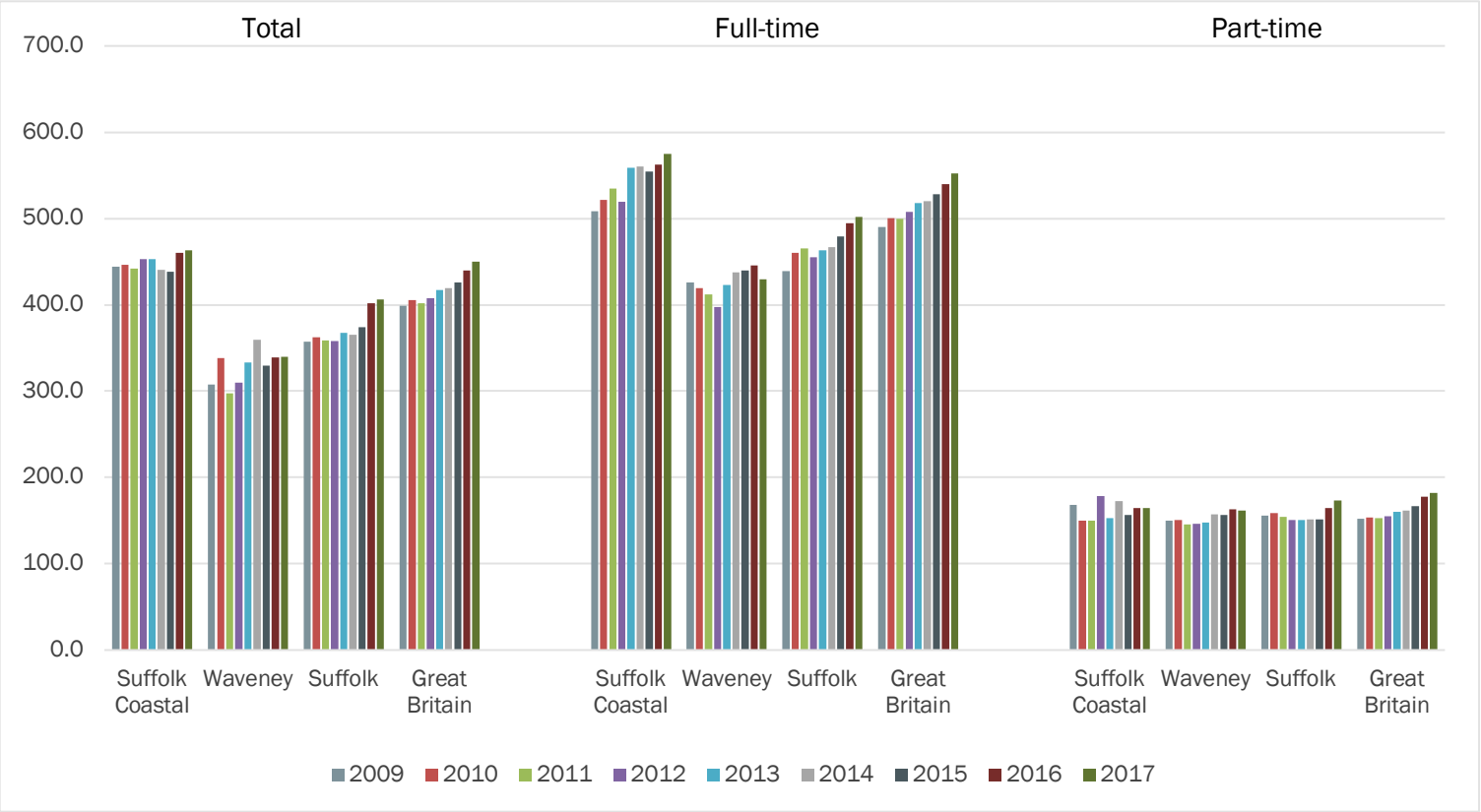


Source: ONS Annual Survey of Hours and Earnings, 2018

Workplace Earnings

4.7.2 The difference between the earnings in Suffolk Coastal District and Waveney District is even larger when earnings are examined by workplace income. In 2017 total median gross workplace earnings in Suffolk Coastal District were over £100 more than in Waveney District. Once again Suffolk Coastal District has mostly had earnings above comparator areas across both full and part-time employment, with Waveney District mostly below comparator areas.

Figure 4.20: Workplace-Based Median Gross Weekly Pay, Full-Time Pay and Part-Time Pay



4.8 Value of Employment

4.8.1 The targets for home-based employment on the Sizewell C construction project are high across all categories. At the civil construction peak the majority of home-based employment will be in the Civil Engineering and Construction category. These jobs can vary in skills level but will be well paid jobs. Using data from the ONS on earnings and GVA per worker, estimates of the value of this employment can be made.

Figure 4.21: Earnings and GVA from Home-based Employment at Civils Peak

	Home-based Workers	Total Earnings	Total GVA
Civil Engineering and Construction	1,330	£43,300,000	£88,700,000
Mechanical & Electrical Engineering	140	£4,200,000	£7,200,000
Operation	50	£2,100,000	£11,200,000
Project Management	130	£4,400,000	£9,000,000
Support Services, Security and Clerical	220	£4,000,000	£10,100,000
Total	1,860	**£58,600,000**	**£126,300,000**

Source: EDF Socio-economic Technical Note 1, April 2014 and HJA analysis

4.8.2 Of the approximately 2,000 home-based workers expected on site at overall peak almost half are expected to be employed in Mechanical & Electrical Engineering. These are typically high skilled, high paying jobs and this is evident from the fact these jobs account for almost half of total worker income at peak.

Figure 4.22: Earning and GVA from Home-based Employment at Overall Employment Peak

	Home-based Workers	Total Earnings	Total GVA
Civil Engineering and Construction	380	£12,400,000	£25,300,000
Mechanical & Electrical Engineering	990	£30,400,000	£52,400,000
Operation	250	£11,900,000	£62,300,000
Project Management	160	£5,500,000	£11,200,000

	Home-based Workers	Total Earnings	Total GVA
Support Services, Security and Clerical	250	£5,200,000	£11,700,000
Total	2,020	**£65,400,000**	**£163,000,000**

Source: EDF Socio-economic Technical Note 1, April 2014 and HJA analysis

4.8.3 From the data above it is clear that the majority of jobs at the civil construction and overall employment peak will be in well paid jobs, and the targets for home-based employment are not being met by employing vast amounts of people in low skill, low wage jobs. The difficulty for EDF will be meeting these ambitious targets for recruitment from the local skilled population and this will increase the likelihood of the displacement of workers from local businesses.

5 Appendix 5: Employment and Workforce

5.1 Baseline

5.1.1 The employment and workforce baseline situation is set out in the previous chapter.

5.2 Impacts

5.2.1 EDF Energy states that 25,000 roles will be created during the construction period. These will vary in length from a few days to several years, so this number in itself is not particularly helpful. 5,600 people will be employed [on the main site or in total?] at the peak of the construction period, including 250 operational employees who will remain on site, as part of a full complement of 900 operational staff. An additional 500 staff will be employed at associated developments all of whom are assumed to be home-based workers[47].

5.2.2 EDF Energy's Stage 2 Consultation document, (Fig.5.5 p.44) shows the total expected workforce profile on-site over time (not including those located at associated developments), which is included in this report as Figure 3.1. No specific years are given on the chart. No specific numbers are given for the demand for each type of worker.

5.2.3 Roles on the project will include those in construction, and in other areas associated with the development. Non-construction roles on the project include: tourism, hospitality, food production, business support and administration (Stage 2 Consultation document, para 5.5.4, p.49). It has been suggested that changes to the skill base could deliver a long-term legacy, particularly in the tourism sector. Workers who develop skills on this project could then go on to work on other projects in the civil and nuclear construction sectors (Stage 2 Consultation document, para 5.5.5, p.49),

5.2.4 Concerns have been raised by Somerset stakeholders that there will be significantly more people on site and in the local area at peak than was set out in the proposals for Hinkley Point C, which are very similar to the workforce proposals for Sizewell C. Somerset stakeholders are concerned that a number of people on site are designated as visitors rather than workers and are therefore not included in the workforce projections. This could have a wider economic impact if there is more demand for accommodation and transport, and hence more traffic congestion, than was anticipated, based on the proposed number of workers.

Wages and GVA

5.2.5 No data is provided by EDF Energy on the likely wage or GVA impacts of employment on the project.

Output and productivity

5.2.6 Baseline figures are provided for output in the Construction and Energy sectors (Stage 2 Consultation document, para 5.3.15, p.42).

5.2.7 Growth in the Energy sector supports high productivity and higher paid jobs, in line with the local aspirations, including those set out in the SEP. Growth in the Energy sector will help to drive up productivity and total GVA.

[47] EDF Energy (2014) Socio-economic Technical Note 1A: Associated Development Workforce Pre-Stage 2 Draft

5.3 Home-Based Workers

Number of workers

5.3.1 The EDF Energy Stage 2 Consultation document (para 4.2.1 p.20) states that it will *invest in a range of initiatives to optimise the potential for jobs related to the construction and operation of Sizewell C to benefit local residents*.

5.3.2 The Stage 2 Consultation document (para 4.2.2 p.20) states that *EDF Energy and its contractors would try to recruit as many local people for the construction phase as possible. In order to facilitate this, EDF Energy will work with relevant stakeholders to prepare a skills, education and employment strategy, which would include measures to boost local skills and a brokerage that would help place trained people into suitable roles*.

5.3.3 EDF Energy plans that 2,000 of the workers at peak will be home-based workers. This is 36% of the expected total workforce. This is based on the experience at previous new nuclear projects, most notably Sizewell B. There will be 2,000 home-based workers at peak, but how many in total?

5.3.4 Experience from Sizewell B and Hinkley Point C suggests that home-based workers will be concentrated in lower skilled and lower paid roles. At civils peak construction (expected in month 6) and overall peak construction (expected in month 30), the numbers of home-based workers are set out in the figure below.

Figure 5.1: Total and Home-Based Workers

	Total employment at civils peak	Home-based workers at civils peak	Total employment at overall peak	Home-based workers at overall peak
Civil engineering and construction	2,895	1,330 (46%)	760	380 (50%)
Mechanical and electrical engineering	400	140 (34%)	3,285	990 (30%)
Operational staff	45	45 (100%)	250	250 (100%)
Project management	850	130 (15%)	1,055	160 (15%)
Support services, security and clerical	240	220 (90%)	280	250 (90%)
Total	4,430	1,860 (42%)	5,630	2,020 (36%)

Source: EDF Energy (2014)

5.3.5 What is the length of employment expected? The high cost of preparing and accrediting people to be able to work on a nuclear new build site means that it is likely that staff undertaking temporary tasks will be transferred to new roles for which they are suited.

5.3.6 No data is provided on the direct wages or GVA that might be generated by the employment of home-based workers.

Source of Home-Based Workers

5.3.7 EDF Energy has used a gravity model to determine the likely location of workers, including home-based workers. Home-based workers are assumed to be willing to travel up to 90 minutes each way (Stage 2 Consultation, para 5.4.18, p.46). Evidence emerging from the Hinkley Point C project shows that home-based workers are coming from a much smaller area than was originally anticipated.

5.3.8 The main sources of home-based workers are expected to be the unemployed (discussed above in section **Error! Reference source not found.**), those who are displaced from existing businesses, new entrants to the labour market, and in-migrants to the local area.

Training

5.3.9 There will be a need for upskilling and accreditation in order for local workers to access work opportunities at Sizewell C.

5.4 Non-Home-Based Workers

5.4.1 3,600 of the 5,600 workers on site at the peak of the construction period will be non-home-based workers. At peak construction, 2,400 of these are expected to be resident in the EDF Energy accommodation campus, within the main development site (Stage 2 Consultation document, para 5.4.18 p.46). No data is presented on the length of each job, and what this means for overall demand for accommodation.

5.4.2 The gravity model assumes that non-home-based workers will find accommodation within 60 minutes travel time of the site (Stage 2 Consultation, para 5.4.18, p.46). There is limited data on the impact of non-home-based workers.

5.4.3 EDF Energy has stated that workers' have an allowance of £35 per night, but there is no data on the likely distribution of spend by non-home-based workers. It would be helpful to have further data on:

- Amount and type of accommodation needed?
- Spend on off-campus accommodation?
- Spend on food?
- Spend on leisure?
- Spend on other services?

5.5 Legacy

5.5.1 Potential opportunities will be opened up to people who have developed skills whilst working on the Sizewell C project (or perhaps developed in anticipation of the Sizewell C project), e.g. opportunities at Bradwell in Essex, which could be a location for a further nuclear power station, or work on other new nuclear or energy infrastructure projects, including those in the local area. Therefore, there could be a structural change in the local economy, with more workers with suitable skills and experience for future job opportunities, and therefore lower levels of unemployment and economic inactivity after the construction of Sizewell C. However, if local employment is concentrated in the lower quality activities within the project, or the recruitment of home-based workers does not reach the target of 2,000, then the potential for a local skills legacy is reduced.

5.5.2 Developing a legacy of skills and experience in the local labour force will help to tackle the risk of boom and bust in the local economy.

5.6 Net Additional Local Impact

5.6.1 The figures above mostly discuss the gross direct impact of employment on the Sizewell C project. To calculate the net additional local impact of the project, a number of factors should be considered[48], but there is very little consideration of these in the work undertaken so far.

5.6.2 **Leakage**. In labour market terms, much of the benefit of non-home-based workers leaks out of the local area, other than that which is spent on accommodation, food and local services. This is why the focus on home-based workers is important, as most of their spend will be in the local area.

5.6.3 **Displacement**. As discussed above, there is a risk that workers on the project are already in employment and will be displaced from other local businesses. There is potential for back-filling of these workers if there are workers of a suitable quality available in the local labour market. The difference between churn and displacement is the rate of worker take-up on the project, and the ability to back-fill vacant posts (although any churn could have a negative impact on business continuity). Can the local labour market provide back-filling quickly enough to avoid negative impacts of displacement?

5.6.4 **Multiplier effect**. The employment of home-based and non-home-based workers will generate some limited multiplier effect, but the local multiplier effect will be much greater from other parts of the project, e.g. supply chain spending.

5.6.5 **Deadweight**. This is likely to be a small if not insignificant effect locally, as there is no activity currently on the site, and no alternative proposals for development on this site.

5.7 Mitigation

5.7.1 Actions are needed to maximise the positive impacts of the project and minimise the negative impacts of the projects on the local economy. Some actions are already being undertaken in the local area that will help with these objectives, but local stakeholders have identified the need for more activity. EDF Energy has set out possible mitigation activities that it could deliver. It is also helpful to look at mitigation actions associated with other similar projects, particularly Hinkley Point C, to see what lessons can be applied to Sizewell C.

Local Stakeholders' Activities

5.7.2 Local stakeholders are already investing in actions to develop the workforce for the Construction and Energy sectors, with a view to increasing local employment in these sectors. Plans include:

- New Anglia Sector Skills Plan for Construction[49]
- New Anglia Sector Skills Plan for Energy[50]

[48] See Homes & Communities Agency (2014) Additionality Guide: Fourth Edition
[49] New Anglia LEP & CITB (2016) New Anglia Sector Skills Plan Construction
[50] New Anglia LEP & SkillsReach (2018) Energy Sector Skills: A Skills Plan for New Anglia

5.7.3 An Eastern Institute of Technology has been proposed, and funding is being sought for this. This will be a virtual institute, based on existing further education colleges, and will help to deliver training capacity for STEM skills in the wider area.

5.7.4 Local stakeholders have suggested that it would be useful for EDF Energy to work with the existing skills infrastructure rather than investing in wholly new infrastructure.

Further Mitigation Sought by Local Stakeholders

5.7.5 The main areas of mitigation sought by local stakeholders are:

- Efforts to increase the number of home-based workers employed on the project, although this will need to be pursued carefully, to avoid greater displacement of workers from existing local businesses. A better target might be to increase the proportion of home-based workers employed in the higher quality activities within the project
- More work on avoiding the negative impacts on local businesses of the displacement of local workers
- Consideration of developing shared apprenticeships across the energy sector
- Setting challenging targets for local apprenticeships
- More investment in activities to inspire young people to consider careers in STEM and construction

EDF Energy Mitigation Proposals

5.7.6 EDF Energy has set out a proposal for a **construction workforce development strategy** (Stage 2 Consultation document, para 5.3.7, p.40). This has not yet been produced.

5.7.7 EDF Energy, Suffolk County Council, regional stakeholders and education and training providers will work together to develop an **education, skills and employment strategy** to support the project (Stage 2 Consultation, para 5.6.9, p.53). This has not yet been produced. Is this the same as above, or is it different?

5.7.8 In the Stage 2 Consultation document, Para 5.6.25 (p.55), EDF Energy states:

Through collaboration with regional skills groups, institutions and industry bodies, skills gaps and requirements would be identified with sufficient time for specific provision and appropriate funding mechanisms to be designed and programmed in advance. Adopting this evidence-based approach will enable EDF Energy and its supply chain partners to deliver interventions where they are needed most, and work within the broader regional economic context to promote sustainable careers and skills.

5.7.9 It will be important to ensure that mitigation proposals (such as local labour recruitment commitments) are adhered to by suppliers and not just by EDF Energy, as most workers are employed by suppliers and not by EDF Energy.

5.7.10 At Para 5.6.28 of the Stage 2 Consultation document, it is stated that:

EDF Energy is proposing to open a jobs service through which contractors and supply chain partners would be required to advertise all vacancies. This would be designed to support the recruitment of local residents to the Project where possible.

5.7.11 How and when will these be developed?

Mitigation at Hinkley Point C

5.7.12 EDF Energy has invested in a number of mitigation activities relevant to the workforce and local employment at Hinkley Point C. These include:

- Strategies, discussed below
- Establishment of the Inspire schools education programme and Young HPA providing support to 16 to 21 year-olds who are interested in working on the project
- The Hinkley Jobs Service, matching local people seeking work with opportunities at Hinkley Point C and with other local employers and providing support to help people into work
- Hinkley Point Training Agency, a network of colleges and training providers that can deliver training for EDF Energy and its supply chain
- Skills and Apprenticeships Hub
- A hub for the National College for Nuclear

5.7.13 Evidence from the Hinkley Point C project shows that the jobs service is helping people to access work in a range of local businesses and not just directly related to the project. This wider benefit should be considered when assessing the impact of the infrastructure put in place to support the project.

Hinkley Point C Construction Workforce Development Strategy

5.7.14 This strategy was developed to help overcome the fact that many general construction workers will not be immediately ready to take a job on the Hinkley Point C construction site without specific nuclear skills and accreditation. The focus of the strategy was on developing the skills of local people in areas where there was an objective need for the skills on the project but, which could also be sustained in the Somerset economy beyond the life on project. EDF Energy set up a number of programmes designed to train specific groups of local people which would all work together to form an integrated scheme for the local community.

5.7.15 Training interventions include:

- Construction Skills Centre - a dedicated training centre at Bridgwater College to deliver training course for everyone from the unemployed to construction workers looking to upskill
- Hinkley Ready Skills Project - investment in West Somerset Community College to upgrade the campus and enable them to deliver additional education in skill areas necessary for Hinkley
- Apprenticeships, with the aim to of having 2% of the workforce as apprentices

5.7.16 Employment interventions include:

- Employment Brokerage based in the Job Centre Plus in Bridgwater, helping to place people in vacancies on the Hinkley Point C site
- Employment Outreach, employing outreach workers in Sedgemoor and West Somerset to help people overcome barriers that stop them entering the employment market

5.7.17 EDF Energy is also more broadly committed to looking at increasing opportunities for the unemployed as well as those under-represented in the Construction and Engineering sector across Somerset and the UK including women, Black and Ethnic Minorities (BAME) and the disabled.

6 Appendix 6: Supply Chain

6.1.1 EDF Energy is the developer and client for the construction of Sizewell C. The actual construction will be undertaken by other businesses, known as the *supply chain*. Therefore, the supply chain covers all of the on-site construction employment (with the exception of EDF Energy staff on the site), plus all provision of goods and services to support this. The suggested cost of up to £24 billion mostly comprises supply chain spend.

6.1.2 As an example of the size and complexity of the supply chain, the Hinkley Point C supply chain comprises 180 Tier 1 contracts:

- Mechanical, electrical and heating, ventilation and air conditioning (HVAC) – 13 contracts
- Technology systems around the reactor, turbine generator and C&I – 6 contracts
- Equipment items and components – 51 contracts
- Systems and erection – 36 contracts
- On-site construction – 13 contracts
- Off-site enabling – 6 contracts
- Site services, logistics and operations – 61 contracts

6.1.3 No information is provided on the number of Tier 2 and Tier 3 businesses.

6.1.4 Other than employment, supply chain spend is likely to cover a range of goods and services. Therefore, analysis of the supply chain in this economic impact assessment should focus on the economic impact of any off-site expenditure on goods and services in the local area, rather than replicating the economic impact of activity that takes place on the site which is considered in the previous chapter.

6.1.5 Although it is difficult to ascertain the impact of supply chain spend as distinct from local labour, it is still important to try and maximise the supply chain spend in the local area.

6.2 Baseline

6.2.1 An approximation of the sectors likely to engage in the supply chain are Advanced Manufacturing & Engineering, Construction and Tourism. Local representation in these sectors is set out in the figure below. Most sectors have a Location Quotient greater than 1.0 i.e. they are better represented in the local economy than nationally, with the exception of Advanced Manufacturing and Engineering in Suffolk Coastal District.

Figure 6.1: Employment and Businesses in Potential Supply Chain Sectors

	Suffolk Coastal	Waveney	County of Suffolk
Advanced Manufacturing and Engineering			
Employment	1,400	1,500	12,800
Location Quotient[51]	0.77	1.03	1.12
Businesses	200	300	1,300
Construction			
Employment	2,500	2,300	18,000
Location Quotient	1.06	1.19	1.21
Businesses	700	600	4,000
Tourism			
Employment	6,000	6,000	35,000
Location Quotient	1.11	1.39	1.03
Businesses	600	400	3,300

Source: Employment from ONS BRES, 2016; Businesses from ONS UK Business Counts, 2017

6.3 Supply Chain Spend

6.3.1 If the spend in the regional economy follows EDF projections for Hinkley Point C then up to £200 million will be spent per annum during core construction. This could equate to £1.5 billion over the construction period. This includes labour/employment on site as well as spend on goods and services off the site.

6.3.2 It is understood that EDF Energy is developing a model to calculate the local economic impact of the supply chain for Hinkley Point C, so this could provide useful information to understand the potential impacts of the construction of Sizewell C.

6.3.3 EDF Energy (Stage 2 Consultation report para 4.2.1 p.20) states that it will *commit to a range of initiatives to ensure that local businesses can benefit from the economic activity generated by the construction and operation of Sizewell C*.

6.3.4 At para 4.2.7 (p.20) it is stated that *EDF Energy would also develop a supply chain strategy that would aim to place significant contracts with local businesses. One way that EDF Energy is currently facilitating this is by providing funding to the Suffolk Chamber of Commerce, which is helping local companies get ready for the opportunity via the Sizewell C supply chain portal*.

6.3.5 EDF Energy needs to provide more detail on what it is proposing to do to maximise local supply chain spend. What are the opportunities? How are businesses being prepared to access them?

6.3.6 It is important to be realistic about how much supply chain spend there will be in the local area, and what this spend will be on. It is likely that most high-value supply chain spend will be outside the local area, whereas local supply chain spend will be on the lower value goods and services such as catering, accommodation, passenger transport, and leisure. EDF Energy's Stage 2

[51] A Location Quotient (LQ) is a measure of the concentration of employment in the sector locally compared to the concentration of employment in the same sector nationally. An LQ greater than 1.0 means a greater concentration than the national concentration, and an LQ of less than 1.0 means a lesser concentration than nationally

Consultation (para 5.5.10, p.49) suggests that opportunities for local suppliers are more likely to be in smaller and on-construction packages such as *professional and design services, business administration, hospitality, catering, security and cleaning*. 83% of the value in site preparation (i.e. very early stage, relatively lower value activity) at Hinkley Point C has gone to Somerset-based companies, including catering and food production (Stage 2 Consultation, para 5.5.11, p.49).

Impact at Hinkley Point C

6.3.7 Latest monitoring data produce for the Socio Economic Advisory Group (SEAG) in March 2018 shows 2,400 suppliers registered from the County of Somerset, Bath & North East Somerset and North Somerset; and a further 1,700 suppliers from the rest of the South West region registered.

6.3.8 Local consortia contracts of £435 million have been confirmed, and £69 million has already been spent, creating 450 jobs. It is anticipated that 1,000 jobs will be created in the site operations workforce at peak construction[52].

6.4 Legacy

6.4.1 There is potential for a legacy impact in the local economy if locally-based suppliers can then go on to support other nuclear new builds in the UK or overseas (Stage 2 Consultation, para 5.5.8, p.49), thus undertaking higher-value work than they otherwise would have done. There is also potential to attract inward investors to the local area, which tend to generate higher productivity than indigenous businesses.

6.5 Net Additional Local Impact

6.5.1 **Gross Direct Impact.** Most of the local economic impact of the supply chain is already captured in the previous chapter on employment. At this stage, it is not possible to disaggregate any supply chain impact from the overall impact of the project.

6.5.2 **Leakage**. Much of the supply chain spend is likely to take place outside the local area. This is likely to be most of the supply chain spend, with little high-value supply chain procurement taking place in the local area. Around £2 billion of the total project value is likely to be spent within the region using assumptions from spending in Hinkley Point C to date, so over 90% of the project value will be spent outside the region, and significantly more than this outside the local area of East Suffolk.

6.5.3 Reducing the leakage of supply chain spend out of the local area could have a significant effect on the local economic impact of the project.

6.5.4 **Displacement**. Given that the amount of supply chain spend in the local area is likely to be minimal (other than the spend on local labour), there is not likely to be much displacement of economic activity.

6.5.5 **Substitution**. It may be the case that local business which supply the Sizewell C project substitute this for work that they would otherwise have done – in terms of either the provision of goods or services. This may lead to less capacity in the local business community, and impacts on other parts of the economy.

[52] Supply Chain SEAG Dashboard, March 2018

6.5.6 **Multiplier effect**. There will possibly be some multiplier effect from local supply chain spend, but it will be limited by the small amount of supply chain spend.

6.5.7 **Deadweight**. No deadweight effect is expected given the unique nature of this project.

6.6 Mitigation

Local Stakeholder's Requirements

6.6.1 Local stakeholders would like to see a supply chain plan, to show how the project will engage with local stakeholders and build local supply chain capacity, leaving an economic legacy in the local area[53].

6.6.2 Stakeholders want EDF Energy to encourage Tier 1 suppliers to establish a presence in the local area, and support efforts to attract inward investment to the local area.

6.6.3 Appointment of a dedicated Sizewell C specialist at the Growth Hub, to support local businesses to access the supply chain, has been suggested.

6.6.4 Stakeholders would like EDF Energy to help Suffolk businesses to gain experience at Hinkley Point C, so that they are then better placed to bid for and win work at Sizewell C.

6.6.5 Stakeholders would like EDF Energy to work with other developers of energy infrastructure in the local area, and develop shared approaches to skills development, including shared apprenticeships.

Current Mitigation by EDF Energy

6.6.6 EDF Energy is working with the Suffolk Chamber of Commerce to develop a supply chain register and portal[54]. The supply chain portal is focused on registering details of potential suppliers and getting them ready to bid for contracts by ensuring that they have the necessary accreditations. The companies are listed as *Ready*, *Almost Ready* or *Not Ready*, based on whether they are able to provide the information that EDF Energy or Tier One suppliers require before they will consider a bid from them. The portal currently has links to associations that can help companies achieve the necessary standards to supply the nuclear industry which are often needed for those companies involved in construction.

6.6.7 In the Stage 2 Consultation document (section 5.6, p.52), EDF Energy suggests that it will develop an economic strategy. This will include a procurement and supply chain strategy.

Mitigation at Hinkley Point C

6.6.8 A Hinkley Point C supply chain portal has been established and is managed by the Somerset Chamber of Commerce. It is the central hub for registering the details of local and regional businesses that are interested in participating in the project, and matching their skills to work package requirements[55].

[53] Suffolk Coastal District Council and Suffolk County Council (2017) Joint Response to EDF Energy's Stage 2 Public Consultation Process
[54] https://www.sizewellcsupplychain.co.uk
[55] https://www.hinkleysupplychain.co.uk

6.6.9 Two steering groups were established in 2015, one for site operations and another for industrial partners. The site operations group provides briefings on upcoming work packages to targeted local suppliers where it is felt that there is local capability. South West firms are usually unable to bid on work packages by themselves due to "*the scale of the project and size of the work packages*"[56], but are contributing partners in a number of supplier groups. The industrial partners group facilitates dialogue between Tier 1 suppliers and businesses registered on the portal, and is designed to help South West firms engage with the opportunities arising from Hinkley Point C. This recognises that Tier 1 suppliers will themselves have complex supply chains that may provide opportunities for local businesses. The portal provides a web link to the EDF Energy website where all Tier 1 contract announcements are published, with details of the preferred bidder and details of the contract. The portal now also provides business support to prospective local suppliers in the areas of: strategy and management; procurement and tendering; accreditation and certification; and workforce skills, to help them engage with the Hinkley Point C project.

[56] https://www.hinkleysupplychain.co.uk/the-site-operations-supplier-steering-group/

7 Appendix 7: Tourism

7.1 Baseline

7.1.1 The site for the proposed Sizewell C power station is in the Suffolk Coast & Heaths AONB, and on the Suffolk Heritage Coast. It is located beside the Sizewell Marshes Site of Special Scientific Interest (SSSI). Tourism is important to the local economy, and is more concentrated here than the national average. The visitor economy, tourism and culture form a key sector in the economic strategy for Norfolk and Suffolk.

7.1.2 The tourism offer in the local area is based on tranquility, peace and a high quality natural environment. The environment is very sensitive to external impacts, and more sensitive than the area immediately affected by the construction of Hinkley Point C (i.e. the site for the Sizewell C station is actually in an AONB).

Economic impact of Tourism Reports

7.1.3 Reports on the economic impact of tourism have been commissioned for Suffolk Coastal District, Waveney District and Suffolk Coast & Heaths AONB. These reports have been produced by Destination Research, based on 2017 data[57]. They are prepared using the Cambridge Model, a long-established model for valuing the impact of tourism. The model draws on national and regional data, and takes account of local factors such as accommodation stock, occupancy rates, numbers of attractions, and the nature of the local tourism offer. The reports take account of multiplier impacts as well as the direct impacts of visitors.

7.1.4 The Suffolk Coast & Heaths AONB cuts across Suffolk Coastal and Waveney Districts, so the economic impact of tourism in this area is not additional to the two districts and should not be double-counted.

7.1.5 Business tourism forms part of the market that is analysed within the economic impact of tourism reports.

[57] Destination Research (2017) Economic Impact of Tourism: Suffolk Coast & Heaths AONB
Destination Research (2017) Economic Impact of Tourism: Suffolk Coastal
Destination Research (2017) Economic Impact of Tourism: Waveney

Figure 7.1: The Economic Impact of Tourism

	Suffolk Coastal (2017)	Waveney (2017)	AONB (2017)
Number of trips (day and staying)	6.4 million	5.7 million	4.2 million
Total visitor spend	£260 million	£233 million	£164 million
Total tourism value (including indirect and induced spend)	£326 million	£315 million	£211 million
Total employment supported	6,200	7,400	4,700

N.b. The AONB cuts across the two districts, so data should not be double-counted
Source: Destination Research (2017) Economic Impact of Tourism: Suffolk Coast & Heaths AONB; Destination Research (2017) Economic Impact of Tourism: Suffolk Coastal; Destination Research (2017) Economic Impact of Tourism: Waveney

ONS Data on Employment in Tourism

7.1.6 A definition of tourism has been produced by the ONS, based on Standard Industrial Classification (SIC) codes. This approach to defining the sector is different to that used by Destination Research. Using this ONS definition, data from the ONS Business Register and Employment Survey (BRES) for 2016 suggests that there are 6,000 people employed in tourism in Suffolk Coastal District, 6,000 employed in Waveney District, and 35,000 employed in the County of Suffolk. Although not exactly the same as the figures produced by Destination Research, these figures are a similar scale of magnitude. The concentration of employment in tourism is greater in the local economy than it is nationally.

EDF Energy Assessment of Baseline

7.1.7 According to the Stage 2 Consultation document, para 5.3.20, (p.43), there are 30,000 jobs supported by tourism in Suffolk in accommodation, food and drink, recreation, leisure and culture – similar to the figure shown in paragraph 7.1.6. 10% of this is in the Suffolk Coast & Heaths AONB. The tourism sector supports 10 to 12% of all jobs in Suffolk.

7.1.8 There is potential spare capacity in the tourism accommodation stock (Stage 2 Consultation, para 5.9.11 p.58).

7.2 Impacts

EDF Energy Assessment of Impacts

7.2.1 EDF Energy has not yet attempted to quantify the impact of the proposed development on the tourism sector. A working group has been set up with the local authorities, Suffolk Coast DMO, Visit Suffolk, Visit East Anglia, the Suffolk Coat & Heaths AONB and NALEP to consider how the tourism economy may be affected by the development, and how opportunities could be harnessed (Stage 2 Consultation document, para 5.5.13, p.49). Areas of impact could include:

- Accommodation supply
- Image of the area
- Perception and brand

- Impacts of traffic congestion

7.2.2 360 workers at peak are expected to seek accommodation in the tourist sector. The largest concentration (c.280) will be in Leiston, Aldeburgh and Saxmundham (Stage 2 Consultation, Table 5.8, p.63). The use of tourist accommodation by non-home-based workers will generate a positive impact; but there is also the risk of displacement of tourist visitors. It is stated that, "*EDF Energy does not want to take scarce accommodation and, therefore, impact the tourist industry*." (Stage 2 Consultation, para 5.10.4, p.60).

7.2.3 A significant amount of tourist accommodation would not be affordable to Sizewell C workers (para 5.9.13, p.58). EDF Energy has suggested that workers' allowance for food and accommodation will be around £35 per night, so they will not be able to afford more expensive accommodation. The use of caravans by workers has been suggested. This may include both touring caravans and static caravans.

7.2.4 EDF Energy will commission a visitor survey (Stage 2 Consultation, para 5.5.16, p.50). More details are needed on this.

7.2.5 A visitor centre related to the Sizewell C project has been proposed by EDF Energy (Stage 2 Consultation, para 5.5.17, p.50). There is no discussion of its potential local economic impact.

Local Stakeholders' Assessment of Impacts

7.2.6 It is recognised that accommodation providers will experience positive benefits from increased occupancy and less seasonality of visitors. However, it has been suggested that some accommodation providers welcome the idea of workers and visitors related to the construction project, but others are less keen as these visitors will spend less than leisure visitors. Attraction and destination operators are less positive about the project as increased accommodation occupancy by project-related visitors, along with potential negative impacts such as road congestion, are likely to mean fewer visitors to attractions and destinations throughout the construction period.

7.2.7 Local stakeholders are concerned about impacts on the external perception of the local tourism offer, which as discussed above stands for tranquility, peace and a high quality natural environment. Increased road congestion due to traffic related to the project could have an adverse impact on the ability and willingness of visitors to come to the local area. It is expected that the negative impacts on the tourism sector will be concentrated in proximity to the site, whereas the positive impacts will be more widely spread.

7.2.8 There are also concerns about the loss of repeat visitors to the local area. Many of the visitors to the Suffolk Coast return each year, and there are concerns that if they are temporarily displaced from the local area then they may not return in the longer-term.

RSPB Assessment of Impacts

7.2.9 The RSPB has prepared a report on the potential impact of Sizewell C on visitors to its nature reserve at Minsmere and the local economy[58]. This report states that a survey commissioned by

[58] RSPB (2017)Potential Economic Impacts on Reduced Visits on Minsmere and the Local Economy

EDF Energy suggests that visitor numbers to the Minsmere nature reserve will decline by 29% during construction.

7.2.10 Assuming a loss of 29% of income to the RSPB at Minsmere, this could mean a loss of nearly £400,000 of income per year, plus the loss of some income due to legacy donations. Reduced visits could mean the loss of 10 FTE jobs in the local area, the induced employment supported by these jobs, reduced local supply chain spend and multiplier impacts of this, and the loss of around £2 million of wider spending in the local area by visitors to Minsmere, with a consequent loss of 46 FTE jobs in the wider local economy.

Monitoring of Impact at Hinkley Point C

7.2.11 A dashboard report was produced for the Socio Economic Advisory Group in March 2018. This stated that "*overall, the Hinkley Tourism Action Partnership (HTAP) continues to deliver growth and resilience to the tourism sector across Somerset and is mitigating the potential negative impacts of the project through the development and growth shown within the indicators.*"[59]. The indicators used, however, do not include direct impacts such as visitor numbers. They include: visitors recommending Somerset, growth in digital channels, and tourism business confidence.

7.2.12 A monitoring survey of tourism undertaken in Somerset[60] states that in 2015/16 there was no discernable impact on visitors as a consequence of the construction of Hinkley Point C. Traffic congestion was mentioned as an issue by a small number of respondents.

7.3 Net Additional Local Impact

7.3.1 The **Gross Direct Impact** on the tourism sector comprises both positive and negative impacts. Positive impacts will be on the occupancy of tourism accommodation, particularly outside the peak season. Negative impacts will be on visitor numbers to the local area.

7.3.2 **Leakage** of impact is likely to be minimal, as tourism supply chains are likely to be quite local in nature.

7.3.3 There could be a **displacement** effect associated with the uptake of tourism accommodation by non-home-based workers on the project. Tourism visitors to the local area may be displaced elsewhere, potentially elsewhere in Suffolk, or further afield.

7.3.4 There will be a **multiplier** effect of the impact on the tourism sector, as discussed in the work undertaken by Destination Research and the RSPB. Supply chains for the tourism sector are likely to be quite local in nature, so any positive impact on the tourism sector will have a positive local multiplier impact, and any negative impact on the sector is likely to have a negative local multiplier impact.

7.3.5 There is unlikely to be a **deadweight** effect of the impact on tourism.

[59] Community Safety SEAG Dashboard: Tourism, March 2018
[60] Qa Research (2016) Somerset Tourism Monitoring Surveys: Findings from visitor research between July 2015 and August 2016

7.4 Mitigation

Existing Strategies

7.4.1 A tourism strategy for East Suffolk has been prepared for the period to 2022[61]. It claims that tourism in East Suffolk accounts for £590 million and 13% of all employment in the area. The strategy states that East Suffolk has a diverse range of tourism experiences, including beaches, family attractions, landscapes, culture and heritage. Actions set out include: development of the key tourism assets; improving the visitor experience; ensuring that the infrastructure is in place to develop the tourism sector; excellent destination marketing; and working with partners.

7.4.2 A Suffolk Coast Tourism Strategy was prepared for the period 2013 to 2023[62]. This talks about the sensitivity of the Suffolk Coast environment and the risk of damage to it detracting from the tourism offer. The main attractors of the Suffolk Coast are: peace and tranquility, the quality of the scenery and landscape and general ambience (p.3). The juxtaposition of the existing Sizewell nuclear power stations with the surrounding landscape is noted.

7.4.3 Bedspace occupancy in tourist accommodation ranges from 40% to 58% over the course of a year, but the report does not set out how this varies and the level during the peak period.

7.4.4 The development of Sizewell C is noted as a challenge for the local tourism sector. The potential for a visitor centre as part of the Sizewell C development is noted, and scope for turning this into a significant visitor draw is discussed.

7.4.5 A number of actions are set out in the strategy to develop tourism in the Suffolk Coast area.

7.4.6 The importance of tourism to the county's economy is highlighted in the Suffolk Growth Strategy[63].

EDF Energy Proposals for Mitigation

7.4.7 On-site dedicated worker accommodation will be provided to minimise the impact on the local accommodation stock. Note that this has not delivered in advance of significant amounts of workers on-site at Hinkley Point C, so workers are having to use other forms of accommodation, including tourist accommodation.

Visitor Centre

7.4.8 EDF Energy has proposed the delivery of a visitor centre, although there are not yet any plans in place for this. More information is needed on this, including whether it will operate during the construction phase.

7.4.9 Some local stakeholders in the tourism sector are sceptical about the value of a visitor centre associated with the construction of Sizewell C, and believe that it is incompatible with the nature of tourism in the local area. However, the Suffolk Coast Tourism Strategy (discussed above at paragraph 7.4.4) sets out a role for a visitor centre related to Sizewell C.

[61] Suffolk Coastal and Waveney District Councils (2017) East Suffolk Tourism Strategy 2017 to 2022
[62] URS for Suffolk Coast & Heaths AONB and the Suffolk Coast DMO (2013) The Suffolk Coast Tourism Strategy 2013 to 2023
[63] Suffolk County and District Councils (no date) Suffolk Growth Strategy

Mitigation at Hinkley Point C

7.4.10 Mitigation for tourism impact was agreed in the planning permission for the preliminary works rather than the main DCO. A contribution of £800,000 from EDF Energy will be paid in instalments to West Somerset Council for a Tourism Action Partnership. The money will support its strategy, marketing and promotional Initiatives. The contribution includes funding for a tourism monitoring survey; support for Tourist Information Centres and an information centre for the project; and a tourism officer or officers to be employed by West Somerset and/or Sedgemoor Council.

7.4.11 EDF Energy's economic strategy for Hinkley Point C[64] sets out the case for a positive impact on the tourism sector from the uptake of accommodation by non-home-based workers. In addition, the delivery of a Public Information Centre (PIC) is seen as a positive addition to the local tourism offer.

7.4.12 As a consequence of the planning permission to undertake preliminary works on the site, the Hinkley Tourism Action Partnership (HTAP) was established, comprising the local authorities, local tourism bodies and EDF Energy[65]. This was tasked with "*developing successful management plans and making recommendations to local authority councils for spending tourism allocations available*." (p.2).

7.4.13 The three principle aims of the strategy are to *improve visitor experiences, attract and retain customers and increase industry resilience*. Nine priorities are set out, to meet these principles. These are:

- Fostering positive perception and awareness
- Creating a welcoming and informed travel experience
- Monitoring impacts on visitors and businesses
- Evolving new products for changing customer needs
- Capitalising on digital trends and partnerships
- Evidence based, targeted marketing campaigns
- Building long term capacity of industry
- Encouraging higher value sustainable growth
- Supporting local distinctiveness and action

[64] EDF Energy (2011) Hinkley Point C Development Consent Order Application: Economic Strategy
[65] Hinkley Tourism Action Partnership (2015) Hinkley Tourism Strategy 2015-2020

8 Appendix 8: Impact of Cumulative Projects

8.1 Cumulative Projects

Offshore Wind Farms

8.1.1 Scottish Power is developing or proposing to develop three windfarms off the coast of Norfolk and Suffolk[66].

8.1.2 East Anglia ONE is currently under construction, at an estimated cost of £2.5 billion and creating 3,000 construction jobs. It is estimated to be fully operational by 2020.

8.1.3 The Secretary of State approved the application for East Anglia THREE in August 2017. This project will provide 2,375 Full-time Equivalent (FTE) jobs in construction if built in a single phase or 2,485 FTE jobs if built in two phases[67]. The Environmental Impact Report suggests that costs are not known but broad estimates for offshore wind farm construction is £3 billion[68].

8.1.4 East Anglia ONE North/TWO is currently in Phase 3 consultation, which is due to finish at the end of August 2018.

National Grid Interconnector

8.1.5 Interconnectors are underwater electric connections between different countries that run along the seabed. An interconnector that will land on the Suffolk coast is currently at proposal stage.

Bradwell B Nuclear Power Station

8.1.6 This is a new nuclear build proposed by EDF Energy and China General Nuclear (CGN). It will be located at Bradwell in Essex, where there is currently ongoing site investigation and assessment[69].

King's Lynn B CCGT Power Station

8.1.7 This is a proposal for a Combined Cycle Gas Turbine (CCGT) power station located in North Norfolk beside an existing gas fired power station[70]. An application has been submitted to change the original planning permission granted in 2009, as the company wants to install a plant that is capable of producing more electricity.

8.1.8 Construction will take approximately 40 months and the plant could be operational by 2022

Upper Orwell River Crossings

8.1.9 A bridge is planned in Ipswich and another one in Lowestoft, which has had funding of £151 million approved. Construction work is scheduled to begin in 2020 and finish in 2023.

[66] *https://www.scottishpowerrenewables.com/pages/east_anglia_projects.aspx*
[67] Peter Brett Associates (2015) East Anglia THREE Environmental Statement Chapter 28
[68] Royal Haskoning DHV (2012) East Anglia THREE Offshore Windfarm Scoping Report
[69] https://bradwellb.co.uk
[70] https://www.kingslynnbccgt.co.uk

Adastral Park Housing Development

8.1.10 This is a proposed urban extension of up to 2,000 dwellings at Martlesham, Ipswich [71]. Development costs of £125 million suggest 250 FTE construction jobs, with a peak of no more than 75 worker on-site at any one time due to the phasing of the project.

Progress Power Gas-fired Station

8.1.11 This is a gas-fired *peaking* power station with consent for construction at Eye in Suffolk. It is anticipated that construction will begin in 2019 and last approximately two years, but this is subject to securing a Capacity Market contract. According to the report, *"up to 127 construction workers would be required at Project Site during peak periods*'[72].

[71] Carlyle Land LTD and CEG (2017) Land South and East of Adastral Park: Environmental Statement
[72] Parsons Brinckerhoff (2014) The Progress Power (Gas Fired Power Station) Order

9 Appendix 9: Local Economic Impact Scenarios

9.1 Gross Direct Impact Areas

9.1.1 Four main areas of local economic impact have been identified for analysis:

- Home-based employment
- Non-home-based employment
- Supply chain spend
- Tourism

9.2 Additionality

9.2.1 The gross direct impact of an intervention, however, does not measure the full impact on a local economy. To calculate the net additional local impact (i.e. a more accurate assessment of the local economic impact) best-practice guidance suggests that a number of factors need to be taken into account:

- **Leakage**: the loss of benefit to the local area (i.e. East Suffolk, Suffolk) e.g. if home-based employees come from outside the local area
- **Displacement**: positive impacts in the local area may lead directly to reduced benefits elsewhere in the local economy e.g. home-based workers employed on the project may leave jobs with local employers, who then have difficulty back-filling those jobs; or non-home-based workers' use of tourist accommodation may mean that tourists cannot use it
- **Multiplier effect**: economic impacts generated by additional local income e.g. additional local spending because of home-based employment and supply chain spend may help to support further jobs in the local economy
- **Deadweight**: what would happen if the project did not go ahead. In this case there is no alternative development proposed, so this is not considered further

9.3 Possible Variations Considered

9.3.1 The calculation of gross direct impact and net additional local impact help to identify a number of elements which may vary for each area, and which therefore may affect the local economic impact.

9.3.2 There is limited data available to inform the calculation of gross direct impacts, so a number of assumptions will need to be made to inform the calculation of these effects.

Figure 9.1: Home-based employment

	Possible variation
Gross direct impact	Home-based employment could be lower than planned if there are difficulties recruiting home-based workers
	Value of home-based employment could be greater if investment in training and skills means that home-based workers can obtain higher quality jobs
	Long-term impact could be greater if skilled/experienced home-based workers are able to access better quality jobs after the construction is completed
Leakage	More or fewer of the home-based workers might be recruited from the within/outside the local area (East Suffolk and Suffolk)
Displacement	Home-based workers might be displaced from local businesses. Different levels of displacement and different businesses/sectors affected can be tested
Multiplier effect	No variation likely

Figure 9.2: Non-home-based employment

	Possible variation
Gross direct impact	Less home-based employment (discussed above) will mean the need for more non-home-based employment
Leakage	No variation likely
Displacement	Potential to displace tourists from tourist accommodation
	Potentially less displacement impact if more campus accommodation is provided
	Potentially more displacement if less campus accommodation is provided
Multiplier effect	Greater multiplier effect if local businesses are able to engage in catering/accommodation supply chain
	Less multiplier effect if fewer local businesses are able to engage in catering/accommodation supply chain

Figure 9.3: Supply chain

	Possible variation
	More local supply chain spend

	Possible variation
Gross direct impact	More innovation in local businesses leads to long-term impact on wages and GVA
	Less local supply chain spend
	More inward investment by supply chain businesses
Leakage	No variation likely
Displacement	No variation likely
Multiplier effect	No variation likely

Figure 9.4: Tourism

	Possible variation
Gross direct impact	More or less impact on the accommodation sector depending on the uptake of tourist accommodation by workers (already mentioned above)
	More or less reduction in visitor numbers
	Negative perception of the local area leads to a long-term decline in visitor numbers, after the construction project has finished
Leakage	No variation likely
Displacement	No variation likely
Multiplier effect	No variation likely

9.4 Scenarios Modelled

Scenario 1: Baseline/EDFE Proposition

9.4.1 The model inputs for this scenario are:

- 5,600 workers on-site at the construction peak
- 2,000 of these are home-based workers at peak
- 500 home-based workers on associated development sites
- 2,000 non-home-based workers in accommodation campus at peak
- 570 non-home-based workers in tourist accommodation at peak
- £150 million of local supply chain spend
- 1% loss in total visitor numbers

Figure 9.5: Impacts of Scenario 1 on the County of Suffolk

	Baseline (Gross Direct Impact)	Baseline (Net Additional Local Impact in Suffolk)
Main site home-based employment	13,000 worker-years £500 million of wages £1.3 billion of GVA	7,000 worker-years £200 million of wages £700 million of GVA
Associated developments' home-based employment	2,500 worker-years £60 million wages £140 million GVA	2,500 worker-years £60 million wages £140 million GVA
Non-home-based employment	£30 million p.a. at peak £160 million total during construction	£30 million p.a. at peak £160 million total during construction
Supply chain	£150 million	£73 million
Tourism	+£1 million spend on tourist accommodation p.a. at peak -£6 million loss of visitor spend p.a. at peak	+£1 million spend on tourist accommodation p.a. at peak -£6 million loss of visitor spend p.a. at peak

Scenario 2: More Positive Scenario

9.4.2 The model inputs for this scenario are:

- 5,600 workers on-site at the construction peak (unchanged from scenario 1)
- 2,000 of these are home-based workers at peak (unchanged from scenario 1)
- 500 home-based workers on associated development sites (unchanged from scenario 1)
- 20% increase in local supply chain spend
- 50% decrease in use of tourist accommodation
- 50% decrease in visitor displacement

Figure 9.6: Impacts of Scenario 2 on the County of Suffolk

	Scenario 2 (Gross Direct Impacts)	Scenario 2 (Net Additional Local Impact)
Main site home-based employment	13,000 worker-years £500 million of wages £1.3 billion of GVA	7,000 worker-years £200 million of wages £700 million of GVA
Associated developments' home-based employment	2,500 worker-years £60 million wages £140 million GVA	2,500 worker-years £60 million wages £140 million GVA
Non-home-based employment	£30 million p.a. at peak £160 million total during construction	£30 million p.a. at peak £160 million total during construction
Supply chain	£180 million	£88 million
Tourism	+£1 million tourist accommodation at peak -£3 million from loss of visitors at peak	+£1 million tourist accommodation at peak -£3 million from loss of visitors at peak

Scenario 3: More Negative Scenario

9.4.3 The model inputs for this scenario are:

- 50% reduction in home-based workers
- 75% fewer workers living in Suffolk
- 50% increase in displacement of local workers
- 500 home-based workers on associated development sites (unchanged from scenario 1)
- 50% reduced in supply chain spend
- 500% decrease in visitor numbers

Figure 9.7: Impacts of Scenario 3 on the County of Suffolk

	Scenario 3 (Gross Direct Impacts)	Scenario 3 (Net Additional Local Impact)
Main site home-based employment	6,000 worker-years £200 million of wages £600 million of GVA	3,000 worker-years £100 million of wages £300 million of GVA
Associated developments' home-based employment	2,500 worker-years £60 million wages £140 million GVA	2,500 worker-years £60 million wages £140 million GVA
Non-home-based employment	£40 million p.a. at peak £220 million total during construction	£20 million p.a. at peak £140 million total during construction
Supply chain	£75 million	£37 million
Tourism	+£1 million tourist accommodation at peak -£12 million from loss of visitors at peak	+£1 million tourist accommodation at peak -£30 million from loss of visitors at peak

Scenario 4: Cumulative Impact of Several Major Projects in Suffolk

9.4.4 The model inputs for this scenario are:

- 50% fewer home-based employees
- 75% fewer home-based workers living in Suffolk
- 500 home-based workers on associated development sites (unchanged from scenario 1)
- 50% increase in local labour displacement
- 50% decrease in local supply chain spend
- 5% loss in total visitor numbers

Figure 9.8: Impacts of Scenario 4 on the County of Suffolk

	Scenario 4 (Gross Direct Impacts)	Scenario 4 (Net Additional Local Impact)
Main site home-based employment	6,000 worker-years £200 million of wages £600 million of GVA	3,000 worker-years £100 million of wages £300 million of GVA
Associated developments' home-based employment	2,500 worker-years £60 million wages £140 million GVA	2,500 worker-years £60 million wages £140 million GVA
Non-home-based employment	£40 million p.a. at peak £220 million total during construction	£40 million p.a. at peak £220 million total during construction
Supply chain	£75 million	£37 million
Tourism	+£1 million spend on tourist accommodation p.a. at peak -£6 million loss of visitor spend p.a. at peak	+£1 million spend on tourist accommodation p.a. at peak -£30 million loss of visitor spend p.a. at peak

Scenario 5: Impact of Brexit on Labour Availability

9.4.5 The model inputs for this scenario are:

- 50% fewer home-based employees
- 75% fewer home-based workers living in Suffolk
- 50% increase in local labour displacement
- 500 home-based workers on associated development sites (unchanged from scenario 1)
- £150 million of local supply chain spend (unchanged from scenario 1)
- 1% loss in total visitor numbers (unchanged from scenario 1)

Figure 9.9: Impacts of Scenario 5 on the County of Suffolk

	Scenario 5 (Gross Direct Impacts)	Scenario 5 (Net Additional Local Impact)
Main site home-based employment	6,000 worker-years £200 million of wages £600 million of GVA	3,000 worker-years £100 million of wages £300 million of GVA
Associated developments' home-based employment	2,500 worker-years £60 million wages £140 million GVA	2,500 worker-years £60 million wages £140 million GVA
Non-home-based employment	£40 million p.a. at peak £220 million total during construction	£40 million p.a. at peak £220 million total during construction
Supply chain	£150 million	£73 million
Tourism	+£1 million spend on tourist accommodation p.a. at peak -£6 million loss of visitor spend p.a. at peak	+£1 million spend on tourist accommodation p.a. at peak -£6 million loss of visitor spend p.a. at peak