EAST SUFFOLK COUNCIL AND SUFFOLK COUNTY COUNCIL JOINT LOCAL IMPACT REPORT Sizewell C Nuclear Power Station

Planning Inspectorate's Reference: EN010012

East Suffolk Council URN: 20026200

Suffolk County Council URN: 20026012

May 2021

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Explanatory note:

Both Suffolk County Council and East Suffolk Council have an interest in all matters in this report. They have prepared this as a joint Local Impact Report (LIR) to assist the Examining Authority (ExA) and to avoid repetition. The Councils have divided the responsibility for leading responses to the ExA and in respect of each topic have indicated which is the lead authority. The Councils have sought to keep the issues where both wish to respond in detail to a minimum, but this has not been possible in every case not least because on a small minority of issues there is not a shared position. The Councils request that during hearings at the Examination stage, in accordance with the indicated lead authority, the ExA asks first the respective lead authority for its comments. This is to ensure the Councils are able to respond in the appropriate manner.

Glossary of Acronyms

AIL	Abnormal Indivisible Loads	LIR	Local Impact Report
AONB	Suffolk Coast and Heaths Area of Outstanding Natural Beauty	LOAEL	Lowest Observed Adverse Effect Level
AQMA	Air Quality Management Area	LVIA	Landscape and Visual Impact Assessment
ASB	Anti-Social behaviour	MAD	Major Accidents/Disasters Assessment
BLF	Beach Landing Facility	MTF	Marine Technical Forum
CDO	Combined Discharge Outfall	MUGA	Multi-use Games Area
CoCP	Code of Construction Practice	NALEP	New Anglia Local Enterprise Partnership
CPMMP	Coastal Process Monitoring and Mitigation Plan	NO^2	Nitrogen Dioxide
CSP	ESC and SCC's Community Safety Partnerships	NOx	Nitrogen Oxides
CWS	County Wildlife Site	NPPF	National Planning Policy Framework
DCO	Development Consent Order	NPPG	National Planning Policy Guidance
DMO	Suffolk Coast Destination Management Organisation	NPS	National Policy Statement
EIA	Environmental Impact Assessment	NRMM	Non-Road Mobile Machinery
EN-1	National Policy Statement for Energy	NSIP	Nationally Significant Infrastructure Projects
EN-6	National Policy Statement for Nuclear Power Generation	OSC	Operation and Service Centre
ES	Environmental Statement	PINS	Planning Inspectorate
ESC	East Suffolk Council	PRoW	Public Rights of Way
ExA	Examining Authority	RAMS	Recreational Disturbance Avoidance and Mitigation Strategy
FMF	Freight Management Facility	REPPIR	Radiation Emergency Preparedness and Public Information Regulations 2019
FRA	Flood Risk Assessment	RSPB	Royal Society for the Protection of Birds
FRR	Fish Recovery and Return	SAC	Special Area of Conservation
HCDF	Hard Coastal Defence Feature	SCC	Suffolk County Council
HGVs	Heavy Goods Vehicles	SCDF	Soft Coastal Defence Feature
HRA	Habitats Regulations Assessment	SCLP	Suffolk Coastal Local Plan
HWRC	Household Waste and Recycling Centre	SMP	Shoreline Management Plan
IEF	Important Ecological Feature	SOAEL	Significant Observed Adverse Effect Level
LEEIE	Land East of Eastlands Industrial Estate	SSSI	Site of Special Scientific Importance
LEMP	Landscape and Ecological Management Plan	WMZ	Water Management Zone
LGVs	Light Goods Vehicles	WSI	Written Scheme of Investigation

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Overview

1. Terms of reference

Introduction

1.1. NNB Generation Company (SZC) Limited, a subsidiary of EDF Energy, has submitted an application for a Development Consent Order (DCO) for a new nuclear power plant at Sizewell, to be known as Sizewell C. Throughout this report, NNB Generation Company (SZC) is referred to as "the Applicant".

1.2. This report constitutes the LIR of East Suffolk Council (ESC) and Suffolk County Council (SCC), referred to jointly as "the Councils".

1.3. On 1 April 2019 ESC was created by parliamentary order, with an administrative area covering that of the former Suffolk Coastal and Waveney District Councils.

1.4. SCC is the upper-tier local authority for the county of Suffolk as a whole, and has a variety of statutory responsibilities to provide services and discharge regulatory functions, which together affect a great many aspects of the built, natural, and social environments. These functions include acting as local highway authority, traffic authority, transport authority, waste planning authority, waste regulation authority, minerals planning authority, county planning authority, lead local flood authority, fire authority (including public safety), public health authority, education authority, and social services authority. SCC also holds responsibility for maintaining the Definitive Map and the Historic Environment Record.

1.5. The Sizewell C proposal and Associated Developments are predominantly hosted within the administrative boundary of ESC with minor highway works within Mid Suffolk District Council, and a fen meadow compensation site at Pakenham within West Suffolk Council. Both Mid Suffolk District Council and West Suffolk Council have been consulted on the content within this LIR related to their administrative area. Rather than being full parties to this LIR, they are able to submit their own Written Representations if they wish to. Impacts may also occur within the neighbouring Ipswich Borough Council administrative boundary; that council is not party to this report.

1.6. In preparing this LIR, the Councils have had regard to the purpose of LIRs as set out in s60(3) of the Planning Act 2008 (as amended); Ministry for Housing Communities and Local Government guidance for the examination of applications for development consent and the Planning Inspectorate's (PINS) Advice Note One: Local Impact Reports.

1.7. The Councils have considerable experience of the Nationally Significant Infrastructure Project (NSIP) planning regime. The Councils are host authorities for the consented East Anglia One, East Anglia Three, and Galloper windfarms, the proposed East Anglia One North and East Anglia Two Windfarms which are currently undergoing Examination, and the consented Lake Lothing Third Crossing (for which SCC was also the promoter). SCC has also been host to, or is proposed to be host to, other NSIPs in the County: the Ipswich Chord Rail; Bramford to Twinstead Overhead Power Line proposals; Progress Power Gas Power Station; and the Sunnica Solar Farm proposal.

1.8. A summary of relevant experience of key Council officers involved in writing this LIR is included in **ANNEX A**.

Purpose and structure of this report

1.9. The main content of this report is a description of the onshore (and offshore insofar as they relate to onshore responsibilities) impacts of the proposed development on the administrative areas of the Councils, as well as those of the neighbouring/lower tier Councils (Ipswich Borough and Mid Suffolk District, and West Suffolk Council for the recent fen meadow compensation site). Specifically, it describes the impact of the Works listed in the draft DCO (June 2020 version), and the Change submission (January 2021). The following description of the proposed NSIP is taken from the non-technical description in the DCO application form:

1.10. The proposed Sizewell C nuclear power station would comprise two United Kingdom European Pressurised Reactor (UK EPR™) units with an expected net electrical output of approximately 1,670 MW per unit, giving a total site capacity of approximately 3,340MW. The Sizewell C Project comprises other permanent and temporary development to support the construction, operation and maintenance of Sizewell C. The key elements are the Main Development Site, comprising the Sizewell C nuclear power station itself, offshore works, land used temporarily to support construction including an accommodation campus, the enhancement of sports facilities in Leiston, fen meadow and marsh harrier compensation land, and a series of off-site Associated Development sites in the local area.

1.11. The Associated Development sites are:

i. Two temporary park and ride sites; one to the north-west of Sizewell C on the A12 at Darsham (the 'northern park and ride'), and one to the south-west on the A12 at Wickham Market (the 'southern park and ride');

ii. A permanent road to bypass the A12 through Stratford St Andrew and Farnham (referred to as the 'two village bypass');

iii. A permanent road linking the A12 to the Sizewell C Main Development Site (referred to as the 'Sizewell link road');

iv. Permanent highway improvements at Yoxford and other road junctions;

v. A temporary freight management facility on land to the south-east of the A12/A14 Seven Hills junction; and

vi. A temporary extension of the existing Saxmundham to Leiston branch line into the Main Development Site the ('green rail route') and other permanent rail improvements on the Saxmundham to Leiston branch line.

1.12. This report does not describe the proposed development itself, relying on the Applicant's detailed description of the development as set out in the DCO application documents. In the Changes submission (accepted by the ExA in the Procedural Decisions made on 21 April 2021) the Applicant confirmed that the description of the development itself was unchanged (albeit that some elements would be achieved in a different way or would incorporate additional land).

1.13. This report provides a description of the area in and around the onshore Order Limits of the draft DCO to contextualise expected impacts.

1.14. This report also comments on the mitigation measures proposed by the Applicant, and as and where appropriate, sets out proposals by the Councils for alternative or additional measures to reduce the impact of the scheme.

1.15. Section 60 (3) of the 2008 Planning Act defines the purpose of Local Impact Reports as: "a report in writing giving details of the likely impact of the proposed development on the authority's area."

1.16. This report describes these impacts under headings by topic. Under each heading the key issues for the Councils and the local community are identified, and commentary is provided on the extent to which the Applicant addresses these issues by reference to the application documentation, including the DCO articles, requirements and obligations, as relevant. The Contents page, and each topic heading in the LIR, identify which Council is leading on each of these topic areas. During hearings at the Examination stage, the ExA is requested to first allow the lead authority on the particular topic to provide its comments. The other Council may wish to provide additional comments afterwards. If both Councils are referred to, this indicate that both Councils have an equal interest in this matter, however it is requested that the views of the Council mentioned first would be sought first when responding.

1.17. For each topic area, this report sets out:

i. National and local policy context;
ii. The positive, neutral and negative impacts of the development during the construction phase, as anticipated by the Councils;
iii. The positive, neutral and negative impacts of the development during the operational phase, as anticipated by the Councils;
iv. The suitability of the measures proposed by the Applicant to avoid, reduce, mitigate or compensate the identified impacts;
v. Where applicable, proposals by the Councils for alternative or additional measures to better address the identified impacts;
vi. The need for obligations and requirements.

1.18. Each topic area includes commentary on the Main Development Site and the Associated Development sites, which are then summarised in tables for each Associated Development site across all topic areas in sections 34 and 35.

1.19. As set out above, this is a joint report by the Councils, and generally reflects the assessment and views of both Councils. If there is a divergence in specific topic areas, the report clearly sets out the views of each Council on these topic areas. If this is not specified, it can be assumed that both Councils agree.

Sizewell B Relocated Facilities

1.20. In April 2019, a planning application, DC/19/1637/FUL, to relocate facilities at the Sizewell B operating station was submitted to ESC on behalf of EDF Energy Nuclear Generation Ltd. The application was approved by ESC in November 2019. A judicial review challenge to the grant of planning permission was brought on the grounds that the Council had unlawfully failed to consider the need for, and alternatives to, the proposed development when considering whether there were exceptional circumstances to justify major development in the AONB. It was also alleged that the Council had failed to reach a lawful conclusion that the environmental information was 'up to date', contrary to Regulation 26 Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/571).

1.21. A judicial review was heard in the High Court in October 2020. The Claimant's challenge was dismissed and a subsequent application for permission to appeal that decision was rejected by the Court of Appeal in November 2020. As such, the permission remains extant and works commenced on site at the end of 2020 in accordance with that consent.

1.22. A revised planning application, DC/20/4646/FUL, was submitted in November 2020 and heard by ESC's Strategic Planning Committee on 20 January 2021. Minor changes to the layout from the originally consented scheme were incorporated and, in addition, parking was no longer suggested for Pillbox Field. This was because the layout had been revised following the recent availability of a piece of land at the former Sizewell A station site that could be used for a laydown area. This enabled the layout to be revised and the outage car parking provided for on the existing western car park of the B station.

1.23. The works proposed in relocating facilities include a new visitor centre to be used jointly with the Sizewell C station, this element of the scheme was subject to outline consent. The reserved matter details have not yet been received by ESC. Following signing and sealing of a section 106 legal agreement, the decision for the revised proposal was issued on 18 February 2021. The decision notice and the section 106 agreement are contained at **ANNEX B.**

1.24. The proposals to relocate facilities at the B station are duplicated within this application. The specific impacts identified in relation to these proposals have been considered as part of the approved planning permission; the Planning Committee report is contained at **ANNEX B.** Consent was granted for these works under the Town and Country Planning Act 1990 (as amended); therefore, it is not considered necessary to provide any further commentary in this LIR.

1.25. The Councils expect that any obligations and conditions agreed through the planning consent will be replicated in the DCO obligations and requirements.

2. Description of the area

Natural and Built Environment

2.1. The natural environment of the area around the proposed development has unique characteristics which draw from the combination of the landscape, geology, ecology and the historic context. These are important at local, national and international levels and it is this complex interlocking background which sets the scene for one of the key issues upon which the Councils will consider the impact of the development on the area.

2.2. The entire coastline and its hinterland in the area of the development is covered by the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB). The Main Development Site area straddles the AONB boundary which separates the accommodation campus element which would sit outside of the AONB, but adjacent to the boundary. The AONB designation runs from Kessingland near Lowestoft to the River Stour in the south (its

southern extent was extended in 2020) and its Management Plan (**APPENDIX 1:** 1) describes the character as:

> *"a product of the underlying geology and its associated natural habitats. It is shaped by the effects of the sea and the interaction with people on the landscape. It is a gently rolling landscape, with the estuaries a common and dominant feature. Where the land does rise, commanding views across the landscape are rewarding.*
>
> *Farmland dominates much of the AONB, interspersed with picturesque villages and the occasional small seaside town. There are forestry plantations, low lying freshwater marshes and extensive tracts of heathland. The coastal fringe is dominated by estuaries, grazing marshes and lowland heath." (Section 1.4).*

2.3. In addition to the AONB, the coast is defined by Natural England as Heritage Coast. Heritage Coasts are established to conserve the best stretches of undeveloped coast in England. The Heritage Coast designation does not extend inland to the same extent as the AONB.

2.4. What sets this AONB apart from many others is the degree to which it overlaps with designated ecological settings. These are shown on Figures 8.2.1 – 8.2.3 of the Applicant's outline Landscape and Ecology Management Plan [APP-588]. They show that, in terms of international designations, there are a series of internationally protected Special Protection Areas and Special Areas of Conservation, some or both of which are also Ramsar sites. Extending beyond these is the national designation of Sites of Special Scientific Interest. Finally, there is a set of designated County Wildlife Sites which identify areas of ecological importance. In total much of the surrounding area, especially along the coast, is covered by areas of ecological importance. On the coast the designations cover the mud flats and creeks of the area's salt marsh fringed estuaries as well as the beaches. The hinterland is also noted as containing some of England's few remaining areas of open heathland, known locally as Sandlings.

2.5. The Sizewell area has two long distance paths, the Suffolk Coast Path, now the proposed route of the England Coast Path and the Sandlings Walk along with a network of other rights of way, permissive paths and open access land.

2.6. Both along the coast and inland, the density of population is low with considerable stretches of arable farmland, interspersed with other characteristics including sandlings, forest and dunes. The pattern of settlements in the wider rural area reflects a series of historic communities. In general, the urban areas are relatively small, and most settlements have a core which is often characterised by a series of listed buildings and Conservation Areas. Leiston does displays a different urban form following its significant expansion in the 19th century around the Garrett Ironworks though even here there is an important

heritage to be considered and the scale of the town still remains modest (population of 5,500 in the 2011 Census).

2.7. As one of the driest parts of the country, water resources need to be carefully managed through partnership with water companies, the Environment Agency, landowners and local authorities.

2.8. The special characteristics of the proposed development site set out above, most notably its AONB status, makes the site markedly different and more challenging/sensitive than the Hinkley Point C site. Consideration of these characteristics will be essential when reviewing the Sizewell C proposals. In particular the Councils consider that avoidance, minimisation, mitigation and compensation of the scheme's impacts on the AONB need to be appropriate proportionate to the specific outstanding characteristics of the Sizewell C location.

Economic background

2.9. East Suffolk District hosts several key economic assets. As well as Sizewell B nuclear power station and the ongoing decommissioning of Sizewell A, these include:

i. The Port of Felixstowe – the UK's busiest container port;
ii. Adastral Park at Martlesham – home to BT's Global Research and Development Headquarters and other associated firms;
iii. Offshore and renewable energy cluster in and around Lowestoft servicing the southern North Sea gas fields and developing offshore wind sector; and
iv. Centre for Environment, Fisheries and Aquaculture – a Department for Environment, Food and Rural Affairs agency with substantial expertise in marine sciences and technology that has recently redeveloped its site at Lowestoft.

2.10. Beyond these, located at the northern and southern ends of the district, the other characteristic of the local economy is the substantial proportion of micro- and small businesses (some of which have now grown to medium size) together with a high incidence of self-employment. These sectors are characteristic of the smaller centres closer to the Sizewell proposal.

2.11. The area also has a very substantial agricultural presence, with significant economic benefit. In addition, there are two very large outdoor events that occur in the middle of the district close to the site on an annual basis (suspended during the pandemic), with thousands of visitors - Latitude and the Aldeburgh Festival.

2.12. To the south west of the district, the county town of Ipswich is a significant administrative and service-based centre with a strong financial sector, and with its own port.

2.13. In the northern section of the district sits Lowestoft, 25.5 miles from Sizewell, this is the largest town in the district with a population of circa. 71,000 and is therefore very important to the economy of East Suffolk.

2.14. Alongside these strengths, there are several weaknesses in the local economy:

i. Major economic differences between the north of the district, especially Lowestoft, and the south. These differences are particularly seen in levels of social mobility and skills profile, lower wage levels and the needs for economic and physical regeneration.

ii. In the immediate vicinity of the development, Leiston has significant socio-economic problems such as low life expectancy, poor educational outcomes, low wage culture and a high level of worklessness.

iii. Skills and labour shortages in some sectors.

iv. Housing affordability is challenging for people who rely on local jobs, particularly for the more poorly paid and young people. This is exacerbated in some areas by high levels of second home ownership.

2.15. Tourism is an important contributor to the local economy. While both Lowestoft and Felixstowe are more typical of traditional urban resorts, the sector in the area closer to Sizewell is dependent on the natural, heritage, recreational, and cultural assets of the small resorts, coast and countryside to be found there.

Social and Demographic

2.16. East Suffolk District has an older population than the county, regional or national averages (East Suffolk has 27.5% population over 65 in 2019 compared with England 18.5%). The proportion of the population in the district over 65 is forecast to grow in the future (35.7% by 2041) and it is anticipated that the percentage of the population who are working age will decline (Source: ONS). These factors apply in both the former Suffolk Coastal and Waveney parts of the area. This issue has implications for housing requirements, workforce, service providers and infrastructure provision.

2.17. A report undertaken for the Suffolk Community Foundation in 2020, Hidden Needs in Suffolk, found that overall Suffolk is not one of the England's most deprived local authorities (amongst 40% least deprived), but that compared to England as a whole, the county is not particularly advantaged. Analysis of trends from 2007 to 2019 show that

Suffolk is becoming less advantaged and more deprived. There has been increasing and persistent deprivation in Suffolk's most deprived neighbourhoods and in places where a smaller proportion of the population experienced deprivation, that proportion has increased.

2.18. While East Suffolk does include some of the most prosperous wards in the county, it also has a number of the most disadvantaged. These are concentrated in Lowestoft and to a lesser extent at Felixstowe. In addition, Ipswich has a significant number of neighbourhoods with deprivation and 14% of its wards are within England's most deprived 10%. It should also be noted that even within the more prosperous wards, pockets of deprivation can be "lost" among broader averages.

2.19. Suffolk generally has lower average pay than the national picture. In 2019 the gross average pay in Suffolk was £543 per week while England was £580. In 2017, the pay gap was greatest in the former Waveney District area at £151 less than the national average.

Transport

2.20. The Sizewell C site is in a rural area served by minor roads, with the de-trunked A12 being the nearest road of the Primary Route Network which is for the most part single-carriageway. The nearest element of the Strategic Road Network managed by Highways England is at the Seven Hills Junction of the A14 with the A12 to the east of Ipswich, and the Bascule Bridge in Lowestoft which is the eastern/southern end of the A47. The A12 between these two points is part of the recently designated Major Route Network which is the responsibility of SCC as the Local Highway Authority. For much of its length, this road is single carriageway and governed by speed limits less than the national speed limit. There are a number of constraints along that route and it passes through several settlements.

2.21. Gull Wing, Lowestoft is an iconic and important bridge for Lowestoft being delivered by SCC. Opening in 2023, the bridge will be a third crossing over the town's Lake Lothing. The new bridge will help to reduce traffic congestion in the town, regenerate the area and attract new investment for the local economy.

2.22. Beyond the A12, the route network, is generally of unimproved rural roads, whether of A, B or C classification, frequently passing through settlements.

2.23. The main rail link to the area is the East Suffolk Line which connects with the strategic rail network at Ipswich and (via Lowestoft) Norwich. For the most part, this is a single-track line, with a small number of passing loops. An almost hourly passenger service during the day takes up virtually all the capacity of the line. The route to Felixstowe joins the East Suffolk Line at Westerfield and the section from there into Ipswich is used more

intensively, particularly by freight trains to and from Felixstowe Port. The single-track freight only branch line from Saxmundham to Sizewell Halt (east of Leiston) has had no service since defueling of the Sizewell A power station was completed in August 2014, and even then, the trains ran infrequently at daytime only.

2.24. **ANNEX C** provides a more detailed overview of the transport network in Suffolk.

Comparison with Hinkley Point C

2.25. The Applicant has made clear that, as far as possible, it intends that the proposal at Sizewell should mirror that currently being developed at Hinkley Point in Somerset. This is in order to take advantage of "second of a kind" benefits and reduce the overall cost of the project. However, it is important to understand the different context of the Sizewell C site and to ensure that it is suitably adapted to local circumstances, which may require additional or alternative mitigation to that which was considered appropriate at Hinkley Point C. Differences are briefly summarised below under a number of headings.

2.26. Size of site: The operational site at Hinkley Point C will be 46ha. The site available for the Sizewell C power station amounts to approximately 33ha. This means that the necessary operational plant is concentrated within a materially smaller site (with both positive and negative consequences).

2.27. Natural environment: Sizewell is located on a "soft coast", Hinkley is on a hard rock seashore. While the Quantock Hills Area of Outstanding Natural Beauty overlooks the Hinkley Point site, its designated area comes no closer than approximately 4 miles from the development. By contrast, Sizewell lies within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB). The area around Sizewell is heavily designated with national and international ecological designations in a way that is not replicated at Hinkley.

2.28. Proximity to settlements: The nearest towns to the Sizewell C site entrance are Leiston (1 mile), Saxmundham (5 miles) and Aldeburgh (5 miles). By contrast, at Hinkley Point, the closest town is Bridgwater at 11 miles. However, the combined population of Leiston, Saxmundham and Aldeburgh was just over 11,500 in 2011 (5,500; 3,700; and 2,300 respectively) while that of Bridgwater is 36,000. The much larger settlements of Ipswich (population circa 133,000) and Lowestoft (population circa 71,000) are 26 and 22 miles away from Sizewell respectively – at least twice the distance Bridgwater is from Hinkley Point C.

2.29. Transport: The nearest point on a high-quality trunk road for Sizewell is at Seven Hills, the junction of the A12 with the A14. This is 23 miles distant. For Hinkley Point, the

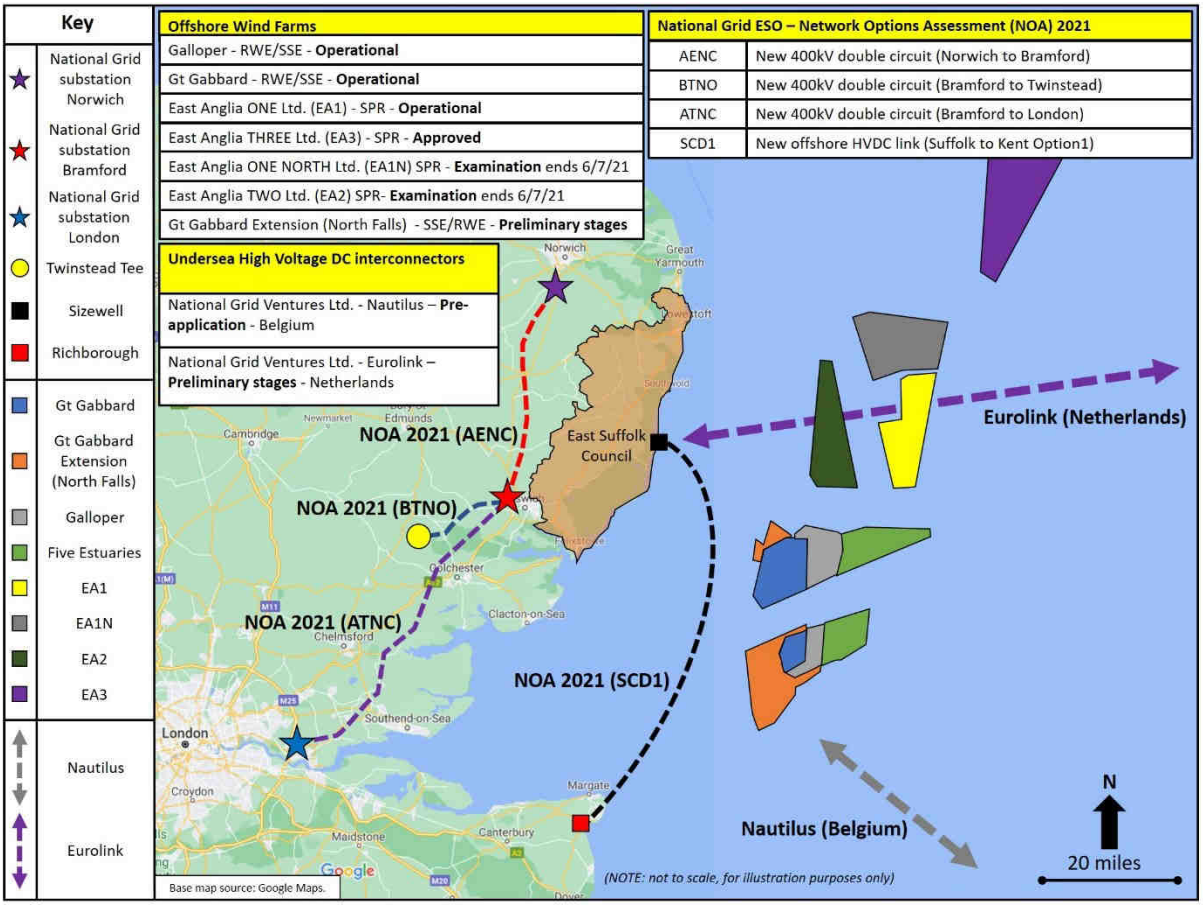
M5 is 14 miles away at either Junction 23 or 24. Sizewell does have the advantage of a rail link which is not available to Hinkley Point.

2.30. The Councils, in conjunction with other Local Authorities from across the UK that already host or have been designated to host nuclear new build projects through their New Nuclear Local Authorities Group, commissioned in 2019 a "Study on the impacts of the early-stage construction of the Hinkley Point C (HPC) Nuclear Power Station" focussed on monitoring and auditing. This study, which was conducted by the Impact Assessment Unit (IAU) of Oxford Brookes University and led by Prof. John Glasson, is referenced in some of the issue specific discussions in this LIR and available at **APPENDIX 2: 1.**

Other relevant developments in the area

2.31. This section looks at other schemes in the wider area which could give rise to the possibilities of cumulative impact of different forms. The possible impact of these schemes will be examined further under the section on Cumulative Impacts (see section 32). This map below (not to scale) gives an overview of the energy projects under consideration or proposed in the vicinity. Further detail of the geographical relationship of these schemes to Sizewell is included in the Cumulative Impacts section.

Figure 1: Map showing other energy projects in and around East Suffolk



2.32. The Cumulative Impacts section also includes other significant schemes that could have a relationship with the Sizewell C Project, either from the perspective of transport demands, other civil engineering schemes or those that will also create a demand for labour. Key developments include; Brightwell Lakes (2,000 houses adjacent to A12 at Martlesham); Ipswich Garden Suburb (3,500 dwellings at Ipswich's northern fringe), the Haven Gateway Freeport (up to 13,000 jobs at Felixstowe, Harwich and Stowmarket); and a snow-based leisure resort at Great Blakenham (west of Ipswich – up to 2,000 jobs). In addition, new bridges are under construction at Lowestoft (the Gull Wing project) and Great Yarmouth (the Third Yare Crossing). Other schemes are listed in the Cumulative Impacts section and include housing and employment designations in the adopted local plans and wider economic and housing areas.

3. National policy and principle of development

3.1. National policy governing the principle of development for a new nuclear power station at Sizewell is National Policy Statement (NPS) EN-6, which should be read together with the Overarching NPS for Energy, EN-1. Whilst the Strategic Siting Assessment for new nuclear power stations as part of EN-6 identified Sizewell as one of eight sites across

England and Wales that was considered to be potentially suitable, EN-6 in paragraph 2.2.5 states that the Infrastructure Planning Commission (now the Secretary of State) "must decide an application for energy infrastructure in accordance with the relevant NPSs except to the extent it is satisfied that to do so would result in adverse impacts from the development outweighing the benefits. The fact that a site is identified as potentially suitable within this NPS does not prevent the impacts being considered greater than the benefits." At the time that this statement was made in July 2011, it was a proper reflection of the effect of section 104 of the Planning Act 2008. At that time Sizewell C was seen as a project capable of deployment by the end of 2025. The Government's consultation response on the siting criteria and process for a new NPS for nuclear power beyond 2025 (July 2018) also makes clear that listing of a site as potentially suitable in EN-6 does not guarantee that applications for development consent on that site will be granted but provides a clear framework for decision-making.

3.2. Given the 10–12-year build time, Sizewell C is not now (in 2021) capable of deployment by 2025, as such NPS EN-6 no longer has effect for the purposes of section 104, as has been clearly recognised by the Applicant. Nonetheless, it is a material planning consideration in the DCO process but not the only policy that the proposal needs to comply with. On 7 December 2017, the Government published a Written Statement on Energy Infrastructure. This Statement, as well as reiterating the need for new nuclear, explained that those projects not capable of deployment before 2025, but listed in NPS EN-6, maintain strong Government support in principle and that section 105 of the Planning Act 2008 would apply to the decision on whether or not to grant development consent for the project. It also stated that in respect of matters where there is no change of circumstances it is likely that significant weight would be given to the policy in EN-1 and EN-6. The Government's consultation response referred to above (July 2018) states that sites listed in EN-6 on which a new nuclear power station is anticipated to deploy after 2025 will continue to be considered appropriate sites and retain strong Government support during the designation of the new NPS; it also confirms the applicability of section 105 in such *circumstances*.

3.3. Section 105 of the Planning Act 2008 states:

> 105 *Decisions in cases where no national policy statement has effect*
>
> (1) This section applies in relation to an application for an order granting development consent if section 104 does not apply in relation to the application.
>
> (2) In deciding the application, the Secretary of State must have regard to –

(a) any local impact report (within the meaning given by section 60 (3)) submitted to the Secretary of State before any deadline specified in a notice under section 60 (2),

(b) any matters prescribed in relation to development of the description to which the application relates, and

(c) any other matters which the Secretary of State thinks are both important and relevant to the Secretary of State's decision.

3.4. This LIR may refer to the NPSs, primarily EN-1 and EN 6 (and its site-specific Appendix EN-6 Vol II), to highlight potential compliance issues in some of the topic areas but the Councils are mindful of the role section 105 of the Planning Act 2008 plays in this process.

3.5. There are a number of relevant local policies which the Examining Authority (ExA) and/or the Secretary of State may consider relevant and important. In particular, the Suffolk Coastal Local Plan includes Policy SCLP3.4 Proposals for Major Energy Infrastructure Projects. This policy identifies the need to mitigate the impacts arising from such developments and will be used to guide the Councils.

3.6. Each of the issue specific sections sets out an overview of key local policy documents.

4. Statutory development plans

4.1. The following key Plan documents have policies relating to the Sizewell C development site from a local perspective. Where appropriate they will be referred to throughout this report.

Suffolk Coastal Local Plan

4.2. The District Council adopted a new Local Plan for that part of the District formerly covered by Suffolk Coastal District on 23 September 2020, which provides a vision for the communities of Suffolk Coastal up to 2036 (**APPENDIX 1: 2).** There is a separate Waveney Local Plan that covers the parts of the district formerly covered by Waveney District Council). It seeks to deliver development that stimulates and supports the economy and provides attractive homes and services for current and future generations. It recognises the opportunities presented in the energy sector. The Plan sets out the level of growth to be planned for, where that growth should be located and how it should be delivered. It includes a vision for communities of Suffolk Coastal as well as objectives to make the vision a reality. It also contains planning policies which will be used to determine planning applications. The Plan contains a specific planning policy relating to energy projects: Proposals for Major Energy Infrastructure Projects, Policy SCLP3.4:

In its role either as determining authority for development under the Town and Country Planning Act, or as consultee on Nationally Significant Infrastructure Projects, the Council will take into consideration the nature, scale, extent and potential impact of proposals for Major Energy Infrastructure Projects, including cumulative impacts throughout their lifetime, including decommissioning.

The Council will work in partnership with the scheme promoter, local communities, National Grid, Government, New Anglia Local Enterprise Partnership, service providers, public bodies and relevant local authorities to ensure significant local community benefits and an ongoing legacy of the development is achieved as part of any Major Infrastructure Projects as outlined in Table 3.6.

Proposals for Major Infrastructure Projects across the District and the need to mitigate the impacts arising from them will be considered against the following policy requirements:

a) Relevant Neighbourhood Plan policies, strategies and visions;

b) Appropriate packages of local community benefit to be provided by the developer to offset and compensate for the burden and disturbance experienced by the local community for hosting major infrastructure projects;

c) Community safety and cohesion impacts;

d) Requirement for a robust Environmental Impact Assessment

e) Requirement for a robust Habitats Regulations Assessment;

f) Requirement for robust assessment of the potential impacts on the Suffolk Coast and Heaths Area of Outstanding Natural Beauty;

g) Appropriate flood and erosion defences, including the effects of climate change, are incorporated into the project to protect the site during the construction, operational and decommissioning stages;

h) Appropriate road and highway measures are introduced (including diversion routes) for construction, operational and commercial traffic to reduce the pressure on the local communities;

i) The development and associated infrastructure proposals are to deliver positive outcomes for the local community and surrounding environment;

j) Economic and community benefits where feasible are maximised through agreement of strategies in relation to employment, education and training opportunities for the local community;

k) Measures to ensure the successful decommissioning and restoration of the site through appropriate landscaping are delivered to minimise and mitigate the environmental and social harm caused during operational stages of projects;

l) Cumulative impacts of projects are taken into account and do not cause significant adverse impacts; and

m) Appropriate monitoring measures during construction, operating and decommissioning phases to ensure mitigation measures remain relevant and effective.

The policy is intended to inform pre-application and early engagement discussions with promoters and provides an early view on potential constraints and opportunities across the district. It is not intended to replace NPS or Government guidance. It is intended to support proposals from construction through to operation and decommissioning.

4.3. Policy SCLP12.1 of the Local Plan supports the production of Neighbourhood Plans in identifying appropriate, locally specific policies that are in general conformity with the strategic policies of the Local Plan. For the purposes of this Local Impact Report, the only Neighbourhood Plan in effect is that which has been made for Leiston (see paragraph 4.7).

Suffolk County Council Minerals and Waste Local Plan

4.4. The current development framework for minerals and waste development is the Suffolk Minerals and Waste Local Plan adopted in 2020 **(APPENDIX 1: 3)**. This document provides a spatial strategy for minerals and waste development in the county and contains policies governing decisions about applications for planning permission.

4.5. The Suffolk Minerals and Waste Local Plan also contains policies affecting other kinds of development to the extent to which they affect safeguarded minerals and waste development or potential minerals reserves. In particular, Policies MP10 and WP18

respectively seek to protect mineral resources from sterilisation and waste management facilities from other forms of competing development.

Neighbourhood Plans

4.6. The introduction of Neighbourhood Plans in the Localism Act 2011 has encouraged local communities to take an active role in the plan-making process and prepare plans and policies that, in gaining statutory weight, have a real impact on the development of localities. The District Council has a supporting role in the production of these plans. There are 18 total Neighbourhood Plan areas designated in East Suffolk, the only one of relevance to this DCO proposal is the Leiston Neighbourhood Plan.

4.7. The Leiston Neighbourhood Plan 2015 – 2029 **(APPENDIX 1: 4)** was prepared by Leiston Town Council and sets out its vision for development to 2029. It was formally 'made' by Suffolk Coastal District Council on the 23 March 2017, and now forms part of the Development Plan for the district. There is reference in the Neighbourhood Plan to the Emergency arrangements in relation to the operating nuclear power station, Sizewell B. The Neighbourhood Plan highlights existing waste-water capacity in the town as a potential constraint to future housing growth – this would potentially impact on future major construction proposals at Sizewell. The Plan acknowledges the potential for Sizewell C but acknowledges that it cannot influence planning decisions on this matter.

4.8. Policy HE1: Protection of Heritage Assets includes Leiston Abbey as a heritage asset of national importance. The policy seeks to sustain and enhance the setting of such heritage assets, including avoiding placing incongruous tall buildings in prominent locations impacting views that contribute to the significance of the heritage assets. The construction site for Sizewell C has the potential to encroach upon these views.

4.9. Policy TM1: Dedicated access for cyclists and pedestrians, supports provision of dedicated access for cyclists and pedestrians and a number of specific proposals that can be linked to the Sizewell C development:

i. the closure of the Kemps Hill stretch of Valley Road to vehicular traffic;
ii. provision of a dedicated cycle path along Sizewell Road to the Crown Farm junction;
iii. extension of the existing footpath from the Crown Farm junction to the Sizewell Belts walks;
iv. a cycle path around the perimeter of the Aldhurst farm wildlife mitigation area.

4.10. Policy TM2: 'Highway capacity at key road junctions' references concerns in Leiston town centre, in particular the junction of Cross Street with Sizewell Road and High Street.

The policy states that development will be expected to make a proportionate contribution to mitigating impacts according to what is necessary.

4.11. Policy TM5 refers specifically to improvements to access for Leiston Household Waste Recycling Facility on Lovers Lane, a site run by SCC, on land owned by the Applicant – further detail can be found in the Minerals and Waste section.

4.12. Flash flooding has been a recurring problem in parts of Leiston including Valley Road / Carr Avenue. Policy FL1 seeks to address localised flooding matters and to ensure that all new development must ensure that it does not result in a worsening of foul and surface water flooding to existing properties.

5. Other relevant local policy

Suffolk Local Transport Plan

5.1. SCC's Suffolk Local Transport Plan (Part 1, **(APPENDIX 1: 5)** Part 2 **(APPENDIX 1: 6)**) sets out the long-term strategy for the Council's transport network and importantly how to support future sustainable economic growth.

5.2. A high priority for SCC is to support the growth of businesses and the strategy recognises the importance of transport in this by reducing delay and the costs associated with the movement of goods.

5.3. The strategy for the rural areas within the county is set around five objectives:

Table 1. better accessibility to employment, education and services;
Table 2. encouraging planning policies to reduce the need to travel;
Table 3. maintaining the transport network and improving its connectivity, resilience and reliability;
Table 4. reducing the impact of transport on communities;
Table 5. supporting the county council's ambition of improving broadband access throughout Suffolk.

5.4. The Local Transport Plan identifies congestion on the A12 between Marlesford and Farnham as a key transport issue for Suffolk Coastal and that a long-term aspiration of the County is the reinstatement of a passenger rail line to Leiston. It also identifies the issue of congestion on the eastern fringe of Ipswich affecting the A12, A14 and A1214.

Green Access Strategy (Rights of Way Improvement Plan)

5.5. The Green Access Strategy **(APPENDIX 1: 7)** outlines future plans and management plans for Public Rights of Way in Suffolk 2020-2030. It identifies green access as important for health and wellbeing and explains the impact that green access can have on growing and managing tourism.

5.6. It assesses the extent to which local rights of way meet the present and likely future needs of the public, opportunities provided by local footpaths and byways for exercise and open-air recreation, and the accessibility of local rights of way.

5.7. The Strategy identifies the improvement of the public rights of way network as a significant political and strategic objective and aligns with existing strategies including the Health and Wellbeing Strategy, the Sustainable Modes of Transport Strategy, and the Growth Strategy. The Plan will seek out opportunities to work collaboratively with internal and external stakeholders to deliver shared outcomes effectively.

Suffolk County Council Travel Plan Guidance

5.8. SCC's document Suffolk Travel Plan Guidance **(APPENDIX 1: 8)** identifies the process for delivering travel plans in the County, this sets out that a Travel Plan should:

i. Be fully assessed prior to its approval in accordance with SCC's methodology.
ii. Contain measures and targets which are secured for implementation by agreement between the Council and the developer/ applicant (by means of a s106 Legal Agreement or, if appropriate, planning condition).
iii. Ensure that the outputs of the Travel Plan (normally trip levels and mode split) are annually monitored against the agreed targets and objectives.
iv. Be reviewed annually to assess whether it is delivering its anticipated outputs.

Suffolk Guidance for Parking

5.9. SCC's document 'Guidance for Parking' **(APPENDIX 1: 9)** sets out the relevant guidance for developers for different types of parking provision. It also covers the need for secure, convenient and high-quality cycle and motorcycle parking, in line with the standards set out including at park and ride sites.

5.10. The Guidance identifies the need to provide suitable charging tariffs for commercial developments based on an individual assessment with relevant justification of the appropriate provision.

5.11. The Guidance identifies that disabled persons' parking bays should be provided at 4 bays plus 4% of the total capacity. It also includes standards for the number of spaces with electric vehicle charging that should be made available depending on the land's use class.

5.12. The Guidance sets out the required specification for the size of car parking bays.

New Anglia Local Enterprise Partnership (NALEP) Economic Strategy for Norfolk and Suffolk 2017

5.13. NALEP works with businesses, education providers, and local authority partners to encourage growth and enterprise across Suffolk and Norfolk. It seeks to raise the level of education, skills, and training opportunities that are available and to support the outstanding economic assets and variety of businesses operating in Suffolk Coastal.

5.14. NALEP published 'The Economic Strategy for Norfolk and Suffolk' **(APPENDIX 1: 10)** in 2017. The document sets out the ambition for Norfolk and Suffolk to be a centre for the UK's clean energy sector and identifies that NALEP will work to ensure Government and investors understand the existing and potential contribution of the area and how it can be maximised, including the strategic case for new infrastructure.

Integrated Transport Strategy for Norfolk and Suffolk

5.15. The NALEP Integrated Transport Strategy for Norfolk and Suffolk **(APPENDIX 1: 11)** has the aim of driving business growth and productivity by improving accessibility between our economic centres. The strategy sets out that improved transport connectivity between areas within the region will support growth. To enable a more connected region the strategy has the objectives of delivering a reliable Major Road Network with improved, more resilient and more reliable journey times between the priority places.

Suffolk Shoreline Management Plan

5.16. The Suffolk Shoreline Management Plan (SMP) 7 (**APPENDIX 1: 12**) was published in 2012. It is a living document used by operating authorities and other organisations, and is not the responsibility of any sole organisation. The preparation of an SMP is the duty of the operating authorities responsible for managing the coastline. Suffolk Coastal District Council (now ESC) as one of the parties to the SMP, adopted it in November 2011. The SMP has also been endorsed by SCC. The SMP was published once all parties had adopted / endorsed the document. The SMP is a non-statutory plan setting out coastal management policy and intent for management for discrete lengths of the Suffolk coastline between Lowestoft and Felixstowe.

East Marine Plan

5.17. The Marine Plan (**APPENDIX 1: 13)** for the east inshore and east offshore marine areas was published in June 2014 and last updated in December 2015. The Plan is written and published by the Marine Management Organisation.

East Suffolk Economic Growth Plan 2018 - 2023

5.18. The Plan **(APPENDIX 1: 14)** sets out how ESC and its partners including any business, stakeholder, other statutory body, who is willing to work with us to achieve our economic ambitions. ESC will achieve economic growth through maximising the competitive advantage in key sectors such as energy. The plan identifies the opportunities and potentials that exist in the energy sector as key to working towards the vision that businesses across East Suffolk have the confidence to invest and grow, creating opportunities for people of all ages and improving further the quality of life in an

outstanding environment. It identifies Sizewell C as a potential asset of national significance and a source of substantial economic benefits.

East Suffolk Business Plan

5.19. The Plan **(APPENDIX 1: 15)** was devised between Suffolk Coastal and Waveney District Councils. The Business Plan lays out the District Councils' dedication to achieving high professional and business standards across Suffolk.

East Suffolk Strategic Plan 2020 - 2024

5.20. The Plan **(APPENDIX 1: 16)** provides the framework to deliver a huge range of vital services for East Suffolk's local communities and was produced by ESC. The ambition of the plan is to deliver the best possible quality of life for everyone who lives in, works in and visits East Suffolk. The plan evolves around five key themes:

i. Growing Our Economy;
ii. Enabling Our Communities;
iii. Financial Sustainability;
iv. Digital Transformation; and
v. Our Environment.

5.21. The Plan is the presentation of the five high-level ambitions and will be the template for ESC in everything it does and seeks to be.

Suffolk County Council Priorities 2017-2021

5.22. This document **(APPENDIX 1: 17)** sets out SCC's priorities for 2017 to 2021, set by its democratically elected Administration. The priorities are:

i. Inclusive Growth: Suffolk needs to improve its economic productivity, levels of educational attainment and build more homes, ensuring that everyone benefits, including people who are vulnerable and facing disadvantage.
ii. Health, Care and Wellbeing: Caring for Suffolk's vulnerable residents, enabling everyone to live long, healthy and fulfilling lives is one of our top priorities. Thriving families and communities and thriving economies support each other.
iii. Efficient and effective public services: At a time of diminishing resources, increased demand, and changing customer expectations, we need to change the way that we operate to meet our customers' needs and balance our budget.

Suffolk Coast and Heaths Area of Outstanding Natural Beauty Management Plan 2018-2023

5.23. The Suffolk Coast and Heaths Area of Outstanding Natural Beauty Management Plan 2018-2023 **(APPENDIX 1: 1)** sets out the approach to conserving and enhancing the natural beauty of the AONB. The AONB Partnership organisations commit to implementing the

plan and share a common vision for the long-term care of the AONB. The vision for the area is summarised as an area of special wildlife, landscape, seascape and heritage qualities that are conserved and enhanced, addressing the needs of people living, working, and visiting the AONB.

5.24. The Plan sets out key objectives. The primary purpose of the AONB designation is to conserve and enhance its natural beauty. The Plans also seeks to ensure decision making regarding the coast and its estuaries pay due regard to the purposes of the AONB including conserving and enhancing associated habitats, ensuring decision making has regard to the purpose of the AONB designation, and to support tourism where it is inclusive, sustainable, and supports the purpose of designation.

5.25. The special qualities of an AONB landscape are often those attributes of an area that may contribute to an appreciation of natural beauty, which are listed in the Natural Beauty and Special Qualities document on the Suffolk Coast and Heaths AONB website.

5.26. The Plan also notes the importance of promoting understanding and enjoyment outstanding landscapes for wellbeing and tourism. The enjoyment of such assets, be they natural or built, can support the visitor and tourism economy, as well as helping individuals to lead fulfilling lives and support active lifestyles with associated physical and mental health benefits.

5.27. The longer-term aspiration for the AONB set out in the Management Plan is to be a high-quality landscape and seascape where its natural beauty and special qualities are conserved and enhanced, where local communities are passionately and actively engaged with their environment, including a thriving economy in a landscape of opportunity for sustainable tourism guided by principles of careful stewardship, and where tranquillity is retained and undesirable intrusion prevented.

5.28. The Plan also notes Nationally Significant Infrastructure Projects like energy production and its associated infrastructure should seek to avoid damage to the natural beauty of the AONB and where this cannot be achieved it should seek to minimise, mitigate and compensate for any residual damage (page 25).

Sizewell C Impact Assessment (Accent Study)

5.29. In May 2016 SCC, supported by ESC, commissioned a report by Accent **(APPENDIX 2: 2).** The core objectives of the report were to assess the traffic impacts of the proposed Sizewell C construction on the wellbeing of local communities. The desired outcome of the research was to inform the Councils in their discussions with the Applicant on means of addressing the impacts. A key driver of the report was to understand the perceived impacts

of use of the B1122 for construction traffic on local residents. The focus of the study was the communities of the B1122.

5.30. Primary research was gathered through a combination of face-to-face interviews and an online survey. It included gathering views from 65 persons who were living in the area at the time of the Sizewell B construction to confirm their expectations at that time versus the reality.

5.31. 70% of respondents from the Accent Study indicated that they would become dissatisfied living where they were living as a result of construction traffic, with the most commonly anticipated impact being increased problems with travelling by car or by foot, with a third of respondents indicating they would walk or cycle less, or drive instead of walking or cycling. Construction traffic was the single largest concern of residents with regards to Sizewell C, with participants in the survey living close to the roads being significantly more likely to be concerned about vibration, noise (at any time), the volume of traffic, pedestrian safety and not be being able to get in/out of the driveway on to the roads than those living further away.

5.32. The most commonly mentioned impact by participants was making it hard to travel around by car or bus (71%), followed by making it hard or dangerous to walk around (56%) and increased stress. At least one-third also mentioned an impact on the community spirit or interaction with neighbours (43%), spending less time outside in the garden (34%) and making it more dangerous for children to play outdoors unsupervised (33%). Other personal impacts mentioned were making sleep more difficult (31%), an impact on personal health (27%), making it harder to do things around the house (22%) and headaches (16%). Almost half (48%) of participants who travel on the B1122 and/or through Yoxford stated that they would make fewer trips. Around one-third thought they would walk less (38%), cycle less (34%) and/or drive instead of walk/cycle (32%). Some also believed they would visit friends less (28%) and rely on internet shopping (24%).

5.33. The mitigation and management measures given highest priority by respondents were night-time and weekend restrictions to heavy goods vehicles (HGVs), provision of less onsite parking (to encourage more use of buses by construction employees and thereby a lower volume of cars), strict enforcement of speed limits, and provision of safety measures for pedestrians and cyclists. Most respondents preferred longer construction works with lower traffic flows (rather than quicker works with higher flows), less onsite parking and higher bus traffic (rather than more onsite parking and higher car traffic), routeing restrictions for light goods vehicles (LGVs) (rather than not having restrictions and

spreading impacts over a wider area) and the reduction of onsite car parking (rather than having routeing restrictions for cars or having no restrictions and spreading impacts over a wider area).

5.34. The main preference for managing temporary HGV increases was to keep the increases to Monday to Fridays, and overnight and weekend restrictions were seen as the most important restrictions for HGV, bus and LGV movements. Routeing restrictions on construction vehicles was also seen as an important management measure. Restrictions on onsite car parking and enforcement of speed limits were also seen as important measures. With regards to increasing safety and wellbeing of residents, respondents indicated that safe crossing points, improved footway facilities and requirements for emission levels from HGVs and buses to meet high standards were priorities.

Vision for Sizewell C

5.35. The Councils, working with the Applicant, in November 2010 signed a Planning Performance Agreement (**APPENDIX 1: 18)** which included a shared Vision of what the project should be seeking to achieve:

i. a contribution to the national need for secure, low carbon electricity and for the replacement of decommissioning nuclear capacity at the national level in accord with applicable and current Government and Development Plan policies;

ii. a significant benefit to the local economy, both during construction and in operation, through local employment opportunities, training and workforce development, expenditure on local facilities and services, and business for the supply chain, and the appropriate publicising of such opportunities;

iii. additional/enhanced social and community provisions and/or facilities, where possible in the form of legacy provisions, to mitigate the impacts of the influx of construction workers and serve the operational workforce;

iv. a power station design, layout and associated grid infrastructure that avoids undue adverse visual impact on the AONB and Heritage Coast, minimises any such impacts whilst complying with operational, safety and security requirements;

v. a positive long-term contribution to local bio-diversity, landscape quality and countryside access;

vi. a development that minimises impacts on coastal processes and is in accordance with the strategies set out in the Suffolk Shoreline Management Plan;

vii. use of sustainable transport modes wherever practicable and improvements to the transport infrastructure where required to minimise the impact of and improve access to the development and ancillary facilities;

viii. a secure and safe Project with robust emergency planning provisions, that complies with all operational safety and security requirements and minimises any adverse impacts on health and well-being of the local population during construction and operation; and

ix. if granted consent, completion of the Project in line with the Developer's objective of having four nuclear generating units operational in the UK by 2025.

5.36. It is clear that ix. will not be achieved but the Councils, as will be seen through this LIR, are keen for the majority of the elements in the Vision to be realised should Sizewell C be consented.

Joint Local Authority Group Principles

5.37. In January 2012, the two Councils established the Sizewell C Joint Local Authority Group, also known as JLAG, to facilitate a joint local authority approach to the challenges and opportunities that will result from the construction and operation of the proposed Sizewell C new nuclear power station. The group consists of Cabinet and locality members from both the Councils. The local MPs are invited to attend as observers. The Chair and Vice-Chair of the group send newsletters when necessary to their fellow councillors, town and parish councils, and anyone else who asks to be on the mailing list. In recent years, the role of the group has expanded to cover other energy projects in the east Suffolk area. The group does not meet in public but publishes meeting notes that are available to all.

5.38. Over the years, the group has worked with other interested parties to create Sizewell C Principles documents that have been endorsed by the group and shared with the Applicant. There are 5 principal documents:

i. Sizewell C Economic Development, Skills, Education and Employment principles; (**ANNEX D)**

ii. Sizewell C design principles: the local perspective; (**ANNEX E)**

iii. Suffolk principles for the management of the Sizewell estate; (**ANNEX F)**

iv. Suffolk ecology principles for Sizewell C; and (**ANNEX G)**

v. Suffolk access principles for Sizewell C. (**ANNEX H)**

5.39. The Sizewell C design principles were produced in collaboration and discussion with the National Trust, RSPB, Suffolk Wildlife Trust, and the Suffolk Coast and Heaths AONB. The ecological principles were produced in collaboration and discussion with the National

Trust, RSPB, Suffolk Coast and Heaths AONB, Suffolk Preservation Society, Suffolk Wildlife Trust, and the Woodland Trust. The estate principles were produced in collaboration and discussion with the Suffolk Coast and Heaths AONB and Suffolk Wildlife Trust. These documents will be referred to in this text and are available as **ANNEX D – H)**.

Other policies, strategies and reference documents referred to in the LIR

5.40. The LIR refers in the issue specific sections to a number of policies and strategies in addition to those listed above. These are clearly referred to in the relevant sections, and all of these documents are included in the Appendices to the LIR. The further policies and strategies referred to are:

i. Natural Beauty and Special Quality Indicators of the AONB
ii. Recreational Disturbance Avoidance and Mitigation Strategy (RAMS)
iii. AONB: The selection and use of colour in developments guide
iv. Section 106 Developers Guide to Infrastructure Contributions in Suffolk
v. State of the AONB Report 2018
vi. Suffolk Flood Risk Management Strategy
vii. Leiston Surface Water Management Plan Update

Other reference documents referred to in the LIR include:

viii. Study on the impacts of the early-stage construction of the Hinkley Point C Nuclear Power: Monitoring and Auditing Study Final Report
ix. BSG Ecology Review of Bat Impact Assessment October 2020 / BSG Ecology Review of Bat Impact Assessment: Second Review March 2021
x. Network Rail Anglia Route Study March 2016
xi. Adrian James Acoustics: Noise assessment technical memoranda
xii. The Energy Coast – Implications, Impact and Opportunities for Tourism on the Suffolk Coast 2019
xiii. 2015 RSPB Minsmere Visitor Survey
xiv. Sizewell C Economic Impact Assessment 2018
xv. 2019 Volume and Value Study by Destination Research (www.thesuffolkcoast.co.uk)
xvi. Aecom Review of the Gravity Model from an accommodation perspective for ES

Impacts by issue

Natural Environment

6. Landscape and Visual Impact Assessment (Lead authorities ESC and SCC)

Summary

6.1. The nominated Sizewell C site is surrounded by a designated national landscape, being wholly within the nationally designated Suffolk Coast and Heaths AONB and on the Suffolk Heritage Coast (see the Context section). The laydown area during the construction phase will cross the entire width of this part of the AONB, impacting upon the public's continuous enjoyment of the AONB coastline and disrupting important wildlife corridors. The site is in a prominent coastal position, with views of the site available from elevated locations including Southwold, Minsmere and Dunwich Heath, and the development will have significant visual and landscape impacts, during construction, operation and decommissioning.

6.2. The Councils accept that there is limited scope for additional embedded mitigation to ameliorate the adverse landscape and visual effects of construction and operation. However, the Councils note that that in some instances (need for pylons on site and outage car park at Goose Hill) harm may be reduced through alterations to the Applicant's proposals. For residual impacts, the Councils agree with the principle of mitigation and compensation funding being made available through a Natural Environment Fund, the scale of which needs to reflect the significance of the harm.

6.3. The Councils note the interrelationship between landscape impacts and design issues (see section 14 below) and impacts on biodiversity, tourism, recreation, heritage and quality of life and well-being.

Table 1: Summary of impacts – Landscape and Visual Impact Assessment					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
1a	Significant adverse impacts on landscape character and visual amenity of AONB and wider landscape through introduction of significant construction activity at Main Development Site, with limited screening opportunities	C	Negative	Reduce: External lighting plan - Requirement Mitigate: Secure embedded landscape mitigation via the Landscape and Ecology Master Plan (LEMP) – Requirement Compensate: Residual mitigation funding through Natural Environment Fund - Obligation	NPS EN-1 notes virtually all nationally significant energy infrastructure projects will have effects on the landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. EN-1 also notes that coastal areas are particularly vulnerable to visual intrusion because of potential high visibility of development on the skyline and affecting long views. NPS EN-6 references potential for long lasting effects on visual amenity given the SCH AONB. Local Plan Policy SCLP10.4 states that development should be sensitive to and informed by the special qualities and features of landscape character.
1b	Significant impacts on the AONB and its special qualities, which could have an effect on the purpose of the designation	C	Negative	Compensate: Residual mitigation funding through Natural Environment Fund - Obligation	NPS EN-1 notes AONBs have the highest status of protection in relation to landscape and scenic beauty. Conservation of natural beauty should be given substantial weight in decision-making. NPS EN-6 references potential for long lasting effects on visual amenity given the SCH AONB.

					Local Plan Policy SCLP10.4 states that development should be sensitive to and informed by the special qualities and features of landscape character.
1c	Significant permanent adverse impact on the AONB landscape from the operational buildings and structures on the Sizewell C platform, particularly of the concrete nuclear domes	O	Negative	SCC: Avoid: Reduce impact by implementing alternative power export solution that does not require pylons and overhead lines (unless proven to be impossible within the site constraints) - Change ESC/SCC: Reduce: Secure design commitments of non-nuclear buildings by requirement - Requirement ESC/SCC: Compensate: Residual mitigation funding through Natural Environment Fund - Obligation	NPS EN-1 notes AONBs have the highest status of protection in relation to landscape and scenic beauty. Conservation of natural beauty should be given substantial weight in decision-making. NPS EN-6 references potential for long lasting effects on visual amenity given the SCH AONB. Local Plan Policy SCLP10.4 states that development should be sensitive to and informed by the special qualities and features of landscape character.
1d	Permanent land take within the AONB	O	Negative	SCC: Avoid: Remove outage car park from its location within the AONB (unless proven to be operationally impossible) - Change ESC/SCC: Compensate: Residual mitigation funding through Natural Environment Fund - Obligation	NPS EN-1 Need to consider cost, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way. NPS EN-1 notes AONBs have the highest status of protection in relation to landscape and scenic beauty. Conservation of natural beauty should be given substantial weight in decision-making.
1e	Conversion of formerly arable land at the Main Development Site to heathland	O	Positive	Mitigate: Secure landscape restoration through LEMP - Requirement	

1f	Landscape impact of temporary Associated Development sites (Park and Ride sites, Freight Management Facility, LEEIE)	C	Negative	Mitigate: Secure landscape planting at Associated Development sites - Requirement Removal and reinstatement of the Associated Development sites - Requirement	
1g	Landscape impacts of permanent transport infrastructure (Two Village Bypass, Sizewell Link Road, other transport infrastructure as required)	C and O	Negative	Compensate: Secure landscape planting at Associated Development sites -Requirement Compensate: Residual mitigation funding through Natural Environment Fund - Obligation	

Policy context

National Policy Statements

6.4. Landscape and visual impacts in relation to energy infrastructure developments are addressed in Section 5.9 of NPS EN-1. It identifies that assessment of landscape and visual impact by the Applicant should include the visibility and conspicuousness of the project during construction and operation of the project, including potential impacts on views and visual amenity. This assessment should include light pollution effects, including on local amenity, and nature conservation (paragraph 6.9.6 and 6.9.7).

6.5. Projects must be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational, and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate (paragraph 5.9.8). All proposed energy infrastructure is likely to have visual effects for many receptors surrounding the proposed development, and it is for the ExA to determine whether the visual effects on sensitive receptors, like local residents and visitors to the local area, outweigh the benefits of the project. Paragraph 5.9.18 notes that coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of the development on the foreshore, on the skyline, and in views along the coast.

6.6. The importance of protecting AONBs is clearly set out. NPS EN-1 confirms AONBs have the highest status of protection in relation to landscape and scenic beauty. Therefore, the conservation of the natural beauty of the landscape and countryside should be given substantial weight in the Examination process, and both Councils have requested that this is considered by the ExA in setting the timetable for Issue Specific Hearings.

6.7. EN-1 states that the circumstances within which the Secretary of State may grant development consent in a protected area should demonstrate that the development is in the public interest and that the development must be assessed having regard to (paragraph 5.9.10):

1. “The need for the development, including in terms of national considerations, and the impact of consenting or not consenting it on the local economy;
2. The cost, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on alternatives set out in Section 4.4; and
3. Any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which it can be moderated.”

6.8. This then sets the context within which the ExA, and ultimately the Secretary of State, has to consider the overall proposals for the new nuclear power station, but also individual component parts. The document also identifies the potential for long-term effects on visual amenity as a result of nuclear power station developments, specifically at Sizewell given the Suffolk Coast and Heaths AONB, which is an important point discussed in this LIR.

6.9. NPS EN-6 notes (paragraph 3.10.8) that visual impacts associated with a new nuclear power station should not be expected to be *"eliminated",* that the scope for visual mitigation will be quite limited, but that mitigation should be designed to *"reduce the visual intrusion of the project as far as reasonably practicable".* Both NPS EN-6 and its Appendix EN-6 Vol II highlight the effects of a nuclear power station, in general and at Sizewell specifically, on landscape character and visual impacts on the AONB, noting that Sizewell A was in situ prior to the designation and that Sizewell B was consented post-designation and these could have an effect on the purpose of the designation:

"There is potential for some long lasting adverse direct and indirect effects on landscape character and visual impacts on the Suffolk Coast and Heaths AONB, a nationally recognised landscape, with limited potential for mitigation given that the site is wholly within the AONB. This could have an effect on the purpose of the designation (…) The potential for remaining effects can best be fully assessed when detailed plans come forward because they depend on a range of factors including the detailed proposals for minimisation and mitigation, the cooling technology proposed and location of transmission infrastructure. However, given the limited scope for mitigation, a level of impact is likely to remain." (EN-6 Vol II paragraph C.8.81/82).

6.10. The Councils consider that the proposal, as presented to date, is a significant challenge to the purposes of the AONB designation as defined by s82(1) of the Countryside and Rights of Way Act 2000, that is, "conserving and enhancing the natural beauty of the area". The Councils note that the natural beauty of the designation is articulated by the Natural Beauty and Special Quality Indicators of the AONB, this document was developed by the Applicant with the AONB Partnership **(APPENDIX 1: 19)**. The quality indicators are much more complex and wider ranging than just landscape or scenic quality.

6.11. The coastline is also defined as Heritage Coast. Heritage Coasts are protected through development management with the planning system. Paragraph 173 of the National Planning Policy Framework (NPPF) (February 2019) states *"planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character."*

Local Plan Policy

6.12. Policy SCLP10.4 of the Suffolk Coastal Local Plan relates to Landscape. This policy requires developments to be informed by and sympathetic to, the special qualities and features as described in the Suffolk Coastal Landscape Character Assessment, 2018, the Settlement Sensitivity Assessment, 2018, and updated landscape evidence. For the Councils this includes recent independent assessments relating to seascape and landscape character. This policy states that development will not be permitted where it would have a significant adverse impact on the natural beauty and special qualities of the AONB that cannot be adequately mitigated. Development within the AONB or its setting must be informed by the Landscape and Visual Impact Assessment (LVIA) to assess and identify potential impacts and to identify suitable measures to avoid or mitigate these impacts. Exceptional circumstances must be demonstrated for major development proposals (as per paragraph 172 of the NPPF). In this instance, the designation of the Sizewell site in NPS EN-6 is a major consideration.

6.13. Proposals for development should include measures that enable a scheme to be well integrated into the landscape and enhance connectivity to the surrounding green infrastructure and Public Rights of Way (PRoW) network. Additionally, proposals should protect and enhance the tranquillity and dark skies across the plan area. Exterior lighting in developments should be appropriate and sensitive to protecting the intrinsic darkness of rural and tranquil estuary, heathland and river valley landscape character.

6.14. Policy SCLP4.2 and 4.5 support new employment development provided it avoids or adequately mitigates any adverse impact on the character of the surrounding area or landscape including the AONB.

Other Relevant Local Policy

6.15. *Suffolk Coast and Heaths Area of Outstanding Natural Beauty Management Plan 2018-2023* **(APPENDIX 1: 1)**: The AONB Partnership organisations commit to implementing the plan and share a common vision for the long-term care of the AONB. The vision for the area is summarised as an area of special wildlife, landscape, seascape and heritage qualities that are conserved and enhanced, addressing the needs of people living, working, and visiting the AONB.

6.16. The Plan sets out key objectives; conserving and enhancing the natural beauty and special qualities of the AONB, to ensure decision making regarding the coast and its estuaries pay due regard to the purposes of the AONB including conserving and enhancing associated habitats, ensuring decision making has regard to the purpose of the AONB

designation, and to support tourism where it is inclusive, sustainable, and supports the purpose of designation.

Suffolk Principles for the Management of the Sizewell Estate

6.17. This document was endorsed by the joint local authorities' group in January 2014 and provides a useful set of estate principles developed by the Councils with the AONB and the Suffolk Wildlife Trust (ANNEX F). It states that the future management of the Sizewell Estate should be an environmental exemplar in order to mitigate long lasting adverse direct and indirect impacts on landscape character, cultural heritage and ecology. This is considered to require an estate management strategy that balances the moderation of visual impacts, enhancement of natural and cultural heritage, strengthening of landscape character, and improvement of public access both on and off the existing estate.

Construction Phase impacts – Main Development Site

Positive

6.18. It is not considered that there are positive impacts on the natural environment during construction. Construction works are generally disruptive in nature and are not expected to provide any positive impacts on the landscape and AONB during this phase. The construction works may provide the basis for future benefits through the conversion of arable to heath land but can only do so if the restoration objectives are clearly understood, and methods of achieving them are properly embedded into the construction programme, rather than being an adjunct to it, or an afterthought. In stating this, the Councils acknowledge the significant positive enhancement work that the Applicant has undertaken on the land it owns adjoining the stations.

Neutral

6.19. It is not considered that there are neutral impacts. Some impact of development outside the AONB could be considered neutral in terms of their impact on the special qualities of the AONB, but they will still have a negative impact on their own landscape context.

Negative

6.20. Overall impact – Even allowing for embedded mitigation measures within the design, the Applicant's ES considers that construction works are likely to result in *significant adverse effects on local landscape and seascape character* within and adjacent to the site. This is due to the permanent (and temporary) removal of existing landscape features such as characteristic vegetation and habitats including woodland, wetlands and shingle and sand dune systems. The scale and duration and physical extent of construction

activities will also have a significant impact in the character of place for an extended period.

6.21. *Significant adverse effects on landscape and seascape character* during construction are recognised in the ES to occur within the AONB on the following landscape and seascape character types as defined by the Suffolk Landscape/Seascape Character Assessment 2011/2019 as described and mapped (2021.05.04 SCC, https://suffolklandscape.org.uk/map/ordnance-survey/)

i. Estate Sandlands
ii. Coastal Levels
iii. Coastal Dunes and Shingle Ridges
iv. Ancient Estate Claylands
v. Nearshore Waters

6.22. These adverse impacts identified in the ES primarily arise through the removal of key characteristic landscape features, and the inclusion of notably uncharacteristic construction related structures and activity.

6.23. *Significant adverse effects on visual amenity* during construction have been identified by the Applicant for views *inter alia* at:

i. Westleton Walks and Dunwich Heath
ii. Royal Society for the Protection of Birds (RSPB) Minsmere
iii. Coastal strip between Dunwich, Minsmere Sluice and Beach View holiday park.
iv. Eastbridge and Leiston Abbey
v. Areas within NW section of Main Development Site which remain accessible to the public.
vi. Sizewell Belts
vii. Views from offshore.

6.24. These areas will all be adversely visually affected by construction activity which will significantly alter current views which feature key landscape character elements that contribute to the value and quality of the view and replace them with visually uncharacteristic construction structures and activity. The Councils do not dispute these findings and continue to be concerned with these significant adverse impacts on some of the most important views in the local area.

6.25. These also include effects on the visual amenity of the Suffolk Coast Path, the proposed route of the East of England Coast Path and Sandlings Walk.

6.26. The following section considers whether the impacts have been appropriately assessed; impacts avoided where feasible, and whether embedded mitigation has been maximised. It goes on to consider the scale of residual impacts.

6.27. Coastal aspects of the AONB – The Applicant's ES identifies that adverse landscape and visual effects will only occur over localised sections of the AONB and Heritage Coast, so the effects during construction on these designations, "as a whole," are therefore assessed as not significant. The Councils consider that the Applicant has taken a narrow perspective when reaching this conclusion in the Non-Technical Summary of the ES [APP-159] In other parts of the ES (Environmental Statement, 6.3 Volume 2 Main Development Site, Chapter 13 Landscape and Visual, paragraphs 13.6.139-13.6.143 and 13.6.145-13.6.147 [APP-216], the Applicant concludes that impacts on the coastal and coastal hinterland areas and character of these designations, around the development site, are of *low magnitude, slight (not significant) and adverse* and on a limited extent of the AONB designation. It needs to be borne in mind that the AONB, as a whole, covers some 441 square kilometres (403 square km as originally designated in 1970 plus the 2020 extension of a further 38 square km), from Kessingland just below Lowestoft in the north to the Stour Valley in Essex in the south, and it is hard to envisage any single development project that would have a significant effect on such an extensive area of AONB *"as a whole"*. Similarly, the Heritage Coast is some 57 kilometres in length and covers some 122 square kilometres of the coastal landscape of Suffolk, and the same point applies. Furthermore, the Councils consider that the development, particularly during its construction, will have an adverse impact on the *perceptions* of the AONB, as a whole.

6.28. Visual effects on public access viewpoints – *Major and major-moderate Adverse visual effects* would occur over a range of *public access viewpoints* in the vicinity of the site and construction laydown area. These include the majority of the Minsmere Levels and the southern section of Dunwich Heath adjacent to Coastguard Cottages, as well as the coastal section between Dunwich Heath and Minsmere Sluice. Slightly lesser, but still significant, effects would be experienced on walking routes through Sizewell Belts, the Walks, Sizewell Gap, and in nearshore waters up to 2km offshore.

6.29. Night-time effects – *Major or major-moderate night-time effects* during the construction period are anticipated by the Applicant across a wide range of landscape, seascape and visual receptors during the construction phase.

Seascape

6.30. The Councils note the assessment contained in the ES that medium–small scale effects on seascape character would arise offshore due to open views of the construction work, affecting the area within approximately 5km of the site. Beyond this area a sense of separation from the coastline marks the edge of the seascape character area and the Councils concur that construction phase visual effects would be minimal, and if present, would be dependent on clear weather and visibility. However, it is stated that for those closer to shore there would be clearer views of the closer areas of coastline at Dunwich and Aldeburgh to draw the eye, which is true, but the construction activity on the Main Development Site, especially during peak construction phase with multiple very tall cranes on site, is also likely to catch the eye giving rise to notably adverse visual effects in marked contrast to the current views of the coastline from Nearshore Waters.

6.31. The Councils are concerned that such peak construction activity with tallest plant present and peak beach landing activity, has been down-played in the ES (paragraph 13.6.72 [APP-216]) as slight and not significant, noting that this is also a designated Heritage Coast. Accepting that it would be for a fairly limited extent, peak construction activity would still have a notable adverse effect on the character of the Nearshore Waters SCT (the Nearshore Waters SCT is identified in the Suffolk Landscape Character Assessment as occupying the shallower coastal waters associated with the largely rural Suffolk coastline between Old Felixstowe and Lowestoft. We note that for visual receptors enjoying the views from close to shore (within 2km), such construction effects will be significantly adverse, and night time Nearshore Waters construction effects are noted as being significantly adverse on the seascape character area, although visual receptors may be limited to the local fishing industry and occasional recreational users. We accept that visual effects decline in significance with distance from the shore, especially beyond 5km.

Operational phase impacts – Main Development Site

Positive

6.32. There is a post-construction positive impact in that the majority of the construction land around the main site that is currently farmland, will be returned to acid grassland/heathland. This is a positive gain for the AONB landscape, the wider landscape, and biodiversity and must be managed appropriately. This restoration can, in general, only occur at the end of the construction period, although, in order to minimise the duration of adverse impacts and maximise the benefits of the restoration proposals the Councils are seeking a phased return to heathland as the construction area required reduces during the latter stages of the build. The Councils consider that such a phased approach is both

reasonable and appropriate based on experience in the restorations of minerals, and or, waste sites.

6.33. A return of the construction land of the Sizewell estate to what is substantially acid grassland and lowland heath, in combination with woodland and hedgerow planting should be regarded as a *notable enhancement of the AONB landscape,* although it will be many years before it is fully realised.

Neutral

6.34. None identified.

Negative

6.35. It is stated in the submission documents that embedded mitigation to minimise effects during operation include the design of the permanent development and associated infrastructure to limit visual prominence, including remodelling of the Northern Mound to screen lower-level infrastructure from beach views and offshore. Façade materials, colours and building heights also contribute. Construction areas will be reinstated in accordance with agreed ecological and landscape management plans. Lighting is claimed to be kept to a minimum. This will help to reduce the impact of the development, although *in most cases a residual negative impact remains.*

6.36. The buildings which comprise the Main Development Site will result in a *significant and lasting adverse residual impact* on the character and special qualities of the AONB within the locality of the main site. Furthermore, this will have an adverse impact on the purposes of the designation that is, to *conserve and enhance natural beauty of an area* as set out in s82 of the Countryside and Rights of Way Act 2000. This impact is intrinsic to the proposal due to the operational requirements of a new nuclear power station.

6.37. The Applicant has attempted to follow the mitigation hierarchy, although for some elements the Councils consider that the Applicant has failed to establish that further avoidance and mitigation cannot be achieved (see below). However, despite both embedded mitigation and secondary mitigation measures, such as planting and landscaping, *significant adverse effects will remain* for the existing landscape character of the area (Estate Sandlands, Coastal Levels, Dunes and Shingle and Inshore Waters). Therefore, it is the view of the Councils that, in addition, appropriate and robust mitigation / compensation measures for residual impacts for the period of operation and decommissioning of the power station will be required.

6.38. The Applicant claims that these landscape and visual effects would only occur over localised sections of the AONB and Heritage Coast and so the effects during operation on

these designations are therefore assessed as not significant [APP-216]. The Councils disagree with this conclusion and consider the *impact on the coastal aspects of the designations to be significantly adverse*. Whilst it is accepted that, after conclusion of construction activities, the adverse impacts will be principally limited to the nuclear power station itself and associated facilities, with landscape restoration being implemented, it is obvious that a significant impact on the coastal aspects of the designation remains throughout the lifetime and decommissioning of the power station. Unfortunately, the residual impacts of the proposal are increased by the inability of the design to fully respond to the sensitivity of the receiving environment, which does not achieve the higher standards exemplified by the design of Sizewell B (as explained further below).

6.39. When fully complete and all landscape restoration complete, it is anticipated that *the most significant residual adverse effects* arising from the permanent presence of the development *will be largely localised* around the site, both to the west and in particular along the coastal strip, and in Nearshore Waters offshore from the site.

6.40. *Significant adverse effects on visual amenity* during operation have been identified by the Applicant for views *inter alia* at:

i. Westleton Walks and Dunwich Heath
ii. RSPB Minsmere
iii. Coastal strip between Dunwich, Minsmere Sluice and Beach View holiday park.
iv. Eastbridge and Leiston Abbey
v. Sizewell Belts
vi. Views from National Trust Dunwich Heath Coastguard Cottages
vii. Views from offshore.

6.41. These areas will all be adversely visually affected during operation which will significantly alter current views which feature key landscape character elements which contribute to the value and quality of the view and replace them with visually uncharacteristic construction structures and activity. The Councils do not dispute these findings and continue to be concerned with these significant adverse impacts on some of the most important views in the local area.

6.42. These include effects on the visual amenity of the Suffolk Coast Path and Sandlings Walk.

6.43. This is similarly likely to be the case for night-time effects, assuming that the depicted effects are a realistic representation of the proposed lighting strategy. As depicted (ES Chapter 13 Landscape and Visual Appendix 13B Part 1 Representative

Viewpoints 6, 8, 9, 11, 14, 17 [APP-218] and all montages in Appendix 13B Part 2 and [APP-219]), the majority of light spill seems to arise from the B station, with relatively little additional lighting shown on the C site. The exception being localised areas of the Estate Sandlands Landscape Character Type, and visual receptors on the Dunwich to Minsmere coast area i.e., to the north of the site.

6.44. Design of the power station: The Councils understand the more sensitive design of some of the non-nuclear buildings, in particular the Operation and Service Centre (OSC) and the turbine halls, which have been carefully designed to reduce the impact following pre-application consultation with the Councils. The Applicant also removed the proposed training building from Goose Hill following requests from the Councils. However, the height and massing of these buildings still give rise to significant residual impact in the locality, which the embedded mitigation can reduce, but cannot overcome.

6.45. The Applicant has made efforts to minimise the visual impact of the design but the constraints as a result of the generic design agreed at an earlier stage with the Office of Nuclear Regulation, have meant that the efforts have not been as successful as the Councils had initially sought, given the sensitive setting of the development. The Councils are aware that the design of the nuclear buildings, including the domes of the nuclear reactor, has been set through the Generic Design Assessment and cannot be changed. However, the Councils note that the design of the domes, in their bare concrete structures, is of significantly inferior quality to the iconic design of the existing dome of Sizewell B, built thirty years ago. This significantly influences the overall visual impact, despite the more sympathetic design of the non-nuclear buildings. A secondary adverse impact is that the poor design of Sizewell C's domes will reduce the effectiveness of Sizewell B's design. Having seen the concrete of domes at the site's sister station in Flamanville, we remain concerned regarding the use of bare concrete and the ability to construct to provide a consistent colour tone.

Figure 2: EPR dome at Flamanville, showing concrete patina. Photo copyright: Bloomberg

6.46. Pylons: Inclusion of new pylons to carry an overhead export line to connect the power station to the National Grid Substation, are an *additional significant adverse impact* on the protected landscape, with at least one of them – the one most visually exposed - proposed to be significantly taller than the existing pylons exporting electricity from the sub-station to the grid.

6.47. The Applicant has sought to address the Councils' previously detailed concerns with regard to the use of overhead pylons by reducing in height some of the proposals. However, this reduction does not take away from the overall impact additional pylons will have on the overall landscape character in this section of the pylons, and the Councils' original aspiration for the proposals at Sizewell C to avoid additional overhead power lines.

6.48. The Applicant has put forward its position with regard to overhead power lines and additional pylons in the AONB, and the Councils understand that a further technical note is being prepared by the Applicant to be submitted at Deadline 2.

6.49. East Suffolk Council has accepted that the evidence put forward by the Applicant demonstrates to ESC's satisfaction that there is no acceptable alternative in this instance. ESC is therefore focused on discussing the residual impact on the landscape arising from the additional pylons that cannot be mitigated and will therefore need to be compensated

for by the Applicant. This residual impact relates to additional visual clutter from the pylons increasing the negative visual impact of the site once constructed.

6.50. ESC is concerned that alternative options to overhead power lines will result in expansion of the nuclear platform. This would result in pressure to extend the platform eastwards – towards the coastline, or westwards towards the Site of Special Scientific Interest (SSSI). Moving the platform eastwards would add to existing concerns the Councils have with regards to the position of the proposed sea defences on the shoreline and the subsequent impact this will have in relation to exposure under coastal change. Moving the platform westwards would result in additional loss of SSSI which ESC cannot support. Having reviewed documentation from the Applicant we agree that any alternative that has the potential to cause harm through release of harmful gases is not appropriate from a climate change perspective. We acknowledge that this may be avoided through careful design but the potential for harm through attack would need to be assessed fully as a potential for major accident or disaster if a gas insulated line alternative is put forward. ESC is not convinced there is space available for the Applicant to do so.

6.51. Suffolk County Council considers that the Applicant has not sufficiently demonstrated the necessity of the proposed pylons compared to less impactful alternative configurations. While it is recognised that alternative technologies, such as gas insulated lines, have associated technical challenges, the Applicant has not demonstrated adequately that these challenges are disproportionate to the impact which they would avoid. In the view of expert consultants, AFRY, commissioned by SCC, gas insulated lines could be a viable and less impactful alternative to overhead lines and pylons, and is a technology used at other nuclear power stations. According to AFRY, the use of gas insulated lines would satisfy planning requirements in respect of visual impact, while gas insulated lines had the highest reliability and availability of the technical solutions considered by the Applicant. AFRY confirmed that alternative and far less damaging gases can be used in gas insulated lines in place of the SF6 Gas which had traditionally been used for such lines.

6.52. SCC: The Applicant refers to, amongst other challenges, site constraints as major obstacle, but in the view of AFRY and SCC, the evidence is inconclusive as to whether gas insulated lines could be accommodated without further increasing the platform size. Whilst the design principle for the layout of the nuclear power station has been to avoid unnecessary clutter, the addition of pylons results in significant visual clutter and significantly increases the negative visual impact of the site. SCC is not convinced that, to date, the Applicant has done everything possible to reduce or avoid any detrimental effect

on the environment, the landscape and recreational opportunities within the AONB as required in NPS EN-1 arising from the use of these specific pylons. However, SCC does not support further encroachment into the SSSI, an important factor in considering alternative options and does not believe that the Applicant has demonstrated that such an encroachment would be necessary to avoid pylons. This summary analysis was undertaken on the information available at the time of preparation of the LIR. SCC has commissioned AFRY to provide an updated assessment of the evolving evidence base from the applicant, which will also consider any further information that may be published by the Applicant. This will be submitted as a Written Representation at Deadline 2.

6.53. SCC: If the ExA is convinced by the Applicant that the pylons are unavoidable, SCC agrees with ESC that residual impact on the landscape arising from the additional pylons would need to be compensated for by the Applicant. This residual impact relates to additional visual clutter from the pylons increasing the negative visual impact of the site once constructed.

6.54. Northern Mound: The northern mound at present provides visual screening of the Sizewell B platform and most importantly its associated ancillary infrastructure. Its removal during construction of Sizewell C with associated vegetation loss will lead to visual exposure of the Sizewell B site and C construction site until the mound is restored. It is anticipated that the restored mound will have an equivalent or enhanced screening effect, but restoration of vegetation cover will still take a notable period of time because of the challenging growing conditions.

6.55. Developments at Goose Hill: The Applicant proposes some additional permanent development outside of the platform site still within the AONB. The Councils welcome that the Applicant has changed the proposals in the DCO application, following previously raised concerns, to incorporate the training centre requirements within the Operational Service Centre building on the main nuclear island site thus reducing the need for additional buildings on Goose Hill. However, to meet policy requirements, the Applicant should demonstrate that there is an overriding need for any additional development to be located within the AONB. Whilst the Councils accept that for some of the proposals (operational car parking and security) this overriding need exists, there is a difference of opinion with regard to the proposed 600 space car park for use during outages.

6.56. Suffolk County Council considers that the proposed 600 space additional car park for use during outages at Goose Hill is not justifiable in the context of the additional damage to the AONB therefore it is contrary to the guidance in requirements of EN-6. The Applicant

has not provided conclusive evidence that is impossible/impractical for alternative parking arrangements to be implemented to avoid additional permanent land take of the AONB, for example by co-locating the outage car park with the Sizewell B outage car park (proposed to be relocated as part of the DCO proposals) or by setting up a Park and Ride solution.

6.57. East Suffolk Council considers that the evidence provided in support of the necessity of the outage car park area for the Sizewell C station separate from that proposed for the Sizewell B station is acceptable. The outage car parking for Sizewell B is proposed to utilise existing car parking at the Sizewell B site, which will not be directly accessible to the Sizewell C site necessitating in an arrangement such as a shuttle bus on the Sizewell Gap Road, Lovers Lane, and Abbey Road for outage workers to access the Sizewell C site. This would be disruptive in the local area. Additionally, although outages will be planned not to coincide with each other, unplanned outages will happen. Shared outage car parking would not be enough to service two outages at the same time resulting in the need for additional car parking. As such, ESC is content that the best solution would be a carefully designed and landscaped 600 space car park adjacent to the entrance to the site that through good design can have minimal impact on the AONB and wider landscape views when not in use.

Seascape

6.58. From a seascape perspective, much like the construction phase offshore effects, their scale and degree of harm very much depend on the distance of the receptor from the shore. Significant effects are anticipated within 2km of the shore, with their magnitude and scale declining out towards 5km off shore, and markedly so beyond that. No significant night time visual effects are anticipated, but this will depend on a suitable lighting strategy being agreed for the site. It has elsewhere been noted that the lighting effects from Sizewell B are likely to have the more dominant impact.

6.59. The Councils note that mitigation of both seascape and visual effects is provided by the retention of existing woodland and other landscape features, but that significantly adverse effects remain in and around the immediate locality of the Main Development Site and these are regarded as contrary to the purposes of designation of both AONB and Heritage Coast, and for which the Nearshore Waters SCT acts as an eastward setting.

Associated Developments impacts – permanent highway schemes

Positive

6.60. Both new highway schemes cut across existing rural predominantly arable landscapes. No positive landscape impacts are anticipated.

Neutral

6.61. Some permanent Associated Development outside of the AONB can be considered neutral in terms of their impact on the special qualities of the AONB, but they will still have a negative impact on their own landscape context.

Negative

6.62. Both new permanent road schemes – Sizewell Link Road and Two Village Bypass, will cut across a well-established landscape pattern and also affect the established landscape setting of a number of heritage assets more fully described in the heritage chapter of this report.

6.63. Two Village Bypass: The construction of the Two Village Bypass will create a road that cuts across the existing fabric and field pattern of the landscape and which has no historic connection with the evolution of that landscape which currently shows a long-established network of connectivity between places and a long-established pattern of use. In many respects the construction of any new road will have such impacts, but in this case, there are also instances of historic landscape connectivity such as that between Farnham Hall and Foxburrow Wood that will not only be lost, but also will be further adversely emphasised by new roadside planting which are not aligned with traditional landscapes features and boundaries. There are specific concerns over the impact of the road on the very long-established agricultural setting of Glemham Hall and its historic parkland. This is more fully covered in the heritage chapter of this report.

6.64. Sizewell Link Road: Much like the Two Village Bypass, the Sizewell Link Road will cut across a well-established landscape pattern and affect the established landscape setting of several heritage assets more fully described in the heritage chapter of this report. This latter point is of particular relevance because it will be the farmland setting of farm-based heritage assets which will be affected, and in some cases that is a very long-standing connection through historic ownership.

6.65. Other Highway Improvements: Other proposed highway improvements including the Yoxford roundabout are anticipated to have localised adverse effects on landscape character and visual amenity, but of a low level, localised nature. The setting of the Yoxford Conservation Area will be affected in a minor way but given that the position of the new roundabout is largely that of an existing busy road junction, the degree of change is relatively low, similarly with the roundabout to the main site access.

Associated Developments impacts – temporary schemes

Construction (of nuclear power station)

Positive

6.66. It is difficult to state that there would be any positive landscape impacts arising from the proposed temporary Associated Development schemes. They are predominantly located on arable farmland and therefore cut across and will sit within existing rural landscapes. Neutral

6.67. As above, temporary Associated Development schemes across existing rural landscapes do not tend to provide any positive or neutral impacts from a landscape perspective. It is possible for schemes to incorporate embedded and off-site mitigation but in this instance, the embedded mitigation does not neutralise the effect the proposals will have on the once rural location.

Negative

6.68. Green Rail Route: Like other linear transport developments, the rail spur will cut across the existing long-established fabric of the landscape which in part forms the landscape setting of Leiston Abbey. With bunding and security fencing adjacent to the railway line, it will have an emphasised incongruous appearance in the landscape for the duration of its presence. However, it is understood that the line is only intended to have a temporary use during the construction phase of the project and will be removed in its entirety thereafter. Any adverse effects on landscape character and visual amenity are regarded as temporary but of medium term for the duration of the rail spur's retention.

6.69. Park and Ride Sites and Freight Management Facility – the presence of these in the landscape will be of an adverse but medium-term temporary nature, based on the change from current agricultural use to transport hub facility. Where existing trees and hedgerows are shown for retention, it will be expected that every effort will be taken to fully protect these during the construction phase, so that as much of the existing fabric of the landscape can be retained intact to provide any ongoing contribution to landscape character post removal of the facility and the full restoration of the land. Visual impacts are expected to be mitigated by temporary bunding, and planting. Where planting is used, it is expected that, wherever possible, this will be positioned so that it can be retained on a permanent basis and form part of the long-term restoration of the sites - this will need to include the campus site.

Operation (after removal of facilities)

Positive

6.70. The Applicant should be required to reinstate the former Associated Development sites on land that they own in an enhanced manner, and where appropriate the Applicant should be seeking to enhance the state of the Associated Development sites being returned to agricultural use so they are of a higher quality than they were if achievable. This principle has not been agreed yet with the Applicant, but if it was implemented, would be a positive impact.

Neutral

6.71. Once the construction of Sizewell C is completed, the temporary Associated Development sites will be returned to their former state, largely of agricultural land; therefore, the operational impacts are neutral.

Negative

6.72. It will take some time for the Associated Developments to return to their former state and this could have implications with regards to replacement planting of field boundaries that will take time to mature, as an example, however, these impacts are limited.

Required mitigation

6.73. Suffolk County Council considers that the Applicant has not maximised the avoidance of impacts where it is considered reasonable and feasible to do so – or has not provided conclusive evidence that there are imperative reasons that would not allow such changes to the scheme. This is the case in relation to the proposals for pylons and overhead lines on the site where there appears to be a viable alternative technology to avoid their need and thereby significantly reduce the visual and landscape impacts. Equally, the Applicant has not evidenced the overriding need to locate the outage car park within the AONB at Goose Hill. Therefore, SCC would expect the Applicant to minimise impacts by avoiding pylons and overhead lines, and the outage car park at Goose Hill, unless this was proven operationally impossible within the site constraints. However, should their retention be proven conclusively necessary, SCC consider mitigation options to be limited, resulting in *significant residual impacts on the landscape and AONB*.

6.74. East Suffolk Council considers that the Applicant has adequately demonstrated and evidenced that they have sought to avoid impacts where feasible. ESC is therefore focused on ensuring that the Applicant provides mitigation where appropriate, for example through careful and considerate landscaping and designing of the outage car parking on Goose Hill,

and through compensation where residual impacts are identified for example from the use of pylons.

6.75. The Applicant accepts that, despite mitigation, there will be significant residual adverse effects on the existing landscape character and on the visual amenity from a number of key sites, both during construction and operation. To mitigate / compensate for these residual impacts, the Applicant proposes to make funding available through a Natural Environment Fund. The Councils are supportive of this Fund and consider that the scale of the fund needs to reflect the significant impact of the development on the AONB and wider landscape, during construction and operation of the power station.

Requirements and obligations

6.76. The Councils consider that within requirement proposals there must be the potential for revisions to any agreed proposals that permit reductions. For example, if the need for additional pylons as currently proposed is accepted by the ExA, there should be the ability for these to be designed to the lowest necessary height during the construction phase in order to minimise residual landscape impacts. Additionally, the Councils expect to be part of an agreement process for external materials to be used on some of the more prominent features on the site such as the OSC and turbine halls (see the Design section).

6.77. The Applicant proposes that the LEMP be consented as part of the specific requirement (14) for landscape works at the Main Development Site, this sits alongside requirement 4 for a project wide terrestrial ecology monitoring plan. Requirement 9 proposes the external lighting of the Main Development Site in accordance with the Lighting Management Plan. The Councils need to be confident that the Lighting Management Plan has appropriate controls within it and that we are satisfied with proposals. Similarly, for requirement 15 relating to operational lighting at the Main Development Site. Requirement 23 relates to landscape planting at Associated Development sites, the Councils will need to be satisfied that the provision of landscaping at the Associated Development sites is appropriately secured under the design requirements for those elements of the proposal. The Councils welcome requirement 24 that relates to removal and reinstatement of the Associated Development sites and welcome the opportunity to provide any advice necessary at that stage with regards to replacement planting for those areas not returning to agriculture and for the field boundary reinstatement of the areas that are returning to agricultural use.

6.78. The Natural Environment Fund would be secured by obligation.

7. Impacts on the AONB (Lead Authorities SCC and ESC)

Summary

7.1. Given the site's prominent location within the nationally designated AONB, the development would have considerable negative impact on the statutory purpose of this designation, both during construction and operation. Whilst impacts on landscape and scenic quality are a key concern in relation to the AONB, the AONB Special Qualities are more broadly defined than that.

7.2. In respect of AONB special qualities, the Councils consider that *large and medium scale effects* are likely for all the indicators of Natural Beauty and Special Qualities, some at a localised level, others affecting a wider area.

Table 2: Summary of impacts – Impacts on the AONB					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
2a	Significant impacts on the AONB and its special qualities during construction and operation: Landscape quality Scenic quality Relative wildness Relative tranquillity Natural Heritage features Health and wellbeing This could have an effect on the purpose of the designation	C / O	Negative	SCC: Avoid: Reduce impact by implementing alternative power export solution that does not require pylons and overhead lines (unless proven to be impossible within the site constraints) as set out in section 6 above. ESC/SCC: Reduce: Secure design commitments of non-nuclear buildings by requirement as set out in section 6 above. ESC/SCC: Reduce: Reduce ecology impacts as set out in section 8 below ESC/SCC: Mitigate: Secure landscape restoration through LEMP - Requirement ESC/SCC: Compensate: Residual mitigation funding through Natural Environment Fund - Obligation	NPS EN-1 notes AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. NPS EN-6 identifies potential for long-term effects on visual amenity, especially at Sizewell, given the SCH AONB.
2b	Permanent land take within the AONB	O	Negative	SCC: Avoid: Remove outage car park from its location within the AONB (unless proven to be operationally impossible) - Change ESC/SCC: Compensate: Residual mitigation funding through Natural Environment Fund - Obligation	NPS EN-1 sets out consideration of applications within designated sites should include consideration of the need for development including national considerations, the impact of consenting/not consenting on the local economy, cost of and scope for developing elsewhere outside the designated area or meeting the need for it in some other way, and any detrimental effects on the environment, landscape, recreational opportunities, and the extent

					to which that can be moderated.

Policy context

7.3. As noted above, NPS EN-6 and its Appendix EN-6 Vol II highlight the effects of a nuclear power station, in general and at Sizewell specifically, on landscape character and visual impacts on the AONB which "could have an effect on the purpose of the designation" (EN-6 Vol II paragraph C.8.81/82).

7.4. The Councils consider that the proposed development present a significant challenge to the purposes of the AONB designation as defined by s82(1) of the Countryside and Rights of Way Act 2000, that is, "conserving and enhancing the natural beauty of the area". The Councils note that the natural beauty of the designation is articulated by the Natural Beauty and Special Quality Indicators of the AONB, this document was developed by the Applicant with the AONB Partnership **(APPENDIX 1: 19)**. The quality indicators are much more complex and wider ranging than just landscape or scenic quality.

Construction and operation phase impacts

7.5. Other sections in this LIR discuss in more detail impacts on the landscape, ecology, heritage and amenity and recreation within the AONB. This section does not repeat these impacts, but aims to bring together all the relevant impacts with regard to the special qualities of the AONB, which may have an effect on the purpose of its designation.

Positive

7.6. As set out above, post-construction the majority of the construction land around the main site that is currently farmland, will be returned to acid grassland/heathland. This is a positive gain for the AONB landscape, the wider landscape, and biodiversity and must be managed appropriately.

Negative

7.7. Given its prominent location within the nationally designated AONB, the development would have considerable adverse impact on the statutory purpose of this designation, both during construction and operation. Whilst impacts on landscape and scenic quality are a key concern in relation to the AONB, the AONB Special Qualities are more broadly defined than that. Whilst other sections of this Local Impact Report discuss in more detail other special qualities, it is important to note the impact across the range of Special Qualities as identified and agreed by the Applicant, SCC, Suffolk Coastal District Council (now ESC) and the AONB Partnership in 2016 as set out in Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) Natural Beauty and Special Qualities Indicators **(APPENDIX 1: 19).**

7.8. In respect of AONB special qualities, the Councils consider *large and medium scale effects* likely for all the indicators of Natural Beauty and Special Qualities, some at a localised level, others affecting a wider area.

7.9. The Councils suggest that effects will be particularly notable with respect to:

i. Landscape quality – as discussed above, the Applicant's ES assesses significant adverse effects on local landscape and seascape character, both during construction and operation.

ii. Scenic quality – as discussed above, major and major-moderate Adverse visual effects would occur over a range of public access viewpoints, both during construction and operation.

iii. Relative wildness – This indicator recognises a sense of remoteness within the area and gives as examples the relative lack of roads and other transport routes and distance from (perceived or otherwise) significant habitation. The proposals would see the introduction of new permanent roads (the Sizewell Link Road and the site access road) into the AONB during the construction and operational phases that would be to the detriment of the relative wildness characteristic. Long distance views would be compromised by the introduction of significant industrial built structures and activity from the construction site.

A relative lack of human influence is a further element of the relative wildness. The loss of important wildlife habitat (part of the SSSI) and habitat associated with the operational and construction sites would lead to a loss of semi natural habitats. The power station would introduce additional, significantly larger than existing industrial built feature into the AONB, and during operational a beach landing facility extending into the sea. These will be highly visible from longer view receptors such as the popular visitor facilities at Coast Guard cottages and the town of Southwold.

iv. Relative tranquillity- The defined characteristic of relative tranquillity includes example indicators such as perceptions of a natural landscape, peace and quiet, stars at night and natural sounds. The construction and operation phases of the proposed development would have a negative impact on these identified ned qualities by the introduction of construction noise, traffic and significant light pollution. Power lines are explicitly referenced as a detractor from tranquillity within the defined natural beauty and special quality indicators for the AONB; the proposals include the provision of four new pylons (larger than the existing

National Grid pylons) and overhead lines, which would have a significant negative impact on the defined qualities of the AONB.

v. Natural heritage features – as discussed in the Ecology and Biodiversity section, there are wide ranging effects on the ecology and biodiversity and their natural heritage features, including permanent loss of parts of Sizewell Marshes SSSI (see section 8); and

vi. Health and wellbeing - as discussed in the Public Rights of Way (PRoW) section, there will be impacts on the public rights of way network and opportunities for recreational use. The presence of a major construction site is also expected to have some impact on the health and wellbeing of users of the AONB – see Quality of life and wellbeing section.

7.10. The Applicant's technical assessment does not identify far views of the power station during construction or operation as being significant. Notwithstanding the result of the technical assessment, the Councils consider that changes to the views from key locations including Southwold, Walberswick and Dunwich may have an important detrimental impact on the nature of the AONB and Heritage Coast.

7.11. On top of the described impacts and effects on landscape and visual receptors, the Councils consider this list of effects on AONB special qualities suggest a risk of significant *impacts on the AONB and the purpose of the designation,* a risk that has been identified in the site nomination material within EN-6 Vol II.

7.12. Heritage Coasts are established to conserve the best stretches of undeveloped coast in England. A Heritage Coast is defined by agreement between the relevant maritime local authorities and Natural England. Heritage Coasts are established to conserve, protect and enhance: the natural beauty of the coastline, their terrestrial, coastal and marine flora and fauna and their heritage features. The proposed development would have localised but nonetheless significant adverse effects on the Heritage Coast.

Required mitigation / requirements and obligations

7.13. The mitigation required, and resulting requirements and obligations, are discussed in more detail in the relevant topic sections, particularly in the landscape and ecology sections of the LIR. The Councils note that, given the significant residual impacts on the AONB Special Qualities, the Natural Environment Fund will be essential to mitigate / compensate for these residual impacts and needs to have a geographical focus on the AONB.

8. Ecology and biodiversity (Lead authorities ESC and SCC)

Summary

8.1. The Main Development Site is within, contains or is close to a number of sites designated for their nature conservation importance, including:

i. Minsmere to Walberswick Ramsar site
ii. Minsmere to Walberswick Special Protection Area (SPA)
iii. Minsmere to Walberswick Heaths and Marshes Special Area of Conservation (SAC)
iv. Site of Special Scientific Interest (SSSI) - the Sizewell Marshes Site of Special Scientific Interest (SSSI) is contained within and partly lost as a result of the development proposals, to the north-east of the site is the Minsmere to Walberswick Heaths and Marshes SSSI
v. County Wildlife Sites (CWS) – the site contains part of the Suffolk Shingle Beaches CWS and part of the Sizewell Levels and Associated Areas CWS. CWS are locally designated sites of biodiversity importance as defined in paragraph 174 of the National Planning Policy Framework.
vi. Outer Thames Estuary SPA
vii. Southern North Sea SAC
viii. As mentioned in section 7 above, the site is located within the Suffolk Coast and Heaths AONB.

8.2. These sites, and the wider Sizewell Estate, contain a diverse range of habitats (including some UK Priority habitats (under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006))) which support a range of protected and/or UK Priority species (under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006)) such as bats, water voles, natterjack toads, and a variety of reptiles and invertebrates. Many of these will be adversely affected by the proposals.

8.3. EN-1 identifies the importance of a number of these receptors, including recognising that SSSIs 'should be given a high degree of protection'. EN-6 follows the same approach to assessment and decision-making as EN-1.

8.4. The Terrestrial Ecology and Ornithology chapter of the ES [APP-224] and its subsequent Addendum [AS-181], along with the Shadow HRA [APP-145, APP-146, APP-147, APP-148, APP-149] and its subsequent Addendum [AS-173], identify a range of potential impacts arising from the proposed development on a suite of ecological receptors.

8.5. Whilst in many cases mitigation and/or compensation measures are proposed to address these impacts, the Councils consider that in a number of cases these measures are either inadequate, too vaguely defined or inadequately secured by the proposed DCO to give certainty that all ecological impacts can be satisfactorily addressed as part of the development proposal.

8.6. The Councils note that a number of ecological assessments are not fully comprehensive and do not allow for clear conclusions on the level of impact expected and the suitability of the mitigation proposals. In such cases, the Councils have used their specialists' professional judgement to indicate what the expected impact might be. In any event, there remain residual impacts which are not adequately mitigated or avoided as part of the design.

8.7. The sections below set out our concerns in relation to specific ecological receptors where we consider that impacts remain underassessed and/or under-mitigated. It is essential that these matters are addressed prior to a decision being reached in the examination of this proposal, otherwise the consented development result in avoidable ecological impacts.

8.8. Whilst not located in areas with multiple designations, the development of the Associated Development sites will still have a considerable impact on local ecology and biodiversity. In the case of the temporary Associated Development sites, required mitigation is limited to the construction period, although it needs to be ensured that appropriate reinstatement is secured. For the permanent Associated Development sites, primarily the Two Village Bypass and the Sizewell Link Road, some permanent impacts will occur that need to be sufficiently mitigated or compensated for.

Table 3: Summary of impacts – ecology and biodiversity					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
Main Development site					
3a	Habitats Regulations Assessment (HRA) – potential impacts on European designated sites – defer to Natural England for specific comments	C/O	Negative	Defer to Natural England for specific avoidance, mitigation and compensation needs	NPS EN-1: International Sites. Identifies most important sites for biodiversity are those identified through international conventions and European Directives. SSSIs are also designated as sites of international importance and will be protected accordingly. Where proposed development is within an SSSI and is likely to have an adverse effect (individually or in combination) development consent should not normally be granted unless benefits of the development outweigh impacts after mitigation.
3b	Increased recreational disturbance pressure at nearby European designated sites, as a result of displacing existing users of the Sizewell Estate and Sizewell beach areas, and as a result of temporary increase in population as a result of construction	C	Negative	Reduce: Provision of recreational access and improvements at Aldhurst Farm and Kenton Hills – requirement Mitigate: Proposed European sites mitigation fund – obligation Mitigate: Monitoring and mitigation plans for Minsmere European Sites and Other European Sites to include provision for issues caused by increase recreational disturbance - obligation Mitigate: Financial contribution to Suffolk Coast Recreational Disturbance Avoidance and Mitigation Strategy - obligation	NPS EN-1: International Sites. Identifies most important sites for biodiversity are those identified through international conventions and European Directives. SSSIs are also designated as sites of international importance and will be protected accordingly. Where proposed development is within an SSSI and is likely to have an adverse effect (individually or in combination) development consent should not

					normally be granted unless benefits of the development outweigh impacts after mitigation.
3c	Loss of part of Sizewell Marshes SSSI.	C	Negative	Avoid: Further reduce ecological impact on SSSI by redesigning the SSSI crossing (SCC requesting consideration of a full open span bridge as alternative) – change Compensate: Creation of compensation off-site Fen Meadow habitats, at Benhall, Halesworth and Pakenham - requirement Compensate: Creation of compensation Wet Woodland habitat – requirement Compensate: Creation of reedbed and ditch habitats at Aldhurst Farm – requirement Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: SSSIs 'should be given a high degree of protection'. Where proposed development is within an SSSI and is likely to have an adverse effect (individually or in combination) development consent should not normally be granted unless benefits of the development outweigh impacts after mitigation. Requirements/obligations should be considered to mitigate the harmful aspects of development.
3d	Potential permanent loss of fen meadow land, wet woodland, reedbed and ditches as a result of loss of part of Sizewell Marshes SSSI if insufficiently mitigated off-site or mitigation fails.	O	Negative	Avoid: Further reduce ecological impact on SSSI by redesigning the SSSI crossing Compensate: Fen Meadow Plan to secure Fen Meadow sites at Benhall, Halesworth and Pakenham – Requirement Compensate: Wet Woodland Plan - requirement Compensate: Fen Meadow Mitigation Strategy - obligation Monitoring: Long term management and monitoring of these compensation habitats (including at Aldhurst Farm)	NPS EN-1: SSSIs 'should be given a high degree of protection'. Where proposed development is within an SSSI and is likely to have an adverse effect (individually or in combination) development consent should not normally be granted unless benefits of the development outweigh impacts after mitigation. Requirements/obligations should be considered to mitigate the harmful aspects of development.
3e	Loss/reduction of ecological connectivity between parts of Sizewell Marshes SSSI, and between the Sizewell Marshes SSSI and Minsmere, for some species groups	C / O	Negative	Avoid: Further reduce ecological impact on SSSI by redesigning the SSSI crossing Mitigate: Control of noise and lighting during construction – requirement	NPS EN-1: SSSIs 'should be given a high degree of protection'. Where proposed development is within an SSSI and is likely to have an adverse effect (individually or in combination) development consent should not normally be granted unless benefits of the development clearly outweigh

				Compensate: Natural Environment Fund funding to compensate for residual impact, particularly in construction phase - obligation	both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs. Requirements/obligations should be considered to mitigate the harmful aspects of development.
3f	Loss of part of Sizewell Levels and Associated Areas CWS.	C / O	Negative	Compensate: Habitat creation across wider Sizewell estate after construction – requirement or obligation Compensate: Natural Environment Fund funding to compensate for residual impact, particularly in construction phase - obligation	NPS EN-1: development should aim to avoid significant harm to biodiversity and geological conservation interests. Decision-making should include consideration of sites of regional and local biodiversity and geological interest (Local Sites, Local Nature Reserves, Regionally Important Geological Sites).
3g	Temporary loss of part of Suffolk Shingle Beaches CWS, and Potential loss of part of Suffolk Shingle Beaches CWS in the longer-term during operation, including if beach recharge is required in the future Noting that vegetated shingle habitat being of national importance	C /O	Negative	Mitigate/Compensate: Appropriate long-term mitigation/compensation measures need to be provided. These are currently missing from the proposal. Requirement/obligation	NPS EN-1: development should aim to avoid significant harm to biodiversity and geological conservation interests. Decision-making should include consideration of sites of regional and local biodiversity and geological interest (Local Sites, Local Nature Reserves, Regionally Important Geological Sites).
3h	Fragmentation and possible local extinction of populations of some bat species, including the nationally rare barbastelle bats. If proposed measures fail, Councils consider an adverse impact on all bat IEFs of at least Moderate Adverse, Significant level could occur, and impact on	C	Negative	through the construction site – requirement Mitigate: Control of noise and lighting during construction – requirement Mitigate – habitat creation on site/on Sizewell Estate, including roosting and foraging habitats – requirement Compensate: Natural Environment Fund may be used to compensate for residual impacts – obligation	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation

	barbastelle could be Major Adverse, Significant.			Monitor: Terrestrial Ecology Monitoring Plan - Requirement	measures should be included as an integral part of the proposed development.
3i	Potential significant adverse impact on natterjack toad terrestrial habitat.	C	Negative	Avoid – Redesign of closest water management zone (WMZ) required to avoid impacts on most important terrestrial habitat - Change Mitigate: Code of Construction Practice (CoCP) (includes terrestrial ecology and ornithology mitigation measures, and prevention of construction impacts) - Requirement Mitigate: Landscape works including habitat creation, and requirement of Landscape and Ecological Management Plan (LEMP) - Requirement Monitor: Terrestrial Ecology Monitoring Plan - Requirement Compensate: Natural Environment Fund may be used to compensate for residual impacts - obligation	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.
3j	Adverse impacts on otter, water vole, badgers, and reptiles – assessed by Applicant as non-significant – but subject to proposed mitigation being successful	C	Negative	Mitigate: Code of Construction Practice (CoCP) (includes terrestrial ecology and ornithology mitigation measures, and prevention of construction impacts) - Requirement Mitigate: Landscape works, including Landscape and Ecological Management Plan (LEMP) requirement - Requirement Monitor: Terrestrial Ecology Monitoring Plan - Requirement Compensate: Natural Environment Fund may be used to compensate for residual impacts - obligation	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.
3k	Residual, cumulative non-significant adverse impacts represent cumulatively an erosion of biodiversity (particularly UK Priority habitats and species) in the area and are not fully addressed.	C	Negative	Compensate: Natural Environment Fund may be used to compensate for residual impacts – obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements

					or planning obligations. Mitigation measures should be included as an integral part of the proposed development.
3l	Conversion of formerly agricultural land on the Sizewell Estate semi-natural habitats/ heathland	O	Positive	Compensate/mitigate: Habitat creation across wider Sizewell estate after construction – requirement or obligation Mitigate: Landscape works, including Landscape and Ecological Management Plan (LEMP) requirement - Requirement	NPS EN-1: development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives; where significant harm cannot be avoided, then appropriate compensation measures should be sought.
3m	Impacts on nearby European, Nationally and locally designated sites as a result of changes in coastal processes.	O	Negative	Assessment – further assessment required to determine extent of likely impacts Mitigate: Natural Environment Fund may be used to mitigate for residual impacts – obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: decision-makers should ensure that appropriate weight is attached to designated sites of international, national and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity; and to biodiversity and geological interests within the wider environment.
Associated Development sites					
3n	*Northern and Southern Park and Rides, Freight Management Facility:* Loss of habitat for breeding and wintering birds – this will continue until operation ceases and the site is restored to its former condition.	C	Negative	Compensate: Natural Environment Fund may be used to compensate for residual impacts – obligation	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.

3o	*Two Village Bypass and Sizewell Link Road:* Loss of connectivity for foraging and commuting bats due to hedgerow loss/re-orientation Loss of habitat for breeding birds.	C/O	Negative	Mitigate: Landscape works, including habitat creation. Landscape and Ecological Management Plan – requirement or obligation Compensate: Natural Environment Fund may be used to compensate for residual impacts – obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.
3p	*Two Village Bypass:* Impact on Foxburrow Wood County Wildlife Site. Loss of veteran trees.	C / O	Negative	Avoid: Avoid loss of veteran trees as far as possible. Mitigate: Landscape works, including habitat creation. Landscape and Ecological Management Plan – requirement or obligation Mitigate: Code of Construction Practice – requirement Compensate: Natural Environment Fund may be used to compensate for residual impacts – obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: loss of Ancient Woodland and Veteran Trees. Ancient Woodland has high biodiversity value and once lost cannot be recreated. Development consent should not be granted that would result in its loss of deterioration unless the benefits (including need) of the development in that location outweigh the loss of ancient woodland habitat.
3q	*Two Village Bypass:* Loss of floodplain grazing marsh (a UK Priority habitat).	C / O	Negative	Mitigate: Landscape works, including habitat creation. Landscape and Ecological Management Plan – requirement or obligation Mitigate: Code of Construction Practice – requirement Compensate: Natural Environment Fund may be used to compensate for residual impacts – obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.

3r	*Sizewell Link Road:* Small amount of woodland lost to construction. Loss of ponds (one permanently). Loss of habitat and habitat fragmentation impacts on great crested newts.	C / O	Negative	Mitigate: Landscape works, including habitat creation. Landscape and Ecological Management Plan – requirement or obligation Mitigate: Code of Construction Practice – requirement Compensate: Natural Environment Fund may be used to compensate for residual impacts – obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.
3s	*Northern and Southern Park and Ride, Freight Management Facility:* Bat assemblage – subject to implementation of the identified mitigation measures.	C	Neutral	Mitigate: Secure identified mitigation measures through Code of Construction Practice and Landscape and Ecological Management Plan – requirement or obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.
3t	*Northern Park and Ride:* Great crested newts – no significant impacts subject to identified mitigation measures being implemented.	C	Neutral	Mitigate: Secure identified mitigation measures through Code of Construction Practice and Landscape and Ecological Management Plan – requirement or obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.

3u	*Two Village Bypass:* Design and mitigation measures avoid any direct impacts on the River Alde. Inclusion of mammal access(es) where embankment and bridge cross Alde River valley.	C / O	Neutral	Avoid: Secure identified measures through Code of Construction Practice and Landscape and Ecological Management Plan – requirement or obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.
3v	*Sizewell Link Road:* Inclusion of suitably sized and located mammal culverts will maintain connectivity for otters.	C / O	Neutral	Mitigate: Secure identified mitigation measures through design of proposals, Code of Construction Practice and Landscape and Ecological Management Plan – requirement or obligation	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.
3w	Yoxford Roundabout: Roadside Nature Reserve 197 is retained outside of the development boundary	C / O	Neutral	Avoid: secure retention of this site	NPS EN-1: protected species and habitats to be protected from the adverse effects of development. Decision-makers should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. Mitigation measures should be included as an integral part of the proposed development.
3x	*Two Village Bypass and Sizewell Link Road:*	O	Positive	Secure suitable design of SuDS ponds/basins – requirement or obligation	

	SuDS ponds/basins may provide new aquatic habitats (dependent on design)				
3y	Sizewell Link Road: Considerable amounts of new woodland and hedgerow planting are proposed as part of the scheme.	O	Positive	Secure identified mitigation measures through Landscape and Ecological Management Plan – requirement or obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	
3z	Two Village Bypass: New woodland planting will provide some new habitats as it matures, which will eventually be greater than that lost (although loss of any veteran trees will not be mitigated/compensated). Improvements to retained floodplain grazing marsh may compensate for the net loss of habitat area.	O	Neutral	Secure identified mitigation measures through Landscape and Ecological Management Plan – requirement or obligation Monitor: Terrestrial Ecology Monitoring Plan - Requirement	

Policy context

National Policy Statements

8.9. NPS EN-1 (para 5.3.7) sets as a general principle, that "development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives (…); where significant harm cannot be avoided, then appropriate compensation measures should be sought."

8.10. NPS EN-1 identifies the importance of a number of these receptors, including International Sites (at para 5.3.9, as well as recognising that SSSIs 'should be given a high degree of protection' (see para 5.3.10 of EN-1). It that states where a proposed development on land within or outside an SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development consent should not normally be granted (Paragraph 5.3.11). Where a residual adverse effect on the site's notified special interest features is likely, consent should only be granted where the benefits (including need) of the development at this site clearly outweigh both the impacts on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs.

8.11. NPS EN-1 notes that due consideration should also be given to regional and local biodiversity and geological designations.

8.12. These are all highly relevant considerations for the Main Development Site.

8.13. NPS EN-1 also refers to the need to aim to avoid loss of Ancient Woodland and Veteran Trees (para 5.3.14), which is relevant for the Two Village Bypass proposals. On protected habitats and species, it states that it should be ensured these "are protected from the adverse effects of development by using requirements or planning obligations" and that substantial weight should be given "to any such harm to the detriment of biodiversity features of national or regional importance which it considers may result from a proposed development" (para 5.3.17).

8.14. NPS EN-6 follows the same approach to assessment and decision-making as EN-1 (See section 3.9 of EN-6). NPS EN-6 and its Appendix EN-6 Vol II clearly refer to the potential for environmental impacts from new nuclear development. In addition, the Habitats Regulation Assessment (HRA) and Appraisal of Sustainability for Sizewell that form part of EN-6 highlight the significant environmental challenges at Sizewell, referring to the need for avoidance and mitigation as well as to probable residual impacts, given the environmental sensitivity of the area. Residual environmental impacts include those on the nationally and internationally designated sites surrounding the development and on the

nationally designated landscape within which the proposed Main Development Site wholly sits (see the context section). The likelihood of these impacts is recognised in the NPS EN-6 documents.

8.15. Specifically with regard to the Sizewell Site, NPS EN-6 Vol II highlights:

"Given the scope for mitigation of biodiversity effects identified in the Appraisal of Sustainability for sites of national importance, it is reasonable to conclude that it may be possible to avoid or mitigate impacts to an extent. However, the Appraisal of Sustainability has highlighted that the site includes permanent land take from Sizewell Marshes SSSI that could lead to direct impacts." (EN-6 Vol II paragraph C.8.64) The NPS also notes (para-C.8.65): "In view of the need for sites and the limited number of potentially suitable sites, the Government does not think the issues in relation to this criterion are sufficient to justify not including the site in this NPS. The Government has also noted that there will be further assessment of any proposal for the site at project level and that EN-1 sets out detailed consideration that must be given to issues related to nationally designated sites, should an application for development consent come forward."

8.16. In relation to the European site designations, the NPS states: "Given that the Habitats Regulations Assessment has not been able to rule out adverse impacts on sites of European nature conservation importance, the Government has carefully considered whether it is appropriate to include this site in the NPS." (EN-6 Vol II paragraph C.8.57).

8.17. The NPS goes on to consider the IROPI - imperative reasons of overriding public importance, test (in Appendix A of EN-6 Vol II) taking "into account the need for sites to be available for potential deployment by the end of 2025, the lack of alternatives, and the consideration given to compensatory measures" (EN-6 Vol II, para-C.8.57). The first of those factors is no longer applicable in the case of the Application. The Councils have not yet reached a decision as to whether there are imperative reasons of overriding public importance in this instance. We consider that there are still a number of areas where the Applicant can improve and expand its mitigation measures. The Councils reserve judgement with regards to IROPI until we discussions with the Applicant on mitigation opportunities have been exhausted. Any consideration by the Councils of IROPI would be also subject to further discussions with Natural England as the responsible authority under the HRA.

Local Plan Policy

8.18. Policy SCLP10.1 of the Suffolk Coastal Local Plan relates to Biodiversity and Geodiversity and gives a detailed account of the requirement for development to demonstrate that it maintains, restores or enhances the existing green infrastructure network and positively contributes towards biodiversity and / or geodiversity. This should be through the creation of new habitats and green infrastructure. Development should

follow the mitigation hierarchy of avoid, mitigate, compensate – compensation should be the last resort.

8.19. This policy requires new development to demonstrate environmental net gains in terms of both green infrastructure and biodiversity. Compensatory habitat should be of equal or greater size and ecological value than the area lost. The Recreational Disturbance Avoidance and Mitigation Strategy (RAMS) **(APPENDIX 1: 20**) has been prepared to provide a mechanism through which adverse impacts from increased recreational activities on European designated sites can be mitigated via financial contributions towards the provision of strategic mitigation. This does not negate the requirement for developments to provide additional measures if identified, as necessary.

Suffolk Ecology Principles for Sizewell C

8.20. The ecology principles document was endorsed by the joint local authorities' group in January 2014 **(ANNEX G**)**,** it is a set of principles that were produced by the Councils in collaboration and discussion with the National Trust, RSPB, AONB, Suffolk Preservation Society, Suffolk Wildlife Trust and the Woodland Trust.

8.21. The overarching ecology principle is that the development must follow the mitigation hierarchy and prioritise the avoidance of adverse ecological impacts before considering mitigation, compensation, offset and enhancement measures. Given the scale of the development it was always expected that offsetting of some residual impacts will be required.

Main Development site impacts

Construction phase

Positive

8.22. Although not being delivered as part of the Sizewell C project the Councils acknowledge that the Applicant previously delivered a scheme for habitat replacement at a site known as Aldhurst Farm to the north of Carr Avenue in Leiston which makes a contribution towards compensating the impact of the Main Development Site. The site was former arable farmland that was stripped back, re-landscaped and contoured, and replaced with a mix of newly created wetland basins and a heathland mosaic over the wider site. Construction of the site began around 2015, it has recently been opened for public access in some of the fields. A PRoW crosses the site. Formal consent for the proposal was granted by ESC in March 2015, DC/14/4224/FUL.

Neutral

8.23. None identified.

Negative

8.24. Ecological Mitigation and Monitoring: Notwithstanding the detailed comments set out in the sections below, the Councils consider that it is essential that for all ecological receptors where adverse impacts have been identified that the mitigation hierarchy is implemented. Impacts should be avoided in the first instance and if this is not possible then mitigation and, in the last instance compensation measures should be applied. As discussed below, the Councils consider that the mitigation hierarchy has not been fully implemented for all ecological receptors. It is also essential that adequate monitoring provisions are put in place and secured, during both the construction and operation phases, to ensure that mitigation measures are being / have been implemented successfully. In addition, a commitment to undertaking pre-commencement ecological surveys to inform the final details of mitigation measures needs to be secured.

8.25. Residual Ecological Impacts: Notwithstanding the detailed comments made in relation to ecological receptors in the sections below, the Councils consider that, as currently presented and assessed by the Applicant, the proposed development will result in residual ecological impacts. Many of these residual impacts may not be significant on their own (i.e., assessed as *Minor Adverse, Not Significant* in the ES), however, cumulatively they do represent a considerable erosion of the biodiversity of east Suffolk. Whilst it may not be possible for the project to deliver specific mitigation measures to address all of these, a compensation fund should be provided as part of the Section 106 to provide a mechanism for the funding of long-term projects in the area to provide biodiversity enhancements outside of the development red line boundary. Such a fund could be secured alongside or as part of the fund proposed to address residual landscape impacts.

8.26. Habitats Regulations Assessment (HRA): With regard to impacts on European designated sites, with the exception of potential impacts arising from increased recreational pressure, we defer specific comment on this to Natural England, affected landowners and other organisations with specialist knowledge of these issues.

8.27. In relation to impacts arising from increased recreational pressure at nearby European designated sites, the Councils have two areas of concern: First, the direct impact of the development with regard to displacing existing users of the Sizewell Estate and Sizewell beach area to nearby sites, as well as generating new visitors to these sites as a result of the temporarily increased population in the area (workers at the construction site). Secondly, the indirect impacts arising from the temporary increase in population (workers at the construction site) acting in-combination with other new residents in the area (as a result of new residential development) to create increased recreational

disturbance pressures. The Councils do not consider that either of these sources of impact have been fully assessed in the Shadow HRA which was submitted with the application [APP-145] or that adequate mitigation measures have been proposed.

8.28. With regard to the first point, the Councils note the mitigation measures proposed by the Applicant, including the provision of recreational access and improvements at Aldhurst Farm and Kenton Hills, as well as the provision of sports facilities in Leiston and other general public rights of way improvements. We also note that Monitoring and Mitigation Plans for the 'Minsmere European Sites' and the 'Other European Sites' (including the Sandlings SPA and the Alde-Ore Estuary SPA) are under preparation. It is understood that these are intended to secure a suite of onsite monitoring and mitigation measures to address issues caused by increased recreational disturbance. Whilst we welcome such plans and note that a potential mechanism to secure them is included in the draft Section 106 [AS-012], the detail of these measures (including how they will be secured and delivered by the DCO) has not yet been provided. We consider that it is essential that this is provided as soon as possible to ensure that the measures proposed are adequate to prevent impacts on the integrity of the identified European designated sites.

8.29. Suffolk Coast RAMS: With regard to the second point, as set out in our Relevant Representations, the Councils consider that the Suffolk Coast RAMS is relevant to this proposal, contrary to the assertion made in the Shadow HRA ([APP-145] paragraph 7.7.94). Whilst the Sizewell C project is predominantly the construction of a nuclear power station, it will also require housing of 2,400 workers for the construction period (9-12 years) in an onsite campus. These workers are expected to act in a similar way to any other new resident of a new residential development would do, albeit for a fixed number of years. As acknowledged in the Shadow HRA, this will include undertaking recreational activities at European designated sites. This will therefore contribute to both the direct impacts to be mitigated via the European Site Monitoring and Mitigation Plans identified above, and in-combination impacts on these sites which are known to arise from increased recreational disturbance as a result of increased numbers of residents from new residential development. The statement in the Shadow HRA (e.g., at 7.7.96 [APP-146]) that "*It is considered that proposed housing developments which are covered by the RAMS Strategy, or by project-specific mitigation commitments, do not have the potential to cause an in-combination effect due to potential increases in recreational pressure with the activities of the Sizewell C Project*" is therefore only part of the consideration, that is, a payment under

the RAMS project will cover certain elements related to new residents in close proximity to European protected sites, but it is anticipated that Natural England, as the competent authority may expect additional mitigation.

8.30. Although new residential development will have provided adequate mitigation to address this impact as part of their own schemes, new residents (workers) in the campus, who are there as a result of the Sizewell C project, will add to this in-combination effect and there is therefore a need for the Sizewell C development to mitigate this as well. Whilst in part this mitigation will be achieved through the delivery of alternative recreational opportunities as part of the development and the measures secured in the European Site Monitoring and Mitigation Plans, nevertheless the Sizewell C project will still add to the in-combination recreational pressure on European designated sites within the Suffolk Coast RAMS zone of influence and this will require addressing as part of the strategic mitigation package which is being delivered as part of the Suffolk Coast RAMS **(APPENDIX 1: 20).** The Sizewell C project must therefore make a financial contribution to the delivery of these strategic measures via RAMS in order to ensure that the development does not result in an adverse effect on the integrity of any European designated sites through in-combination increased recreational disturbance. See **(ANNEX I)** for our RAMS calculation on the sum being sought from the Applicant.

8.31. Sizewell Marshes SSSI – The ES Terrestrial Ecology and Ornithology chapter [AS-033] concludes that impacts on Sizewell Marshes SSSI are Minor Adverse and Not Significant, given on-site mitigation measures during construction and the delivery of compensation habitats at Aldhurst Farm (primarily for reedbed and open water), Benhall (DCO Work No. 7) (primarily for fen meadow and wet woodland) and Halesworth (DCO Work No. 6) (primarily for fen meadow). Changes submitted to the application also include a further habitat creation site at Pakenham in West Suffolk (DCO Work No. 18) (primarily for fen meadow and wet woodland) and the relocation of a proposed water storage facility and the creation of 0.7Ha of wet woodland (along with ditches and reedbed) in the northern part of the Sizewell Estate, alongside the marsh harrier mitigation land. The ES Addendum [AS-181] concludes that these additional habitat creation sites will not change the overall ES conclusion that the development will have a Minor Adverse and Not Significant impact on Sizewell Marshes SSSI.

8.32. Whilst it is understood that the ES conclusions are based on the identified compensation measures being successful, little recognition is given in the assessment to the difficulty in creating some of the required habitats. In particular creation of fen

meadow, suitable to compensate for the high-quality habitat which would be lost, is likely to be extremely difficult, if not impossible. The assessment of impact fails to recognise this difficulty in the assessment of the significance of the impact, although we do acknowledge that the inclusion of a third fen meadow creation site increases the probability of some successful habitat creation being achieved.

8.33. Whilst the Councils understand the rationale behind the selection of the proposed fen meadow compensation sites (Fen Meadow Strategy and Fen Meadow Compensation Study [APP-258]), the lack of complete detailed investigative surveys at each of the sites demonstrating that the required habitat creation is definitely feasible remains a concern. In particular, as recognised in section 4.1.11 of the Fen Meadow Strategy, water availability data for each site has not yet been collected or presented. Such data is critical to understanding whether the quantum of habitat creation proposed can be achieved, as well as being needed for the detailed design of each compensation site. In the absence of this information, it is not possible to be sufficiently certain that the required volume of habitat creation can be achieved and that the ES conclusion of *Minor Adverse, Not* Significant is robust.

8.34. In addition to the above, the ES also makes reference to a financial contribution to be made if fen meadow habitat creation fails to be successful. The Councils consider that the proposed triggers are not appropriate. Release of contingency funds relies on a shortfall of fen meadow creation, but the targets are combined across all three of the compensation sites and therefore do not test whether properly functioning habitat is present (i.e., the 4.5Ha target could be reached cumulatively across all sites but with one or two of the sites only contributing very small amounts of the target habitat which are not sustainable in the long term). The Councils consider that the triggers for contingency fund provision need to be more subtle than those currently proposed and need to reflect habitat provision at each of the compensation sites individually as well as cumulatively. The role of, and triggers for, the contingency fund need to be further considered with all relevant technical experts.

8.35. We note the proposed contingency strategy to provide funding for additional fen meadow mitigation within Suffolk should the proposed sites fail, but given the inherent challenge to create fen meadow, any other fen meadow site has again a significant risk of failure, so compensation may have to be available to be spent on a broader basis and/or area.

8.36. There is also no detail currently available on the value of the proposed Fen Meadow contingency fund and therefore the Councils are unable to comment on whether this will be sufficient.

8.37. In addition to fen meadow habitats, as recognised in the ES and ES Addendum, wet woodland is a component of the SSSI which supports a number of the invertebrate species for which the site is designated. It is understood that creation of compensation wet woodland habitat is proposed both on the Sizewell Estate (0.7Ha in the north) and as part of the wider habitat creation on several of the fen meadow compensation sites (at Benhall and Pakenham). However, whilst draft DCO Requirement 14B secures a plan for creation of this compensation habitat, no details on the strategy for implementation, establishment and long-term management have yet been submitted to the examination. In the absence of this strategy, we are unable to make more detailed comments on the compensation proposals at this time. Wet woodland will take a considerable amount of time to mature to a condition close to being similar to that which will be lost, well beyond the construction and early operational period of the power station. It is therefore essential that if the proposed habitat loss and compensation areas are considered appropriate, a plan for the establishment and long-term management and monitoring of the compensation habitats is appropriately secured. This must include the long-term security of all of the compensation sites (both on and off of the Sizewell Estate), with details of who will be responsible for long-term management works.

8.38. Finally, the Councils are concerned that the construction of the power station, particularly the sheet piling and cut-off wall, will result in impacts on the hydrological function of the SSSI. However, we defer detailed comments on this matter to Natural England and the Environment Agency who have a statutory responsibility and expertise in relation to this potential impact.

8.39. SSSI Crossing: The application originally included a SSSI Crossing structure comprised of an embankment and culvert and it was considered by the Councils that this option was not the optimum available technique as it involved a greater amount of direct land take from the SSSI than a bridge option and would reduce connectivity for species moving between Sizewell Marshes SSSI and Minsmere (particularly species such as water vole, birds and invertebrates). One of the changes to the proposal is a revised SSSI Crossing structure which utilises an embankment and short open span bridge rather than an embankment and culvert. As set out in the ES Addendum the revised SSSI Crossing structure would result in slightly less land take from Sizewell Marshes SSSI (approximately

0.08Ha less), the Applicant considers that it would provide better connectivity for species than a culvert option. Whilst the Councils welcome the revised design as it will result in slightly less direct SSSI loss and potentially better species connectivity (see later comments in this section related to specific species) than the option originally submitted, it will still result in more SSSI loss and severing of connectivity than a full open span bridge crossing (with no embankment). Destruction or weakening of ecological connectivity is recognised as a major factor in the decline of biodiversity, and in cases where mitigation is absent, risks the loss of valuable populations by isolating them and making them more vulnerable to extinction events. However, there is considered to be some benefit with regards to landscaping opportunities with an option involving an embankment.

8.40. Suffolk County Council considers that a full open span bridge (with no embankment) should be considered as a preferable option which has less ecological impact on the SSSI, as was proposed as an option in the pre-application Stage 2 consultation. The Applicant has not provided conclusive arguments why this is not a possible option.

8.41. East Suffolk Council considers that the proposed hybrid causeway / open span bridge offers a reasonable compromise allowing for landscaping of the causeway elements but mobility for species through the open span element.

8.42. The Councils would both like consideration for the design of the bridge and embankment to be amended to further reduce its ecological impact if achievable. For example, the Councils consider that an increase in height of the bridge above that proposed (i.e., > 4m) (which may involve a slight raising of the deck height of the carriageway) would be beneficial for species connectivity, such as some species of invertebrate (particularly those which see by positive polartaxis such as dragonflies and damselflies), by increasing light availability.

8.43. Sizewell Levels and Associated Areas County Wildlife Site (CWS) – The ES identifies that the loss of part of the Sizewell Levels and Associated Areas CWS is a *Moderate Adverse, Significant* impact, however no specific compensation measures are proposed to address this. Whilst it is acknowledged that habitat creation across the wider Sizewell Estate post-construction is proposed which will result in an increase in the amount of semi-natural habitats available in the area, this is not secured through requirements or obligations across the whole estate. Therefore, there appears to be a lack of certainty that this wider habitat creation can be adequately secured.

8.44. In addition to this, these new habitats will not be available until later into the operational phase of the power station and therefore there will be a net loss of CWS

habitats in the construction and early operation phases (while newly created habitats mature).

8.45. Suffolk Shingle Beaches CWS – The ES identifies that the long-term presence of the station sea defences will result in a *Moderate Adverse, Significant* impact on the Suffolk Shingle Beaches CWS, part of which is immediately in front of the development site. Sea level rise and coastal change is predicted to result in exposure of the hard defence in the operational lifetime of the power station with its presence meaning that there is no opportunity for any natural rollback of the CWS habitats. Despite this no additional compensation or offsetting measures are proposed to address this impact. Survey work has indicated that the vegetated shingle habitat is of national importance and therefore appropriate long-term mitigation/compensation measures should be provided.

8.46. The Councils also note that the change to the submission in relation to coastal defences moves the hard coastal defence feature closer to the sea [AS-181], with the requirement for recharge of the soft coastal defence then likely to be required (see section 11). Dependent on the frequency of such recharge activity it is possible that vegetated shingle flora will never adequately re-establish on the reconstructed CWS area and therefore permanent loss of this part of the CWS will occur even earlier in the operational life of the power station. This will result in a permanent impact of at least *Moderate Adverse, Significant* level.

8.47. Bats: To assist with the consideration of the likely impacts on bats and the suitability of the mitigation measures proposed in the application, the Councils commissioned a review of the Applicant's submission (Sizewell C – Review of Bat Impact Assessment, BSG Ecology, October 2020 **(APPENDIX 2: 3)** and Sizewell C – Review of Bat Impact Assessment: Second Review, BSG Ecology, March 2021) **(APPENDIX 2: 4**). The conclusions set out below draw on these reports, which should be read in conjunction with this Local Impact Report the Applicant's Updated Bat Impact Assessment (ES Addendum Appendices Chapter 2 Main Development Site Appendix 2.9.B [AS-208]) provides the Applicant's response to the first (October 2020) review report.

8.48. Identification of Important Ecological Features (IEFs): The Environmental Statement (ES) [AS-033] sets out the different species of bats recorded on the Sizewell Estate and assigns importance criteria for the purposes of assessing impacts on their populations. The ES Addendum [AS-181] presents the results of the 2020 survey work and does not change the importance classifications set out in the ES. This includes that the site supports a barbastelle bat population of National importance and a Natterer's bat population of

County importance, along with populations of at least eight other bat species considered of Local importance. The Councils do not disagree with the levels of importance assigned to the different species. The ES sets out five Important Ecological Features (IEFs) related to bats, Barbastelle; Natterer's bat; Leisler's bat and Nathusius' pipistrelle; Noctule and Serotine; and Daubenton's bat, brown long-eared bat, common pipistrelle and soprano pipistrelle, against which impacts are then assessed. The assessment presented in the ES and ES Addendum is underpinned by a Bat Impact Assessment, the most recent version of which is presented as the Updated Bat Impact Assessment in the Environmental Statement Addendum Appendices Chapter 2 Main Development Site Appendix 2.9.B Terrestrial Ecology and Ornithology [AS-208].

8.49. Identification of sources of potential impact: The ES identifies that construction impacts are likely to arise from multiple sources which have the potential to affect several different elements of bat's lifecycles. Impacts assessed for the construction phase are from habitat loss (roosts and foraging); habitat fragmentation (due to habitat loss); disturbance (noise) and disturbance (lighting). For the operational phase of the development only disturbance from lighting is considered by the ES to have the potential to give rise to adverse impacts.

8.50. Overall ES/ES Addendum assessment of impacts: With the exception of the impacts on barbastelle arising from habitat fragmentation, none of the impacts (loss of roosting habitat; loss of foraging habitat; habitat fragmentation; noise disturbance and light disturbance) set out in the ES are considered by the applicant to give rise to effects greater than Minor Adverse (Not Significant) following the implementation of the mitigation measures included within the application. The conclusions presented in the ES Addendum (including the assessment of the changes to the proposals) do not amend these original conclusions.

8.51. The Councils have a number of concerns about the conclusions reached in the ES/ES Addendum, particularly in relation to impacts likely to arise during the construction phase of the development.

8.52. Construction - Habitat Loss (Roosts): It is understood that the assessment of impacts on bat roosts as a result of direct loss of habitat during construction is based on consideration of the total roost resource available vs that which will be lost during construction. Whilst the Councils understand the principle of this approach, we are concerned that no quantification of the total roost resource available on the wider Sizewell Estate is included. In the absence of this we do not consider that the assertion that,

following mitigation, the loss of roosting habitat will only result in a Minor Adverse, Not Significant impact on all bat IEFs can be evidenced. Even with the implementation of mitigation measures (primarily the installation of bat boxes) there is no demonstration that an equal or greater roosting resources is available to all bat species roosting on or adjacent to the development area

8.53. With regard to Goose Hill, the area of greatest woodland loss, the conclusions on roost resource presented in the ES and Updated Bat Impact Assessment appears contradictory. Section 5.3.5 of the Updated Bat Impact Assessment [AS-208] notes that potential roosts of barbastelle (and noctule) have been recorded in Goose Hill. It is additionally noted that Section 8.7.13 of the assessment suggests that there were thought to have been pipistrelle roosts within Goose Hill plantation in 2020. Section 5.3.6 then states that, "Several locations on and close to the site boundary have significant numbers of trees with roosting potential for bats, including (…) Goose Hill (…).". The paragraph notes the principal locations of trees with potential for roosting within the plantation and comments on the lack of suitability of large parts of it due to the (young) age of the trees. This is restated (in part) in Section 8.3.13. In 5.3.7, however, it is stated that Goose Hill offers "minimal roosting resource for bats." The 2020 reports are cross referred in providing an evidence base for this assertion, which is not subject to qualification. Section 8.3.9 further notes that conifer plantation, such as that principally present within Goose Hill, is sub optimal for roosting barbastelle, providing, "limited availability of roost features.". Figure 2.9.B.1 appears to show a barbastelle roost in Hilltop Covert, which forms the western block of the Goose Hill plantation (this is separated from Kenton Hills by an access track). However, this location is referred to as being in Kenton Hills in 8.3.50 of the bat assessment, and as being in Nursery Covert (Nursery Covert is the eastern part of Kenton Hills, so these references are not necessarily incompatible. It is less apparent why the roost is shown north of the track, and where Kenton Hills is considered to extend to if the roost is considered to be in Kenton Hills) in Table 8.21.

8.54. The ground level tree roost assessment completed by Arcadis in 2020 concluded that there were 104 trees within Goose Hill that offered medium roosting potential for bats, and a further seven with high roosting potential. The statement in Section 5.3.7 (that there is minimal roosting resource for bats) does not therefore appear to accord with this finding, particularly in the absence of details of the wider roosting resource available in the area, and it is unclear what the quoted statement in 8.3.9 means in this context. Overall, the Councils consider that there is insufficient evidence to support the ES conclusion that

roost loss (following mitigation) will result in only a Minor Adverse, Not Significant adverse impact on all bat IEFs. Dependent on the roost resource available in the wider area and the actual number of known roosts or suitable roost trees to be lost, the actual impact for some bat IEFs may be significantly greater (even up to Moderate Adverse, Significant dependent on the particular IEF).

8.55. In addition to the above, a number of tree roosts have been identified along the northern edge of Kenton Hills. Whilst it is stated in the assessment that these are retained, some figures appear to show them conflicting with the bund to be constructed along this edge. It therefore appears that these trees may also be at risk and that these roosts could potentially be lost which would further increase the impact on bat IEFs.

8.56. Overall, the Councils consider that there is insufficient evidence presented to support the ES conclusion that roost loss (following mitigation) will result in only a Minor Adverse, Not Significant adverse impact on all bat IEFs. Dependent on the roost resource available in the wider area and the actual number of known roosts or suitable roost trees to be lost, the actual impact for some bat IEFs may be significantly greater (even up to Moderate Adverse, Significant dependent on the particular IEF).

8.57. Construction - Habitat Loss (Foraging): The development will result in the loss of a number of habitats suitable for foraging bats of all IEFs, and in particular we are concerned about the loss of the Goose Hill area of woodland and the potential impact that this could have especially on barbastelle and Natterer's bats.

8.58. The geographical location and importance of Goose Hill to foraging and commuting barbastelle and Natterer's bat, and the impact of the loss of much of the area will have been a consideration in concluding a significant adverse effect on barbastelle as a result of habitat fragmentation. However, the evidence provided with regard to both species indicates it may well also comprise a locally important foraging area for the respective populations, particularly breeding female barbastelles. In the absence of definitive evidence of how the area is used by different bat species throughout the year, but following the evidence which is available, a precautionary approach needs to be taken. This should be that the area does form an important foraging area of barbastelle and Natterer's bats for at least part of the year. The Councils consider that this is particularly around the breeding season when female bats will be foraging closer to their maternity roosts, and the area may also be important for newly-volant bats (those just beginning to fly).

8.59. Following this precautionary approach, it is not clear that there is robust data presented in the application to confirm that habitat creation has (or will) offset the

reduction in foraging resource currently available. As a result, it would be more robust to conclude a residual significant effect on both species rather than conclude a Minor Adverse, Not Significant effect.

8.60. Construction - Habitat Fragmentation: The ES concludes that, with the exception of barbastelle, subject to the implementation of the identified mitigation measures the impact on bat IEFs from habitat fragmentation will be Minor Adverse, Not Significant. For barbastelle the conclusion is that there will be a Moderate Adverse, Significant impact. It is noted that the changes to the project (including the revised SSSI Crossing design and the proposed inclusion of a vegetation link across the Temporary Construction Area between Kenton Hills and Ash Wood) have not altered the applicant's conclusion in relation to this.

8.61. Whilst the Councils agree with the conclusion in relation to the significant impact on barbastelle, we are concerned about the limited detail currently available on a number of the strategic mitigation measures proposed. In particular, there is a lack of detail on the parameters of the retained and created habitat corridors along Bridleway 19; across the Temporary Construction Area between Kenton Hills and Ash Wood and in the SSSI Crossing area (in addition linked concerns related to noise and light are set out below). In the absence of knowing how these corridors will be retained, established and managed (including for example widths, vegetation type, vegetation structure) it is not possible to be certain that they will be adequate to maintain the required linkages to prevent significant adverse impacts not just on barbastelle but on other species, particularly Natterer's bat, as well. It is essential that this detail is provided so that stakeholders can be confident that the parameters set will be adequate to provide the commuting habitats required. The lack of a figure showing the proposed link between Kenton Hills and Ash Wood is considered particularly limiting in this respect.

8.62. In addition to the above, the Councils do not consider the cumulative impacts from the Main Development Site (including the Temporary Construction Area) and the Sizewell Link Road have been adequately considered (please also see the ecology section of the Sizewell Link Road chapter). Both developments will require the removal of habitats suitable for foraging and commuting bats and, as the two developments connect, it is highly likely that it will be the same bat population which will experience this impact. Given that the species most likely to suffer from this impact is barbastelle (and to lesser extent maybe Natterer's bat as well), this will compound the existing conclusion of a Moderate Adverse, Significant level impact and may even give rise to a Major Adverse, Significant level impact

8.63. Construction - Disturbance (Noise): The Updated Bat Impact Assessment [AS-208] provides detail of noise modelling undertaken at 8kHz and 22kHz and assesses the likely impact on roosting and foraging/commuting bats using 8kHz for roosting and 22kHz for foraging/commuting. However, it is noted that the conclusions on construction noise impacts presented in the ES and ES Addendum only refer to 8kHz and this is used for assessing both roosting and foraging/commuting impacts. The Councils consider that this is a significant discrepancy given that the ES chapter sets out the conclusions in relation to the significance of impact. The Councils agree with the noise assessment methodology set out in the Updated Bat Impact Assessment and the use of the two different frequencies. This should form the basis for the assessment presented in the ES, not the sole use of 8kHz as currently included.

8.64. Notwithstanding the above, we are concerned that the modelling indicates that several of the retained/created habitat links to be used by foraging/commuting bats (see section on habitat fragmentation above) will experience noise levels of above the threshold set for the assessment (above 65dB at 22kHz). This is particularly the case during construction phases 1 and 2. Figures 2.9.B.14 to 2.9.B.16 in the Updated Bat Impact Assessment [AS-208] show the 22kHz noise modelling outputs with important bat foraging and commuting areas overlaid. It is understood that these figures show noise modelling with the mitigation measures described in the application in place (primarily a 5m acoustic fence and/or earth bund). These appear to indicate that during all construction phases the important habitat linkages at Bridleway 19, the link between Kenton Hills and Ash Wood and the SSSI Crossing area will be exposed to noise levels at or above the threshold set as being disturbing to foraging and commuting bats. Also, the north, south and west edges of Ash Wood, an area known to support a range of bat roosts including maternity roosts for barbastelle, will also experience similar noise levels during all phases, as will the northern edge of Kenton Hills during at least phase 1. Based on this modelling, and acknowledging that it presents a worst-case scenario, we have significant concerns that high noise levels in the range known to the disturbing to foraging/commuting bats will render the strategic mitigation measures put in place to address habitat fragmentation impacts unsuccessful. This is of particular concern for species which will rely on these linkages, including barbastelle for which a population level adverse impact is already predicted from habitat fragmentation.

8.65. The Updated Bat Impact Assessment draws on the results of monitoring at the construction of Hinkley Point C to provide demonstration that bats (including barbastelle)

will continue to use corridors around and through construction areas. Whilst the results of this monitoring are interesting, the Councils do not consider that they are directly relatable to the situation at Sizewell. At Hinkley the habitats within the construction area are on the fringe of those relied on by that barbastelle population for foraging and commuting, whereas at Sizewell the affected habitats are within the core area understood to be used by the population. There is likely to be a significant difference in population responses to the loss (be it temporary or permanent) of fringe habitat when compared to core habitat. Also, we have reservations on the sole use of static detector surveys for population monitoring, particularly as static detectors have limitations on the data that they can collect and how this can be interpreted - please see the Monitoring Strategy section below for further comment on what we consider these limitations to be.

8.66. In addition to the above, it also remains unclear how, in practical terms, unacceptable levels of noise will be defined and mitigated during construction. There appear to be potential conflicts between health and safety and further controls being implemented. At present there is nothing included in the application documentation that could be easily adapted to provide the basis for a Working Method Statement for an Ecological Clerk of Works (team).

8.67. Given the concerns set out above in relation to construction noise and the mitigation measures included to address it, the Councils consider that bat IEFs will experience impacts above the Minor Adverse, Not Significant level set out in the ES. Dependent on the mitigation measures achievable, the actual night-time noise levels generated during the works and the duration of these, it is possible that some bat IEFs may experience an adverse impact of at least a Moderate Adverse, Significant level.

8.68. Construction - Disturbance (Lighting): In relation to impacts arising from construction lighting, whilst the Councils note the additional modelling presented in the Updated Bat Impact Assessment, it is unclear why this has only been undertaken at parts of the site and we are concerned that this hasn't adequately considered lighting at all critical points along the corridors identified as being required to be kept dark. For example, there does not appear to be any detailed modelling of the southern end of Bridleway 19 where the site access plaza will be. Also, the modelling presented for the SSSI Crossing appears to be for the culvert and embankment option not the open span bridge and embankment option, it is therefore not possible to conclude the that the lighting strategy proposed for this area will be adequate to maintain sufficient darkness so that the area does not become a barrier to foraging and commuting bats. As set out in the Habitat Fragmentation section

above, details of the parameters for these corridors need to be set out and these should include acceptable light levels.

8.69. We are also concerned that reference continues to be made to keeping areas as dark as is 'reasonably practicable' and that no parameters for acceptable light levels have been set out. This does not provide confidence that bats will be a key driver in terms of limiting / controlling light during construction. It also remains unclear how, in practical terms, unacceptable levels of lighting will be defined and mitigated during construction. There appear to be potential conflicts between health and safety and further controls being implemented. At present there is nothing included in the application documentation that could be easily adapted to provide the basis for a Working Method Statement for an Ecological Clerk of Works (team). The absence of suitable parameters and controls will lead to an impact on bat IEFs greater than the Minor Adverse, Not Significant set out in the ES.

8.70. Assessment of Significance of Residual Effects: Notwithstanding the Council's concerns set out above that construction habitat loss, noise and lighting will result in greater impacts than presented in the ES, no conclusion is drawn in the application documents on what the predicted significant residual effect of habitat fragmentation on barbastelle will mean for the population.

8.71. For 9-12 years during construction connection of local landscape features known to be used by barbastelle will be affected, as some of these features and linking hedgerows will be within the footprint of the site and its construction area. The construction footprint will result in both east-west and north-south commuting features being lost. This is likely to result in barbastelles taking more circuitous routes to foraging areas: for males, which range considerable distances this may be sustainable; for females, which forage close to roost sites when breeding, and for volant young with limited ranging ability, this may prevent them reaching preferred areas for feeding.

8.72. If barbastelle continues to roost within the EDF Estate, there is likely to be a population level effect on the species as a result of this effective displacement of females and young bats from foraging habitats due to the construction area representing a partial barrier to movement. Alternatively, the colony might relocate into the wider area, potentially competing with other colonies for resources. The extent of decline might be possible to model, but how populations will respond cannot be concluded with certainty. In the very worst case, the development could result in the local extinction of the barbastelle population. The lack of conclusion on this in the ES and the Updated Bat Impact Assessment is considered to be a significant omission and effects not only consideration of

the robustness of the conclusions presented but also consideration of how an adequate monitoring strategy can be designed.

8.73. For Natterer's bat, the assessment concludes that due to the more generalist habitat preferences of the species, the colony is likely to adapt to habitat fragmentation impacts resulting from construction, but that it will become more 'vulnerable'. It is unclear in this context whether vulnerability could result in a population-level effect as a result of additional impacts arising from the Sizewell Link Road, for example. This, and inherent uncertainty in the conclusions regarding the magnitude of effect on the county-level important population are of significant concern. As with barbastelle, the lack of conclusion on this in the ES and the Updated Bat Impact Assessment is considered to be a significant omission and effects not only consideration of the robustness of the conclusions presented but also consideration of how an adequate monitoring strategy can be designed.

8.74. Bats – Conclusion: The ES concludes that, subject to the implementation of the identified mitigation measures, with the exception of the impact of habitat fragmentation on barbastelle, no bat IEFs will experience construction impacts above Minor Adverse, Not Significant. For barbastelle, habitat fragmentation is considered likely to result in a construction impact at a Moderate Adverse, Significant level. For the reasons set out above, the Councils consider that there are a number of limitations in the assessment which undermine these conclusions. Impacts from construction habitat loss, construction noise and construction lighting all have the potential to result in impacts of greater significance than those predicted in the ES. Of additional particular concern is the fact that construction noise and lighting have the potential to adversely impact the mitigation measures being put in place to address impacts arising from fragmentation of connectivity due to habitat loss. In the absence of parameters relating to the retained habitat corridors we do not consider that it is possible to be confident that the habitat mitigation measures identified can be adequately implemented. It is the Council's opinion that the failure of these measures would result in adverse impacts for all bat IEFs (particularly foraging and commuting) of at least a Moderate Adverse, Significant level.

8.75. Overall, the Councils consider that the following populations (and therefore bat IEFs) are at the most risk:

i. Barbastelle (because of the likely relatively small population size, the presence of a confirmed breeding population meaning that habitats are likely to be more important at more critical times of the year, the observed home ranges on site being considerably

smaller than the Core Sustenance Zone in the literature, their prey requirements and their aversion to noise and lighting);

ii. Natterer's bat (because of the presence of a confirmed breeding population meaning that habitats are likely to be more important at more critical times of the year, the potential for the loss of up to 60% of identified core habitat areas and their aversion to noise and lighting);

iii. Brown long-eared bat and Daubenton's bat (because of their relatively small Core Sustenance Zones, reliance on linear features, aversion to noise and lighting and the presence of a confirmed breeding brown long-eared bat population meaning that habitats are likely to be more important at more critical times of the year and they would be separated from roosting and foraging habitats by the construction area); and

iv. Common and Soprano pipistrelle bats (whilst these species are relatively more common, they have small Core Sustenance Zones and require linear features in the landscape to navigate and are therefore more susceptible to the impacts that are likely to occur from the construction).

8.76. Natterjack Toad: The ES identifies that this is a receptor of National importance and therefore has 'High' value in the EIA. The ES concludes that subject to mitigation measures the development will result in a *Minor Adverse, Not Significant* impact on this receptor. The Natterjack toad population is small and is restricted to an area on the edge of the Main Development Site, they are therefore particularly vulnerable to adverse construction impacts. In particular construction of the Water Management Zone (WMZ) north-east of Goose Hill poses a potential threat to terrestrial habitat used by this population, especially an area of rabbit warren used as a hibernation site. We consider that the loss of this area would be significantly detrimental to this vulnerable population and therefore a revised design is required in this area to avoid any impact on this feature. If changes to the design of the WMZ can be achieved, alongside the other mitigation measures identified in the application, then we consider that the conclusion presented in the ES in relation to the level of impact is likely to be correct (subject to confirmation of this by Natural England). Natterjack toad are a protected species and therefore all measure will need to be in accordance with the required Natural England licence.

8.77. Otter: Survey work undertaken in 2020 has provided updated information on the otter usage of the Main Development Site and the immediately surrounding area. Whilst the results of this survey work are referenced in the submitted Code of Construction

Practice (CoCP) [AS-273], the required mitigation measures have not been updated. This must be corrected to ensure that adequate and effective mitigation is secured.

8.78. Water Vole: The ES concludes *Minor Adverse, Not Significant* impacts on water vole based on displacement of animals to adjacent habitats and translocation to Aldhurst Farm. The ES Addendum (January 2021) [AS-181] presents an updated conclusion based on survey work undertaken in 2020 which showed a lower water vole population across the Main Development Site area than previously recorded (although it is noted that a 'medium' population is now recorded as present at Aldhurst Farm which is an increase on that recorded previously). The results of the 2020 survey work do not change the overall conclusion presented in the ES that the water vole population at the site is of National importance and therefore is given a 'High' value in terms of Environmental Impact Assessment, nor that the proposed development will result in a *Minor Adverse, Not Significant* impact on this receptor following the implementation of the identified mitigation measures. We note that the ES Addendum considers that there may be no need for water vole translocation from the Main Development Site to Aldhurst Farm based on the population size recorded in 2020. We would highlight that, as recognised in the ES Addendum ([AS-181] section 2.9 d) iii) b) paragraph 2.9.23), water vole populations are cyclical and therefore the potential need for translocation should not be discounted should the population have increased again by the time mitigation needs to be implemented.

8.79. The ES does not consider that fragmentation of populations by the SSSI Crossing is significant, speculating that water voles may use the culvert provided. The Councils do not consider that this conclusion has been appropriately evidenced. The change to the SSSI Crossing structure from culvert to a bridge design would help reduce the amount of fragmentation which could occur, and we therefore maintain the consideration that a bridge option is preferable to a culvert option in this regard.

8.80. The ES also states that even if the SSSI Crossing structure does cause fragmentation of the connectivity between the Sizewell and Minsmere water vole populations, they are robust enough to survive on their own. However, the amount of water vole habitat impacted by construction quoted in the ES appears to be understated when compared to the Water Vole Mitigation Strategy Appendix. In particular the receptor site at Aldhurst Farm is portrayed as much smaller than the amount of habitat to be lost from the SSSI. We do however note that a mammal culvert is proposed to be installed between Aldhurst Farm and Sizewell Marshes, under Lovers Lane. This is welcomed as, dependent on the

correct design and implementation, this link will help prevent separation between Aldhurst Farm and Sizewell Marshes SSSI, and the potential creation of a third discrete population.

8.81. The water vole population at Sizewell is, as recognised in the ES, of National importance and is therefore correctly attributed a 'High' importance in the EIA. It is also contiguous with the nationally important population at Minsmere to the north. Whilst mitigation measures are identified in the application (including the Updated Water Vole Method Statement, ES Addendum Appendix 2.9.C5 [AS-209]) which could, if successful, reduce the impact on this receptor to a *Minor Adverse, Not Significant* impact, this is not certain and therefore robust monitoring is required to be secured as part of the DCO. It is recognised that Requirement 4 of the draft DCO secures the production and implementation of a project wide terrestrial ecology monitoring plan to address the need for holistic ecological monitoring. It is essential that the mitigation proposed is successful, otherwise the impact is likely to be greater than that assessed and may be significant (potentially *Moderate Adverse, Significant*).

8.82. Reptiles: The ES identifies the reptile assemblage on the site as an IEF of Medium (County) importance. It concludes a *Minor Adverse, Not Significant* impact on this feature subject to the implementation of mitigation measures. The ES Addendum highlights that following survey work undertaken in 2020, lower population sizes of all four reptile species are considered to be present on site than those originally considered present in the ES. This does not change the overall conclusion presented on the importance of the feature or the level of impact considered likely following the implementation of mitigation.

8.83. The mitigation proposed predominantly relies on the translocation of animals to pre-prepared receptor sites on the wider Sizewell Estate and at Aldhurst Farm. Given the lowering of the population size estimates highlighted in the ES Addendum (Table 2.35, [AS-181]) it is vital that pre-commencement surveys are undertaken to establish the likely reptile population sizes at the time mitigation works commence so that it can be ensured that adequate receptor land is available. Provided it can be demonstrated that an adequate amount of receptor land is available and ready to accept animals (and has not already been colonised), the Councils accept the impact assessment presented. A robust monitoring programme during construction and operation is required to ensure mitigation strategy is working, particularly for snake species.

Operational Phase

Positive

8.84. Restoration of land used for temporary construction area and Biodiversity Net Gain: Once construction is complete the restoration of land to semi-natural habitats, as opposed

to agricultural land, will provide a biodiversity benefit. This is assessed as being *Moderate Beneficial, Significant* in the ES. Whilst the submitted Biodiversity Net Gain report [APP-266] concludes a 10.20% net gain in biodiversity unit values for habitats (using Department for Environment, Food and Rural Affairs Metric v2) for the Main Development Site (and an approximate 18% net gain combined for the Main Development Site and the Associated Development sites), we consider that this claimed gain must be treated with caution. As acknowledged in the Biodiversity Net Gain report, the metric calculations cannot account for impacts on designated nature conservation sites (on which the ES identifies direct impacts – in particular see section above in relation to Sizewell Marshes SSSI) and nor can they account for impacts on species or more subtle ecological impacts such as fragmentation of connectivity caused by habitat removal during construction (even if these habitats are eventually replaced). Given that there is the potential for the project to have unmitigated residual biodiversity impacts, the Councils consider that the conclusions presented in Biodiversity Net Gain report must be used as only part of the consideration of the overall ecological impact of the project.

8.85. The Councils would urge that a phased approach is taken to the restoration of land (particularly within the Temporary Construction Area/LEEIE) to ensure that parts are released at the earliest possible opportunity. This would enable habitat creation and restoration to begin ahead of the completion of the whole construction phase which would start to deliver any gains sooner.

Neutral

8.86. All restoration of land to its prior use (which is principally agricultural) will have a neutral ongoing impact.

Negative

8.87. Bats - Disturbance (Lighting): The ES concludes that operational lighting will result in a Minor Adverse, Not Significant level impact on bat IEFs. Whilst this conclusion may be correct, illustrative plans only appear to be provided for specific areas. In the absence of operational lighting plans for the whole site and the levels of impact identified cannot be confirmed.

8.88. Permanent land take: All permanent development will cause permanent land take and potentially severance of habitats.

8.89. Recovery of species and habitats: Species whose population will be more severely affected by the construction, and habitats temporarily affected by construction may take

many years to recover. Impacts will therefore last well into the operational period of the power station.

8.90. Monitoring: It must also be ensured that the Terrestrial Ecology Monitoring Plan, secured by Requirement 4, adequately covers the operational phase of the development as well as the construction phase.

Associated Development Site impacts

Northern Park and Ride site

Construction (of nuclear power station)

Positive

8.91. None identified.

Neutral

8.92. Great Crested Newts: The ES [APP-363] states that subject to the implementation of the identified mitigation measures the Northern Park and Ride will result in a *Minor Adverse, Not Significant* impact on local great crested newt populations. It is therefore essential that the required mitigation measures are adequately secured as part of the proposal. It should also be ensured that monitoring measures are secured to demonstrate that the mitigation has been successful, and if it has not that further mitigation measures can be identified and implemented.

8.93. Bats: The ES [APP-363] recognises the bat assemblage using this site as an Important Ecological Feature and identifies mitigation measures, particularly in relation to habitat loss (roosting, foraging and commuting) and disturbance (lighting, noise and visual). Whilst appropriate mitigation measures are identified it is essential that these are adequately secured and implemented.

Negative

8.94. Breeding and Wintering Birds: Although scoped out of the EIA (ES Chapter 7 [APP-363]), nevertheless, the temporary use of the site as a park and ride will result in the loss of habitat for breeding and wintering birds. Whilst it is acknowledged that this will be below the level of significance for assessment in the ES, nevertheless it will result in a local adverse impact on these receptors.

Operation (after removal of facilities)

Positive

8.95. None identified.

Neutral

8.96. Once the construction of Sizewell C is completed, the temporary Associated Development sites will be returned to their former state, largely of agricultural land; therefore, the operational impacts are neutral.

Negative

8.97. None identified.

Southern Park and Ride site

Construction (of nuclear power station)

Positive

8.98. None identified.

Neutral

8.99. Bats: The ES [APP-394] recognises the bat assemblage using this site as an Important Ecological Feature and identifies mitigation measures, particularly in relation to habitat loss (roosting, foraging and commuting) and disturbance (lighting, noise and visual). Whilst appropriate mitigation measures are identified it is essential that these are adequately secured and implemented.

Negative

8.100. Breeding and Wintering Birds: Although scoped out of the EIA (ES Chapter 7 [APP-394]), nevertheless, the temporary use of the site as a park and ride will result in the loss of habitat for breeding and wintering birds. Whilst it is acknowledged that this will be below the level of significance for assessment in the ES, nevertheless it will result in a local adverse impact on these receptors.

Operation (after removal of facilities)

Positive

8.101. None identified.

Neutral

8.102. Once the construction of Sizewell C is completed, the temporary Associated Development sites will be returned to their former state, largely of agricultural land; therefore, the operational impacts are neutral.

Negative

8.103. None identified.

Freight Management Facility

Construction (of power station)

Positive

8.104. None identified.

Neutral

8.105. Bats: The ES [APP-523] recognises the bat assemblage using this site as an Important Ecological Feature and identifies mitigation measures, particularly in relation to habitat loss (roosting, foraging and commuting) and disturbance (lighting, noise and visual). Whilst appropriate mitigation measures are identified it is essential that these are adequately secured and implemented.

Negative

8.106. Breeding and Wintering Birds: Although scoped out of the EIA (ES Chapter 7 [APP-523]), nevertheless, the temporary use of the site as a freight management facility will result in the loss of habitat for breeding and wintering birds. Whilst it is acknowledged that this will be below the level of significance for assessment in the ES, nevertheless it will result in a local adverse impact on these receptors.

Operation (after removal of facilities)

Positive

8.107. None identified.

Neutral

8.108. Once the construction of Sizewell C is completed, the temporary Associated Development sites will be returned to their former state, largely of agricultural land; therefore, the operational impacts are neutral.

Negative

8.109. None identified.

Two Village Bypass

Construction and operation

Positive

8.110. Sustainable Drainage Systems (SuDS) Ponds: The proposal will include the construction of new ponds as part of the drainage strategy. These must be designed to maximise their value for wildlife.

Neutral

8.111. Mitigation, Monitoring and Long-Term Management: It is essential that a LEMP is secured to ensure that appropriate long-term management of habitats associated with

Two Village Bypass is delivered. At present this does not appear to be secured either as part of the Code of Construction Practice (CoCP) (Requirement 2) or through any of the other draft DCO Requirements. Provisions need also be made for undertaking pre-commencement ecological surveys to inform the final details of mitigation measures.

8.112. Whilst a monitoring plan is secured by Requirement 4 of the draft DCO (Project Wide Terrestrial Ecology Monitoring Plan), it is not clear that additional mitigation/compensation measures to be implemented if the initial measures are unsuccessful are adequately secured. The Code of Construction Practice (CoCP) [AS-273] could potentially be used secure such measures during the construction phase, with the Landscape and Ecological Management Plan (LEMP) used to continue them through into the operational phase (subject to the comment above regarding securing the LEMP).

8.113. River Alde: Rivers are a UK Priority habitat; however, it is noted that the design of the proposal and mitigation measures proposed should avoid any direct impacts on this habitat.

8.114. Otter: Impacts on otters can be considered neutral if adequate provision is made where the bridge and embankment cross the Alde Valley, in the form of suitably sized and located mammal culverts, to allow the continued movement of otter along the valley without the need for them to cross the new road.

Negative

8.115. Foxburrow Wood CWS: At its closest point there is only approximately a 15m buffer between the Two village Bypass and Foxburrow Wood CWS. Whilst the ES recognises the importance of the wood, this buffer seems unlikely to be sufficient to prevent impacts on trees on the woodland edge, either during construction (through the potential for root damage) or in the future (due to the presence of the cutting restricting future growth). It is also not clear what impact the proposed cutting will have on water availability for trees on the edge of the wood, changes in this could in turn result in adverse impacts on the woodland edge.

8.116. Other woodland (not Foxburrow Wood CWS): The ES [APP-425] and ES Addendum [AS-184] identify that 0.73Ha of lowland mixed deciduous woodland is present within the site boundary. Of this area, approximately 0.4Ha is within the area required permanently for the proposed development and a further 0.1Ha would be temporarily lost to facilitate construction and replanted at the end of the construction phase. To compensate for this loss approximately 1.59Ha of new woodland is proposed to be planted. Whilst the proposed new planting would provide a net gain in the amount of woodland in the area,

the ES assertion that it would be functional 10 years after planting is considered to be overly optimistic. It will take much longer than this for functioning woodland to establish and therefore the quantum of this habitat proposed will not be available until much later. Whilst this is not a reason not to support the planting, it should be part of the consideration when weighing its benefits against the other impacts of the Two Village Bypass.

8.117. Loss of veteran trees: Whilst the route proposed for the Two Village Bypass avoids direct impacts on ancient woodland, it will result in the loss of a number of veteran trees. In particular such trees are located alongside the track between Farnham Hall and Foxburrow Wood, and in the east-west hedge line between Mollett's Farm and Friday Street Farm Shop. Such losses are disappointing, potentially contrary to NPPF paragraph 175 (c), and must be avoided wherever possible. Whilst it is not possible to directly compensate for the loss such of veteran trees, their value does not appear to have been recognised in the ES and nor has significant new woodland planting (or any other measure) been proposed as a way of providing indirect compensation.

8.118. Hedgerow loss: Whilst new hedgerow planting (at a greater level than that to be lost) is proposed as part of the scheme, this will follow the new road corridor and will therefore be largely perpendicular to the existing hedgerows that will be lost. Therefore, whilst the total amount of hedgerow planted is greater, it will not necessarily provide the same connectivity as is currently present in the landscape (e.g., between Foxburrow Wood CWS and Pond Wood CWS). Such loss of connectivity would be potentially particularly significant for bats (see below) and other non-flying terrestrial protected and UK Priority mammal species such as badger and hedgehog.

8.119. Floodplain Grazing Marsh: The scheme will result in the permanent loss of 2.91Ha of floodplain grazing marsh, a UK Priority habitat. Whilst the ES [APP-425] considered this habitat of relatively low ecological value, the ES Addendum [AS-184] now recognises this loss in the context of the wider value of this habitat within the River Alde valley. To compensate for this loss, it is proposed to create new and enhance existing habitat (a total area of approximately 2.77Ha) within the red line boundary of the Two village bypass. This would involve improving the diversity of the sward in remaining areas of grazing marsh and the creation of new wetland channels. Whilst this would create a qualitative improvement in habitats in the long term (subject to securing an appropriate LEMP for the proposal – please see our comments on this above), there would still be a net loss of habitat area overall.

8.120. Bats: The Two Village Bypass will sever a number of foraging and commuting routes used by bats, and whilst new vegetation planting is proposed as part of the scheme it will not directly replace the connectivity which will be lost (see Hedgerow section above). In addition to the replacement planting, part of the mitigation for loss of connectivity for bats is the proposal to allow tree canopy growth over the cutting in the vicinity of Foxburrow Wood. This does not seem practical (or safe) from a highway perspective and therefore seems unlikely to be sufficient to maintain the required landscape connectivity. Also, whilst a footbridge is proposed in the vicinity of Foxburrow Wood this has not been designed as a 'green bridge' which would offer the opportunity to address some of the concerns over loss of connectivity raised above.

8.121. Breeding Birds: The ES identifies the breeding bird assemblage as an important ecological feature and concludes that there would be a *Minor Adverse, Not Significant* impact on this receptor from habitat loss/fragmentation and disturbance effects. The conclusion in relation to habitat loss is based on the fact that there are extensive areas of equivalent alternative habitat available in the surrounding area. Whilst this is the case, this habitat is likely already occupied by the same species as which will be displaced from the Two village bypass area. It therefore appears unlikely that there will sufficient alternative habitat available in the surrounding area to support all of the displaced birds and the proposal will result in the net loss of breeding birds, this appears likely to be in line with the significance concluded in the ES.

Sizewell Link Road

Construction and operation

Positive

8.122. None identified.

Neutral

8.123. Mitigation, Monitoring and Long-Term Management: It is essential that a LEMP is secured to ensure that appropriate long-term management of habitats associated with Sizewell Link Road is delivered. At present this does not appear to be secured either as part of the Code of Construction Practice (CoCP) (Requirement 2) or through any of the other draft DCO Requirements. Provisions must also be made for undertaking pre-commencement ecological surveys to inform the final details of mitigation measures.

8.124. Whilst a monitoring plan is secured by Requirement 4 of the draft DCO (Project Wide Terrestrial Ecology Monitoring Plan), it is not clear that additional mitigation/compensation measures to be implemented if the initial measures are unsuccessful are adequately secured. The Code of Construction Practice (CoCP) [AS-273]

could potentially be used secure such measures during the construction phase, with the Landscape and Ecological Management Plan (LEMP) used to continue them through into the operational phase.

8.125. Otter: Impacts on otters can be considered neutral if adequate provision is where the new road crosses watercourses that adequate provision, in the form of suitably sized and located mammal culverts, to allow the continued movement of otter along the watercourses without the need for them to cross the new road.

Negative

8.126. Bats: The survey results for the Sizewell Link Road presented in the ES suggest that the habitats that it passes through are of relatively poor quality for commuting/foraging bats and that any bats displaced from the Sizewell Link Road route will find habitats in the surrounding countryside. However, this does not take into consideration that one of the impacts from the Main Development Site is that bats from that area may need to travel further west to get around the construction laydown area if connectivity through the Temporary Construction Area/LEEIE cannot be adequately maintained. This would take them into the Sizewell Link Road area. If the area crossed by the Sizewell Link Road already contains habitats which are of relatively poor quality for commuting/foraging bats and the construction and operation of the Sizewell Link Road will make this worse, with woodland and hedgerow loss, then this will exert an even greater pressure on the bat populations from the Main Development Site and make them even more isolated (see project-wide Bats section above). We consider that it is essential that impact assessment and delivery of mitigation measures is holistic to assess and address impacts arising from both the Main Development Site and Associated Development sites (such as the Sizewell Link Road) in combination.

8.127. Great Crested Newts: The ES identifies impacts on great crested newts particularly from habitat loss and habitat fragmentation during construction, although it goes on to conclude that these impacts are *Minor Adverse, Not Significant* as they will only be short term and are reversible. Whilst they may only be short term in relation to the operational life of the road, nevertheless they will occur over at least the entire construction period (approximately three years) and therefore it is essential that adequate mitigation measures, controlled under the appropriate Natural England licence, are put in place to protect the populations present.

8.128. Farmland Birds: The ES identifies the farmland bird assemblage as an important ecological feature and concludes that there would be a *Minor Adverse, Not Significant*

impact on this receptor from habitat loss/fragmentation and disturbance effects. The conclusion in relation to habitat loss is based on the fact that there are extensive areas of equivalent alternative habitat available in the surrounding area. Whilst this is the case, this habitat is likely already occupied by the same species which will be displaced from the Sizewell Link Road area. It therefore appears unlikely that there will sufficient alternative habitat available in the surrounding area to support all of the displaced birds and the proposal will result in the net loss of farmland birds; this appears likely to be in line with the significance concluded in the ES.

8.129. Woodland and Hedgerows: The construction of the Sizewell Link Road will result in the loss of approximately 0.4Ha of lowland mixed deciduous woodland (a UK Priority Habitat). Whilst the proposed new planting (of approximately 13.1Ha) would provide a net gain in the amount of woodland in the area, the ES [APP-461] assertion that it would be functional 10 years after planting is considered to be overly optimistic. It will take much longer than this for functioning woodland to establish and therefore the quantum of this habitat proposed will not be available until much later.

8.130. Construction will also result in the loss of approximately 4.5km of hedgerow (approximately 1.3km of which is classified as 'Important' under the Hedgerow Regulations). Whilst it is noted that a considerable amount of new hedgerow planting is proposed along the route (approximately 12.8km), nevertheless this will take time to mature until it can function in a similar way to the habitat to be removed.

8.131. Whilst we do not consider that either of the above are reasons not to support the proposed planting, they should be part of the consideration when weighing its benefits against the other impacts of the Sizewell Link Road.

8.132. Ponds: The proposal will result in the permanent loss of one pond and the temporary loss of seven others (to be reinstated post construction). It is noted that 14 new/restored ponds will also be created as part of the proposal. It must be ensured that any new ponds created are within appropriate terrestrial habitats to support species which have both aquatic and terrestrial elements to their lifecycle. Where new ponds are also required to perform a drainage function, they must be designed to maximise their value for wildlife.

Yoxford Roundabout

Construction and operation

Positive

8.133. None identified.

Neutral

8.134. Roadside Nature Reserve 197: The exclusion of this Roadside Nature Reserve (designated for the presence of a protected fungi species) from the development boundary is welcomed. As recognised in the ES [APP-494] mitigation measures are required to ensure that there are no indirect impacts on this site as a result of the proposal. These will be delivered through the CoCP.

Negative

8.135. None identified.

Required mitigation (Main Development and Associated Development sites)

8.136. The Councils consider that it is essential that for all ecological receptors where adverse impacts have been identified the mitigation hierarchy is implemented. Impacts should be avoided in the first instance and if this is not possible then mitigation and, in the last instance, compensation measures should be applied. As set out in the sections above, the Councils consider that the mitigation hierarchy has not always been fully implemented for all ecological receptors. It is also essential that adequate monitoring provisions are put in place, during both the construction and operation phases, to ensure that mitigation measures are being/have been implemented successfully. Pre-commencement ecological surveys are also required to inform the final details of the necessary mitigation and monitoring.

8.137. Whilst the Councils welcome a number of the proposed mitigation schemes, as noted above, we do not consider that the Applicant has always fully followed the mitigation hierarchy, and residual ecological impacts remain that require mitigation.

8.138. Specifically, as set out above, the Councils consider that the Applicant should, unless proven impossible, improve the design of the SSSI crossing so that it reduces the impact on the SSSI as much as possible – SCC's preference is to replace the proposed short bridge with a full bridge solution, but if this is not considered possible, both Councils would like to see the design amended to increase the under-bridge height.

8.139. Residual Ecological Impacts – Notwithstanding the detailed comments made in relation to ecological receptors in the sections above, the Councils consider that as currently presented and assessed the proposed development will result in residual ecological impacts, including many which whilst not significant on their own (assessed as *Minor Adverse, Not Significant* in the ES) cumulatively represent an erosion of the biodiversity of east Suffolk, which needs to be compensated where it is not possible for the project to deliver specific mitigation measures to address all of these.

8.140. Bats – Mitigation Strategy: Notwithstanding the significant concerns set out above, the construction mitigation strategy for bats is included in the Construction Code of Practice (Table 6.1) [AS-273]. However, this has not been updated to reflect the submitted Updated Bat Impact Assessment and is therefore out of date. Given that construction mitigation measures are secured by the DCO via the Construction Code of Practice this is of concern and must be addressed.

8.141. Bats – Monitoring Strategy: The Updated Bat Impact Assessment does not include monitoring protocols. It is stated in the text of the assessment (at various points) that a Terrestrial Ecology Monitoring Plan is in preparation. A robust monitoring strategy is essential to demonstrate that mitigation measures implemented are being successful or if they are not where additional measures need to be implemented. However, we have number of concerns about potential monitoring limitations.

8.142. The Updated Bat Impact Assessment commits to providing further information on / monitoring the following under the auspices of the Terrestrial Ecology Monitoring Plan (this is not exhaustive list of references to the Plan).

i. Light levels and associated spill into surrounding habitats used by bats (4.1.15).
ii. Bat activity in response to light levels (8.2.121).
iii. Bat boxes (annually) during construction (4.1.16).
iv. The “extent of use of dark corridors” in conjunction with bat box use (4.1.17).
v. The effects of noise levels on bats (noting the confidence limits on the assessment of impacts) (8.3.60), with a view to determining whether construction activities were likely to require a licence (8.3.66).
vi. The use of “roost locations” (the implication is that this goes beyond bat boxes) and key foraging and commuting routes to investigate key impacts and quantify disturbance (8.3.61).

8.143. In the context of a commitment to monitoring foraging and commuting activity, it is concerning that the static survey work in 2020 was not complemented by other survey work designed to collect data on indicative bat numbers and behaviour (some back-tracking work was completed, but this was small-scale). This does not seem to be considered a limitation of the 2020 work, as the key stated aim of the static survey was to provide a basis for monitoring i.e., it was designed with this limitation built in.

8.144. Without an understanding of bat behaviour or an indication of the numbers of barbastelle and Natterer’s bat involved in generating the data recorded at these static monitoring points, it is unclear how monitoring can be designed to detect changes in bat

commuting and foraging likely to have resulted from the development. Implementing "Monitoring of the bat usage of the site to determine any significant decline of the recorded assemblage of bats" (as suggested in Section 8.3.5 and elsewhere) ignores the key features of the bat community (as assessed in the ES) and will not contribute usefully to assessing whether residual effects are impacting them. The reason to monitor these feature species would logically be to investigate whether population-level effects appear to be occurring (and measure these as far as it is possible to do so), and the role that disruption to commuting routes and foraging areas is playing in this. This would test and add evidence to the conclusions of the ES. Broadly comparing activity levels in the more common and widespread species that will dominate the bat community pre and during construction is less relevant.

8.145. It is also noted that triggers for alterations to e.g., construction phase noise (8.3.64, 8.3.66) and lighting levels in areas that are considered important to bats remain undefined. Measurable, acceptable limits of noise and light intensity around (or potentially at points on the edge of these features) individual retained features during diurnal and nocturnal works need to be defined. These should be based on the best available information on likely effects, and set at a level appropriate for the most sensitive species present (likely to be barbastelle). Until there is some indication of how noise and lighting impacts will be practically controlled, the conclusions of the report with regard to the effectiveness of the mitigation proposed must be relied upon which is of concern given the identified limitations.

8.146. Section 8.4.47 refers to identifying evidence of roost abandonment through monitoring, and using this as a measure of development-related impacts. For roost switching species this may prove challenging without e.g., radio tracking. There is no indication in the submitted documents of how this might be achieved.

8.147. As referenced in the noise section above, there are various references to work at Hinkley Point C potentially providing the evidence base for the success of proposed mitigation. These references need to be balanced by commentary on the extent to which the situations can be compared. The footprint of Hinkley Point C was largely dominated by intensively managed agricultural land likely to have supported relatively low levels of bat activity; the Sizewell Estate includes a wetland SSSI, numerous woodland pockets of varying size, age and species composition, is (locally) connected to an extensive wetland complex and ancient woodland around Minsmere and supports a nationally important barbastelle population and a county-level importance Natterer's bat population.

8.148. At least one bat flight corridor was identified across the Hinkley development footprint (a green lane that has been retained in part and partially re-routed) that had some use by barbastelle and a range of other species. Monitoring has established that the lane continues to be used by barbastelle. It is unclear whether the data collected is of high enough resolution to assess the extent to which the nature, frequency or number of barbastelle using it has changed however; Section 8.3.57 of the Updated Bat Impact Assessment indicates that barbastelle use of the feature declined during construction, while Section 8.2.47 states that monitoring has detected barbastelle have started using an alternative route (Benhole Lane) to navigate around the construction area. Neither statement is subject to further qualification. It is also likely that the situation during and post construction at Sizewell will be a lot more complicated, as many more flight routes directly connecting roosts to high quality foraging habitat will be disrupted, and it is less clear how these might realign.

Requirements and obligations

8.149. The Councils refer to the following requirements in the draft DCO to secure elements of ecology and biodiversity mitigation:

i. Requirement 2 – CoCP includes terrestrial ecology and ornithology mitigation measures, and prevention of construction impacts.
ii. Requirement 4 – Terrestrial Ecology Monitoring Plan.
iii. Requirement 14 – Landscape works for Work No. 1A, including LEMP requirement.
iv. Requirement 14A – Fen Meadow Plan
v. Requirement 14B – Wet Woodland Plan

8.150. The Councils also refer to references in the Applicant's Draft S106, in relation to the proposed European sites mitigation fund; Fen Meadow mitigation strategy; Suffolk Coast RAMS financial contribution; and the Natural Environment Fund.

8.151. The Councils consider that further detail needs to be provided by the Applicant, with additional provisions for mitigation and compensation measures to be included. These are discussed in the following paragraphs.

8.152. Bats – Mitigation Strategy: As set out above, the construction mitigation strategy for bats is included in the Construction Code of Practice (Table 6.1) [AS-273], but requires to be updated to reflect the submitted Updated Bat Impact Assessment and is therefore out of date.

8.153. Bats – Monitoring Strategy: As set out above, the Bat Impact Assessment needs to include monitoring protocols. A suitable Terrestrial Ecology Monitoring Plan needs is to be secured by Requirement 4 of the draft DCO. Until this is produced it is not possible to comment on the likely effectiveness of the approach proposed. A robust monitoring strategy is essential to demonstrate that mitigation measures implemented are being successful or if they are not where additional measures need to be implemented. However, we have number of concerns about potential monitoring limitations (see above).

8.154. Overall, we consider that the purpose of monitoring should be clearly attributable to one or more of the following:

i. It is required to address residual uncertainty (any impacts that remain following implementation of mitigation measures, the success of which cannot be measured without monitoring) with regard to impacts on key bat populations identified through the assessment work submitted in support of the DCO application.

ii. It is required to understand whether licencing will be needed for specific elements of the work / to inform practical mitigation changes designed to minimise the potential to commit an offence / obviate the need for licencing.

iii. It is a licencing requirement.

iv. It is needed to understand the medium- and long-term success of habitat creation work in relation to key bat populations.

v. It is part of or forms a precursor to structured long term research on bat populations on the EDF Estate that will extend beyond the period in which development-related impacts are likely to take place.

8.155. Mitigation, Monitoring and Long-Term Management provisions (Main Development Site and Associated Development sites): Whilst a Project Wide Terrestrial Ecology Monitoring Plan is secured by Requirement 4 of the draft DCO, it is not clear that additional mitigation/compensation measures, to be implemented if the initial measures are unsuccessful, are adequately secured. The CoCP [AS-273] could potentially be used to secure such measures during the construction phase, with the LEMP used to continue them through into the operational phase (although please see our comment in relation to the coverage of the LEMP in the Sizewell Levels and Associated Areas CWS section in paragraph 8.43.

8.156. For the permanent Associated Development sites of Two Village Bypass and Sizewell Link Road, an outline LEMP has been submitted as part of the application [AS-263 and AS-

264], however, the provision of final LEMPs does not appear to be secured either as part of the CoCP (Requirement 2) or through any of the other draft DCO Requirements. It is essential that this is secured to ensure that appropriate long-term management of habitats associated with the Two Village Bypass and Sizewell Link Road is delivered.

8.157. In addition to this, the Councils consider that the draft DCO Requirements, or the documents that they secure, need to include a commitment to undertake pre-commencement ecological surveys to inform the final details of the required mitigation measures and monitoring. In the Councils' view, this is essential, particularly if there are any unforeseen delays to parts of the project which are not currently accounted for by the mitigation measures covered in the CoCP.

8.158. CoCP: The CoCP (secured by draft DCO Requirement 2) secures measures to be implemented during construction of the Main Development Site and Associated Development sites. Measures related to operation, particularly the location and function of lighting require more detail which could potentially be secured under Requirement 20, but this does not appear to be definite at this stage. This is particularly important in relation to bats. Even if appropriate mitigation measures are identified, the Councils note that it is essential that these are adequately secured and implemented.

8.159. The Councils support the Applicant's proposal in the draft Section 106 [AS-012] to include Monitoring and Mitigation Plans for the 'Minsmere European Sites' and the 'Other European Sites' (including the Sandlings SPA and the Alde-Ore Estuary SPA), aiming to secure a suite of onsite monitoring and mitigation measures to address issues caused by increased recreational disturbance. However, the detail of these has not yet been provided.

8.160. Compensation Funding: A compensation fund for residual ecological impacts should be provided as part of the Section 106 to provide a mechanism for the funding of long-term projects in the area to provide biodiversity enhancements outside of the development red line boundary. Such a fund could be secured alongside or as part of the fund proposed to address residual landscape impacts.

8.161. Suffolk Coast RAMS contribution: An overall contribution of £149,912 912 (see **ANNEX I)** for calculation details) to the Suffolk Coast RAMS is considered by the Councils as appropriate to help mitigate the in-combination recreational disturbance impacts that are considered likely to arise from the construction of Sizewell C. This could be secured as part of the Section 106, ancillary to the European Sites Access Contingency Fund element.

8.162. Compensation habitats – Fen Meadow: The Councils support the Applicant's proposal for the areas proposed for compensation habitats to be secured as part of the draft DCO [AS-143], and the controls under Requirement 14A securing a Fen Meadow Plan to control how the necessary implementation, establishment and management. Requirement 14A requires that the Fen Meadow Plan be in accordance with the Fen Meadow Strategy, which is provided in ES Addendum Chapter 2 Appendix 2.9.D [AS-209].

8.163. The ES also makes reference to a financial contribution to be made if fen meadow habitat creation fails to be successful. Whilst it is noted that the Update on the Section 106 Agreement [AS-012] provided by the Applicant identifies that the fen meadow contingency fund will form part of the S106 Agreement, and the submitted Fen Meadow Strategy [AS-209] sets out the test of success and the contingency approach habitat creation is not ultimately successful. The Councils are concerned that the triggers proposed for the contingency fund are not appropriate. Release of contingency funds relies on a shortfall of fen meadow creation, but the targets are combined across all three of the compensation sites and therefore do not test whether long term functional habitat is present (i.e., the 4.5Ha target could be reached cumulatively across all sites but with one or two of the sites only contributing very small amounts of the target habitat which are not sustainable in the long term). The Councils consider that the triggers for contingency fund provision need to be more subtle than those currently proposed and need to reflect habitat provision at each of the compensation sites individually as well as cumulatively. The role of, and triggers for, the contingency fund need to be further considered with all relevant technical experts.

8.164. We note the proposed contingency strategy to provide funding for additional fen meadow mitigation within Suffolk should the proposed sites fail, but given the inherent challenge to create fen meadow, any other fen meadow site has again a significant risk of failure, so compensation may have to be available to be spent on a broader basis and/or area.

8.165. There is also no detail currently available on the value of the proposed Fen Meadow contingency fund and therefore the Councils are unable to comment on whether this will be sufficient or appropriate at this stage.

8.166. Pakenham Fen Meadow (SCC Lead Authority as within West Suffolk Council administrative boundary): This proposal was added at the Proposed Changes stage in order to increase the amount of fen meadow provided to compensate for loss of SSSI adjacent to the Main Development Site. It is noted that this was welcomed by Natural England when it was subject to consultation in late 2020. There is an opportunity to restore and improve

this river valley for the wider benefit of biodiversity. However, further information is awaited from the Applicant on:

i. Phase 1 Habitat Survey.
ii. NVC Botanical Surveys.
iii. Surveys for aquatic invertebrates.
iv. Surveys for Otters and Water Voles.
v. Surveys for terrestrial invertebrates.
vi. Any other surveys indicated by the Phase 1 work.

8.167. The engineering necessary to create the right sort of through-ground water flows could result in water level changes and therefore impact on the adjacent SSSI and CWS. Detailed proposals will be necessary to demonstrate that there is no adverse impact or, if so, how that might be mitigated and this would need to be supported by an understanding of the current state of the existing SSSI. Monitoring will be required to ensure that any conclusions arising from studies are seen in practice and that there is the opportunity for contingency actions in the event that fen meadow creation is not effective or that it has adverse consequences on other sites (as referred to in previous section).

8.168. The ES Addendum Volume 1 Chapter 2 [AS-181] includes reference to the impacts of this scheme. At p215 it deals with Historic Environment. While there is reference to Listed Buildings within 500m of the development, no impacts are shown. Pakenham Watermill, a Grade II* Listed Building lies immediately downstream of the proposed new fen meadow. It is owned and operated by the Suffolk Building Preservation Trust which uses water power to grind flour both for the purposes of demonstrating this historic feature and, through sales, to assist in funding its restoration. There is the danger that poorly managed watercourses in the fen meadow could affect the water flow to the mill and the Applicant should ensure that the meadow can be maintained without affecting water flow to the mill. While there remains uncertainty about this, it would be seen as a negative impact, but there is the possibility that management of the meadow in a way that guarantees the long-term maintenance of water supply to the mill would mean that this could be a positive impact on a listed structure.

8.169. At p219 of the ES Addendum Vol 1 Chapter 2 [AS-181], the Applicant acknowledges that the proposal takes up to 32ha of agricultural grazing land. Concern has been expressed that this may jeopardise the viability of existing agricultural units. The ES Addendum concludes that grazing could continue at this site, albeit at reduced intensity and that there should not be any significant impact on existing farm operations. Further clarification of

the relationship of the proposed development with farming enterprises should be developed to ensure that this involves no negative impact.

8.170. As the Pakenham Fen Meadow site is within West Suffolk Council's administrative boundaries, the Councils request that draft requirement 14a is amended, so that Suffolk County Council, in consultation with West Suffolk Council, discharges the Pakenham element of the Fen Meadow Strategy. West Suffolk Council is in agreement on this matter. Proposed changes to the wording of this requirement are included in Appendix XX.

8.171. Compensation Habitats – Wet Woodland: Draft DCO Requirement 14B secures a plan for the creation of compensation wet woodland habitat both on the Sizewell Estate (0.7Ha in the north) and as part of the wider habitat creation on several of the fen meadow compensation sites (at Benhall and Pakenham), however no details on the strategy for implementation, establishment and long-term management have yet been submitted to the examination and so detailed comments are not possible at this stage.

8.172. Sizewell Levels and Associated Areas CWS: The ES identifies that the loss of part of the Sizewell Levels and Associated Areas CWS is a Moderate Adverse, Significant impact, however no specific compensation measures are proposed to address this. Whilst it is acknowledged that habitat creation across the wider Sizewell Estate post-construction is proposed which will result in an increase in the amount of semi-natural habitats available in the area, Requirement 14 the draft DCO only secures this in Work No. 1A (as part of the LEMP) not across the whole estate. Therefore, there appears to be a lack of certainty that this wider habitat creation can be adequately secured.

9. Soils and Agriculture (Lead authority ESC)

Summary

9.1. This section gives a brief overview of the Main Development Site and Associated Development sites impacts on soils and agriculture. However, this is not an area in which either Council has technical expertise. We provide a short summary on this area and will endeavour to take part during the Examination to the best of our ability.

Table 4: Summary of impacts – Soils and agriculture					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
4a	Permanent / Temporary loss of agricultural land	C / O	Negative	Mitigate: Facility access arrangements to remaining fields for affected farmers. Compensation: To affected farmers through appropriate compulsory purchase fees for the land - separate compulsory purchase compensation regime Compensate: Recognition of this loss should be reflected through mitigation and compensation proposals through the Natural Environment Fund - Obligation	NPS EN-1: Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Local Plan policy 10.3 states development proposals will be expected to protect the quality of the environment. Also states development proposals will be considered in relation to impacts on soils and the loss of agricultural land.
4b	Landscaping of former construction land to heathland mosaic	O	Positive	Applicant proposes this land to be dealt with separately through a Trust – need to be secured.	Policy SCLP10.4 states development proposals are expected to protect and enhance special qualities and features of the area. States development only allowed within AONB in exceptional circumstances and where it is in the public interest. Local Plan Policy SCLP10.3 states development proposals will be considered in relation to impacts on soils and the loss of agricultural land.
4c	Permanent loss of agricultural land at Two Village Bypass (Grade 2 and 4) and Sizewell Link Road (Grade 2 and 3)	C / O	Negative	Mitigate: Facility access arrangements to remaining fields for affected farmers. Plans Compensation: To affected farmers through appropriate compulsory purchase fees for the land - separate compulsory purchase compensation regime Compensate: Recognition of this loss should be reflected through mitigation and compensation proposals through the Natural	NPS EN-1: Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Local Plan Policy SCLP10.4 states development proposals are expected to protect and enhance special qualities and features of the area. States development only allowed within AONB in exceptional

				Environment Fund - Obligation	circumstances and where it is in the public interest. Policy SCLP10.3 states development proposals will be considered in relation to impacts on soils and the loss of agricultural land
4d	Temporary loss of agricultural land at Freight Management Facility, Northern and Southern Park and Ride sites and LEEIE; Green Rail Route	C / O	Negative	When the sites are no longer required, the land will be returned to agricultural use, often returning to baseline conditions. In some cases (Freight Management Facility) there will be some negative impacts on the quality of soils onsite to be mitigated	Local Plan Policy SCLP10.4 states development proposals are expected to protect and enhance special qualities and features of the area. States development only allowed within AONB in exceptional circumstances and where it is in the public interest. Policy SCLP10.3 states development proposals will be considered in relation to impacts on soils and the loss of agricultural land.
4e	Contaminated land	C	Neutral	Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.	Policy SCLP10.3: Environmental Quality, states that proposals will be expected to protect the quality of the environment.

Policy context

National Policy Statements

9.2. Little reference is made to soils and agriculture in NPS EN-1, though Paragraph 5.10.8 of Section 5.10 on Land Use notes Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. It also states that Applicants should identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination.

9.3. The content of the local plan policies below aligns with that of the NPSs.

Local Plan Policies

9.4. Policy SCLP10.3: Environmental Quality, states that proposals will be expected to protect the quality of the environment. The policy states that development proposals will be considered in relation to impacts including soils and the loss of agricultural land.

Other Relevant Local Policy

9.5. The East Suffolk Economic Growth Plan 2018-2023 and NALEP Economic Strategy for Norfolk and Suffolk in 2017 **(APPENDIX 1: 10 AND 1: 11)** identify agriculture as an important and long-established sector in East Suffolk.

Impacts of the proposals

9.6. The main issue relates to the loss of agricultural land and disruption to agricultural activities, and contaminated land process and procedures.

9.7. The Main Development Site assessment includes the accommodation campus, the Land East of Eastlands Industrial Estate (LEEIE), the temporary construction site, the relocated facilities, and the main nuclear island site. The land is a mix of Grade 2 – 5 agricultural land and is a mix of land to be permanently lost and temporarily lost. However, as the majority of the land is proposed to be re-landscaped post-construction in a heathland mosaic, the predominantly arable use of land will be lost permanently. However, as a majority of this land is within the AONB, its replacement with a heathland mosaic is considered to be a long-term benefit for the AONB. However, 205.41 hectares of land will be returned to agricultural use. There will be a total loss of 22.2hectares of best and most versatile land with no additional mitigation proposed. 150 hectares of the land is in the ownership of the Applicant.

9.8. As embedded mitigation the Applicant suggests that they have sought to reduce the overall land take required on a permanent basis. A Soil Management Plan is proposed as part of the CoCP which will ensure best practice with regards to reinstatement of temporarily used land. The outline LEMP and later LEMP will ensure the land for replacement as heathland will be to an appropriately acceptable standard.

9.9. Land for the LEEIE will be returned to agricultural use, as will land for the accommodation campus and the temporary construction site post-construction. There will be permanent loss of land for the main nuclear island development during construction and operation.

9.10. The Two Village Bypass will take up predominantly Grade 2 and Grade 4 land. The bypass would have *moderate* impacts on some landscape character, *major-moderate* adverse impacts on some visual receptors and *moderate adverse* impacts on agricultural land.

9.11. It is important to note that due to the permanent nature of this proposal there is an expectation that the loss of some very good quality agricultural land should be compensated through payments to the Natural Environment Fund.

9.12. The Sizewell Link Road will take up predominantly Grade 2 and Grade 3 land, with a small amount of Grade 4 land. The Sizewell Link Road would have a *minor adverse* impact on geology through soil erosion. The site comprises approximately 123.5 ha of primarily agricultural land, as well as highway land. The Sizewell Link Road would have *major adverse* impacts on agricultural land (this is rated as a greater impact than the Two Village Bypass due to the higher amounts of land-take and higher quality of land).

9.13. Mitigation for this has not been proposed. If this loss is to be permanent (as proposed in the DCO), there is an expectation by the Councils that this loss should be compensated for – to the farmers through appropriate compulsory purchase fees for the land, but also by facilitating any changes to access arrangements for access to remaining fields affected by the Sizewell Link Road development, should be included.

9.14. The Freight Management Facility will take up predominantly Grade 3 and Grade 4 land. The Freight Management Facility will have a *minor adverse* impact on soils and land use, due to the long term but temporary loss of agricultural land. The type of development onsite requires the removal of soils to enable the construction of the freight management facility, which would have negative impacts on the quality of soils onsite. The site of the Freight Management Facility predominately comprises Grade 3 and 4 agricultural land.

9.15. The Northern and Southern Park and Ride developments will have a *major adverse* impact on soils due to long term but temporary loss of agricultural land during the construction phase. Approximately 78 % of the site for the northern park and ride falls into Grades 1, 2 and 3a (best and most versatile land). At the southern park and ride site the land is predominantly Grades 3a, 3b, and 4. Only 20% of the site comprises land that falls into a best and most versatile category (Grades 1, 2, and 3a). The developments and associated changes of use are temporary, and when the sites are no longer required, the land will be returned to agricultural use, baseline conditions are unlikely to have been altered. The Councils would be interested, at the appropriate time, in exploring opportunities for retention of a small part of the Northern Park and Ride site post-construction as a car park for Darsham Railway Station (see Transport section).

9.16. The Yoxford roundabout and other highway improvements would have moderate adverse impacts on agricultural land and soils, given the largely developed nature of the site and low amount of agricultural land loss.

9.17. The Green Rail Route would create major adverse impacts to the quality of agricultural land, soils, and geology, given the loss of 22ha of agricultural land. However, the soil for these would be stored in bunds close to and within the site to enable

restoration of the site once the use is no longer required. The Councils expect this to be clearly detailed in the Soil Management Plan and adhered to. All impacts are moderated by the temporary nature of the green rail route.

Contaminated land

9.18. In terms of contaminated land, the Applicant is using the correct procedures as outlined by the relevant guidance (CLR:11, GPLC, BS10175:2011+A2:2017 and latterly Land Contamination Risk Management. There is a commitment to continue this compliance but it will need to be included in the relevant documents and clearly so, be that in the Materials Management Plan or Spoil Management Plan, the Councils would suggest that due to the wide scope of this project the Applicant should also undertake to produce a Land Contamination Management Plan so that there is not confusion with other plans/responsibilities.

9.19. The main issue here comes from necessity and one that we accept with caveats. This is a significant project and the preparation has been ongoing for many years; the contaminated land surveys were undertaken between 2009 and 2015 and although comprehensive there are 6-12 years where the situation may have changed and contamination may have been caused, there is also the issue of unknown contamination.

9.20. However, this uncertainty is acceptable if the Applicant accepts and take account of it which is why a Land Contamination Management Plan would be an extremely useful document. This would also be useful to formalise situations such as the discovery of unknown contamination. All that needs to be done is to ensure there is a robust discovery strategy in place and accept that there may be a need for extra initial survey in certain circumstances where there may have been a change from when the initial survey was done.

9.21. The various reports have also made some recommendations so there will need to be a commitment that these recommendations will be undertaken in the DCO. Overall current work has been done to an acceptable level and the Applicant is adhering to the appropriate national standards and guidance, this will need to continue as required by relevant legislation.

9.22. In the event that contamination which has not already been identified to the Councils is found or suspected on the site it must be reported in writing immediately to ESC as the Local Planning Authority.

9.23. An investigation and risk assessment must be completed in accordance with a scheme which is subject to the approval in writing of ESC as Local Planning Authority. The

investigation and risk assessment must be undertaken by competent persons and conform with prevailing guidance (including BS10175:2011+A2:2017 and the Land Contamination Risk Management and a written report of the findings must be produced. The written report is subject to the approval in writing of ESC as the Local Planning Authority.

9.24. Where remediation is necessary a detailed remediation method statement must be prepared and is subject to the approval in writing of ESC as the Local Planning Authority. The remediation method statement must include detailed methodologies for all works to be undertaken, site management procedures, proposed remediation objectives and remediation criteria. The approved remediation method statement must be carried out in its entirety and ESC as Local Planning Authority must be given two weeks written notification prior to the commencement of the remedial works.

9.25. Following completion of the approved remediation scheme a validation report that demonstrates the effectiveness of the remediation must be submitted to and approved in writing by ESC.

9.26. A Land Contamination Management Plan would provide a framework for this process which would likely speed it up in terms of implementation in the event such a situation occurred. It may be appropriate for this to be included under an existing approved document such as the Code of Construction Practice or as a stand-alone document for approval by the Councils and adherence to by the Applicant.

Requirements and obligations

9.27. The Soil Management Plan as part of the CoCP and the LEMP will be secured by obligation.

9.28. Mitigation and compensation for affected agricultural use needs to be secured.

9.29. Particularly for the permanent elements of the proposal, there is an expectation that recognition of the loss of agricultural land and reduced soil quality should be compensated through payments to the Natural Environment Fund, secured by obligation.

9.30. A Land Contamination Management Plan is required to cover all aspects with regards to unidentified and known land contamination and unforeseen land contamination.

10. Minerals and Waste (Lead authority SCC)

Summary

10.1. The Councils consider that the Applicant's strategy to utilise significant amounts of minerals from the site in construction is appropriate and that there are relatively minor

impacts upon existing minerals and waste infrastructure. The following table summarises the various perceived impacts and these are expanded on below.

Table 5: Summary of impacts – minerals and waste

Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
5a	Impact of increased construction traffic at Lovers Lane on Lovers Lane Household Waste Recycling Centre, with proposed changes significantly impacting operational capacity and safe operations	C	Negative	Mitigate: Relocation of Lovers Lane HWRC. The Waste Disposal Authority is not content that the currently proposed changes at the Lovers Lane site can be delivered without unduly impacting operational capacity and safe operations. Requirement/obligation	Suffolk Minerals and Waste Local Plan: Policy WP18 Safeguarding of Waste Management Facilities. The safeguarding of waste sites is necessary to protect them from other forms of development which might either directly in indirectly impact upon waste development. SCC will object to development proposals that would prevent or prejudice the use of such sites for those purposes unless suitable alternative provision is made.
5b	Minor impacts upon Minerals and Waste safeguarding	C	Neutral	n/a	Suffolk Minerals and Waste Local Plan: Policy WP18 Safeguarding of Waste Management Facilities. The safeguarding of waste sites is necessary to protect them from other forms of development which might either directly in indirectly impact upon waste development. SCC will object to development proposals that would prevent or prejudice the use of such sites for those purposes unless suitable alternative provision is made.
5c	Conventional Waste Management follows five-step waste hierarchy identified in the Waste Framework Directive - Disposal as a last resort.	C	Neutral	n/a	Suffolk Minerals and Waste Local Plan: in order of preference the waste hierarchy is prevention, preparing for re-use, recycling, other recovery, and disposal.

5d	From a minerals perspective, use of borrow pits and stockpiles is supported and it is considered potential adverse impacts can be monitored and minimised	C	Neutral	Appropriate controls to monitor and mitigate potential adverse impacts - obligation	Suffolk Minerals and Waste Local Plan Policy MP3 states borrow pits will be acceptable as long as they are within 10km of the project site, the borrow pit is worked and reclaimed as part of the project, and they comply with the general environmental criteria GP4.

Policy context

National Policy Statements

10.2. Whilst nuclear energy proposals are addressed in overall terms in EN-6 Vol I and II, and reference is made to water quality and resources, safeguarding of mineral resources and waste management (hazardous and non-hazardous) are addressed as a generic impact in EN-1. However, radioactive waste is dealt with specifically in EN-6. The local policies discussed below are generally consistent with national policy and guidance.

Local Plan Policies

10.3. Policy SCLP9.2: Sustainable Construction, requires all new non-residential developments of equal or greater than 1,000sqm gross floorspace to achieve the British Research Establishment Environmental Assessment Method 'Very Good' standard or equivalent unless it can be demonstrated that it is not viable or feasible to do so. This includes the consideration of waste management.

Suffolk Minerals and Waste Local Plan July 2020

10.4. The Suffolk Minerals and Waste Local Plan provides a comprehensive set of policies for the consideration of minerals and waste development within the County.

10.5. Policy GP1: Presumption in favour of sustainable development. This policy notes that there are circumstances when development should be restricted. For example, such as in an Area of Outstanding Natural Beauty.

10.6. Policy GP2: Climate change mitigation and adaption. The proposals present a mixed picture in terms of criteria b) which refers to the minimisation of carbon emissions, as the borrow pits are within the redline boundary whereas the vast majority of the concreting aggregates will be supplied either from Somerset or Derbyshire. However due to quality considerations this is unavoidable.

10.7. Policy GP3: Spatial Strategy. Whilst well related to the Suffolk Lorry Route Network, rail network and navigation the proposals will have a significant adverse impact upon the Area of outstanding Natural Beauty and Site of Special Scientific Interest.

10.8. Policy GP4: General Environmental Criteria. This policy provides a list of environmental criteria, many of which will have been considered in some depth elsewhere in this Local Impact Report. Paragraph e) refers to geodiversity. This includes Sites of Special Scientific Interest and Regional Important Geological Sites, none of which are known to be adversely affected.

10.9. Policy MP1: Provision of land won sand and gravel. It is clear from the application and the change submission that a significant amount of material is required to be moved around the site using stockpiles and borrow pits, and be brought into the site using sea, rail, and road. The quantum of mineral is significant and is comparable to of all of the proposed new sand and gravel sites identified in the Plan which covers the period up until 2036. However, it is understood that for the main part the vast majority of this material will either be imported int the County or excavated from on-site borrow pits. The latter will also provide void space to receive the unsuitable peaty deposits currently found under the main Power Station site.

10.10. Policy MP2: Proposed sites for sand and gravel extraction. This policy identifies nine sites for future sand and gravel extraction. The Plan was adopted in July 2020 and planning applications for two of these sites (Barham and Barnham) have already been received. Pre-application discussions on a further four sites are taking place and there are no reasons to believe at the present time that the remaining three sites will not be developed. In conclusion it can be said that Suffolk will be able to meet the projected demand forecasts in terms of the overall tonnage to 2036.

10.11. Policy MP3: Borrow Pits. The proposed development meets criteria a) in that the borrow pits are within 10km of the project site. It also meets criteria b) in that the borrow pit would be worked and restored as part of the project. In terms of criteria c) the proposed borrow pits and associated stockpiles would be contrary to Policy GP4 because of the significant adverse impacts upon the Area of Outstanding Natural Beauty.

10.12. Policy MP5: Cumulative environmental impacts and phasing of workings. Clearly there are some significant adverse cumulative impacts associated with the borrow pits. These would include the large stockpiles of excavated materials and the general construction activity associated with this development.

10.13. Policy MP6: Progressive working and restoration. It is acknowledged that the lack of stability of the imported fill material will make progressive restoration of sections of the borrow pits impossible. However, the relatively short overall extraction and restoration period compared to the average minerals and waste back filling development offsets this disadvantage. Taking the development as a whole, there is acknowledged to be considerable habitat creation proposed.

10.14. Policy MP7: Aftercare. It is expected that aftercare on the restored borrow pits will be undertaken over at least a five-year period.

10.15. Policy MP8: Concrete batching plants and asphalt plants. The proposed concrete plants associated with the development would not be considered as a County matter as they are not associated with a quarry and hence this policy does not apply.

10.16. Policy MP9: Safeguarding of port and rail facilities, and facilities for the manufacture of concrete, asphalt and recycled materials. It is noted that the Sizewell Branch Line development boundary partially falls into the safeguarding area of the Saxmundham concrete batching plant operated by Cemex. So long as the plant is able to continue to operate unhindered or a suitable alternative location is able to be offered than no objection would be raised.

10.17. Policy MP10: Mineral's consultation and safeguarding areas. Minerals Consultation and Safeguarding Areas seeks to protect mineral resources from sterilisation and allocated sites from other forms of competing development. The Minerals Consultation and Safeguarding Areas referred to in MP10 are identified in the SMWLP Safeguarding and Proposals Map. Significant parts of the proposal fall within the Minerals Consultation Area, including:

i. Large portions of the Main Development Site
ii. The whole of the Two Village Bypass
iii. The whole of the Yoxford Roundabout
iv. The eastern part of the Sizewell Link Road
v. The whole of the Southern Park and Ride

10.18. No objection is raised on minerals safeguarding grounds however because the sand and gravel is only at best of regional significance whereas the proposed development is of national significance. It is also noted that a considerable amount of the sand and gravel will be used in the construction, thereby it would avoid being sterilised.

10.19. Policy WP1: Management of waste. This policy projects levels of waste arisings to 2036. The most significant waste arisings in terms of volume are the peaty material

removed from the construction site that will be tipped into the borrow pits as restoration material thereby not entering the general waste arisings for the County. There is also significant void space remaining in the County should the need arise.

10.20. Policy WP 17: Design of waste management facilities. Any new built waste management facilities on site would need to comply with this policy.

10.21. SMWLP Policy WP18: Safeguarding of Waste Management Facilities. This policy seeks to protect existing and proposed waste management sites from other forms of competing development. The Main Development Site falls into the safeguarding area of the Lover's Lane Household Waste Recycling Centre in Leiston and into the safeguarding area of the waste facilities at Sizewell B and Sizewell A Nuclear Power Stations.

Context

10.22. The Leiston Recycling Centre (HWRC) is located at a restricted site on Lovers Lane. This is considered by the Councils and Leiston Town Council to be an important and well used community asset. The Applicant owns the Recycling Centre site, leasing it out to the County Council. It is recognised that the site has existing access issues which the Waste Disposal Authority has addressed in recent years through modification, but the Councils consider that with the proposed increased traffic, particularly of HGVs, as a result of the construction will significantly impact on the road safety for access to the Recycling Centre, predominantly in the early years of development. A suitable safe solution is required. The Applicant has proposed traffic management changes but the current proposal is not supported by the Highway Authority or the Waste Disposal Authority and has negative environmental impacts.

Construction phase impacts

Positive impacts

10.23. None identified.

Neutral impacts

10.24. Minerals and Waste Safeguarding: The Councils recognise that significant amounts of minerals from the site will be utilised in construction and that there are relatively minor impacts upon existing minerals and waste infrastructure.

10.25. Main Development Site: The Councils concur with the assessments included within the submission. Dust arising from construction activities will be considered elsewhere.

10.26. Borrow Pits and stockpiles: The Councils support the principle of using on-site borrow pits and stockpiles as this can significantly reduce the number of HGV movements required to facilitate movement on material on and off site. However, the strategies do not

come without impacts. The non-road mobile machinery (NRMM) vehicular movements to facilitate the borrow pits and stockpiles will have noise and air quality impacts (discussed elsewhere) and dust implications (discussed elsewhere) and potentially result in an adverse impact on human health (discussed elsewhere). The stockpiles will also impact on the landscape (discussed elsewhere).

10.27. Overall, the positives arriving from on-site borrow pit and stockpiles are acknowledged and subject to appropriate controls to monitor and minimise potential adverse impacts arising, the negatives can be controlled and managed, resulting in neutral overall impacts.

10.28. It is acknowledged through the ES that an assessment of the feasibility of using peat and clay as backfill for the borrow pits was undertaken and the findings have been presented. It is noted that further work is being undertaken to establish final dimensions of the pits that will be required. It is noted that the only scenario for stockpiling above the borrow pits that has been assessed is for a maximum height of 5 metres.

10.29. It is noted that further laboratory scale and field trials are carried out in order to assess the efficacy of the lime improvement programme process and to define the optimum lime dosing rates. The timing and securing of these tests, and re-examination of proposals should the tests not provide for suggested proposals need to be clear in the requirements. The Councils will need to be included if alternatives are proposed to replace the lime improvement programme.

10.30. Conventional Waste Management: The Councils support reference to and use of the five-step waste hierarchy identified in the Waste Framework Directive - Disposal as a last resort. It is noted that the primary stakeholders for this area of consideration are SCC (Waste Authority) and the Environment Agency. The Applicant identifies two study areas, the first being the site boundary of the project as this constitutes the area within which construction materials would be consumed (this includes the whole red line boundary), the second study area is the waste management infrastructure likely to accept the waste generated by the Sizewell C project which is likely to be the east of England. The assessment is also split between construction and operational phase. Noting that the operational phase is 60 plus years, therefore there could be changes to waste policy and hierarchy during that time, the Councils would not wish to restrict the ability for the operating station to meet regulations and guidance in the future.

Negative impacts

10.31. Lovers Lane HWRC: With increased HGV traffic at Lovers Lane, the Sizewell C development will have a significant impact on the operations of the Recycling Centre, particularly in the early years but continuing throughout construction, by increasing congestion, leading to the risk of queuing and associated risks to road users. In the early years, the increase in traffic estimated in the Transport Assessment is from 3250 to 4800 vehicles a day (Annual Average Weekday Traffic), an increase of 1550 vehicles of which 600 movements are HGVs. The volume of Sizewell related traffic reduces to 400 vehicles a day during peak construction, almost all HGVs between the LEEIE and the secondary access.

10.32. The proposals for improvements to the access put forward by the Applicant in the Change Application [APP-015] are not acceptable to the Councils, as they do not address required design standards and continue to cause a road safety risk, noting that the quality of the drawing, and the lack of any supporting information, leaves much uncertainty in understanding the proposals and their impact. The main concerns of the proposals within this plan are:

i. The proposals will significantly impact on the viability of the operations of this already now constrained site, the size of which will be further reduced by needing to move the gates and the site cabins further into the site, and to accommodate the staff car parking within the site due to the proposed loss of existing staff parking at the entrance of the site. Due to siting of the Recycling Centre within the AONB, the site cannot easily be increased to make up for this loss. This would result in an inferior service provision to the public through the reduction of types of recycling that would be able to be accepted and would mean that this Recycling Centre would be the only one in Suffolk with such a reduced provision. From the limited information available, it is expected that the changes may result in a reduction of the actual recycling area (where all the recycling banks excluding the skips are) by around 45-50%) which would require reducing the types of recycling accepted by at least five, with reduced capacity of other types. SCC as the Waste Disposal Authority considers this as unacceptable.

ii. Road safety is not sufficiently addressed, e.g., proposed visibility splays are not to design standard for a derestricted road, nor for a 40mph road.

iii. No EIA of the proposed work, which would appear to be within the impact risk zones of the Sizewell Marshes SSSI, has been provided.

Operational Phase

Positive impacts

10.33. Lovers Lane HWRC: As a result of increased traffic during the construction phase relocation of the Lovers Lane HWRC or suitable safe access improvements to the site will be essential to mitigate the road safety risk. A positive legacy at the end of the construction period would be any improvements that do not adversely impact on the service provision currently available – which is primarily expected to be the case if the site was relocated. It is noted that any potential relocation site would have to be assessed against Local Plan policy, and such a site would not be anticipated to be within the AONB.

Neutral impacts

10.34. None identified.

Negative impacts

10.35. Lovers Lane HWRC: If the proposed solution for the Lovers Lane HWRC involves a configuration of the site resulting in reduced service provision, this negative impact raised above would continue to occur.

Required mitigation

10.36. Lovers Lane HWRC: Discussions with the Applicant are ongoing as to how the impact can be mitigated to ensure that the community continues to have safe access to a good recycling service. SCC, as the Waste Disposal Authority, believes that the best option is a relocation of the Recycling Centre to increase road safety by minimising the effects of the significant traffic and HGV increase that is anticipated during construction, as well as providing an improved amenity for the community of Leiston and surrounding areas. The relocation site would be sought to be outside of the AONB, and in seeking a relocation, this would need to comply with Local Plan policy.

10.37. The alternative to relocation is the provision of measures to provide safe and appropriate access arrangements to the site, which is challenging due to the constraint nature of the site. The Applicant would need to demonstrate that a proposal to stay at the current site is feasible and safe; the Councils have not seen the evidence that the current proposal would meet these criteria. The Councils are concerned that relocation needs a sufficient lead-in time so it is important to resolve this issue promptly so Leiston is not left with a diminished service and insufficient time to do anything about it.

11. Coastal Change / Geomorphology (Lead authority ESC)

Summary

11.1. The Councils consider there is the potential for the development's marine works to alter the natural development of the shoreline that would occur, as far as can be predicted, in a `without Sizewell C' scenario. The Councils believe that the marine works have potential to cause impacts that can be defined as Negative (disrupts natural change) to Neutral (allows natural change). Any impact may have a magnitude within a range of significant to negligible and may also vary over time. Furthermore, impacts noted as applicable to each phase may occur over all or part of the time range.

11.2. The ES includes an explanation of how the potential weight of impact has been assessed by the Applicant. Effects on geomorphological elements are classed as either "direct" or "indirect". For example, dredging of the seabed would be a direct impact, whereas the scour caused around a pile, being due to the changed flow regime, would be an indirect impact.

11.3. Assessment of the coastal impacts of the proposed development has been made more difficult by the absence of information from the Applicant, both in the original submission and the subsequent changes submission, this absence is keenly felt in the lack of dimensions and levels on illustrations that are provided. This is particularly evident when assessing the impact of the permanent Hard Coastal Defence Feature (HCDF) and design details for marine components.

11.4. As of late April 2021, some design and impact assessment information, relating to structures that were modified under the January 2021 Change submission to PINS, are awaited from the Applicant. Our impact assessment table therefore cannot be regarded as complete and may need to be revisited and revised on receipt of the relevant information.

11.5. The Table below provides an overview of impacts. Further tables are included below to provide a more detailed impact as to the likelihood of negative, neutral and positive impacts of each of the proposed structures.

Table 6: Summary of impacts – Coastal change / geomorphology					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
6a	Potential coastal change impacts **during construction from Permanent HCDF**, which may result in Loss of habitat, LVIA impacts, loss of recreational beach width, amenity value, prevention of natural coastal evolution.	C	Negative / Neutral	Mitigate: Built in mitigation to counter probable negative impacts of HCDF. Requirement/obligation Control: Coastal Defences – Approval of design changes. Requirement Monitor: Coastal Process Monitoring and Mitigation Plan (CPMMP), scope, approval process, content to be secured by requirement Monitor: Marine Technical Forum – scope and responsibilities (requirement or Section 106) Maintenance Activities Plan - Requirement	NPS EN-1 identifies coastal change as key consideration; with impacts being direct (e.g., as a result of dredging or dredge spoil deposition), or indirect (results of hydrodynamic responses to direct changes). States decision-makers should be satisfied that the proposed development will be resilient to coastal erosion and deposition, taking account of climate change, during the project's operational life and any decommissioning period SMP7: seek to prevent natural coastal evolution
6b	**Operational impacts of permanent HCDF** - Reduction in coastal change over Minsmere frontage and Sediment interruption and entrapment increasing over time	O	Negative/ Neutral/ Positive	Mitigate: SCDF as primary mitigation, mainly for HCDF but also any other impact on the shoreline from marine works. A maintained SCDF has potential to sustain a 'neutral' Without Sizewell C sediment movement scenario Mitigate: Secondary mitigation (mainly for HDCF): Bypassing, recycling and other has potential to correct any HCDF sediment blockage impacts beyond the range of the SCDF.	NPS EN-1 Coastal change risk needs to be managed over the development's planned lifetime, and decision-makers should be satisfied that the proposed development will be

				Monitor: Coastal Process Monitoring and Mitigation Plan (CPMMP), scope, approval process, content to be secured by requirement Maintenance Activities Plan - Requirement	resilient to coastal erosion and deposition, taking account of climate change, during the project's operational life and any decommissioning period. Local Plan Policy SCLP9.3 notes essential infrastructure, including transport infrastructure, utility infrastructure and wind turbines will only be permitted in the Coastal Change Management Area where no other sites outside of the Area are feasible and there is a management plan in place to manage the impact of coastal change including their future removal and replacement.
6c	Potential coastal change **impacts during construction from Permanent Beach Landing Facility (BLF) and Temporary BLF**, which may result in Loss of habitat, LVIA impacts, recreational impacts, coastal processes impact, piling, dredging, barge berthing and grounding, alteration of wave and current patterns, and seabed levels, forcing local shoreline morphology change	C	Negative / Neutral	Beach Landing Facility - Approval of design changes – requirement Monitor: Coastal Process Monitoring and Mitigation Plan (CPMMP), scope, approval process, content to be secured by requirement Maintenance Activities Plan - Requirement	NPS EN-1 Coastal change as key consideration, concerned both with the impacts which energy infrastructure can have as a driver of coastal change and with how to ensure that developments are resilient to ongoing and potential future coastal change

6d	**Operational impacts of permanent BLF** in terms of Dredging, alters wave and current patterns, and seabed levels, lead to local accretion / erosion change effects at shoreline	O	Negative or neutral	Mitigate: SCDF as primary mitigation, mainly for HCDF but also any other impact on the shoreline from marine works. A maintained SCDF has potential to sustain a 'neutral' Without Sizewell C sediment movement scenario Mitigate: Secondary mitigation (mainly for HDCF): Bypassing, recycling and other has potential to correct any HCDF sediment blockage impacts beyond the range of the SCDF. Monitor: Coastal Process Monitoring and Mitigation Plan (CPMMP), scope, approval process, content to be secured by requirement Maintenance Activities Plan - Requirement	NPS EN-1 Coastal change risk needs to be managed over the development's planned lifetime, and decision-makers should be satisfied that the proposed development will be resilient to coastal erosion and deposition, taking account of climate change, during the project's operational life and any decommissioning period
6e	**Potential impacts of CDO, FRR to** interfere with nearshore sediment transport pathways	C / O	Negative or neutral	Mitigate: SCDF as primary mitigation, mainly for HCDF but also any other impact on the shoreline from marine works. A maintained SCDF has potential to sustain a 'neutral' Without Sizewell C sediment movement scenario Mitigate: Secondary mitigation (mainly for HDCF): Bypassing, recycling and other has potential to correct any HCDF sediment blockage impacts beyond the range of the SCDF. Monitor: Coastal Process Monitoring and Mitigation Plan (CPMMP), scope, approval process, content to be secured by requirement Maintenance Activities Plan - Requirement	NPS EN-1 Coastal change risk needs to be managed over the development's planned lifetime, and decision-makers should be satisfied that the proposed development will be resilient to coastal erosion and deposition, taking account of climate change, during the project's operational life and any decommissioning period
6f	**Impacts of Temporary HCDF** (not a temporary structure) regarding Loss of habitat, LVIA impacts, recreational impacts, piling and preventing natural change	C	Negative	Control: Coastal Defences – Approval of design changes. Requirement Monitor: Coastal Process Monitoring and Mitigation Plan (CPMMP), scope, approval process, content to be secured by requirement Maintenance Activities Plan - Requirement	NPS EN-1 Coastal change as key consideration, concerned both with the impacts which energy infrastructure can have as a driver of coastal change and with how to ensure that developments are resilient to ongoing and

					potential future coastal change
6g	**Impact of SCDF** as primary mitigation is proposed to counter probably negative impacts of HCDF and other marine works, secondary mitigation bypassing, recycling and nourishment of beach frontage – reactive mitigation	O	Neutral	Control – coastal defences – approval of design changes – requirement Monitor – Coastal Process Monitoring and Mitigation Plan (CPMMP), scope, approval process, content to be secured by requirement. Maintenance Activities Plan - requirement	NPS EN-1 Coastal change as key consideration, concerned both with the impacts which energy infrastructure can have as a driver of coastal change and with how to ensure that developments are resilient to ongoing and potential future coastal change
6h	**Removal of HCDF** at decommissioning to restore a naturally functioning 'neutral' shoreline	O / decommissioning	Neutral	Control – decommissioning requirement Monitor - Coastal Process Monitoring and Mitigation Plan (CPMMP), scope, approval process, content to be secured by requirement.	NPS EN-1 Coastal change as key consideration, concerned both with the impacts which energy infrastructure can have as a driver of coastal change and with how to ensure that developments are resilient to ongoing and potential future coastal change
6i	**IF HCDF retained** at decommissioning – it becomes a permanent and significant block to natural coastal change	O / decommissioning	Negative	Control – future maintenance of the SCDF may be required to protect the beach in front of the HCDF - requirement Monitor - ongoing monitoring may be required via a Coastal Process Monitoring and Mitigation Plan (CPMMP), scope, approval process, content to be secured by requirement. Maintenance Activities Plan – if the structure remains on the beach it will need to be maintained for safety purposes - requirement	NPS EN-1 Coastal change as key consideration, concerned both with the impacts which energy infrastructure can have as a driver of coastal change and with how to ensure that developments are resilient to ongoing and

					potential future coastal change
6j	**Impacts of temporary construction work** – excavation, dredging, stockpiling	C	Negative	Monitor: Coastal Process Monitoring and Mitigation Plan (CPMMP), scope, approval process, content to be secured by requirement Maintenance Activities Plan - Requirement	NPS EN-1 Coastal change as key consideration, concerned both with the impacts which energy infrastructure can have as a driver of coastal change and with how to ensure that developments are resilient to ongoing and potential future coastal change

Policy context

National Policy Statements

11.6. Generic coastal change impacts of new energy NSIPs are covered in Section 5.5 of EN-1.

11.7. The policy states that planning decision-making in coastal areas is informed by an understanding of coastal change over time, preventing new development from being put at risk from coastal change by avoiding any development that adds to the impacts of physical changes to the coast. If development is, exceptionally, necessary in coastal change areas because it requires a coastal location and provides substantial economic and social benefits to communities, it needs to be ensured that the risk is managed over its planned lifetime, and that plans are put in place to secure the long-term sustainability of coastal areas (Para 5.5.1). It goes on to say that where onshore infrastructure projects are proposed on the coast, coastal change is a key consideration (para 5.5.2).

11.8. Paragraphs 5.5.3 and 5.5.4 note that coastal change associated with large scale infrastructure projects can be directly or indirectly caused. Coastal change may be a result of works directly affecting the coast; including marine landing facility construction and flood and coastal protection measures. Indirect changes to the coastline may arise as a result of a hydrodynamic response to some of these direct changes, which could lead to localised or more widespread coastal erosion or accretion.

11.9. Section 3.8 of NPS EN-6 details coastal change considerations specific to nuclear power stations. It identifies that the construction of new coastal and fluvial defences and possible marine landing jetties/docks necessary to support the nuclear power station could affect coastal processes, hydrodynamics and sediment transport processes at coastal and estuarine sites. These impacts could lead to coastal erosion or accretion. There could also be changes to offshore features such as submerged banks and ridges and marine ecology.

11.10. EN-1 sets out that where relevant, applicants should undertake coastal geomorphological and sediment transfer modelling to predict and understand impacts and help identify relevant mitigating or compensatory measures. Paragraph C.8.40 of NPS EN-6 Volume II notes that the Government considers that this would be relevant at the Sizewell site.

11.11. Section 4.8 of EN-1 refers additionally to new energy infrastructure typically being a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate,

decommissioning of new energy infrastructure. (Paragraph 4.8.5) The IPC (now ExA) should be satisfied that applicants for new energy infrastructure have taken into account the potential impacts of climate change using the latest UK Climate Projections available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure (Paragraph 4.8.6).

Local Plan Policies

11.12. Policy SCLP3.4: Proposals for Major Energy Infrastructure Projects, requires appropriate erosion defences, including the effects of climate change, are incorporated into the project to protect the site during the construction, operational and decommissioning stages.

11.13. Policy SCLP9.3: Coastal Change Management Areas, seeks to highlight areas where the rates of shoreline change are significant over the next 100 years. Although there is a presumption against some forms of development, essential infrastructure will be permitted where no other sites outside the area are feasible and there is a management plan in place to manage the impact of coastal change including their future removal and replacement.

Other Relevant Local Policy

11.14. East Suffolk Business Plan: recognises the onshore and offshore energy sector as one of East Suffolk's distinctive economic strengths.

11.15. East Suffolk Strategic Plan 2020-2024: recognises the energy sector as a key selling point for East Suffolk and identifies renewable energy as a key priority.

11.16. AONB Management Plan 2018-2023 - produced in accordance with the Countryside and Rights of Way Act 2000: seeks to conserve and enhance the special landscape (and seascape) characteristics of the AONB and ensure that they are considered and enhanced by the planning process, with impacts of major infrastructure development avoided, mitigated or offset. It promotes, and recognises the importance of, sustainable recreation and tourism within the AONB and seeks to enhance the understanding of its historic and cultural assets. The Suffolk Heritage Coast is largely contained within the AONB and there are no statutory requirements or powers associated with the Heritage Coast definition. Sizewell's Nearshore Waters Seascape is judged to have high sensitivity and be highly susceptible to the effects arising from major construction activity within the character type and adjacent to the coast. The marine works area is immediately adjacent to the Suffolk

Coast and Heaths AONB and is of national value. Furthermore, the immediate offshore area is within the Suffolk Heritage Coast.

11.17. East Marine Plan, MMO. Generic Policy SOC3: proposals that affect the terrestrial and marine character of an area must not have an adverse impact on that character and if it does must minimise or mitigate against the impact. Policy CC1 seeks to ensure that proposals take account of how they may be impacted upon, and respond to climate change over their lifetime. Policy DD1 refers to proposals within or adjacent to licensed dredging and disposal areas – Galloper is a licenced area but this is for the MMO to consider in detail. Policy TR2 references static items in recreational boating areas – this is not considered to be a major issue at Sizewell. However, there are known fishermen at Sizewell and therefore we expect policy FISH1 of the East Marine Plan relating to fishing activities to be complied with.

Shoreline Management Plan

11.18. Shoreline Management Plan (SMP7) is a non-statutory plan that identifies recommended approaches for management of coastal change. The headline outputs are policy statements however the more detailed Intent for Management texts that underpins them are of greater significance. Suffolk Coastal District Council, now ESC, adopted the current SMP7 policies in November 2011 and this was endorsed by SCC.

11.19. ESC is the lead authority for delivery of the Suffolk SMP7. ESC, together with the Environment Agency are operating authorities with statutory powers to undertake coastal flood and erosion defence management actions.

11.20. The Sizewell C frontage lies within Policy Development Zone 4 (Dunwich to Thorpeness). The southern majority of the Sizewell C site is in policy unit MIN 13.1 with the northern minority in policy unit MIN 12.4.

11.21. The policy for MIN 13.1 is to Hold the Line to 2105 and acknowledges that defence works may be required in the long term (from 2055) to protect the power stations. The intent for management for the Sizewell and Sizewell cliffs shoreline frontage is summarised as: *The aim of the plan is to maintain the defence of Sizewell but to generally allow the natural development of the coast. These two aims are not seen as being in conflict. Within this, the plan would not preclude local management to reduce the rate of erosion but this would have to be assessed in detail, taking into account the potential impacts on nature conservation interests.* Although not explicitly defined in the SMP the Councils interpret the `line to be held' as the seaward extent of the existing Sizewell A and Sizewell B flood

defence embankment. If Sizewell C's HCDF goes ahead as planned, the Councils consider that these aims would be in conflict.

11.22. The Sizewell C development will extend northward into the Minsmere South policy unit MIN12.4. The policy intention is Managed Realignment to 2105, with acknowledgement of possible minor works required to address local weak spots. The intent for management is summarised as: *… the shingle banks to the south of the sluice would continue to roll back. ….. The risk (of inundation) is unlikely to become substantial until such a time that regular overtopping of the shoreline ridge occurs, potentially not till epoch 3 (after 2055). Flood management to the rear of the power station would need to be reviewed and it is important that development of the power station site is fully integrated with management of this northern area.*

11.23. The Councils consider that the SMP Intent for Management, and future management action plan for MIN 13.1, is based on an assumption that any new power station development would have a similar plan position in relation to the active shoreline as sites Sizewell A and Sizewell B. However, the equivalent primary defence position of Sizewell C is much further seaward (estimated 40-50m) than that for sites Sizewell A and Sizewell B, which is tantamount to an Advanced defence line. This is not consistent with the headline policy.

11.24. This situation is attributable in part to the landward flank of the Sizewell C site being constrained by a SSSI. Earlier in the Sizewell C development process the Councils, in discussion with other stakeholders, took the view that protection of the SSSI would have to take priority over avoidance of seaward advancement. The landward boundary was thought to be compatible with the seaward boundary. However, it has been apparent for some time (since 2015) that the HCDF is unable to comply with the SMP policy and will be located closer to the sea than the Line to be held as it existed at the time of SMP adoption. The SMP Intent for Management aspiration to *generally allow the natural development of the coast* is made more difficult to achieve by the more seaward position of the Sizewell C site relative to sites Sizewell A and B.

Context

Site Description

11.25. The location of Sizewell C is within a slowly eroding embayment on the East Suffolk Coast. Minsmere, adjacent to the North is, a large wetland area dedicated to birdlife, where water levels are controlled by a Sluice. The Thorpeness frontage adjacent to the south comprises actively eroding soft cliffs and a village frontage with a variable shingle

beach. The Thorpe Ness promontory is formed upon a relatively hard crag outcrop that forms the southern extent of the Greater Sizewell Bay with the river Blyth outfall at the northern end. The Sizewell frontage constitutes a mixed sand and gravel beach in front of a low (5m) vegetated bund and a higher (10m) bund behind that which is the primary defence for the existing power stations (Sizewell A and B). South of Sizewell village there are low cliffs behind a mixed beach to Thorpe Ness.

11.26. The significant local geomorphological features and receptors are described below along with their relevance to coastal processes:

i. The beach and shoreline encompassing sections of the Minsmere to Walberswick Heaths and Marshes SAC the Minsmere to Walberswick Special Protection Area (SPA) and the Area of Outstanding Natural Beauty (AONB).

ii. Inner and outer longshore bars in the nearshore zone that are important sediment transport pathways.

iii. The Sizewell-Dunwich sandbank which shelters the shoreline behind by reducing wave action.

iv. The Coralline Crag outcrop at Thorpeness that is an important natural coastal control feature which stabilises the adjacent shorelines.

v. The soft eroding cliff frontage at Thorpeness which is sensitive to any geomorphological change and impacts a coastal community.

Baseline condition for impact assessment

11.27. To assess the nature, extent and duration of potential impacts of the Sizewell C development on coastal geomorphology it is necessary to develop a vision of how the shoreline might evolve in a `without Sizewell C' scenario. Projections of future coastal change are inherently uncertain. The SMP provides information on this as does the Applicant's DCO documents, notably in BEEMS report TR311 [APP-312]. From those documents the following can be assumed as possible changes in the period to 2100.

i. Slow retreat of the Sizewell shoreline possibly leading to exposure of, and need for reinforcement of, the Sizewell B defence.

ii. Retreat leading to breaching of the Minsmere frontage, perhaps creating a new tidal inlet.

iii. Failure of the Minsmere sluice outfall requiring a new method of draining low land behind.

11.28. If these changes occur, there will be impacts on topics of coastal access, landscape, land use – possibly others.

11.29. It is unlikely there will be significant changes to features that influence coastal processes over this timeframe i.e., Thorpe Ness, the two nearshore banks and the offshore Sizewell and Dunwich banks. There are other factors that could lead to changes in the causes of coastal change including changes in: weather patterns (shifts in prevailing wind and wave direction), climate, Sea Level Rise and management policy for coastal frontages that influence the feed of sediment to the Sizewell bay.

Proposed works with potential to affect Coastal Change during Construction

11.30. The Sizewell C development includes the following works that have potential to affect coastal change by altering the changes that are predicted to occur in a `without Sizewell C' scenario. The text below describes the works as they were presented in the 2020 DCO, updated with the January 2021 Change submission. It includes a summary of potential primary physical impacts of each feature.

i. Hard Coastal Defence Feature (HCDF): This is the flood and erosion defence for the Sizewell C site. Over the southern majority of the site frontage, it will comprise a temporary steel sheet piled wall through most of the construction phase. This temporary HCDF is highly unlikely to affect natural change that may occur in its short lifetime. The temporary HCDF piled wall will be built over at around ~ construction phase year 8 by a permanent, massive, rock faced embankment that will extend ~15m further seaward. At the north facing site boundary and the Permanent BLF landing promontory, a permanent rock slope will be constructed early in the construction phase. Without mitigation the permanent HCDF will prevent natural change by interrupting the movement of sediment across it if, as is predicted, the shoreline retreats landward.

ii. Soft Coastal Defence Feature (SCDF): This is an artificial enhancement of the beach to seaward of the permanent HCDF to minimise / prevent HCDF interference with the natural movement of sediment. It is built-in mitigation to counter the probable negative impact of the HCDF. Further secondary mitigation, involving methods including sediment bypassing and recycling *may* be used in combination with the SCDF. The Applicant presented updated ongoing design information to the Councils on 15 March 2021, we are awaiting further reports before making our assessment. More information is expected to be provided during the Examination period.

iii. Beach Landing Facilities (BLF) Permanent and Temporary: These are jetties that allow the seaborne delivery of abnormal indivisible loads (AIL) and bulk construction materials, respectively. The permanent BLF includes dredging and,

during the construction phase, a barge berthing platform and is likely to be more impactful than the temporary BLF. Both have potential to alter wave and current patterns, and seabed levels, that could lead to local accretion / erosion change effects at the shoreline. The Applicant presented a draft impact assessment of the new BLF arrangements to the Councils on 15 March 2021. It suggested no change to DCO assumptions that impact significance remains low.

iv. Temporary Surface Water outfall: This is a pipe on the upper beach that may discharge clean water during rainstorms within the construction phase only. This will not cause a significant impact on coastal change. There may be local short term scour impacts affecting public access.

v. Combined Discharge Outfall CDO: This is a permanent tunnelled submarine outfall pipe ~ 400m tbc from the shore to discharge clean wastewater from the site. The CDO and Fish Recovery Return have potential to interfere with the nearshore sediment transport pathways. If this occurs there may be local impacts on the shoreline immediately landward of a similar nature, but of lesser scale, to the `salient' (area of local accretion) located to landward of the Sizewell B outfall.

vi. Fish Recovery and Return FRR outfall x 2: These are permanent tunnelled submarine outfall pipelines ~ 400m tbc from the shore to return fish to the sea that have been recovered from the main cooling water intake pipelines. The potential impact on coastal geomorphology is expected to be similar to that described above for the CDO (impact on geology is a lot worse).

vii. Temporary works in the construction of the HCDF, SCDF, BLFs and potentially other marine structures, notably excavation, filling, material stockpiling etc., details tbc.

11.31. The main cooling water intake and outfall structures are located ~ 3km offshore on the seaward flank of the Sizewell sandbank. They are too far offshore to have a direct or indirect impact on the shoreline.

Proposed works with potential to affect Coastal Change – New and Missing Information

11.32. In the period since January 2021 the Applicant has presented additional information to the Councils including design details and impact assessments.

11.33. The impact on coastal processes of the Permanent and Temporary BLFs has been assessed in a new report that concluded no change from the assessment in the 2020 DCO ES, i.e., No Significant Effect.

11.34. Design details (drawings, reporting) have not yet been received from the Applicant. This prevents a proper assessment of potential impacts. There are elements of exhibited

outline design (received to date) of both the HCDF and the SCDF that raise potential concerns, e.g., the shallowness of the HCDF seaward foundation structure, how to adapt when the HCDF becomes exposed, and the shoreline is upon the structure; the purpose of the erosion resistant cobbles that may create a further incursion seaward; the sustainability of the SCDF; design methodology for secondary mitigation (by-passing, recycling, renourishment). Further detail, with design information (as distinct from modelling to date) may identify further, previously not apparent, impacts or may alleviate them. Further specific detail is provided in **ANNEX O.**

Associated impacts of works with potential to affect Coastal Change

11.35. It is expected that the marine and shoreline structures described above will have the following impacts that are not coastal geomorphology linked but are linked to the coast. These are covered in further detail by other sections of this report, they are therefore not included in the Coastal Change Impact Table. They are:

11.36. Reduction of / disruption to public recreation and access: The area available for public access will initially be greatly reduced from the current situation however, over time natural change is forecast by the Suffolk SMP to retreat the shoreline to reach the Sizewell B defence. Disruption caused by the development will be most significant during the construction stage (9 – 12 years) when there will be some temporary full closures, with lengthy diversions, and a relatively narrow access corridor seaward of the temporary HCDF. Over the operation phase the Applicant's intent is to maintain a Coastal Path on the seaward face of the HCDF at a level above the SCDF. A maintained SCDF should protect a path in this position. There may be issues at each end of the HCDF where the coastal path atop it will need to transition to an unmaintained, potentially retreating shoreline, where the coastal path will be at a lower level. These changes have potential to alter public enjoyment of the Sizewell C environment and result in relocation of visitors to other sites. These issues are covered in section 17.

11.37. In addition, the effective closure of the popular Sizewell frontage will inevitably send people to other adjacent local beaches – notably Thorpeness, this displacement and subsequent potential impacts on the coastline at Thorpeness need to be assessed by the Applicant, it is suggested in consultation with ESC as coastal protection authority to explore a masterplan approach to be developed with the community for short term defences, improved access and improved parking / roads.

11.38. Loss / change of habitat: The advancement of the Sizewell C platform to seaward of the Sizewell A and B building line will result in the loss of several hectares of valuable

vegetated shingle (discussed in the Ecology section). However, the advanced HCDF has potential to limit the extent of shoreline retreat over ~1km of frontage to the north of the site that the Applicant identifies as a potential benefit to the designated Minsmere site. The maintained SCDF is designed to release shingle rich sediment into the alongshore sediment system that will travel along and beyond the Sizewell C frontage. Over time the sediment source for SCDF maintenance, and potentially for secondary mitigation measures if required, will probably include imported material that may alter the nature and composition of the beaches it becomes dispersed into.

11.39. Significant changes in the land and seascape: The HCDF will occupy and alter the landform of several hectares of existing vegetated shingle habitat. If the SCDF is maintained until HCDF removal at decommissioning, the rock core of the HCDF will remain buried below soil and landscaping, as are the defences for Sizewell B to date. If it is not, then the lower HCDF rock face will become exposed by a retreating shoreline. If the adjacent shoreline retreats the HCDF will develop into a promontory. The Permanent BLF will be fully exposed through the construction phase but will have most deck members removed through the operation phase leaving mainly piles visible. The full structure will be reassembled only when use is required to receive abnormally large loads for few weeks every 10 years. The temporary BLF is due to be removed to or below seabed at the end of the construction phase. The AONB partnership have advised the overall effect of the temporary BLF on an enlarged extent of the Coastal Dunes and Shingle Ridges Landscape Character Type, and on the Nearshore Waters Character type is deemed significant and adverse.

Proposed works with potential to affect Coastal Change during operation

11.40. As well as being considered under construction, the Sizewell C development includes the following works that have potential to affect coastal change by altering the changes that are predicted to occur in a `without Sizewell C' scenario. The text below describes the works as it was presented in the 2020 DCO, updated with the January 2021 Change submission. It includes a summary of potential primary physical impacts of each feature.

i. The Permanent Hard Coastal Defence Feature (HCDF): This is the flood and erosion defence for the site that will be in place from around construction phase year 8. It will comprise a massive embankment with a rock armoured seaward face covered by landscaping. Without mitigation the permanent HCDF rock slope has potential to prevent natural coastal change by interrupting the movement of sediment along the shore. This interference would lead to accretion or depletion of shorelines each

side. It will also prevent natural change if it impedes mobilisation of sediment landward and adjacent to it. This affect is predicted to potentially slow long-term erosion of the adjacent Minsmere frontage. The HCDF may undergo design adaption during its life that will move the rock slope foundation further seaward by 18m over the southern majority of its length. This will further diminish the beach width available for recreation and habitat value. When compared with the `Without Sizewell C' condition the HCDF brings forward by several decades the situation anticipated by SMP7 where the retreating shoreline would reach the defence line.

ii. Soft Coastal Defence Feature (SCDF): This is an artificial enhancement of the beach to seaward of the permanent HCDF to minimise / prevent HCDF interruption of the natural movement of sediment. It is built-in mitigation to counter the probable negative impact of the HCDF. Further secondary mitigation, involving methods including bypassing and recycling may be used in combination with the SCDF.

iii. Beach Landing Facility (BLF) Permanent: The permanent BLF will allow the infrequent seaborne delivery of AILs during the operational phase. Use of the permanent BLF will require dredging to allow access for vessels. The barge berthing platform is not retained in the operational phase. The BLF has potential to alter wave and current patterns, and seabed levels, that could lead to local accretion / erosion change effects at the shoreline.

iv. Combined Discharge Outfall CDO: This is a permanent tunnelled submarine outfall pipe ~ 400m tbc from the shore to discharge clean wastewater from the site. The CDO and Fish Recovery Return have potential to interfere with the nearshore sediment transport pathways. If this occurs there may be local impacts on the shoreline immediately landward of a similar nature, but of lesser scale, to the `salient' (area of local accretion) located to landward of the Sizewell B outfall – this is likely to be temporary interference to the bars.

v. Fish Recovery and Return FRR outfall x 2: These are permanent tunnelled submarine outfall pipes ~ 400m tbc from the shore to return fish to the sea that have been recovered from the main cooling water intake pipes. The potential impact is expected to be similar to that described above for the CDO.

Technical Consultation with the Applicant

11.41. The Applicant created the Sizewell C Marine Technical Forum (MTF) group in 2014 after learning from the Hinkley Point C development consultation process. MTF members are Environment Agency, Natural England, Marine Management Organisation and ESC.

The MTF has three work stream themes, 1 Coastal Geomorphology and Hydrodynamics, 2 Marine Sediment and Water Quality and 3 Marine Ecology. Part 1 is of relevance to this LIR topic. The primary purpose of the MTF is to develop and oversee implementation of a plan for monitoring of the impacts of the development on coastal processes during the construction and operation phases, and to specify and deliver appropriate mitigation actions.

11.42. Through the Sizewell C project development stage, the MTF has been used to undertake reviews of technical reports and advise on design considerations applied within studies produced by the Applicant. In 2016 ESC employed coastal consultant ENBE to support officers in this process, this support is ongoing.

11.43. The key document of relevance to coastal change is the BEEMs report TR311 [APP-312], Marine Synthesis Reports (MSR1) Coastal Geomorphology and Hydrodynamics [AP-311]. Many other `feeder' reports have informed the MSR1. The MSR1 is referenced by the DCO ES chapter on Coastal Change. The Councils have reviewed and commented upon the MSR and the majority of the feeder reports in addition to DCO documentation relating to Coastal Change direct to the Applicant and through our Relevant Representations.

11.44. The Applicants approach to consultation through the MTF has been proactive. The technical studies produced by the Applicant have been detailed and findings have been presented in an objective fashion in reasonable detail, but there is still outstanding information required to enable a comprehensive review and assessment.

Councils' view of the Applicant's assessment, including phasing considerations

11.45. The Councils are generally satisfied that over the Sizewell C project development stage the Applicant has applied good effort to the creation and management of a consultation process on issues concerning the marine environment in general and the coastal geomorphology topic in particular. This has given the Councils and their advisors access to outline scheme design and impact assessment information as it has developed that has allowed the Councils to have input to the process. The Councils are satisfied that in general the Applicant has understood and given proper consideration to feedback and we acknowledge that some changes have been made by the Applicant as a result. However, several matters of significant difference remain.

11.46. Within this process a notable long-running concern for the Councils, has been the slow preparation and release by the Applicant of design details (profiles and plan position) for the HCDF and SCDF in general, and the seaward HCDF/defence foundation in particular. This information is fundamental to the assessment of impact of and mitigation for the

HCDF on coastal processes and its late supply – that is still ongoing – has led to significant changes in potential impacts and mitigation actions to those identified in the DCO submission.

11.47. The January 2021 Change information included significant alterations to the HCDF plan position and shape plus a new temporary BLF, and other changes, that have opened new areas of discussion and difference. As of 19/3/21 design and impact assessment information following on from those changes is outstanding. Elements of this new and pending information may become matters of uncommon ground.

11.48. A sample of current matters of uncommon ground are listed below. This is a small extract of the long list that the Councils are working through with the Applicant.

i. The long-term sustainability of the SCDF that is mitigation for the negative impact of the HCDF.

ii. A default commitment for the Applicant to remove the HCDF at decommissioning.

iii. Consideration of potential `worst case' and `what if' shoreline evolution / short term change scenarios over the site life plus evidence of design resilience in response thereto.

iv. The inclusion of Thorpeness Village in the extent of the baseline monitoring plan.

v. When assessing the need for potential mitigation how will the Applicant differentiate scheme-related impacts from behaviour which might otherwise have prevailed naturally (no scheme).

vi. Agreement on longer term monitoring plans and how they will affect the decommissioning report and decisions on the HCDF thereafter.

vii. Agreement on if/how to monitor activities and shoreline behaviour where there is potential for negative impacts which are not prevalent immediately, or even certain to happen.

Construction and Operation Impacts

11.49. To consider the impact of the development involves consideration of the potential for the marine works to alter the natural development of the shoreline that would occur, as far as can be predicted, in a `without Sizewell C' scenario. The Councils believe that the marine works have potential to cause impacts that can be defined as Negative (disrupts natural change) to Neutral (allows natural change). Any impact may have a magnitude

within a range of significant to negligible and may also vary over time. Furthermore, impacts noted as applicable to each phase may occur over all or part of the time range.

11.50. The ES includes guidance on how the potential weight of impact has been assessed by the Applicant. Effects on geomorphological elements would either occur directly, i.e., through dredging the seabed, or indirectly, i.e., piling into the seabed and the presence or shadow effect of piles altering the flow regime and causing bed lowering or scour respectively.

11.51. Assessment of the coastal impacts of the proposed development has been made more difficult by the absence of information from the Applicant, both in the original submission and the subsequent changes submission, this absence is keenly felt in the lack of dimensions and levels on illustrations that are provided. This is particularly evident when assessing the impact of the permanent HCDF and design details for marine components.

11.52. As of 19/3/21 some design and impact assessment information, relating to structures that were modified under the January 2021 Change submission to PINS, are awaited from the Applicant. Our impact assessment table therefore cannot be regarded as complete.

11.53. The Tables below presents an assessment of how the potential causes of Coastal Change, listed above in 11.33 and 11.42, may be classified under the required headings.

11.54. Mitigation is shown in the Neutral column because it may/will be required to balance negative impacts and bring about a neutral outcome. If mitigation is not applied or becomes unsustainable then negative impacts will prevail.

Table 7: Potential coastal change impacts during construction

Structure	Potential impact	Negative Impacts	Neutral Impacts
Permanent HCDF	Loss of habitat, LVIA impacts, recreational beach width, amenity value, sheet piling, prevention of natural coastal evolution.	Probable	Possible
Permanent BLF	Loss of habitat, LVIA impacts, recreational impacts, coastal processes impacts, piling, dredging, barge berthing platform, alter wave and current patterns, and seabed levels, lead to local accretion / erosion change effects at shoreline	Possible	Probable
Temporary BLF	Loss of habitat, LVIA impacts, recreational impacts, coastal processes impacts, piling, alter wave and current patterns, and seabed levels, lead to local accretion / erosion change effects at shoreline	Possible	Probable
CDO	Interfere with nearshore sediment transport pathways	Possible	Probable
FRR	Interfere with nearshore sediment transport pathways	Possible	Probable

Temporary construction works	Excavation, dredging, stockpiling	Probable	-
Beach stormwater outfall	Short term scour impacts	1.	Probable
Temporary HCDF	Loss of habitat, LVIA impacts, recreational impacts, piling, prevent natural change	-	Probable
Mitigation	Built in and reactive mitigation to counter potential negative impacts of HCDF and other marine works	-	Probable

Table 8: Potential coastal change impacts during operation

Structure / Activity	Potential impacts	Positive Impacts	Negative Impacts	Neutral Impacts
Permanent HCDF	Reduction in coastal change over Minsmere frontage as a result of the interruption of some sediment transport (north to south) by a prominent HCDF	Possible	Possible	-
Permanent HCDF	Longshore Sediment transport interruption increasing over time	-	Probable	-
Permanent BLF	Dredging, altered wave and current patterns, and seabed levels, local accretion / erosion due to changes in bed sheer stresses.	-	Possible	Probable
CDO	Interference with nearshore sediment transport pathways	-	Possible	Probable
FRR	Interference with nearshore sediment transport pathways	-	Possible	Probable
SCDF. Primary mitigation. Expected mainly for HCDF but also any other impact on the shoreline from marine works	Built in and reactive mitigation to counter potential probable negative impacts of HCDF and other marine works	-	-	Probable
Secondary Mitigation by bypassing, recycling and nourishment. Expected mainly for HCDF but also any other impact on the shoreline from marine works	Reactive mitigation with potential to correct any sediment transport blockage or other impacts instead of or in addition to the SCDF.	-	-	Probable
Removal of the HCDF at decommissioning	Required to restore a naturally functioning 'neutral' shoreline. To be the default forward planning position unless changed by future environmental impact assessment.	-	-	Probable / likely
Cessation of Mitigation at decommissioning	A permanent and significant block to natural coastal change.	-	Probable	-

stage IF HCDF is not removed.				

11.55. The scope of the Coastal Process Monitoring and Mitigation Plan (CPMMP) must be designed to include a capability for such impacts to be identified and for appropriate mitigation to be applied. Further detail on cumulative effects is included in section 32.

Required mitigation and monitoring

11.56. A Coastal Process Monitoring and Mitigation Plan (CPMMP) is under preparation. Owing to uncertainty in the prediction of shoreline evolution the CPMMP is critical to the successful management of any negative impacts on coastal processes that may arise from the development. This is even more critical following recent information from the Applicant regarding plans for a more seaward HCDF foundation. It will gather and process information to detect and investigate changes in the marine and shoreline environment over the frontage that has potential to be affected by the development. Where an impact is attributable to the development it will require mitigation action.

11.57. The SCDF is the primary embedded mitigation action for the HCDF. The SCDF should also address potential impacts at the shoreline caused by the CDO / FRR and BLFs, however, these structures may cause other impacts that require mitigation by other means. It is the Councils' opinion that the SCDF is not certain to be sustainable for the lifetime of the development (assumed 2160).

11.58. Secondary mitigation (by moving or adding beach material to frontages beyond the SCDF) is likely to be required in addition to, and, possibly in place of, management of the SCDF should the SCDF become unsustainable.

11.59. An updated CPMMP is expected from the Applicant during the Examination process.

Requirements / Obligations

11.60. The following are summaries of proposed Requirements that as of 19/3/21 are the subject of ongoing discussion with the Applicant, the Councils, and the MMO. The full suggested / requested text is in **ANNEX J.**

i. Marine Technical Forum – scope and responsibilities (requirement or Section 106)
ii. Monitoring and Mitigation Plan - scope, approval process, content
iii. Decommissioning and Removal – of the HCDF
iv. Coastal Defences – Approval of design changes.
v. Beach Landing Facility - Approval of design changes

vi. Maintenance Activities Plan.

vii. Jurisdiction issues to be resolved – under discussion with the Applicant and the Marine Management Organisation.

viii. ESC requires the zone for baseline monitoring and mitigation to extend southward to include Thorpeness village.

ix. ESC requires monitoring for Coralline crag outcrop to allow detection of any potential negative impacts (not limited to physical) from the Sizewell C development.

x. ESC remains unclear on how the Applicant will identify an impact caused by the development over frontages beyond a maintained SCDF, without having in place a process to predict shoreline change in a without Sizewell C condition.

Built Environment

12. Historic Environment (Lead authority ESC)

Summary

12.1. The proposed development will impact on built heritage across the district, with effects ranging from *low level* harm to *significant adverse* effect.

12.2. Heritage impact assessment is challenging to measure and cannot be reduced to tabular matrices or definitive categorisation, and so expert and experienced professional judgement is essential. The Councils welcome that the Applicant's application of professional judgement as appropriate. This section of the report summarises key areas of importance, the full critical assessment of the proposal is available at **ANNEX K.**

12.3. The rationale provided for the methodology chosen in the EIA Scoping Report is not one the Councils would normally use but we can understand. The Councils consider the work undertaken by the Applicant to be of good quality. See **ANNEX K** for further consideration of the assessment methodology used by the Applicant.

12.4. The impacts of the proposed temporary Associated Development on heritage assets during the construction phase is largely discounted from consideration because of their limited duration and transient effects and are not generally taken into account when considering the impact of a development upon an asset's setting. The time periods involved in construction of the Associated Development is considerably shorter than that of the Main Development Site.

12.5. For the purposes of this assessment, historic environment has been separated into two sub-categories; heritage, and archaeology.

12.6. Definitions within the historic environment section are as follows. Listed buildings are protected under the planning system, split into three categories: Grade I buildings are of exceptional interest, Grade II* are particularly important buildings of more than special interest, and Grade II buildings are of special interest, warranting every effort to preserve them. A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. Non-designated heritage assets are buildings or sites identified as having a degree of heritage significance meriting consideration in planning decisions, but which do not meet the criteria for designated heritage assets.

12.7. The mitigation proposed to directly affected built heritage assets seems very limited and we welcome further discussion with the Applicant with regards to how this could be remedied. All heritage assets which will be heavily impacted by the project during the construction and operational phases should benefit from mitigation or compensation.

Table 9: Summary of impacts – Historic environment (Note – this table does not include impacts considered as neutral)					
Ref No.	Description of Impact	Construction (C) / operation (C)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
9a	Major adverse effects on Abbey Cottage	C / O	Negative	None identified - compensation through obligation may be appropriate	NPS EN-1 notes potential for adverse impacts on historic environment during all phases of development-decommissioning. NPS EN-1 notes potential for adverse impacts on historic environment during all phases of development-decommissioning. Local Plan Policy SCLP11.3: conservation and protection of historic environment a key consideration.
9b	Moderate adverse effects on Upper Abbey Farmhouse and barn	C	Negative	None identified – compensation through obligation may be appropriate	NPS EN-1 notes potential for adverse impacts on historic environment during all phases of development-decommissioning. Local Plan Policy SCLP11.3: conservation and protection of historic environment assets a key consideration.
9c	Moderate positive effect/impact of repair on Upper Abbey Farm Barn	O	Positive	Secure repairs by obligation as alternative is a negative impact	NPS EN-1 notes potential for adverse impacts on historic environment during all phases of development-decommissioning.

					Local Plan Policy SCLP11.3: conservation and protection of historic environment a key consideration.
9d	Impact on Coastguard Cottages at Dunwich from Main Development Site construction	C	Negative	None identified - compensation through obligation – Natural Environment Fund	NPS EN-1 notes potential for adverse impacts on historic environment during all phases of development-decommissioning. Also notes non-formally designated heritage assets are not awarded lower significance. Local Plan Policy SCLP11.3: conservation and protection of heritage assets a key consideration.
9e	Two Village Bypass impact on Farnham Hall, St Mary's Parish Church, Little Glemham Hall	C / O	Negative	Mitigation for Farnham Hall and, if possible, St Mary's Church, by landscape planting – requirement LEMP	NPS EN-1 notes potential for adverse impacts on historic environment during all phases of development-decommissioning. Local Plan Policy SCLP11.3: conservation and protection of historic environment a key consideration.
9f	Two Village Bypass - Significant beneficial effects for designated heritage assets within Farnham and Stratford St Andrew	O	Positive	Secured by delivery of Two Village Bypass	NPS EN-1 notes potential for adverse impacts on historic environment during all phases of development-decommissioning. Local Plan Policy SCLP11.3: conservation and protection of historic environment a key consideration.
9g	Sizewell Link Road impacts on Theberton Hall and Hill Farmhouse	O	Negative	Mitigation by landscape planting – requirement - LEMP	NPS EN-1 notes potential for adverse impacts on historic environment during all phases of development-decommissioning.

					Local Plan Policy SCLP11.3: conservation and protection of heritage assets a key consideration.
9h	Green rail route impacts on Leiston Abbey group	C	Negative	None identified, compensation through obligation, proposals to compensate through obligation for Pro Corda	NPS EN-1 notes potential for adverse impacts on historic environment during all phases of development-decommissioning. Local Plan Policy SCLP11.3: conservation and protection of historic environment a key consideration.
9i	Impacts on Leiston Abbey First Site	C / O	Negative	None identified, compensation through obligation, proposals to compensate through obligation for Pro Corda	NPS EN-1 notes potential for adverse impacts on historic environment during all phases of development-decommissioning. Local Plan Policy SCLP11.3: conservation and protection of historic environment a key consideration.

Policy context

National Policy Statements

12.8. The potential for construction, operation, and decommissioning of energy infrastructure to result in adverse impacts on the historic environment is identified in NPS EN-1 (section 5.8).

12.9. Paragraph 5.8.2 defines the historic environment as including all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, landscaped and planted or managed flora.

12.10. Paragraph 5.8.5 notes that the absence of formal designation for certain heritage assets does not award them lower significance. Non-designated heritage assets affected by a development should be considered subject to the same policy considerations as would apply if the asset was formally designated.

12.11. Paragraph 5.8.8 notes as part of the ES the Applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance. The level of detail should be proportionate to the importance of the heritage assets. At a minimum, the Applicant should consult the relevant Historic Environment Record and assessed the heritage impacts themselves using expertise where necessary according to the proposed development's impact.

12.12. In considering applications, the IPC (now ExA) should seek to assess the particular significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset, taking account of evidence provided with the application, designation records, the Historic Environment Record, the heritage assets themselves, consultation with interest parties, and expert advice where needed. (Paragraph 5.8.8 - 5.8.18).

12.13. Paragraph 5.8.12 notes in considering the impact of a proposed development on any heritage assets, the IPC (now ExA) should consider the particular nature of the significance of the heritage assets and the value that they hold for current and future generations. This understanding should be used to avoid or minimise conflict between conservation of that significance and the development proposals.

12.14. The desirability of sustaining and, where appropriate, enhancing the significance of the heritage assets, the contribution of their settings and the positive contribution they can make to sustainable communities and economic vitality. The IPC (now ExA) should take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment.

12.15. Paragraph 5.8.13 notes regard should be given by the IPC (now ExA) to any relevant local authority development plans or local impact report on the proposed development.

12.16.

Local Plan Policies

12.17. Policy SCLP11.3: Historic Environment promotes the conservation and enhancement of the historic environment. The policy requires all development which has the potential to impact on historic assets or their settings is supported by a Heritage Impact Assessment and/or an Archaeological Assessment.

12.18. Policy SCLP11.4: Listed Buildings, details a clear set of criteria which must be met if development which affects the setting of listed buildings is to be supported. These include the need to demonstrate a clear understanding of the significance of the building and/or its setting alongside an assessment of the potential impact of the proposal on that significance.

12.19. Policy SCLP11.5: Conservation Areas, states that development which has the potential to affect the setting of conservation areas will be assessed against the relevant Conservation Areas Appraisals and Management Plans.

12.20. Policy SCLP11.6: Non-Designated Heritage Assets, identifies that new uses which result in harm to a Non-Designated Heritage Asset or its setting will be considered based on the wider balance of the scale of any harm or loss.

Other Relevant Policies/Documents

12.21. The Conservation Area Appraisals for Yoxford, Marlesford, Wickham Market, Leiston, Thorpeness, Aldeburgh and Southwold are relevant.

Main Development Site – construction phase impacts

Positive

12.22. None identified.

Neutral

12.23. Views towards the Sizewell site from the group of listed buildings at Potter's Street crossroads will be permanently altered but this does not diminish greatly an appreciation of the significance of these designated heritage assets within their wider rural setting.

12.24. Thorpeness beach does not fall within the Thorpeness Conservation Area, and so any glimpsed views of the C station that will be likely from the beach will have no impact on the Conservation Area in terms of its coastal setting. Such views will be precluded by the curve of the coastline.

12.25. The side-by-side development of the C station alongside the A and B stations will intensify the existing effect of those stations, referred to by the Applicant as coherence across the group. The effect of intensification of existing industrial development is smaller than the effect of new industrial development in an undeveloped landscape.

12.26. There will be no significant impact on the significance of the Southwold Conservation Area from the addition of the C station.

12.27. The setting of the Aldeburgh Conservation Area will not be significantly affected by the development. The beach at Aldeburgh forms part of the Conservation Area and so views from it northwards to the A and B stations are easily available. The stations are part of the established backdrop to the landscape setting that forms the skyline edge of views northwards from the town. Though the view is important, it does not contribute to the significance of the Conservation Area.

Negative

12.28. Upper Abbey Farm - The impact of construction at the Main Development Site will be greatest on Upper Abbey Farm. Setting is of high importance for farmhouses such as this and can be assessed visually and through historic function and tenurial connections. Landscape setting contributes importantly for these reasons, and because farmhouses have a long and established and integral relationship with their farmed landscapes, they are often indivisible.

12.29. The Councils raise no objection to the removal of the modern building to make away for the emergency equipment store; or the removal of the modern building to the south of the stockman's house, both at the Upper Abbey Farm group. As stated here, neither of these structures has any historic value.

12.30. The proposed siting of permanent infrastructure comprising a back-up generator and emergency equipment store within the curtilage of Upper Abbey Farmhouse and Barn is acceptable in principle but is not without impact. The impact of development can be mitigated by sensitively siting the infrastructure and grouping buildings of a similar scale together instead of dispersing them. The larger building is the emergency equipment store (approximately 12m in height, and 60m x 25m in plan, per Figure 8.21, p194 of the Design and Access Statement (DAS) [APP-584]) and will be an at-scale building, but there should be sufficient spatial separation to ensure that it does not dominate the Farmhouse. It will likely have somewhat of an overbearing effect on some of the curtilage listed buildings near it and will mean the Listed barn will no longer be the largest building on site. However, it is not unexpected to see large modern scale agricultural-industrial sheds on

viable farmstead sites, and provided the design choices i.e., cladding, appearance, and colour choice, are well considered, the building will join the existing group without adverse effect. The Councils consider it a sensible proposition to group buildings of a similar scale together rather than disperse them into the landscape and can support the approach proposed here as the overall result is less than substantial harm. The Councils acknowledge the Applicant has been a responsible owner in restoring the listed Farmhouse building following an unfortunate fire.

12.31. Abbey Cottage: The setting to Abbey Cottage will be permanently changed by the construction of the roundabout and altered access road in very close proximity to it. There will be a *significant major adverse* effect on its setting as a result of the construction of the roundabout and altered access road. The intensification and enlargement of transport infrastructure like new roads and roundabouts has an adverse impact on the rural setting of the Cottage. The existing simple arrangement of a road and lane with established tree-ed edges with hedgerows will become an engineered feature of urban character which will provide the main entrance road to the Sizewell estate. There will be an adverse impact leading to a harmful effect on the significance of the designated heritage asset at Abbey Cottage from the development of the roundabout within its immediate setting.

12.32. It is noted that there will be additional adverse impacts arising from the proposed accommodation campus on Upper Abbey Farm, Abbey Cottage and Potter's Farmhouse in respect of this scale of development within their respective settings, particularly for Upper Abbey Farm and Abbey Cottage which are in such close proximity. These will be caused by the scale and extent of built form, engineering associated with transport and access infrastructure, and change in the character of the landscape in this area of it. These impacts will give rise to a low-to-moderate magnitude of harm to the significance of these designated heritage assets which will be significant. Their duration over the medium term of the construction phase (10-12 years) does not mean their transient nature should be discounted.

12.33. Dunwich Heath Coastguard Cottages: The greatest permanent effects on any heritage assets that arise from the Main Development Site will be experienced by the Dunwich Heath Coastguard Cottages. The Coastguard Cottages will be significantly affected because of their topographical elevation and their positioning facing south, with views containing the Sizewell site. The Coastguard Cottages are representative of a building typology that characterises the East Suffolk Coastline, which contributes to their

significance. Location makes an important contribution to an appreciation of the buildings, and the Cottages' remoteness contributes specifically towards their significance.

12.34. The biggest visual change will occur in the north end of the site where the majority of the new development will take place. This development creates a magnitude of change here greater than experienced by any other heritage asset, resulting from the intensification of the industrialisation of this part of the coastline and subsequent reduction in the undeveloped coastal landscape which currently contributes to an appreciation of the Coastguard Cottages. It is considered there will be a medium magnitude of impact leading to a moderate adverse effect for an asset of medium heritage significance, contrary to the conclusions of the EA.

12.35. Leiston Abbey First Site: Historic England's Relevant Representation set out concerns about the impact of the Main Development Site on the significance of two designated heritage assets known as the Leiston Abbey First and Second Sites. The Second Site, near the B1122, is discussed below under "Green Rail Route". Scheduled Monuments, such as the First and Second Sites, fall under the remit of Historic England.

12.36. The Leiston Abbey First Site is classed as a Scheduled Monument and comprises the initial foundation of a community of Premonstratensian monks in the marshes to the north of Sizewell, near Minsmere sluice. This site is some distance from the existing A and B stations but still experiences a level of harm from their presence as large-scale industrial development in the landscape, harm that will increase in magnitude with the addition of the C station. The primary impact on the First Site will be from the Main Development Site construction site activities.

12.37. As such there will be a higher level of residual harm to the First Site as a result of the addition of the C station than the Second Site, where the harm is of medium duration.

Main Development Site – Operational phase impacts

Positive

12.38. Upper Abbey Farm will experience moderate positive effect during the operational phase of the development. The Grade II Listed barn is proposed for repair as a heritage benefit, and subsequent public benefit, of the wider proposal and is acknowledged as a positive outcome. The Councils welcome that the barn is proposed for repair as a heritage benefit, and discussions have commenced with the Applicant regarding initial elements of repair. It is noted that there is a proposal to stabilise or remove unstable structures in the wider farmyard but this is not tantamount to a comprehensive programme of repair and re-use. The Councils consider the removal of these buildings may not be acceptable if they are of historic value, though it is noted it is unclear whether this reference refers to only

non-historic structures. The Councils would have been better pleased to see a more comprehensive programme of repair and re-use for all other curtilage-listed buildings which have suffered from benign and serious neglect.

Neutral

12.39. The substation proposal to the south of the Upper Abbey site would not adversely affect its setting, given the intervening physical distance and the proposed planted screening.

Negative

12.40. For Abbey Cottage, the Applicant's assessment states that the effects of the roundabout and diverted access road would persist in the operational phase. The Councils strongly disagree with the Applicant's conclusion that there would be no impact on heritage significance and no effects arising. There will be an *adverse* impact leading to a harmful effect on the significance of the designated heritage asset at Abbey Cottage from the development of the roundabout within its immediate setting. This would be a major adverse effect that would be *significant*. There is no mitigation proposed for this impact, it is therefore suggested that compensatory measures should be considered.

12.41. There will be a residual permanent harm on the Leiston Abbey First Site as a result of the presence of the Sizewell C station.

Associated Development sites impacts (construction and operation)

Two Village Bypass

Positive

12.42. The Two Village Bypass is expected to create significant beneficial effects for designated heritage assets within Farnham and Stratford St. Andrew. The Councils are therefore in agreement with this part of the Applicant's assessment (paragraphs 9.6.74-9.6.89 [APP-432]).

Neutral

12.43. These heritage benefits of the proposal which are public benefits, and which are considerable, must be balanced against the less than substantial harm that we have identified to other built heritage assets arising from the development of a road bypass within their setting.

Negative

12.44. The Two Village Bypass will have a significant adverse effect on Farnham Hall for several reasons, contrary to the Applicant's assessment that there will be *no significant* effect (*minor adverse*). The Councils consider it will have a *significant* effect because:

i. Position has no regard for historic pattern of fields and field boundaries;

ii. Introduction of a new trafficked road with higher vehicle levels;

iii. Visual and physical severance of the Hall from Foxburrow Wood;

12.45. Proposed hedgerow and supposed screen planting will embed and accentuate the adverse effect of the road on the landscape.

12.46. It is evident there will be a serious impact on the setting of Farnham Hall from construction and operation of the bypass resulting from the erosion of the historic landscape, loss of rural and agricultural character of the surrounding landscape, loss of tranquillity, and severance of Foxburrow Wood. This view is contrary to that of the Applicant, who concluded there will be *no significant* effect on Farnham Hall from a road bypass built in such close proximity. The landscape setting of the Hall contributes importantly to its significance and the serious impact arising from these changes to its setting will harm its significance. Harm will be less than substantial and of a high level.

12.47. The setting of St Mary's Parish Church will similarly be adversely affected by the bypass, contrary to the conclusions of the Applicant (at Page 50, paragraph 9.6.68 [APP-432]) that there will be no effect. See **ANNEX K** for further detail of the identified harm.

12.48. The construction of the Two Village Bypass will have an impact on the setting of Little Glemham Hall and its parkland. The registered parkland is a designated heritage asset and has a setting of the agricultural landscape.

12.49. The introduction of an engineered road bypass with the addition of an urban character roundabout in this rural area will have an adverse impact. The road layout will disrupt the field layout and its associated characteristics and in no way relate to the patterns of roads, boundaries and property divisions that are characteristic of an established and historic landscape where all of these things fit together. Further, the diversion of the A12 off its historic turnpike alignment adjacent the parkland is another adverse outcome of this proposal. The Councils cannot, therefore, agree with the assessment provided by the Applicant that there will be no effects arising from the construction of the road bypass within the nearby setting of the Hall and its parkland.

12.50. There is, therefore, a historic visual relationship between the asset and the eastern area of its setting, contrary to the conclusions drawn by the Applicant.

12.51. The Councils do not ascribe any special interest to the unlisted small courtyard of buildings at Pond Barn. The cart lodge and shelter sheds are mid-to-late Victorian in origin (the southern range was added by 1903) and, although characteristic buildings, do not warrant any particular interest.

12.52. It is disappointing that the historic landscape character of this area of the districtE that will be the subject to the proposed development is assessed as being of low heritage significance. See **ANNEX K** for further detail.

12.53. However, the Councils have to balance this harmful impact with the positives that the Two Village Bypass brings. The Councils have advocated for a Two Village Bypass accepting that where there are positives there will also be negatives. Therefore, the benefit of returning Stratford St Andrew and Farnham to their former status as quieter, rural villages will represent an enhancement to the much wider landscape setting of the Hall and parkland in that they will be more characteristic of the found countryside around the Hall. This is a heritage benefit, one with potential to be significant.

Required mitigation

12.54. Farnham Hall: Any potential mitigation for the adverse impact of the bypass on Farnham Hall can be considered in two parts; mitigation for the adverse impact on the amenity of the occupiers of Farnham Hall and its associated buildings, and mitigation in terms of landscape planting to ameliorate the impacts of a new road. Residents facing adverse amenity impact from such a development may prefer screening of sufficient density and amount to act as a sound and visual buffer, with the impact on the historic landscape a secondary concern.

12.55. St Mary's Church: Potential mitigation will be dependent upon what, if anything, can be facilitated alongside the new road with regard to visibility and safety concerns.

12.56. The Applicant so far has given little consideration to mitigation for the impact of new roads cutting through the district's rural landscape, and it is yet to be seen whether the Applicant will choose to produce strategy drawings prior to the decision being taken, or post-consent during discharge of requirements. This results in harm to historic landscape that is difficult, if not impossible to mitigate. Harm done to historic / landscape character is permanent and therefore there is no adequate mitigation to offset this harm. The Applicant does not appropriately recognise the harm of this impact, and instead diminishes the impact.

Sizewell Link Road

Positive

12.57. The Applicant's assessment states that the beneficial effects to heritage assets arising from the displacement of some traffic from the route through Middleton Moor and Theberton will not be significant. The Councils respect this fair assessment and

acknowledge that there will be a modest improvement to the quality of the surroundings of the listed buildings in these villages and that this will be a heritage benefit.

Negative

12.58. The Sizewell Link Road will create a significant change in the setting to built heritage assets in the village of Theberton. The Councils consider it will have a *moderate adverse* effect, contrary to the Applicant's conclusion of *no significant adverse* effects predicted. There is a multiplicity of heritage assets affected and assessed, and some general points are applicable to all of them given their shared landscape setting. The following assets share a landscape setting and similarity of effects arising from the proposal for the Sizewell Link Road: Fordley Hall, Vale Farmhouse, Moor Farmhouse, Hill Farmhouse, Anneson's Corner, Theberton Hall, Theberton House, and St Peter's Church. These effects carry additional weight for those assets whose principal elevations face towards (but not necessarily overlooking) the areas of proposed development.

12.59. These surroundings will be affected by the visual and physical addition of a new engineering feature; the urbanisation of a previously undeveloped landscape in the area and along the route of the road; associated traffic noise and vehicle movements; the partial loss of an historic field pattern by a road route that disregards it entirely; and partial loss of the dynamic seasonal attributes of a farmed landscape. Change will also arise from the interruption and realignment of the historic road pattern from Yoxford to Leiston where that is proposed. These effects are *moderate adverse and significant*.

12.60. The Sizewell Link Road will have an adverse effect on the historic parkland setting of Therberton Hall by contributing to the erosion of parkland. The historic setting to Theberton Hall and Parkland has been eroded over the later 20th century through conversion to arable land use, such that it is more difficult to perceive on the ground.

12.61. Hill Farmhouse, Middleton, is a Grade II listed building with an integral historical relationship with the farmed land around its south-west in terms of use, ownership, proximity, and aspect.

12.62. This farmed land is proposed for the construction of the link road across it. The Applicant concluded there would be no effects to Hill Farmhouse by the construction of the Link Road to its immediate south-west (paragraph 9.6.97 of the ES [APP-467]). The Councils do not agree with this assessment.

12.63. The Farmhouse's principal elevation faces onto this land with direct views from both upper storeys and from all the building on a seasonal basis. The construction of the proposed road within the close setting of the farmhouse will harm its significance by

eroding the historic and established field pattern; eroding the farmed character of the surrounding landscape; introducing an urbanising engineered feature; and increasing traffic noise. Further, it is also questionable whether the remnant field to the immediate north of the new road will be viable for agricultural production.

12.64. The effects arising from this change, the impacts of which have been summarised above, to be *moderate adverse and significant*. This is contrary to the conclusion of the assessment where *no significant adverse* effects are predicted. There is no mitigation proposed by the Applicant in relation to the harm caused to this heritage asset.

12.65. Given that the Applicant's assessment identifies land to the north of Moat Farm as one of the earliest farming landscapes in Suffolk, the Councils do not consider that it is realistic to assess the historic landscape as having 'low heritage significance' and where the construction of a new road through it – the route of which ignores and disrupts the irregular pattern of pre-18th century enclosure – is judged to have no significant adverse effects. This is a conclusion with which the Councils cannot agree. The Applicant has unjustifiably diminished the heritage value of the historic landscape.

Mitigation

12.66. Theberton Hall: Visual screening serves to sever the visual impact of development; shielding the impact of modern intrusion into a historic landscape. The Councils consider that screening can be sympathetic to the prevailing landscape character and so there is potential for screening to be successful. In the case of Theberton Hall, potential mitigation could include a narrow belt of woodland between the Hall and new road, though it is important to note this screening/planting would not be reflective of the character of the historic landscape but could go towards possible visual mitigation.

12.67. Hill Farmhouse: Any potential mitigation is contingent on what will be lost as a result of the development. If there are particular landscape features like tree belts or hedge rows with trees in existing views, potential mitigation may look at replicating this. It should be noted that this type of mitigation would not be a historic reflection of the existing landscape and would only give a flavour of the past character of the landscape. Once historic landscape is lost, it is lost forever and cannot be mitigated.

12.68. The loss of historic landscape cannot be mitigated and there can be no replacement; once lost, it is lost forever.

Green Rail Route

Positive

12.69. There are no anticipated positive impacts from the Green Rail Route.

Negative

12.70. The buildings comprising the Leiston Abbey group will be significantly adversely affected by the construction of the rail extension towards its south. The group comprises the Abbey, Guesten Hall, St Mary's Abbey Church, the Retreat House, and the Abbey Farm Barn. This group value adds to their significance. Leiston Abbey is considered to include some of the finest surviving monastic remains in Suffolk and is one of the most completely preserved examples of a Premonstratensian monastery in England.

12.71. This is known to have some of the finest surviving architectural ruins in the County and are also publicly accessible as the Site has good connectivity for the public. The Abbey site forms a significant local landmark by virtue of its scale, open landscape setting, and evident architectural and historic interest. These views amplify an appreciation of the site's local and District-wide importance.

12.72. The Councils agree with the Applicant's conclusion that there will be a *significant adverse* effect on the Leiston Abbey group from the construction of the rail extension towards its south.

12.73. Historic England's Relevant Representation set out concerns about the impact of the Main Development Site on the significance of two designated heritage assets known as the Leiston Abbey First and Second Sites. Scheduled Monuments, such as the First and Second Sites, fall under the remit of Historic England. The Abbey referred to above is the Leiston Abbey Second Site; the first site in the Sizewell Marshes, c.3km northeast of the site of the original priory foundation, comprises the ruins of the re-located priory. Their Representation notes previously raised concerns about impacts on the significance of these assets during the construction phase and with regards to the residual impact of the proposal during the lifetime of the project. The Councils support their comments.

12.74. The Green Route rail infrastructure would be in close proximity to the Second Site. The harm introduced by increased noise levels will affect the special interest of the site. The impact on the Second Site would largely be noise-related and the loss of tranquillity to a currently very quiet setting, a result of train movements along the Rail Route and trains stopping for security checks in a shallow linear tract of the landscape.

12.75. The harm to the Second Site is limited to the duration of the construction phase. The removal of the Green Rail Route infrastructure after this will restore the noise levels to pre-construction levels.

12.76. The construction of 2m high bunds and associated 1.8m-2.4m security fencing along the edge of the bunds, rail route, and diverted public footpath must be considered, for full and detailed consideration of these elements see **ANNEX K**.

12.77. It is acknowledged that the rail extension and its associated infrastructure will be removed in the medium term, the extended period of time during which significant adverse effect as identified above will endure, must be taken into account. The years of harm are a significant length of time over which harm to the setting of Leiston Abbey and the surrounding group would be endured.

12.78. The Councils note that the Leiston Abbey group is the only built heritage asset assessed to have the potential to experience project-wide effects arising from the Main Development Site and the rail extension route (Table 3.6, p33, 6.11 Vol.10 [APP-577]).

Yoxford Roundabout and Other Highway Improvements

12.79. The Yoxford Conservation Area and Rookery Park were not included in the Applicant's assessment for possible timing reasons, as this was extended in early 2020 by ESC. It is likely that the Applicant had prepared their assessment prior to ESC adopting and implementing the extended Conservation Area. The impact which the proposed Link Road may have on the newly extended Yoxford Conservation Area which now takes in the three locally listed parklands of Rookery Park, Grove Park, and Cockfield Hall has not been considered. Rookery Park is not a listed building and its parkland is not a designated heritage asset. The Conservation Area is a designated heritage asset, the setting of which includes its contrasting non-parkland agricultural landscape and historic field pattern, of which the development site forms a part in this area of it. The Conservation Area has a very wide setting and, although the development site does approach close to its southern boundary and will represent a change, the Councils judge that that any adverse effect from the very low magnitude of impact arising will be *minor*. Further detail available in **ANNEX K**.

Neutral

12.80. The historic road alignment within the village of Yoxford will be altered by the construction of a new roundabout, namely the dogleg route of the turnpike road and the junction with the road to Middleton. The Councils note that the design of the roundabout has evolved during consultation, and the latest iteration is considered more suitable than previous designs. The existing arrangement forms part of the Conservation Area, and at the time of designation in 1973. The A12 up to the northern boundary of Satis House was also included, as was the access and lodge to Rookery Park (but not Rookery Park itself). The Councils would not argue that the road at the periphery of the Conservation Area and at some distance from its historic centre contributes importantly – or much at all – to the

significance of the Conservation Area; it is hard to see how it can do. The road pattern within a Conservation Area does contribute to its interest where that is historic.

12.81. The road alignment at the Rookery Park entrance and Middleton Road junction and the original route of the Middleton Road junction have already been re-aligned in the 20th century and so while the addition of a roundabout will represent a change to this part of the Conservation Area, it is not a change that will give rise to any significant impacts.

12.82. The position of the roundabout is sufficiently aligned to protect and somewhat buffer the important well tree-ed boundary to Satis House which provides an important green edge in this part of the Conservation Area.

Negative

12.83. The setting of the Yoxford Conservation Area will suffer some low-level minor harm arising from the development of a new roundabout, an engineering feature which will intrude into the local landscape of modern agricultural character which forms a small part of the setting on the northern edge of the area. The experience of the Conservation Area's surroundings here will be altered but will resemble that which currently exists – a busy road alignment and junction. Though the road junction will become a roundabout, the perceptual effects will be similar. There will be a *modest adverse* impact arising from increased signage.

12.84. The Councils consider this to be an acceptable level of impact to the Conservation Area as the magnitude of change is minor, and within the expected levels of change within such an environment. Therefore, on all of these bases, the Councils agree with the conclusion of the Applicant that there would be no significant adverse effect on the Yoxford Conservation Area.

12.85. The Councils agree with conclusions about assessed effects on the cited heritage assets (paragraphs 9.4.105-119 [APP-499]). We would say that there will be a *minor adverse* effect from the construction of the engineered roundabout feature within the nearby setting of the Grade II listed Rookery Cottages which will give rise to a low level of *less than substantial harm* to its significance. The proposed planting to the east of the roundabout as mitigation is welcome.

12.86. The proposed remodelling of the junction of the Bramfield Road with the A12 will leave the triangular plot of the Grade II listed Stone Cottage, Thorington, unaltered. This is important since the shape of the plot, which forms the building's curtilage, is historic. The current road junction and alignment are historic and there will be an adverse effect arising from the increase in extent of engineered highway at the junction, along the A12 adjacent

and along the Bramfield Road. This will arise from the physical impacts of the works, although the perceptual effects arising from this change to the building's setting will be broadly similar, in terms of the trafficked nature of the roads and character of a road junction.

12.87. The road design brings the northbound carriageway of the A12 closer to the dwellings and will have an adverse effect on their setting, giving rise to a low level of less than substantial harm to significance of Stone Cottage.

Mitigation

12.88. Impacts on residents of Stone Cottage are likely to arise from noise. This has implications from a noise mitigation perspective as mitigation measures could be proposed to offset this harm, as none are currently proposed. Whilst noise impacts are dealt with under noise and vibration issues within the LIR, it is noted that, as the property is listed, there are limits to what could be achieved through noise mitigation.

Freight Management Facility

Neutral

12.89. The Grade II listed Decoy Cottages in Nacton will not be adversely impacted by the development of the Freight Management Facility. It is the Councils' view that the development site does not form part of the cottages' setting. The setting of the cottages consists principally of their gardens, former decoy ponds, and Decoy Wood, which contribute importantly to their significance as bespoke 19th century dwellings for Decoy Pond keepers on the Orwell Park estate.

12.90. Page 19 of Appendix 8.4D of the Freight Management Facility Planning Statement notes at paragraph 5.10.6 [APP-594] notes the Applicant's assessment that '*there would be no changes to the setting of the closest listed building, the Grade II listed Decoy Cottage, as its setting is that of parkland and woodland, and is not to be altered as part of the proposed development*'. This assessment mirrors that of the Councils, above.

Northern Park and Ride

Neutral

12.91. There will be a small level of less than substantial harm to the significance of the Grade II Listed Oak Hall from the development of the Northern Park and Ride. The Councils accept that the artificial bunds of 3 metres height will mitigate some of the visual and acoustic impact of the northern park and ride on the extended setting of the Grade II listed Oak Hall. The harm will be transient, given the park and ride facility is not permanent in nature, but the harm will persist for its medium-term duration and cannot be discounted.

12.92. The above comments apply also to the Grade II listed Old Hall. The associated former parkland to the Old Hall did not extend to the west side of the turnpike road (London Road/A12) and did not, therefore, include, the application site. The parkland, itself, has lost its original designed qualities such that it is not included on ESC's local list of parklands (SPG6). Further detail in **ANNEX K**.

Southern Park and Ride

Neutral

12.93. There will be a low level of harm to the Conservation Areas of Marlesford and Wickham Market. Given the assessed minor adverse effect on historic landscape character from the construction of the Southern Park and Ride between the Conservation Areas, there will be a low level of harm arising on their significance from this development within their setting.

12.94. The application site forms part of the wider agricultural landscape setting of these Conservation Areas which contributes importantly to their significance because of the historic relationship and dependence of rural villages and small market towns on their rural hinterland in terms of agricultural production, labour and trade. The application site contributes in no specific way but only in a general way as part of this wider landscape of identified historic character, and so will have a minor visual impact in a large landscape setting.

Negative

12.95. As the assessment identifies a minor adverse effect arising from the construction and operational phases of the development, it follows that there will be harm to the significance of the Conservation Areas from this proposed development. This harm results from the introduction of buildings, hard surfacing, lighting, infrastructure, transport noise and bunding) within their wider setting. The harm is considered less than substantial given the physical distance, intervening landscape and limited intervisibility.

12.96. The appraisal outlined above applies to surrounding listed buildings, the setting of which the application site will fall into. These are largely restricted to The Rookery and Hacheston parish church where the combination effect of travelling along the B1116 through the landscape which includes these assets along with the development would represent a change to the existing experience of their surroundings; this is also applicable to the experience of All Saints church tower in Wickham Market when viewed travelling south along the A12. This change would give rise to a minor adverse effect and the same assessment of harm that is identified above. Further detail in **ANNEX K.**

13. Archaeology (Lead authority SCC)

Summary

13.1. Archaeological evaluation work has commenced, however, a number of areas of land impacted by the proposal have yet to be properly evaluated. Further evaluation and all mitigation works are outstanding as of the time of finalising this LIR. It is therefore essential that the impact of the development on the terrestrial historic environment must be assessed and mitigated to appropriate archaeological standards, even if this causes delay to aspects of the development, as a result of unexpected complex archaeological remains being identified.

13.2. For all land impacted by the DCO proposal, a programme of archaeological investigation to determine the location, nature, extent and significance of surviving archaeological remains must be completed and, based on the results of these investigations, an appropriate mitigation strategy implemented to include further fieldwork, post-excavation analysis, reporting, publication and archive deposition. This needs to be secured by clear and robust DCO Requirements. The Requirements proposed in the draft DCO are inadequate and require significant amendment to be effective in securing an appropriate programme of archaeological assessment and mitigation that properly protects the interests of the Historic Environment (archaeology).

13.3. The Overarching Written Scheme for Investigation (WSI) has now been approved by SCC Archaeological Service. Subject to minor amendments, it is anticipated that this control document will be resubmitted by the Applicant prior to, or early in, the examination process.

13.4. Whilst the Peat Strategy has been approved by SCC Archaeological Service, the Peat Archaeological Mitigation Written Scheme of Investigation is still pending, and cannot be produced, or approved, until the engineering designs and construction methodologies have been finalised. Therefore, the DCO Requirements MUST include a separate Requirement for a specific Peat Archaeological Mitigation WSI, to deliver the outcomes identified in the Peat Strategy.

13.5. The potential impacts and mitigation measures are summarised in this section in a generic way, with all relating to the entire scheme, that is, all areas within DCO order limits and all elements of the proposed scheme, including main developments, supporting infrastructure and ecological compensation areas. A more detailed, site-by-site assessment of archaeological impacts and mitigation measures can be found in **ANNEX L**.

Table 10: Summary of impacts - Archaeology					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
10a	Potential for material disturbance of archaeological remains	C	Negative	Archaeology requirement (to be amended to effectively secure a programme of further assessment, mitigation post-excavation analysis, reporting, publication and archive deposition; and, where heritage assets are identified worthy of preservation in situ, to secure a methodology to ensure they are protected from construction impacts and an ongoing management plan to ensure their future protection) Suitable resourcing for SCC Archaeological Services participation in mitigation measures - obligation.	NPS EN-1 states construction, operation and decommissioning phases have the potential to result in adverse impacts on the historic environment Local Plan Policy SCLP11.7 notes where proposals affect archaeological sites preference is for in situ preservation unless recording is more appropriate.

Policy context

National Policy Statements

13.6. Archaeology is addressed within Section 5.8 (Historic Environment) of EN-1.

13.7. Paragraph 5.8.9 states where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact.

Local Plan Policy

13.8. Policy SCLP11.7 of the Suffolk Coastal Local Plan refers to Archaeology and the requirement for an archaeological assessment proportionate to the potential and significance of remains to be included with any planning proposal. Preference will always be given to preservation in situ of any remains identified unless it can be shown that recording of remains, assessment, analysis report and/or deposition of the archive is more appropriate.

Construction phase impacts

Positive

13.9. None identified.

Neutral

13.10. None identified.

Negative

13.11. The Sizewell C proposals have the potential for material disturbance and destruction of archaeological remains. The potential negative impacts set out below relate to the entire scheme, that is, all areas within DCO order limits and all elements of the proposed scheme, including main developments, supporting infrastructure and ecological compensation areas. A more detailed, site-by-site assessment of archaeological impacts and mitigation measures can be found in **ANNEX L**.

13.12. The majority of impacts on archaeological assets, during the construction phase site preparation, ecological mitigation or landscaping works, are as a result of material loss through disturbance. The ES identifies potential impacts on remains from a range of eras including prehistoric, Roman, medieval and 20th century. For further details see Table 16.7 in chapter 16 of book 6.3 [APP-272]. Archaeological evaluation undertaken so far has identified surviving multi-period archaeological remains across numerous parts of the DCO area. Ongoing evaluation work is likely to define extensive, additional remains.

13.13. For each of these impacts, the ES identifies *major adverse significant* effects, mitigated to *minor adverse non-significant* effects through the implementation of a programme of archaeological mitigation, post-excavation analysis, reporting, publication and archive deposition, defined in an Overarching Written Scheme of Investigation (OWSI), and detailed in Site Specific Written Schemes of Investigation (SSWSI), to be agreed with the Councils.

13.14. An appropriate WSI in an important mitigation measure for archaeological impacts on any scheme. Alongside the agreed overarching WSI, detailed site-specific WSIs will be required for each phase of archaeological assessment and mitigation, for each site. Requirement 3, as written in the submitted draft DCO provides insufficient detail to secure the appropriate phases of archaeological investigation.

13.15. The Councils consider the wording of the requirement dealing with securing the written schemes of investigation required in the draft DCO is not appropriate and lacks effective measures to mitigate the impacts identified in the ES. The Councils have submitted a proposed alternative wording for Requirement 3, which would provide

appropriate mitigation and allow the Councils to agree with the assessment of residual impact identified in the ES.

Operational phase impacts

Positive

13.16. None identified.

Neutral

13.17. The ES identifies *no impacts* on archaeological features during the operational stage of development. The Councils agree with this assessment, unless remains requiring preservation in situ are defined, as measures would need to be in place to ensure this takes place during operation. This applies to the entire scheme, that is, all areas within DCO order limits and all elements of the proposed scheme, including main developments, supporting infrastructure and ecological compensation areas.

Negative

13.18. None identified.

Required mitigation

13.19. Requirement 3, as drafted in the submitted draft DCO, is unacceptable to the Councils. The Councils have provided the Applicant with suggested wording which would satisfactorily secure the required mitigation. See **ANNEX J.**

13.20. The present requirement does not make a clear distinction between the Overarching WSI and site-specific WSIs. It also does not make clear that multiple phases of archaeological investigation, followed by mitigation, will be required at each site, that is, all areas within DCO order limits and all elements of the proposed scheme.

13.21. The present requirement also does not secure post-investigation analysis, reporting, publication and archiving work. The Councils' suggested wording rectifies this and secures this work by requiring its completion within a set timeframe from breaking ground at the nuclear platform.

13.22. The Councils are working with the applicant to agree suitable provision in the s106 agreement for resourcing and monitoring of archaeological fieldwork and review of post-investigation reports and mitigation measures, as well as archive deposition costs.

14. Design (Lead authority ESC)

Summary

14.1. The following critique of the design elements of the proposal are provided separately to the overall response to the LVIA of the proposal.

14.2. The design and finish of the buildings can be positively critiqued, but they remain at-scale industrial structures in a designated protected landscape, the impact of which cannot be mitigated and so the LVIA conclusions in this LIR remain valid.

14.3. The Councils' assessment of the impacts arising from the LVIA and by virtue of its location within the AONB relate to the overall scale, bulk, and appearance of the project is addressed in the above Landscape section, whilst this section focuses on the particular design of individual elements within the overall scheme. This assessment is solely focused on the operational elements of the proposal.

Table 11: Summary of impacts - Design

Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
11a	Potential for inappropriate materials and layout and landscaping for the accommodation campus and ancillary buildings	C	Negative	Design detail and materials to be agreed – requirement Control – Design Review Panel to work with / advise the Councils – section 106	NPS EN-1 addresses criteria for good design for energy infrastructure. Local Plan Policy SCLP11.1 supports locally distinctive and high-quality design.
11b	Potential for inappropriate finishes and materials on main nuclear island buildings: turbine halls, OSC, gateway building	O	Negative	Design detail and materials to be agreed – requirement Control – Design Review Panel to work with / advise the Councils – section 106	NPS EN-1 addresses criteria for good design for energy infrastructure. Local Plan Policy SCLP11.1 supports locally distinctive and high-quality design.

Policy context

National Policy Statements

14.4. Section 4.5 of EN-1 addresses criteria for "good design" for energy infrastructure.

14.5. Paragraph 4.5.1 identifies the importance of the visual appearance of a building in good design and acknowledges high quality design goes beyond purely aesthetic considerations. Functionality is also important, including fitness for purpose and sustainability. This importance is also acknowledged in the 2008 Planning Act.

14.6. Applying good design to energy projects should produce energy infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. However, it is acknowledged in this paragraph that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.

14.7. Paragraph 4.5.2 notes good design can be a means of meeting NPS policy objectives; for example, good design in terms of siting and use of appropriate technologies can help mitigate adverse impacts like noise.

14.8. In relation to the setting of the nuclear power station within the AONB, as noted above, NPS EN-6 and its Appendix EN-6 Vol II highlight the effects of a nuclear power station on landscape character and visual impacts on the AONB, which is an important aspect in these considerations.

Local Plan Policy

14.9. Policy SCLP11.1 relates to design quality of proposals. ESC supports locally distinctive and high-quality design that clearly demonstrates an understanding of the key features of local character and seeks to enhance those features through innovative and creative means.

Sizewell C design principles: the local perspective

14.10. In March, 2014 the joint local authorities group endorsed this document (**ANNEX E**), which were produced in association with the National Trust, RSPB, Suffolk Wildlife Trust and the AONB. As the only new nuclear power station proposed in an AONB, it considered that Sizewell C should be an environmental exemplar demonstrating how a large infrastructure project can be delivered in an area of high environmental sensitivity. It considered that Sizewell C must be sensitive to place, both in terms of design, layout and finishes. It concluded that Sizewell C should be an exemplar in terms of innovative nuclear power station design in the 21st century and add to the intrigue and character of the Suffolk coast. The development should be something that both local communities can embrace and that the Applicant can be proud of as a legacy.

Main Development Site design review

14.11. The quality of the design of the power station is compromised by the inflexibility on changing the design of nuclear components approved through the Generic Design Assessment by the Office of Nuclear Regulation. The fixed nuclear component design was found to be acceptable when considered for Hinkley Point C and, under a different

regulatory regime, in France at Flamanville. However, in the context of Sizewell C and its location within the AONB, the Councils consider the design of these fixed components to be sub-optimal for the AONB location. Sizewell B's dome established a bench-mark for good nuclear design in a sensitive location so it is disappointing that the design quality will be lower for Sizewell C. Whilst the Councils understand that the design of the nuclear components is fixed and cannot be changed as part of the DCO approvals, it does mean that the impact of the building will be more significant and will therefore justify and require greater mitigation or compensation given its AONB setting.

14.12. The approach taken by the Applicant for the non-nuclear components of the site is supported by the Councils (subject to the separate concerns raised by SCC in relation to pylons and overhead lines in section 6 above). The choice of cladding for the turbine halls is a sophisticated one, combining multiple considerations in respect of materiality, colour, shading, the dynamic interplay of changing daylight and climatic conditions, the landscape, and seascape context, in one modelled material.

14.13. Through design choices it is possible to somewhat dematerialise the turbine halls; not entirely, but in part. This effect may arise through the visual dissipation of the monumental solidarity of these volumes through the shimmering effect of their external surfaces. It is the idea that you might approach these hard, solid blocks of monumental-scale buildings and be surprised by the light, evanescent surfaces which confound their solidity. The experience in approaching the turbine halls is partly determined by their materials, and so a light, evanescent surface cladding the turbine halls may surprise the viewer upon approach. The block-like structures retain their monolithic uniformity, but there is potential for these structures to become dynamic, unexpected, and even playful. As such, the idea is reflecting without, rather than revealing what lies within the turbine halls.

14.14. The thin-ness and visual lightness of the material itself will form an intriguing contrast with the certainty and inertia of the concrete nuclear island.

14.15. Provided the Applicant respects the AONB setting and use of colours AONB: The selection and use of colour in developments guide (**APPENDIX 1: 21),** the Councils have no strong views on the colour of tone of the panels. These choices remain key design considerations, and there is likely to be more than one good combination. The Councils do however endorse the approach of a vertical gradation in visual effect from lighter to darker, top to bottom (as illustrated in Figure 7.42 of the Main Development Site Design

and Access Statement [APP-586]). The Councils, with the AONB, expect to be consulted on colour choices through either a design review process or through a requirement.

14.16. There are design issues still to be resolved: the size of shadow gap, grid of smaller and larger shadow gaps, edge treatments at corners, parapets, and junction with the plinth storey. There is ongoing discussion with the Applicant on how to ensure these issues are resolved, be it through existing or new requirements.

14.17. Turbine Halls and OSC Building: Clarity is still to be provided on aspects of the design, including the use of glass fibre reinforced concrete panels for the plinth storeys to the turbine halls and OSC building. The accompanying illustration (Figure 7.42 [APP-586]) shows a deliberately dark colour effect but the Councils are unclear how this is achieved with concrete. The illustration also appears to show textured finishes to the concrete panels.

14.18. These are all key detailed design elements to clarify at some point since, these materials and effects will be deployed at a vast scale.

14.19. The Councils note that the 1.5m width module of the aluminium panel is used here as the short dimension to maintain a uniform vertical width from bottom to top of the building. It is assumed that a cartesian grid is the most straightforward application of a system to order these facades. However, it is still possible to gauge the effect that is being sought here with the design of the plinth and its relationship to the aluminium cladding.

14.20. The skybridges will not be particularly discernible as key architectural elements, as suggested elsewhere in the Design and Access Statement [APP-586]. Their setback position and very small scale in relation to the Halls and OSC building minimises their impact on their immediate environment.

14.21. In pre-application discussions about the design of the OSC building, the Design Council was concerned about the quality of the environment for employees apparently denied coastal views due to the over-riding desire to minimise light spill particularly to the east elevation. Figure 7.56 [APP-586] illustrates how the central atrium would dramatise this principal communal space and provide it with plenty of top light and attractive character, potentially. The Councils do not judge it as important to provide employees with a view of the sea as it is to ensure that the effects of light spill are absolutely minimised. Office users will be able to gain borrowed light from the atrium and have views into it and across it; and the design does allow scope for a seaward aspect to take into account the Design Council's comments.

14.22. There is a continuity of a concept-derived approach in the through-design of the Conventional Island. There is a symmetry in the layout of the set piece buildings on the Island and their use of a vertical ordering of facades, incorporating the language of plinths, for example, and a hierarchy of scale. It can be suggested that the geometric configuration of the layout and composition of buildings is translated into the geometry of their applied appearance, creating symmetry in design. The degree of consideration applied here is welcome.

14.23. The elevational treatments of the OSC respond to their differing orientation, internal spaces behind and their function, and articulation and modelling. These are key to the design of a building. This highlights the architectural and social importance of the building. The design of the building shows a refined and sophisticated approach with depth of thought and consideration applied to ensure a good design outcome.

14.24. The rationale of the spatial sequence when arriving onto the platform is unclear. When arriving on the platform, the building facing on approach is the contaminated tools store; a fenced compound to store ISO containers. While there may be a logistical rationale about easy transport access, it is still an important space in this position and has an influence on arriving visitors.

14.25. The design for the main access building appears underwhelming. The building serves as a sort of gate lodge to the Sizewell C Estate, and could be a feature of refined and attractive design in its own right. Utilitarianism as a design approach has its place, but outside the set piece buildings, there could be room for a more considered approach.

14.26. Pre-application discussions were held with the Applicant regarding the addition of permanent structures within the curtilage of the Grade II listed Upper Abbey Farmhouse, as outlined here. The principle of their addition, subject to design, can be acceptable; and setting impacts, following restoration of the surrounding landscape on completion of construction, are acceptable.

Accommodation Campus

14.27. The appearance of the accommodation blocks has not yet been detailed, although their plan form, plan positions and layout have been. Their form and scale will be repetitive, and it is interesting to note here that the possibility of modular construction is being considered. This must be relevant also in the context of the removal of these buildings at the end of the construction period and the ease by which that can be undertaken.

14.28. The local vernacular is referenced here in terms of materials and colour palette, although the Councils are uncertain how the former will lend itself to a modular form of construction that will have a contemporary appearance – red brick, render or flint.

14.29. It will be more important to ensure that a locally responsive colour palette is employed to provide some level of complementarity to the local surroundings. These blocks will not be permanent features of the Suffolk countryside in this location and the Councils are less concerned about the materials choice. Indeed, that choice should relate more closely to the nature of construction - if it will be modular, for example.

14.30. The figures on page 249 of Appendix A [App-589] provide a useful 3-D visual illustrative guide to the massing and form of the accommodation blocks. Recessed glazed stairwells will provide relief and articulation to the form and facades. Window openings will be paired where possible, to avoid the monotony of a motel-like repetition of identical windows in identical positions. Flat roofs will serve to restrain the scale of these blocks, most of which are four storeys in height. The Councils welcome these design considerations in respect of appearance.

14.31. It is welcomed that thought is being given to other appearance considerations in terms of window and materials treatment. If modular construction is employed, it will become critical to avoid a kind of stacked portacabin effect. That would provide a very dispiriting kind of effect for occupants of the site to put up with for many years. The final finished appearance needs careful consideration.

14.32. It is understood that the site layout is now fixed in terms of disposition of the accommodation blocks, recreation centre, access and routes, and the decked car park.

14.33. It is clear landscape proposals have been incorporated into the layout of the accommodation campus from an early stage. The east-west orientation of accommodation buildings is considered acceptable in respect of localised impacts, and the alternating pattern of access streets and green streets is considered attractive. It is accepted that sufficient consideration has been given to the quality of intervening space, traffic distribution and habitable conditions for occupants.

14.34. The long site edges will consist primarily of the access road to the west; and a recreation/fitness footpath to the east, buffering the countryside edge. The southern edge includes the Upper Abbey Farm site. The accommodation campus will clearly have a landscape presence that is unavoidable.

14.35. As this layout is not for permanent occupation, it is therefore not reasonable to apply the usual urban design principles to it. It has specific characteristics that will make it

unlike any other major residential development and these must be considered when judging the quality of this proposal.

14.36. Design details for the recreation building should be restrained, given its impressive scale. The visual impact of the building can be restrained by the use of a muted colour palette.

14.37. The choice of edge treatment to the decked car park will be critical in terms of views to it from the surrounding countryside and adjacent road; and also, from within the site and accommodation blocks adjacent, for which this will be their principal aspect. The suggestion here of vertical timber slats as a form of cladding does sound worth testing, as it is an attractive choice of material and will help towards mitigating what will be an unappealing urban building of enormous scale.

14.38. The Colour Strategy, as outlined, is well considered and an approach the Councils consider acceptable. Some colour relief from the dark palette of the accommodation blocks will be needed and the suggested choice of entrances to provide this is appropriate.

Required Mitigation

14.39. Good design in itself is a form of embedded mitigation that is supported by both Councils. However, to ensure that, where possible, an appropriately high standard of design is achieved, in particular with regards to the turbine halls, OSC, and other ancillary non-nuclear regulated buildings, that an appropriate level of design is achieved that respects the important setting of the AONB within which the development will sit for many years.

14.40. The Councils require appropriate requirements to ensure that the final design elements and materials of buildings within the Sizewell C complex are appropriate particularly within the AONB setting, the requirement should cover the turbine halls, the OSC, the main access building serving as a gateway to the estate, and the detailed design of buildings within the curtilage of the Grade II listed Upper Abbey Farmhouse. with regards to the accommodation campus there should be a requirement for agreeing materials and landscaping around this area as well as the final design details for the recreation building. It may be acceptable for these details to be included with reference to a design code provided it is appropriately detailed, this will need further discussion with the Applicant. The currently drafted requirements in the draft DCO are not sufficient; the Councils are in discussions with the Applicant on this matter.

14.41. It will be important for other bodies such as Natural England and the AONB Partnership to be able to contribute to discussions regarding the more visible buildings

such as the turbine halls and OSC. A small design review panel may be able to provide this role in advising the Councils prior to discharge of any design and material related requirement. This could be committed within the section 106 agreement.

Traffic and Transport

15. Traffic and Transport (Lead authority SCC)

Summary

15.1. The proposed development will have a significant negative impact on the highway network, even when the proposals for the second BLF and additional train deliveries proposed as part of the change application have been delivered. This impact is despite the embedded highway mitigation proposed by the Applicant. A substantial amount of additional road traffic will be created as a result of the construction activity, both from HGV freight traffic, LGV vehicles, and workforce car and bus traffic. This will have associated impacts such as on severance, pedestrian delay, pedestrian amenity, fear and intimidation, driver delay, accidents, road safety, noise and air quality, as well as the carbon footprint of the construction. The uncertainty of delivering additional train movements on the East Suffolk Line poses a risk of a significant increase in the number of HGV movements on the road network, which would further exacerbate these impacts unless controlled. Timing of delivery of the BLFs will also need to be clarified as an integral part of the freight management strategy proposed.

15.2. The application includes a Two Village Bypass when previously one of the options proposed was for minor changes to the existing A12 only. The Councils welcome this as we had raised concerns that a one village bypass would have been inadequate and that its location was detrimental to a highly valued landscape. The Two Village Bypass addresses identified concerns with the constraints on the major road network at Farnham.

15.3. The Applicant has included the Sizewell Link Road as an alternative route to the B1122 which had been requested by the Councils in previous rounds of pre-application consultation. The provision of this alternative is welcome although the Applicant has not fully demonstrated that this route is the optimal one.

15.4. The changes to the freight management strategy proposed by the Applicant are broadly welcome although the Councils have yet to see the evidence that these measures are deliverable at the time required by the project to mitigate its impact on the road transport network or that HGVs can be reduced to the levels indicated in the change

documents. If the project is consented it is the Councils' strong stated position that the DCO must include suitable controls and monitoring secured by requirements to ensure that mitigation is delivered in a timely manner and impacts on communities do not exceed those assessed in the ES and Transport Assessment.

15.5. The Councils will work proactively with the Applicant and other stakeholders to identify and mitigate transport impacts as evidenced by progress in reaching a mutually agreed position on the majority of the traffic modelling.

15.6. In the Councils' view, additional measures are required to ensure the reduction in HGVs proposed can be met at the correct time in the construction timetable. This would be in addition to direct mitigation measures for adverse impacts on the highway network For more information on deliverability risks see section 31.

Table 12: Summary of impacts – Traffic and Transport (Note: Associated Development site specific transport comments can be found in the next section)					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
12a	A substantial negative impact local transport network and communities due to additional road traffic from construction activity and related AIL, HGV, LGV and car movements, in terms of severance, pedestrian delay, pedestrian amenity, fear and imitation, driver delay, accidents and safety, noise and air quality.	C	Negative	Proposals by the Applicant to maximise rail and sea delivery, with increased rail haulage and second temporary beach landing facility proposed in its change application – DCO proposals Caps to control movement of HGVs on Suffolk's Road network (hourly, daily and quarterly) – obligation Traffic Incident Management Plan, Construction Traffic Management Plan. Construction Workers Travel Plan to be secured by obligation Monitoring and mitigation requirements and governance arrangements of Transport Review Group - obligation Specific measures as below	NPS EN-1: transport of material, goods, and personnel can have adverse impacts on surrounding transport infrastructure and transport networks. Consideration and mitigation of transport impacts is a key policy objective. Local Plan Policy SCLP7.1 notes development will be supported where any significant impacts on the highways network are mitigated.
12b	Reduced residual capacity on the nationally important A14 as a result of construction traffic HGVs, leading to increased delays and congestion particularly of Junction 58 'Seven Hills' and Junction 55 'Copdock', leading to increased delay and congestion at these locations, and increased pressure on the A14 Orwell Bridge, with additional congestion during bridge closures.	C	Negative	Caps to control movement of HGVs on Suffolk's Road network (hourly, daily and quarterly) – obligation. Traffic Incident Management to address A14 and Orwell Bridge Closure issues – obligation	NPS EN-1: transport of material, goods, and personnel can have adverse impacts on surrounding transport infrastructure and transport networks. Consideration and mitigation of transport impacts is a key policy objective. Local Plan Policy SCLP7.1 notes development will be supported where any significant impacts

					on the highways network are mitigated.
12c	As a result of the Two Village Bypass, improvements to amenity and severance in Stratford St Andrew and Farnham, and improvement to A12 journey times in this location	C / O	Positive	Delivery and approval of design to be secured by requirement/obligation	
12d	As a result of Sizewell Link Road, removal of construction and other traffic from Middleton Moor and Theberton	C	Positive	Delivery and approval of design to be secured by requirement/obligation	
12e	On the A12 between A14 'Seven Hills' and Lowestoft, as result of increased construction related HGV, LGV, AIL, abnormal load and car traffic: reduced resilience and capacity, potential for road safety incidents, driver delay as a result of construction traffic; Increased severance and anxiety of vulnerable road users and reduced amenity; Increased journey time between A14 Seven Hills and the A1152 junction at Woodbridge; reduced residual capacity at a number of by Suffolk junctions; and reduced exit capacity for the large number of less busy side roads and accesses along the road which will increase delay, the likelihood of crashes and reducing access to facilities.	C	Negative	Implementation of DCO proposals to be delivered by the Applicant, of the Two Village Bypass, A12 / A1094 roundabout, Yoxford roundabout, improvements to A12 / B1119 and A12 / A144 junctions – requirement Contribution towards capacity improvements along the A12 between Seven Hills and Woodbridge - obligation Funding for junction and road safety improvements at a range of locations identified (**ANNEX M)** – obligation Monitoring and mitigation requirements and governance arrangements of Transport Review Group – obligation	NPS EN-1: transport of material, goods, and personnel can have adverse impacts on surrounding transport infrastructure and transport networks. Consideration and mitigation of transport impacts is a key policy objective. Local Plan Policy SCLP7.1 notes development will be supported where any significant impacts on the highways network are mitigated.
12f	Impacts from increased traffic on the following other A and B roads in relation to reduced resilience, capacity, vulnerable road user amenity/increased anxiety,	C	Negative	Obligations to secure highway junction improvements and road safety improvements. Monitoring and mitigation requirements and governance arrangements of Transport Review Group - obligation	NPS EN-1: transport of material, goods, and personnel can have adverse impacts on surrounding transport infrastructure and transport networks.

	increased severance and increased potential for road safety incidents: B1125 A1120 B1078/B1079 A1094 B1069/A1152, A144 A145 B1119 B1122 prior to delivery of Sizewell Link Road Other roads may be impacted as result of displacement of car journeys.				Consideration and mitigation of transport impacts is a key policy objective. Local Plan Policy SCLP7.1 notes development will be supported where any significant impacts on the highways network are mitigated.
12g	Detrimental effect on the road surface of Suffolk highway network due to the number of construction HGVs, AILs and abnormal loads	C	Negative	Applicant to commit to funding the increased levels of required remediation through maintenance - obligation	NPS EN-1: transport of material, goods, and personnel can have adverse impacts on surrounding transport infrastructure and transport networks. Consideration and mitigation of transport impacts is a key policy objective. Local Plan Policy SCLP7.1 notes development will be supported where any significant impacts on the highways network are mitigated.
12h	Reduced network resilience as a result of the constant daytime presence of construction traffic on the highway network, which will limit the County Council's ability to undertake necessary road maintenance during normal working hours without significant detrimental	C	Negative	Traffic Incident Management – obligation Contribution towards increased costs for road maintenance- obligation	NPS EN-1: transport of material, goods, and personnel can have adverse impacts on surrounding transport infrastructure and transport networks. Consideration and mitigation of transport impacts is a key policy objective. Also notes

	impact on the operation of the highway, as the HGV route to Sizewell.				development will be supported where the cumulative impact of new development will not create severe impacts on the existing transport network Local Plan Policy SCLP7.1 notes development will be supported where any significant impacts on the highways network are mitigated.
12i	Economic impacts of journey delays	C	Negative	Mitigation/compensation fund for local economic impacts - obligation	NPS EN-1: transport of material, goods, and personnel can have adverse impacts on surrounding transport infrastructure and transport networks. Consideration and mitigation of transport impacts is a key policy objective. Notes impacts like congestion may have economic and social effects too. Also notes development will be supported where the cumulative impact of new development will not create severe impacts on the existing transport network
12j	Reduced propensity for people to cycle or walk along the existing transport network, especially on the B1122 section beyond the limits of the Sizewell Link Road (between A12 Yoxford and along the A12 for the life of the project.	C	Negative	Improvements to cycle and pedestrian infrastructure - obligation	Policy SCLP7.1 notes development will be supported where it is located close to and provides safe pedestrian and cycle access to services and facilities, and is well integrated into, protects and enhances the

					existing pedestrian routes and the public rights of way network
12k	Risk of late delivery of transport infrastructure to exacerbate transport issues	C	Negative	Caps to control movement of HGVs on Suffolk's Road network (hourly, daily and quarterly) – obligation	
12l	Reduced availability of on street parking in areas in vicinity of the site, as a result of increased numbers of houses in multiple occupation and fly parking	C	Negative	Mitigation package for on street parking impacts to be agreed with Applicant – obligation	Local Plan Policy SCLP7.1 notes development proposals should be designed to encourage people to travel using non-car modes to access employment and other services.
12m	Impacts of additional freight trains on passenger trains and freight trains operating out of the Port of Felixstowe	C	Negative	Transport Review Group to monitor rail freight operation to ensure no adverse impacts on the railway line. If issues, arise these will need to be resolved by the Transport Review Group	
12n	Possibly improvements to the East Suffolk Line as a legacy benefit	O	Positive	Once required improvements are confirmed by Network Rail, these need to be secured by requirement or obligation	Local Plan Policy SCLP11.7 states opportunities to improve provision of or access to public transport, in rural and urban areas will be supported.
12o	Improvements to the Leiston Branch Line	O	Neutral	n/a	Local Plan Policy SCLP11.7 states opportunities to improve provision of or access to public transport, in rural and urban areas will be supported.
12p	Additional traffic impact from operational work force and outage staff	O	Negative		
12q	Improved walking and cycling facilities as a legacy benefit	O	Positive		Local Plan Policy SCLP11.7 states opportunities to improve provision of or access to public

					transport, in rural and urban areas will be supported.
12r	Highway maintenance burden as result of additional permanent roads	O	Negative	Maintenance contribution to the highway authority - obligation	

Policy context

National Policy Statements

15.7. NPS EN-1 promotes the use of rail or water freight transport, as a method to reduce the environmental and congestion impacts of road freight, setting out that '*Water-borne or rail transport is preferred over road transport at all stages of the project, where cost-effective'* (paragraph 5.13.10). It goes on to state that '*If an applicant suggests that the costs of meeting any obligations or requirements would make the proposal economically unviable this should not in itself justify the relaxation by the Infrastructure Planning Commission of any obligations or requirements needed to secure the mitigation*' (paragraph 5.13.12)

15.8. Paragraph 5.13.8 of NPS EN-1 sets out that 'Where mitigation is needed, possible demand management measures must be considered and if feasible and operationally reasonable, required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts.'

15.9. Paragraph 5.13.1 identifies impacts from the transport of materials, goods and personnel to and from a development may include economic, social and environmental effects. Environmental impacts may result particularly from increases in noise and emissions from road transport. Disturbance caused by traffic and abnormal loads generated during the construction phase will depend on the scale and type of the proposal. Paragraph 5.13.2 indicates that the consideration and mitigation of transport impacts is an essential part of the Government's wider policy objectives for sustainable development. Paragraph 5.13.6 expects applicants to mitigate transport impacts to "acceptable levels" by measures, requirements or planning obligations, and paragraph 5.13.7 notes that where this is done appropriately limited weight should be given to residual impacts.

15.10. NPS EN-6 notes in relation to transport matters that "the strategic level assessment undertaken by Government did not include detailed traffic assessments as this will depend on a number of factors which are noy yet known such as timing and phasing of development. Section 5.13 of EN-1 contains policy on consideration of traffic and transport impacts which would be undertaken should an application for development consent come forward."

15.11. NPPF paragraphs 108 and 109 provide guidance for reviewing planning applications on transport grounds, setting out the following policy:

'In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

a) Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

b) Safe and suitable access to the site can be achieved for all users; and

c) Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe'.

Local Plan Policy

15.12. Policy SCLP7.1 relates to sustainable transport and Policy SCLP7.2 to parking proposals and standards.

15.13. With regards to sustainable transport, ESC requires development proposals to be designed from the outset to incorporate measures that will encourage people to travel using non-car modes to access home and employment. Development must also mitigate any significant impacts on the highway network. A Travel Plan is required to be included with all large development proposals.

15.14. SCLP7.2 references parking to be provided dependent on the location, type and intensity of use. Proposals are expected to conform to the Suffolk Guidance for Parking.

Suffolk Transport Plan

15.15. SCC's Local Transport Plan **(APPENDIX 1: 5)** recognises the East Suffolk Coast, including Sizewell C as a key area for growth and development. The Four-Village Bypass is included as a strategic transport improvement scheme in Part 2 of the County's Local Transport Plan as a medium to long term project delivered by developers. Also included in the Local Transport Plan are proposals for improvements in Coddenham to relieve the impacts of HGVs on the village and major improvements to the A14 / A12 Copdock Interchange.

15.16. SCC's Local Transport Plan 2011 sets out that there are also long-standing issues of traffic volume through the villages of Marlesford, Little Glemham, Stratford St Andrew, and Farnham on the A12.

Suffolk Parking Guidance

15.17. The Suffolk Parking Guidance **(APPENDIX 1: 9)** was updated in 2019 and provides details on the requirements for cycle, powered two-wheeler, electric vehicle charging

facilities, parking for disabled motorists and car parking for relevant use classes. The provision of these facilities should meet relevant guidance.

Suffolk Travel Plan Guidance

15.18. Suffolk Travel Plan Guidance **(APPENDIX 1: 8)** contains information on the development and anticipated content of travel plans, and the operational site travel plan should be developed in accordance with this guidance or any superseding guidance.

Suffolk Developer Contributions

15.19. The Section 106 Developers Guide to Infrastructure Contributions in Suffolk **(APPENDIX 1: 22)** sets out guidance identifies the relevant funding requirements for highway improvements, including relevant legal and administrative costs.

Context – Suffolk transport network and improvements

15.20. To understand how the Applicant's proposal fits into Suffolk's transport infrastructure, we are providing an overview of the existing road and rail network and proposals outside of Sizewell C to improve it. In **ANNEX C,** the Councils have provided context reports to provide a high-level summary of the local transport network on approach to, and around, the Sizewell area. The report has been designed to provide an introductory overview of the local transport network and the general issues that are faced by users. It highlights the general reliance on the private car as the main mode of transport, while providing an overview of the options when considering alternative modes, particularly for medium and long-distance journeys. The report in **ANNEX C** may help inform the Examination, but is not designed to be, and so should not be viewed as, a complete audit of the entire East Suffolk transport network. It includes an overview of the road, rail and bus network and pedestrian and cycling infrastructure in the area. The section below focusses on current wider proposals for key improvements of the transport network in and near Suffolk.

15.21. The A12 is part of Suffolk's Major Road Network, reflecting the importance of the route for local communities, the economy, the visitor economy, and access to the AONB and coast. It is recognised that there are existing issues on the A12, in particular between the A14 junction at Seven Hills and the A1152 at Woods Lane, Melton. Transport modelling undertaken by SCC to support the recent Suffolk Coastal Local Plan and Ipswich Strategic Planning Area plan (further detail if required at: https://www.suffolk.gov.uk/assets/Roads-and-transport/public-transport-and-transport-planning/ISPA-Transport-Mitigation-v13F.pdf) also indicated that these issues would worsen as a result of planned growth.

15.22. SCC in its capacity as Local Highway Authority, supported by East Suffolk Council, was successful in applying for and receiving development funding from the Department for Transport to progress the detail of improvements in this section of the A12 and make the case for funding its delivery. SCC has consulted on the proposals and is currently evaluating representations received through the consultation.

15.23. The Major Road Network Scheme would enhance highway capacity at eight junctions on the A12, between the A14 Seven Hills and the A1152 Woods Lane. It would also provide a new section of dualled road, and improve walking/cycling and public transport facilities. SCC working with ESC and other partners, has developed proposals by assessing traffic movements and traffic demand impacts at the junctions. The results from this analysis are that a number of the A12 junctions will be over capacity and/or be subject to significant congestion in future years, which is associated with planned growth and development in the area and would be further exacerbated by construction traffic arising from the Sizewell C proposal.

15.24. Given that the Sizewell C construction traffic will significantly increase the pressure on the A12, SCC as local highway authority is requesting a reasonable contribution from the Applicant to some of the schemes in locations identified as being most affected by the construction traffic.

15.25. In addition to the SCC-led improvements to the A12 north of Seven Hills, Highways England is working on a number of improvements to the A14 between Seven Hills and Copdock and onwards between Copdock and Newmarket, as well as to the A12 south of Copdock. Of these however, Highways England have only formally identified the A12/A14 Copdock Interchange and A11 Fiveways, Mildenhall as schemes that may be delivered in the Department for Transport's Third Road Investment Strategy (RIS3), to run from 2025 to 2030 (with some feasibility design undertaken in advance of 2025).

15.26. These proposals complement the Sizewell C highway mitigation schemes put forward by the Applicant.

15.27. It is noted that ideally, in order to not unduly disrupt vehicular access to Sizewell C and avoid exacerbated impacts on the road network, it will be important to construct the A12 transport improvements so that they are complete before the construction traffic associated with Sizewell C reaches its peak, even though the improvements are primarily proposed to support long term growth forecast in Local Plans. The Councils note the associated risks associated with the timing of our own sponsored works; developer funded infrastructure as well as the Sizewell C associated highway works. The Councils continue to

work with relevant stakeholders to aim to bring forward some of the schemes, which for the A12 Major Road Network scheme will require flexibility from the Department for Transport in the timescales for decision making and, if successful, for providing the required funding.

15.28. Network Rail are proposing improvements to the Haughley rail junction and at Ely Station to improve efficiency and capacity. Associated with these works are signalling and level crossing improvements along the rail line between Ipswich and Ely. In addition to this, further enhancement and maintenance work is planned across the Suffolk and wider rail network, as set out in Network Rail's Anglia Route Study **(APPENDIX 2: 5)**. The timing of delivery for some of these rail improvements will take place within the next 10 years and is likely to take place during the construction of Sizewell C. This may have an impact on the rail deliverability component for Sizewell C, therefore the possible risks should be identified by the Applicant

15.29. The Councils provide, in Table 13 and Figures 2 and 3, an overview of the schemes along the A12 and A14 in the pipeline, including those put forward by the Applicant in relation to Sizewell C.

Table 13: Strategic transport improvement schemes planned in the local area

Ref	Scheme	Promoter	Certainty	Est Date of works
1	A14/A142 junction, Newmarket	Hatchfield Farm development	High	up to 2026
2	A11 Fiveways junction, Mildenhall	Highways England	Medium - RIS2 development funding. Estimated delivery RIS3, subject to funding	RIS 3 – 2025-2030
3	A134/A14 Sugar beet junction, Bury St Edmunds A134/A14 Sainsburys junction, Bury St Edmunds	Berkeley Homes (NE dev site) Hopkins Homes (SE dev site)	High High	tbc tbc
4	A14 Woolpit to Stowmarket, replace concrete carriageway	Highways England	High - RIS2	2021/22
5	Haughly Rail junction improvement	Network Rail	High	2021/22
6	A14/A12 junction, Copdock, Ipswich	Highways England	High - RIS2 development funding. Estimated delivery early RIS3 subject to funding	2026
7	A14/A137 junction, Wherstead, development related	Pidgeon developers	High – planning permission granted	up to 2026
8	A14 Orwell Bridge - variable speed limit	Highways England	Completed	2021
9	A14/A1189 Nacton Rd junction, eastbound on-slip	SCC - pinch point funding	Medium - dependent on funding	up to 2026
10	A14/Orwell Crossing junction (eastbound) extend on/off slips	Developer	High	up to 2026
11	A14/A12 Seven Hills junction	SCC MRN / HIF or CLL Brightwell Lakes dev Highways England	High	2022 to 2024
12	A12/Foxhall Rd junction	SCC MRN /HIF or CLL Brightwell Lakes dev	High	2022 to 2024
13	Brightwell Lakes access- signalised junction	SCC MRN /HIF or CLL Brightwell Lakes dev	High	2022 to 2024
14	A12/ BT junction	SCC MRN / HIF or CLL Brightwell Lakes dev	High	2022 to 2024
15	A12/ Tesco junction	SCC MRN / HIF or CLL Brightwell Lakes dev	High	2022 to 2024
16	A12/ A1214 Park and Ride junction	SCC MRN	High	2022 to 2024
17	A12/ B1438 Seckford roundabout and dualling of carriageway to the north	SCC MRN	Medium - SOBC stage	2022 to 2024

18	A12/B1079 Dobby's roundabout	SCC MRN	Medium - SOBC stage	2022 to 2024
19	A12/ A1152 Woods Lane roundabout	SCC MRN	Medium - SOBC stage	2022 to 2024
20	A12 Stratford St Andrew - Two Village Bypass	Sizewell C	High	2022 to 2024
21	A12/A1094 Friday St junction	Sizewell C - roundabout Scottish power - temp signals	High	2022 to 2023 2023
22	A12/B1119/B1121 Saxmundham new roundabout to access development	Developer	High	2024 onwards
23	A12 south of Yoxford - Haul Road link	Sizewell C	High	2022 to 2024
24	A12/ B1122 Yoxford - roundabout	Sizewell C	High	2022 to 2024
25	A12/ Darsham Park and Ride access, roundabout	Sizewell C	High	2023
26	A12/ Wangford - speed limit reduction	SCC	High	2020
27	Lake Lothing Third Crossing	SCC	High	2020 to 2022
28	A12/Capel St Mary - slip roads	Highways England	tbc	tbc
29	A12 Junctions 19 to 25 additional 3rd lane (Colchester to Chelmsford)	Highways England	tbc	tbc

Figure 3: Road improvement schemes along the A12 and A14

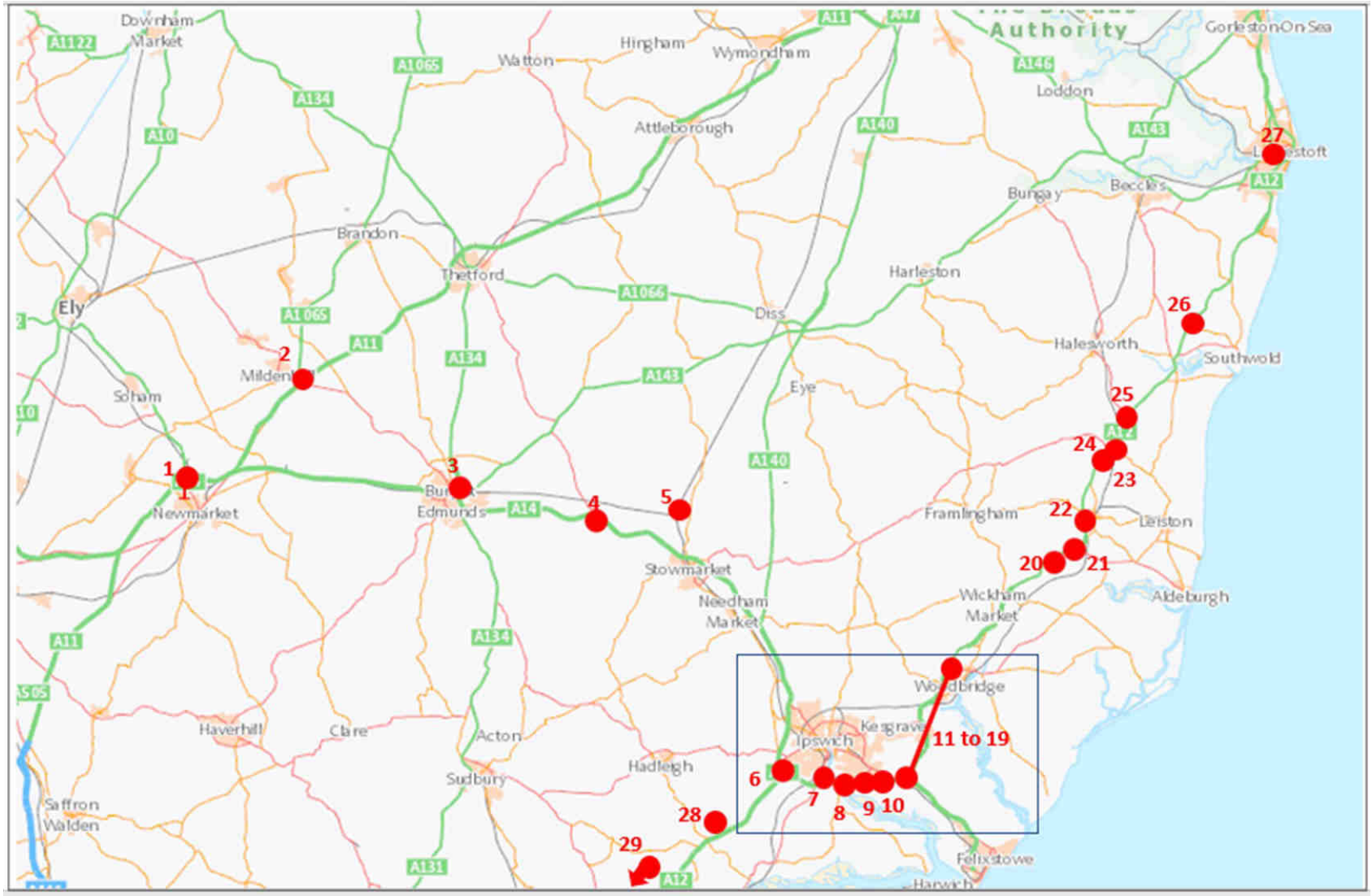
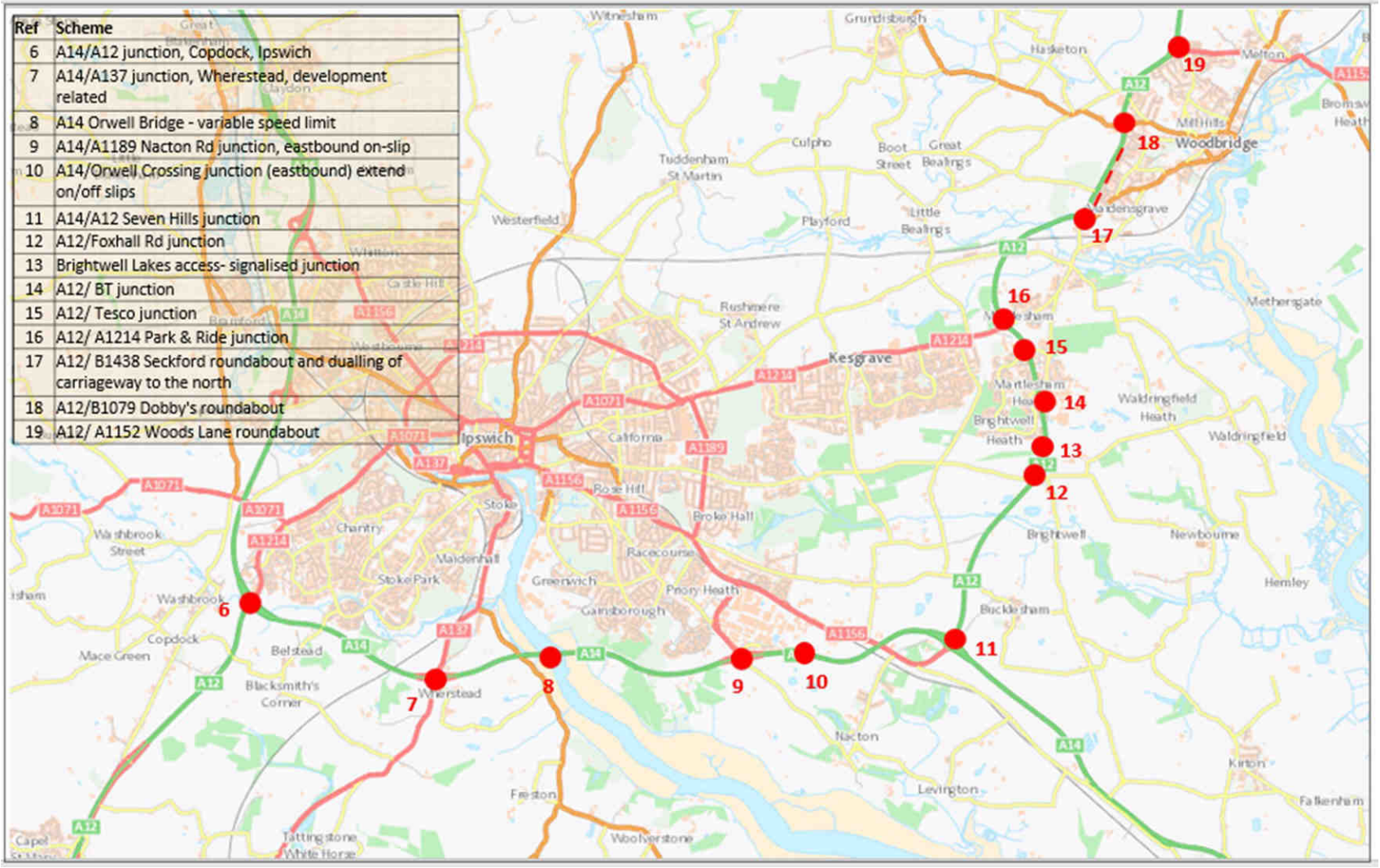


Figure 4: Road improvement schemes along the A12 and A14 – detail around Ipswich



Context – the Applicant's transport strategy

Overview

15.30. This context section discusses the transport strategy and transport modelling submitted by the Applicant, including how it has evolved through previous rounds of consultation and pre-application discussions.

15.31. The Councils are generally satisfied with the transport modelling the Applicant has undertaken as the evidence base for assessing impacts (see 15.51 below).

15.32. Throughout the pre-application phase, the Councils requested that the Applicant maximise rail and marine freight deliveries, in order to achieve a more sustainable approach to freight management to/from the site. As part of the Stage 3 consultation proposals, the Applicant removed proposals for a marine-led transport strategy that had been proposed at Stage 2 and introduced a road-led option alongside a rail-led proposal. The Councils raised some concerns at the time regarding the lack of evidence behind removal of the marine-led strategy. At Stage 4 of the consultation process, more detailed evidence was provided as to why the marine-led approach had been withdrawn and a hybrid integrated strategy was introduced, which is what the approach proposed in the Applicant's original DCO submission is based upon.

15.33. The proposals in the Applicant's original DCO submission would have resulted in more than 60% of materials being transported by HGV to the site (with up to 38% to be transported by rail, and only Abnormal Indivisible Loads (AILs) by sea). Suffolk County Council considered at that point in its Relevant Representation (paragraphs 17 to 25) [RR-1174] that these proposals fell far short of a sustainable transport strategy. East Suffolk Council was satisfied at that point [RR-0342] that provided the mitigation proposed was in place at the right time in the construction timetable, the Applicant had sought to provide the most deliverable sustainable strategy it could achieve. ESC acknowledged our disappointment that opportunities were missed over the last ten years to enable improvements to the wider east Suffolk rail network as that would have enabled avoidance of reliance on overnight rail, but welcomed the Two Village Bypass, and Sizewell Link Road but requested further detailed information in some areas.

15.34. In response to SCC's concerns about this approach highlighted in its Relevant Representations [RR-1174], and some of the concerns highlighted by ESC in their Relevant Representation [RR-0342], the Applicant put forward revised freight management strategy proposals in the change application [AS-280], seeking to increase the use of rail and sea modes compared to the proposals in the original DCO submission, with additional freight

deliveries proposed by rail and the creation of a temporary second beach landing facility. If these improvements are delivered, the Applicant suggests that this could reduce the proportion of materials brought to site by road to 40% of the total tonnage (para 2.1.15 in [AS-280]).

15.35. The principle of increasing freight movements by rail and marine is supported by the Councils. At the time of finalising this LIR, there remains a lack of clarity around the deliverability, timing and impact of the proposals of additional train movements and timing of the construction of a second beach landing facility, which would be of concern to the Councils if not resolved. The Councils will continue to work proactively with the Applicant, Network Rail and other relevant organisations to aim to resolve these matters.

15.36. If the scheme was to be consented, the Councils appreciate the need to ensure there is a balance between managing local impacts and timeliness of construction. However, if for any reason the delivery of road mitigation and/or deliveries via rail and sea cannot be achieved, the Councils expect reasonable robust caps to be agreed so that non-delivery of required mitigation does not automatically revert back to a significant increase in HGV numbers that has not been adequately assessed in either the original Transport Assessment or ES, or in the Transport Assessment or ES Addenda. The Councils, through the Transport Review Group, would want to be consulted upon any proposals to diverge from the caps and have approved them before the Applicant could proceed.

15.37. With regard to transporting the workforce the Councils recognise the Applicant's ambitions, firstly to minimise the need to travel by locating the accommodation campus adjacent to, and the caravan park close to, the Main Development Site and secondly to transport a significant proportion of staff to/from the site by public transport through the delivery of two Park and Ride sites, as well as other bus services running from locations with high numbers of staff living there. Despite these measures, the construction will result in large numbers of additional car and bus journeys of the workforce on Suffolk's highway network, to and from the park and ride sites and the Main Development Site car park, and in the Early years to the temporary park and ride site at LEEIE.

15.38. Despite the measures put forward by the Applicant, the proposed development will still result in a significant negative impact on the highway network. A substantial amount of additional road traffic will be created as a result of the construction activity, with associated impacts on severance, pedestrian delay, pedestrian amenity, fear and intimidation, driver delay, accidents and safety, noise and air quality (see the Noise & Vibration and Air Quality sections), as well as the overall carbon footprint of the proposal

(see sustainability section). The Applicant makes a number of substantial proposals for road mitigation, most notably the Two Village Bypass and the Sizewell Link Road. However, in the Councils' view, additional measures will, or in some instances may, be required to further reduce this impact, and a full proposal of mitigation measures is likely to be required to directly reduce impacts on the highway network – see paragraph 15.151 for details of required mitigation.

Rail proposals (as per DCO Change Application)

15.39. The Councils support the use of rail to move construction materials for this project and agree that this is compliant with national policies such as the NPS EN-1. The Councils note the crucial role that rail transport has to play in delivering significant reductions in pollution and congestion. The NPS for National Networks (2015), whilst not directly applicable to this application, provides the useful context that, tonne for tonne, rail freight produces 70% less CO2 than road freight, up to fifteen times lower Nitrogen Oxides (NOx) emissions and nearly 90% lower PM10 emissions. It also has de-congestion benefits – depending on its load, each freight train can remove between 43 and 77 HGVs from the road.

15.40. The Rail improvements put forward by the Applicant comprise four key elements:

i. The Green Rail route providing access to the Main Development Site during construction
ii. Sidings at the LEEIE providing access to this site during the 'Early years'.
iii. Improvements to the track and level crossings on the Leiston Branch Line including Saxmundham Junction on the East Suffolk Line
iv. Mitigation for noise and vibration, improvements to level crossings and signalling on the East Suffolk Line

15.41. As part of the revisions to the transport strategy proposed in the Applicant's change application, the Applicant now intends to run four/five trains per day as set out in the ES Addendum [AS-188]; this would be an increase of one/two trains per day compared to what was proposed in the original DCO submission (three trains with six movements - five at night and one during the day). According to the Applicant, the operation of four/five trains per day might consist of:

i. six train movements at night with two movements during the day; or
ii. seven freight train movements at night with three movements during the day; or
iii. eight movements during the night (with two movements during the day).

15.42. The Applicant has recently indicated (presented to the Councils on 15 March 2021) that they intend to operate two trains a day from January 2024, and then four trains a day from August 2024 when the Green Rail Route is completed. This is a change from the Applicant's original proposals, which was to already commence operating two rail services per day within the first 12 months of construction (from 2023), however it also means an increase in level of service available from 2024. The Applicant's Early Years Construction proposal and assessment is reliant on the movement of two freight trains per day within the first 12 months of construction to keep HGV movements to 600 movements per day. The Applicant's new approach to only operate rail from 2024 has an impact on their ability to meet the commitments made within their DCO submission and subsequent change documents submitted in January 2021 during the Early Years. This emphasises the Councils' need for robust caps and controls. Overall, the Councils welcome the ambition to provide additional rail insofar as it takes HGV movements from the highway network (See Noise and Vibration for further commentary regarding increased levels of rail).

15.43. The DCO submission document, associated appendices and change submission focus on enhancement to the section of rail track between the Saxmundham Junction to the Sizewell Level crossing on the Leiston Branch Line (providing continuously welded track and improvements at eight level crossings for the existing branch line, as well as the delivery of the Green Rail Route, a temporary rail chord of 1.8km running from a Junction on the existing Saxmundham to Leiston Line to the B1122 Abbey Road level crossing).

15.44. However, the Applicant has not demonstrated what improvements are required to the East Suffolk Line or the wider rail network. A GRIP 3[1] Feasibility Study is being undertaken by Network Rail to identify the capacity and level crossing improvements needed on the East Suffolk Line, but this will not be completed until July 2021. In addition to this, although the Applicant has referenced from where materials are likely to be sourced within the UK, no commitment has been given as to the origins or rail routes and capacity available.

15.45. Without this evidence, it is not clear whether the Applicant can operate additional trains on the East Suffolk Line and the wider railway network, nor the potential impact on current passenger services operating on the line and freight rail services to the Port of Felixstowe. This creates substantial risks not only that the number of HGVs on the road

[1] The Governance for Railway Investment Projects (GRIP) describes how Network Rail manages and controls projects that enhance or renew the national rail network. GRIP divides a project into eight distinct stages.GRIP3 – Option Selection assesses and the most appropriate option that delivers the requirements is determined. It confirms that the outputs can be economically delivered.

network will need to be significantly greater than indicated, with the associated impacts arising from that increase, but also that it could cause disruption to rail passengers using the passenger trains and the operations of the Port of Felixstowe, which uses part of the East Suffolk Line for the transportation of goods. Given the Port of Felixstowe's recent success in its bid to becoming a Freeport (as confirmed in the March 2021 Budget announcements), the Councils would be concerned if Sizewell C was to adversely impact on the Port's ability to use the rail network for freight.

15.46. Further detail of the Councils' evaluation of the full range of rail mitigation measures is detailed below.

Beach landing facilities

15.47. A second BLF appears to be a critical element of the Applicant's proposals to move freight from the roads. However, further clarity is needed in relation to these provisions. See the Coastal Geomorphology section for detail in regard to this.

15.48. The Applicant notes (in para 3.3.2/3.3.3 [AS-280]) that the BLF has operational constraints of weather and tide and therefore proposes to limit the marine campaign to a seven-month period annually between April and October. It goes on to say that the ES Addendum assesses the likely significant effects if use is made of the new, temporary BLF outside the summer campaign, weather and other conditions permitting. It concludes that "For the purposes of this Freight Management Strategy, however, the potential for less frequent use of the new BLF outside the campaign period is regarded as helpful resilience rather than a source of supply that can be relied upon."

Balance of transport modes

15.49. As set out above, the Councils are supportive of maximising rail and sea borne deliveries to reduce HGV traffic. Due to the lack of full detail of rail and sea transport proposals at this time, the Applicant has not conclusively identified the final maximum materials capacity that the rail movements and BLFs could principally deliver.

15.50. The Applicant states [AS-280], para 2.1.12] that approximately 40% of the construction material requires road transport. However, the Councils have not seen conclusive evidence for this statement. Therefore, should the finalised proposals for rail and sea show that there is principally capacity to take a proportion higher than 60% of materials, there is no evidence why the proportion of materials being brought to site using rail and sea-borne transport modes cannot be increased further beyond 60%. Some information has been provided on the preferred modes of transport for selected materials [APP-185] but a full overview is not provided. The Councils consider that the Applicant has

not fully explored the maximisation of delivery of materials by modes other than road and is not matching the aspirations of recently examined projects such as Wylfa New Nuclear Plant (proposed 80% of materials by sea) nor evidencing that it is matching the inspiration of the NPS.

Transport modelling

15.51. The transport impacts of the proposed development have been assessed using transport modelling. There is ongoing work in relation to the transport modelling being carried out by the Applicant and the Councils, however, it is likely that the Councils will consider the modelling methodology to be acceptable. This is subject to no further issues being identified in additional work being undertaken. However, there are inherent risks within the assessment which underline the need for comprehensive monitoring, controls on key transport parameters and potential additional mitigation for unforeseen impacts:

15.52. Gravity Model – The gravity model uses the potentially available accommodation and travel time to the site to determine the origin of the workforce. Whilst the Councils consider that the Gravity Model is an acceptable way of estimating the origin of workforce, it remains only an estimate. The potential for a more or less condensed distribution of the workforce will have implications on the transport network, including occupancy at the park and rides, number of vehicles driving directly to/from site and vehicular impacts at local junctions; and

15.53. Strategic Transport Model – The baseline model is considered acceptable for use, given the calibration achieves the DfT WebTAG criteria. However, the model, like any model, has its limitations, such as the modelled vehicle numbers being lower than those surveyed currently in the PM peak north of Woodbridge. Given the limitations of the model, the scale of network and scale of development results need to be treated as indicative, but with inherent risk. The future year 'with development' scenarios are naturally also reliant on the inputs that have been assessed; these rely on numerous variables all of which affect the overall assessed impact.

15.54. The assessment is for three scenarios: the 2023 'Early Years', the 2028 'Peak Construction' and the 2034 'Operational' scenario. The Early Years scenario models development impacts prior to the delivery of the Two Village Bypass and Sizewell Link Road, the peak construction scenario represents the greatest workforce during the development, and the operational scenario is post-construction. Each of these scenarios represents a snapshot in time and while in many cases the assessment methodology may be reasonable, it does not mean that it does not present a risk to the overall conclusions.

15.55. The additional traffic arising from the construction of the development has been tested at 45 junctions, through either VISSIM microsimulation modelling or through local junction modelling. Risk in the assessments impacts on the accuracy of these models. For some of the modelling, the risk is very low due to the level of existing traffic, but for others, the assessment method potentially underestimates the impact and thus may result in mitigation measures not being provided where it actually may have been necessary. This risk is also inherent in the conclusions of the ES of road traffic where traffic flows are being assessed, particularly when considering the hours of greatest change.

15.56. Car sharing - Throughout the life of the project, the car sharing factor for staff is likely to change reflecting staff numbers and home locations. Monitoring at Hinkley Point C identified that the worker car share at the development was not achieving the proportions assessed within the Hinkley Point C Transport Assessment, albeit the data available reflected the situation at that point in the project. Increases in staff numbers since then might affect these proportions (potentially better reflecting the assessed proportions). Learning from Hinkley Point C, these car share factors were applied to the predicted workforce for the Sizewell C assessment, and are considered to be an acceptable dataset for determining the car share factor. However, the dataset represents a risk to the overall conclusions on traffic impacts and so car sharing should be monitored, to identify any potential issues before they occur and to reduce the likelihood of worker vehicle movements exceeding those assessed. For visitor car share, limited evidence has been submitted to support the assumptions around these movements and have not been agreed with the local authorities, and monitoring is again considered necessary to ensure compliance.

15.57. In consequence of these risks, the Councils consider the need for additional controls and caps within the transport management plans, to be secured by obligation (see Requirements and Obligations), as well as potential additional mitigation measures (see Required Mitigation).

15.58. Despite the risks, the Applicant's modelling provides a helpful basis for the assessment of likely impacts on the highway network, which are considered in the impacts section below.

Transport risks identified from the transport modelling

15.59. The Applicant proposes, in its submissions, only controls relating to the daily total number of HGVs travelling to the Main Development Site, for each of the scenarios (i.e.,

Early Years, Peak Construction, Operational). The following paragraphs consider risks identified by the Councils when considering the traffic impacts.

15.60. HGVs to Associated Development Sites: HGVs travelling to/from the Associated Development sites, as yet, are not proposed to be controlled by caps or monitored for route choice. These represent a significant number of HGV movements in the Early Years scenario (Appendix 7B of APP-603 indicates 466 Two Way HGV movements).

15.61. HGVs Peak Hour Movements: HGVs are, as yet, not proposed to be controlled to hourly caps. This means that the junction modelling exercise undertaken may be underestimating impacts in certain hours (i.e., a greater number of HGV movements than assessed may operate in the peak hours). As a worthy comparison, peak hour caps on HGV movements are in place for the Hinkley Point C development. It is noted that within a sensitivity test evaluating the scenario of 100% HGVs originating from the south no additional HGV movements were added in the model to those already included in the peak hours.

15.62. HGVs Quarterly Movements: HGVs travelling on the road network are, as yet, not proposed to have a quarterly cap, meaning that the peak construction 'typical day' will not be controlled to be a 'typical day' (i.e., an average day across a reasonable period of time) with the potential for far more peak days than are being suggested. This is particularly important given risks around delivery of the proposed use of rail and unknowns relating to the secondary beach landing facility. These quarterly caps are in place for the Hinkley Point C development and are requested for Sizewell C.

15.63. Associated Development site reinstatement: There are no controls proposed for the reinstatement phase after completion of the development nor any assessment of impacts for a scenario where mitigation has been removed (i.e., the park and rides) with the associated construction workforce potentially still greater than the Early Years assessment.

15.64. Workforce Numbers: There are no controls proposed for workforce numbers; meaning that numbers may exceed those assessed for the Early Years scenario prior to the delivery of relevant mitigation or for the peak year scenario.

15.65. Accommodation Campus: The delivery of the Accommodation Campus may be later than assessed or take up may be lower meaning that this may generate more workforce trips to/from site than assessed. Delivery could be addressed by controls on the workforce numbers as above and robust monitoring to identify changes at an early stage.

15.66. Accomodation Campus Worker Trips: Lower than forecast uptake of sustainable transport modes or the proposed shuttlebus by workers seeking to travel to and from

Leiston risks additional car related journeys on the local network. Good quality direct pedestrian and cycle access between the campus and the town centre is needed to ensure opportunities to use sustainable transport modes are taken up. Workforce shift patterns: There are no controls on shift patterns. Many workers have been modelled as travelling outside of the network peak hours. Evidence to date at Hinkley Point C (Appendix 7B of [AS-268) indicates workers travelling potentially more in the peak, particularly during the PM peak hour than is being assessed here. Although the Appendix states that this is an Early Years comparison, we are conscious of the level of workforce employed at Hinkley Point C during the comparison exercise (over 5,000) and that it is not a complete like-for-like comparison for either the Early Years or the Peak scenario. This is relevant as the shift patterns as proposed generally avoid workers travelling in peak hours.

15.67. Bus numbers: the number of buses will be determined by workforce location and demand (reflected by the shift patterns, as above); and may differ from that assessed.

15.68. Light Goods Vehicles (LGVs): There are, as yet, no controls proposed for total daily LGV movements or LGV routeing.

15.69. Abnormal loads: There are no limitations on the number of abnormal load movements, nor any modelling of the associated impacts. Particularly of concern is the significant delay they can cause.

15.70. Delivery of mitigation schemes: There is no assessment of the impact of traffic management associated with the delivery of mitigation. Therefore, the modelling exercise is undertaken on an uninhibited network, when in reality the network may often be inhibited.

15.71. In consequence of these risks, the Councils consider the need for additional controls and caps within the transport management plans, as well as potential additional mitigation measures.

15.72. Despite the risks, the Applicants modelling provides a helpful basis for the assessment of likely impacts on the highway network, which are considered in the impacts section below.

Current status of ES on road traffic

15.73. As above, the Councils note that the assessment of the environmental impacts of road traffic forms an ongoing workstream with the Applicant; however, there are a number of key issues that currently mean that the conclusions drawn by the Applicant at this point cannot be deemed acceptable. Some of these issues affect the overall conclusions. As a brief summary they relate to the conversion of the surveyed and peak hour modelled flows

into 24 hour flows, the directional factoring for Sizewell C flows, the absence of an assessment of the reinstatement phase, the absence of an assessment of specific representative hours for each location and scenario, the dismissal of impacts occurring during the representative hour, the defined sensitivity of receptors which does not consider a number of factors relating to existing facilities, the assessment of journey time delay being based on the strategic model where local junction model outputs are available, the absence of baseline information on the presence of vulnerable road users, that the effect of AILs is not considered and that the effect of construction of highway mitigation is not considered.

15.74. As well as the overall conclusions which would affect all locations within the assessment, there are conclusions that affect specific locations that are not currently agreed; whilst not a complete list these include Sizewell Gap, the Main Site Access, the B1125 at Westleton, the A12 at Yoxford, the A12 at the Northern Park and Ride, the A12 at Little Glemham, the A12 South of Wickham Market, the A12 both north and south of the A1152 Woods Lane junction, the A12 south of the A1214 Park and Ride roundabout, the A12 south of the Anson Road roundabout, the A12 south of the Foxhall Road roundabout, and the B1069 at Coldfair Green and at B1069 north of Aldringham Lane.

15.75. Discussions around these issues have been progressing and we will continue to work with the Applicant to address them. The Councils will make it clear to the ExA where any issues remain through the Statement of Common Ground.

Learning from Hinkley Point C

15.76. The Councils commissioned, alongside other members of the New Nuclear Local Authority Group, the "Study on the impacts of the early-stage construction of the Hinkley Point C (HPC) Nuclear Power Station" (Oxford Brookes University 2019) **(APPENDIX 2: 1)** which including looking at the transport impacts at Hinkley Point C. In its summary on actual impacts against predicted impacts, the study concluded in 2019 on transport matters (page 58): "There is (..) current good performance against predictions for many transport indicators. These include the key indicators of mode share for workforce journey to the main site, with the bus system working well, and the Delivery Management System (DMS) actuals v HGV limits. However, the car share system, in place in relation to worker journeys to the Park and Ride sites, has not been as effective as expected, and there was the unexpected issue of fly parking. However, better management appears to be now in hand for both issues. Delays in the delivery of key transport infrastructure, including the

jetty and Park and Ride sites, meant that there were more issues in the early stages of the project."

15.77. In response to the identified gaps in data, the study recommends (page 62) for Hinkley Point C that: "Various omitted transport issues need to be monitored, and reported to the TRG, including: fly parking, EURO IV (exhaust emissions), deflectograph road condition surveys, increased delay to local drivers and reduced highway capacity, bus passenger movements to site, LGV movements, and take-up of traffic noise insulation scheme, and road safety. A bulk delivery materials plan should be submitted to LAs by the developer before temporary jetty operational."

15.78. The study considers that, in response to the delays of transport related schemes, for future New Nuclear Builds, robust consideration should be given to suitable trigger points in relation to completion of associated developments, as well as suitable monitoring provision (page 64). Issues related to implementation and delivery risks are discussed in more detail under section 31 below.

15.79. The Councils understand that for those areas where appropriate monitoring and controls were in place, most notably peak hourly, daily and quarterly HGV numbers and routeing were generally accorded with, and that the management measures were successful. This is the same for the proportion of staff travelling to/from the site by bus. However, there are a number of areas including LGV numbers and routeing that have not been monitored and so have not been evidenced to continually meet the ES predictions for that project.

Cumulative impacts

15.80. The construction period for the Sizewell C project will overlap with a number of other major infrastructure projects, major developments, and highways schemes. Traffic from the Sizewell C project will cause pressure on the road network, particularly along the A12, at a time when a number of improvement works will be made by SCC as local Highway Authority to deal with planned growth in the area. Some of these schemes are required to enable specific developments, or are subject to external funding. If the mitigation measures for Sizewell C traffic cannot be delivered to an agreed schedule, then this will have consequences for improvements schemes, potentially presenting financial risk for other developments.

15.81. Sizewell C traffic, if consented, will coincide with traffic generated by the East Anglia One North and East Anglia Two offshore wind farms, if consented, to construct the onshore

elements of those schemes. Some communities may therefore suffer impacts from both developments.

15.82. More detailed consideration of cumulative impacts on transport is provided in the Cumulative Impacts section below.

Construction phase highways impacts

15.83. The Applicant is proposing to deliver a number of transport mitigation schemes which will reduce the negative transport related impacts of the development; these are discussed in relevant sections below. The Councils welcome these proposals in principle, and consider that, once completed, they will reduce or mitigate Sizewell C's transport impact at certain locations and may in some instances be beneficial. However, with the exception of transport and community impacts mitigated by the provision of the Two Village Bypass and Sizewell Link Road, even after mitigation is delivered, the transport impacts will overall be negative. Each section, where appropriate, considers the impacts geographically, starting from the development site outwards.

Positive impacts

15.84. There will be a positive impact to residents along the B1122 in Middleton Moor and Theberton during the construction phase**,** as a result of the Sizewell Link Road rerouting existing traffic in this site-specific section. (see Sizewell Link Road section below)

15.85. The Two Village Bypass will have a positive benefit to residents of Stratford St Andrew and Farnham by removing traffic from the A12 passing through the centre of these communities. There will be a benefit of the Two Village Bypass to other road users by reducing travel time on the A12 at this specific location. The proposed A12 / A1094 roundabout scheme is considered to be a significant benefit particularly in terms of road safety. (see Two Village Bypass section below)

15.86. The construction of the minor mitigation works at the following junctions is likely to help to mitigate the potential impacts on highway safety of the project's construction traffic, although there is limited evidence to determine whether the mitigation would outweigh the road safety disbenefits associated with the increase in road traffic. The following minor mitigation works are considered to have a neutral or minor benefit once completed:

i. A12 / B1119;
ii. A1094 / B1069;
iii. A12 / A144;
iv. B1078 / B1079; and

v. A140 / B1078

15.87. Although details have not yet been provided, any improvements to the East Suffolk Line necessary to mitigate the impacts of freight use during construction may have a limited legacy benefit for passenger trains.

Neutral impacts

15.88. The Councils recognise the project's ambitions, firstly to minimise the need to travel by locating the accommodation campus and caravan park close to the site and secondly to transport a significant proportion of staff to/from the site by public transport through the delivery of two park and ride sites, as well as other bus services running from locations with high staff residential density. This will reduce the impact of workforce related traffic on the highway network.

15.89. Some of the proposed highway mitigation measures have the potential to neutralise the road safety impacts in specific locations.

15.90. The improvements to the Leiston Branch Line are considered to be necessary for the construction works but having no benefit to the rail passenger network after completion.

Negative impacts

Overall impact on the highway network

15.91. The project will result in a substantial negative impact on the highway network, even with proposals for the second BLF and additional train deliveries. A substantial amount of additional road traffic will be created because of the construction activity, with associated impacts on severance, pedestrian delay, pedestrian amenity, fear and intimidation, driver delay, accidents and safety, noise and air quality see Noise and Vibration and Air Quality , as well as carbon footprint (see Sustainability).

15.92. The increase in construction HGVs and buses on the road network will result in reduced resilience meaning an increased likelihood of incidents and additional delay during incidents, with the exception of those locations where mitigation is provided.

15.93. The Councils consider the negative impacts of freight traffic in combination with traffic associated with the construction workforce to be significant. The impacts on the Suffolk highway network are a result of a combination of construction related HGV and LGV construction traffic, AILs and abnormal loads[2], as well as workforce related car and bus traffic. The Councils note that discussions around the environmental assessment of road traffic form an ongoing workstream with the Applicant, and as such additional impacts may

[2] Note in this context 'abnormal loads' are those defined as such in https://www.gov.uk/esdal-and-abnormal-loads. This is a wider definition than that for Abnormal Indivisible Loads (AIL) which are considered to be those requiring Vehicle Special Orders.

be identified through further work that is yet to be completed. In more detail, the implications of each of these elements of generated transport are as follows:

15.94. Impacts of HGV construction traffic: The large number of additional HGVs on Suffolk's highway network is considered to be the most important transport impact. See paragraph 15.59 above for more details of the HGV related highway risks and issues.

15.95. AILs and abnormal loads: Construction will require a considerable number of AILs, some of which will utilise the permanent BLF, to travel to the site, as well as abnormal loads, which the Councils assume will largely be delivered by road. At Hinkley Point C, in the first three years of construction there have been approximately 4,000 abnormal loads, with the most active quarter seeing approximately 500 abnormal loads or six a day. Approximately half of the abnormal loads at Hinkley Point C in the first three months were escorted, the vast majority by private companies. Any abnormal load needing to be transported by road will have particularly significant impacts on the highway network, as they are generally slow moving, and allow for little or no over-taking by other road users. This will result in increased journey times, delay and driver frustration, as well as reduced resilience, and a lack of confidence in consistent journey times. It is notable that, in the Sizewell C context, these large loads need to travel appreciably further from the strategic transport network to reach Sizewell C compared to at Hinkley Point C.

15.96. LGVs: The increase in unrestricted construction LGVs, as well as a sizeable amount of additional construction related bus and car journeys, on the wider road network will increase delay and reduce residual capacity at junctions, further exacerbating issues of safety. Such traffic increases are likely to encourage more traffic, both Sizewell C related and from local users, to 'rat run' through local communities on minor roads.

15.97. Workforce traffic - buses: Whilst the principal of maximising the transport of the workforce to site by bus is supported, as stated above, it will nevertheless result in substantial additional impact on the highway network. The assessed number of bus movements at peak construction equates to 36 services (36 arrivals and 36 departures) between Ipswich, Woodbridge and Lowestoft and the site, 93 services between Leiston and the site, 76 services between each park and ride and the site, 12 services between the LEEIE and the site, and 13 services between Saxmundham and the site. Whilst these are the services at peak construction, it is expected that there will be a gradual build-up of bus services during the early years of construction reflecting the delivery of infrastructure and the actual location of the workforce.

15.98. Workforce traffic - cars: The construction will result in large numbers of additional car and bus journeys on Suffolk's highway network, to and from the park and ride sites and the Main Development Site car park, and in the early years to the temporary park and ride site at LEEIE. Noting the welcome efforts by the Applicant to reduce car journeys as set out under neutral impacts, the impact of additional car journeys remains considerable (e.g., at peak construction 5,650 workforce car trips (2,825 arrivals and 2,825 departures) have been assessed across the three main car parks). The number of parking spaces provided at the Main Development Site and park (1000 spaces plus parking for the Accommodation Campus) and ride sites (1250 spaces at each) reflects this (AS-017). This includes impacts on parts of the road network not affected by HGV traffic, including the B1078/B1079, B1125 and A1120.

15.99. The unpredictability of workers' movements by car which are not controlled beyond specifying access to specific park and rides consequentially may lead to unforeseen issues on the highway network such as increased collisions, fly parking or speeding (see Oxford Brookes report **APPENDIX 2: 1**).

15.100. Unpredictability is also seen in terms of collision frequency on the network. Many junctions, particularly those on the A12, show significant variability in the frequency of collisions over time, but not consistently exceeding levels that would trigger mitigation. The Councils are concerned that the changes in traffic flows resulting from the construction phase could trigger concentrations of collisions at such locations.

15.101. The impacts of construction traffic will be in the early years exacerbated by the impact of the construction of transport mitigation schemes, with online-construction and associated traffic management expected to result in substantial delays.

Impacts on the Strategic Network: A12

15.102. Construction traffic HGVs, AILs, abnormal loads, buses, cars and LGVs will increase delay across Suffolk's highway network, specifically, along the A12 between A14 'Seven Hills' and Lowestoft; the key strategic transport corridor for east Suffolk. The majority of the A12 is single carriageway with limited locations to overtake safely. The substantial rise in HGVs, AILs and abnormal loads will increase the potential for delay, and will lead to increased driver frustration, and as a result may increase the likelihood of drivers undertaking unsafe manoeuvres, especially with regards to slow moving vehicles.

15.103. The increase in HGVs, buses and light vehicles during construction will increase delays, severance, fear and anxiety of vulnerable road users and reduce amenity along the A12 corridor, most notably at Martlesham, Woodbridge, Marlesford, Little Glemham and

Blythburgh, as well as prior to the delivery of mitigation at Farnham, Stratford St Andrew, Yoxford, Theberton and Middleton Moor.

15.104. The increase in construction traffic along the A12 will reduce exit capacity for the large number of side roads and accesses along the road, reducing the capacity to undertake a safe manoeuvre from these side roads, increasing delay, the likelihood of crashes and reducing access to community facilities and businesses.

15.105. During the construction of transport mitigation schemes, there will be substantial delays along the A12 as a result of the delivery of the associated developments required as mitigation, this includes the delivery of five roundabouts on the A12, which will require varying levels of online construction work and therefore associated traffic management. The impact of delay as a result of on-line construction and associated traffic management has not been assessed as part of the DCO process and is likely to negatively affect the Suffolk economy by increasing delay and reducing resilience on east Suffolk's strategic transport corridor, as well as increasing user frustration.

15.106. A number of locations along the A12 will particularly be affected, as a result of reduced resilience and capacity, the potential for road safety incidents, driver delay, vulnerable road user amenity and increased severance. Details of the route of the A12 identifying constraints and pinch points have been set out at **ANNEX C**. Further mitigation measures in addition to those identified by the Applicant are considered to be required to directly mitigate impacts at some locations. These are listed in the "Required Mitigation" section below.

15.107. It is also noted that, as a result of the delivery of the Two Village Bypass, increased pedestrian delay and severance to cross the route of the Bypass is expected (noting that severance and amenity along the bypassed old A12 will be significantly improved).

Impacts on the Strategic Road Network: A14

15.108. Construction traffic HGVs will reduce residual capacity on the A14, particularly at the recognised constraints of Junction 58 'Seven Hills' and Junction 55 'Copdock', leading to increased delay and congestion at these locations. The use of this route will increase pressure on the A14 Orwell Bridge, and result in additional congestion during bridge closures. The Councils defer to Highways England to provide detailed comments on the impacts on the Strategic Road Network.

Impacts on wider highways network

15.109. Along the designated HGV routes, the increase in HGVs during construction and, to a lesser extent, other development related traffic will result in a reduced propensity for

people to cycle or walk along the existing transport network. This concern applies to any local road used by Sizewell C construction traffic, including those parts of the B1122 beyond the limits of the Sizewell Link Road where no cycling or pedestrian facilities are present.

15.110. Beyond the designated HGV routes, the increase in unrestricted construction LGVs, as well as a sizeable amount of additional construction related bus and car journeys, on the wider road network will increase delay and reduce residual capacity at junctions, further exacerbating issues of safety. This is likely to negatively affect existing vulnerable road users, including reducing the ability to access existing facilities and the ability to undertake journeys by sustainable modes.

15.111. In addition, the traffic increases along main roads are likely to encourage more traffic, both Sizewell C related and from local users, using 'rat runs' through local communities on minor roads. This displacement traffic would use less strategic roads which are not designed to accommodate significant levels of traffic. This is likely to put additional strain on these roads reducing residual capacity, increasing delay and negatively impacting pedestrians, cyclists and other vulnerable road users by impacting their ability to enjoy walking / riding such routes because of increased noise and risk of danger. Vulnerable road user includes wheelchair users, horse and riders, young children.

15.112. Comments on impacts and required mitigations at particular locations and of traffic moving through communities are provided below, with further detail in **ANNEX M.** The following provides an overview of roads and locations on the wider network particularly impacted:

i. B1122: On the whole length of the B1122 prior to delivery of the Sizewell Link Road, and a shorter section (between the entrance to the Main Development Site and Theberton, and between the Middleton Moor link to the Link Road and Yoxford) once mitigation is in place, reduced resilience, capacity, vulnerable road user amenity, and increased severance and potential for road safety incidents. Details of the route identifying constraints and pinch points have been set out at **ANNEX C**.

ii. Sizewell Link Road: Increased pedestrian delay and severance to cross the Link Road (noting that severance and amenity along the bypassed old B1122 will be significantly improved).

iii. Leiston town centre: The town centre signal junction is approaching capacity and the town in general will see a significant increase in pedestrian, cycle and

vehicular traffic. Details of existing transport characteristics and constraints in Leiston have been set out at **ANNEX C**. Mitigation is proposed through town centre improvement funding.

iv. B1125 (Theberton to Blythburgh): reduced capacity, vulnerable road user amenity, and increased severance and potential for road safety incidents.

v. B1119 (Leiston to Saxmundham), reduced resilience, capacity and increased potential for road safety incidents.

vi. B1069 (Leiston to A1094, and A1094 Snape to Bentwaters) and A1152 (Bentwaters to Melton/A12), reduced resilience, capacity, vulnerable road user amenity and increased potential for road safety incidents.

vii. On the A1120 (Yoxford to A140), reduced resilience, capacity and increased severance, and potential for road safety incidents.

viii. On the A1094 (A12 Friday Street junction to Snape Road B1069 junction), reduced resilience, capacity, vulnerable road user amenity and increased potential for road safety incidents. Details of the route identifying constraints have been set out at **ANNEX C**.

ix. A1094 / B1069 junction Church Road, Snape: Modelling indicates the junction worsening in operation and operational impacts indicate that if the traffic impacts were to occur in the network peak hours, reflecting alternative workforce shift patterns; the junction may operate over capacity with noticeable increases in delay as a result of development traffic at this location.

x. A1094 / B1069 Snape Road, Friston: Modelling indicates the junction worsening in operation and operational impacts indicate that if the traffic impacts were to occur in the network peak hours, reflecting alternative workforce shift patterns this may result in the junction exceeding capacity; with noticeable associated delay.

xi. Saxmundham town centre signals: Modelling of the junction indicates it approaching capacity in the 2034 scenarios with a worsening of overall performance at the junction. The impact at this junction is likely to be affected by staff shift patterns, and so could potentially exceed those that have been assessed in the construction scenarios. Details of existing transport characteristics and constraints in Leiston have been set out at **ANNEX C**.

xii. On the B1078/B1079 (Wickham Market to A140), reduced resilience, capacity and increased potential for road safety incidents.

xiii. Wickham Market: Road capacity impacts and delays at B1078 through Wickham Market; however, the mitigation package for Wickham Market, which is currently under discussion may mitigate this impact and may provide a legacy benefit of the scheme.

15.113. In the Councils' view, further mitigation measures are considered to be required to directly mitigate impacts on the highway network. These are listed in the "Required Mitigation" section below.

Localised Impacts in the Leiston Area

15.114. The Leiston area will experience significant increases in vehicle movements from Sizewell C construction traffic. While HGVs should not be routed through Leiston, the local road network will be used by cars and busses accessing the Main Development Site and LEEIE.

15.115. Workers staying in Accommodation Campus will require access to Leiston town centre and other destinations, whilst the Applicant is proposing a shuttle bus from the campus, to the town centre and to the off-site sport facilities, to avoid additional car trips it is preferable that such trips are made by foot or cycle. However, the direct route between the Campus and town centre is via Abbey Road / Station Road where the footways are narrow. The carriageway is also narrow, which is likely to make cycling unattractive to workers, and which places vehicles close to the edge of the footway, reducing both attractiveness and safety for walking from the Campus into Leiston. However, improvements to footways or provision of cycleways are difficult due to the constraints of the highway boundary and adjacent properties.

15.116. The alternative route via the proposed diverted bridleway 19 alongside Lovers Lane and then via Valley Road is significantly longer by, approximately 1500m (or 1330m if pedestrians use FW18). This route also has to go up two hills in each direction compared to the single gradient of Abbey Road.

15.117. The Pegasus crossings on Lovers Lane and Abbey Road are considered a benefit to those using the public rights of way although for safety reasons this necessitates a 40mph speed limit on these roads and will add slightly to driver delays.

15.118. The Councils will continue to work with the Applicant on finding a solution to the identified problems.

Delivery timetable and phasing

15.119. The delivery timetable of the various Associated Development sites proposed to mitigate the development's impact will affect the exact nature of the impacts at the

various stages of the development. The risk of late delivery of infrastructure, as was seen at Hinkley Point C with regards to the works at Junction 23 of the M5, can result in additional unforeseen impacts, and may result in highway works being delivered while the number of construction-related HGV and car traffic is already at a high level.

15.120. The submission included a high-level Implementation Plan [APP-599] and a commitment within the Draft S106 [AS-040] to use reasonable endeavours to deliver the mitigation to the Implementation Plan provided. Notably, for transporting the workforce, as part of their Early Years assessment, the Applicant has modelled 1,500 workers at the Main Development Site without the presence of the Northern and Southern Park and Ride facilities (which are indicated to be delivered in project years 2 and 3 respectively) nor accommodation campus (indicated to be delivered by project year 3).Although an early years park and ride is proposed at the LEEIE it is not clear how this will fit into the demand scenario from workers. Following opening at Hinkley Point C, unplanned temporary park and ride facilities were opened as a short-term response to Early Years demand; these were an unforeseen consequence of the development and would affect both the assessed transport impacts as well as requiring relevant assessment. There is a risk that such additional developments come forward in the Sizewell context, adding additional negative impact onto the local road network and enforcement work for ESC as Local Planning Authority. The Applicant is requested to work with ESC as Local Planning Authority and SCC as Local Highway Authority to anticipate and manage this potential scenario in relation to Sizewell C.

Economic impact of journey delays

15.121. The construction period is estimated to last up to twelve years, and through that period will continuously impact on the day-to-day experiences of users of the Suffolk transport network. The length of time of the project's construction will have a negative economic impact by increasing journey times, particularly along the A12, which would have a quantifiable impact associated with congestion, and other impacts associated with perception of the reliability of the road network. These impacts will be further exacerbated by long periods of traffic management at numerous locations in order to deliver relevant mitigation. For further information see the section on economic and supply chain impacts.

On-street parking capacity

15.122. Evidence from Hinkley Point C indicates that the availability of on-street parking capacity will be reduced, particularly in areas near to the site, as a result of legitimate

parking by workers through increased numbers of houses in multiple occupation, particularly in towns and villages close to the site. Hinkley Point C also reported similar adverse impacts as a result of fly parking by workers. This required enforcement by the local planning authorities in Somerset and subsequent retrospective planning consents adding considerably to the District Councils' workloads. The Councils, by working with the Applicant, are seeking to avoid this scenario occurring in Suffolk as a result of the Sizewell C proposal.

15.123. Impacts on vulnerable road users: As indicated in the list above, the project will result in additional significant levels of traffic moving through communities. This is likely to negatively affect pedestrian, cyclists and other vulnerable road users, including reducing the ability to access existing facilities and the confidence and desirability to walk and cycle safely.

Impacts at bus stops

15.124. The proposed project will result in an increase in bus services throughout Ipswich, and east Suffolk, potentially resulting in construction workers having to wait at locations with limited or unattractive waiting facilities, with possible resulting impacts on noise, amenity and road safety.

Impacts of rail movements

15.125. The proposed additional rail movements on the East Suffolk Line and Sizewell Branch Line will result in noise and vibration impacts for adjoining properties – these impacts are covered in the noise and vibration section of this report.

15.126. As the Applicant has not yet provided evidence that additional freight trains can be accommodated on the East Suffolk Line and the wider railway network without affecting current passenger and freight rail services, the Councils consider that additional freight train movements could cause disruption to passenger trains as well as freight trains operating out of the Port of Felixstowe that use part of the East Suffolk Line for the transportation of goods.

Operational highway impacts – Main Development Site

Positive

15.127. The potential exists for a positive legacy benefit as a result of ongoing discussions over the mitigation schemes for Leiston town centre and for Wickham Market.

15.128. When considering highway resilience and journey times, the Councils consider the Two Village Bypass to be an important legacy benefit of the scheme. This includes the

proposed A12 / A1094 roundabout, which results in substantial improvements to road safety.

15.129. The construction of the minor mitigation works at the following junctions are considered to be a minor legacy benefit of the development:

i. B1078 / B1079
ii. A140 / B1078
iii. A12 / B1119
iv. A1094 / B1069
v. A12 / A144

15.130. If the delivery of freight trains requires upgrades to the East Suffolk Line (to be confirmed by Network Rail), these may be of some limited legacy benefit.

15.131. Designation of the Sizewell Link Road as the HGV route for Sizewell B in place of the B1122 will take Sizewell B HGV traffic away from Middleton Moor and Theberton. Operational traffic associated with Sizewell A and Sizewell B may divert to the Sizewell Link Road.

Neutral

15.132. Improvements to the Leiston Branch do not bring any operational benefits to the passenger rail network and it is understood there are no proposals for freight movements to Sizewell C in the operational phase. The Line is no longer used for Sizewell A or Sizewell B.

Negative

15.133. The Applicants have set out that 900 staff will be required to run the site for day-to-day operation plus a further 1,000 staff during outages. The location of the site means that it is highly reliant on travel by private car, resulting in additional traffic impacts on the road network. It is notable that much of the operational traffic are forecast to travel to / from the south and west through Leiston and not via the B1122 corridor (only 20-30% of peak hour operational workforce traffic is predicted to use the eastern end of the Sizewell Link Road, reducing to just 10% at the western end).

15.134. Additions to the road network will increase the highway maintenance burden on SCC as Local Highway Authority.

15.135. Negative impacts that are particularly noticeable in the operational assessment will be seen at the following locations, based on the Applicant's modelling the level of impact varies between the locations, but the Councils are mindful that the 16:00 to 17:00 hour has

not been modelled in the local junction modelling, which represents the PM hour of greatest impact for operational traffic:

i. Leiston town centre signals: Modelling indicates that the junction is approaching capacity and will be operating over capacity as a result of the development's operational traffic, which is a particularly noticeable worsening in the 08:00 to 09:00 hour; however, the mitigation package for Leiston Town Centre, which is currently under discussion may mitigate this impact. This may provide a benefit to the signalised junction on the High St / Cross St / Sizewell Rd but not that at the B1119 Waterloo Avenue/B1122 junction.

ii. A1094 / B1069 Church Road, Snape: Modelling indicates the junction approaching capacity in future scenarios; and that there is a noticeable increase in delay and reduction in capacity as a result of the development's operational traffic at this location particularly in the AM peak hours.

iii. A1094 / B1069 Snape Road, Friston: Modelling indicates the junction approaching capacity in future scenarios; with noticeable delay, albeit limited impact as a result of the development's operational traffic, but further consideration of the PM peak hour is required.

iv. Saxmundham town centre signals: Modelling of the junction indicates approaching capacity in the 2034 scenarios with a minor worsening of overall performance at the junction, particularly an increase in delay in the 08:00 to 09:00 period, as a result of operational traffic.

Construction phase rail impacts

15.136. This section provides an overview of strategic impacts of the rail proposals. Specific transport comments on the East Suffolk Line, Leiston Branch Line and Green Rail proposals are made in the Associated Development section below.

Positive

15.137. Any rail improvements made to the East Suffolk Line have some positive construction phase impacts, as these will also help reduce impact of existing passenger rail services.

Neutral

15.138. The use of rail to move construction materials can greatly reduce the number of HGVs operating on the highway and make the project compliant with national policy. It also provides a low-carbon solution for transporting large volumes of materials.

15.139. The improvements to the Leiston Branch Line, including the Saxmundham Junction track modifications, do not provide any benefits to passenger services on the rail network.

15.140. Although full details are not provided the limited information regarding mitigation work to allow freight trains to use the East Suffolk Line has little if any benefit to passenger services.

15.141. The Councils regret that the significant rail legacy benefit, that of a passing loop between Woodbridge and Saxmundham, as proposed in the stage 3 consultation, is no longer proposed by the Applicant or deliverable.

Negative

15.142. There are significant gaps in the details provided by the Applicant to enable the Councils to evaluate the impacts of many of the proposals, nor does information show what infrastructure measures may be applied to the East Suffolk Line to reduce noise impact such as upgrading the Rail line to continuous welded track and addition of ballast mats. The Councils are concerned about the uncertainty associated with practicalities of delivery such as obtaining rail possession before construction trains start and delivery to the proposed timescale assumed in the Transport Assessment and ES. There is a need to also consider the impact on the wider rail network, which presently has not been shown. There is a risk that non or late delivery would add to the pressure placed on the highway network by additional HGV movements to cover any shortfall in rail haulage.

15.143. The running of rail freight also has the potential to disrupt passenger services and Port of Felixstowe freight services operating on the East Suffolk Line and across the rest of the rail network. This is evidenced through the introduction of 5 train paths per 24-hour period.

15.144. As the complete details of mitigation or improvement works required for use of the rail network for freight trains has not yet been provided it is not possible to evaluate the impacts of any construction activities associated with them. The Councils consider it likely that the works will generate some vehicle movements which may be significant, for example construction vehicles using minor roads to access crossings on the Leiston Branch Line.

15.145. Construction of the Green Rail Route will create delays and disruptions to the highway network specifically on Abbey Road, Lovers Lane and Buckleswood Road. As yet sufficient details are not available to quantify this.

15.146. The operation of rail services at night, which will cause noise impacts on local residents and on key sites. These are expressed in the noise and vibration section.

Operational phase rail impacts

Positive

15.147. Any rail improvements made to the East Suffolk Line have a legacy benefit for passenger trains and for residents along the line benefitting from noise mitigation measures.

Neutral

15.148. The upgrades to the Leiston branch line are considered to be neutral, given that there are no regular services on this line.

15.149. As stated above, the Councils regret that the significant rail legacy benefit, that of a passing loop between Woodbridge and Saxmundham, as proposed in the stage 3 consultation, is no longer proposed or deliverable

Negative

15.150. None identified.

Required mitigation

15.151. The specific road mitigation proposals by the Applicant include, in addition to the major road infrastructure proposals of the Two Village Bypass and the Sizewell Link Road, a limited number of improvements to existing road junctions.

15.152. However, it is recognised by both the Applicant and the Councils that more localised highway related improvements in some of the communities affected by additional traffic are appropriate and required. Table 14 identifies improvement schemes that the Councils are currently working with the Applicant on. The measures particularly in Leiston would need to be complemented and supported by robust travel plan targets to maximise the use of sustainable transport and infrastructure, during the construction and operational phases.

Table 14: Transport related schemes the Councils are currently pursuing with the Applicant
(Please note: other locations/improvements may be added to this list if further evidence evolves)

Location	Summary of required improvements
Leiston town improvements	Including town centre mitigation and cycle improvement strategy, to be delivered in the Early Years of construction. The design of these works should include traffic assessments during the operational phase.
Wickham Market mitigation scheme	Including road safety improvements on B1078, High Street mitigation and town improvements; to be delivered in the Early Years of construction.
B1078/B1079 road safety improvements	Improvements to be delivered in the Early Years of construction to include: i. Improvements at and around Coddenham. ii. Speed limit changes at Charsfield iii. Improvements at the B1078 / B1079 junction at Otley, as proposed by the Applicant. iv. Potential road safety improvements at the B1078/B1079 junction at Clopton.

	v. Improvements at the A140 / B1078 junction as proposed by the Applicant. vi. Road safety improvements at the B1078 / Main Road junction at Hemingstone. vii. Road safety improvements at the B1078 / Ashbocking Road junction (Hare and Hound corner).

15.153. Aside from those schemes being progressed above, based on the available information, the Councils consider that additional mitigation is required at a number of identified locations which has been shared with the Applicant. These locations correspond to some of the highways with identified impacts listed under **Error! Reference source not found.** above. A summary of the locations and improvements required is provided in Table 15, with full details of the impacts to be mitigated at these locations listed in **ANNEX M.**

Table 15: Additional highway mitigation required
(Please note: This list is subject to review if further evidence evolves)

Location	Summary of required improvements
Eastbridge Lane	Safe pedestrian facilities between the north end of BW19 and Eastbridge (see PRoW section)
B1122 corridor	Improvements for cyclists and pedestrians to be delivered for peak construction
B1125 corridor	Proportionate highway improvements in the form of improvements for vulnerable road users
Yoxford (A12)	Proportionate highway improvements or relevant controls on HGV movements to mitigate cumulative impacts with East Anglia One North or East Anglia Two
Little Glemham (A12)	Proportionate highway improvements in the form of footway improvements including improved crossing facilities, gateway features to influence driver speed, resurfacing
Marlesford (A12)	Proportionate highway improvements in the form of footway improvements including improved crossing facilities, gateway features to affect driver speed, resurfacing
A12 corridor between A14 Seven Hills and A1152 Woods Lane	SCC as local Highway Authority expects a proportional financial contribution towards improvements to mitigate impacts on capacity, economic impacts of congestion, impacts on fear and intimidation and road safety

15.154. Traffic modelling is not an exact science and through variance in data and by relying on assumptions transport assessments can only be an estimate of likely impacts. Recognising these limitations, the Councils remain concerned about impacts at a number of locations. The Councils are still considering whether improvements at these locations are required at prior to commencement of the project. For locations where improvement prior to commencement are not considered necessary, suitable controls or caps may be required to avoid these issues, and/or ongoing monitoring will be required in order to identify and respond to any worse than currently assessed impacts and currently unforeseen impacts. Of particular concern are those junctions where collisions occur but

the frequency is variable over time and not consistently of such significance as to trigger mitigation under normal traffic conditions. The Councils consider that a c viontingency fund will be required of sufficient value to monitor, respond to and mitigate numerous transport impacts. A summary of the locations and improvements required is provided in Table 16, with full details of the impacts to be mitigated at these locations listed in **ANNEX M.**

Table 16: Potential additional highway mitigation required
(Depending on further evidence and/or based on monitoring; other locations may be added to this list if further evidence evolves)

Location	Summary of required improvements
B1122 corridor	Road safety improvements and enhancements for vulnerable road users
B1121 / B1119 Saxmundham town centre signal junction	Capacity improvements
A1094 from the A12 to the B1069 at Friston	Road safety improvements along route, including at the A1094/B1069 Snape and A1094/B1069 Friston junctions
Junctions on A12 from Yoxford to Lowestoft	Road safety improvements if construction traffic adversely impacts on users at junctions, for example at Blythburgh the A12/B1125, A12/A145 and A12/A1095; and the A12/B1126 at Wangford.
Bredfield junction (A12)	Road safety improvements
A1120 corridor	Road safety improvements and enhancements for vulnerable road users and road traffic in various locations
A1152 and B1069 corridor running from A12 Melton to Leiston	Road safety improvements and enhancements for vulnerable road users and road traffic in various locations
Seven Hills (A14)	Road safety improvements and capacity enhancements if movements to the FMF result in impacts exceeding those in the Transport Assessment or ES (in consultation with Highways England)

15.155. The experience gained from Hinkley Point indicate a likelihood of localised highway issues that arise during the construction period. Typically, these include parking problems as a result of additional workforce related parking in the communities associated with changes in housing type or bus stops, speeding and rat running through communities or a rise in the number of collisions at a specific location. A flexible process is required for the TRG to investigate such matters during the construction phase and where appropriate apply suitable controls or other mitigation measures.

15.156. In addition, measures need to be agreed to minimise disruption as a result of abnormal loads and traffic management.

15.157. Table 17 lists the identified issues to date – further detail in **ANNEX M**.

Table 17: Other highway related issues that may require mitigation	
Issue	**Summary of required measures**
Site specific highway issues such as fly parking, speeding, disruption of the rights of way network and rat running within local communities	Location specific control or mitigation, as appropriate based on the nature of the impact
Movement of abnormal loads	Effective management plan including elements such as timing, waiting areas and protocols on escorting such loads
Traffic Management during construction of highway works	Management of highway mitigation works and related traffic management in coordination between the Applicant and highway authorities

Requirements and obligations

15.158. The Applicant will control and monitor the movement of HGVs on the Suffolk road network. HGV movements will need to be capped to those figures assessed within the ES for each HGV route to ensure impacts do not exceed those assessed, and reflect hourly, daily and quarterly controls during relevant timeframes of the programme, which mirrors the approach used at Hinkley Point C. It should also be secured that the number of car parking spaces at the Main Development Site, Accommodation Campus, LEEIE and Park and Ride sites, will not exceed the capacities as assessed in the DCO unless agreed with the Transport Review Group. These need to be secured by obligation.

15.159. Traffic Incident Management Plan, Construction Traffic Management Plan, Construction Workers Travel Plan will need to be agreed by the Councils and secured by obligation.

15.160. A car share factor for the construction workforce and visitors to the site is to be secured by obligation, with suitable monitoring to identify and address any potential issues before they occur.

15.161. Results of monitoring should be reported to the Transport Review Group chaired by SCC as the Local Highway Authority, to be secured by obligation. ESC to be a member of the Group.

15.162. A number of documents, designs and detailed proposals need to be approved by the Councils prior to commencement of construction which needs to be secured by requirement / obligation.

15.163. Obligations to secure highway junction improvements and road safety improvements, including design costs, costs arising from work to any highway, and future maintenance costs.

15.164. A bus infrastructure fund is needed to provide appropriate waiting facilities at those locations where facilities are not considered to be appropriate. This will be dependent on the routes that buses eventually take, but could include, a bus layby to minimise disruption to through traffic, waiting facilities to improve construction workforce comfort, and raised footways to improve accessibility.

15.165. Recovery of reasonable costs: The Applicant will be expected to reimburse SCC as Local Highway Authority for additional costs related to:

i. Structural maintenance of the highway including structures due to use by extraordinary traffic;
ii. For maintenance works outside normal working hours;
iii. Staff costs for technical approval and supervision of highway works including traffic management;
iv. Costs of monitoring management plans and attending associated grounds such as the Transport Review Group (and ESC costs – to be determined through Section 106);
v. Future maintenance liabilities for highway infrastructure.

15.166. Protection of highway and other legal rights: SCC as Local Highway Authority will be seeking protective provisions in the DCO to:

i. Enable it to continue to discharge its duties under the Highways Act and other legislation;
ii. Protect it against third party claims;
iii. Avoid its powers as a Local Highway Authority to be fettered in the future;
iv. Recover reasonable costs to prevent a financial burden being placed on Suffolk ratepayers by the project.

15.167. Further details of the required commitments considered necessary are listed in **ANNEX M.**

16. Transport impacts at Associated Development sites (Lead authority SCC)

16.1. This chapter of the LIR discusses the Associated Development sites from a transport impact perspective. Transport impacts and other impacts of each Associated Development site are brought together in the site-specific section of this LIR.

Table 18: Summary of impacts – Transport impacts at Associated Development Sites					
Ref No.	Description of Impact	Construction (C) / operation (C)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
18a	Potential for Valley Road (near LEEIE) to be made pedestrian / cycle only from the proposed LEEIE caravan park	C / O	Positive	Secured by change of plan and/or obligation	
18b	Noise and amenity impact of night time train operations at LEEIE rail sidings, including night time loading/unloading of trains	C	Negative	(See noise section) Code of Construction Practice Noise mitigation package?	NPS EN-1: Potential for adverse impacts from transport of materials/goods/personnel during all project phases. Consideration and mitigation of transport impacts identified as essential considerations. Local Plan Policy SCLP11.7 notes importance of mitigation for significant impacts on highways network.
18c	Provision of parking facilities for cycles, motorcycles and electric vehicles - potential to reduce the impacts of the Park and Ride sites and workforce car traffic, and associated facilities should be maximised and adaptable to demand.	C	Neutral	Proposals for the design, construction and removal of the proposed Park and Ride access, including traffic management, to be submitted to and approved by the highway authority prior - obligation	
18d	Construction traffic for the construction, of Associated Development sites, and later removal of the temporary	C / O	Negative	Proposals for the design, construction and removal of the proposed Park and Ride access, including traffic management, should be submitted to and approved by the highway authority prior - obligation	NPS EN-1: Potential for adverse impacts from transport of

	Associated Development sites, in addition to traffic management to on-line road works, will have create additional congestion and delay on local road networks.				materials/goods/personnel during all project phases. Consideration and mitigation of transport impacts identified as essential considerations. Local Plan Policy SCLP11.7 notes importance of mitigation for significant impacts on highways network.
18e	Staff potentially not using the park and ride, effecting the overall transport strategy	C	Neutral/ negative	An operational phase plan clearly showing delivery of parking spaces and closure of the site to be submitted to Councils - obligation	
18f	Potential legacy benefit of retaining small proportion of parking at southern end of Northern Park and Ride associated with railway station parking	O	Positive	To be considered towards end of construction phase	
18g	Improvements of footway and cycling infrastructure linking the site to Wickham Market and Marlesford for Southern Park and Ride, if provided	C / O	Positive	To be secured by obligation / through DCO plans	
18h	Increase in workforce car traffic and construction LGV to Southern Park and ride traffic through the built-up area of Wickham Market, increasing the potential for conflict, increasing pedestrian delay, reducing amenity as well as increasing severance	C	Negative	Transport improvement package for Wickham Market, to be secured by obligation	NPS EN-1: Potential for adverse impacts from transport of materials/goods/personnel during all project phases. Consideration and mitigation of transport impacts identified as essential considerations. Local Plan Policy SCLP11.7 notes importance of mitigation for significant

					impacts on highways network.
18i	Increased workforce car movement and construction LGV movements as a result of Southern Park and Ride, with impacts on B1078 and B1079 corridor	C	Negative	Transport mitigation package for B1078/B1079 corridor - obligation	NPS EN-1: Potential for adverse impacts from transport of materials/goods/personnel during all project phases. Consideration and mitigation of transport impacts identified as essential considerations. Local Plan Policy SCLP11.7 notes importance of mitigation for significant impacts on highways network.
18j	Two Village Bypass removing through traffic from the existing A12 through the communities of Farnham and Stratford St Andrew and the Farnham Bend – amenity and severance benefits, network resilience and drive time benefits.	C / O	Positive	Proposals for the design and construction access, including traffic management, should be submitted to and approved by the Councils prior to commencement of construction - obligation	Local Plan Policy SCLP11.7: Development will be supported where it reduces conflict between users of the transport network (e.g. pedestrians, cyclists, drivers).
18k	Two Village Bypass - fails to mitigate the traffic impacts of the development on the neighbouring communities of Marlesford and Little Glemham,	C	Negative	Additional mitigation for Marlesford and Little Glemham - obligation	Local Plan Policy SCLP11.7 notes importance of mitigation for significant impacts on highways network.

18l	Improved junction layout at A12 / A1094 Friday Street	C	Positive	Detailed design to be approved by Councils - obligation	
18m	Permanent environmental impacts of Sizewell Link Road and Two Village Bypass on biodiversity, landscape, agricultural land	C / O	Negative	For Sizewell Link Road: SCC request to construct Sizewell Link Road as a temporary haul road and remove it after completion of construction period; a lesser standard of construction could reduce impacts of the Link Road, and removal after completion would remove the impacts. (Note that this does not apply to the Two Village Bypass, as SCC considers that the Two Village Bypass has an important legacy benefit, which on balance justifies its retention.)	NPS EN-1: Potential for adverse impacts from transport of materials/goods/personnel during all project phases. Consideration and mitigation of transport impacts identified as essential considerations.
18n	Maintenance burden of additional road infrastructure to SCC as Local Highway Authority (particularly Two Village Bypass, Sizewell Link Road)	O	Negative	Commuted sums for highway authority – obligation For Sizewell Link Road: SCC request to remove Sizewell Link Road after completion of construction period	NPS EN-1: Potential for adverse impacts from transport of materials/goods/personnel during all project phases. Consideration and mitigation of transport impacts identified as essential considerations.
18o	Sizewell Link Road – Reduce impacts of construction traffic on houses adjacent to current B1122 (Middleton Moor, Theberton, parts of Yoxford); and provide a dedicated HGV route to Sizewell	C	Positive		
18p	Noise, amenity, severance impact on B1122 prior to completion of Sizewell Link Road from increased construction traffic	C	Negative	Mitigation package for B1122 - obligation	NPS EN-1: Potential for adverse impacts from transport of materials/goods/personnel during all project phases. Consideration and mitigation of transport impacts identified as essential considerations.

18q	Opportunity, if Sizewell Link Road is retained, to downgrade current B1122 to become a quiet road, with cycling and walking improvements	C	Positive	Mitigation package for B1122 - obligation	
18r	Yoxford roundabout upgrade to existing junction, with road safety improvements	C	positive	Proposals for the design and construction, including traffic management, to be approved by the Councils - obligation	
18s	Location of Freight Management Facility results in multiple movements of HGVs at strategically important junction, resulting in disruption, delay and risk to road safety at Seven Hills Roundabout, as well as on Felixstowe Road and A1156.	C	Negative	Proposals for the design and construction, including traffic management, to be approved by the Councils – obligation Additional mitigation measures - obligation Monitoring - obligation	
18t	Potential of queuing back onto highway	C	Negative	Monitoring - obligation	
18u	Reduced capacity for Operation Stack	C	Negative	Monitoring - obligation	
18v	Park and Ride sites and Freight Management Facility to be returned to agricultural land after use.	O	Neutral	To be secured by obligation	
18w	Green Rail Route impact of construction and removal of level crossings – disruption to road users	O	Negative		
18x	Leiston branch line closure of minor roads	O	Negative		
18y	East Suffolk line improvements in signalling, level crossing safety and noise and vibration measures as legacy	O	Positive	To be secured with Network Rail	

Land East of Eastlands Industrial Estate (LEEIE)

16.2. The principle of the LEEIE facility to manage freight and staff vehicle movement and to create new rail sidings is supported by the Councils.

16.3. For the project, the proposed LEEIE facility has benefits in managing both freight and staff vehicle movements throughout the life of the project as well as minimising travel distance to site for approximately 600 workers and supporting sustainable travel to/from work patterns.

16.4. The proposals to create sidings so that two trains a day can haul materials to the LEEIE is supported in principle and would reduce the dependence on HGVs in the early years. The development of rail sidings at the LEEIE site will enable materials to be transported by rail – removing some of the burden on the highway network. The delivery of two freight trains in the early years means that up to 300 HGVs per day (600 movements) will be removed. Despite the positive impact of removing HGVs from the highway, the operation of the night-time operation of the two trains (4 movements in total) will have associated impacts including noise generated from potential night-time movement/loading and unloading of rail. There is still uncertainty regarding delivery of these sidings and it is unclear if continued use of the sidings after construction of the Green Rail Route could provide any benefits to the freight management strategy.

Positive

16.5. Leiston-cum-Sizewell Town Council has requested, supported by the Councils, that Valley Road be made pedestrian / cycle only from the entrance to the caravan park on the LEEIE. This would provide a pedestrian / cycle route for workers heading to the town centre. The Town Council wishes to see Valley Road converted as it is a rat-run currently but not essential in the local highway network. Improving cycle and pedestrian facilities in the area can link with other improvements proposed by the Sizewell C construction and would be a positive impact.

Neutral

16.6. As temporary infrastructure the rail sidings, useful in the construction phase, have no legacy benefit.

Negative

16.7. Despite the positive impact of the proposed rail siding removing HGVs from the highway, the operation of the night-time operation of the two trains (four movements in total) will have associated impacts including noise generated from potential night-time movement/loading and unloading of rail.

16.8. The proposed facility will result in a significant increase in the number of turning movements on Lover's Lane, especially undertaken by large vehicles (HGVs and buses), this is likely to have negative impacts on road safety and small negative impacts on delay.

16.9. As outlined in detail under paragraph 10.31, the Councils are concerned that, with increased HGV traffic at Lovers Lane, the Sizewell C development will have a significant impact on the operations of the Lovers Lane Household Waste Recycling Centre, particularly in the early years but continuing throughout construction, by increasing congestion, leading to the risk of queuing and associated risks to road users.

16.10. Construction of accesses will have a negative impact on King George Avenue and Lovers Lane during construction of the LEEIE due to delays to road users. Traffic management associated with construction of the proposed access will cause short term delay on Lover's Lane and for the public accessing the Household Waste Recycling Centre.

16.11. Access to the sidings requires trains to pass over the Station Road level crossing. This will cause delays to road users including pedestrians and cyclists which could be significant when Station Road is being used by Sizewell C construction traffic.

16.12. The new access into the site, specifically the widening of Lovers Lane to allow a right-hand turn lane while beneficial during the construction phase, has no legacy benefits and may require removal together with the impacts associated with this.

Northern Park and Ride at Darsham

16.13. The principle of the Park and Ride site is supported by the Councils. The aim of the proposed facility is to reduce the impact of staff vehicles on the road network; it is estimated at peak construction there will be 1,206 daily arrivals and departures from the Park and Ride.

16.14. It is recognised that the proposed facility is likely to reduce overall vehicle mileage on the network associated with worker trips and will significantly increase the number of staff travelling to/from the site by public transport, which the Councils strongly support.

16.15. Clearly this level of demand will not exist at the early stages of construction, but there will be demand for the facility. This is evidenced from Hinkley Point, where a number of temporary park and ride facilities were deemed necessary very early on in construction to manage the workforce. This supports the need to build out the delivery of the facility to ensure it captures the demand as it builds out.

16.16. Early delivery of the Associated Development will also mean that staff have not established alternative patterns of travel and are less likely to have become intransigent about using the Park and Ride facility.

Positive

16.17. None - whilst the proposals for the Park and Ride are supported as a mitigation measure during construction, the facility does not constitute a positive impact of the Sizewell C development overall.

Neutral

16.18. The proposals include provision for parking 1,054 vehicles. This means at peak there are 196 available free parking spaces. As with the assessment of the gravity model and the transport modelling, there is inherent risk within the assessment and car parking use needs to be monitored to minimise potential issues resulting in staff not using the Park and Ride.

16.19. The provision of parking facilities for cycles, motorcycles and electric vehicles has the potential to reduce the impacts of the Park and Ride and workforce car traffic, and associated facilities should be maximised and adaptable to demand.

Negative

16.20. Construction of the Park and Ride site: The Applicants have estimated that construction of the Park and Ride will necessitate 42 two-way HGV movements on the road network on a daily basis throughout the 9-month construction period, with an additional 92 construction workforce vehicle trips. Traffic from the construction of the Associated Development site will lead to increased congestion and delay on the local road network, as well as associated impacts on vulnerable road users.

16.21. The construction of the proposed roundabout access will require some on-line highway works, this will result in additional delay on the A12, which will result in increasing driver frustration, above and beyond the impacts associated with other construction vehicles. Delivery of these online works, including traffic management, may also disrupt the haul route for other nationally significant projects in the local area (e.g., East Anglia One North and East Anglia Two), especially when considering the presence of significant numbers of abnormal loads. This will require strong communication, planning and management to minimise disruption; nevertheless, there will still be disruption as a result.

16.22. As identified, the profile of HGV movements associated with construction of the Main Development Site increases during the construction programme of the Main Development Site, and so early delivery of the Associated Development sites will reduce the potential for increased HGV movements on the road network beyond what has been assessed in the ES.

16.23. The operation of the proposed roundabout access will introduce a minor delay on the road network, where no delay currently exists for A12 traffic.

16.24. Limited information has been made available on the timing of closure of the site. Removal of the Park and Ride could take place prior to workforce numbers reducing to below the Early Years assessed level. This may result in an exceedance of assessed impacts.

Operation (post-removal of the park and ride site)

Positive

16.25. Potential exists for a legacy benefit of retaining a small proportion of parking at the southern end of the site associated with railway station parking. This would require planning permission.

Neutral

16.26. Once the construction of Sizewell C is completed, the site of the Park and Ride facility will be returned to its former state of agricultural land and the roundabout will be removed; therefore, the operational impacts are neutral.

Negative

16.27. Removal and reinstatement of the highway works associated with the park and ride will be disruptive to those using the A12 and adjacent highways. A quantity of waste material will also be created. Reinstatement of landscaped areas may not restore land to its previous condition.

Required mitigation

16.28. Construction of the proposed park and ride facility to begin within 3 months of construction of beginning construction of the project and should be phased so that it can continue to accommodate anticipated demand. Proposals for the design, construction and removal of the proposed Park and Ride access, including traffic management, should be submitted to and approved by the Councils prior to commencement of construction. An operational phase plan for operation of the Park and Ride clearly showing delivery of parking spaces and closure of the site should be submitted to the Councils. There will be a number of other mitigation and obligation requirements. Details in **ANNEX M.**

Southern Park and Ride at Wickham Market/Hacheston

Construction

16.29. The aim of the proposed facility is to reduce the impact of staff vehicles on the road network; it is estimated at peak construction there will be 1,182 daily arrivals and departures from the Park and Ride.

16.30. It is recognised that the proposed facility is likely to reduce overall vehicle mileage on the network associated with worker trips and will significantly increase the number of staff travelling to/from the site by public transport, which the Councils strongly support.

16.31. Clearly this level of demand will not exist at the early stages of construction, but there will be demand for the facility. This is evidenced from Hinkley Point, where a number of temporary park and ride facilities were deemed necessary very early on in construction to manage the workforce. This supports the need to build out the delivery of the facility to ensure it captures the demand for the facility as it grows.

16.32. The proposed Park and Ride includes a Traffic Incident Management Area that has capacity for 100 HGVs in the event of an incident to the north on the A12.

16.33. It is recognised that the proposed Postal Consolidation Facility will reduce total vehicle mileage associated with LGVs on the road network. It is recognised that the facility has the potential to reduce negative impacts associated with exacerbating incidents on the A12; however further details are needed to understand the operation of the facility.

16.34. The proposals include improvements to the B1078 / B1116 roundabout junction for sustainable transport to encourage movements to/from the Park and Ride by these modes, but they do not yet include improvements to the wider network to compliment and integrate with these.

16.35. Early delivery of the Associated Development will mean that staff have not established alternative patterns of travel and are less likely to have become intransigent to use of the Park and Ride facility.

Positive

16.36. None - whilst the proposals for the Park and Ride are supported as a mitigation measure, the facility does not constitute a positive impact of the Sizewell C development.

16.37. Improvements of footway and cycling infrastructure linking the site to Wickham Market and Marlesford, if provided, would be a legacy benefit to road users and local communities.

Neutral

16.38. The profile of HGV movements associated with construction of the Main Development Site increases during the construction programme, and so early delivery of the Associated Development sites will reduce the potential for increased HGV movements on the road network beyond what has been assessed in the ES.

16.39. Operation of the Park and Ride: The proposals include provision of 1,250 car parking spaces. The assessment of the demand is based on the gravity model for the site. The gravity model is considered to provide an indicative assessment of the potential location of staff and as such carries inherent risk. The car parking accumulation assessment indicates a peak occupancy of 894 vehicles. This means at peak there are 356 available free parking

spaces. As with the assessment of the gravity model and the transport modelling, there is inherent risk within the assessment, albeit less so than the Northern Park and Ride, and car parking use needs to be monitored to minimise potential issues resulting in staff not using the Park and Ride.

Negative

16.40. Construction of the Park and Ride site: The Applicant has estimated that construction of the Park and Ride will necessitate 42 two-way HGV movements on the road network on a daily basis throughout the 9-month construction period, with an additional 92 construction workforce vehicle trips. Traffic from the Associated Development site will lead to increased congestion and delay on the local road network, as well as associated impacts on vulnerable road users. Most notably it will negatively impact the operation of the B1078 / B1116 roundabout junction and the A12 slip roads, reducing safety and increasing light vehicle movements through Wickham Market, negatively affecting severance and amenity.

16.41. Through the built-up area of Wickham Market, the increase in traffic is likely to negatively impact sustainable modes of transport (walking, cycling,) by increasing the potential for conflict, increasing pedestrian delay, reducing amenity as well as increasing severance.

16.42. The construction of the proposed access is likely to require some minor on-line works, this will have a localised negative impact on delay.

16.43. The movement of workers to and from the Park and Ride in the operational phase will have a negative impact on the local highway network in terms of roads safety and amenity, specifically but not exclusively on the B1078 corridor.

16.44. The additional light vehicle movements associated with Sizewell C on the B1078 through Coddenham is of concern. The village is a Conservation Area with a large number of Listed Buildings. Its narrow, twisting main street with on-street parking, poor forward visibility and absence of footway mean that additional vehicles will have a disproportionate effect on amenity at this location.

16.45. Limited information has been made available on the timing of closure of the site. Removal of the Park and Ride could take place prior to workforce numbers reducing to below the Early Years assessed level. This may result in an exceedance of assessed impacts.

16.46. The Sizewell C project will result in increased LGV movements, particularly following construction of the Park and Ride, this will impact on the B1078 and B1079 with negative impacts on road safety and vulnerable road user amenity, and capacity at the B1078 /

B1079 junction in particular, which is shown to be operating at capacity in certain future scenarios.

Operation (post-removal of the Park and Ride site)

Positive

16.47. Improvements of footway and cycling infrastructure linking the site to Wickham Market and Marlesford, if provided, would be a legacy benefit to road users and local communities.

Neutral

16.48. Once the construction of Sizewell C is completed, the site of Park and Ride facility will be returned to its former state of agricultural land; therefore, the operational impacts are neutral.

Negative

16.49. Removal and reinstatement of the highway works associated with the Park and Ride will be disruptive to those using the A12 and adjacent highways. A quantity of waste material will also be created. Reinstatement of landscaped areas may not restore land to its previous condition.

Required mitigation

16.50. Construction of the proposed Park and Ride facility to begin within 3 months of construction of beginning construction of the project and should be phased so that it can continue to accommodate anticipated demand. Proposals for the design, construction and removal of the proposed Park and Ride access, including traffic management, should be submitted to and approved by the Councils prior to commencement of construction. An operational phase plan clearly showing delivery of parking spaces and closure of the site should be submitted to the Councils. There will be a number of other mitigation and obligation requirements. Details in **ANNEX M.**

Two Village Bypass / mitigation for Stratford St Andrew, Farnham, A12/A1094 junction

16.51. The Councils support this scheme as effective mitigation as well as providing strategic transport legacy, by removing through traffic from the existing A12 through the communities of Farnham and Stratford St Andrew, which then also avoids an existing constrained section of the road, known as the Farnham Bends, improving road network resilience.

16.52. The Local Transport Plan includes a four-village bypass around the villages of Marlesford, Little Glenham, Stratford St Andrew and Farnham as strategy transport improvement, to be implemented “for delivery by a developer in the medium to long

term". The Applicant was willing to contribute its funding for a Two Village Bypass to the wider scheme, with the Councils seeking additional funding from the Department for Transport, however this was not forthcoming, meaning that an optimal solution of a four-village bypass could not be further pursued.

16.53. The Councils consider that the proposed Two Village Bypass is proportionate to the Applicant's proposal, as the minimum required mitigation for the affected communities. The Bypass will remove construction traffic from the communities of Farnham and Stratford St Andrew mitigating related amenity and severance impacts for residents and improve network resilience by providing an alternative route to traffic during incidents. The Bypass will provide an improved junction layout at A12 / A1094 Friday Street and is likely to reduce the number of road collisions at the junction. The Councils consider that the Two Village Bypass is a legacy benefit, providing a higher speed route bypassing the two villages, improving journey times and helping to support the Suffolk economy.

16.54. The Councils consider that the route proposed by the Applicant is the least worst option when considering impacts on Foxborrow Wood and its position is subject to satisfactory detailed design of the bypass.

Construction

Positive

16.55. Once completed the proposed Bypass will remove through traffic from the existing A12 from the communities of Farnham and Stratford St Andrew, which will improve local amenities and reduce the severance impact of the development.

16.56. The new route will remove traffic from an existing constrained section on the A12 known as Farnham Bends, which will improve road network resilience and reliability. The Bypass will remove through traffic from the communities of Farnham and Stratford St Andrew and improve network resilience by providing an alternative route to traffic during incidents. Although longer, being a higher speed road of modern design it will somewhat improve journey times and thus help to support the Suffolk economy. The traffic issues in this part of the A12 are also identified in SCC's Local Transport Plan.

16.57. Early delivery, prior to significant use of the A12 by ScottishPower Renewables or Sizewell C haulage vehicles, of the roundabout would negate the need for the traffic signal scheme proposed as part of the East Anglia One North and East Anglia Two windfarm schemes at the A12 / A1094 junction (works no. 36), providing an upgrade on the East Anglia One North and East Anglia Two mitigation scheme and removing the need for additional intrusive works. (See their proposed construction management plan at the East Anglia One North and East Anglia Two examination library)

Neutral

16.58. Unless the existing A12 route through the villages is downgraded then some through traffic may continue to utilise the existing route.

16.59. No significant pedestrian or cycle facilities are provided along the route of the bypass. A bridge carries one bridleway across the Bypass but this is balanced against a number of other rights of way having to cross the new road.

Negative

16.60. The proposed mitigation fails to mitigate the traffic impacts of the project on the neighbouring communities of Marlesford and Little Glemham, which have been identified by the Councils throughout the pre-submission phase to require mitigation. Traffic travelling through these communities will significantly increase severance, pedestrian delay, anxiety of pedestrians, cyclists and other vulnerable road users, and increase the potential for conflict between large vehicles and vulnerable road users. Reference is included in the updated section 106 to this, so we expect further detail to be agreed with the Applicant.

16.61. The completion of the Two Village Bypass is likely to induce further traffic on the A12, negatively impacting those communities where mitigation has not been provided.

16.62. The proposed construction of the A12 / A1094 roundabout and the new roundabout to the west of Stratford St Andrew are likely to require some on-line works. The full details of these on-line works are yet to be confirmed, however, this will result in additional delay on the A12, which will result in increasing driver frustration, above and beyond the impacts associated with other construction vehicles. The construction of the new roundabout is challenging in terms of traffic management, specifically in terms of keeping the A1094 open. Diversion routes are long and use less suitable roads such as the B1069 and B1122. With Sizewell C Main Development Site construction traffic travelling through these junctions, it will further exacerbate these impacts. Delivery of these online works, including traffic management, will also disrupt the haul route for other nationally significant projects in the locality (e.g., East Anglia One North and East Anglia Two) including abnormal loads.

16.63. The increased delay associated with the delivery of the mitigation works is likely to negatively impact the Suffolk economy and reduce resilience on the road network.

16.64. Prior to the completion of the A12 / A1094 roundabout, there will be additional HGV traffic and construction workforce traffic moving through the junction. The junction has a history of collisions and the increase in vehicles using this junction will reduce available gaps to undertake safe highway manoeuvres (this will be affected by whether East Anglia One North or East Anglia Two mitigation has been delivered at this location). Prior to the

delivery of the mitigation, and dependent on other projects, there will be an increase in the potential for road collisions at a location which has a history of collisions.

Operation (of the nuclear power station)

Positive

16.65. The Two Village Bypass is considered to be a legacy benefit. The Bypass will provide an improved junction layout at A12 / A1094 Friday Street and is likely to reduce the number of road collisions at the junction. The Bypass will provide a higher speed route bypassing the two villages, improving journey times and helping to support the Suffolk economy. The Bypass will remove through traffic from the communities of Farnham and Stratford St Andrew and improve network resilience by providing an alternative route to traffic during incidents.

16.66. The design of the roundabouts has the potential to better cater for pedestrian and cycle movements and removing traffic from the villages will improve the potential to travel sustainably and reduce severance.

Negative

16.67. The proposed route will provide an additional maintenance burden for SCC as Local Highway Authority.

Required mitigation

16.68. Proposals for the design and construction of the proposed Two Village Bypass including the two roundabouts, including traffic management, should be submitted to and approved by the Councils prior to commencement of construction. The designs require further development to realise the benefits for pedestrians and for cyclists noted above. Additional mitigation and obligation requirements are detailed in **ANNEX M.**

16.69. The Councils consider payment of commuted sums towards future maintenance to be necessary and reasonable.

Sizewell Link Road and B1122

16.70. The Applicant proposes a new link road from the construction site to the A12 bypassing the villages of Middleton Moor, Theberton and parts of Yoxford. Both Councils consider a new Link Road necessary to mitigate the impacts of construction traffic on these communities. We consider that the proposed routeing makes the Sizewell Link Road acceptable mitigation for the impacts of construction traffic, although note that it brings with it its own negative environmental impacts and that the Applicant has not fully evidenced that the proposed route optimises the outcomes in terms of journey times, distance, and related carbon emissions for deliveries to the construction site.

16.71. Whilst both Councils consider a new link road necessary to mitigate the impacts of construction traffic, SCC and ESC have come to different conclusions as to the merit of permanency of the Sizewell Link Road and the extent of its legacy value, these differences are set out in more detail in the mitigation section of this topic heading.

Construction Phase

Positive

16.72. Once completed the Sizewell Link Road will reduce the impact of existing through traffic and Sizewell C construction traffic on the houses adjacent to the B1122, particularly in Middleton Moor and Theberton, and for parts of Yoxford adjacent to the A12. This should improve the environment for sustainable transport users reducing severance and improving amenity along the B1122 between Middleton Moor and Theberton compared to the status quo with existing traffic levels. It can also replace the B1122 as the HGV route for Sizewell B traffic during operation and outages.

Neutral

16.73. Whilst the proposed Sizewell Link Road is considered by the Councils acceptable mitigation for the impacts of construction traffic on the villages of Middleton Moor, Theberton and parts of Yoxford, the Applicant has failed to properly evidence that the proposed route optimises the outcomes in terms of journey times, distance and related carbon emissions for deliveries to the construction site. During the preparation of these proposals, SCC asked the Applicant to properly evaluate relief road options to the south of the B1122 as such options may have had a legacy development by encouraging more traffic from the South to use it.

16.74. The Councils acknowledge that the Sizewell Link Road would take traffic from a large stretch of the B1122 and its provision as an alternative address the negative perceptions of construction traffic using the B1122 highlighted in the Accent report **(APPENDIX 2: 2).**

Negative

B1122 impacts prior to delivery of the Sizewell Link Road

16.75. Prior to the delivery of the Sizewell Link Road, which according to the Applicants will take at least 24 months to construct, there will be a substantial increase of 600 HGV movements along the B1122 (dependent on timing of the delivery of the Sizewell B Relocated facilities), including through the communities of Middleton Moor and Theberton. In addition, the construction of the Sizewell Link Road in itself will add HGV and car movements on the B1122: the Applicant has indicated that construction of the Sizewell Link Road will result in a total of 200 daily HGV movements and 546 other vehicle movements associated with the construction workforce for the Sizewell Link Road - in the

busiest hour this equates to an additional 210 construction workforce vehicle movements on the local road network and 15 HGV movements. This is considered by the Councils to be a significant impact on the local road network.

16.76. This additional traffic will use the B1122 at a time during which there is no mitigation proposed for the communities along this road. For the B1122 these increases will result in increased delay for drivers potentially leading to driver frustration and reduced residual capacity at side roads, whilst for the communities these increases will result in reduced road safety, particularly for vulnerable road users, increased severance and significant disruption to those wishing to cross the B1122 and SLR during the construction phase. These issues will not be addressed until the Sizewell Link Road is completed, which is estimated to be two years into the construction period.

16.77. Although it is expected that the majority of work associated with the Sizewell Link Road will be offline, there are four locations that will require tying in with the existing B1122 along with Fordley Road and Pretty Road PRoW and access changes. This will necessitate traffic management which will have a negative impact on the operation of the B1122, potentially with construction traffic still using the route.

16.78. The proposed construction of the new Sizewell Link Road roundabout with the A12 is likely to require some on-line works; this will result in additional delay on the A12, which will result in increasing driver frustration, above and beyond the impacts associated with other construction vehicles. Delivery of these online works, including traffic management, may also disrupt the haul route for other nationally significant projects in the locality (e.g., East Anglia One North and East Anglia Two) including for abnormal indivisible loads.

Impacts after completion of the Sizewell Link Road

16.79. The Sizewell Link Road is a substantial additional road infrastructure, which will be detrimental to the local environment, with adverse impacts on landscape and ecology, public rights of way, severance of land holdings and the permanent loss of agricultural land.

Operational phase (of the nuclear power station)

Positive

16.80. The Sizewell Link Road would form a dedicated and purpose-built HGV route providing access to the then three operating reactors at Sizewell (Sizewell C and B) and the ongoing decommissioning of Sizewell A, as well as a route for other through-traffic avoiding the existing B1122 route through the villages of Middleton Moor and Theberton. The additional route to/from Sizewell would also offer greater network resilience by providing an alternative route especially in the event of a traffic incident.

16.81. A retained Sizewell Link Road would provide the opportunity to downgrade the current B1122 to become a quiet road between Middleton Moor and Theberton, used by limited local vehicular traffic with priority given to walking and cycling with appropriate measures to create cycling connectivity to the surrounding area. One suggestion is that it could be promoted as a cycling route from the coast heading north towards Darsham providing a family friendly tourist route that does not have to contend with vehicles heading to the power station. This could also be seen as a positive permanent benefit in terms of amenity and reduced severance for the villages of Middleton, Middleton Moor and Theberton.

Neutral

16.82. As above, the Applicant has failed to properly evidence that the proposed route achieves optimal outcomes in terms of journey times and distance for deliveries to the construction site.

16.83. There is potential for existing through traffic or some through traffic associated with the Sizewell C operation to continue to use the existing B1122 – although not HGVs as they will be required to use the Sizewell Link Road.

Negative

16.84. The Sizewell Link Road is a substantial additional road infrastructure, which will have a detrimental impact on the local environment. As a new permanent road, it would have a permanent adverse impact on the landscape and biodiversity, public rights of way, severance of land holdings and would result in the permanent loss of agricultural land.

16.85. Although the Link Road can enable the B1122 to be downgraded as a vehicular route to give preference to non-motorised users, no facilities are currently proposed to be provided beyond the extents of the Link Road. Non-motorised users would have to remain on the carriageway between Yoxford and Middleton Moor and between Theberton and the Main Site Access.

16.86. It is noted that the proposed route will provide an additional maintenance burden for SCC as Local Highway Authority in perpetuity (albeit a commuted sum contribution towards this would be expected).

Mitigation of impacts of the Sizewell Link Road

16.87. Whilst both Councils consider a new Link Road necessary during the construction period to mitigate the impacts of construction traffic, the Councils have come to different conclusions as to the merit of a permanent Sizewell Link Road.

16.88. Suffolk County Council as the Local Highway Authority, has a preference for the Sizewell Link Road to be removed on completion of the Sizewell C project as the ongoing long-term environmental damage is not justified by transport benefits once the construction period is concluded. As stated in SCC's Relevant Representation [RR-1174] paragraphs 40 to 42 while SCC supports the principle of the Link Road to mitigate construction traffic it does not consider the route has been robustly justified nor provides a significant legacy benefit post construction.

16.89. SCC: The proposed Sizewell Link Road runs broadly parallel to an existing B-road to Sizewell which itself, whilst not considered suitable from an amenity perspective during the construction phase, would be suitable for the traffic volumes expected during operation of Sizewell C. The Applicant's traffic modelling forecast the Sizewell Link Road to carry low traffic levels similar to other B roads in the area. The modelling anticipates that the road would cater for only a small proportion of operational workforce traffic to Sizewell C (20-30% of peak hour operational workforce traffic using the eastern end of the Sizewell Link Road, reducing to 10% at the western end), with the majority of operational worker traffic anticipated be to/from the south and west through Leiston. The existing B1122 would be capable of accommodating this level of traffic volumes during operation. Therefore, SCC considers that the proposed route does not offer a significant long-term legacy benefit in transport terms, beyond its ability to remove traffic from Theberton, Middleton Moor and to a lesser extent Yoxford operation, and therefore provides in the view of the County Council limited transport benefits in terms of e.g., journey times.

16.90. SCC asks for the removal of the Sizewell Link Road on completion of the Sizewell C project, as on balance, it does not consider the Sizewell Link Road with its proposed routeing to have sufficient strategic legacy benefit after construction of Sizewell C (running parallel to the existing B1122) to justify the environmental impact, the impact on local receptors and additional maintenance burden on the highway authority of the road in perpetuity. Any legacy value provided by the road is minimal, as it is not needed following construction, and any supposed benefit is far outweighed by the environmental disbenefits created by the retention of the road.

16.91. SCC considers that the construction of the Sizewell Link Road as a temporary haul road could require a lesser standard of construction and less consequential mitigation than a permanent road to make it acceptable. This could reduce the negative impacts outlined above and potentially could lead to the delivery of the road earlier in the life of the project.

The Link Road related construction traffic and construction period could also be less as a result.

16.92. SCC: On balance, whilst the road is required during construction, SCC considers there is not sufficient justification for the road's permanent retention.

16.93. East Suffolk Council's preference is for the Sizewell Link Road to remain post construction of Sizewell C as it considers that there is long term benefit in keeping the Sizewell Link Road as the HGV route to the Sizewell C station once operational, and replacing the B1122 as the HGV route for Sizewell A and Sizewell B. Taking additional HGV movements from the B1122 and removing its role as the abnormal indivisible load route for Sizewell B and the existing substations for National Grid and Greater Gabbard and Galloper offshore windfarms justifies retention of the Sizewell Link Road. Its retention as a dedicated and purpose-built HGV and abnormal indivisible load route to Sizewell A, B, C, and to the existing offshore windfarm related substations, justifies its permanency.

16.94. ESC: In addition, once the road has been constructed and used for circa ten years, to then remove the Link Road, with the reverse of the construction process required resulting in further vehicle movements related to its removal (that have not been assessed under the submitted ES) and disruption to the local network, would have a detrimental impact in itself. The road will need to be built to an appropriate standard to carry a large number of HGVs for 8+ years. If it is built of a lesser standard, there may be restrictions on usage, if non-Sizewell C vehicles are restricted from using the Link Road there would be no added benefit to residents of the B112 in reduction of traffic on the B1122 during construction of Sizewell C.

16.95. ESC considers that the retention of the Sizewell Link Road, as well as promoting opportunities for the local economy by providing a dedicated route to Leiston, enables the promotion of tourism opportunities with permanent downgrading of the B1122. ESC is working on an emerging Cycling and Walking Strategy which is due for adoption towards the end of 2021 and opportunities for the B1122 are being discussed as part of that work. In addition, with three operating reactors at Sizewell, there will be outages planned for every six months which bring an additional 1000 workers to the site. A dedicated promoted route from the A12 to the site would facilitate movement of these workers to the site with less disruption to residents of the B1122 and through Leiston.

16.96. ESC: The Applicant is working closely on promoting the hydrogen economy by working to provide a hydrogen electrolyser in close proximity to the Sizewell B station, this could provide additional opportunity and benefits for the town of Leiston and a dedicated

Link Road from the A12 to Leiston would in ESC's view support future aspirations around this and other economic opportunities for the town.

16.97. Both Councils agree that, if it is the view of the ExA that the Sizewell Link Road is to be retained, there are additional measures that will need to be put in place to mitigate and manage the impacts. We would expect the Applicant to fund the downgrading of the current B1122 to become a quiet road between Middleton Moor and Theberton, used by limited local vehicular traffic with priority given to walking and cycling with appropriate measures to create cycling connectivity to the surrounding area, which the Applicant has indicated it is willing to consider. To make this strategically beneficial, the Councils also request improvements to cycle and walking infrastructure along the sections of the B1122 not bypassed, i.e., Yoxford and Middleton Moor and between Theberton and the main site entrance.

16.98. The Councils also expected commuted sums for future maintenance of the new road if the Sizewell Link Road is to be retained.

16.99. Proposals for the design and construction of the proposed Sizewell Link Road, including traffic management, should be submitted to and approved by the Councils prior to commencement of construction of the roundabout. Additional measures with regards to obligations are detailed in **ANNEX M.**

Yoxford roundabout

Construction

Positive

16.100. The Yoxford roundabout junction will offer an upgrade on the existing junction with the A12, which is likely to improve access to the A12 from the minor arm roundabout decreasing delay on this approach as well as reducing delay associated with the right turn movement to the B1122.

16.101. The potential exists for positive impacts associated with improvements to vulnerable road user infrastructure and movement as part of the design of the roundabout.

Neutral

16.102. None identified.

Negative

16.103. The roundabout will have a minor increase on delay to A12 southbound movements in particular by introducing a new give way to this traffic.

16.104. The Applicant has indicated that construction of the Yoxford roundabout will include a total 20 daily HGV movements during the construction period which is 12 months. As well as these they have estimated approximately 52 daily vehicle movements associated with construction workers associated with the roundabout. Delivery of these works will require traffic management and will have a negative impact on driver delay during construction. Delivery of these online works, including traffic management, may also disrupt the haul route for other projects in the locality (e.g., East Anglia One North and East Anglia Two) including abnormal loads. The roundabout needs to be delivered at an early stage as construction will severely impact access to the B1122 for all traffic until the Sizewell Link Road is open, and Lowestoft traffic including AILs even after the Sizewell Link Road is open.

Operation (of the nuclear power station)

Positive

16.105. As above, the Yoxford roundabout junction will offer an upgrade on the existing junction between the A12/B1122, which is likely to improve access to the A12 from the minor arm roundabout decreasing delay on this approach as well as reducing delay associated with the right turn movement to the B1122.

16.106. Depending on the final design of the roundabout, positive impacts could be achieved by improving the infrastructure for pedestrians, cyclists and other vulnerable road users.

Neutral

16.107. None identified.

Negative

16.108. As above, the roundabout will have a minor increase on delay to A12 southbound movements in particular by introducing a new give way to this traffic.

Required mitigation

16.109. Proposals for the design and construction of the proposed Yoxford Roundabout, including traffic management, should be submitted to and approved by the Councils prior to commencement of construction of the roundabout. The roundabout is to be delivered early in the construction phase. Additional measures with regards to obligations, including commuted sums for future maintenance, are detailed in **ANNEX M.**

Freight Management Facility

Construction impacts

Positive

16.110. No positive impacts have been identified; however, the inclusion of a Freight Management Facility (FMF) is considered to increase the likelihood of better management of the approach of freight vehicles to the site and on the A12 north of Seven Hills.

Neutral

16.111. Whilst the proposed location of the FMF is considered by the Councils to be acceptable in principle subject to resolution of the issues raised below, the Applicant has failed to properly evidence that this location is optimal in terms of managing HGVs particularly in the case of closures of the Orwell Bridge. The Councils advised the Applicant in the pre-submission stage that potential alternative locations to the west of the Orwell Bridge, which could improve the site's ability to manage HGVs, should have been fully investigated.

Negative

16.112. The location of the FMF requires vehicles travelling to the site to come off the eastbound off-slip at Junction 58 Seven Hills and instead of using the free flow slip towards A12 north (i.e., towards the construction site) they turn right towards A1156. This movement requires HGVs to give way to circulating traffic causing increased delay on the approach, and subsequently causes delay at the other approaches as vehicles are required to give way to the now circulating freight traffic. The HGVs are then required to turn left from A1156 onto Felixstowe Road. When leaving the FMF, HGVs will be required to right turn across A1156, which is an arterial route into Ipswich, which can experience congestion. HGVs will then have to travel across Junction 58 again, further increasing delay at the strategically important junction.

16.113. Traffic impacts could have been reduced if a FMF on the main freight route that did not require multiple movements at a strategically important junction had been proposed and the location of the facility will have a negative impact on the operation of Junction 58 Seven Hills. HGVs from Felixstowe could potentially leave the A14 prior to the Seven Hills junction by using the slip from the A14 directly onto Felixstowe Road (the old A45). While this junction is the responsibility of Highways England the Councils would expect to see evidence, such as vehicle tracking and collision data, to evidence this is a safe manoeuvre.

16.114. Traffic management will be required at the Seven Hills junction during delivery of improvement works associated with the Brightwell Lakes housing development. The

additional Sizewell C traffic negotiating the junction during these works will cause additional disruption.

16.115. Construction of the access arrangements will increase delay on Felixstowe Road, and will need to be managed in such a way to minimise it negatively affecting the operation of Felixstowe Road and particularly the A1156.

16.116. Should the FMF exceed its operational capacity, especially during incidents on the highway network, queuing back onto the highway is likely to occur resulting in delay and congestion.

16.117. Felixstowe Road is an attractive alternative route to Felixstowe for cyclists, the presence of the high numbers of HGVs along this route will increase the potential for conflict with these existing users and potentially negatively impact the use of this sustainable mode.

16.118. The proposed FMF access is located on Felixstowe Road, this is the location for Highways England's 'Operation Stack', which involves the holding of HGVs off the A14 during closures of the Orwell Bridge. The proposed access is likely to reduce capacity during Operation Stack potentially causing greater impact on more strategic highway network.

16.119. The proposed FMF is in a location that is unlikely to attract movements to/from the site by staff by sustainable modes of transport being within walking distance of a small population and with almost no accessibility by public transport. Therefore, the site is highly likely to attract staff trips by private car.

Operational impacts (post-removal of the facility)

Positive

16.120. None identified.

Neutral

16.121. Once the construction of Sizewell C is completed, the site of the FMF will be returned to its former state of agricultural land; therefore, the operational impacts are neutral.

Negative

16.122. Removal and reinstatement of the highway works associated with the FMF will be disruptive to those using Felixstowe Road and adjacent highways. A quantity of waste material will also be created. Reinstatement of landscaped areas may not restore land to its previous condition.

Required mitigation

16.123. Proposals for the design and construction of the proposed FMF access, including traffic management, should be submitted to and approved by the Councils prior to commencement of construction. Additional measures required are detailed in **ANNEX M.**

Rail improvements

16.124. The Councils support enhanced use of rail to move construction materials for this project and agree that this is compliant with national policies such as NPS EN-1.

16.125. The Rail improvements comprise four key elements:

i. The green rail route providing access to the Main Development Site during construction

ii. Sidings at the LEEIE providing access to this site during the 'early years'.

iii. Improvements to the track and level crossings on the Leiston Branch Line including Saxmundham Junction on the East Suffolk Line.

iv. Mitigation for noise and vibration, improvements to level crossings and signalling on the East Suffolk Line.

16.126. There are significant gaps in the details provided by the Applicant to enable the Councils to evaluate the impacts of many of the proposals, nor does information show what infrastructure measures may be applied to the East Suffolk Line to reduce noise impact such as upgrading the Rail line to continuous welded track and ballast mats. The Councils are concerned about the uncertainty associated with practicalities of delivery such as obtaining rail possession before construction trains start and delivery to the proposed timescale assumed in the transport statement and ES. There is a need to also consider the impact on the wider rail network, which presently has not been shown. This means that impacts on already constrained areas such as Haughley Junction and Ely Station need to be considered. In either case there is a risk that non or late delivery of rail infrastructure would add to the pressure placed on the highway network by additional HGV movements to cover any shortfall in rail haulage.

16.127. The Councils regret that the significant rail legacy benefit, that of a passing loop between Woodbridge and Saxmundham, as proposed in the stage 3 consultation, is no longer deliverable.

Rail line upgrades/developments

Green Rail Route

16.128. The Councils support the principle of the Green Rail route as stated in our Relevant Representations (paragraph 45 [RR-0342] and [RR-1174].

Positive

16.129. None identified.

Neutral

16.130. In terms of freight management strategy, the improvements are supported, as they have the potential to significantly reduce the use of road transport for haulage of materials, thus reduce road transport related impacts.

16.131. As these works are temporary there are no legacy benefits other than the associated realignment of Lovers Lane with the improvements to facilities for non-motorised users.

Negative

16.132. The construction and removal of the level crossings will cause disruption to road users on Abbey Road, Abbey Lane, Lovers Lane and Buckleswood Road.

16.133. Operational use of the level crossings by trains will create minor delays during construction of Sizewell C to those using Abbey Hill.

Leiston Branch Line

Positive

16.134. None identified.

Neutral

16.135. In terms of freight management strategy, the improvements are supported as they have the potential to reduce the use of road transport for haulage of materials during the construction phase. The proposals would result in a reduction of noise and vibration impacts (see noise section).

16.136. As no use of the Leiston Branch for freight or passenger services during the operational phase of Sizewell C the improvements have no long-term benefit.

Negative

16.137. The improvements of the level crossings and track are likely to require closure of minor roads and public rights of way.

16.138. Construction traffic accessing the level crossings will be required to use narrow minor roads with impacts on road users, particularly pedestrians, cyclists, and horse riders. The nature of the roads mean they are susceptible to damage by large vehicles to the carriageway and verges.

16.139. Freight trains will cause some delays to highway users crossing the Leiston branch at level crossings.

16.140. Construction of the new junction at Saxmundham may have a negative impact on rail users through delays, cancelation, or replacement of passenger services during construction.

East Suffolk Line

16.141. The Councils note that little information has been provided regarding the details of what improvements are necessary for the East Suffolk Line to carry the required numbers of freight trains nor what mitigation will be required to alleviate the impacts of these trains.

Positive

16.142. Any improvements in signalling or level crossing safety measures or mitigation may have a positive benefit to the use of the line by passenger trains, which would remain in place after construction as a legacy benefit.

16.143. Any measures to reduce noise and vibration would also be considered as positive, in so far as the adverse impacts also of non-Sizewell C related rail movements would be reduced (see noise and vibration section).

Neutral

16.144. In terms of freight management strategy, the improvements are supported as they have the potential to reduce the use of road transport for haulage of materials during the construction phase.

16.145. Measures to reduce noise and vibration would reduce the noise and vibration impacts from Sizewell C - related trains.

Negative

16.146. The improvements of the level crossings and track, if necessary, may require closure of minor roads and public rights of way.

16.147. Construction traffic accessing the level crossings or rail network may be required to use narrow minor roads with impacts on road users, particularly pedestrians, cyclists and horse riders. The nature of the local minor roads mean they are susceptible to damage by large vehicles to the carriageway and verges.

16.148. Construction of improvements may have a negative impact on rail users through delays, cancelation or replacement of passenger services during construction.

17. Access (PRoW), Amenity and Recreation (Lead authorities SCC and ESC)

Summary

17.1. An updated ES was provided with the change submission in relation to amenity and recreation [AS-181]. This section also refers to the original submission in Vol. 2 of the ES Chapter 15 [APP-267]. This section has a strong relationship with ecology and HRA issues, detailed in section 8 above.

17.2. The ES considers the effects of the proposed development on PRoW, permissive footpaths, walking routes, cycle routes and accessible open spaces including the North Sea for recreational users.

17.3. In addition to the original ES, proposals in the change submission included in this report are: enhancement of the permanent BLF, construction of a new, temporary BLF, greater flexibility as to where certain Sizewell B facilities are relocated, change to certain parameter heights and activities on the Main Development Site, surface water disposal in the early years via a temporary outfall structure on the beach, change to the sea defence to make it more efficient and resilient to climate change, extension of the Order limits to provide for additional fen meadow habitat at Pakenham, new bridleway link between Aldhurst Farm and Kenton Hills, and reduction in HGV movements as a result of increase in rail movements and the new temporary BLF.

17.4. The Councils consider that the development of Sizewell C will have a negative impact on the quality and amenity of the recreation and access network. This could have a consequential impact on the tourism offer in this area. Impacts will be direct (diversions and closures) and indirect (changes to the amenity value and quality of the user experience due to increased activity such as traffic, noise, loss of views). The construction phase will have a greater negative impact than the operation phase.

17.5. Existing public rights of way on the coast, namely the nationally-promoted Suffolk Coast Path, the proposed England Coast Path National Trail, and the Sandlings Walk will be adversely affected by the construction activities on the beach itself and from the main platform. The public will be subject to temporary diversions seaward which is concerning on a coast that suffers from active erosion and occasional surge tides. The public will experience adverse impacts during the construction of the BLFs and sea defences, and this continues throughout the construction period as the BLFs are in use. Although the Applicant's proposals aspire for the coastal access to be maintained, it is recognised that there could be times when it is unsafe to do so and there will be closures. The enjoyment and attractiveness of this access will be severely diminished; recognised by the Applicant in the ES.

17.6. The increased volume of traffic on the wider road network will impact on non-motorised users causing severance and displacement. There will also be impacts on the PRoW network along the Two Villages Bypass and the Sizewell Link Road.

17.7. The Councils commissioned specialist acoustic consultants, Adrian James Acoustics, to provide a report on noise impact to amenity and recreation areas, see **APPENDIX 2: 6.**

The Applicant assessed the impact of construction noise on amenity and residential areas using a proprietary methodology, The Natural Tranquillity Method. The Councils accept that the outputs presented by the Applicant resulting from use of this model appear plausible.

Table 19: Summary of impacts – Access (PRoW), Amenity and Recreation					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
19a	Significant adverse impacts on the amenity and recreation value for beach users and of the PRoW on the coast path in the Main Development Site, particularly the public footpath (E-363/021/0) and also the proposed England Coast Path National Trail along the coastal frontage	C	Negative	S106 obligation – PRoW fund to mitigate negative impacts To be reflected in scale and criteria of PRoW Fund, Natural Environment Fund and Community Fund, as well as the Tourism Fund	NPS EN-1 and EN-6: Importance of coastal path and opportunities to maintain and enhance access to the coast. Suffolk Green Access Strategy: public rights of way network is an essential asset to us all for health and wellbeing, safe and sustainable travel, leisure activity and economic growth. Rights of Way Improvement Plan (ROWIP) sets out how the rights of way and access network is managed, maintained and improved.
19b	Short term closures of the coast path, with 5.51km longer and less attractive alternative inland route, which is proposed to be partly on-road, and closure and diversion of Sandlings Walk at Goose Hill as a result of closure of permissive path at Goose Hill and public bridleway through the campus site	C	Negative	Agreed protocol/limitations to closures of the coast path, to secure the Applicant's commitment for the Coast Path to be kept open for the majority of the time during construction and operation, and to communicate closures – requirement or obligation. Appropriate and agreed off-road diversion for the Coast Path and Sandlings Walk during periods of closure (which needs to include, in addition to Applicant's proposals, off road provision along Eastbridge Road north of Round House – requirement or obligation.	NPS EN-1 and EN-6: Importance of coastal path and opportunities to maintain and enhance access to the coast. Suffolk Green Access Strategy: PRoW network is an essential asset to us all for health and wellbeing,

					safe and sustainable travel, leisure activity and economic growth. ROWIP sets out how the rights of way and access network is managed, maintained and improved.
19c	Significant concern that proposals will leave public footpath along coast more vulnerable to erosion from coastal processes	C / O	Negative	Alternative location of the PRoW to the one proposed, to reduce the likelihood of this impact – change required. Coastal Monitoring Plan to include monitoring and mitigation of adverse impacts to the Coast Path – requirement.	NPS EN-1 and EN-6: Importance of coastal path and opportunities to maintain and enhance access to the coast. Suffolk Green Access Strategy: PRoW network is an essential asset to us all for health and wellbeing, safe and sustainable travel, leisure activity and economic growth. ROWIP sets out how the rights of way and access network is managed, maintained and improved.
19d	Significant adverse operational impacts on the amenity and recreation value of the PRoW near the power station, particularly the public footpath (E-363/021/0) and also the proposed England Coast Path National Trail along the coastal frontage.	O	Negative	To be reflected in scale and criteria of PRoW Fund and Natural Environment Fund	NPS EN-1 and EN-6: Importance of coastal path and opportunities to maintain and enhance access to the coast. Suffolk Green Access Strategy: PRoW network is an essential asset to us all for health and wellbeing, safe and sustainable travel, leisure activity and

					economic growth. ROWIP sets out how the rights of way and access network is managed, maintained and improved.
19e	Provision of a new off-road bridleway link from the Sandy Lane bridleway south to Lovers Lane and King Georges Avenue junction.	C / O	Positive	To be secured by obligation	Suffolk Green Access Strategy: PRoW network is an essential asset to us all for health and wellbeing, safe and sustainable travel, leisure activity and economic growth. ROWIP sets out how the rights of way and access network is managed, maintained and improved.
19f	Recreational pressures as a result of the public displaced from the beach and from construction workers	C	Negative	Measures to enable workforce to walk or cycle to the main site Cycle infrastructure funding - obligation. Proposed Resilience Funds for National Trust and RSPB - obligation. RAMS payment - obligation.	Local Plan Policy SCLP3.4: key consideration for major energy infrastructure projects is adverse impacts on local communities. Suffolk Green Access Strategy: PRoW network is an essential asset to us all for health and wellbeing, safe and sustainable travel, leisure activity and economic growth. ROWIP sets out how the rights of way and access network is managed, maintained and improved.
19g	Restoration of existing permissive walking access through Kenton and Goose Hills to the coast- route of	O	Neutral / positive	To be secured by obligation. Councils request provision of a permanent public right of way from the beach at the north end of	Suffolk Green Access Strategy: PRoW network is an essential asset to us all

	the Sandlings Walk, Retention of the inland alternative Bridleway route which will provide a link in the currently fractured bridleway north-south bridleway network, Provision of a bridleway link from the new bridleway in Aldhurst Farm to public bridleway 19 at the Kenton Hills car park.			the Sizewell C site, inland to join Bridleway 19 close to the Kenton Hills Car park - Change required. Closed section of Bridleway 19 to be reinstated post-construction phase - obligation	for health and wellbeing, safe and sustainable travel, leisure activity and economic growth. ROWIP sets out how the rights of way and access network is managed, maintained and improved.
19h	Significant adverse effects on the amenity and recreation value of the network of PRoW affected by the Sizewell Link Road and the Two Village Bypass	C / O	Negative	ProW fund to mitigate negative impacts to be expanded to include all those sites where there is a negative local impact identified and not just those with moderate to major impact identified. - obligation Cycle infrastructure funding - obligation	Local Plan Policy SCLP3.4: key consideration for major energy infrastructure projects is adverse impacts on local communities. Suffolk Green Access Strategy: PRoW network is an essential asset to us all for health and wellbeing, safe and sustainable travel, leisure activity and economic growth. ROWIP sets out how the rights of way and access network is managed, maintained and improved.
19i	Adverse impacts at Park and ride sites and Freight Management Facility on amenity and recreation	C	Negative	Embedded mitigation in the project through controls in the proposed Code of Construction Practice are proposed for the two park and ride sites and the other Associated Developments. Residual impacts to be reflected in PRoW Fund, Community Fund and/or Natural Environment Fund - obligation	Local Plan Policy SCLP3.4: key consideration for major energy infrastructure projects is adverse impacts on local communities. Suffolk Green Access Strategy: PRoW network is an essential asset to us all for health and wellbeing, safe and sustainable travel, leisure activity and

					economic growth. ROWIP sets out how the rights of way and access network is managed, maintained and improved.
19j	Footpaths diversions at Southern Park and Ride, Two Village Bypass, Sizewell Link Road and Green Rail Route; and temporary PRoW diversions during construction of Associated Development sites	C / O	Neutral	Secured through DCO proposals Retention of the additional link provided between the public footpaths affected by the green rail route - DCO plans	Local Plan Policy SCLP3.4: key consideration for major energy infrastructure projects is adverse impacts on local communities. Suffolk Green Access Strategy: PRoW network is an essential asset to us all for health and wellbeing, safe and sustainable travel, leisure activity and economic growth. ROWIP sets out how the rights of way and access network is managed, maintained and improved.

Policy context

National Planning Policy

17.8. Potential impacts on open space as a result of the location of energy infrastructure projects are identified in NPS EN-1 (Section 5.10). This aligns with government policy to ensure there is adequate provision of high-quality open space (including green infrastructure) and sports and recreation facilities to meet the needs of local communities. Open spaces, sports and recreational facilities all help to underpin people's quality of life and have a vital role to play in promoting healthy living. Green infrastructure in particular will also play an increasingly important role in mitigating or adapting to the impacts of climate change. Paragraph 5.10.24 identifies Rights of way, National Trails and other rights of access to land as important recreational facilities for example for walkers, cyclists and horse riders. Paragraph 5.10.16 expects "applicants to have taken advantage of opportunities to maintain and enhance access to the coast."

17.9. NPS EN-6 Vol II reiterates the above, and notes (in paragraph C.8.78) that the decision maker "will consider the implications for development of the creation of a continuous signed and managed route around the coast, as set out in the Marine and Coastal Access Act 2009, using the guidance in EN-1. Possible mitigation measures might include siting certain elements of a station away from public footpaths and/or the provision of realignments to existing or planned rights of way."

Local Plan Policy

17.10. East Suffolk Local Plan Policy SCLP3.4 Proposals for Major Energy Infrastructure Projects references ensuring community cohesion is maintained and that the impacts of disturbance are mitigated, there should be positive outcomes for the local community and surrounding environment.

17.11. Policy SCLP4.5 Economic development in rural areas required proposed uses to be compatible with the surrounding area and offer additional community benefits where opportunities exist.

17.12. Policy SCLP7.1 Sustainable transport requires new development to be integrated with and protect and enhance existing pedestrian routes and the public rights of way network.

17.13. The Suffolk Access Principles (**ANNEX H)** for Sizewell C are a set of principles developed by the Councils and agreed in 2014 which set out our views on the range of

access-related issues associated with the proposed development of Sizewell C. The objectives identified are:

i. To minimise the direct impact of the development on linear and non-linear, formal and informal access users in the vicinity of the development during the construction phase;
ii. To address the indirect construction phase impacts of the development on access in the vicinity of the development associated with:
iii. Deflection of existing users to environmentally sensitive sites;
iv. Increase in use of remaining access by the temporary workforce;
v. Redistribution of use in the locality increasing pressure on currently lesser used access routes; and
vi. Conflicts between non-motorised users and vehicular traffic, including the impacts on the safety and amenity of those users.
vii. To ensure Sizewell C workers can access the main site safely using sustainable modes of travel; and
viii. To ensure that Sizewell C leaves a positive legacy of improved access in the local and wider area.

Although completed in 2014, the objectives have not required updating since and remain valid as key objectives for the Councils.

17.14. To address these objectives the Councils, expect direct impacts to be mitigated by the Applicant as well as indirect impacts. At all times sustainable access should be ensured and the aim should be to leave a positive legacy.

Other relevant Local Policy

17.15. Suffolk Green Access Strategy (2020-2030) **(APPENDIX 1: 7**) is a statutory Rights of Way Improvement Plan produced by SCC as required by the Countryside and Rights of Way Act 2000 (Section 60 and 61). It provides a clear direction as to how the rights of way and access network is managed, maintained, and improved to meet the needs of all users.

17.16. Improving the quality of the experience on urban and rural rights of way has become increasingly important politically and strategically. The Green Access Strategy highlights the importance of the rights of way and access network for health and wellbeing, safe and sustainable travel, leisure activity and economic growth. It represents SCC's commitment to making the very most of this asset and to provide residents, business community, and visitors with an array of different and innovative opportunities to use, enjoy and benefit from.

17.17. Objectives within the Strategy include protecting the network from adverse impacts from new developments and to create a more connected network and to seek opportunities to enhance public rights of way, including new linkages and upgrading routes, improving access for all and supporting healthy and sustainable access between communities and services with funding sought from developers.

Context

17.18. The access network including PRoWs, open access and common land are some of the key features of the visitor experience of Suffolk. The quality of the coastal landscape, its high level of accessibility and its connectivity to coastal towns, villages, and hinterland, are the draw for visitors.

17.19. The public rights of way network in Suffolk makes up almost half of the highway network with 3,500 miles (5,700km) of footpath, bridleway, restricted byway and byway. In addition, there are over 12000 acres of open access heathland, nationally and regionally promoted long distance cycle routes and walking routes and permissive paths. It is an essential asset for the County for health and wellbeing, safe and sustainable travel, leisure activity, and economic growth.

17.20. SCC as Highway Authority manages the PRoW Network, promotes cycle routes, and as Access Authority, has responsibilities for open access land and the England Coast Path in Suffolk. The Green Access Strategy guides the identification and delivery of improvements to the provision for walkers, cyclists, horse riders, and those with mobility problems, including seeking opportunities to work collaboratively with internal and external stakeholders.

17.21. Annex C provides, in Part IV, a detailed overview of the pedestritan and cycling infrastructure in the area.

17.22. Public Footpath Leiston FP 21 is the footpath along the beach from Sizewell Gap to Minsmere Sluice and the proposed route of the England Coast Path and existing Suffolk Coast Path route (‘the coast footpath’).

17.23. Sizewell beach is a very popular walking destination – the estimated annual level of use as recorded on the beach close to the car park is 195,557 visits and 32,214 visits where the coast footpath meets the Sandlings Walk on the north boundary of the proposed C site (the approximate location of the beach landing facility). Walking was the main activity (92%) (Sizewell C Public Access Visitor Surveys 2014, [APP-268].

17.24. In the same survey, 29% of respondents said they would avoid visiting the area during construction due to noise, disruption and traffic impacts, an expectation that they

would be less safe, and experience loss of access to footpaths and damage to the landscape. This displacement of visitors can have adverse impacts of nearby beaches, namely Thorpeness and Aldeburgh to the south, increasing pressure on those beaches to withstand additional visitors. In the case of Thorpeness introducing additional challenges resulting from its soft eroding cliff frontage (see the coastal change section).

17.25. The England Coast Path is proposed to use the footpath along the beach. This will be the first National Trail in Suffolk and it is a key aim for the Councils to promote coastal access to bring economic benefits to the region, an aspiration supported by 76% of respondents to the SCC's Green Access Strategy consultation. It will be the most important trail in Suffolk. However, this needs to be balanced with the need to protect European sites from unacceptable levels of visitors (RAMS project **(APPENDIX 1: 20)**).

17.26. Where the England Coast Path has been completed elsewhere in England, it has had an impact on coastal destinations on both visitor numbers and spend. Over £379 million is spent in the national economy as a result of trips to use English coastal paths, of which £350 million is spent within local coastal economies, according to the Economic and Health Impacts of Walking on English Coastal Paths: A baseline study for future evaluation (2019.12.23, Natural England.)

17.27. The Coast Path and use of the Coast Path has been a concern of the Councils throughout pre-application discussions with the Applicant, primarily because of the potentially very long alternative route should the Coastal Path need to be shut for safety reasons. The original submission stated that part of the coastline would need to be closed for six months to enable the construction of the permanent BLF [APP-184]. The Councils welcome that the change submission confirms that the Coast Path will be able to remain open for substantially more of the construction period of the permanent BLF than before. However, as closures are still likely to occur albeit for shorter periods of time, an appropriate notification period to the Councils along with publication of the alternative route will be expected. The Councils also welcome that the Coast Path will be kept open during operation of the permanent BLF structure and during the construction and operational phases of Sizewell C.

17.28. There are 12 PRoW that lie on the proposed route for the Sizewell Link Road some of which are promoted as part of a series of village walks. For example, local walkers from Theberton use the network of quiet minor roads and PRoW to create circular walks to the west of the village around Moat Road and Pretty Road.

Overall construction impact of the development on access, amenity and recreation in east Suffolk

Positive

17.29. Construction works will have no positive impact on the amenity and recreation of the PRoW network.

Neutral

17.30. None identified.

Negative

17.31. The Councils consider that the development of Sizewell C will have a negative impact on a wide range of aspects of the quality and amenity of the recreation and access network.

17.32. The Applicant considers that none of the changes alter the results of the sound tranquillity assessment in the original ES [APP-270]. The Councils note that this assessment only assesses sound tranquillity, however, as set out in the AONB section (paragraph 7.9iv), the AONB characteristic of tranquillity is more widely defined. The Councils consider that the AONB-defined characteristic of relative tranquillity would be adversely impacted by the introduction of construction noise, traffic and significant light pollution, as well as the introduction of additional power lines, which will affect, for example, perceptions of a natural landscape, peace and quiet, stars at night, and natural sounds.

17.33. Factors assessed by the Applicant in its sound tranquillity assessment that are relevant to the change submission are effects on severance, pedestrian delay, amenity, and fear and intimidation. The Change submission assessment considers that during the peak years amenity reduces as a result of the changes. Where it increases the impact on severance, mitigation is proposed in the form of a shared footway/cycleway thus reducing the effect on severance to not significant. The Councils will expect this mitigation to be incorporated in revised work plans. In Marlesford the effect on fear and intimidation increases, however the transport assessment addendum [AS-266] considers the overall effect to be minor adverse - not significant. The Councils do not agree with this assessment - as noted in the transport section (paragraph 15.103). Marlesford has been identified by the Councils as a location of particular concern with regard to increased severance, fear and anxiety of vulnerable road users and reduced amenity. However, from a purely recreational perspective, the Councils accept that there are limited recreational receptors using the A12, and therefore the impacts on recreation in this location will be much more limited.

17.34. Locals and visitors value the coastal area for the quality and connectivity of the access network that enables enjoyment of the outstanding scenery, the peace and quiet and the abundant wildlife. The most popular activity enjoyed in the AONB is walking (95% of respondents) (AONB: State of the AONB Report 2018 (**APPENDIX 1: 23**).

17.35. People are drawn to the places and routes around Sizewell for the same reasons, but also by the ability to walk their dogs off the lead, easy car parking, and closeness to home. The most popular locations were the beach footpaths, the Suffolk Coast Path beside Sizewell, Kenton Hills, and Aldringham Walks.

17.36. The construction period in particular will severely compromise the very features that attract people to this part of the coastal area. 29% of respondents to the Energy Coast Survey stated that they were a little or a lot less likely to visit during construction and of the business that replied to the survey, 58% expect their annual turnover to decrease. (The Energy Coast – Implications, Impact and Opportunities for Tourism on the Suffolk Coast, **APPENDIX 2: 7**).

17.37. The reduction in the attractiveness of the access network could have a consequential impact on the tourism offer in this area (see the tourism section for more details).

17.38. Impacts will be direct (diversions and closures) and indirect (changes to the amenity value and quality of the user experience due to increased activity such as traffic, noise, loss of views). The construction phase will have a greater negative impact than the operation phase. The increased volume of traffic on the wider road network will impact on non-motorised users causing severance and displacement.

17.39. Existing PRoW on the coast, namely the nationally-promoted Suffolk Coast Path, the proposed England Coast Path National Trail, and the Sandlings Walk will be adversely affected by the construction activities on the beach itself and from the main platform. This will have an impact at a wider scale on access, amenity and recreation

Main Development Site impacts

Construction

17.40. The Applicant makes the following proposals for the construction phase, updated with respect to the Change submission (AS-181):

i. The public footpath (E-363/021/0) and the proposed England Coast Path will be kept open and available on the coast during the construction and use of the enhanced permanent BLF and the temporary BLF, and during the construction of the sea defences, except in rare circumstances where it is unsafe to do so.

ii. The access along the beach will be diverted seaward to a corridor above the highest Astronomical tide.

iii. The off-road bridleway (E-363/019/0) from Lovers Lane to the Eastbridge Road will be closed for the duration of construction.

iv. A long alternative inland route will be provided that will enable the onward journey for walkers diverted away from the coast following the proposed England Coast Path, and for users of bridleway 19(E-363/019/0)

Positive

17.41. Once initial construction is completed on the access to the Main Development Site, the new permanent route and uncontrolled crossing of Lover's Lane will be made available for pedestrians – approximately two years post-commencement of construction works. This new link from Aldhurst Farm across Lovers Lane to Kenton Hills will provide off-road pedestrian connection from west of Lover's Lane to the permissive footpath network in Kenton Hills and south of Kenton Hills, Leiston Common, Bridleway 19 on Sandy Lane and further afield. This is considered to enhance recreational resource for pedestrians.

17.42. The provision of a new off-road bridleway from the junction of Sandy Lane public bridleway (E-363/019/0) with Lovers Lane, south through the Big Field to Lovers Lane near the junction with King Georges Avenue is welcomed.

Neutral

17.43. The commitment of the Applicant to aim for the Coast Path to be kept open for the majority of time during construction and during operation of the permanent BLF is welcome and will reduce the impact on access, amenity, and recreation.

17.44. After construction is complete, the temporary BLF will be removed and thus have no impact on users of the Coast Path, including equestrian use.

17.45. Measures to prevent objects falling from the conveyor of the temporary BLF will be provided to secure safety of beach and Coastal Path users.

17.46. The temporary discharge outfall on the beach would have ground reinstated over it being buried and is not anticipated to have any adverse impact on beach users.

17.47. Removal of outage car parking from Pillbox Field is welcome as it removes additional impact for receptors using Bridleway 19.

17.48. The new pedestrian link would require the loss of hedgerow resulting in the need for replacement hedgerow planting.

Negative

17.49. Temporary seaward diversions of the Coast Path: The public will be subject to temporary diversions seaward which is concerning on a coast that suffers from active erosion and occasional surge tides. The close proximity of this diverted path to the mean high water could place walkers at risk during spring tides and surge tides. The enjoyment and attractiveness of this access will be severely diminished; recognised by the Applicant in the ES, due to construction activity - noise, traffic, air quality, removal of views, and the likely channelling of the alternative access through fenced areas. The public will experience adverse impacts during the construction of the BLFs and sea defences, and this continues throughout the construction period as the BLFs are in use.

17.50. Coast Path alternative route: Although the Applicant's proposals aspire for coastal access to be maintained as much as possible, it is recognised that there will be times when it is unsafe to do so and there will be closures, including during construction of the temporary and permanent BLFs and possibly during construction of the temporary discharge outfall pipe. However short these may be, they will have a negative impact on recreational users of the Coast Path. Given the importance of the Coast Path, these events, and the resulting reduction in predictability whether the path is open, is of concern. There will be an overall loss of amenity and enjoyment.

17.51. The Councils are concerned that the proposed inland alternative to the Coast Path is 5.51km longer in distance for a walker following the coast path, provides a lower quality of scenery and gives a less pleasant experience as it runs parallel to local roads, the campus site and requires users to cross roads five times. It will lie immediately adjacent to the B1122 for 900m and through the main site roundabout and campus site for 1100m.

17.52. This alternative route will place walkers into the road north of the Round House, Eastbridge Road for 750m – this section of road is hedged and banked on both sides and has no verges. The Sizewell C Visitor Surveys 2016-2018 (PRoW and Cycle Route) stated that "Eastbridge Road generated a steady stream of cars and farm vehicle traffic throughout the day making it risky for walkers and dogs" (paragraph 5.2.1, [APP-269]. It is also acknowledged by the Applicant in the ES Chapter 15 -15.6.125 [APP-267] that some construction workers are likely to drive along Eastbridge Road.

17.53. Bridleway 19 will be closed during the construction phase between Kenton Hills car park and where it joins Eastbridge Road.

17.54. Impacts on Sandlings Walk and permissive access at Goose Hill: Permissive access at Goose Hill, including the route of the Sandlings Walk, will be removed during construction.

The Sandlings Walk will need to be temporarily diverted. The remaining permissive access routes at Kenton Hills will be compromised by the close proximity of the construction site.

17.55. There will be disturbance to beach users, visually there will be impacts recreationally from the barges and tugs using the permanent BLF and the vehicles on the access road to the BLF. There will also be construction sound associated with this.

17.56. The temporary BLF will be constructed over approximately 9 months, with around 12 piles required on the beach. Driving these piles will result in noise and disturbance for beach users.

17.57. The temporary BLF will operate at night and as such light and sound will impact on receptors. However, there are less likely to be beach receptors at this point. Lighting will impact on dark skies but will be at the foreground of the Main Development Site which will be lit overnight during construction.

17.58. Proposed changes to the sea defences will alter the nature of views and noise and reduce the width of accessible land between the hard defences and the sea after it has been constructed. This impact is significant and as such requires mitigation (route diversion).

17.59. Recreational pressure from campus occupants: The Applicant's provision of a perimeter footpath on the campus site as a means to reduce off-site recreational pressure is considered by the Councils to be extremely over optimistic; the campus site is on the doorstep of the AONB, surrounded by high quality landscape, the heritage coast, nature reserves, and well-known visitor attractions, and will be a draw to workers.

17.60. Increased usage of PRoW: The Councils expect many of the local PRoW and open access sites to experience an increase in usage, from the public displaced from the beach and from construction workers. This includes the public footpath from the Eastbridge Road to the Minsmere Sluice resulting in the likely damage of the natural surface.

17.61. Displacement of users to alternative locations has the potential to lead to adverse impacts due to increases in use such as over-crowding, damage to European protected sites. For further details on ecology see section 8.

17.62. Noise impacts on amenity and recreation: The ES identifies noise as a contributory factor in significant impacts in these areas:

Receptor 11	Minsmere South	Major adverse effect
Receptor 12	Minsmere to Sizewell Coast	Major adverse effect
Receptor 14	Northwest Site	Major adverse effect
Receptor 15	Sizewell Belts	Major adverse effect
	Suffolk Coast Path and Future England Coast Path	Major adverse effect

	Sandlings Walk	Major adverse effect
Receptor 5	Westleton Walks and Dunwich Heath	Moderate adverse effect
Receptor 7	RSPB Minsmere	Moderate adverse effect
Receptor 8	Dunwich to Minsmere Coast	Moderate adverse effect
Receptor 10	Eastbridge and Leiston Abbey	Moderate adverse effect
Receptor 16	North of Leiston	Moderate adverse effect
Receptor 19	Aldringham Common and the Walks	Moderate adverse effect

17.63. During peak years there will be significant adverse effects on severance and pedestrian amenity on Abbey Road, Leiston, including in the vicinity of the railway crossing.

Operation

17.64. The following proposals are made by the Applicant for the operational phase:

i. The coast footpath will be permanently realigned seaward of its current location onto the platform east of the hard sea defence. The revised submission [AS-181] places the public footpath further seaward than in the original application. This is due to the footprint of the proposed C station being further east than the existing B station and hence impinging on the current alignment of the coast footpath.

ii. The coast footpath will be temporarily closed during operation of the BLF.

iii. The Applicant has stated in the SoCG that they will provide an alternative informal footpath along the top of the hard sea defence, within the permanent coastal margin which people will be able to use at all times, including if the lower PRoW is eroded by extreme sea events.

Positive

17.65. The new footpath link between Aldhurst Farm and Kenton Hills will be designated as a Bridleway once construction is completed creating a permanent more direct route off-road north-south as part of longer routes within the AONB.

17.66. The inland alternative route to the coast path will be retained and dedicated as a public bridleway providing an off-road route from the junction of Lovers Lane with King Georges Avenue, through Aldhurst Farm, alongside Abbey Road and the Eastbridge Road to where it re-joins public Bridleway 19.

Neutral

17.67. The Coast path is anticipated by the Applicant to be kept open during the irregular use of the BLF during operation of the Sizewell C station.

17.68. Permissive access on the Sizewell Estate will be re-opened through Goose Hills, reinstating the route for the Sandlings Walk.

Negative

17.69. Impact on the Coast Path as result of potential erosion: The Councils remain concerned that the proposed design places the public footpath, the England Coast Path and the footpath corridor seaward of its current location, and further seaward from the original application. This could leave the public footpath more vulnerable to erosion from coastal processes and hence severance. The regular need to recharge the soft defence could affect users both physically if closures are required during these works and in terms of amenity and tranquillity.

17.70. It is unacceptable to locate the public footpath in a location which could be subject to erosion, as it is actively planning for a public highway to become a future liability to SCC.

17.71. Managing a PRoW on eroding defences, both soft and hard, presents the Councils with practical and legal difficulties regarding how to protect the right of access whilst complying with its responsibility for public safety. It is neither easy nor cost free. The beach monitoring and mitigation plan will determine the timing and extent of works to maintain the soft defence for its coast defence function, but this must recognise the need to maintain the coast to ensure continued access.

17.72. The Councils are concerned about the lack of accurate information regarding the location of the public footpath in relation to the sea defence design. The illustrative figures are not accurate in giving either a true picture of how the coastal frontage will look, where the public footpath will run, or how the recharging works will affect the public footpath, both when it is temporarily moved during construction and during operation.

17.73. There are assumptions made in the DCO about the expected viable life of the sacrificial soft defence based on its position and form, and it is expected that the soft sacrificial defence will become non-viable between 2050-2080. However, there is not enough evidence or information provided to be able to assess the impact of the new proposals on the public footpath (E-363/021/0). The concern is that the risk of erosion of the soft defence and hence the exposure of the public footpath could be sooner than the assumptions predicted in the original draft DCO [APP-059].

17.74. Unless evidence can be provided to the contrary, it appears that these proposals will make the public footpath more vulnerable to early loss than is currently anticipated with the design proposed in the draft DCO. The Councils maintain their objection to re-locating the permanent public footpath where it will be expected to erode, creating a management and legal liability for SCC.

17.75. Public Bridleway 19: Public bridleway 19 (E-363/019/0) will be restored and re-opened but will be severed by the site access road.

17.76. Visual and amenity impacts on beach users: The revised permanent BLF will have additional visual impacts on a permanent basis during operation of Sizewell C as the number of piles will have been increased, as will the length of the BLF and elevated horizontal cross beams to the piles have been introduced. These will have an impact visually on receptors using the beach.

17.77. During use of the permanent BLF there will be construction sound for receptors on the beach, however, this will be limited to use every 5 – 20 years only.

17.78. The temporary BLF will be removed post construction of the power station. However, it is not clear if the piles from the beach are to be removed. It is likely they will be cut off at the base – this may need to be monitored overtime to ensure they do not become a safety hazard as the beach profile alters. See the coastal change section.

17.79. The HCDF and SCDF will be permanent features during operation of the station and will alter the nature of views along the coast and towards Sizewell B and C. They will reduce the width of accessible land between the hard sea defences and move the permanent route of the Coast Path seaward.

Associated Development impacts

Construction phase

17.80. The Applicant makes the following proposals for the construction phase, updated with respect to the Change submission [AS-181]:

(I) Public footpaths will be severed by the Green Rail Route with temporary alternatives provided.

(II) Four public footpaths are affected by the Two Village Bypass; these will be temporarily closed, two of which will have alternatives provided on the proposed new permanent alignments (E-243/001/0 and E-137/029/0), whereas footpaths E243/003/0 and E-243/004/ will have temporary alternatives until the bridge is built. At that point, they will be permanently diverted over the new bridge. The PRoW will be re-opened permanently on new alignments across the bypass and over the new bridge. The Councils require crossing points to be safe, easy to use and accessible by all.

(III) Temporary closure of all PRoW affected by the Sizewell Link Road during construction with temporary alternatives provided. Roads that are stopped up will retain access in most cases for non-motorised users. A bridge over the SLR will be constructed at Pretty Road for non-motorised users.

17.81. There are no PRoWs in the Northern Park and Ride site but there are four within the 1km agreed study area. Embedded mitigation is included with design principles for the Site. Once operational, the majority of effects are assessed as being of limited significance.

17.82. For the Southern Park and Ride there are three routes which run close to the boundaries of, or within, the site. There is an additional group of public footpaths to the north of the site and to the west and east. Visitor surveys were carried out by the Applicant in November 2016 and August 2018.

17.83. For the Two Village Bypass there are six footpaths registered as PRoW within the site, within the agreed study area there a further 42 PRoW.

17.84. For the Sizewell Link Road there are 16 PRoW within or partially within the site, and there are 38 outside the site but within the agreed study area.

17.85. In the section of the ES reserved for Yoxford and other highway improvements, only the Yoxford roundabout was taken forward for consideration, the other highway improvements were screened out of the assessment. No PRoW diversions are required in relation to the Yoxford roundabout works. There are six footpaths registered as PRoWs located outside of the site but within the 500m study area. No other recreational routes or resources are potentially impacted by the roundabout proposal.

17.86. There are no PRoW diversions required in relation to the Freight Management Facility but a number of bridleways potentially affected by the proposal from a recreation and access perspective so those have been assessed in the ES.

17.87. In respect of the Green Rail route from Saxmundham to Leiston to the Main Development Site, a number of works in relation to the Green Rail route were screened out of assessment. The resultant study area relates to the proposed rail extension route within the site boundary and land immediately beyond to a distance of 1km. There are 3 registered PRoWs in the site boundary, 11 PRoWs outside the site boundary but in the study area, a number of footpaths providing access to the PRoW network and 2 bridleways in the study area. Leiston Abbey is within the study area as are some other public open spaces and allotments in Leiston. A number of these routes were surveyed in August 2016 and November 2018. Impacts of the Green Rail route on recreation and amenity will only occur during the construction phase of the Sizewell C development.

17.88. The Pakenham site for fen meadow creation is crossed by a PRoW and has two others that will be crossed by potential construction access points. However, these will only result in indirect impacts and minor changes to the setting of the PRoWs arising from changes to views and noise.

Positive

17.89. None identified.

Neutral

17.90. Southern Park and Ride: During construction of the Southern Park and Ride site a diversion of Bridleway E-288/008/0 will be provided.

17.91. Two Village Bypass: During construction of the Two Village Bypass, a number of PRoW will need to be diverted temporarily. Four PRoW will need to be permanently diverted.

17.92. Sizewell Link Road: During construction of the Sizewell Link Road a number of PRoWs will be diverted, some permanently. A new over-bridge is proposed at Pretty Road to maintain access.

17.93. Green Rail Route: During construction and operation of the green rail route a number of PRoWs and footpaths will be diverted.

17.94. Pakenham site: The developments at Pakenham site will only result in indirect impacts and minor changes to the setting of the PRoWs arising from changes to views and noise.

Negative

17.95. Northern Park and Ride: The Northern Park and Ride once operational will have a minor adverse effect on receptors arising from noise of vehicles using the site, views within the site of moving vehicles and lighting within the site.

17.96. Southern Park and Ride: Receptors in the vicinity of the Southern Park and Ride site are likely to experience noise and dust during construction of the site, and visual impacts.

17.97. Two Village Bypass: During peak years there will be adverse significant effects on severance and pedestrian delay on users of PRoW which currently pass through a rural landscape and will be crossed by the Two Village Bypass.

17.98. Receptors in the vicinity of the Two Village Bypass are likely to be affected by noise and movement during the construction phase. Even though there may be temporary routes available during construction of the Two Village Bypass, walking through a construction site is likely to deter users due to noise, traffic, poor views and uncertainty as to location of the path in the construction site and beyond. There will be increased construction traffic on the A12 during this period.

17.99. During the operational phase of the Two Village Bypass receptors will have views of the bypass and vehicles on it, there will be disturbance where PRoW cross the carriageway.

17.100. Sizewell Link Road: During peak years there will be adverse significant effects on severance and pedestrian delay on users of PRoW which currently pass through a rural landscape and will be crossed by the Sizewell Link Road.

17.101. Disruption and severance of the PRoW network around the Sizewell Link Road for approximately 24 months during the construction of the road, severing the villages of Middleton and Theberton from the access network west of the B1122, and impacting pedestrian and cycle amenity. The Middleton circular walk no. 2 will be bisected by the new road removing its attractiveness as a route. Even though there may be temporary routes available, having to walk through a construction site is likely to deter users due to noise, traffic, poor views and uncertainty as to location of the path in the construction site and beyond.

17.102. During the construction phase of the Sizewell Link Road receptors at the common land in Middleton as well as those on a select few PRoW are likely to suffer from potential noise, dust, and other emission effects, as well as from diversions and views to the construction.

17.103. West of Theberton, there is a particularly attractive public footpath (FP3) bounded by a mature hedgerow affording scenic views over the small valley to Theberton Woods. At the local level, the presence of the Sizewell Link Road will remove this scenic view and adversely affect the ability of users of the footpath to enjoy it.

17.104. During the construction phase of the Yoxford roundabout there will be some disturbance from noise and visually to receptors on footpaths nearby but the impact is considered to be not significant.

17.105. Freight Management Facility: The Freight Management Facility will have a negative impact on receptors of nearby bridleways during construction because of noise, dust, views, and lighting. During operation, lighting will be noticeable but the bridleways are unlikely to be well used after dark so the impact is likely to be negligible.

17.106. Green Rail Route: During construction of the Green Rail Route, there may at times be lighting required that will be noticeable by receptors in the vicinity of the Green Rail Route.

17.107. During operation of the Green Rail Route, receptors on routes in the vicinity will notice changes to the noise environment and changes to views. There will be particular significant effects for receptors at Leiston Abbey.

Operational phase

17.108. The following proposals are made for the operational phase: PRoW will be re-opened permanently on new alignments across the Sizewell Link Road. SCC require that these crossing points should be safe, easy to use and accessible by all.

Positive

17.109. Two Village Bypass: At the Two village Bypass, provision of a cycle/footbridge will avoid the need for two at grade crossing places on the bypass. The inclusion of public footpath E243/003/0 and E-243/011/0 within the red line as a precursor to upgrading this public footpath to public bridleway is welcomed.

17.110. There may be beneficial impacts arising for receptors using the old A12 through Farnham and Stratford St Andrew once the Two Village Bypass is operational as there will be fewer vehicles on that route.

17.111. Sizewell Link Road: There will be beneficial impacts for receptors on the stretch of the B1122 between the drop-down to the Sizewell Link Road in the east and the Main Development Site entrance to the west, resulting from less traffic using that route. Benefits will be in relation to safety, less noise, better air quality, less traffic.

17.112. Green Rail Route: The footpaths affected by the Green Rail Route will be restored to their original locations and the temporary connection between public footpath 6 and 10 (E-363/006/0 and E-363/010/0 will be created as a permanent PRoW.

17.113. Pakenham site: The creation of the fen meadow habitat at Pakenham is likely to enhance the landscape for users of the PRoW thus enhancing the recreational experience.

Neutral

17.114. Yoxford Roundabout: Limited operational phase impacts on the amenity and recreation of receptors are anticipated to arise from the operational phase of the Yoxford roundabout.

Negative

17.115. Two Village Bypass: Walkers, cyclists and horse riders who currently enjoy a network of PRoW and quiet lanes to the east of Stratford St Andrew will have this network compromised by the Two Village Bypass. The new road will have a negative impact on footpaths E243/001/0 and E-137/029/0.

17.116. The amenity value of the permissive access in Foxburrow Woods will be compromised by the proximity to the Two Village Bypass in terms of noise, air quality and visual impact.

17.117. Sizewell Link Road: Once the Sizewell Link Road is open, walkers, cyclists, and horse riders who currently enjoy a network of PRoW and quiet lanes to the west of Middleton and Theberton will have this network permanently compromised. The new road will reduce the amenity of the area for recreation.

17.118. During operation of the Sizewell Link Road there will be views of the road maintained and noise alongside lighting at the roundabouts. Where PRoW cross the carriageway there will be disturbance to receptors from moving vehicles.

Mitigation, Requirements and Obligations

17.119. The methodology for the assessment of impacts on amenity and recreation is appropriate. The general principles set out in the Rights of Way and Access Strategy are also appropriate but should be extended to cover all PRoW and not just those on the Main Development Site. It is accepted that the Applicant has acknowledged the construction impact on the coastal access and developed proposals that could minimise temporary closures. However, this does not reduce the adverse impact on amenity experienced by users of the coastal access and the mitigation of the inland alternative route is not adequate in so far as it does not provide a wholly off-road route.

17.120. Mitigation in the form of an appropriate off-road diversion for the Coast Path and Sandlings Walk during periods of closure is required. Whilst the proposals by the Applicant include off-road provision for a significant length of the diversion route, the section between the public Bridleway 19 Round House and Eastbridge is proposed to be on Eastbridge Lane, with no off-road provision. The Councils also expect for this section the provision of an appropriate safe off-road footpath, secured by obligation. The Councils will require suitable legal provisions that the coast path / FP21 cannot be closed until such time as an acceptable diversion route is open for use. A robust BLF construction program will be necessary to identify the necessary time required to complete the legal process to deliver an alternate route whether delivered by the applicant or through obligation be the Councils.

17.121. An appropriate method for communicating closures of the coast path should be agreed with the Councils. This should include advanced warning, appropriate signage on the beach and at relevant access points, and for the diversion route. Any closures will need to be kept to the absolute minimum. Where possible peak holiday seasons should be avoided.

17.122. The Councils welcome the retention of the alternative bridleway route including the link south to Lovers Lane at the King Georges Avenue junction and the link from Aldhurst Farm to Kenton Hills and public Bridleway 19. This is a positive contribution to the Councils' aspiration for a better-connected bridleway network for the benefit of walkers, cyclists and horse riders.

17.123. The Councils are disappointed that the Applicant is not proposing to provide a permanent PRoW from the beach at the north end of the Sizewell C site, inland to join Bridleway 19 close to the Kenton Hills Car Park. This is the current route of the Sandlings Walk but remains a permissive route and this undermines the Applicant's claim that there would be substantial improvements of the existing access network conferring significant benefits. The Councils consider that the Applicant has, in this instance, not taken advantage of opportunities to maintain and enhance access to the coast, as is advised in NPS EN-1.

17.124. The Councils welcome the reference to a PRoW fund to mitigate the negative impacts but require this to include all those sites and receptor areas where there is a negative local impact identified and not just those receptor areas with moderate to major impact identified. Walkers, cyclists, and horse riders use networks of PRoW, using promoted walks and creating their own linear and circular walks; the use of receptor areas is understandable but does not take into account how people use an area for recreation.

17.125. The Councils require a degree of flexibility within the PRoW fund to enable mitigation works on PRoW or open access sites where the impact is not yet known. Although the Sizewell C Visitor Surveys undertaken in 2014 [APP-268] identified that a proportion of visitors to the Sizewell area would be displaced and to which areas, the reality of the scale of the construction and the level of disruption might produce a different pattern in practice. In addition, the influx of construction workers will add recreational pressure onto the network and mitigation should include measures to enable them to walk or cycle to the main site.

17.126. Thus, the Councils seek a comprehensive funding package for mitigating the wider impacts on the public rights of way and cycle infrastructure around the Main Development Site and its transport corridors including the Sizewell Link Road and the Two Village Bypass.

17.127. The closed section of Bridleway 19 is to be reinstated post-construction phase. The re-aligned route should be provided prior to closure of this section.

17.128. The Monitoring Plan related to the coastline will be expected to take into consideration adverse impacts arising from potential changes affecting the Coast Path and/or recreational beach users.

17.129. Mitigation in the form of replacement hedgerow planting will be required at Lover's Lane to facilitate the safe crossing point. The new link is to be designated as a Bridleway post-construction.

17.130. With regards to the identified areas where the ES states noise will be a contributory factor in significant impacts, there is no mitigation identified. The Councils expect mitigation measures to be provided, if that is not possible then compensatory measures may be required to be undertaken.

17.131. The Applicant undertook survey work with reference to potential receptors who may be displaced, of those surveyed in 2014, 151 said they would be displaced. A 2015 RSPB Minsmere Visitor Survey [APP-269] stated that 37 would be displaced. The Councils welcome the precautionary approach taken by the Applicant to the potential displacement evidence base and the assessment of likely impacts arising from construction workers. It is interesting to note that some of the people displaced because of the construction phase may be replaced by construction tourists coming to view the construction. The Councils welcome proposals for resilience funding for RSPB Minsmere and Dunwich Heath National Trust – both of whom may experience an increase in construction tourists throughout the construction phase of the development.

17.132. Embedded mitigation in the project through controls in the proposed CoCP are proposed for the two Park and Ride sites and the other Associated Developments.

17.133. In addition to the mitigation above and residual mitigation through the PRoW Fund, wider residual impacts on amenity and recreation will also need to be reflected in the scale and criteria for the Natural Environment Fund and the Community Fund, and residual impacts on tourism through the Tourism Fund.

Wider Environmental issues

18. Noise and Vibration (Lead authority ESC)

Summary

18.1. The Applicant has identified adverse and significant adverse impacts in relation to noise and vibration across the range of areas discussed below. There are a range of adverse and significant adverse impacts that have been assessed by the Applicant that will affect a wide range of sensitive receptors both around the development and across the wider District.

18.2. If consented, much of the focus needs to be on ensuring that impacts have not been underestimated, that there are robust procedures to monitor those impacts and that where there are impacts, the mitigation and compensation structure is such that they are reduced as much as reasonably practicable for those affected.

Table 20: Summary of impacts – Noise and vibration					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative / Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
20a	Adverse to significant adverse noise and vibration impact of construction activity of Main Development Site on residential receptors persisting length of construction period, with some of the construction taking place 24 hours a day	C	Negative	Mitigate/compensate: Noise mitigation and compensation scheme, to be offered to residents at a lower significance value than the current SOAEL - obligation	NPS EN-1: Noise and vibration can affect quality of life and health, and enjoyment of areas of value like quiet places and places of high landscape quality.
20b	Change to the existing rural noise climate around Main Development Site affecting amenity and recreation	C	Negative	Mitigate/compensate: To be reflected in mitigation and compensation measures for amenity and recreation and natural environment (including Natural Environment Fund)	NPS EN-1: Noise and vibration can affect quality of life and health, and enjoyment of areas of value like quiet places and places of high landscape quality.
20c	Potential for adverse impact to sensitive receptors from additional noise during operation of the power station	O	Negative	Selection of suitably protective operational night time noise criteria should be the primary control, otherwise; Mitigate/compensate: Noise mitigation and compensation scheme, to be offered to residents at a lower significance value than SOAEL - obligation	NPS EN-1: Noise and vibration can affect quality of life and health, and enjoyment of areas of value like quiet places and places of high landscape quality.
20d	Continuous plant noise with tonal/other characteristics that would change the sound climate and character of areas on a semi-permanent basis	O	Negative	Mitigate/compensate: To be reflected in mitigation measures for amenity and recreation and natural environment (including Natural Environment Fund)	NPS EN-1: Noise and vibration can affect quality of life and health, and enjoyment of areas of value like quiet places and places of high landscape

					quality. Characteristics of inherent operational noise as contributing factor to noise impact.
20e	Adverse impact from rail freight movements along East Suffolk Line and Leiston Branch Line, particularly night-time noise	C	Negative	Reduce: Engineering and operation solutions including continued welding delivered by Network Rail– obligation Reduce/Mitigate: Wide ranging other mitigation measures in addition to those currently proposed, such as acoustic fencing/boundary treatments or insulation to properties beyond upgraded glazing – obligation Mitigate/compensate: Noise mitigation and compensation scheme, to be offered to residents at a lower significance value than SOEL - obligation	NPS EN-1: noise impact of ancillary activities associated with the development, like increased road and rail traffic movements, or other forms of transportation, should also be considered.
20f	Benefits from a reduction in noise and vibration for residents on the A12 in Farnham and Stratford St Andrew, and residents on the B1122 past Middleton Moor and through Theberton	C / O	Positive	n/a	NPS EN-1: Noise and vibration can affect quality of life and health, and enjoyment of areas of value like quiet places and places of high landscape quality.
20g	Adverse impacts from noise and vibration of constructing Associated Development	C	Negative	Mitigate/compensate: Noise mitigation and compensation scheme, to be offered to residents at a lower significance value than the current SOAEL - obligation	NPS EN-1: Noise and vibration can affect quality of life and health, and enjoyment of areas of value like quiet places and places of high landscape quality.
20h	Adverse noise and vibration impacts resulting from additional road traffic, particularly HGVs, with currently	C	Negative	Reduce: Provision for new quiet road surfaces and, if and where applicable, roadside noise barriers, as well as landscaping – obligation	NPS EN-1: Consideration of noise impact of ancillary activities associated with

	proposed design measures not representing mitigation for reducing road traffic noise at source			Mitigate/compensate: Noise mitigation and compensation scheme, to be offered to residents in line with the Noise Insulation Regulations 1975 (as amended 1988) - obligation	development, e.g., from increased road and rail traffic movements.
20i	Potential for legacy benefit if noise reducing rail infrastructure improvements are undertaken	O	Positive	Noise mitigation and compensation scheme, to be offered to residents at a lower significance value than the current SOAEL - obligation	NPS EN-1: Noise and vibration can affect quality of life and health, and enjoyment of areas of value like quiet places and places of high landscape quality.
20j	Sports facilities at Leiston Leisure Centre / Alde Valley Academy	C / O	Negative	Potential to cause noise impacts on nearby residential properties – mitigation through requirement / obligation including controlling hours of operation	NPS EN-1: Noise and vibration can affect quality of life and health, and enjoyment of areas of value like quiet places and places of high landscape quality.

Policy context

National Policy Statements

18.3. NPS EN-1 identifies adverse impacts from noise and vibration as a generic impact. It recognises that excessive noise can have wide-ranging impacts on the quality of human life, health, and use and enjoyment of areas of value including quiet places and areas with high landscape quality. Similar considerations apply to vibration (paragraph 5.1.1). It also notes that the noise impact of ancillary activities associated with a development, such as increased road and rail traffic movements or other forms of transportation, should be considered (paragraph 5.11.5).

18.4. Paragraph 5.11.3 outlines factors that will determine the likely noise impact:

- the inherent operational noise from the proposed development, and its characteristics;
- the proximity of the proposed development to noise sensitive premises (including residential properties, schools and hospitals) and noise sensitive areas (including certain parks and open spaces);
- the proximity of the proposed development to quiet places and other areas that are particularly valued for their acoustic environment or landscape quality; and
- the proximity of the proposed development to designated sites where noise may have an adverse impact on protected species or other wildlife.

Local Plan Policies

18.5. Policy SCLP10.3: Environmental Quality, states that proposals will be expected to protect the quality of the environment and to minimise and, where possible, reduce all forms of pollution and contamination including noise pollution.

18.6. Policy SCLP10.4: Landscape Character, identifies those proposals for development should protect and enhance the tranquillity and dark skies across the district.

18.7. SCLP11.2: Residential Amenity, states that the Council will have regard to noise and disturbance with the expectation that developments will not cause an unacceptable loss of amenity for existing and futures occupiers in the vicinity.

Context

18.8. **APPENDIX 2: 6** contains 2 technical memoranda, Ref M002 Sizewell C DCO – Main Development Site Noise and Vibration Review and Ref M003 Sizewell C DCO – Rail / Road Traffic Noise and Vibration Review which support and enhance the points made in this section.

18.9. The submission documents have identified adverse and significant adverse impacts in relation to noise across the range of areas discussed below. There are a range of adverse and significant adverse impacts that have been assessed by the Applicant that will affect a wide range of sensitive receptors both around the development and across the wider District.

18.10. With a project of this magnitude, adverse effects will be likely to occur if it is consented and therefore much of the focus will be on ensuring that impacts have not been underestimated, that there are robust procedures to monitor those impacts and that where there are impacts, the mitigation and compensation structure is such that they are reduced as much as reasonably practicable for those affected.

18.11. While the assessment of impact has thus far been based on sound modelling, data from field assessment of background noise and theoretical data of noise sources, there will need to be a requirement for ongoing revisiting of assessments to take account of uncertainty and new information and of monitoring in future to ensure the soundness of the current predictions to ensure adequate protection can be provided. This process will be particularly important once main- and sub-contractors are appointed and the construction proposals in particular are developed in more detail. This continuous approach will be key to addressing the significant noise implications of this large, complex, and geographically dispersed project.

18.12. It is accepted there is an inherent level of uncertainty in the assessment reported in the application documents, and to a degree this is to be expected in a project of this scale. Uncertainty can, however, cause the assessment of an impact to be underestimated through being informed by too little information or too many assumptions.

18.13. As a project wide issue, the Applicant has acknowledged a certain amount of uncertainty in their impact assessment which in terms of construction noise is related to unappointed contractors, unknown plant types/specifications, location of activities, duration of activities and construction methods at present.

18.14. The impacts below are considered according to No Observed Effect Level (NOEL) the Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect Level (SOAEL).

18.15. The No Observed Effect Level is the level below which no effect can be detected. The noise can be heard but does not cause any change in behaviour, attitude, or other physiological response. It can slightly affect the character of the area but not such that

there is a change in the quality of life. No specific mitigation measures would be expected to address noise.

18.16. The LOAEL is the level above which adverse effects on health and quality of life can be detected. Noise can be heard and causes small changes in behaviour or other physiological response. There is a potential for sleep disturbance at these levels. This level of noise affects the acoustic character of the area such that there is a small actual or perceived change in quality of life. There is an expectation that the noise will be mitigated and reduced to a minimum.

18.17. The SOAEL is the level above which significant adverse effects on health and quality of life occur. The noise causes a material change in behaviour, attitude or other physiological response. These responses may include avoiding certain activities during periods of intrusion or having to keep windows closed most of the time because of noise. There is greater potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty getting back to sleep. Quality of life is diminished due to change in acoustic character of the area. At this level there is an expectation of avoidance.

18.18. The Noise Policy Statement for England includes guidance that says for noise levels below LOAEL no action is required, for noise levels between LOAEL and SOAEL all reasonable steps should be taken to mitigate and minimise adverse impacts, and noise levels exceeding the SOAEL should be avoided. The noise policy aims of the Noise Policy Statement for England are consistent with the stated aims of NPS EN-1.

18.19. However, paragraph 1.2.17 of Appendix 6G [APP-171] casts doubt on this by claiming that *"the concept of the SOAEL is different from the declaration of significant adverse effects in an Environmental Statement"*. This statement is not explained and we would disagree that there is inconsistency between the two, but we would welcome discussion on this.

18.20. More specifically, paragraph 1.2.22 of Appendix 6G [APP-171] states that: "Depending upon the classifications of effect adopted for the Environmental Statement, it is possible that likely significant negative or adverse effects may be declared, whilst noise levels remain below the SOAEL."

18.21. It is claimed that this has been established through the examination of other NSIPs which also demonstrated that the first aim of the Noise Policy Statement for England / NPS EN-1 can be met even if significant adverse effects are identified, as long as the SOAEL is avoided. However, neither of the two cases which are referenced (Thames Tideway and

the Cranford Agreement Appeal for Heathrow Airport) are energy projects, so the specific aims of EN-1 would not have applied in those cases.

18.22. Paragraph 1.2.23 of Appendix 6G [APP-171] references terminological inconsistencies between The Infrastructure Planning (EIA) Regulations 2017 and the NPS EN-1 policy aims. This is valid but does not alter the aim of overarching NPS EN-1 (in line with the NPSE) to *"avoid significant adverse impacts on health and quality of life from noise"* and *"mitigate and minimise other adverse impacts on health and quality of life from noise"*.

18.23. Appendix 6G [APP-171], see reference above, goes on to state that the approach adopted in this assessment is based on that set out in the *Design Manual for Roads and Bridges, LA111 Noise and vibration*, *November 2019* in which the SOAEL for road traffic noise is aligned with the threshold for noise insulation, as set out in the Noise Insulation Regulations 1975. It is stated that the Design Manual for Roads and Bridges distinguishes between the SOAEL as an identifiable noise level and the significance of effects which are separately aligned to changes in noise level.

18.24. However, neither the Design Manual for Roads and Bridges or the *Noise Insulation Regulations 1975* are intended to provide a basis for general assessment of noise and vibration, or indeed rail-specific noise and vibration, so it is not clear why this approach was adopted throughout. The Councils request that this approach is reconsidered to one that more clearly aligns with the policy aims of NPS EN-1 and the Noise Policy Statement for England.

18.25. The issue of adverse noise is common across the project, but issues are likely to be the most significant and complex at the Main Development Site and so there is a need to secure an adequate Noise Mitigation Scheme to mitigate the noise impacts.

18.26. It is likely the DCO will contain a requirement that "exempts" the developer from action under Section 79 of the Environmental Protection Act 1990 (Statutory Nuisance) as is usual in these cases. However, due to the nature, size, and duration of this development it is likely to cause complaint and there is an expectation that there will be cooperation with the Environmental Protection Team at ESC in finding a resolution when these inevitable complaints are received and found to have merit.

18.27. The noise and vibration impacts are divided below into non-transport noise and vibration, followed by transport-related noise and vibration.

Construction noise and vibration impacts (non-transport)

18.28. It is recognised that the proposed development would require a significant construction programme in terms of both its geographical scale and duration of the works. The construction programme would have a duration of up to 12 years, including several broad overlapping phases. It is recognised that these broad phases would differ in terms of their duration and activity types, and therefore potential noise impacts to noise sensitive receptors would vary through the duration of the construction period. The broad construction phases described in the noise assessment documentation are as follows:

- Phase 1 – Site established and preparation for earthworks (Years 1 and 2);
- Phase 2 – Main earthworks (Years 1 to 4);
- Phase 3 – Main civils (Years 3 to 9);
- Phase 4 – Mechanical and Engineering fit-out, instrumentation and commissioning (Years 4 to 11);
- Phase 5 – Removal of temporary facilities and restoration of the land (Years 10 to 12).

18.29. It is further recognised that there will be several Associated Development Sites in the District that will require construction prior to (possibly) and in the early years of the development to facilitate construction at the Main Development Site, although more limited in scale and duration there are potential noise impacts to noise sensitive receptors that need to be considered and mitigated as appropriate.

18.30. Construction impacts are anticipated to be greatest at the Main Development Site. Issues are expected to be the most significant and complex here, and so there is a need to secure an adequate Noise Mitigation Scheme supported by appropriate significance criteria.

18.31. In terms of noise sensitive receptors such as residential dwellings and similar the Councils are generally satisfied that the appropriate receptors have been identified based on currently known information and that these have been included in the relevant assessments.

Positive

18.32. It is not anticipated there will be any positive impacts from construction noise and vibration, either at the Main Development Site or the Associated Development sites.

Neutral

18.33. Where there are impacts from noise from construction related activities the general position is that they will be negative to varying degrees, however where the Applicant proposes appropriate and adequate noise mitigation measures it may be possible to

consider these impacts as neutral. This is however dependent on the Applicant presenting and justifying such measures for the Councils to consider.

Negative

18.34. A variety of adverse effects have been predicted. The scale of the project is such that adverse effects will be likely to occur if it is consented. Therefore, there is emphasis on ensuring that impacts have not been underestimated, that robust significance criteria have been chosen to characterise those impacts, that there are robust procedures to monitor those impacts and that where there are impacts above the relevant significance criteria that the mitigation and compensation structure is such that they are reduced as much as reasonably practicable.

18.35. Hours of work are a key control in terms of construction impacts. Construction is proposed to take place 24 hours a day, with the full range of construction actives described in the noise assessment taking place between the hours of 07:00 and 23:00. Night-time construction activity (between 23:00 and 07:00) is proposed to be limited to maintenance and logistics support activities, including unloading and storing of marine-, rail-, and HGV-delivered freight, essential plant refuelling, repositioning of scaffolding, maintenance and repair, and dewatering activities. This includes a period of 8.5 years where the Green Rail Route into site is operational and night-time noise levels are dominated by freight being unloaded. This level of continuous construction activity is inherently out of character with the existing environment around the assessment locations and will provide the residents of the affected area with no respite from the noise. It is vitally important that the assessment criteria are set appropriately to allow the ExA to understand the true impact of noise from continuous construction activity for a prolonged period on the surrounding receptors.

18.36. The Councils acknowledge the effort made by the Applicant to describe construction noise to the various receptors on a phase-by-phase basis and using what information is known or can be reasonably predicted. The assessment presented is therefore helpful in identifying where potential and actual noise impacts would likely occur.

18.37. However, although accepted as inherent to a project of this size at this stage in the process there is significant uncertainty in the predictions of noise impacts. Whilst this is true for all areas of noise and vibration, it is particularly the case for construction noise where contractors have not yet been engaged and details of exact processes, methodologies and plant cannot be known. It is important that assessments are revisited, and monitoring undertaken to validate predictions in order to ensure impacts are not underestimated and mitigation is adequate and appropriately selected and applied.

18.38. The level of impact and mitigation will be largely dictated by setting adequate significance criteria in terms of LOAEL and SOAEL in line with relevant policy, guidance, and standards. There is currently a question as to whether the levels set are sufficiently protective to residential receptors and this will require further justification from the Applicant to ensure that impacts are appropriately addressed. Given the duration of the construction, the extended night-time work and the low existing ambient noise levels, we consider that the proposed thresholds for significant effects and for mitigation could permit unacceptable levels of construction noise which could cause significant adverse impact over many years without any option for recourse. If the LOAEL and particularly the SOAEL proposed by the Applicant remain unchanged the Councils would expect that the Noise Mitigation Scheme should be available at a level lower than SOAEL in order to adequately protect residents.

18.39. The qualitative summaries in the report identify a number of locations around the study area where construction noise is expected to have significant effects on non-residential receptors in a currently tranquil environment. At this stage it is clear that the introduction of a large scale, long term engineering project will fundamentally change the existing rural noise climate in the areas surrounding the study site.

18.40. In terms of construction related vibration, Chapter 11 of the ES [APP-202] identifies the primary sources of construction vibration on site as sheet piling, vibratory roller/compaction plant, surface breaking, and bulldozer movements, and states that receptors in close proximity to proposed workings could potentially experience some vibration. The Councils would not normally expect this type of work to be permitted outside normal daytime working hours because of the limited options for mitigation, and so consider that it would be reasonable to prohibit this type of work except during the daytime on weekdays.

18.41. The Change submission introduced an enhanced BLF. It is the Councils' understanding that this information will be submitted in due course. The Councils expect there to be potential implications on noise arising from additional construction associated with the enhanced BLF and potential from additional use during its operational life – during construction and post construction.

18.42. Use of the expanded sports facilities at the Leiston Sports Centre / Alde Valley Academy during the construction and operational phase could result in noise impacts. LOAEL and SOAEL values for operational use of the sports facilities state that these were derived from the Sport England design guidance note *'Artificial grass pitches acoustics*

planning implications guide' (2015). The Councils consider that the assessment criteria are suitable and it is unlikely likely to result is significant adverse noise impacts subject to appropriate controls such hours of use.

Operational noise and vibration impacts (non-transport)

18.43. The operational phase is expected to start in approximately 2034 and to last 60 years. There are a variety of processes and potential sound sources associated with the operation of such a station.

18.44. There is potential for adverse impact to sensitive receptors such as residential properties during the lengthy operational period of the station and the additional noise source it represents in the area. Where a significant impact is found to exist based on appropriately set significance criteria, a scheme of mitigation should be made available to the affected properties.

18.45. We are satisfied that appropriate receptors have been identified in the study area, although some represent groups of properties which may need further consideration, and that appropriate assessment methodology has been selected for operational noise from the station being BS4142:2014+A1:2019.

Positive

18.46. It is not anticipated there will be any positive impacts from operational noise and vibration during the life of the station.

Neutral

18.47. Where there are impacts from noise from operational activities the general position is that they will be negative to varying degrees, however where the Applicant proposes appropriate and adequate noise mitigation measures it may be possible to consider these impacts as neutral. This is however dependent on the Applicant presenting and justifying such measures for the Councils to consider.

Negative

18.48. In general, the Councils are concerned that continuous operational power station noise levels at sensitive receptors may result in adverse impacts from the predicted daytime and night-time levels.

18.49. The proposals would introduce continuous plant noise which may have tonal or other characteristics that would change the sound climate and character of some areas on a semi-permanent basis. People would be exposed to this noise in their homes and gardens, and on public rights of way in recreation and amenity areas (in the AONB).

18.50. In some parts of the study area, the sound climate during the operational phase of Sizewell C will include sounds associated with the operation of the Sizewell B power station. Whilst it is acknowledged that Sizewell B is an existing noise source in the development area, Sizewell C's position north of the existing station may extend the area over which operational noise may be detectable during the life of the station. The Sizewell C development will also increase the period that power station operational noise will be experienced in the Sizewell area beyond the previous predicted operational life of Sizewell B.

18.51. The principle of setting LOAEL and SOAEL is accepted in terms of assessing operational noise in accordance with relevant planning policy. As with other areas of noise impact the setting of appropriate significance criteria is key to identifying and managing impact. However, the Councils are not currently satisfied with either the derivation of the magnitude of impact categories, nor the application of context in relation to assessment outcomes. The Councils do not consider that the Applicant has adequately considered the context in which Sizewell C operational noise would exist, particularly in terms of the change in sound climate that would result in some locations or that the suggested significance criteria have been justified as adequately protective to sensitive receptors.

18.52. Prior to operation, commissioning tests would be undertaken to demonstrate that the Sizewell C nuclear power station can perform in accordance with its design specification and safety and environmental requirements. Commissioning testing of reactors and back-up generators would be a one-off process but is predicted to take approximately three years for each UK EPR reactor unit and approximately five years in total, due to overlapping commissioning periods. This is a relatively long duration but potential noise impacts during the commissioning period appear to have been discounted from the Applicant's assessment. The Councils consider this needs to be considered further.

18.53. Use of the expanded sports facilities at the Leiston Leisure Centre / Alde Valley Academy during the construction and operational phase could result in noise impacts, see para 18.35 for details.

Transport related Noise and Vibration impacts

18.54. It is estimated that the construction of the proposed development will take around twelve years. It is inevitable that such a large construction project will be served by very large volumes of freight, particularly during Phases 1 and 2 when most of the earthworks would be completed.

18.55. The increase in road and rail traffic associated with this development has the potential to cause a variety of noise and vibration impacts over a very wide area of the district, compounded by the transport network's dispersed nature and the remote rural location of the development site in relation to the transport network.

Rail

18.56. The original DCO application was based on a strategy of combined road and rail freight. The main components of the originally proposed freight management strategy in terms of rail are:

1. The existing East Suffolk Line (between Ipswich and Saxmundham);
2. The Saxmundham to Leiston Branch Line (which would be upgraded as part of the proposals); and
3. A new railway line known as the Green Rail Route, constructed during years 1-2 of construction to provide a dedicated rail link between the Saxmundham to Leiston line and the Main Development Site. The Green Rail Route would be removed once construction is complete.

18.57. The potential noise and vibration impacts associated with construction and operation of the proposed development were assessed in the ES.

18.58. In addition, a change proposal was submitted by the Applicant in January 2021 to facilitate the potential to increase the number of freight train movements to facilitate bulk material imports by rail.

18.59. The Councils are of the view that the change proposals significantly increase the use of the rail route at night and has the potential to significantly impact sensitive receptors along the route and in terms of ancillary activities to that transport such unloading at the development site.

Positive

18.60. It is not anticipated there will be any positive impacts from rail noise and vibration during the life of the power station.

18.61. Dependent on the mitigation employed to resolve noise and vibration impacts there is potential for a legacy benefit in terms of rail infrastructure improvements which will continue to have a positive impact during and after the completion of the project, this is however at the expense of potentially increased adverse impacts during the construction phase.

Neutral

18.62. Where there are impacts from noise from rail transport noise and vibration the general position is that they will be negative to varying degrees, however where the Applicant proposes appropriate and adequate noise mitigation measures it may be possible to consider these impacts as neutral. This is however dependent on the Applicant presenting and justifying such measures for the Councils to consider.

Negative

18.63. The Councils have significant concerns regarding the noise and vibration impacts associated with the freight management strategy, particularly in terms of night-time rail freight movements past noise-sensitive receptors. We consider that the current extent of rail noise and vibration mitigation would not adequately protect residents along the route to the site, and that the strategy does not achieve policy requirements in respect of mitigating and minimising adverse effects. We would expect mitigation and minimisation to occur at LOAEL as per policy, avoidance at SOAEL as per policy but also expect that the Rail Noise Mitigation Scheme should be available at a level lower than SOAEL in order to adequately protect residents.

18.64. The change proposal seeks to reduce the number of HGV movements to deliver a more sustainable transport strategy and puts significant emphasis on the importance of rail and marine solutions to take the burden off road freight. To evaluate the proposals, which the Councils welcome in principle, it will be important to consider the impact of rail traffic and construction noise. If the new proposals proceed, it will be important to make every endeavour to mitigate the noise and vibration impact of the increased use of rail in particular.

18.65. The Councils currently consider that in order to confirm their support for the proposed freight management strategy, residents must be adequately protected from noise and vibration impacts in line with current policy and legislation. We would expect mitigation and minimisation to occur at LOAEL as per policy, avoidance at SOAEL as per policy but also expect that the Rail Noise Mitigation Scheme should be available at a level lower than SOAEL in order to adequately protect residents.

18.66. The Councils require that the rail noise and vibration is subject to robust significance criteria in order to characterise and address impacts from rail freight.

18.67. The Councils accept that the Applicant has undertaken an extensive assessment of rail noise in order to assess the likely impact and have provided a set of significance criteria that are justifiable. However, the current application of the rail noise mitigation scheme at exceedance of SOAEL is not accepted as meeting the policy requirement to mitigate and

minimise adverse impacts through all other available means prior to considering noise insulation. Indeed, the Councils maintain that a lower criterion for the provision of mitigation under the scheme is required in order to adequately address impact and protect residents from rail noise and vibration and satisfy relevant noise policy.

18.68. The rail noise impact assessment relies heavily on engineering and operational measures to reduce impact, including but not restricted to upgrading the rail line to continuous welded track, speed restrictions, the use of lower noise engines, and ballast mats where necessary. The Councils are concerned about the uncertainty in the ability and timescale to deliver these measures, which if unachievable will mean an increased impact. The Councils maintain that a robust rail noise mitigation scheme is required based on justifiable significance criteria in order to address and balance this uncertainty.

18.69. Though the number of rail movements vary throughout the life of the project, the vast majority of movements will occur overnight along the East Suffolk Line and Leiston Branch Line, currently there is very limited, if any, overnight rail traffic on the East Suffolk Line on a typical night and no overnight rail traffic on the Leiston Branch Line. The increase in traffic created by this project at the most sensitive time of day, 6 days a week for a prolonged period of time has the potential to adversely affect those living along the route unless carefully managed and mitigated.

18.70. Whilst mitigation measures are welcome, the current scope of mitigation measures is limited in scope to engineering and operation measures where there is a degree of uncertainty and potential for change and a rail noise mitigation scheme that proposes glazing treatments at exceedance of SOAEL. Policy requires the range of mitigation measures includes the full panoply of those available (for example acoustic fencing/boundary treatments or insulation to properties beyond upgraded glazing). This is particularly important when considering buildings with atypical construction, listed buildings, buildings in shared ownership or leasehold/rented accommodation, and the need to consider each case in relation to specific impacts and the most appropriate mitigation.

18.71. Studies undertaken by Network Rail and by consultants appointed by SCC demonstrate that a passing loop at single-line sections on the East Suffolk Line either at two locations or at one location (such as a single freight-holding loop south of Woodbridge Junction) would be required to allow day-time operation. Further enhancement of level crossings and signalling would also be required alongside potential additional rail improvements across the network past the East Suffolk Line.

Road

18.72. The regulation of Road Traffic Noise is a Highways Authority function which in this case falls to SCC. However, the Councils have worked jointly to assess the impacts arising from road noise in order to properly assess the revised freight management scheme proposed by the Applicant.

18.73. The original DCO application was based on a hybrid strategy of road and rail freight.

18.74. The main components of the originally proposed road freight management strategy are:

1. The existing road network and;
2. New roads to be constructed as part of the development construction, most notably the Sizewell Link Road and Two Village Bypass.

18.75. The potential noise and vibration impacts associated with construction and operation of the proposed development were assessed in the ES.

18.76. The impact of road traffic noise on new roads due to construction of Sizewell C is based on two representative construction years and an operational year as follows:

1. Early years of construction (2023)
2. Peak year of construction (2028)
3. Operational year (2034)

18.77. For the peak year of construction, two scenarios representing a typical and busiest day were assessed because the number of HGV deliveries on some days during this period would be higher than on a typical day. The Councils consider this approach to be sensible and pragmatic.

18.78. The assessment of impacts from traffic noise on existing roads during the construction phase is based on the magnitude of change categories presented in Table 11.5 of Volume 2, Chapter 11 of the ES [APP-202]. These are consistent with the IEMA Guidelines for Environmental Noise Impact Assessment 2014 and are considered appropriate.

Positive

18.79. It is not anticipated there will be any positive impacts from road noise and vibration during the construction and operational life of the station.

18.80. There will be benefits from a reduction in noise and vibration for residents on the A12 in Farnham and Stratford St Andrew, and residents on the B1122 past Middleton Moor and through Theberton. These benefits need to be weighed against the negative impacts arising from road traffic on other areas of the district during the construction phase.

18.81. Predicted road traffic noise effects cover a relatively large number of individual receptors, with a range of predicted effects identified. These include some major beneficial effects but this is tempered by some major adverse effects' impacts.

Neutral

18.82. Where there are impacts from noise from road transport noise and vibration the general position is that they will be negative to varying degrees, however where the Applicant proposes appropriate and adequate noise mitigation measures it may be possible to consider these impacts as neutral. This is however dependent on the Applicant presenting and justifying such measures for the Councils to consider.

Negative

18.83. The construction would involve HGVs using existing and new roads and associated infrastructure. The most significant proposals for new roads and infrastructure include:

i. Sizewell Link Road;
ii. Two Village Bypass;
iii. Northern Park and Ride;
iv. Southern Park and Ride; and
v. Various junction changes and highways improvements.

18.84. Construction works involved in the above will inevitably produce noise and vibration which may result in some impact that will require mitigation. However, in comparison to construction works on the Main Development Site these works will be of relatively limited duration and the Councils are less concerned about this than about the operation of these new roads, which would occur for a longer period. The benefits to residents in areas where road traffic is being removed as a result of new roads must be considered in this balance between positive and negative impacts.

18.85. Predicted road traffic noise effects cover a relatively large number of individual receptors, with a range of predicted effects identified, which range from negligible and/or major beneficial to major adverse impacts.

18.86. The Applicant proposes several measures in terms of road traffic mitigation including the Park and Ride facilities, BLFs, and rail freight. While a balanced transportation strategy (such as is proposed) is necessary to manage noise and vibration impacts, the Councils consider that the design measures suggested do not represent mitigation for reducing road traffic noise at source. Such measures might include quiet road surfaces and roadside noise barriers. It is currently unclear whether such measures are proposed as primary, secondary or tertiary mitigation.

18.87. The ES identifies a number of receptors that are likely to be adversely impacted by noise associated with both the construction and operation of the Sizewell Link Road ranging from negligible and/or major beneficial to major adverse impacts. The Noise Mitigation Scheme should deliver mitigation for road traffic noise in line with the Noise Insulation Regulations 1975 (as amended 1988). The Applicant has not yet proposed mitigation for these receptors that satisfies the Councils.

Required mitigation

18.88. The Noise Mitigation and Compensation scheme must be available for all aspects of the project as identified above but there is an acceptance that mitigation will be required for certain properties which is welcomed.

18.89. Currently the mitigation scheme relies on the assessments to date which underlines the importance to the Councils in their accuracy. The Applicant has stated that further assessment will be undertaken once some of the uncertainties have been resolved and this will be used to update the mitigation and compensation scheme in terms of eligible properties. This is welcomed.

18.90. A dynamic approach to mitigation must be taken, given the potential for unforeseen or previously underestimated impacts to emerge during the construction (including transport) and operational period. It is likely there will be a level of impact that must be accepted and that the assessments, however accurate, may underestimate an impact, methodologies may change, or other properties may be affected. Therefore, there must be an acceptance that the assessment for this scheme is an ongoing matter in order to address these uncertainties and ensure impact is addressed.

18.91. The mitigation scheme appears to provide a degree of protection but should be more flexible and extensive given the nature of the potential impact.

18.92. Currently the Noise Mitigation Scheme is to be offered from the point that SOAEL is exceeded (as a means of avoiding exceedance of SOAEL). However, the Councils consider that a lower significance value should be discussed and where appropriate set as the point where the noise mitigation scheme is offered to residents to provide a robust and protective approach given the nature of the impacts and the duration of the project.

18.93. The Noise Mitigation Scheme must consider all viable measures for noise and vibration mitigation and not be restricted unless a particular measure is demonstrated to be unsuitable.

18.94. Properties offered measures under the Noise Mitigation Scheme should be considered on a case-by-case basis to take account of specific circumstances such as,

atypical construction of a dwelling or listed building status, and the scheme should provide a bespoke mitigation package to affected properties and residents.

18.95. Potential noise issues arising from the sports facilities at Leiston Leisure Centre / Alde Valley Academy can be addressed primarily through management and restriction on hours of operation.

18.96. The mitigation measures discussed must be secured in the DCO through either Requirement or Section 106 provision.

19. Air Quality (Lead authority ESC)

Summary

19.1. It has been demonstrated that the Sizewell C Power Station in isolation, or in-combination with other proposed developments such as East Anglia One North and East Anglia 2 will not cause a significant impact upon nitrogen dioxide (NO_2), or fine particulate matter (PM_{10} or $PM_{2.5}$) across the District. The exception to this is within the Stratford St Andrew Air Quality Management Area (AQMA) where a sensitivity test has been submitted which shows the range of NO_2 concentration could cause significant impacts if there are not adequate limits and monitoring placed on the emissions standards which apply to construction heavy goods vehicles (HGVs). The Councils are in discussion with the Applicant regarding a suitable cap on the more polluting HGVs (those which do not conform to the latest Euro VI standard). The Councils have established that a suitable cap on the percentage of non-Euro VI HGVs can avoid significant air quality impacts within the Stratford St Andrew AQMA. It is expected that the Applicant will submit additional documents, including an updated CoCP, which will contain an acceptable commitment in relation to non-Euro VI HGVs.

19.2. The Applicant is working on an improved commitment in relation to NRMM. Currently only a commitment to Stage IV NRMM where practicable and available has been made within the latest CoCP (submitted in January 2021) [APP-273]. Additional submissions should strengthen this to use Stage V NRMM where practicable and available. In the event that Stage V NRMM is not available, plant/equipment with the highest available NOx and PM emission standards should be used with a cap on the maximum proportion of non-Stage IV / V plant being specified. If Stage IV/V NRMM is not available, ESC requests that the reasons for this should be provided by the Applicant to ESC, and any such NRMM should be deployed in locations as far away from sensitive receptors as practicable.

19.3. One of the components of NRMM is diesel-fired generator plant. There is the potential for significant emissions from diesel generator plant during construction. The Councils seek the use of electrically powered plant at the earliest possible stage to avoid the need to use diesel generators, and requests confirmation that this principle will be adopted by the Applicant during the construction programme. Temporary diesel fired generator plant may potentially be regulated by the Environment Agency. Under these circumstances, the Councils would contribute to the permit consultation process, but would not seek to duplicate these controls. However, as this is not yet confirmed, the Councils may need to make further representations to ensure that the potential impacts of diesel-fired generators used during construction are minimised, fully assessed and appropriately mitigated.

19.4. The Applicant has concluded there is potential for dust emissions of a large magnitude during the construction phase but with mitigation and ongoing monitoring, impacts are expected to be negligible. The Councils agree that mitigation and monitoring can minimise impacts so that they are negligible. Discussions between the Councils and the Applicant are ongoing regarding mitigation within the Dust Management Plan and CoCP to ensure that a negligible impact can be achieved.

Table 21: Summary of impacts – Air quality					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative / Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
21a	Dust nuisance impacts from construction, with potential impacts on residential receptors, ecology and amenity, further mitigation required	C	Negative	Reduce: Screening, fencing, turfing of stockpiles and earth bunds close to sensitive human health and ecological receptors. The details of these measures are currently under discussion with the applicant and will be set out in the Code of Construction Practice – requirement Mitigate: Code of Construction Practice to include construction dust air quality mitigation which reflects the scale and location of the proposed construction activities – requirement Monitor: Regular monitoring and responding mitigation, including dust deposition monitoring – obligation	NPS EN-1: infrastructure development can have adverse effects on air quality from construction to decommissioning, resulting in adverse impacts on health, protected species and habitats, and the wider environment. Local Plan Policy 10.3 states air quality and the impact on receptors in AQMAs are key considerations for assessing development proposals. SCLP11.2 notes consideration of air quality and other forms of pollution is essential when assessing impacts of development.
21b	Air quality impacts from NRMM potentially significant, commitment to low emission NRMM requested.	C	Negative	Reduce: Commitment requested to use Stage V NRMM where practicable and available. In the event that Stage V NRMM is not available, plant/equipment with the highest available NOx and PM emission standards should be used. A cap on the maximum proportion of non-Stage IV / V plant should be specified. If Stage IV/V NRMM is not available, ESC requests that the reasons for this should be provided to ESC, and any such NRMM should be	NPS EN-1: infrastructure development can have adverse effects on air quality from construction to decommissioning, resulting in adverse impacts on health, protected species

				deployed in locations as far away from sensitive receptors as practicable.	and habitats, and the wider environment. Local Plan Policy 10.3 states air quality and the impact on receptors in AQMAs are key considerations for assessing development proposals.
21c	Two Village Bypass improves air quality in Stratford St Andrew AQMA and other properties in Farnham and Stratford St Andrew.	C / O	Positive	n/a	Local Plan Policy 10.3 states air quality and the impact on receptors in AQMAs are key considerations for assessing development proposals.
21d	Sizewell Link Road improves air quality along the existing B1122.	C / O	Positive	n/a	Local Plan Policy 10.3 states air quality and the impact on receptors in AQMAs are key considerations for assessing development proposals.
21e	Electric vehicle charging points marginally reduce overall carbon footprint and air quality impact of the development and encourage use of electric vehicles in the area.	C	Positive	Secure appropriate number of electric charging points at Park and Ride Sites, Freight Management Facility, temporary workers accommodation and main site car park - obligation	Local Plan Policy 10.3 states air quality and the impact on receptors in AQMAs are key considerations for assessing development proposals.
21f	Emissions from construction HGVs across the road network, with the risk that HGV movements could be greater than assessed, Councils propose a cap based on assessed levels.	C	Negative	Reduce: Euro-VI for HGV (with cap for non-Euro-IV vehicles), with appropriate monitoring, through CoCP – requirement/obligation Reduce/monitor: Caps on numbers of HGVs (hourly/daily/quarterly) secured by obligation	NPS EN-1: infrastructure development can have adverse effects on air quality from construction to decommissioning, resulting in adverse impacts on health, protected species

					and habitats, and the wider environment. Local Plan Policy 10.3 states air quality and the impact on receptors in AQMAs are key considerations for assessing development proposals.
21g	Risk of significant in-combination air quality impacts from HGVs in Stratford St Andrew before completion of Two Village Bypass, limits on HGV emission standards under discussion.	C	Negative	Reduce/monitor: Caps on numbers of HGVs (hourly/daily/quarterly) secured by obligation Reduce: Euro-VI for HGV (with cap for non-Euro-IV vehicles), with appropriate monitoring, through CoCP – requirement/obligation Reduce/monitor: Caps on numbers of HGVs (hourly/daily/quarterly) secured by obligation	NPS EN-1: infrastructure development can have adverse effects on air quality from construction to decommissioning, resulting in adverse impacts on health, protected species and habitats, and the wider environment. Also notes IPC (now ExA) should give weight to air quality considerations where a project would lead to deterioration of air quality in an area. Local Plan Policy 10.3 states air quality and the impact on receptors in AQMAs are key considerations for assessing development proposals.
21h	Potentially significant impacts from emergency diesel generators on habitats	O	Negative	Further information requested – if any mitigation requirements are defined, these can be identified subsequently	NPS EN-1: infrastructure development can have adverse effects on air quality from construction to decommissioning, resulting in adverse impacts on

					health, protected species and habitats, and the wider environment.

Policy context

National Policy Statements

19.5. NPS-EN1 states infrastructure development can have adverse effects on air quality during the construction, operation, and decommissioning phases. These phases can involve emissions to air which can have adverse impacts on health, on protected species and habitats, or the wider countryside. The content of the policies below aligns with that of the NPS.

Local Plan Policies

19.6. Policy SCLP10.3: Environmental Quality, clearly states the expectation that development proposals will protect the quality of the environment and minimise and, where possible, reduce all forms of pollution and contamination including air quality pollution.

19.7. Policy SCLP11.2: Residential Amenity, identifies air quality and other forms of pollution as a key consideration the local authority will take into consideration when assessing the impact of development.

Construction Impacts

Positive

19.8. Once the Two Village Bypass is constructed, significant reductions in emissions of nitrogen dioxide (NO_2) and fine particulate matter (PM_{10}/$PM_{2.5}$) in the Stratford St Andrew AQMA are predicted as vehicles take alternative routes. In this way, the bypass is forecast to have a positive impact upon local air quality (reduced NO_2 concentrations) within the Stratford St Andrew AQMA and at other properties that border the A12 within the villages of Farnham and Stratford St Andrew.

19.9. When Sizewell Link Road is constructed, modest reductions in emissions of NO_2, PM_{10} and $PM_{2.5}$ are predicted at sensitive receptors along the existing B1122 between Yoxford and Theberton as vehicles take the Sizewell Link Road. In this way, the Sizewell Link Road is forecast to have a positive impact upon local air quality for villages along the B1122.

19.10. Electric vehicle charging points are part of transport strategy for car parks associated with the construction phase and will benefit East Suffolk by encouraging construction workers to adopt vehicles with no direct NO_x emissions and reduced emissions of PM_{10} and $PM_{2.5}$.

Neutral

19.11. A variation on the DCO application was submitted in January 2021 which indicates that an additional 1.4 million m^3 of material will be excavated at the Main Development

Site, and an additional 2 million tonnes of material will be imported (paragraph 3.3.18, [AS-202]. The Councils have sought confirmation that this additional material will not cause road traffic to increase beyond assessed levels. The Applicant has confirmed during discussions that construction HGVs will not exceed those presented within the May 2020 application. To ensure that the additional excavated material and the assessed construction traffic occur in reality, the Councils request that a cap is placed on the annual daily average HGV movements associated with the Main and Associated Development sites during the early years scenario and until the Two Village Bypass is constructed. This cap should be based upon the assessed number of trips to and from the sites, as follows (taken from Table 7.7 of '*The Sizewell C Project 8.5 Transport Assessment Revision 1.0 May 2020')* [APP-602]:

i. Main Development Site: 600;
ii. Northern Park and Ride – 42;
iii. Southern Park and Ride – 42;
iv. A12 / B1122 roundabout – 20;
v. Two Village Bypass – 120;
vi. Sizewell Link Road – 200; and
vii. Freight Management Facility – 42.

19.12. If additional HGV movements associated with the aforementioned additional materials could take place after the early years period, it may be necessary to apply further caps to later year HGV movements to reflect the traffic flows used in the air quality modelling and impact assessment.

19.13. Beccles has been identified as an area with street canyon features which has not been represented as such within the dispersion modelling and could be adversely affected by construction traffic. However, during recent discussions the Applicant confirmed that there will not be any construction HGVs passing through Beccles on the A145 and therefore no significant change in air quality is anticipated. Nevertheless, East Suffolk Council monitors NO_2 along the A145 in Beccles which can be used to establish a baseline if needed.

19.14. The approach used for road vehicle emission calculations and underlying assumptions is considered acceptable, although a more conservative approach could have been used within the main ES. This is of particular concern when Sizewell C's impacts are in-combination with traffic from other proposed developments such as East Anglia One North and East Anglia Two upon annual mean NO_2 within Stratford St Andrew's AQMA. A

sensitivity assessment demonstrated the potential range of impacts that would arise if the proportion of Euro V HGVs in the construction fleet is higher than indicated by governmental projections. The sensitivity assessment highlights that impacts upon the NO_2 annual mean within the AQMA in Stratford St Andrew could range from substantial adverse, in the event of a high proportion of Euro V HGVs, to negligible with a small proportion of Euro V HGVs. The potential significance of these impacts in combination with the potential impacts due to the nearby proposed East Anglia One North / East Anglia Two windfarm development means that caps on the % of Sizewell C's HGVs at a Euro V standard or lower need to be set. The Councils are in discussion with the Applicant regarding this matter.

19.15. The caps on non-Euro VI vehicles will provide wider benefits for NO_2 and to a lesser extent PM_{10} and $PM_{2.5}$ concentrations across East Suffolk. A higher proportion of Euro VI vehicles will result in lower emissions of NO_x, PM_{10} and $PM_{2.5}$ from HGVs travelling to and from the construction site. These caps are designed to ensure that the majority of HGVs have the latest low emission technology and minimise HGV impacts upon air quality.

19.16. Other than the potential in-combination impacts in Stratford St Andrew discussed above, the proposed scheme satisfactorily demonstrates no significant impact upon local air quality across the district.

19.17. The analysis of estimated dust deposition from the borrow pits stockpile is comprehensive and goes beyond minimum requirements of best practice IAQM guidance as is appropriate for a large-scale construction project in a coastal location. Specifying requirements to review weather conditions prior to stockpile working and use of binding agents should be sufficient to mitigate the potential dust deposition impacts.

19.18. The following issues previously identified by the Councils have also been satisfactorily resolved:

i. Air pollutant emissions during the start-up of the nuclear reactors have been demonstrated as insignificant due to start-up only occurring a couple of hours per year and being released from a height of 70 metres.

ii. Air pollutant emissions from car parks have been demonstrated as insignificant. This encompasses emissions of NO_x, PM_{10} and $PM_{2.5}$ from vehicles travelling to and around the car parks and also fumes of benzene, volatile organic compounds and carbon monoxide released from stationary cars.

19.19. The following issues are considered unlikely to result in a local air quality impact, but are important for the Councils in seeking to encourage and facilitate low emitting transportation in East Suffolk:

i. The air quality assessment in support of Sizewell C has assumed that there will be no electric vehicles from the development. The actual design will include electric charging points to facilitate and encourage use of electric vehicles. It has been stated within chapter 8.3 Associated Design principles [APP-589] that there will be 63 passive and 63 active charging points in the Northern Park and Ride, the same number of charging points at the Southern Park and Ride as well. There will be 3 active and 3 passive charging points at the Freight Management Facility. However, no information on electric charging points at the temporary workers accommodation has been provided or the main site car park. Further information is sought.

ii. The Councils request that buses used for Sizewell C are either electric or ultra-low emission vehicles, to minimise the air quality impacts of the bus fleet. This request is under consideration by the Applicant.

Negative

19.20. The main potential impacts are emissions from construction HGVs across the relevant road network, emissions from NRMM and generators, and the potential effects of dust from construction activities upon neighbouring communities. Also, further information has been requested to ensure that there is no risk of adverse air quality impacts in locations such as Woodbridge AQMA due to traffic diverting as a result of increased congestion on the A12.

19.21. There is potential for dust emissions of a large magnitude from earthworks across the development sites during the construction phase. The Applicant's assessment of dust impacts concludes that there would be a negligible risk after mitigation and with ongoing monitoring. However, the Councils are currently concerned that mitigation is not sufficient to deliver a negligible impact and have suggested further mitigation in the following areas:

i. Soil stripping during construction will be extensive and there is a risk of dust nuisance occurring at nearby residential amenity receptors. The dispersion modelling of dust nuisance is robust, although subject to large uncertainties. It is recommended that mitigation should be based on industry best practice, enhanced, if necessary, to reflect the scale and location of soil stripping. Other activities may also have an unusually high potential for dust generation due to

their scale, nature and/or location. Dust deposition monitoring (method to be agreed) should be undertaken when soil stripping or other potentially dusty activities occur near sensitive receptors. Specific mitigation of these impacts may be needed. These measures should be specified and agreed in the dust management plan or CoCP.

ii. The Applicant has carried out an assessment of NOx emissions from dump trucks and earth moving vehicle (CAT777s) using haul routes. However, there will be substantially more NRMM in use at the different construction zones, including mobile generators and cranes. The Councils will be seeking (a) the use of electrically powered plant when feasible, confirming the point when this can be introduced, (b) the use of NRMM conforming to the most up to date Stage V emissions standards (more details after point c), and (c) avoiding the deployment of plant close to site boundaries where possible.

Whilst Stage IV plant may be acceptable in some settings, Stage V plant may be needed to ensure minimisation of PM emissions and coverage of NRMM with power output above 560 kW. A commitment is requested to use Stage V NRMM where practicable and available. In the event that Stage V NRMM is not available, plant/equipment with the highest available NOx and PM emission standards should be used. A cap on the maximum proportion of non-Stage IV / V plant should be specified. There is the potential for considerable diesel NRMM capacity in Main Development Site construction zones A (e.g., power station platform), B (temporary construction contractor area) and C (temporary borrow pit). As such, it is expected that the Applicant will undertake additional monitoring of NO_2 at key locations in the vicinity of these construction zones during the construction programme.

iii. One of the components of NRMM is diesel-fired generator plant. Experience at the Hinkley Point C development indicates that diesel-fired generator plant could amount to tens of MW of unabated diesel generator plant. It is understood that the Environment Agency is in discussion with the Applicant regarding permitting requirement of aggregated NRMM. The Councils seek the use of electrically powered plant at the earliest possible stage to avoid the need to use diesel generators, and requests further details of when this will occur. If combustion plant is regulated by the Environment Agency under an Environmental Permit, the Councils would not seek to duplicate these controls.

However, the regulatory status of this plant is not yet confirmed, and the Councils may need to make further representations to ensure that the potential impacts of diesel-fired generators used during construction are minimised, fully assessed and appropriately mitigated.

Operational Impacts

Positive

19.22. There are no anticipated positive impacts on air quality during operation.

Neutral

19.23. There are no anticipated neutral impacts on air quality during operation.

Negative

19.24. A number of nearby habitat sites already experience nutrient nitrogen deposition above the critical load. Receptors E2b, E2c, E2d, E10a and E12a within nearby habitat sites are all forecast to experience more than a 1% increase in nutrient nitrogen deposition during the routine operation and commissioning scenarios. These potential impacts were assessed in ES Volume 2 Chapter 14 Ecology [APP-224], but the Councils consider that it is inappropriate to conclude that these forecast impacts are insignificant, simply because baseline levels of nitrogen deposition are already above the critical load. The Councils also have concerns about modelling of short-term impacts. Further information is sought. The Councils have discussed with Natural England and note that they will be the lead on issues of this nature, we will maintain discussions on this matter to ensure that suitable safeguards are included in the CoCP, and defer to Natural England when this body raises similar concerns.

Required mitigation

19.25. The Construction Dust Assessment submitted by the Applicant details air quality mitigation within the CoCP. The general measures described are appropriate but will require confirmation through the review and agreement of the CoCP and should reflect the scale, nature, and location of the proposed construction activities.

19.26. Regular monitoring of haul routes within 50m of sensitive boundaries is considered appropriate, although it is requested that consideration be given to hard surfacing haul routes within 50m of human health or ecological receptors to reduce the likelihood of dust nuisance. Details of the location of haul routes and surfacing will be reviewed by ESC as part of the process of finalising the CoCP.

19.27. It is requested that stockpiles and earth bunds are turfed and fenced/screened in locations close to sensitive human health and ecological receptors to minimise wind

whipping of loose bund or stockpile material. A combined approach to mitigation is recommended in view of the scale and coastal location of stockpiles and earth bunds. The details of these measures are currently under discussion with the Applicant. The Councils seek confirmation that the controls requested by the Councils will be included in the CoCP/DMP.

19.28. Given the potential for dust nuisance as a result of soil stripping, it is requested that dust deposition monitoring should be specified when soil stripping is undertaken within close proximity of sensitive receptors, in line with monitoring associated with other mitigation measures in the CoCP. The CoCP or Dust Management Plan should specify that dust deposition monitoring is recommended at residential amenity and ecological receptors within 15 metres of soil stripping to start with. Dust deposition monitoring requirements should be reviewed and updated during construction. The Councils request that an updated CoCP or Dust Management Plan will contain the proposed monitoring locations.

19.29. The CoCP indicates that pre-fabricated buildings will be used as far as practicable. The Councils request that this construction technique should be adopted for temporary workers accommodation to minimise potential dust impacts.

19.30. The latest CoCP submitted in January 2021 [APP-273] contains a commitment to Euro VI for HGVs and where this Euro standard is not possible Euro V. The Councils are in discussions with the Applicant and expect further commitments on HGVs, to include:

i. A cap on the % of non-Euro VI and confirmation that non-Euro VI vehicles will be Euro V;
ii. A monitoring strategy to demonstrate compliance with this cap; and
iii. Confirmation of how data on the Euro class of HGVs will be monitored and reviewed, and how any potentially significant issues arising in the event of significant numbers of non-Euro VI vehicles will be addressed.

19.31. The latest CoCP submitted in January 2021 provides a commitment to Stage IV NRMM, where practicable and available. The Councils welcome this commitment, which will be effective in minimising NOx emissions from plant up to 560 kW. However, the Councils request further commitments to the use of Stage V NRMM in the first instance. This will ensure that PM emissions are minimised as well as NOx emissions, and will extend the coverage of controls to plant with power output above 560 kW which are not covered under Stage IV controls. Additional submissions of the CoCP by the Applicant should include:

i. The use of mains electricity as a power source at the earliest possible stage;
ii. Commitment to use Stage V NRMM, where available and practicable. In the event that Stage V NRMM is not available, plant/equipment with the highest available NOx and PM emission standards should be used;
iii. A cap on the % of non-Stage IV / V compliant NRMM;
iv. If Stage IV/V NRMM is not available, the Councils request that the reasons for this should be provided by the Applicant, and any such NRMM should be deployed in locations as far away from sensitive receptors as practicable;
v. A monitoring and reporting strategy to evidence compliance with caps; and
vi. Further controls on emissions from diesel fired generator plant if not covered under an Environmental Permit.

20. Flood and Water (Lead authority SCC (surface water) / ESC (coastal flood risk))

Summary

20.1. The Councils expect any proposal to have appropriate surface water drainage infrastructure which prioritises the use of SuDS and does not increase existing surface water flood risk.

20.2. Currently, some of the proposals cause significant concern in this respect. The Councils have not yet seen evidence that any of the surface water drainage infrastructure proposed to serve the Main Development Site, the LEEIE and Associated Developments can be facilitated within the proposed red line boundaries to a satisfactory standard. As the County Council has a statutory role as Lead Local Flood Authority, the Councils require these issues to be resolved with evidence that a suitable drainage solution can be delivered for all sites both during construction and operation.

20.3. The Councils are not the responsible authorities for flood risk resulting from coastal or fluvial flooding and so, we defer to others who are experts in this area (Environment Agency). However, aspects of flood risk are important for our communities, so we give an overview in this section.

Table 22: Summary of impacts – Flood and water					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative / Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
22a	At several sites non-SuDS measures are proposed. Acceptable mitigation measures may not fit within order limits with current designs.	C	Negative	Change of proposals to implement SuDS measures in all locations – change to design	NPPF Section 14 addresses meeting the challenge of climate change, flooding, and coastal change and notes where development is necessary in at-risk areas, the development should be made safe for its lifetime without increasing flood risk elsewhere. Local Plan Policy SCLP9.6: Developments should use sustainable drainage systems to drain surface water. SuDS should be integrated into the landscaping scheme and green infrastructure provision of the development; contribute to the design quality of the scheme; and deliver sufficient and appropriate water quality and aquatic biodiversity improvements, wherever possible.
22b	No acceptable drainage strategy for LEEIE, with risk of increased surface water flood risk	C	Negative	Need for change of proposals for the LEEIE to allow for a suitable SuDS system - change Suitable provisions for control and approval of detailed drainage mitigation measures to ensure suitability and acceptability - requirement	NPS EN-1: Where new energy infrastructure is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and, where possible, by reducing flood risk overall. NPPF Section 14 addresses meeting the challenge of climate change, flooding, and coastal change and notes where development is necessary in at-risk areas,

					the development should be made safe for its lifetime without increasing flood risk elsewhere. Local Plan Policy SCLP3.4 states proposals for major energy infrastructure projects will require appropriate flood and erosion defences, including the effects of climate change are incorporated into the project to protect the site during the construction, operational and decommissioning stages. Local Plan Policy SCLP9.6: Developments should use sustainable drainage systems to drain surface water. SuDS should be integrated into the landscaping scheme and green infrastructure provision of the development; contribute to the design quality of the scheme; and deliver sufficient and appropriate water quality and aquatic biodiversity improvements, wherever possible.
22c	Potential to increase runoff rates and therefore flood risk at several locations; some also for operational period – particularly LEEIE and Yoxford Roundabout	C / O	Negative	Suitable provisions for control and approval of detailed drainage mitigation measures to ensure suitability and acceptability - requirement	NPS EN-1: Where new energy infrastructure is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and, where possible, by reducing flood risk overall.
22d	Green Rail Route potential for legacy benefit. Suitable provisions for control and approval of detailed drainage mitigation measures to ensure suitability and acceptability.	C / O	Positive	Suitable provisions for control and approval of detailed drainage mitigation measures to ensure suitability and acceptability - requirement	NPS EN-1: Where new energy infrastructure is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and, where possible, by reducing flood risk overall. NPPF Section 14 addresses meeting the challenge of climate change, flooding, and coastal change and notes where

					development is necessary in at-risk areas, the development should be made safe for its lifetime without increasing flood risk elsewhere. Local Plan Policy SCLP9.6: Developments should use sustainable drainage systems to drain surface water. SuDS should be integrated into the landscaping scheme and green infrastructure provision of the development; contribute to the design quality of the scheme; and deliver sufficient and appropriate water quality and aquatic biodiversity improvements, wherever possible.
22e	Potential for increase of coastal flood risk – linked to coastal processes (see xx)	C / O	Negative	See comments under coastal processes and geomorphology	

Policy context

National Policy Statements

20.4. Flood risk is addressed as a generic impact in Section 5.7 of NPS EN-1. It notes that while flooding is a natural process, its effects and severity can be increased both as a consequence of decisions about the location, design, and nature of settlement and land use, and as a potential consequence of future climate change. While flooding cannot be wholly prevented, its adverse impacts can be avoided or reduced through good planning and management. It explains that climate change may lead to increased flood risks.

20.5. Paragraph 5.7.3 notes that where new energy infrastructure is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and, where possible, by reducing flood risk overall.

20.6. The local policies discussed below, in relation to surface water flood risk and drainage, are consistent with that contained in NPS EN-1.

20.7. In relation to coastal flood risk, paragraph 3.6.1 of EN-6 states that as nuclear power stations need access to cooling water during operation, power stations are most likely to be developed on coastal or estuarine sites. Without appropriate mitigation measures the potential effects of climate change make these sites at greater risk of flooding than if they were located inland.

20.8. Section C.8 of EN-6 Volume II details the flooding, storm surge, and tsunami appraisal of the Sizewell nuclear site.

20.9. Paragraph C.8.19 notes that while part of the site lies in Flood Zone 3 (land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%) or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year), the Government believes this should not preclude it from the NPS if the independent regulator has advised the site can be potentially protected. At Sizewell the Environment Agency and Office for Nuclear Regulation have advised the site can potentially be protected from flood risk, including the effects of climate change, throughout its lifetime. This NPS is out of date and therefore the ES has used updated projections. It will be for the Environment Agency and Office for Nuclear Regulation to assess the current proposal at Sizewell.

20.10. Paragraph C.8.20 states the Government has taken a sequential approach giving priority to areas at lower risk of flooding. Paragraph C.8.21 notes the IPC (now ExA) must be satisfied that a sequential approach has been applied at the site level to ensure that, where possible, critical infrastructure is located in the lowest flood risk areas within the site.

20.11. Paragraph C.8.22 discuss consultation responses and concern regarding potential impacts of climate change and the ability of the Sizewell site to withstand these, including concern about the length of time waste maybe on the site. Responses also noted that sea level rise may necessitate abandonment of the site. The Appraisal of Sustainability identified potential adverse effects relating to flood risk arising from predicted rising sea levels caused by climate change, particularly during the later stages of operation and decommissioning of any new nuclear power station.

20.12. Paragraph C.8.23 addresses waste storage and disposal. Waste will be stored in safe and secure interim storage until a geological disposal facility becomes available, of which higher activity waste from new nuclear power stations is expected to be available for new build waste from around 2130.

20.13. The Environment Agency has advised that it is reasonable to conclude that a nuclear power station within the Sizewell site could potentially be protected against flood risks throughout its lifetime, including the potential effects of climate change, storm surge and tsunami, taking into account possible countermeasures. Paragraph C.8.24 also notes predictions of potential future climate change effects become increasingly less certain the further into the future they extend. As climate change projections continue to be refined predictions will project further into the future and as such, should greater future impact be predicted, it should be identified well in advance, giving time for appropriate action to be taken to address those impacts.

20.14. Paragraph C.8.26 states should sites achieve development consent, their capacity to withstand potential climate change will remain under consideration throughout the life of the nuclear power station. Once licensed, as part of the site licensing conditions, the licensee must review their safety case at regular intervals. This review will take the most recent climate change projects into account and allow necessary modifications to flood defences and/or operating arrangements to be undertaken. The objective of the review is to compare the safety case of the site against modern standards to see if there are reasonably practicable improvements that could be made, to ensure that the plant is safe to continue to operate.

20.15. Paragraph C.8.27 states the Environment Agency has noted that sea level rise and land raising of the development will need to be taken into account when considering flood storage loss due to the development, because mitigation of flood risk to the site could have an adverse impact on flood risk in the surrounding area by reducing the capability of area to absorb and disperse flood water. It is also noted that at the time of publication, it is not

possible to assess the impact on flood risk in the surrounding area from development and that this will need to be considered as part of the flood risk assessment submitted to the IPC (now ExA) as part of the DCO application. Paragraph C.8.28 notes the report Climate Change – Adapting to the Inevitable indicates the Sizewell site would be threatened in a scenario of projected 2m sea level rise in the second half of the 23rd century with no adaptation efforts made. As such, the Environment Agency is noted to agree with the report's suggestion that Sizewell may need additional flood protection in the future.

20.16. Paragraphs C.8.29-C.8.30 address fluvial flooding at Sizewell. The Environment Agency has also noted that there is a fluvial risk to part of the site not covered in the nomination as a nuclear site. This is from drainage channels connected to Minsmere Sluice, and this fluvial risk does not affect the Environment Agency's overall conclusion. It also notes that flooding could impede access and egress, however, this could be mitigated for in the design of such routes to ensure the access remains open. The routes will need to be designed to ensure they do not increase the flooding risk impact elsewhere.

20.17. Paragraph C.8.31 concludes the site passes the flooding criterion and that it is potentially reasonable to conclude that any new nuclear power station on at Sizewell could potentially be protected against flood risk throughout its lifetime, including the potential effects of climate change, storm surge and tsunami and considering possible countermeasures.

National Planning Policy Framework (NPPF) and National Planning Policy Guidance (NPPG)

20.18. Paragraphs 155 – 165 of the NPPF cover planning and flood risk. Paragraph 165 sets out the expectations for how sustainable drainage systems should be incorporated into major developments.

20.19. Flood risk and coastal change is covered under a specific section of the NPPG. Particular paragraphs of note are;

i. Paragraphs 01, 50 and 51– Opportunities to reduce flood risk using SuDS

ii. Paragraph 80 – Surface water disposal hierarchy

20.20. The Department for Environment, Food and Rural Affairs, non-statutory technical standards for sustainable drainage systems March 2015 should be used in conjunction with the NPPF and NPPG.

Local Plan Policies

20.21. East Suffolk Local Plan Policy SCLP3.4: Proposals for Major Energy Infrastructure Projects, seeks to ensure that appropriate flood risk measures which include the effects of

climate change are incorporated into projects to protect the site during the construction, operational and decommissioning stages.

20.22. Policy SCLP9.5: Flood Risk, states that proposals for new development will not be permitted in areas at high risk from flooding, i.e., Flood Zones 2 and 3, unless the applicant has satisfied the safety requirements in the Flood Risk NPPG. The policy emphasises that developments should exhibit the three main principles in flood risk, in that, they should be safe, resilient and should not increase flood risk elsewhere.

20.23. Policy SCLP9.6: SuDS, requires development to utilise sustainable drainage systems which should be integrated into the landscaping scheme, contribute to the design quality of the scheme and deliver sufficient and appropriate water quality and aquatic biodiversity improvements, wherever possible. The policy states runoff rates should be restricted to greenfield runoff rates wherever possible.

Other Relevant Local Policy

20.24. The Suffolk Flood Risk Management Strategy 2016 (**APPENDIX 1: 24)** sets out guiding principles on tackling flooding and integrates the issue of flooding from surface water runoff and from ordinary watercourses. One of the key objectives is to prevent an increase in flooding as a result of new development by ensuring SuDS are properly considered and incorporated into works. The document notes the importance of aligning with the content of SMP and River Basin Management Plans to ensure a holistic approach is taken to flood and coastal management and water quality.

20.25. Appendix A of the Suffolk Flood Risk Management Strategy sets out the local requirements for SuDS design in Suffolk.

20.26. Suffolk Flood Risk Management Strategy Objective 3 states that planning decisions should be *"based on up-to-date information about all flood risks"*.

20.27. CIRIA SuDS Manual (C753) is considered industry best practice for SuDS.

Flood Risk Assessment

20.28. The Applicant, through the production of a Flood Risk Assessment (FRA) for the proposed development, has satisfied the policy requirements of the Local Plan. However, the Councils understand that further work is being undertaken on the FRA's in some instances to increase confidence in the associated hydraulic models and, where required, to incorporate surface water drainage outfalls.

20.29. The Councils note the conclusions of the FRA on coastal and fluvial flood risk, but defer to the Environment Agency as the relevant statutory body for detailed commentary on those matters.

Coastal Flood Risk (Lead authority: ESC)

20.30. The Office for Nuclear Regulation, advised by the Environment Agency, are responsible for ensuring the safety case for the Sizewell C station from a coastal flood risk perspective. The Councils wish to ensure that the necessity for Sizewell C to be protected from flooding does not adversely impact adjacent coastal frontages or increase the flood risk elsewhere; namely Sizewell and Thorpeness to the South and Minsmere to the north. The Sizewell C proposal incorporates a combination of hard and soft coastal defences- the designs for which have recently been changed to increase their resilience based on the UKCP18 RCP 8.5 climate change scenario. The purpose of the revised defence is to protect the Sizewell C station from over-topping and coastal inundation from a 1 in 1,000-year wave event, up to year ~2140. DCO documents [AS-157] claim that the scheme design with embedded mitigation has been modelled and the results of the modelling confirm that the Main Development Site and the SSSI Crossing would not be at risk of fluvial or coastal inundation or tidal breach flooding throughout the development lifetime. This assessment does not address the issue of whether the proposed mitigation would have the potential to increase tidal or fluvial risks elsewhere. The responsible authorities will need to thoroughly assess this aspect of the proposal.

20.31. The Councils discuss the impacts of the proposed coastal defences in the Coastal change / geomorphology section. Therefore, it will not be duplicated here. The Councils wish to reiterate the adopted SMP aim to 'maintain the current line of defence at Sizewell (with reference to Sizewell A and Sizewell B) whilst allowing the natural development of the coast'. The proposed flood defence features at Sizewell C and the objective of the SMP create a long-term conflict of interest. It is important to note that the Sizewell C development with its proposed SCDF and HCDF, brings forward by several decades, the time by which mean seawater level has transgressed to meet the toe of Sizewell B's existing defence. The Councils are yet to be provided with modelling reports and updated ES since the change submission proposed heightening and advancing the coastal defence features further seaward but the implications of this defence must be properly assessed by the responsible authorities.

20.32. The SMP highlights the need for flood risk management to the rear of the power stations in future epochs. This is due to the ongoing rise in sea levels and coastal erosion, but also due to predicted and unforeseeable changes in management of neighbouring coastlines (such as the RSPB Minsmere's wetland reserve and the questionable longevity of Minsmere sluice – a control point on the coast to the north of Sizewell C).

20.33. Submitted documentation with the DCO [APP-312] assumes coastal change will occur at Sizewell C over the lifetime of the defence, including the possibility of shoreline retreat. If such retreat leads to a breach at Minsmere and/or the failure of Minsmere sluice, a new method of draining the low-lying hinterland between Sizewell and Minsmere would be required. Any topographic or bathymetric change, caused by the presence of Sizewell C's coastal defence (i.e., blocking the free movement of sediment alongshore) could lead to a sediment deficit downdrift, which could subsequently alter the flood risk through reduced beach volumes.

20.34. The Councils are aware of the temporary CDO that will drain the Main Development Site of excess storm water and discharge on to the beach above high-water mark.

20.35. The impact of this outfall during the construction phase will be an inconvenience to beach users as flow rates could locally scour the beach, but no long-term impacts to local flood risk or morphological change are expected.

20.36. The permanent and temporary BLFs will influence bed sheer stresses and longshore current patterns, over a long length of coastline proportional to the lengths of the BLFs themselves. The installation and presence of so many piles give rise to the potential for sub-tidal, inter-tidal and supra-tidal zone changes. The responsible authorities need to be clear as to whether any BLF-induced change to coastal morphodynamics will adversely impact off-site flood risk.

Potable and Non-potable Water (Lead authority: ESC)

20.37. The Applicant has developed a Water Supply Strategy with the Environment Agency and Essex and Suffolk Water. It is proposed that the principal supply will come from mains water provided by Essex and Suffolk Water, Sizewell C is located within the Blyth Water Resource Zone.

20.38. During construction the required water supply will be considerably higher than during operation, operational requirements are anticipated to be approximately 2.0 mega litre/day (Ml/d), rising to 3Ml/d during outages (most recent figures from the Applicant).

20.39. The application suggests that average demand during construction is estimated at 1.8Ml/d (1 megalitre per day = 1 million litres). This will be the peak for approximately 14 months during enabling works. During the main construction phase, it will peak between 2.5Ml/d and 3.5Ml/d for 20 months during tunnelling works, gradually decreasing through remainder to around 0.5Ml/d.

20.40. The Blyth Water Resource Zone is not capable of providing the required water supply without boosting resilience in water supply to the local area. A number of options are proposed by the Applicant to address this shortfall in supply.

20.41. This subject area is being discussed in regular monthly meetings with the Applicant, the Environment Agency and Essex and Suffolk Water. Options for boosting supply in the Blyth Water Resource Zone are being examined by Essex and Suffolk Water at this time. The expectation is that the supply required by the Applicant can be met by Essex and Suffolk Water however that evidence has not yet been made available. The Councils are keen to ensure that the local area does not suffer any issues with water supply during the construction phase of Sizewell C. Our expectation is that supply will be boosted by Essex and Suffolk Water in order to address any current shortfall in availability of potable water in this area.

20.42. In addition to consideration of potable water supply, provision of additional reservoirs for non-potable water should be considered. The Councils consider there to be an important opportunity for winter storage reservoirs, the water of which could either be used by the Applicant for construction activities, or through license trading with local farmers substitute farmers' use of potable water. Such reservoirs could provide legacy benefit. Unfortunately, the Applicant is not currently proactively pursuing this as an option.

20.43. The Applicant does propose some additional water storage area which is proposed to store the clean water discharged from the foul water treatment facilities associated with Sizewell C, B, and A. This additional water storage area could again provide legacy benefit but this would need further discussion and exploration with the Applicant, the Internal Drainage Board and local farmers.

Surface water drainage and flooding (Lead authority: SCC)

Context - key local issues

Leiston

20.44. In December 2017, the County Council published a Surface Water Management Plan Update for Leiston **(APPENDIX 1: 25)**. This work was completed on behalf of SCC by BMT. This update was required to incorporate more detailed information, such as updated LiDAR, that was not available when a previous report was produced in 2015.

20.45. This detailed work was undertaken in Leiston because of an established history of surface water flooding in the town which has impacted residential properties on multiple occasions. The production of the SWMP has enabled SCC as Lead Local Flood Authority to obtain a greater understanding of how surface water is managed in Leiston. It should be noted, that whilst the model is more accurate than standard Environment Agency National

Mapping[3], assumptions were made due to a lack of available information on the existing surface water sewer network in Leiston.

20.46. The majority of Leiston is served by an Anglian Water surface water sewer network. This is a historic system that has been upgraded as the town has expanded. The system is unable to accommodate more severe rainfall events, resulting in overland flows along natural exceedance routes.

20.47. Due to the catchment topography and the road levels in Leiston, two main surface water flow paths were identified through Leiston. These can be seen in a map of flood depths of the Leiston SWMP (for 1:100+40% events), included in **(APPENDIX 1: 26).** These two flow paths converge on Valley Road, at the allotments, prior to the rail bridge, before continuing east along Valley Road, past the existing foul pumping station before flowing under Lovers Lane, into the SSSI.

20.48. Soil conditions in Leiston are variable and therefore cannot be relied upon to deliver infiltration unless proven through BRE365 compliant infiltration testing.

Area affected by Land East of Eastlands Industrial Estate (LEEIE)

20.49. Properties on Valley Road, Leiston, opposite the proposed development on LEEIE are predicted by the Leiston SWMP to be at high risk from surface water flooding.

Area affected by Green Rail Route at Abbey Road

20.50. Properties on Abbey Road, Leiston, south of the junction with Lovers Lane are predicted to be at risk of surface water flooding. A plan of the surface water flood risk for this area is included in **APPENDIX 1: 27.**

Area affected by Yoxford roundabout

20.51. There are known, recurring surface water flooding problems along A12, particularly between the A1120 and B1122 junctions. A plan of the surface water flood risk for this area is included in **APPENDIX 1: 28.**

20.52. The existing surface water drainage system is very shallow and unable to be upgraded due to multiple constraints associated with the existing infrastructure (services, road levels etc.). The existing system has a positive outfall which passes through private land before ultimately discharging into the River Yox.

[3] Environment Agency National Mapping for Leiston has been updated to include the outputs of the Leiston SWMP.

SSSI

20.53. The SSSI and adjacent Minsmere Nature Reserve are sensitive to changes of the water environment. This includes changes to the flows of surface water into the SSSI, both in terms of quantity and quality and any potential changes to groundwater levels.

20.54. This topic is overseen by multiple stakeholders, including the Councils. The LLFA seek to ensure the natural surface water regime is mimicked through the use of SuDS to maintain the natural water balance. This is considered to be essential for the Main Development Site during construction.

General Principles

20.55. The Councils have sought clarification on some of the principles contained within the Outline Drainage Strategy that do not completely align with National and Local Policy, Guidance and Best Practice. The principles clarification [APP-181] provided by the Applicant has provided the Councils with some reassurance. However, at the time of submission of this LIR, the Councils have not received any further information regarding how surface water will be managed on any of the proposed sites (with the exception of highway schemes).

20.56. The Councils expect infiltration testing to be undertaken at all sites to inform the outline design, required to demonstrate that a surface water drainage strategy, compliant with national and local Policy, guidance and best practice can be delivered within the Order Limits. The Councils are aware of infiltration testing being undertaken on some sites and have received some results of testing. However, the Councils await the results of infiltration testing from all proposed development sites.

20.57. Where the Applicant is reliant on a method of surface water disposal other than infiltration, they must demonstrate that their Order Limits are of sufficient extent to discharge to this location, and if required, obtain permission from the asset owner.

20.58. The Applicant does not propose potential pollution assessment methodologies to be used, depending on proposed site uses. The submission also includes a reliance on proprietary SuDS treatment systems (such as bypass interceptors). This is not compliant with NPS EN-1 which states that SuDS should be prioritised.

20.59. Regular monitoring and maintenance of sub-optimal SuDS solutions is not an approach that the Councils support, nor do we believe that it delivers sufficient mitigation. For example, a reliance on crated soakaways served by gullies and an upstream oil interceptor does not reduce surface water flood risk in the same way that an open SuDS system could. An extreme, short duration rainfall event, which could generate significant silt laden runoff, could block the gullies and/or interceptor, preventing flows from

accessing the crated system. Unlike an open SuDS system which could receive and attenuate flows without the same risk of blockage. Regular maintenance and monitoring do not resolve the residual risk of utilising a below ground surface water drainage system.

20.60. SuDS should be designed to maximise biodiversity and amenity benefits wherever possible.

Construction phase impacts

Commentary

20.61. General Principles: National and local policy, guidance and best practice do not provide different requirements for SuDS during construction, compared to operation. As such, the Councils expect the Applicant to comply with national and local policy, guidance and best practice during the construction phase.

20.62. On this basis, at the time of submission of this LIR, the Councils are concerned whether sufficient mitigation, compliant with national and local policy, guidance and best practice can be delivered within the Order Limits during construction. The Councils expect this to be demonstrated for every site, with supporting information, including plans and calculations, prior to the conclusion of the examination.

20.63. The availability of land should not be considered as justification for not prioritising the use of SuDS during construction. The land required for SuDS during construction, alongside other site requirements should have been adequately considered when establishing the applications Order Limits.

20.64. Three elements of the development, at LEEIE, Green Rail Route at Abbey Road and Yoxford Roundabout, have the potential to increase existing surface water flood risk to residential properties. It should be noted that in all three instances, there is the potential for the Applicant to deliver mitigation that could reduce existing surface water flood risk to residential properties and deliver legacy benefit.

20.65. Main Development Site: Given the main site's ecologically sensitive location, it is vital that during the construction phase, natural surface water drainage processes are mimicked through the use of SuDS.

20.66. The recent changes submission includes a temporary surface water outfall to the adjacent beach, for use in extreme rainfall events. It is apparent to the Councils that the need for this outfall pipe would have resulted from more detailed assessment of surface water requirements on the Main Development Site. The Councils have not seen any of this information at the time of submitting this LIR. Whilst the Councils do not necessarily object to this proposal on the basis of it being used as an emergency overflow, the parameters for which this overflow will be utilised, and the area it could serve, need to be

clearly outlined. The overflow must also only be used if it can be demonstrated that its use will not result in detriment to the surrounding water environment and reliant habitats.

Positive

20.67. Green Rail Route: This site has the potential to deliver legacy benefit to the properties on Abbey Road, to improve existing surface water flood risk at these properties, and the Aldhurst Farm mitigation area. The proposed attenuation basin location (adjacent Abbey Road) is directly on a surface water flow path that impacts the two sites. By attenuating this existing flow path, alongside flows generated by the proposed development, and releasing it at a slower rate, it would be possible to reduce flood risk to properties on Abbey Road. This would require the attenuation to be sized accordingly, if the Order Limits allow. The potential legacy benefit to Aldhurst Farm would require further assessment by multiple specialisms. However, at present, the Applicant proposes to remove the attenuation basin post-construction, when the Green Rail Route is removed. This would remove the potential legacy benefit reduction in surface water flood risk.

Neutral

20.68. None identified.

Negative

20.69. Main Development Site: It has not been demonstrated that the required mitigation options identified in the ES can be delivered within the Order Limits.

20.70. Whilst WMZs have been identified within the Outline Drainage Strategy, no further information has been provided to demonstrate how surface water will be managed for each of these indicative areas. Furthermore, the Site Entrance Hub was omitted from the identified WMZs, and to date, no information has been provided to detail how the Applicant intends to drain surface water from this area. As such, the Applicant has not demonstrated that any WMZs can deliver mitigation that is compliant with national and local policy, guidance and best practice within the Order Limits.

20.71. If infiltration of surface water from WMZs is feasible, then this must be prioritised, as per National and Local Policy, Guidance and Best Practice. Only if infiltration could result in negative impacts to surrounding habitats would a positive discharge to watercourses be considered. The Councils do not view a lack of space to facilitate infiltration features as justification for seeking to utilise alternate methods of surface water discharge.

20.72. It is critical that there is sufficient space for SuDS within WMZs to remove contaminants from runoff using natural processes, prior to discharge. The use of

proprietary treatment measures as a primary method of treatment is not acceptable to the Councils, SuDS must be prioritised.

20.73. Due to the potential for suspended sediment in surface water within WMZs, the Councils do not think it would be appropriate to use closed SuDS systems, such as crated attenuation tanks.

20.74. LEEIE: The area hosting this Associated Development suffers from existing flooding problems. The development proposals at this site have potential to increase existing surface water flood risk to residential properties. It should be noted that, there is the potential for the Applicant to deliver mitigation that could reduce existing surface water flood risk to residential properties and deliver legacy benefit.

20.75. The site is in Source Protection Zone 3. It is clear that comprehensive SuDS infrastructure is needed; the risk of flooding will be difficult to manage with a conveyance system alone. The maintenance requirement for a simple conveyance system will be high and cannot be relied on in the likely event of flash storms. Property level protections do not solve the problem, as these reduce risk but are reliant on resident action.

20.76. Discussions have taken place between the Councils, the Applicant and other key stakeholders regarding potential surface water drainage strategies for the LEEIE. To date, these discussions have not resulted in an agreeable surface water drainage strategy that the Councils view as compliant with national and local policy, guidance, and best practice.

20.77. Sizewell Link Road: The Councils require further clarification and information from the Applicant to demonstrate that sufficient mitigation, compliant with national and local policy, guidance and best practice can be delivered within the Order Limits during construction. This should include temporary construction areas such as contractor compounds and haul roads.

20.78. Further clarification is required on the principles in place for temporary watercourse crossings, to facilitate construction haul roads etc. until such time the permeant culverts are constructed, if such temporary crossings are required.

20.79. Two Village Bypass: The Councils require further clarification and information from the Applicant to demonstrate that sufficient mitigation, compliant with national and local policy, guidance, and best practice can be delivered within the Order Limits during construction. This should include temporary construction areas such as contractor compounds and haul roads.

20.80. It must be demonstrated that areas designated for infiltration during operation can be protected during the construction phase to prevent the compaction of natural soils

and/or contamination with material that could hinder the future infiltration potential of these soils. This would require sufficient space within the Order Limits to facilitate haul roads etc. If this is not possible, principles for remediation and post construction testing must be identified.

20.81. Yoxford Roundabout: The Councils require further clarification and information from the Applicant to demonstrate that sufficient mitigation, compliant with national and local policy, guidance, and best practice can be delivered within the Order Limits during construction.

20.82. As highlighted under Key Local Issues, there are existing surface water flooding issues at this location. During construction, sediment laden surface water runoff has the potential to increase surface water flood risk if it were to enter the existing highway drainage system. It must be demonstrated that mitigation can be delivered within the Order Limits.

20.83. The local highway authority is unlikely to permit any discharge of construction surface water to the existing highway surface water system.

20.84. Freight Management Facility: At the time of submission of this LIR, the Councils have not received any information to supplement what is contained within the Outline Drainage Strategy and ES.

20.85. The principles contained in the Outline Drainage Strategy and ES for this site are not acceptable to the Councils and do not comply with national and local policy, guidance and best practice. These principles rely on the storage of surface water in crated systems below ground. The principles are also reliant on proprietary treatment measures, which is not a SuDS approach. It is unclear if the Applicant can accommodate an acceptable and compliant surface water drainage strategy within the Order Limits, whilst delivering other mitigation, such as landscape bunding.

20.86. The potential mitigation listed in the Outline Drainage Strategy and the ES are not consistent with one another.

20.87. The site is located adjacent to an existing attenuation basin. It is assumed that this basin attenuates surface water generated by the A14.

20.88. Northern Park and Ride: At the time of submission of this LIR, the Councils have not received any information to supplement what is contained within the Outline Drainage Strategy and ES. The Councils require further clarification and information from the Applicant to demonstrate that sufficient mitigation, compliant with national and local policy, guidance and best practice can be delivered within the Order Limits.

20.89. An existing pond is proposed to be retained; however, it is unclear how surface water flows to the pond will be retained, in terms of both quantity and quality to prevent any negative impact on this Suffolk Priority Habitat.

20.90. An existing watercourse and associated surface water flow path has been identified along the site's western boundary. It is unclear how these existing features will be managed along the site boundary, including potential interaction with site security fencing.

20.91. Southern Park and Ride: At the time of submission of this LIR, the Councils have not received any information to supplement what is contained within the Outline Drainage Strategy and ES.

20.92. The principles contained in the Outline Drainage Strategy and ES for this site are not acceptable to the Councils and do not comply with national and local policy, guidance, and best practice. The Councils require further clarification and information from the Applicant to demonstrate that sufficient mitigation, compliant with national and local policy, guidance, and best practice can be delivered within the Order Limits.

20.93. The information contained within the submission identifies that there are no ordinary watercourses adjacent to, or within the proposed Order Limits. The site is therefore reliant on infiltrating surface water. The Councils have not seen any results of infiltration testing for this site. Therefore, the Councils are unable to confirm that a deliverable surface water drainage strategy is available within the Order Limits at the most strategic level.

20.94. The Outline Drainage Strategy [APP-181] includes proposals for below ground attenuation in tanks and pumping of surface water. The necessity for this approach, which would be deemed as a last resort, has not been identified, nor has the catchment that it would serve. The Outline Drainage Strategy also proposes to utilise traditional methods of surface water drainage, such as gullies and pipes, which is not compliant with a SuDS approach.

20.95. An existing surface water flow path is present across the proposed site access. It is unclear how the proposed access could alter this existing surface water flow path without resulting in an increase in offsite flood risk.

20.96. An existing pond is proposed to be retained; however, it is unclear how surface water flows to the pond will be retained, in terms of both quantity and quality to prevent any negative impact on this Suffolk Priority Habitat.

20.97. Current proposals include ecological fencing around proposed SuDS. This could remove any potential biodiversity benefits that these features could deliver during the construction phase.

20.98. Green Rail Route: At the time of submission of this LIR, the Councils have not received any information to supplement what is contained within the Outline Drainage Strategy and ES.

20.99. It is unclear if temporary construction compounds and temporary roads will be served by any sitewide drainage strategy or if these will require separate surface water drainage strategies.

20.100. The submission includes bunding along the northern edge of the Green Rail Route. This would intercept multiple existing surface water flow paths, which could result in an increase in off-site flood risk if not accommodated within the design. The Councils have not received clarification from the Applicant as to how these surface water flow paths will be accommodated in the proposed design.

Operational phase impacts

Commentary

20.101. General Principles: At the time of submission of this LIR, the Councils have not been approached for discussions regarding operational drainage for any proposed developments, other than the proposed highway schemes mentioned below.

20.102. The Councils have been involved in productive discussions with the Applicant regarding the operational surface water drainage strategies for highway schemes (Two Village Bypass, Sizewell Link Road and Yoxford Roundabout). Whilst more information is required, such as plans and calculations, before the Councils have confidence that the necessary mitigation is deliverable within the Order Limits, this work is progressing well.

20.103. Main Development Site: At the time of submission of this LIR, the Councils have not received any information pertaining to the proposed surface water drainage strategies for any of the sites that will remain throughout the operational phase.

20.104. The Councils understand that some of the site will be subject to a nuclear safety case, those areas will not be expected to comply with the surface water disposal hierarchy. However, all other areas, for example, the Goose Hill car park, and Main Development Site ancillary development (as per Sizewell B relocated facilities), will be expected to comply with national and local policy, guidance, and best practice for the disposal of surface water.

20.105. Sizewell Link Road: Results of initial infiltration testing have been provided to the Councils. It is agreed that infiltration is not feasible and alternative methods of surface water disposal will be required as per the surface water disposal hierarchy. Further work is

required to establish discharge methods, locations and rates. General principles for crossing ordinary watercourses have been agreed, using short sections of portal culverts.

20.106. Two Village Bypass: Results of initial infiltration testing have been provided to the Councils. An infiltration strategy appears to be feasible for this scheme. Further clarification is required for some areas of proposed infiltration to ensure adequate protection of the underlying aquifer. General principles for crossing ordinary watercourses have been agreed, using short sections of portal culverts.

Negative

20.107. None identified.

Negative

20.108. None identified.

Negative

20.109. Main Development Site: The reinstatement of areas used during construction, particularly the borrow pits once backfilled, have the potential to increase greenfield runoff rates. No information has been provided to detail how this could be mitigated.

20.110. The off-site sports facilities, being located in Leiston, have the potential to increase surface water flood risk. No consideration has been given in the submission to how this area will drain surface water throughout the operational life of the site.

20.111. Sizewell Link Road: Whilst progress is being made on an operational surface water drainage strategy and the general principles have been agreed, more information is required to demonstrate that sufficient mitigation, compliant with national and local policy, guidance and best practice can be delivered within the Order Limits during the operational phase.

20.112. Two Village Bypass: Whilst progress is being made on an operational surface water drainage strategy and the general principles have been agreed, more information is required to demonstrate that sufficient mitigation, compliant with national and local policy, guidance, and best practice can be delivered within the Order Limits during the operational phase.

20.113. Yoxford Roundabout: Whilst progress is being made on an operational surface water drainage strategy and the general principles have been agreed, more information is required to demonstrate that sufficient mitigation, compliant with national and local policy, guidance, and best practice can be delivered within the Order Limits. During the operational phase.

20.114. This scheme has the potential to deliver legacy benefit by reducing the existing surface water flood risk on the A12. This would require the scheme to retain and discharge surface water generated by the development site through infiltration whilst also intercepting surface water flows from the North (A12) and East (B1122) and disposing of these flows using the scheme's surface water drainage system. This would require the scheme's surface water drainage system to be designed accordingly.

20.115. The local highway authority is unlikely to permit any discharge of operational surface water to the existing highway surface water system.

Required mitigation

20.116. The Councils hope that they can agree with the Applicant details of suitable drainage solutions for the key sites that they are concerned about before the end of the Examination. As referred to above, the Councils have not yet seen evidence that any of the surface water drainage infrastructure proposed to serve the Main Development Site, the Land East of Eastlands Industrial Estate and Associated Development can be facilitated within the proposed red line boundaries to a satisfactory standard. The Councils, and in particular SCC as the Lead Local Flood Authority, require these issues to be resolved, with evidence that a suitable drainage solution can be delivered for all sites both during construction and operation.

20.117. The potential increase in surface water flood risk and pollution associated with construction and operation of the proposed project should be mitigated through the prioritisation and use of SuDS. Surface water drainage strategies and designs must comply with national and local policy, guidance, and best practice. Surface water drainage strategies should maximise the use of above ground storage and treatment through natural processes.

20.118. It must be demonstrated as part of the DCO process that sufficient and suitable mitigation can be accommodated within the Order Limits to mitigate the identified impacts. Providing this can be demonstrated, requirement 5 of draft DCO ensures further details of these works can be provided post-consent.

20.119. With regard to non-potable water supply, the Applicant is asked to reconsider the provision of additional reservoirs for non-potable water, the water of which could either be used by the Applicant for construction activities, or through license trading with local farmers substitute farmers' use of potable water. Such reservoirs could provide legacy benefit.

Requirements and obligations

20.120. Requirements will need to give sufficient assurance to the Lead Local Flood Authority that final designs are acceptable. The Councils have different views how this should be achieved.

20.121. Suffolk County Council requests that SCC should discharge any requirements which concern surface water drainage. This is to reflect and protect its statutory duties as Lead Local Flood Authority, and in recognition of the fact that SCC holds the technical expertise on this matter. SCC acknowledges that flood/drainage matters must be considered on an integrated basis with other environmental topics and would fully expect to do so, in consultation with ESC as the discharging authority for other matters and with the other bodies named in the requirement. The proposed wording by SCC for a revised requirement is included in **ANNEX J.**

20.122. East Suffolk Council support the requirement as drafted in the draft DCO that requires the district to discharge surface water drainage details alongside foul water drainage details, in consultation with the relevant drainage authorities including the EA, East Suffolk Internal Drainage Board, and SCC in their capacity as Lead Local Flood Authority. ESC has many years of expertise in doing so and considers itself a competent authority well versed and practised in consulting and managing technical input from specialist authorities. ESC notes and supports the drafting of requirement 5 in the draft DCO that approaches foul and surface water drainage in a holistic manner noting that there are differing areas of concern involved that need to be taken into consideration to ensure the right drainage solution for the site. As the enforcement authority, ESC consider that the separation is not necessary and could create complications particularly if the foul and surface water drainage systems are closely aligned.

21. Sustainability (Lead authority ESC)

21.1. National policy is clear that the purpose of the planning system is to contribute to the achievement of sustainable development. It identifies three dimensions within sustainable development; economic, social and environmental. This section focusses on climate change impacts – socio-economic and biodiversity impacts are covered elsewhere in this LIR.

21.2. The main adverse sustainability impacts relate to carbon emissions and resources required for the construction of the project. Once operational, there will be sustainability benefits of generating low carbon energy.

Table 23: Sustainability (Note: this section focusses on climate change impacts – socio-economic and biodiversity impacts are covered elsewhere in this LIR)					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
23a	Greenhouse gas emissions from construction activity	C	Negative	Reduce: Minimise need for construction traffic, and maximise sustainable transport modes - covered in the Transport section of this LIR Reduce: Further increase Euro VI compliant HGVs, with a proposed cap on the % of non-Euro VI and confirmation that non-Euro VI vehicles will be Euro V – covered in the Transport section of this LIR Compensate/mitigate: Consideration of off-setting of impacts	Local Plan Policy SCLP7.1: Sustainable Transport states development proposals should be designed from the outset to incorporate measures that will encourage people to travel using non-car modes to access home, school, employment, services and facilities.
23b	Use of resources and generation of waste during construction (particularly materials)	C	Negative	Compensate/mitigate: Consideration of off-setting of impacts	
23c	Low carbon energy generation	O	Positive		Local Plan Policy SCLP9.1: notes the Council will support low carbon energy developments where certain criteria are met.

Policy context

National Policy Statements

21.3. Section 4.8 of NPS EN-1 addresses climate change adaptation in energy infrastructure development. It notes that the IPC (now ExA) should take the effects of climate change into account when developing and consenting infrastructure, referring also to the potential long-term impact of climate change.

21.4. New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure (paragraph 4.8.5). The IPC (now ExA) should be satisfied that applicants for

new energy infrastructure have taken into account the potential impacts of climate change using the latest UK Climate Projections available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure (paragraph 4.8.6).

21.5. EN-1 notes the energy NPSs should speed up the transition to a low carbon economy and thus help to realise UK climate change commitments sooner than continuation under the current planning system.

21.6. Paragraph 2.2.5 notes the UK economy is reliant on fossil fuels, and they are likely to play a significant role for some time to come. Most of our power stations are fuelled by coal and gas. The majority of homes have gas central heating, and on our roads, in the air and on the sea, our transport is almost wholly dependent on oil. Paragraph 2.2.6 identifies that the UK needs to wean itself off such a high carbon energy mix: to reduce greenhouse gas emissions, and to improve the security, availability and affordability of energy through diversification.

Local Plan Policy

21.7. Policy SCLP9.1: Low Carbon and Renewable Energy: recognises the need to transition to a low carbon future and supports low carbon and renewable energy developments where they are within a suitable area or satisfy specific criteria which includes consideration of the existing environment and avoiding significant adverse impacts.

Context

21.8. The NPPF is clear that the purpose of the planning system is to contribute to the achievement of sustainable development. It identifies three dimensions within sustainable development; economic, social and environmental.

21.9. The Councils recognise sustainability comprises these three elements, but this section focuses on environmental sustainability in relation to climate change. The social and economic aspects of sustainability are addressed in sections 23, 24, 25, 26, 27, 28, 29 and 30 of this report.

21.10. The Government has identified that, in order to meet its energy and climate change objectives, there is an urgent need for new electricity generating stations. It has also been identified that new nuclear power should contribute to the UK's energy mix. This is identified in the NPS EN-1 and EN-6.

21.11. The Government has committed to Net Zero by 2050.

21.12. Nuclear power is a low carbon technology and the energy output to carbon emission ratio is considered by Government to compare favourably against alternative low carbon fuel sources such as wind. Reliability is the key unique selling point of nuclear power as it provides a reliable source of electricity and a stable base load compared to other energy generation alternatives.

21.13. The Councils consider that the proposed development could provide a positive impact in terms of clean, green, low carbon energy production. The development could contribute to a reduction in the carbon emissions and make a significant contribution to energy supply in the UK, providing a secure and stable energy source for decades during operation.

21.14. The Councils recognise that the positive impact on low carbon energy generation will have to be balanced against the potential environmental impacts of the proposed development. The construction (and decommissioning) of a development of this scale will have significant embedded carbon emissions. Whilst these may be offset by the carbon benefits during operation, they should still be minimised as far as this is possible.

Construction phase impacts

Positive

21.15. None identified.

Neutral

21.16. None identified.

Negative

21.17. The primary adverse impact will be the result of greenhouse gases during construction.

21.18. The construction of any large-scale infrastructure project would be resource intensive and have the potential to generate waste. Building the power station would involve the daily movement of large numbers of construction workers and significant amounts of materials and equipment.

21.19. As covered in the transport section of the LIR, the Applicant aims for 60% of materials to be delivered by rail or sea, with the remaining 40% to be delivered by HGV. Rail and sea modes of transport can be considered low carbon modes of transport. The carbon footprint of the 40% HGV deliveries will remain substantial. Therefore, in order to maximise the sustainability of the construction, the Applicant should aim to maximise rail and sea modes of transport to the highest possible proportion.

21.20. On transporting the workforce to the construction site, whilst the Applicant has aimed to reduce the traffic and carbon impact by providing an on-site Accommodation Campus, a near-site workforce caravan site, and two Park and Ride sites, the carbon footprint of additional car journeys to site and to the Park and Ride sites will still be substantial, and initiatives through the Travel Plan to reduce the carbon and traffic impact of the workforce should be further promoted.

21.21. The construction period will cause significant amounts of greenhouse gases to emitted. It is estimated that over the course of the 9–12-year construction period, approximately 5.7 million tonnes of CO2 would be emitted.

21.22. The majority of greenhouse gas emissions during the 9-12-year construction period are associated with the embodied carbon within the materials (84%) with transport of materials to site and construction worker commuting totalling 10%.

21.23. It is noted that the development has also wide-ranging impacts on ecology and biodiversity, and potential adverse impacts on coastal processes.

Operational phase impacts

Positive

21.24. The sustainability of new nuclear power stations is founded on attributes of low carbon emissions and secure energy supply.

21.25. The Applicant states in the Sustainability Statement that the amount of greenhouse gases emitted during the construction period is small in comparison to the savings that will be achieved once the power station is operational.

Neutral

21.26. None identified.

Negative

21.27. None identified.

Required mitigation

21.28. As set out in the transport section, the Councils expect the need for construction traffic to be minimised, and the proportion of sustainable transport modes to be maximised, with resulting reductions in carbon emissions.

21.29. The Councils also seek, as detailed in the Air Quality section, an enhanced commitment by the Applicant to further increase Euro VI compliant HGVs, with a proposed cap on the % of non-Euro VI and confirmation that non-Euro VI vehicles will be Euro V.

21.30. However, even if this is achieved, the carbon footprint of traffic generated by Sizewell C and the construction activity, and the use of resources and generation of waste during construction (particularly materials) remains substantial. The Councils encourage the Applicant to consider ways to off-set the carbon footprint of the development.

22. Major Accidents and Disasters (Lead authority ESC)

22.1. Major accidents and / or disasters assessment (MAD) considers the potentially significant effects of a development on the environment because of its vulnerability to, or introduction of, risks of major accidents and/or disasters.

22.2. The main risks are related to a) a major construction site and the additional workforce population adjacent to an operating nuclear power station, and b) operating a new nuclear power station in this location.

Table 24: Summary of impacts – Major accidents and disasters

Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
24a	Impact on existing off-site radiation emergency arrangements of Sizewell C construction site	C	Neutral	Suffolk Resilience Forum Radiation Emergency Plan under Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR19) to be updated before construction work commences, and construction works to implement the provisions of this plan - requirement	NPS EN-6 notes radiation from nuclear power stations requires careful management during and beyond the operational life of the power station.
24b	Potential risk arising from a major construction site in this location, and from an operating nuclear power station in this location	C / O	Negative	Mitigation that takes into consideration other large scale development projects in place throughout the construction and operation - obligation Up-to-date responsibilities met under the REPPIR19 regulations - requirements	

Policy context

National Policy Statements

22.3. Little reference is made in EN-1 to major accidents and disasters in regard to energy infrastructure development. Paragraph 4.11.3 of Section 4.11 (Safety) of EN-1 notes some energy infrastructure will be subject to the Control of Major Accident Hazards (COMAH) Regulations 1999. These Regulations aim to prevent major accidents involving dangerous substances and limit the consequences to people and the environment of any that do occur. COMAH regulations apply throughout the life cycle of the facility, i.e., from the design and build stage through operational life to decommissioning.

Local Plan Policy

22.4. The Local Plan does not have any specific policies in relation to this subject area. However, it does have Policy SCLP9.5 relating to flood risk and Policy SCLP9.3 relating specifically to the coastal change management area in the district. Policy SCLP3.4 in relation to proposals for major energy infrastructure proposals, requires the Council to consider the potential impacts of proposals throughout their lifetime including decommissioning.

Context

22.5. MAD considers the potentially significant effects of a development on the environment because of its vulnerability to, or introduction of, risks of major accidents and/or disasters.

22.6. The MAD does not include Environmental Permitting or Nuclear Site Licence matters and excludes certain off-site works that are not likely to be susceptible to or create new MAD hazards.

22.7. The MAD chapter of the ES sets out a comprehensive review of the risks and hazards associated with the project, determines the appropriate mitigation measures, and highlights the tolerability of any residual risks. The assessment methodology is agreed by the Councils.

22.8. The Councils will not cover Marine Navigation Risks, as these are within the remit of the MMO and EA (flooding).

22.9. The MAD considers two scenarios: the construction assessment scenario including construction at the Main Development Site including the operation, removal, and reinstatement of temporary development at Associated Development sites, and the operational assessment scenario comprising the operation of the permanent development at the Main Development Site and Associated Development sites.

22.10. The Community Safety Management Plan sets out the measures that will contribute to community and worker safety, and where appropriate implementation will be secured through S106 obligations.

22.11. Areas scoped out of the assessment: off-site sports facilities at Leiston, fen meadow compensation site south of Benhall, east of Halesworth and if required marsh harrier improvement area at Westleton have been scoped out of the assessment – this is agreed, and it is considered that the new fen meadow compensation area in West Suffolk can also be scoped out of assessment.

22.12. With the implementation of primary and tertiary mitigation measures, the assessment considers that all major accidents and disaster risks are considered to have been mitigated to 'not significant'. The methodology included the hazards associated with both National and Community Risk Register's and Suffolk's emergency preparedness arrangements under the Civil Contingencies Act 2004.

22.13. There are several threats and hazards during the construction phase. These include fire and / or explosions at the Main Development Site or off-site Associated Development sites including unexploded ordinance, disturbance, or unidentified unexploded ordnance in the marine environment, ground stability including collapse of deep excavations and stockpiles, road traffic accidents involving construction traffic, construction incidents including major leaks and spillages within the marine environment, ionising radiation risk from radiography, train derailment or collision, and injury to members of the public using level crossings.

22.14. There are several hazards/threats possible during the operation of Sizewell C. These include a civil nuclear incident, major accident, marine navigation risks, ground stability and disturbance of unidentified explosive ordnance during maintenance, major leaks or spillages at the Two Village Bypass and Sizewell Link Road resulting in contamination or release of hazardous substances, road safety risks caused by operational traffic.

22.15. Hazards common to both the construction and operation phase include loss or failure of electricity transmission, gas supply, water supply, or telecommunications through contact with unidentified utilities during maintenance, emergency response activities implemented on the Main Development Site impacting sensitive receptors, absent or deficient security, safety, or environmental management systems including inadequate planning, resource provision, or procedures.

22.16. The cumulative assessment with other projects, including nationally significant infrastructure projects, has been carried out by the Applicant. It is imperative that findings

within the ES relating to cumulative impacts arising are properly carried out at the appropriate times during construction and operation. This must include reference to ScottishPower Renewable proposals for East Anglia One North and East Anglia Two offshore windfarms (if consented). See the cumulative section for further reference to these projects. A post-consent review may be required which would need to be secured by requirement.

Construction and Operation phase impacts

Positive

22.17. There are no specific positive impacts arising from the MAD assessment.

Neutral

22.18. The majority of the Sizewell C construction site, and the entirety of the licenced operational site, sits within the Sizewell B Detailed Emergency Planning Zone and will have a major impact on existing off-site radiation emergency arrangements. The details, which include urgent public protection measures, will be included in the Suffolk Resilience Forum Radiation Emergency Plan under Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR19) before construction work commences.

22.19. Sizewell A remains a nuclear licenced site, but there is no requirement for off-site emergency arrangements (Serials 27.4.35 and 27.4.38).

22.20. The requirement for immediate counter-measures as a result of an off-site nuclear emergency at Sizewell B has been extended from 1km to 1.35km under REPPIR19 (Serial 27.4.39).

Negative

22.21. There is potential risk arising from a major construction site in this location and from an operating nuclear power station in this location. However, the Applicant has carried out what appears to be a thorough assessment. With appropriate mitigation that takes into consideration other large scale development projects in place throughout the construction and operation and with up-to-date responsibilities met under the REPPIR19 regulations the Councils consider negative impacts can be appropriately mitigated.

Requirements and obligations

22.22. Within the assessment, reference is included to emergency arrangements for the existing Sizewell A and B stations. These are set out within on-site and off-site emergency plans, supported by national plans, in line with existing legislative requirements, including REPPIR19 and nuclear site licence conditions. It also references off-site emergency

arrangements that would require a multi-agency response as set out within the Sizewell Off-Site Emergency Plan. To comply with REPPIR19 the existing Sizewell on-site and off-site emergency response plans will need to be updated. The on-site plan will need to be completed by EDF Energy Nuclear Generation Ltd (Sizewell B) in conjunction with the Applicant. The off-site plan will need to be completed by SCC (as the Duty Holder) in conjunction with EDF Energy Nuclear Generation Ltd (Sizewell B) and the Applicant. The latter plan will also cover wider risks under civil contingencies.

22.23. The Draft DCO does not cover at the moment provisions for emergency planning. The Councils request a new requirement to be added, so that no part of the relevant works may be commenced until the Suffolk Resilience Forum Radiation Emergency Plan has been reviewed to account for the relevant works, and that emergency planning arrangements in respect of the relevant works must be implemented in accordance with the Plan. Proposed wording for this new requirement is included in **ANNEX J.**

Socio-economic

23. Economic, skills and employment strategy

Lead authority: ESC (supply chain and tourism)/SCC (skills and employment)

Summary

23.1. The development will be an enormous opportunity for Suffolk's local economy. It would mean, according to the Applicant, a boost to the local economy as a result of the construction phase, equating to £2.5bn of output and supporting over 40,000 years of employment throughout the construction phase of the project [APP-195]. Benefits would include significant local employment creation, additional spending in the area from non-homebased workers, and as a result extra wages from home-based workers, and opportunities for local businesses to enter the supply chain.

23.2. It is recognised that, if well delivered, a number of these aspects, particularly related to skills and business opportunities, may have legacy benefit for the local economy.

23.3. Whilst these expected benefits are welcome, they can only be seen as opportunities rather than confirmed benefits, and the Councils expect that economic, skills, education and employment opportunities for the local area are maximised, and the Applicant's ambitions in this area further increased. The Applicant is in agreement with the Councils on a number of mitigation funds related to skills, employment and education, although the detail and size of these funds is still to be confirmed.

23.4. The Councils highlight that there are also a number of negative impacts from the development. These include churn issues and resulting displacement of the workforce of other sectors, and disruption to the supply chain of other sectors.

23.5. For tourism, the impact of the construction is considered by the Councils to potentially be significantly negative; this needs to be reflected in mitigation through the proposed tourism fund.

23.6. In order to support Suffolk in realising the numerous long-term economic opportunities which Sizewell C presents for Suffolk's local people, supply chain and economy, whilst minimising negative effects, it is essential that these issues are addressed through the strategies proposed by the Applicant, namely the Employment, Skills and Education Strategy, the Local Supply Chain Engagement Strategy, and the Tourism Strategy.

23.7. The Applicant and its contracted supply chain partners must work transparently and collaboratively with the Councils, and its partners across Suffolk and Norfolk, to ensure that the region capitalises on the opportunity presented by Sizewell C and that the value in and to local communities is maximised.

23.8. Adequate financial mitigation is required to deliver the economic benefit to the local area. There will be residual impacts of the development on the local community and businesses in Suffolk that cannot be mitigated, and this needs to be very carefully managed.

Table 25: Summary of impacts – Economic, skills and employment strategy					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative / Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
Supply chain and economic development					
25a	Investments in local economy as part of the construction programme, and associated local/regional supply chain opportunities – however, "Lift and shift" may risk undermining local supply chain opportunities	C	Positive	Applicant is encouraged to engage in inward investment activities to maximise local economic benefit Mitigation plan to increase local economic benefit and reduce negative impacts including displacement - obligation Funding for economic development resource to aid with delivering the mitigation plan – obligation Suitable governance involving the Councils to maximise opportunities - obligation	Local Plan Policy SCLP3.4: pre-amble notes economic opportunities associated with energy infrastructure development may involve creation of jobs during all stages of the project and associated demands on local supply chain and sectors which support projects.
25b	Opportunity for additional spend in the area from workforce	C	Positive	Applicant is encouraged to work with Councils on innovative schemes to encourage non-home-based workforce to spend money locally	
25c	Adverse impact on businesses as a result of workforce displacement and churn, and disruption/displacement in local wider supply chain	C	Negative	Mitigation plan to increase local economic benefit and reduce negative impacts including displacement - obligation Funding for economic development resource – obligation Suitable governance involving the Councils to maximise opportunities - obligation	NPS EN-EN1 identifies large-scale development projects are likely to have socio-economic impacts at local levels, e.g., on small businesses.
25d	Economic cost of congestion and journey time delays to local businesses, as a result of increase in construction traffic and highway works	C	Negative	Mitigate/Compensate: Fund to mitigate/compensate for economic cost of congestion - obligation	NPS EN-EN1 identifies large-scale development projects are likely to have socio-economic impacts at local levels, e.g., on small businesses.

					Local Plan
25e	Potential "boom and bust" effect for the local economy at end of construction period	O	Negative	Mitigation plan to increase local economic benefit and reduce negative impacts including boom and bust effect - obligation Suitable governance involving the Councils to maximise opportunities - obligation	NPS EN-EN1 identifies large-scale development projects are likely to have socio-economic impacts at local levels, e.g., on small businesses.
25f	Supply chain opportunities of operational power station (including outages)	O	Positive	Mitigation plan to increase local economic benefit and reduce negative impacts including displacement - obligation	Local Plan Policy SCLP3.4: pre-amble notes economic opportunities associated with energy infrastructure development may involve creation of jobs during all stages of the project and associated demands on local supply chain and sectors which support projects.
25g	Legacy of experienced and accredited businesses to enter global nuclear supply chain and wider local and national energy project opportunities	O	Positive	Mitigation plan to increase local economic benefit and reduce negative impacts including displacement - obligation Tangible mechanisms for ensuring that the skills base developed for Sizewell C is as transferable as possible to other key sectors in the local economy – obligation	Local Plan Policy SCLP3.4: pre-amble notes economic opportunities associated with energy infrastructure development may involve creation of jobs during all stages of the project and associated demands on local supply chain and sectors which support projects.
Employment skills and education					
25h	25,0000 employment opportunities from the construction; opportunity for significant local employment creation –	C	Positive	Applicant to set clear, ambitious and SMART employment targets - obligation Job service funded by the Applicant – obligation	NPS EN-1 Socioeconomics: socio-economic impacts may include the creation

	however, risk that home based worker target cannot be met			Employment outreach fund - obligation Activity to increase the size and diversity of the labour market pool - obligation Suitable governance involving the Councils to maximise opportunities - obligation Adopt and fund a dynamic approach to monitoring skills, employment and education outcomes and impacts – obligation Skills activities as below	of jobs and training opportunities. Local Plan Policy SCLP3.4 notes consideration will be given to maximising economic and community benefits where feasible through agreement of strategies in relation to employment, education, and training opportunities for the local community.
25i	Opportunity to enhance skills and prospects of local workforce, and improvement Suffolk's skills and training offers – also leaving legacy post-construction	C / O	Positive	Funded "skills for supply chain" programme - obligation Funding for a regional skills coordination function – obligation Capital and revenue fund for local skills infrastructure and improving local training offers – obligation Suitable governance involving the Councils to maximise opportunities - obligation Apprenticeship strategy – obligation	NPS EN-1 Socioeconomics: socio-economic impacts may include the creation of jobs and training opportunities. Local Plan Policy SCLP3.4 notes consideration will be given to maximising economic and community benefits where feasible through agreement of strategies in relation to employment, education, and training opportunities for the local community.
25j	Opportunities for unemployed and under-employed	C	Positive	Activity to increase the size and diversity of the labour market pool - obligation Employment outreach fund - obligation Bursary scheme to remove barriers to training and employment – obligation Apprenticeship strategy – obligation	NPS EN-1 Socioeconomics: socio-economic impacts may include the creation of jobs and training opportunities. Local Plan Policy SCLP3.4 notes consideration will be given to maximising

					economic and community benefits where feasible through agreement of strategies in relation to employment, education, and training opportunities for the local community.
25k	Labour market churn issues and impacts on wider business community	C	Negative	Funded "skills for supply chain" programme to include investment for skills in the wider economy - obligation Job service funded by the Applicant to be wider than just supply chain related – obligation	NPS EN-1 Socioeconomics: socio-economic impacts may include the creation of jobs and training opportunities and potential impact of influx of construction workers on demand for services (potentially including business community). Local Plan Policy SCLP3.4 notes consideration will be given to maximising economic and community benefits where feasible through agreement of strategies in relation to employment, education, and training opportunities for the local community.
25l	Negative long-term impact on individual career prospects if demobilisation and legacy for workers is not addressed	O	Negative	Mechanisms for ensuring that the skills base developed for Sizewell C is as transferable as possible to other key sectors in the local economy – obligation	Local Plan Policy SCLP3.4 notes consideration will be given to maximising economic and community benefits where feasible through agreement of strategies in relation to employment, education,

					and training opportunities for the local community.
25m	Unemployment as project demobilises – "boom and bust"	O	Negative	Mechanisms for ensuring that the skills base developed for Sizewell C is as transferable as possible to other key sectors in the local economy – obligation Job service funded by the Applicant to be maintained for the post-construction period to help alleviate the impact – obligation	Local Plan Policy SCLP3.4 notes consideration will be given to maximising economic and community benefits where feasible through agreement of strategies in relation to employment, education, and training opportunities for the local community.
25n	900 operational jobs, with local employment opportunities, and opportunities as result of Suffolk becoming an attractive location as base for outage workers	O	Positive	n/a	Local Plan Policy SCLP3.4 notes consideration will be given to maximising economic and community benefits where feasible through agreement of strategies in relation to employment, education, and training opportunities for the local community.
Tourism					
25o	Potentially significant impact on Suffolk as a tourism destination (Forecast 17% reduction in overall willingness to visit during construction)	C	Negative	Tourism Fund of scale appropriate to the level of potential impact, available before start of construction and until post-construction - obligation	NPS EN-1 Socioeconomics notes impacts may include effects on tourism. Local Plan Policy SCLP6.1 Tourism: The Council will seek to manage tourism to protect the features that make the area attractive to visitors (including the Heritage Coast environment).

					Local Plan Policy SCLP3.4 Proposals for Major Energy Infrastructure Projects: notes consideration will be given to assessment of potential impacts on the SCH AONB. Local Plan Policy SCLP6.3: Tourism Development within the AONB and Heritage Coast: notes tourism development in the AONB will be supported where it is of a scale and extent that does not adversely impact the AONB, and supports the conservation and enhancement of special qualities of the AONB.
25p	Displacement of tourists from accommodation as a result of demand from workforce	C	Negative	Housing Fund has an element of measures to deal with impacts on tourism accommodation	NPS EN-1 Socioeconomics notes impacts may include effects on tourism. Local Plan Policy SCLP6.1 Tourism: The Council will seek to manage tourism to protect the features that make the area attractive to visitors (including the Heritage Coast environment). Local Plan Policy SCLP3.4 Proposals for Major Energy Infrastructure Projects: notes

					consideration will be given to assessment of potential impacts on the SCH AONB.
25q	Business benefits of workforce taking up tourism accommodation	C	Positive	n/a	NPS EN-1 Socioeconomics notes impacts may include effects on tourism. Local Plan Policy SCLP3.4 Proposals for Major Energy Infrastructure Projects: notes consideration will be given to assessment of potential impacts on the SCH AONB.
25r	Potential "boom and bust" effect on tourism accommodation if becoming reliant on workforce bookings	O	Negative	Tourism Fund to be available also in the early post-construction period - obligation	
25s	Potential that recovery of tourism sector may take several years after construction period	O	Negative	Tourism Fund to be available also in the early post-construction period - obligation	NPS EN-1 Socioeconomics notes impacts may include effects on tourism. Local Plan Policy SCLP6.1 Tourism: The Council will seek to manage tourism to protect the features that make the area attractive to visitors (including the Heritage Coast environment).
25t	Sizewell C Visitor centre as tourist attraction	C / O	Positive	Visitor Centre to be secured by obligation Applicant to work with local stakeholders to commission research that will help to define a vision and options for the proposed visitor centre that will maximise benefits for the local economy - obligation	NPS EN-1 Socioeconomics notes impacts may include effects on tourism. Local Plan Policy SCLP6.1 Tourism: The Council will seek to manage tourism to protect the features that

					make the area attractive to visitors (including the Heritage Coast environment). Local Plan Policy SCLP6.3: Tourism Development within the AONB and Heritage Coast: notes tourism development in the AONB will be supported where it is of a scale and extent that does not adversely impact the AONB, and supports the conservation and enhancement of special qualities of the AONB

Policy context

National Policy Statements

23.9. Generic socio-economic impacts of energy NSIPs are covered in Section 5.12 of EN-1.

23.10. EN-1 sets out that the construction, operation, and decommissioning of energy infrastructure may have socio-economic impacts. It identifies that the construction, operation and decommissioning of energy infrastructure may have socio-economic impacts at local and regional levels.

23.11. Paragraph 5.12.3 notes socio-economic impacts may include the creation of jobs and training opportunities, the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities, and effects on tourism. There may be impacts from a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development.

23.12. Paragraph 5.12.3 also covers potential cumulative impacts of development: if development consent were to be granted for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.

23.13. Paragraph 5.12.5 states socio-economic impacts may occur in isolation or be linked to other impacts, for example the visual impact of a development is considered under landscape and visual impact assessment but may also have an impact on tourism and local businesses.

23.14. Paragraph 5.12.8 notes decision-makers should consider any relevant positive provisions the developer has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts.

Local Plan Policy

23.15. Policy SCLP4.2 relates to new employment development in the former Suffolk Coastal Area. Although not a designated employment site in the Local Plan, the potential for the development of Sizewell C has been referenced in previous Local Plans. Development for employment outside of settlement boundaries will only be acceptable if

there is no sequentially preferable land available adjacent to existing employment areas. Although not allocated in the Local Plan, the site for Sizewell C is allocated in NPS and therefore it is not considered to be contrary to this Policy.

23.16. Policy SCLP4.5 Economic Development in Rural Areas supports proposals that grow and diversify the local economy. One of the sections of this policy requires the proposed use to be compatible with surrounding employment uses.

23.17. Policy SCLP6.1 Tourism requires ESC to seek to manage tourism across the plan area in a way that protects the features that make the area attractive to visitors. This includes proposals which improve the visitor experience and support opportunities for year-round tourism. However, as per policy SCLP6.2, any proposals must comply with HRA regulations. Tourism development in the AONB and Heritage Coast must comply with policy SCLP6.3 which includes enhancing the long-term sustainability of the area.

Sizewell C Economic Development, Skills, Education and Employment Principles

23.18. This principles document has been endorsed by the joint local authorities' group and builds upon a previous iteration from 2015. The document outlines the principles and priorities for action related to maximising the socio-economic benefit of the proposed Sizewell C development. It references and described the significant opportunities and challenges for Suffolk's businesses, and how with a clear strategy it can make a definitive contribution to Suffolk's education and skills priorities for the area. The full document is available at **ANNEX D**.

Context

23.19. With a unique mix of onshore and offshore renewables, gas and nuclear generation, Suffolk has become the UK's epicentre for energy generation and transmission. Nuclear power has been a key part of this energy mix since the construction of Sizewell A, coupled with more than half a century of offshore experience in oil and gas behind it, Norfolk and Suffolk have a unique blend of ports, infrastructure, expertise, skills and innovation that form an Energy Cluster that will now play an important role in supporting the UK in delivering its transformational net zero target.

23.20. This development will be the largest infrastructure project in Suffolk for generations, and one of the largest infrastructure projects in the UK in the coming decades and therefore is an enormous opportunity for our local economy. The Sizewell C Consortium (The Sizewell C Consortium is a group of over 200 leading companies and organisations from across the country, guided by its goal to deliver Sizewell C and to ensure that the priorities of levelling up and net zero are met. The Consortium has commissioned a report

by Ernst and Young that has identified that from a possible UK spend of £14.4 billion, £2 billion will be spent in Suffolk alone, with the Applicant predicting the project will put at least £100 million a year into the regional economy during peak construction and £40 million per year during its 60 years of operation.

23.21. The local area has an ageing population with a persistent decline in working age population, with the largest age group being aged 70-74 and the most overrepresented age group being those aged 85 and above. The District is reliant on attracting inward migration to sustain an accessible working age population. Despite this, skills levels and wages are lower, with more jobs than the national average in lower paying industries.

23.22. There are 10.9% of the population in the Aldeburgh, Leiston and Saxmundham Community Partnership affected by income deprivation, and 8.3% of those are of working age. A significantly high number of children is affected by this income deprivations, with 15.2%, which has contributed to 32.5% of children being classed as obese (evidence from gov.uk website). The income deprivation in the area caused by worklessness and lack of employment opportunities has a knock-on effect on the health of the younger generation. Local people need accessible employment opportunities in order to break this cycle. Leiston itself is IMD Quartile 4, making it in the second most deprived 20% of areas in England, from 2019 data. This has been notably exacerbated by the Covid-19 pandemic. Life expectancy is also lower in Leiston than in the rest of Suffolk for both males and females. Continuing to enable local people to access the skills they need to benefit from and drive future growth sectors such as clean energy is central to supporting our Inclusive Growth priority, improving productivity, raising wage levels, educational attainments and helping build a resilient economy and workforce.

23.23. For areas hosting large scale development, it is expected that benefits filter into the community and create social mobility, supporting a levelling up agenda and increasing education and employment opportunities. Despite being host to two nuclear power stations for six decades, the immediate nearby towns and villages have not been enabled to maximise the benefits of their presence in the town as would be expected and still have substantial socio-economic difficulties and the town's population and reputation has suffered as a result. The Sizewell C project provides a new opportunity for those geographically closest to the site and the Applicant must be a catalyst for this, as well as having a local presence in the vicinity of the development that is not on the site. The Councils consider this essential in order to support Suffolk in realising the numerous long-term economic opportunities which Sizewell C presents for our local people, supply chain

and economy, whilst minimising negative effects. The Applicant should ensure that Suffolk and the wider region gain long term legacy benefits for businesses and the local communities and that areas such as Leiston, Aldeburgh and Saxmundham, towns of just under 12,000 residents, which will host the new nuclear power station can also reap the economic benefits. Just over one in six people within these communities are aged under 16, and we want these young people to have every opportunity to be the future workforce of the Applicants project.

23.24. The Applicant must be cognisant of the fact that, while the potential benefits of the Sizewell C development will be widely felt across Suffolk, the East of England and the UK, the negative impacts requiring significant mitigation will be felt locally in the area of East Suffolk, and therefore the mitigation should be felt locally as well. In order to maximise this opportunity, and enable the mitigation to be applied coherently, there needs to be enhanced economic development capacity to deliver the required activity.

23.25. Although Leiston will be most impacted with an expected increase in population of 48% through non-home-based workforce at the peak construction period, other key East Suffolk towns and wider Suffolk will also be affected. The appropriate strategies e.g., Workforce Development Strategy and Employment, Skills and Education Strategy require full support and delivery commitment by the applicant to ensure the local opportunities, including access to training and employment are enabled and delivered, to truly deliver on our joint social mobility and legacy aspirations.

23.26. This intention should be emphasised and clear in the Applicant's plans, and in the S106 documentation, with adequate financial mitigation to deliver the economic benefit to the local area. There will be residual impacts of the development on the local community that cannot be mitigated, and this needs to be very carefully managed, so that the benefits of having such a development on their doorstep do not pass those communities by and every effort must be taken to realise the potential for social mobility for Leiston and other local East Suffolk communities.

23.27. The consultation includes several strategic proposals and opportunities in relation to the project but does not include significant detail in any of the areas.

23.28. To support economic development, employment, education and skills benefits, the Applicant is proposing the following strategies:

i. Employment, Skills and Education Strategy.

ii. Local Supply Chain Engagement Strategy.

iii. Tourism Strategy.

23.29. The Councils commissioned an Economic Impact Assessment 2018 (**APPENDIX 2: 8**). This includes recommendations for mitigating actions. These include:

i. Commitment from the Applicant and all supply chain businesses to the recruitment of local workers;

ii. Ensuring sufficient campus accommodation to manage the number of non-home-based workers in tourist accommodation;

iii. Providing support to local businesses to help them to identify and develop to fulfil supply chain opportunities and achieve accreditation to be able to win work in the supply chain;

iv. Providing investment in attracting inward investors to the local area supporting them via an effective investor development programme; and

v. Providing investment in marketing and business support to the tourism sector to minimise the loss of visitors to the local area.

23.30. Supply chain, employment, skills and tourism impacts are closely interlinked; for the purposes of this LIR, they are discussed consecutively in the following sections.

Learning from Hinkley Point C

23.31. The Councils, as part of the New Nuclear Local Authority Group, commissioned a Study on the impacts of the early-stage construction of the Hinkley Point C Nuclear Power Stage: Monitoring and Auditing Study Final Report (**APPENDIX 2: 1)** which looked at the economic development impacts at Hinkley Point C. It summarised with regard to the actual (2019) impacts against predicted impacts on economic development that (page 58): “At the current, pre-peak phase, the project is performing well against predictions in many impact areas, including local employment content, training and education, apprenticeships, jobs brokerage, local supply chain inputs and tourism. Mitigation and enhancement measures appear to be working well. However, there is some debate about the actual level of total workforce numbers, set against predictions, about disaggregated employment impacts (eg skills analysis for HB and Non-Home-based (NHB) workforce, opportunities for various disadvantaged or under-represented groups), and long-term sustainability implications.”

23.32. The study raises concern (at page 61) that at Hinkley Point C there has been a lack of clarity on definition of some indicators, “For example, for employment -- what is a worker, which workers should be included in the site profile, and what is the predicted average homebased workforce over the project life? The DCO examination was an opportunity missed for clarification of such socio-economic issues.”

23.33. It identifies (page 62) that "the monitoring system is not delivering enough accurate and disaggregated employment information, especially on local content by skill category and by disadvantaged and under-represented groups.

23.34. Similarly, there is a lack of disaggregated data on supply chain impacts in Somerset and districts.

23.35. Improved, full, transparent and publicly available Workforce Survey needed to underpin the better auditing of many socio-economic impacts."

23.36. These are important observations which need to be addressed when setting up the monitoring framework for Sizewell C.

23.37. The study notes the need for the Examining Authorities "to recognise opportunities, and plan for, potential legacy benefits in examining major DCOs" (page 65).

24. Economic and supply chain Impacts (Lead authority ESC)

Construction impacts

Positive impacts / opportunities

24.1. The development will be an enormous opportunity for Suffolk's local economy.

24.2. The Applicant refers to a number of expected benefits of the construction phase (Economic Statement 1.3.2 [APP-610]), including:

i. a boost to the local economy as a result of the construction phase, equating to £2.5bn of output and supporting over 40,000 person years of construction employment;

ii. Local employment creation – a third of jobs at peak of construction expected to be filled by existing local residents, including people previously unemployed or inactive;

iii. Spending in the area from non-homebased workers, and as a result extra wages from home-based workers;

iv. Supply chain opportunities.

24.3. These expected benefits are welcome, but they can only be seen as opportunities rather than confirmed benefits, and the Councils expect that economic opportunities for the local area are maximised, and the Applicant's ambitions in this area further increased.

24.4. The report commissioned by the Sizewell C Consortium projects total spend of £4bn within the regional economy throughout the construction of Sizewell C, but this is not just for Suffolk and spread across the whole East of England. The same report projects a value of £2bn of the total construction budget to Suffolk based companies, but the Councils

highlight that may disrupt other large local infrastructure projects that use the same labour workforce and supply chain.

24.5. Supply chain opportunities - The Applicant's ambition for increased investment in local supply chain is very positive. However, the Applicant's activities are at the moment only focused on adding local businesses into that supply chain. While this is supported, the Councils see this as too-narrow a focus and as such a missed opportunity for the local economy: A more proactive approach would mean that, in addition to adding those local businesses into the supply chain, the Applicant would support to enable them, through investment and expert advice, to grow their offer so they can supply the Applicant's project as well as service their existing markets, by expanding and employing more local people. To maximise opportunities for local businesses, the Councils continue to encourage the Applicant to work with partners (particularly NALEP) to make this happen by developing an effective business growth and investor development service. Supply chain and inward investment must work together to maximise opportunities.

24.6. The Councils recognise that the experience, accreditation and expertise that suppliers for Sizewell C will gain during the construction phase will be exportable, enabling local companies to compete for nuclear/clean energy contracts globally.

24.7. Workers' spend – a large proportion of the cost of the build will be in salaries for the substantial workforce which should generate additional spend in the local and regional economy, if they are encouraged and supported to do so. The Applicant refers in its Economic Statement (para 1.3.2 [APP-610]) to a potential average spending by non-home-based workers in the area of around £21.5 million per year or around £260 million over the construction phase, plus extra wages from home-based workers during the construction phase (with an average boost to incomes each year of £15 million) boosting local spending by a further £5 million per year or £60 million over the construction phase. To maximise these opportunities, workers need to be informed of businesses and suppliers to meet their needs on their doorstep and encouraged via their employers and by the Applicant to use them.

24.8. Opportunities for the local economy from the construction of the project which need be supported in order to be maximised include:

i. Opportunities for growth in non-nuclear related businesses associated with supporting the delivery of the project, for example, local catering, leisure and retail companies. This provides benefits to the wider economy and population as well as the nuclear supply chain.

ii. Opportunities for growth in existing and newly accredited nuclear related businesses associated with delivering the project (Engineering etc.)

iii. Opportunities for businesses to grow in other sectors now that they have the experience of working to a higher nuclear standard. The Applicant should provide funding for business support to enable this to happen.

iv. Opportunity to create new consortia (Food, Transport, Engineering, etc.) with businesses being created from grass roots partnerships and pitching for entry to the supply chain and with the right support.

v. Legacy across all identified growth. A significant opportunity is companies new to the nuclear and energy supply chain providing them with opportunities for future growth in the global nuclear supply chain as well as linking to wider Clean Growth and Net Zero delivery.

vi. Research and Development/Innovation opportunities are already being manifested in the work on hydrogen and the linkages to the Freeport East. The presence of a new nuclear power station at Sizewell will enable the Freeport to become a centre of technical excellence for the wider energy industry and support technological innovation that can be exported around the world. Energy from local offshore wind and new nuclear sources will drive the development of a Green Hydrogen Hub in the Freeport helping the port to become net zero by 2030. Would expect to see other opportunities like this to emerge from the build and subsequent operation.

vii. Suffolk's Energy Cluster linked with offshore and onshore renewables opportunity, with the Applicant being a lynchpin tenant in the activity of the region, accelerating inward investment of Tier 1 and Tier 2 suppliers who may be working in multiple energy construction projects.

viii. Total cumulative wider financial investment - there is expected to be an increasing demand for land and premises ranging from small yards for lower-level contractors to more formal office spaces.

Neutral impacts

24.9. Local businesses can grow from new opportunities afforded, but may then not expand and just supply to the new nuclear market, which is in the area for a time limited period.

Negative impacts

24.10. Whilst there are many significant economic opportunities arising from the Sizewell C development, given the scale of the development and the resulting demand by the project for workforce resources, it is equally likely that there will be several negative impacts for the local economy. In addition, elements of the Applicant's economic strategy, most notably the expected "lift and shift" of parts of the Hinkley Point C supply chain, may risk undermining local economic opportunities.

24.11. Workforce Churn creating displacement – Workforce churn that leads to negative displacement is discussed in more detail in the Skills employment and education section below. The Councils are concerned about impacts of workforce churn on local businesses. If it becomes substantially harder for businesses to fill roles over a longer period, this is indicative of displacement. The development may lead to disruption to businesses that are not within the supply chain that may suffer negative workforce churn from displacement, whereby employees leave to seek employment in the supply chain.

24.12. Disruption within the supply chain - disruption within the supply chain for existing companies (displacement) could occur when goods in the nuclear supply chain are also needed in local businesses and they become more expensive or difficult to obtain, thus disrupting local markets.

24.13. Lift and Shift - The Sizewell C model of learning from Hinkley Point C and applying lessons to reduce costs includes an element of "lift and shift" of companies and employees in the supply chain, i.e., redeploying the same companies used at Hinkley Point C at Sizewell C. This is clearly a threat to generating genuine local benefits for Suffolk and reduces opportunities for local companies to enter the supply chain, for local people to be trained, and to leave legacy benefits.

24.14. Economic Congestion which has been modelled using the VISSUM and VISIM models is likely to cause notable disruption for businesses operating time-dependent activity across the A12. Increased journey times, increased congestion and reduced reliability on the routes affected by construction traffic (principally any journey that involved part of the A12 north of Seven Hills interchange) may cause a perception amongst businesses and investors that the area is an inconvenient location for travel and businesses, and may result in considerations to relocate away from the district or development area as they are incurring significant costs from delays.

24.15. This perception of inconvenience of location for travel and business may be further exacerbated by reduced confidence in the reliability of East Suffolk Line rail passenger

services, due to potential delays or cancellations as a result of the additional rail freight deliveries.

24.16. There will be a significant amount of pressure on the housing market in areas geographically closest to the site, as not all workers will want to live on the campus accommodation provided, despite it being offered. There will also be substantial pressure on holiday accommodation, which despite being occupied all year round, will not reach the income levels from tourists that it will from workers on the site.

Operational impacts

Positive impacts and opportunities

24.17. There will be direct and indirect business and supply chain opportunities as a result of the operational Sizewell C power station, which in itself would create 900 high value local jobs. In addition, the rolling programme of outages for Sizewell B and Sizewell C reactors, drawing in a workforce of 1,000+ to service each reactor, would create further direct and indirect business and supply chain opportunities.

24.18. The experience of working on the construction of Sizewell C has the potential of legacy benefits for local businesses and employees, for future growth in the global nuclear supply chain, offshore and onshore renewables opportunities, as well as linking to wider Clean Growth and Net Zero delivery.

Neutral

24.19. None identified.

Negative

24.20. There is a concern that at the end of the construction period, there could be a "boom and bust" effect for the local economy, with the substantial contracts for local businesses and the large sized construction workforce being wound down. If not carefully managed by ensuring that there is a proactive focus on legacy and on supporting businesses to flourish after the end of the construction period, this could have a significant negative impact on the viability of local businesses and the employment opportunities in the local area. This emphasises further the need for an effective business growth and investor development service that goes beyond the supply chain work currently being undertaken.

Required mitigation

24.21. Supply chain related recommendations from the Councils' Economic Impact Assessment **(APPENDIX 2: 8)** include:

i. Providing support to local businesses to help them to identify and develop to fulfil supply chain opportunities and achieve accreditation to be able to win work in the supply chain;

ii. Providing investment in attracting inward investors to the local area supporting them via an effective investor development programme.

24.22. The Applicant has not yet provided any proposals in relation to additional inward investment. The Councils would welcome the Applicant engaging with them to further increase the local economic benefit, through inward investment (such as consideration of locating a regional base for the Applicant or office in Suffolk) and the potential, using the Sizewell C project as a catalyst, for a Clean Energy innovation centre, similar to that implemented with partners at Hinkley Point C.

24.23. The Councils expect to see a clear, realistic, and positive mitigation strategy with key targets and quantum for financial investment that the Applicant is proposing for each economic area affected, including skills, tourism, supply chain etc., (see also sections below on skills and tourism). The Councils need to have greater understanding of and further discussion on the intent and scale of investment from the Applicant.

24.24. The Applicant needs to further detail their assessment of and mitigation proposals for the adverse economic impacts, on tourism and other industries. The Applicant is expected to;

i. Develop and ensure early implementation of a robust and properly resourced mitigation plan to increase local economic benefits and reduce negative effects including displacement;

ii. Develop a substantial and creative package of measures to support upskilling local companies. This needs to be formalised so that training programmes can be planned and delivered in time to ensure that local Small Medium Enterprises have the competencies and capabilities to fulfil work package requirements of the early groundworks and civils phases (see Skills Employment and Education section);

iii. Develop clearly defined partnership strategies focused on other potential areas of economic benefit such as inward investment and supply chain; co-ordination of business support activities to maximise local economic benefit. Local Authorities are best placed to provide this local leadership role within Economic Development teams, supported by NALEP;

iv. Develop innovative schemes to encourage non-home-based workers to spend money with local retailers;

v. The Councils and their partners will submit a request for additional funding to provide economic development officer and business support.

24.25. The Councils expect to see a clear, realistic, positive mitigation strategy with key targets and ranges for financial investment that the Applicant is proposing in each economic subject area including skills, tourism and supply chain. The Councils also expect clarification on local economic benefits and how they can be increased, as detailed in the section above.

24.26. The Councils consider that, in response to the economic impacts of congestion on the local economy, consideration is given to a fund to mitigate/compensate for economic cost of congestion.

24.27. The Councils and their partners will submit a request for funding to support additional Economic Development resource required in order to manage issues associated with the economic impact and maximising the local economic benefit of Sizewell C.

25. Skills, Employment and Education (Lead authority SCC)

Construction impacts

Positive impacts / opportunities

25.1. The construction of Sizewell C will be one of the largest and most complex construction projects in the UK, requiring a highly skilled and competent workforce. It will therefore offer a once in a generation catalytic opportunity to deliver:

i. Increased, sustainable, employment harnessing the increased productivity levels that nuclear construction demands;

ii. Enhanced skills and prospects for the local workforce;

iii. Increased investment in, and enhancement of, Suffolk's local skills system; and

iv. National leading school's engagement programme inspiring young people across the region to enter science, technology, engineering and maths career routes.

25.2. The Councils expect the project to have a positive impact on employment levels and supporting the Councils priority of Inclusive Growth. Creating opportunities for those furthest from the workforce and for our vulnerable groups such as Care Leavers. To achieve this positive impact the Applicant and local stakeholders need to work collaboratively. The Applicant will need to share detailed skills and job information in

advance and provide funding to ensure measures that will support this activity are enhanced.

25.3. The projection for 25,000 employment opportunities across a broad range of careers and occupations at a time when the county is seeking to recover from the impacts of the coronavirus pandemic is welcomed, particularly if these are correctly linked to legacy employment opportunities ensuring sustained employment once the project is completed.

25.4. The Councils consider that there will be many opportunities for locals to improve their jobs, gain new skills and training, increase their pay and enhance (or change) careers, which will have both benefits for the individuals and for the Suffolk economy.

25.5. The Councils wish to fully reap opportunities to maximise the local workforce proportions in the later, higher skilled, stages of the project. To achieve this, the Applicant needs to work with partners to recruit and train local people in the early stages of the construction period which will ensure that they develop their skills and are enabled to move between roles and different types of contracts, and to higher skilled roles, throughout the construction period.

25.6. The Sizewell C project is an opportunity for positive change in improving the equality, diversity, and inclusion across the engineering and construction sectors. Increasing equality, diversity, and inclusion will bring significant benefits to organisations and this project can be a catalyst for sustainable change.

25.7. The UK's nuclear industry is concentrated into clusters around the country. The construction and operation of Sizewell C alongside the existing Sizewell B station will lead to Suffolk becoming the densest operational nuclear cluster in the UK. Suffolk therefore will benefit from the significant long term and highly productive employment that the nuclear sector supports.

25.8. Nuclear and the wider Clean Energy sector is an appealing destination for students. This development provides a once in a generation opportunity to maximise educational inspiration, using the project as the catalyst, encouraging more learners to study science, technology, engineering and maths (STEM) subjects.

25.9. As more learners are encouraged, through targeted inspiration, to strive to reach their potential we will also be supporting the delivery of Suffolk's long-term objective of raising 'human capital' and improving skill levels, this is critical for achieving inclusive growth.

25.10. The project will be a catalyst for improving the skills and competency of individuals within local businesses. Suffolk has low rates of progression from employment within low

level, low-skilled jobs and this has contributed towards a workforce with a much lower skill profile than the national equivalent. The Sizewell C project will create opportunity for the Suffolk workforce to gain new skills and training to help them progress into higher level work with enhanced career prospects moving forward.

25.11. The Sizewell C project provides an opportunity for enhancement of the regional training offer building on the innovative and additional training already developed through programmes such as the New Anglia Skills Deals. Developing and delivering new innovative training, valued by the local economy, will strengthen the regional offer and the specific institution offering the provision.

25.12. The benefits of apprenticeships for both an employer and apprentice are widely publicised. The Sizewell C project will provide many opportunities for local apprenticeship recruitment supporting Suffolk's growth sectors of construction and engineering and play an important part in mitigating any negative employment churn impacts in wider regional employment sectors.

Neutral

25.13. None identified or anticipated.

Negative

25.14. Labour market churn occurs as workers move between jobs – Whilst the Councils welcome the opportunity for individuals to access jobs with better pay and enhanced career paths, this comes with its challenges to the wider Suffolk economy. Local partners are concerned that the Sizewell C project will bring high levels of churn, where skilled labour prematurely leaves their current local employment to work on the project, that will lead to a damaging reduction in Suffolk's economic activity. The Councils are particularly concerned that churn will negatively impact the deliverability of adult social care services and community health care provision, but the impact will equally affect the wider business community. The Councils do not want to discourage individuals to take advantage of the opportunities arising from Sizewell C, but expect that employment, skills and supply chain activities, and public services resilience mitigations, put forward by the Applicant include measures to mitigate such adverse impacts on the local economy and employment market.

25.15. The Councils remain concerned that due to the unprecedented level of development planned, including other key NSIPs that will also require a similar labour force, the region will have significant cumulative labour churn issues if not correctly mitigated. Sizewell C, alongside large-scale infrastructure projects, such as East Anglia Offshore Wind, National

Grid Electricity Transmission Bramford to Twinstead and further projects, are all fuelling demand for skills in the infrastructure sector locally.

25.16. Mitigation provided to other themes is based on the "worst case" impact scenario of numbers of non-home-based workers. However, the Councils are concerned that the Applicant may not achieve the home-based worker predictions in this model, with these shortfalls then being met by increasing non-home-based workers. If this occurs mitigation may not be sufficient.

Operational phase impacts

Positive

25.17. According to the Applicant, the operational power station would create 900 high value local jobs supporting the ongoing operation of Sizewell C.

25.18. In addition, the rolling programme of outages for Sizewell B and Sizewell C reactors would draw in a workforce of 1,000+ to service each reactor, which would make Suffolk an attractive location for outage workers to be based in.

25.19. The experience of working on the construction of Sizewell C has the potential of legacy benefits for local employees. If a focus on skills legacy is maintained, the gained skills and experience and career progression of the home-based workforce during the construction of Sizewell C may have a positive legacy for Suffolk's employment market.

Neutral

25.20. None identified.

Negative

25.21. The creation of jobs and the positive impact that the Sizewell C project will have on employment levels is welcomed. However, there is a risk that unemployment will increase as the project demobilises. This impact may be mitigated or at least reduced if the employment opportunities are linked to sustainable 'legacy' employment in the region. Legacy infrastructure skills are identified as those which will be of most value to Suffolk and the region after the Sizewell C project has been completed. Therefore, ensuring that, as the Sizewell C project demobilises, sustainable and continuous employment is provided through mobilisation into the next infrastructure project.

Required Mitigation

25.22. Skills and employment related recommendations from the Councils' Economic Impact Assessment (**APPENDIX 2: 8)** include the need for a commitment from the Applicant and all supply chain businesses to the recruitment of local workers.

25.23. A number of funds will be required to mitigate impacts and maximise opportunities related to skills, employment and education. These include funds for local skills infrastructure, a job service, and a bursary scheme – these are explained further in the Requirements and Obligations section below.

25.24. Additional commitments from the Applicant are sought on the following issues:

i. Prioritisation of activities that develop both local talent pools and local people so that they are enabled to take up opportunities of recruitment into higher skilled roles;

ii. Set clear, specific (to role and level), ambitious, measurable, relevant and time-based employment targets that will ensure the minimum level of home-based recruitment is met and this employment will benefit the local population in terms of legacy, as defined above, and support the outcome of increasing the proportion of local people in higher skilled roles;

iii. Commit to maximising the employment of local residents to fill the 900 permanent operational roles through establishing a training pathway that develops a local talent pipeline;

iv. Set an ambition for 5% of the roles required by the Sizewell C project to be filled through 'earn and learn' positions (the majority of which will be apprenticeships but may also include graduates on formalised training schemes and sponsored students as per the definition of the '5% club') including a commitment to a minimum number of apprenticeship opportunities to be provided to local people;

v. Create tangible mechanisms for ensuring that the skills base developed for Sizewell C is as transferable as possible to other key sectors in the local economy;

vi. Undertake activity to increase the size and diversity of the labour market pool;

vii. Put into place clear plans (e.g., commitments within contracts) to drive the behaviours of the Sizewell C supply chain to achieve skills and employment outcomes;

viii. Use the creation of social value as a measure of quantifying the success of any interventions and to drive commitment and delivery by local contractors and suppliers to recruit locally and provide apprenticeships where feasible;

ix. Clearly set out a strategic approach to developing and supporting the Sizewell C project's workforce requirements. The strategic approach should take into

account each distinct phase of the project, feedback from employment monitoring measures and be reflective of Suffolk's economics, in particular local opportunity that meets skills legacy for the region; and

x. Adopt and fund a dynamic approach to monitoring skills, employment and education outcomes and impacts that, through clearly identified governance, processes the use of all available evidence, local expertise and Labour Market Information (LMI) to ensure home based worker targets are being met and programmes are in place to support/ensure local talent pools are available to combat churn effects.

Requirements and obligations

25.25. In order to mitigate impacts and maximise opportunities, the Councils request the following to be secured:

i. The provision of an employment outreach fund to support the delivery of initiatives in areas of social deprivation and working with those furthest from the labour market and our identified priority groups to bridge the gap to becoming 'work ready' and increase the pool of available local labour;

ii. Provision of a capital and revenue fund ensuring that local skills infrastructure is able to develop and has access to the cutting-edge facilities and specialist teaching resources necessary to create a lasting education and skills legacy to service the needs of the build and support local residents beyond the build;

iii. Delivery of a funded job service that will grow, build and maintain a pool of local talent (replacing 'talent pool of local employment'), driving local employment within the Sizewell C project whilst also creating connections and pathways to enable the flow of local labour between Sizewell C and other infrastructure projects as well as supporting local employers to mitigate against the impact of employment churn;

iv. An apprenticeship strategy integrated with the Applicant's workforce delivery strategy, providing key entry and progression opportunities for all, ensuring all contractors maximise opportunities for local people and providers;

v. Enrichment and enhancement of Suffolk's current educational inspiration offer and its content, maximising the project's opportunity to increase educational inspiration. Upskilling and equipping inspiration leads throughout education, outreach and the Voluntary, Community and Social Enterprise sector;

vi. A funded "skills for supply chain" programme that engages with local businesses and focuses on identifying and delivering the skills and training requirements that will ensure they are competitive when looking to win work on the Sizewell C project and minimise any negative impact of displacement in the local economy;

vii. Provision of a bursary scheme aimed at supporting the removal of barriers to training and employment. Ensuring education and skills development is accessible to all;

viii. Funding for monitoring as set out in paragraph 25.24 above; and

ix. Funding for a regional skills coordination function embedded in the system to provide a focal point of coordination and skills planning and legacy - acting as the main link between the Sizewell C Project, providers and broader regional demand for skills.

26. Tourism Impacts (Lead authority ESC)

Construction phase impacts

Positive

26.1. The proposal for a visitor centre to be shared with the B Station is noted and we welcome this provision as a new/enhanced tourist attraction.

26.2. No clear positive impacts on the tourism sector are anticipated. However, there may be some short-term positive benefits on workers using tourist accommodation all year round and some small-scale construction tourism.

Neutral

26.3. No neutral impacts on the tourist sector are anticipated. It is accepted that a proportion of traditional Suffolk tourism may be substituted by tourists visiting the area specifically to view the construction site, but this is not anticipated to make up in any significant way for the negative tourism impacts.

Negative

26.4. The Councils are concerned about the potentially significant negative impact of the development on the tourism sector. The value of the tourist visitor economy in East Suffolk is estimated at £695m in a study by the Suffolk Coast Destination Management Organisation (DMO) (**APPENDIX 2: 9**), and it supports approximately 11,000 FTE jobs (15% of employment) in East Suffolk.

26.5. The Councils consider that the tourism economy can be defined in terms of its volume and value. As referenced above the Councils' own "Cambridge Model" Volume and

Value estimates provide a robust and longitudinal picture of the tourism economy for all of Suffolk and any local areas within. The Councils agree that opportunities and mitigation measures need to be identified as soon as possible. The Councils' Economic Impact Assessment **(APPENDIX 2: 8)** recommends this course of action as a key mitigation action.

26.6. Using Office of National Statistics (ONS) SIC sector data to estimate tourism employment does not provide a complete picture of the tourism economy, as this data does not include small and micro tourism and tourism related businesses that do not register on ONS datasets (if not using PAYE for example).

26.7. The Applicant commissioned their own visitor survey from Ipsos/Mori in 2019. The survey used both qualitative and quantitative method to collect and assess visitor attitudes towards visiting the Suffolk Coast area during construction of Sizewell C. Its results almost exactly mirrored those headline results from the 2019 visitor and business energy projects survey commissioned by the Suffolk Coast DMO. Namely there was a forecast 17% reduction in overall willingness to visit which, in the DMO survey, equated to a significant negative economic loss every year during construction.

26.8. An element of the Housing Fund is proposed in relation tourism impacts, see the accommodation section for further detail.

Operational phase impacts

Positive

26.9. The provision of the visitor centre will have a legacy benefit.

26.10. Some of the investments made through Tourism Fund funding may have legacy benefit.

Neutral

26.11. Once the tourism sector has recovered from the construction period and visitors who may have been put off visiting during the construction period are returning, it can be expected that the long-term tourism impact can be considered as neutral.

Negative

26.12. The Councils are concerned about a "boom and bust" effect on parts of the tourism sector at the end of the construction period. Accommodation providers may during the construction period have become reliant on business related to the construction workforce of Sizewell C. This will, at least to a degree, have displaced regular tourist visitors who may have stayed previously at these businesses. The immediate impact on the sector could potentially be severe. The proposed tourism fund should include provision to mitigate the impacts at this post-construction period.

26.13. It is noted that it could take several years after the end of construction to attract back visitors who may have been put off visiting during the construction period.

Required mitigation

26.14. Tourism related recommendations from the Councils' Economic Impact Assessment **(APPENDIX 2: 8)** include:

- Ensuring sufficient campus accommodation to manage the number of non-home-based workers in tourist accommodation;
- Providing investment in marketing and business support to the tourism sector to minimise the loss of visitors to the local area; and

26.15. These recommendations would be primarily achieved through the accommodation strategy, and the Tourism Fund discussed below.

Requirements and obligations

26.16. The Councils welcome the Applicant's reference to a Tourism Fund to mitigate negative impacts on the tourism and visitor economy and expect to be fully involved in developing this fund further. The Applicant has issued their own draft proposals for a tourism fund including a proposal to fund capital and revenue investment to improve the visitor economy offer and the support offered for a tourism strategy and action plan (the Councils' own Economic Impact Assessment also recommends these actions).

26.17. The Tourism Fund proposal should include firm commitment from the Applicant to support marketing and promotion activities to be undertaken by our partner, the DMO. Proposals should also include direct support for attractions and events. The Councils and local tourism stakeholders have developed their own proposals for the Tourism Fund to complement and enhance the Applicant's proposal, which they have shared with the Applicant. This proposal details the themes and areas of investment that the tourism mitigation fund needs to deliver against. These include:

i. Visitor Experience Development;
ii. Infrastructure Asset Investment;
iii. Destination Marketing and Promotion;
iv. Tourism Business Support Grants;
v. Tourism Support Resources; and
vi. Research Visitor/Business Surveys.

26.18. The Councils strongly recommend that the mitigation referenced in both the Applicant's and the Councils' own tourism mitigation fund proposals are properly and fully funded, managed, and delivered through existing tourism partnerships between the

Councils, the DMO, the AONB, RSPB and the National Trust. There are no Tourist Information Centres in East Suffolk, but the Councils would welcome directing the investment into our tourism services and partnership organisations such as the DMO.

26.19. The proposal for a visitor centre to be shared with the B Station is noted and we welcome this provision. The Councils would like further information on how local interest groups can be involved in the design and delivery of the new centre.

26.20. In summary, we expect the Applicant to:

i. Provide a firm commitment to the tourism fund with a clear indication of the scale of investment proposed so that stakeholders can begin to shape relevant campaign and marketing activities (evidence from the Economic Impact Assessment **(APPENDIX 2: 8)** suggest that early mitigation has been highly effective in preventing negative impacts on tourism in the South West); and

ii. Work with local stakeholders to commission research that will help to define a vision and options for the proposed visitor centre that will maximise benefits for the local economy.

27. Public Services (Lead authority SCC)

Summary

27.1. The Councils welcome the Applicant's recognition of the potential impact of its development on many aspects of public services, including on school places, social care and safeguarding, health and emergency services. To effectively deal with these impacts, agreement must be reached on appropriate avoidance (through early intervention), mitigation and compensation strategies, as well as acceptable monitoring frameworks to ensure that any unexpected impacts in these areas will be addressed by the Applicant during the development.

27.2. It is noted that there are overlaps between public services impacts and other sections of this LIR, in particular community cohesion and community safety (see below).

Table 26: Summary of impacts – public services					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative / Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
26a	Impact of non-home-based workers on school capacity and Early Years provision	C	Negative / Neutral	Agree clear monitoring process to collect robust workforce data to predict demand, and to identify additional impacts – obligation Funding for additional preschool and primary places at Leiston Primary School – Obligation Contingency fund for school transport – Obligation	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest development, including community facilities.
26b	Impact on/ risks for the wellbeing and learning of pupils at school, as a result of safeguarding concerns, emotional wellbeing and children with English as Additional Language	O	Negative	Funds to be made available to schools for additional pupil support resources - Obligation	NPS EN-1 identifies potential social cohesion impacts depending on how populations and service provision change as a result of the development and influx of construction workers. Local Plan Policy SCLP3.4 notes potential community safety and cohesion impacts will be a consideration in decision-making.
26c	Increase in demand for under 5s and family services, particularly Health Visitor Services, as a result of increase in	C	Negative	Funding for the provision of additional Health visitor resources (estimated around 1.5 FTE) - obligation	NPS EN-1 notes influx of construction workers and associated local demographic changes may

	children arising from incoming workforce				alter demand for services and facilities in settlements nearest development, including community facilities.
26d	Reduced impact on public and community health from construction workforce as a result of onsite health care provision including preventative measures	C	Neutral	Onsite occupational health care provision – obligation Health campaigns for Sizewell C Workforce - obligation Public Services Contingency Fund to be set up to enable mitigating residual impacts - Obligation	NPS EN-1 notes decision-makers should consider any relevant positive provisions the developer has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise.
26e	Risk of direct safeguarding impact on young people as victims and an indirect impact on dependent children and children of partners with whom the Sizewell C workforce form relationships.	C	Negative	Public Services Contingency Fund to be set up to enable mitigating such impacts - Obligation	Mitigation measures may be necessary to mitigate any adverse socio-economic impacts of the development.
26f	Impacts on social care and community health– risk of loss of residential based care provision; increased delays in delivery of care and costs for home care and community health; and increased shortage of social care and community health workforce	C	Negative	Workers Code of Conduct – Requirement Public Services Contingency Fund to be set up to enable mitigating such impacts - Obligation	Mitigation measures may be necessary to mitigate any adverse socio-economic impacts of the development.
26g	Risk of increase of issues resulting from unsafe sexual activity of the workforce, with impacts on the sexual health of the resident population	C	Negative	Workers Code of Conduct – Requirement Workers' sexual health services to be included in onsite occupational health care provision and to be commissioned through SCC Suffolk Public Health – obligation Additional activity for these services could result in significant cost pressure on local sexual health services. If not mitigated for, caps on local services would have to be applied and the ability to test	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest

				for sexually transmitted across the whole of the county will be affected. Sexual health promotion campaigns for Sizewell C workforce - obligation	development. Potential for social cohesion effects from influx of construction workers and associated demographic changes, associated impacts on service provision may affect social cohesion. Local Plan Policy SCLP3.4 notes potential community safety and cohesion impacts will be a consideration in decision-making.
26h	Potential impacts on the Clinical Commissioning Group (CCG) and National Health Service (NHS) in terms of increased demand on primary healthcare, acute healthcare, ambulance service, dental health and pharmacies	C	Negative	On-site occupational health service provision – obligation Package of mitigation measures and funding to be agreed between CCGs, NHS and the Applicant - obligation	Mitigation measures may be necessary to mitigate any adverse socio-economic impacts of the development.
26i	Delayed emergency services response times as a result of traffic congestion, including abnormal loads	C	Negative	Robust incident management protocol and associated funding for main access routes, developed in cooperation with emergency services and national and local highway authorities – obligation Solutions to mitigate delayed response times to be considered further with emergency services - obligation	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest development.
26j	Increase in demand of fire and rescue services as result of population and traffic increase; and as a result of project site specific activities	C	Negative	Package of mitigation measures and funding, to include mitigation of increase in service demand, preventative work, and working with the Applicant to devise strategies and conduct specific training to manage the unique risks presented by the project. - obligation	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in

					settlements nearest development.
26k	Increase in demand of policing services, in terms of provision of custody, Command and Control Room and Crime Co-ordination Centre resourcing and local policing resources, as well as roads policing	C	Negative	Package of mitigation measures and funding to be agreed between Suffolk Constabulary and the Applicant - obligation	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest development. Potential for social cohesion effects from influx of construction workers and associated demographic changes, associated impacts on service provision may affect social cohesion. Local Plan Policy SCLP3.4 notes potential community safety and cohesion impacts will be a consideration in decision-making.

Policy context

National Policy Statements

27.3. Generic health impacts of energy NSIPs are covered in Section 4.13 of EN1. Paragraph 4.13.4 identifies that new energy infrastructure may affect the composition, size and proximity of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport or the use of open space for recreation and physical activity.

27.4. Paragraph 5.12.3 of Section 5.12 (Socioeconomics) of EN-1 notes Applicants' assessments of socio-economic impacts should consider all relevant impacts including the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities. It also notes that an influx of construction workers may change local population dynamics and could alter the demand for services and facilities in the settlements nearest the construction work, including community facilities. Paragraph 3.12.17 of Section 3.12 (Nuclear Impact: human health and well-being) of EN-6 expects applicants to work with the local authority (and health care providers) to identify any potentially significant health impacts and appropriate mitigation measures.

Local Plan Policies

27.5. Policy SCLP8.1 of the Local Plan refers to Community Facilities and Assets and that proposals for new facilities and assets will be supported. It references that we do not generally permit the change of use or loss of an existing community use or facility. In addition, we have area specific strategies for Leiston, Saxmundham, and the rural areas.

Construction Phase impacts

Positive

27.6. If proposals set out in the skills section of the LIR for enrichment and enhancement of Suffolk's current educational inspiration offer are implemented, this increased educational inspiration would be a benefit for schools to enhance their curricula.

Neutral

27.7. No additional impact on public services is expected from home-based workers' families, as these would be anyway accessing services in the locality.

27.8. Healthcare facilities: The Applicant sets out that a comprehensive onsite occupational health service is to be provided, to include a wide range of preventative measures and treatments, as set out in the ES, 6.3 Volume 2 Chapter 28 [APP-346]. The Councils agree that this may reduce or in some instances neutralise the impact of the workforce on primary care and public health provision for the community. However, it is expected that there may be some residual impact on health services. This includes impacts

from workers' families, health services for workers not provided on-site, as well as health services which workers may prefer to access away from their work place. To consider the likelihood of such impacts, there is a need to better understand:

i. The predicted demand on Suffolk primary, community, acute and specialist services such as sexual health and substance misuse;
ii. How pathways of care between Sizewell provision and Suffolk services will be developed including the referral process;
iii. How "enforcing a strict worker Code of Conduct and drug and alcohol testing policies" will reflect the nature of substance misuse in the county (for example multi-drug use, increasing use of prescription drugs) and how this will be enforced and monitored given the number of contractors and sub-contractors on site;
iv. Provision to support co-occurring conditions (dual diagnosis – mental illness and substance misuse);
v. Health protection for example to reflect rising incidence of syphilis;
vi. Managing potential increased demand and the effect that this may have on for example waiting times;
vii. Potential impact of dental health including access to dental treatment whilst on site; and
viii. Potential pressure on pharmacy services.

Negative

27.9. School Places and Early Years Education: The Councils welcome the Applicant recognising that demand for provision of schools and early years places may arise from the children of non-homebased workers during construction, which may affect school and early years capacity in the local area [APP-195, para 9.7.170 onwards].

27.10. It is difficult to forecast school capacity for the period of construction. Pupil forecasts are currently only available until 2024, which is before the main workforce arrives at site for construction. Additional pressures on school places are expected over the coming years as a result of additional dwellings being proposed in the catchment areas. In addition, the Suffolk Coastal Local Plan includes an allocation of 800 houses in Saxmundham. Further joined-up discussions are required to consider the in-combination impacts of these proposals, including any traffic impacts from school transport to public and private schools.

27.11. Over the 12-year construction phase the Applicant forecasts the following pupil demand arising from workforce families moving into the wider area:

Table 27: Projected demand for education spaces	
Phase of education	**Projected pupil demand**
Pre-school	150
Primary	135
Secondary	12

27.12. The peak of the demand is predicted by the Applicant to be in year 7 of the construction phase, currently in the plans as 2028. Current school and early years forecasts support that additional accommodation will be needed in some areas to manage this increased demand.

27.13. The Applicant has provided the Councils with forecast demand based on learning from Somerset. In this spreadsheet the demand increases from the initial construction year to a peak of pupil demand in 2028 and then drops away once more.

27.14. The Applicant also provided a breakdown of predicted areas that the workforce families would settle in and what that meant in terms of the peak demand year of 2028.

27.15. The data provides evidence that the places required at the peak period are well spread across the wider area and only Leiston, Aldeburgh and Saxmundham are predicted to see larger demand arise.

27.16. Pre-school: Based on the data provided by the Applicant and the sufficiency data that Early Years use to forecast places, only Leiston appears to be an area where additional early years accommodation will be needed to meet demand. All other areas are, at this moment, predicted to be able to provide the necessary places or the demand is not of high enough quantity to warrant an expansion. However, this is based on the Applicant's forecast demand and will need to be monitored as families begin to apply for places. Leiston has been identified as an area where this additional accommodation would be best placed. The early years team at SCC will work with the school to plan and design any additional accommodation to ensure it meets the needs of the settings and their young children.

27.17. Primary: In the Applicant's predictions, the 135 primary places required at the peak period are well spread across the wider area and only Leiston, Aldeburgh and Saxmundham are predicted to see larger demand (22, 11 and 8 pupils respectively). As these numbers are relatively small there is predicted to be sufficient places in the schools serving those 62 other areas. However, this is based on the Applicant's forecast demand and will need to be monitored when families begin to apply for places at local schools. Additional demand on

school transport will also need to be mitigated to ensure that any additional capacity required on routes is available when increased demand arrives in the schools.

27.18. For the three schools that will see larger demand, the current forecasts for each are (based on 95% capacity for place planning purposes):

i. Leiston - Alongside planned housing that is included in pupil forecasts, the school will be approaching full capacity in 2023 and will be over-subscribed in 2024 at the point that the Sizewell development begins. However, the growth is not predicted to take the school to the next phase of capacity (from 420 places to 525 places) so for the duration of the Sizewell C development, additional accommodation needs to be added to deal with the additional demand until such time as Sizewell C is operational and more certainty is known about future forecasting (which can only be completed four years hence). The education teams at SCC will work with the school to plan and design any additional accommodation to ensure it meets the needs of the school and their learners.

ii. Aldeburgh – Although there is a predicted demand, based on the Applicant's forecast, of 11 pupils arising from the Sizewell C development, places are expected to be available at the school to cover the demand. There may be a reduced number of places at the school for out of catchment demand, but SCC's school admissions process will be able to support families through this issue and find a place for those pupils at their home catchment school if there are places, or a suitable alternative.

iii. Saxmundham – Similarly to Aldeburgh, the demand outlined in the Applicant's forecast would be expected to be met by existing places at the primary school.

27.19. Secondary: The evidence provided by the Applicant shows far fewer pupils of a secondary age predicted to move into the area with workforce families. There is an expectation that both local High Schools (Alde Valley and SET Saxmundham) would have the places available to maintain demand of the levels forecast. However, this will need to be monitored as workforce families begin to apply for places.

27.20. There is a high likelihood of the demand for school places being higher than those available but only in one or two areas, in the Leiston/Saxmundham area. Therefore, the risk of children not getting a place at their catchment school is high unless additional accommodation is provided to mitigate.

27.21. There are significant issues if pupils are not able to gain a place at their catchment school, not only financially if that child has to be transported to another school but also for

the wellbeing of the pupil who may be attending a different setting from siblings and friendship groups. There are also potential reputational impacts to SCC as admissions are scrutinised closely year on year.

27.22. Schools safeguarding and additional provision at schools: There are other implications that need to be managed alongside providing 'physical' school places such as support for young people with additional learning needs (e.g., EAL and SEND). Safeguarding concerns from schools need to be primarily directly addressed with schools in the area, and we advise that preventative work should be considered as part of the mitigation package (see also section below on social services and safeguarding). This could include the Applicant supporting the Personal, Social and Health Education curriculum and/or funding training for school staff and governors. Similarly, should there be a number of children of workers with limited English language skills/English as an Additional Language (EAL), any impacts and related costs to schools arising from this would need to be addressed with schools directly. We expect the Applicant to engage local schools and the educations team within SCC early on these matters to explore mitigation of the issues raised.

27.23. Pre-school children family support: The Applicant predicts 809 pre-school children entitled to early education arising from workforce families moving into the wider area, over the 10-12 years of construction. However, this figure does not include all children aged 0-5, as it includes only children entitled to early education. This will have an impact on Health Visitor service provision for under 5s and their families living in the Leiston area, and additional resources are required for the increased demand by workforce children.

27.24. Impacts on social care service provision (care homes): The Councils are concerned about loss of residential based care providers in the area due to the proximity to the site. Residents may not want to access care in the Leiston area due to negative perceptions, which could exacerbate the reason for independent care providers who own premises used to provide care (residential / supported living etc.) to decide it is more financially viable to either sell or convert their premises into accommodation to rent out to the construction work force. This could put local care homes at risk and putting further pressure on facilities in other towns in the area. This is in addition to the risk that the development will inflate purchase and/or development costs in the area which will reduce the care sector's ability to develop and provide suitable provision in the area for local residents.

27.25. Social care and community health service provision (Transport): The pressure on transport infrastructure resulting from the development has impacts on the deliverability of social care and community health services. The details of transport impacts and delays

are dealt with in section 16 above, the potential consequences of these on social care and community health in particular are dealt with here.

27.26. Care providers are not paid for travel time between social worker / community health visits. Increased traffic congestion, resulting in increased travel time between visits, could make runs in the area non-viable for care providers to deliver. This could lead to a degradation of service in the area on current rates. In order to protect levels of service, rates may have to be increased which would increase financial pressure on Adult Social Care Services and Community Health.

27.27. Increased travel time between visits could also result in delays in delivery of care at scheduled times. This may affect medication schedules or customers' choice and experience of care. It could lead to increased demand for more complex care if routines are disrupted.

27.28. Social care and community health service provision (Workforce): The care sector workforce in the area is already fragile, relatively low-paid and works across anti-social hours and is subject to high turnover of staff. It is already difficult to recruit in Leiston.

27.29. The Sizewell C project will result in the creation of a range of relatively high-paying low-skilled roles which will cause market pressure for employers including in the health, social work and care work sectors. The Councils are concerned that these services may become more difficult and expensive to ensure sufficient carers are retained in the area. Whilst the Councils support the principle of individuals taking advantage of the job opportunities arising from Sizewell C, it is essential to agree with the Applicant and implement effective mitigation measures for the impacts arising, to ensure that statutory services can continue to be delivered safely and to the current quality standards.

27.30. A shortage of health, social work and care workers to provide health, social care, and care services could have a negative effect on the level of care and support available to those using services in the local area and wider region, as commissioners would have to deploy resources from other areas. In a worst-case scenario, this could leave people in the local area without care in the private care sector or require the local authority to provide expensive care resources required to cover emergency circumstances. A failure to be able to provide health, social care and care services effectively will lead to increase in poor health, greater demand on services and, in a worst-case scenario, could potentially result in fatalities.

27.31. The Councils assess that an impact on services is likely due to the fragility of the workforce in the area, while a severe impact is merely possible in a reasonable worst-case scenario.

27.32. Demand from the workforce on services (safeguarding): The Councils welcome that the Applicant is looking to set up contingency measures for any potential effects should they occur, but would urge the Applicants to also support a comprehensive preventative approach targeting vulnerable groups and service providers. The Councils welcome some of the measures proposed, including implementing a worker code of conduct and supporting community liaison activities, however further detailed work and discussions are required to discuss mitigation measures in social care and safeguarding.

27.33. The Councils consider it likely that the scale of the increase in the population from the non-home-based workforce will lead to increased demand on SCC's Children and Young People's Services. There is a strong correlation between the size of population and the spend by Local Councils on Children's Services, and the Councils anticipate that, with Sizewell C, the increase of the resident population will impact on service demands, particularly as a result of the large scale of non-home-based workers.

27.34. The issues that give rise to the additional demand are many and varied, often occurring in combination, and relate to the issues identified also in the community impacts section. Alcohol and drug misuse, emotional well-being, anti-social behaviour, County Lines, prostitution/brothels, sexual exploitation of young people, domestic violence, neglect, abuse, impact of the disruption on children with additional needs (e.g., Autism, Disabilities), can have a direct impact on young people as victims and an indirect impact on dependent children and children of partners with whom the Sizewell C workforce form relationships. This in turn will have an impact on the caseloads and interventions of Social Workers, Early Help Practitioners, Youth Justice Practitioners, Health Visitors, and School Nurses. The extent of the impact may vary in intensity and over time depending on the people involved, the prevailing socio-economic situation, and the effectiveness of prevention and early intervention measures.

27.35. There is potential for increased demand from the workforce for adult community services, including support and safeguarding for adults with care and support needs, safe beds for women's refuge services and homeless spaces. SCC is required under the Care Act 2014 to undertake assessments to assess needs and provide support to anyone in the county with eligible needs.

27.36. Demand from the workforce on services (drugs, alcohol, sexual health, safeguarding): Whilst it is welcome that the Applicant has recognised the potential impact of drug and alcohol misuse in its workforce and will carry out testing, there may still be additional demand on treatment services, for workers and their families with potential increased demand in the surrounding community. There are also potential impacts in relation to health and social risks arising from unsafe sexual activity.

27.37. Population sexual health: As discussed in the Community Impacts section of this report, the impact of a relatively large concentration of predominantly young male workers is likely give rise to issues in the community as a result of risky behaviour. This includes health and social risks arising from unsafe sexual activity. This is a reasonable assumption, evidenced by a combination of indications of an increase in the Hinkley Point C zone in attendances at sexual health clinics particularly by young men, and nationally rising rates of sexually transmitted infections which are highest in young adults. With the construction workforce, Suffolk will be importing a population shown to have higher rates of sexually transmitted infections.

27.38. These can directly or indirectly have an impact on the sexual health of the resident population in terms of sexually transmitted infections, unplanned pregnancy, sexual exploitation, and possibly sexual violence.

27.39. This in turn will have an impact on local sexual health and termination/abortion services from increased demand from the resident population and from the Sizewell workforce who prefer the anonymity of sexual health services not associated with their workplace.

27.40. The extent of the impact could be a significant health protection issue dependent on the degree of risky sexual behaviour and the effectiveness of prevention and early intervention measures.

27.41. Whilst provision is made for sexual health in the Occupational Health Unit, the Applicant does not acknowledge that Sizewell workforce will access local sexual health services nor the impact on the sexual health of the resident population. This is of particular concern as on-line services are easily accessible. Additional activity for these services could result in significant cost pressure on local sexual health services. If not mitigated for, caps on local services would have to be applied and the ability to test for sexually transmitted across the whole of the county will be affected.

27.42. Primary Care: Whilst it is accepted that the proposed on-site health provision proposed by the Applicant may largely contain the impact of the workforce themselves on

primary care, the Councils anticipate that the proposal will still have an impact on primary healthcare facilities in and around the area of the development. The Applicant suggests that, at peak construction, there may be up to 7,900 of the workforce working on the site at any one time. This could have a large impact on the nearby surgery of Leiston and its branch surgery in Yoxford, as well on those of other surgeries nearby. It is to be noted that:

i. The location of Leiston Surgery means increasing the physical capacity of the building would be very difficult and the Councils are concerned that the surgery may exceed capacity. The East Suffolk Local Plan **(Appendix 1:2)** notes that additional floorspace at Leiston Surgery and its branch Yoxford Surgery is essential and is costed, it is proposed to be part funded through Community Infrastructure Levy payments with a funding gap remaining but the aim is for it to be delivered during the Plan period.

ii. The surgery at Yoxford does not have capacity to expand its net internal area. However, as it is only used for appointments on Mondays, Wednesdays, and Fridays it has the potential to open more often, but financial contributions to help this might be required.

iii. Capacity of surgeries nearby, including Aldeburgh and Saxmundham, will also need to be considered.

iv. To maintain a primary care service for the residents of in particular Leiston Surgery (but also Saxmundham and Aldeburgh surgeries), mitigation might be sought through Section 106 contributions. Therefore, a process will need to be confirmed on how any contributions will be agreed between all stakeholders.

27.43. Potential impact of dental health and pharmacies: Further clarity is required regarding access to dental treatment whilst on site and potential residual impact on dental health provision in the area. Similarly, further clarity is required regarding access to pharmacy services whilst on site and the potential residual impact on pharmacy provision in the area.

27.44. Acute healthcare: Although it is proposed that the Applicants will employ their own Occupational Health workers on site for non-home-based workers, consideration needs to be provided in terms of increased demand on the local hospitals (James Paget Hospital in Gorleston and Ipswich Hospital) and the deployment of the air ambulance.

27.45. Delayed emergency service response times: Anticipated traffic congestion as a result of Sizewell C traffic (with abnormal loads, AILs and the construction of online highway mitigation as part of the Sizewell C proposals further exacerbating the impact) could cause

unacceptable delays in emergency service attendance times in the event of an on-site emergency or, indeed, an extension of response times to incidents in the local area. This will affect all emergency services – ambulance, police, and fire and rescue. The Councils understand that at Hinkley Point C there has been no significant impact on emergency service response times, however the road network is significantly different in Suffolk and the increase in traffic may lead to both an increased incident rate and delayed response times. It can also be expected that, because of the increase in traffic, there will be more road traffic accidents, which will increase the service demand for emergency services.

27.46. Fire and Rescue Services: The expected growth in population and in traffic entailed by the construction increases demand in Fire and Rescue services, to attend incidents and undertake preventative work. The likely increase in houses in multiple occupation may increase fire risk. In addition, the Fire Service will be required to visit the project site and to devise strategies and conduct specific training to manage the unique risks presented by the project.

27.47. Policing impacts: It is anticipated that Suffolk Constabulary will submit a detailed impact assessment to provide an account of impacts they predict on their services and evidence to support these assessments. The Councils support Suffolk Constabulary's assessments and highlight some of the key impacts. Specific additional resource demands have been identified, supported by modelling, in the provision of custody, Command and Control Room and Crime Co-ordination Centre resourcing and local policing resources. These demands are predicted using a robust methodology based on demographic weightings applied to the increase in population from the Sizewell C workforce. Again, in addition to demographic changes flowing from the Sizewell C workforce, there are impacts arising from substantial increases to traffic which will impact on roads policing.

Operational Phase impacts

Positive

27.48. If proposals set out in the skills section of the LIR for enrichment and enhancement of Suffolk's current educational inspiration offer are implemented, this could leave a legacy for Suffolk beyond the construction phase.

Neutral

27.49. None identified.

Negative

27.50. No negative impacts on public services are envisaged during the operational phase.

Required mitigation

27.51. School Places and Early Years Education: To ensure that impacts of increased school place demand are mitigated it will be necessary to collect data through the applicant's employee On-Boarding/Induction process during worker information management, including providing information on dependents and nationality where possible, to help more clearly identify people and their characteristics coming into the area because of Sizewell C. The more information the Councils can acquire from the Applicant about what lessons have been learnt from the Hinkley Point C experience in Somerset and how this can be applied to Suffolk, the better. Providing accommodation is not a quick process and lead in times are vitally important.

27.52. To achieve mitigation, it will be necessary to provide:

i. Additional accommodation for both pre-school and primary places at Leiston Primary School. Growth funding to allow the school to open a new class. School funding is provided using a lagged model where schools receive funding based on the pupils in the school the year before. Therefore, any shortfall in funding to set up the new class/classes and employing the necessary teaching and support staff would need to be in place ahead of the new class opening. Similarly, for Early Years, set-up funding for their provision would need to be in place prior to opening.

ii. A contingency fund for school transport in the event that a child is not able to access a place at their catchment school.

iii. Funds provided for additional pupil support resources (e.g., support staff for EAL and SEND; PSHE preventative activities).

27.53. Pre-school children family support: The County Council delivers health visitor services to under 5-year-olds and their family. It is estimated that, to safely deliver a service to the additional under 5s and their families living in the Leiston area arising from the Sizewell C workforce, an additional 1.5 FTE of Health Visitor resource is required, which should be funded by the Applicant.

27.54. Social Care Provision (safeguarding and welfare of children and young people): The Councils consider it important for funding, for example through the Public Services Resilience Fund, to be provided towards multi-agency preventative and responsive measures; for example, specific Social Worker, Family Support Practitioner and Young Persons Worker posts and service provision that will work with vulnerable families and young people in a preventative and, if necessary, reactive manner. The design of this Fund should allow for preventative, flexible work and will, in turn, be influenced by the social

and economic conditions as the construction proceeds. Funding for a Young Person / Family Support Officer to work across public sector and local community services to monitor impacts, including bringing together data, on children, young people and families with a specific priority on more vulnerable groups including children known to social care, youth justice and other vulnerable groups including children with special education needs and disabilities, Care Leavers, black, Asian, and minority ethnic groups (BAME), and lesbian, gay, bisexual, transgender, queer (or sometimes questioning), and others (LGBTQ+).

27.55. Social care provision: It will be necessary to agree with the Applicant how impacts on delivery from transport pressures can be modelled and monitored in order to determine appropriate proactive and reactive mitigation measures. The Applicant's proposed Public Services Resilience Fund could be a means to address such impacts; the details of this fund are still emerging. Proactive measures to address this issue could include:

i. Paying travel time per service user in affected area – like a congestion charge – payable to providers of services;
ii. Introducing residents-only parking zones and provide free Key Worker Parking Badges;
iii. Ensuring providers are notified of planned transport disruption so they can proactively re-plan routes and runs and manage customers' expectations. This would incur extra administration for providers of services which should be provided for;
iv. Providing for additional capacity and travel time to allow providers to schedule more time between visits (which means they'd be less efficient runs and likely require more runs) to reduce risk of late visits;
v. Increase hourly rate for provision of services in region – the Applicant to pay the difference from Countywide normal rates;
vi. Provision of resources to assist with capturing data, monitoring and reporting impacts. Given the comparability of impacts, this resource could be shared between adult and children's social services, Public Health and Clinical Commissioning groups.

27.56. In addition, there should be provision for compensatory reactive measures including:

i. Cover for emergency care arrangements if providers hand care runs back to commissioning bodies until substantive provision can be resumed;

ii. Provision for compensation to be paid to customers of care services where severe or life-threatening impacts to their service have occurred.

27.57. In addition to SCC-delivered adult and children's social care and public health services, these mitigation measures would be applicable to other similar statutory services, in particular community health services and district nursing. This needs to be reflected in mitigation packages for those affected organisations.

27.58. Some Community Health Services including universal Health Visiting and School Nursing are funded via SCC. The impact of the additional children, based on the same data used for school place modelling is at peak construction year and estimated additional 0.3FTE Health Visitors are required to be able to safely deliver a service to the under 5s and their families living in the Leiston area.

27.59. For impacts relating to increased demand for services, the Applicant states that the Worker Code of Conduct will mitigate workforce behaviour issues. It is therefore important that resources for monitoring are secured so that likely impacts can be identified, attributed, and mitigated on a reactive basis by the appropriate workstream.

27.60. Workers' sexual health services to be included in onsite occupational health care provision: The Councils consider that this will need to be commissioned as a specialist service. This would mirror the Hinkley Point C arrangements where the local Somerset sexual health services commissioned by Somerset Public Health are resourced to provide services to the workforce. For Suffolk, the contractual arrangements would need to go through SCC - Suffolk Public Health as services will be retendered during construction period. This should be secured by obligation.

27.61. Population sexual health: Whilst provision is made for sexual health in the Occupational Health Unit, the Applicant does not acknowledge that Sizewell workforce will access local sexual health services nor the impact on the sexual health of the resident population. This is of particular concern as online services are easily accessible in Suffolk. Additional activity for these services could result in significant cost pressure on local sexual health services. The Councils expect that any impact on these services as a result of the construction of Sizewell C will be funded by the Applicant, as otherwise increased demand could result in the need to have caps to access these services locally with the ability to test for sexually transmitted across the whole of the county affected. Funding for these services could be through the Public Services Contingency Fund.

27.62. Health campaigns for Sizewell C workforce: The Councils request that health campaigns by the Applicant for the workforce are coordinated with SCC Suffolk Public

Health to ensure highest effectiveness. This needs to include sexual health promotion e.g., campaigns on condom use. These should be secured by obligation.

27.63. Public Services Contingency Fund: As set out above, the Applicant proposes the Public Services Contingency Fund to be available for the majority of impacts on SCC services. This is in principle supported by the Councils, subject to appropriate mechanisms and levels of funding. The Applicant's position is that releasing the contingency element of the Public Services Resilience fund annually would help proactively make best use of funds. However, the purpose of early intervention is to mitigate the risk of the issues arising, so evidence of a retrospective monitoring of effects to determine the release of contingency funding will not be a good measure of the impact had no early intervention occurred.

27.64. The Councils see the need for flexibility in mitigation and contingency funds to allow for effective multi-agency preventative and responsive measures, for example the funding of specific posts that work with marginalised/chaotic young people and adults, an ability to make grants to local voluntary and community sector. This could be funded via the Public Services Resilience Fund to allow flexible response to the as yet unknown implications and effects which will, in turn, be influenced by the social and economic environment as the construction period proceeds.

27.65. Delays in emergency response times: As part of the mitigation package, the Councils expect that a robust incident management protocol for the main access routes is developed by the Applicant in co-operation with the emergency services, national and local highway authorities, with appropriate levels of funding by the Applicant.

27.66. Creative solutions need to be considered to mitigate such a potential delayed response time. Some will require bilateral discussions between the Applicant and the service providers, others could be considered on a wider basis, such as whether improvements to the existing mobile telephone network coverage may help with response time and attendance by emergency services.

27.67. Provision of mitigation funding towards the Clinical Commissioning Group (CCG), NHS and Suffolk Constabulary: It is anticipated that these organisations will provide the Applicant with detailed requests for mitigation measures and associated funding.

Requirements and obligations

27.68. Many of the impacts on public services for SCC are proposed by the Applicant to be funded through the Public Services Resilience Fund. Subject to the concerns raised above being addressed, and an acceptable scale of the fund, this is supported by the Councils.

27.69. The on-site occupational health provision is proposed to be secured by obligation.

27.70. Contributions to the CCG, Suffolk Fire and Rescue (part of SCC) and Suffolk Constabulary would be secured via obligation.

28. Community impacts (Lead authority ESC)

Summary

28.1. The Councils recognise the benefit of the proposed new sports facilities in Leiston, although further work will be required on the detailed design.

28.2. The Councils are concerned about potential community cohesion impacts as a result of the influx of a sizeable non-home-based workforce. The Councils require the Applicant to develop a comprehensive strategy of integration of workers with the local community, including the implementation of the proposed workers' Code of Conduct, as well as mitigation of negative impacts and extensive monitoring to adjust this strategy if required.

28.3. The Councils anticipate an increased risk for community safety issues arising from the workforce. If these are not mitigated, the impacts could be severe. The Councils expect the Applicant to work with the Councils and the local and county wide community safety partnership to agree on a funded programme of preventative and reactive measures.

28.4. Monitoring of community impacts is considered to be key to enable swift responses to any impacts which do occur. The Councils expect to be involved in delivering the proposed Community Impact Reports and ensuring the correct mechanisms are in place to minimise adverse effects on social cohesion, community impacts and equality impacts.

Table 28: Summary of impacts - Community					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative / Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
28a	New sports facilities in Leiston which would be available for shared used with communities during construction, and would be legacy benefit	C / O	Positive	Funding for construction of the sports facilities at Leiston and a 'sink' fund for refurbishment at the end of the construction phase - Obligation	NPS EN-1 notes decision-makers should consider any relevant positive provisions the developer has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise. Local Plan Policy SCLP3.4 states proposals and the need to mitigate the impacts arising from them will consider appropriate packages of local community benefit to mitigate the impacts of disturbance experienced by the local community for hosting major infrastructure projects.
28b	Construction workers' Code of Conduct may reduce impacts on community safety and community cohesion	C	Neutral	Construction workers Code of Conduct secured by requirement	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest development. Potential for social cohesion effects from influx of construction workers and associated demographic changes, associated impacts on service provision may affect social cohesion. Local Plan Policy SCLP3.4 notes potential community safety and

					cohesion impacts will be a consideration in decision-making.
28c	Risk of increased ASB, crime and non-crime community safety issues in locality; increased community tensions as result of incoming workforce	C	Negative	Provision through the ESC Public Services Contingency Fund towards mitigation measures (including staffing, awareness raising, project funding, increase in capacity to deal with impacts) to be delivered through East Suffolk Community Safety Partnership in response to these issues – Obligation Funding towards provision of additional community policing resources to mitigate community safety risks, increased crime and Anti-Social Behaviour (ASB) in hot spot areas – Obligation Community Impact reports; with drafting to involve Councils - Obligation	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest development. Potential for social cohesion effects from influx of construction workers and associated demographic changes, associated impacts on service provision may affect social cohesion. Local Plan Policy SCLP3.4 notes potential community safety and cohesion impacts will be a consideration in decision-making.
28d	Increased risk of criminal exploitation (county lines and modern slavery), Violence Against Women and Girls, Men and Boys (including domestic abuse and sexual violence), radicalisation and Hate Crime as result of incoming workforce	C	Negative	Provision through the SCC Public Services Contingency Fund towards mitigation measures (training, staffing, awareness rising, increase in capacity to deal with impacts) to be delivered through SCC Community Safety in response to these issues - Obligation	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest development. Potential for social cohesion effects from influx of construction workers and associated demographic changes, associated impacts on service provision may affect social cohesion. Local Plan Policy SCLP3.4 notes potential community safety and cohesion impacts will be a consideration in decision-making.

Policy context

National Policy Statements

28.5. NPS EN-1 addresses the potential impact on community cohesion of large-scale energy infrastructure development. Paragraph 5.12.3 notes socio-economic impacts of a project may include the impact of a changing influx of workers during the different construction, operation, and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development.

Local Plan Policy

28.6. Policy SCLP8.1 of the Local Plan refers to Community Facilities and Assets and provides support for new facilities and assets. It explains that the Council does not generally permit the change of use or loss of an existing community use or facility. In addition, there are area specific strategies for Leiston, Saxmundham, and the rural areas.

Context

28.7. The Councils have an existing role in mitigating community safety impacts, through the East Suffolk Community Safety Partnership, as well as the Safer Stronger Communities Board (the countywide Community Safety Partnership), which sets the countywide priorities for Suffolk. The East Suffolk Community Safety Partnerships help to deliver these priorities locally. ESC leads the East Suffolk Community Safety Partnership; SCC lead the Safer Stronger Communities Board.

28.8. It is anticipated that the construction period for Sizewell C will result in the need for mitigating measures over and above the normal annual programme of activities delivered by the East Suffolk Community Safety Partnership and the Safer Stronger Communities Board. The existing East Suffolk Community Safety Partnership programme includes projects and events and commissioned services that have provided positive safeguarding outcomes to promote the safety of East Suffolk communities.

28.9. The East Suffolk Community Safety Partnership seeks to achieve positive outcomes by raising awareness and providing the information, advice, and tools necessary to promote prevention, to ensure communities understand the consequences of identified risk-taking behaviours and how to reduce the risk of becoming involved with or impacted by ASB and criminal activity.

28.10. The programme also includes the provision of appropriate reporting mechanisms and procedures to ensure ASB and criminal activity is reported for recording, monitoring and address by the appropriate bodies and agencies through the Partnership e.g., Suffolk Constabulary.

28.11. SCC's Community Safety Team and The Safer Stronger Communities Board commission/deliver several services, including delivery of training and education/awareness raising packages, and working in partnership with other local authorities, Police, Fire and Rescue Service, Trading Standards, Clinical Commissioning Groups, the voluntary sector, Probation, and others to reduce crime and disorder in our communities. The annual work programme is enhanced locally by the delivery of Crucial Crew which provides the above.

28.12. The annual work programme of both CSPs is developed through a comprehensive strategic assessment. It is informed by a comprehensive assessment of crime and disorder data, as well as wider partnership data e.g., health.

28.13. The Councils will consider and adopt the relevant learning from Hinkley Point C in terms of associated impacts, successful mitigating measures and the resources necessary to design and deliver the programme. The Councils note that, within the Oxford Brookes Study of Hinkley Point C (**APPENDIX 2: 1)**, the report states (page 59) "for community safety, there appears to be good management of potential project impacts through a combination of mitigation measures, including the implementation of the Worker's Code of Conduct, and some resourcing has been provided towards community liaison and policing looked at the transport impacts at Hinkley Point C." However, the Councils note that the indicators being monitored for Hinkley Point C are limited, with a focus on official crime data, which will not cover lower-level community safety issues. The study was undertaken before the peak of construction workforce, in 2019. It is also important to note the differences to the Hinkley Point C area and demographic.

28.14. When considering the impacts, the demographic and indices of deprivation across the towns to be most affected and impacted by Sizewell C in East Suffolk by the Sizewell C construction need to be taken into account, particularly Leiston, Lowestoft, Saxmundham and Aldeburgh, but not excluding Woodbridge, Felixstowe, and rural communities. Furthermore, the Councils are conscious of the issues, risks, and community safety impacts that were experienced across east Suffolk, particularly Leiston and Lowestoft, during the construction of Sizewell B.

28.15. In considering the likelihood of impacts, it is important to understand the issues that have occurred in recent years in the area, and that the CSPs, Suffolk Constabulary and other local agencies have needed to address. These include those risk and impacts previously listed, such as county lines, gang related violence, and drug and alcohol misuse. They are a clear indication that the existing demographic already creates the environment for criminality and risk-taking behaviours. Sizewell C will only increase those impacts and risks to a higher level and this needs to be mitigated. This is very different to the Hinkley area and demographic.

Sports and recreation

28.16. The Applicant proposes to have facilities for accommodation campus occupants at the campus site including a running track and a small gym. To supplement this offering and to provide a positive opportunity for the town of Leiston, the Applicant is proposing a new 3G pitch and two Multi-Use Games Areas (MUGA) on land adjacent the recently refurbished Leiston Leisure Centre and Alde Valley Academy (High School for the town of Leiston and surrounding area).

Construction phase

28.17. The Councils are concerned that the construction period for Sizewell C may lead to additional community safety and community cohesion impacts that need to be mitigated.

28.18. Concerns raised by the local community in terms of community safety are well documented and include effects on vulnerable citizens, drug and alcohol misuse, prostitution, sex trafficking, and sexual exploitation of young people, particularly young females. Some of these concerns are based on the experiences of local communities during the construction of Sizewell B. There is a clear intent by the Applicant to learn from the previous Sizewell B development and more recently from the mitigation measures adopted at Hinkley Point C. These include the Community Safety Management Partnership and worker code of conduct, along with mandatory drug and alcohol testing.

28.19. The influx of up to 5,900 non-home-based workers at peak construction to the area will radically change the demographic of the area due to the make-up of the workforce, which creates the likelihood of the impacts discussed here. It is important to note (as reflected in the Applicant's prediction) that, in addition to the non-home-based workers, the Applicant predicts a population of HGV and LGV drivers in the area (predicted to be up to 440 per year), as well as visitors (up to 200 per year) and workers' families (1168 per year). This is important context to support the understanding of possible community

safety and cohesion impacts and required mitigation, as they may be more significant than solely based on the number of non-home-based workers.

28.20. It is anticipated that the construction period for Sizewell C will result in the need for mitigating measures over and above the normal annual programme of activities delivered by the East Suffolk Community Safety Partnership and the Safer Stronger Communities Board. The Councils seek to achieve positive safeguarding outcomes by raising awareness and providing the information, advice, and tools necessary to promote prevention, to ensure communities understand the consequences of identified risk-taking behaviours and how to reduce the risk of becoming involved with or impacted by ASB and criminal activity, including County wide awareness raising and training initiatives e.g., on domestic abuse, Prevent and criminal exploitation training.

28.21. It is noted that some of the community safety impacts may occur in a wider geographical area than the local community in East Suffolk, given that community safety issues often occur outside of the home, where individuals may pass their leisure time.

Positive

28.22. Sports and recreation: The proposal to site new sports facilities in Leiston, rather than on the accommodation campus, is supported and welcomed. The provision of a full-sized 3G football pitch and two MUGA at Alde Valley Academy / Leiston Leisure Centre, Red House Lane, Leiston, is considered sufficient in addition to the recent extensive improvements carried out by ESC to the Leiston Leisure Centre.

28.23. Additional income is anticipated through increased memberships to the leisure centre by non-home-based workers, and the operator of the Leisure Centre will be keen to discuss opportunities with the Applicant for offering such memberships to their transient staff. The Councils welcome confirmation that a refurbishment and replacement policy is being proposed at the end of the 10 – 12-year construction phase, to resurface the 3G pitch and to ensure the legacy is left in prime condition for continued community use over a significant period of time.

28.24. The Applicant is suggesting shared use of the new facilities with the 3G football pitch being available to Alde Valley Academy during school hours Monday to Friday during term-time, the pitch would be reserved for Sizewell C workers in the evenings and at times to be agreed over the weekends, with the community being allowed to book the pitch outside of these times.

Neutral

28.25. There is the potential for the influx of workers to the Leiston area to have a neutral impact on community cohesion and integration. If the workers are willing to assimilate into the local area by shopping locally, using local facilities including sports facilities, the swimming pool and Leiston Film Theatre as examples, this would encourage them to feel an ownership of the town and thereby respect its residents. Workers who are here longer term may be keen to be involved in local events for example film festivals or the local Park Run. To ensure this, there needs to be ongoing dialogue between the Applicant and the local communities throughout the construction phase. It is acknowledged that once the site is operational, it will move into the remit of the Sizewell Site Stakeholder Group.

28.26. The Councils note that wider funding arrangements, such as through the proposed Sizewell C Community Fund, may provide opportunities for refurbishment and improvements to other local community facilities in Leiston, including the Sports and Social Club, Waterloo Centre, and local youth hubs including CYDS, as well as potentially creating opportunities for additional facilities for young people to be provided in Leiston. Such facilities could be used for diversionary activities for young people and could provide community cohesion between the local communities and the non-home-based workers.

Negative

28.27. Sports and recreation: The environmental impact of an all-weather football pitch and 2 MUGA pitches in the proposed location at Alde Valley Academy / Leiston Sports Centre will need to be considered. Facilities of this type are usually floodlit and in allowing for extended hours and seasonal use which can result in detrimental impacts in terms of noise and light. There are residential dwellings in the immediate vicinity of the location of the MUGA and the all-weather pitch so this will need to be considered in detail and mitigation built into the final design and location, in order to minimise potential adverse impacts arising. See the sections on noise and vibration and air quality.

28.28. Risk of surface water drainage impacts: The proposed sports pitches will require an appropriate surface water drainage system, particularly given that Leiston SWMP clearly identifies the area is at risk from surface water flooding. It is unclear at this stage, whether infiltration is feasible. If not, the Applicant will need to determine with Anglian Water if the surface water drainage system has sufficient capacity for them to discharge surface water run-off from the proposed multi use games areas into the existing surface water sewer. If not, this may leave the proposed sports pitches without a feasible method of surface water drainage.

28.29. Community safety impacts - overview: Community safety impacts are predicted to occur during the construction phase of the Sizewell C project due to factors including substantial demographic changes resulting from the predicted non-home-based construction workforce. Whilst the home-based workforce would also both generate and experience community safety impacts; these are already largely accounted for through existing measures and capacity provision.

28.30. The Applicant recognises in its submission the following risks in relation to the increase of workers for the construction of Sizewell C (Vol 2 Chapter 9, paragraph 9.7.192 [APP-195]), of *"Potential risks related to cultural differences between NHB construction workers and residents (Hate Crime)"* and *"Potential risks related to drugs, alcohol and prostitution including exploitation of young girls by a predominantly male workforce, and potential for related increase in trafficking (VAWG/Criminal Exploitation)"*. Whilst this recognition is helpful, the Councils note that these risks are not exclusively for "young girls" - they may affect all young people, and to an extent adults.

28.31. The Councils are particularly concerned about managing the community safety impacts of an influx of mainly young, comparatively well-paid, men into an area with some relatively deprived communities. This would result in a considerable change in the demographic profile (population size and composition) of the communities where non-home-based workers are expected to be located, which would result in heightened risk of criminality and ASB (perpetrators and victims) and increased non-crime community safety risks. Important possible impacts include impacts related to sexual services, criminal exploitation including involvement in County Lines crimes, domestic abuse, drugs and alcohol, and sexual violence. The Councils note that these issues were experienced through earlier constructions at Sizewell, and are already now experienced in the affected local communities.

28.32. Community cohesion: The Councils are concerned of increased community cohesion tension, as a result of, for example, fly parking (unauthorised parking), littering, noise, over-demand on existing services, some of which are at capacity, and leisure activities and congestion. These all have the potential to negatively impact on community cohesion.

28.33. The Councils are concerned about how the Applicant proposes to try to address these issues, reduce potential tensions and maximise integration between workers and the local community. The Applicant states that they will provide workers with a 'welcome pack' and local guide; however, further more fundamental measures are considered to be required.

28.34. Criminal exploitation (including County Lines and Modern Slavery): The Councils are concerned that the current threat of County Lines, Modern Slavery, and other forms of criminal exploitation developing across east Suffolk could be exacerbated through the influx of non-home-based workers.

28.35. Modern Slavery is shown by research to be prevalent in the construction industry, and has been present during Hinkley Point C construction. Although the Councils understand that the Applicant will closely manage their workforce through the Worker Code of Conduct, there is a significant risk for Modern Slavery to take place through the sub-contraction of work. Alongside this, local intelligence shows that the number of Modern Slavery referrals through the National Referral Mechanism in Suffolk is currently doubling every year. Modern Slavery is an increasing issue, and given the scale of the construction project, the Councils anticipate that Modern Slavery will increase further as a result of the development.

28.36. County Lines is a criminal 'business model' based on moving into areas to sell drugs to maximise profits. It works on a simple supply and demand model and therefore a workforce population increase is likely to increase the demand for drugs (both class A and recreational use) which has the propensity to increase violence and harm to both individuals and communities. There are several County Lines currently operating in Suffolk, and the Councils are concerned that the Sizewell C development could be seen as a business opportunity for County Lines. A non-home-based workforce demographic of mainly young men with financial resources residing in the area and their possible exposure to readily available Class-A drugs, increases this risk and other risks attached to the business model including the use of violence, and the Councils therefore anticipate that new County Lines may develop given the ready market of new customers.

28.37. Violence against individuals: The Applicant recognises in the DCO application that a substantial proportion of crimes recorded in Suffolk relate to domestic violence, and that this has been raised as a potential concern at Sizewell C (6.3 Volume 2 Main Development Site, Chapter 9 Socio-economics, para 9.7.217 [APP-195]). The Councils recognise in their county-wide approach that consideration needs to be given not only to Violence Against Women and Girls (VAWG) in line with a refreshed strategy published by the Home Office in 2016, but that both female and males can be victims and perpetrators, so consider that, also in the Sizewell C context, adverse impacts need to be assessed, monitored and mitigated for the broadened remit of Violence against Women and Girls, Men, and Boys.

28.38. In the Hinkley Impact Monitoring report (Supplementary Data Exception Report for HPC Health Task and Finish Group - January 2021), rates of domestic abuse service referrals, as well as sexual assaults, were significantly higher in relation to the rest of Somerset. This appears to be a more recent trend, with Hinkley Point C moving towards peak construction, as the "Study on the impacts of the early-stage construction of the Hinkley Point C (HPC) Nuclear Power Station" (Oxford Brookes University 2019, page 31**) (APPENDIX 2: 1)** did not observe between 2015 and 2018 any notable increased community safety concerns, in terms of crime and fear of crime, in the Hinkley Point C area in comparison to the rest of Somerset.

28.39. Each year, nearly 2 million people in the UK suffer some form of domestic abuse - 1.3 million female victims (8.2% of the population) and 600,000 male victims (4%). With the anticipated increase in the local population by some 5,900 workers at the peak of construction, in combination with additional community cohesion tensions, it is likely there will be an increase in domestic abuse and sexual violence.

28.40. Hate Crime and Community Tensions: Over the last 12 months there has been a 30% increase in reports of Hate Crime in Suffolk. This is reflected nationally. The anticipated increase in the local population by some 5,900 non-home-based workers at the peak of construction, and some likely cultural and socio-economic differences between Sizewell C's workforce and existing communities, will radically change the demographic of local communities particularly Leiston, Saxmundham and Aldeburgh, and Lowestoft. This could result in an increase in tension, clashes of communities, and an increase in reporting of Hate Crime.

28.41. It is noted that data from the Hinkley Impact Monitoring Report (Supplementary Data Exception Report for HPC Health Task and Finish Group - January 2021) shows that instances of hate crime have occurred within the Hinkley zone.

28.42. ASB and violence in a public place: There is the potential of an increase in alcohol and drug misuse resulting in ASB related to growth of the night-time economy. To deal with this issue, more licenced premises require monitoring and disorder requiring response and investigation may increase.

28.43. Whilst Violence in a Public Place is not currently a priority of the local or countywide community safety partnerships, it has the potential to increase and is likely to become a priority in the future. Based on available data, there is correlation between the night-time economy, crime, and alcohol. Alcohol features in a higher proportion of crimes that occur at night than during the day. Many of these are concentrated in areas with a strong Night-

time economy. With the influx of a high number of workers we can expect the night-time economies in the surrounding areas to Sizewell to have an increase in footfall and licensed premise occupancy rates. There are likely to be incidents of public disorder and violence as there are within all communities. The Councils' proposed programme of mitigating measures includes the remobilisation and expanded delivery of schemes including Pubwatch, Nightsafe and the Town Pastor scheme, to support vulnerable people and keep communities safe, by reducing the risk and fear experienced by communities through excessive drinking behaviours associated with alcohol intoxication and the night-time economy.

28.44. Impacts on vulnerable groups: The potential of landlords putting up rent is of particular concern for families and vulnerable households, which may put them into difficulty and may result in homelessness (see also LIR comments on the accommodation strategy). Landlords often do this with no checks, some of whom may be vulnerable themselves, e.g., single mothers and older people due to need for extra income. A programme of awareness-raising is recommended as mitigation.

28.45. Any increase in crime or community tensions may also result in an increased propensity for exploitation of vulnerable groups both in the existing community and in Sizewell C workforce families. This would require a multi-agency prevention strategy and safeguarding response.

28.46. Mental health and missing person incidents: As a result of community tension and wider impacts of the development on the wellbeing of the local community (see quality of life and wellbeing section), there is a risk of increased mental health and missing person incidents requiring multi-agency approach.

28.47. PREVENT Duty: The Councils have a responsibility to deliver the Government's Prevent strategy to remove or reduce the threat of radicalisation and being drawn into terrorism. While there is no evidence to suggest that the construction workforce would be specifically targeted, power stations are high risk sites in terms of terrorism, and the anticipated increase in the local population by some 5,900 workers at the peak of construction will statistically increase the risk of radicalisation in the local area. The Councils, with partner organisations, will need to deliver additional training for the general population and workforce. The construction period would additionally offer an opportunity to do more work in and with communities to recognise the signs of radicalisation and increase understanding on how to make referrals.

Required mitigation

28.48. The Councils consider the most effective way to mitigate community safety and community cohesion impacts is by building on, supporting, and enhancing programmes and activities by the existing East Suffolk Community Safety Partnership and the Safer Stronger Communities Board.

28.49. The Councils, on behalf of the East Suffolk Community Safety Partnership and the Safer Stronger Communities Board, have put together proposals for programmes of activity in Action Plans, appended in **ANNEX N**, which are proposed to be delivered by the respective partnerships and Council community safety teams. These Action Plans identify a programme of preventative and mitigation measures. The Action Plans are based on the identified potential impacts and risks of Sizewell C arising due to the overall scale of demographic change (size and profile) likely to be generated by the non-home-based workforce, and are informed by previous local experience and learning from Hinkley Point C.

28.50. Through the multi-agency approach, each of the Partnership's representative organisations would have an important role in mitigating net additional community safety impacts arising from Sizewell C. This approach should align with the Applicant's request, to base public service resource provision and demand on the annual predicted levels of non-home-based workers, their families, visitors, and the populations of HGV and LGV drivers.

28.51. The Applicant is requested to fund the increased capacity required by the two partnerships where these exceed the normal annual resource allocation, to appropriately design, implement, and manage the programmes of preventative and mitigating activities necessary to address increased community safety impacts. For the avoidance of doubt, the Councils would not have sufficient capacity to deliver the extended programmes of proposed preventative and mitigating activities necessary to address the community safety and ASB associated impacts of Sizewell C, with current resources.

28.52. The Applicant proposes that community safety activities would be funded through the Public Services Contingency Fund, which the Councils support in principle, subject to appropriate mechanisms, criteria and levels of funding.

28.53. The provision of outreach or community workers promoting community cohesion between local communities and non-home-based workers and their families and delivering diversionary activities would mitigate some of the concerns held by local communities. These community workers could utilise improved community facilities to organise both wider integration-focussed projects and diversionary activities for young people. This could include support for the wider delivery of the current Crucial Crew Plus programme (aimed

at 13- to 15-year-olds) that is being rolled out across high schools in east Suffolk and could be specifically tailored to students in the local area who are considered to be at risk. The Councils would welcome more detail about the proposed community liaison activities and what these would consist of; ideally the Applicant would work with the Councils' community officers to put together a programme of suitable activities for the local area, and provide resources to embed additional community workers within that team.

28.54. At a county-wide level, the Action Plan include measures to mitigate against the risk of criminal exploitation, Violence Against Women and Girls, Men, and Boys, radicalisation, and Hate Crime.

28.55. Specific mitigation measures against the impact of an increase in domestic abuse and sexual violence to be delivered include:

i. an increase in capacity for domestic abuse outreach services (DAOS) – a service universally available for victims of domestic abuse across the county offering advice and support on safely exiting an abusive relationship.

ii. An increase in capacity for domestic abuse safe accommodation (communal refuges across Suffolk for high-risk victims of domestic abuse, offering lifesaving sanctuary from abusers).

iii. Increase in capacity for domestic abuse Sanctuary Scheme (offering home security measures are available for high-risk domestic abuse victims and their children to remain safe in their own homes).

iv. Increase in training offer of Domestic Abuse Champions, which would require increasing the capacity of the trainer throughout the construction of Sizewell C.

28.56. Mitigation measures related to criminal Exploitation (including County Lines and Modern Slavery) would include additional resources towards training around criminal exploitation, with focus on awareness raising across organisations, schools and communities in the Sizewell locality, and towards the countywide work programme that levers resources to tackle criminal exploitation – including County Lines officer resources and expanding local activities of criminal exploitation hubs that have outreach workers engaging with young people and vulnerable adults in areas of highest risk (this is currently led by YOS).

28.57. To mitigate against Hate Crime and Community Tensions, training and support that the Councils provide in this area should be expanded. This should include the provision of English to Speakers of Other Languages (ESOL) courses – to respond to the anticipated high proportion of multi-national workforce of the circa 7,500 workforce, which could reduce

isolation and loneliness of international workers and their families and to promote community cohesion.

28.58. The Councils work together with partner organisations to deliver the Government's Prevent Strategy. The training programme on Prevent (WRAP – Workshop to Raise Awareness of Prevent) is designed to increase knowledge and awareness in the general population to recognise the signs of radicalisation. To mitigate the impact of 5,900 out-of-area workers and continue to raise awareness of the risks, additional WRAP training sessions would be offered to the new workforce and organisations in the surrounding areas.

28.59. It may be appropriate for the Community Partnerships to re-adopt the night-time economy as a community safety priority; this would need resources for safety planning and targeted communications.

28.60. Skills and employment: It is noted that the Applicant's employment-related ambitions, particularly for vulnerable and deprived communities (see the skills section), may alleviate some of the potential community safety issues. Raising aspirations within vulnerable and deprived communities and reducing the sense of 'difference' between the workforce and relatively deprived local community would support the 'prevention' ambitions of partners. The provision of a broad range of jobs and employment opportunities within local communities would contribute to positive community cohesion by enabling integration, aspirations and fostering a sense of equal opportunity. These activities should be secured through obligations.

28.61. Support by the Applicant to faith groups: In addition to preventative and mitigation measures proposed to be delivered by the community safety partnerships, the Applicant should give consideration and support regarding the various faith groups likely to be present on site e.g., provision of prayer rooms.

28.62. Policing: Increased provision of Police Community Support Officers, police officers, and an additional Sergeant dedicated to mitigating the potential community safety risks, ASB and increased crime within the hot spot areas (Leiston and Saxmundham in particular) would go some way to alleviate the fears and concerns of communities.

28.63. Community Impact Reports: The Councils will expect to be involved in delivering the proposed Community Impact Reports and ensuring the correct mechanisms are in place to minimise adverse effects on social cohesion, community impacts, and equality impacts. This includes, where appropriate, the provision of additional local services including doctor surgery places and school places and improvements to local infrastructure including

provision of educational and visitor facilities. The Councils are also working alongside the emergency services to ensure Blue Light Services are appropriately resourced during the construction of Sizewell C.

Requirements and obligations

28.64. Provision for the Councils to design and build the facilities at Leiston Leisure Centre must be incorporated in the S106 agreement as well as the commitment to re-surface the 3G pitch prior to ESC taking on full responsibility for future maintenance and management.

28.65. The new sports facilities will require a scheme of archaeological investigation, and mitigation as appropriate, due to proximity to recorded archaeological remains. Provision needs to be made to ensure that detailed design proposals satisfactorily address environmental impacts from floodlighting and noise. See the section on negative impacts to Amenity and Recreation, as well as avoiding an increase of risk in surface water flooding.

28.66. The Applicant proposes that funding for community safety and community cohesion matters would be provided through the Public Services Contingency Funds. These would need to be secured by obligation.

28.67. The Construction Code of Conduct is proposed to be secured by requirement.

28.68. Obligations should include reference to the governance of community safety matters, including responsibilities in relation to community impact reports.

29. Accommodation and Housing (Lead authority ESC)

Summary

29.1. The Sizewell C development requires a massive influx of workers to this area of the County to service the construction phase. The number of workers projected and being assessed to work on the project is 7,900 plus 600 working on Associated Development sites, to be predominantly non-home-based.

29.2. This has the potential to significantly adversely impact on housing availability around the site with potential overspill into adjacent authorities. The Councils would prefer the Applicant to focus on using home-based workers to minimise impact on the local housing market.

29.3. The Councils recognise that the proposed workers' caravan site at LEEIE and the Accommodation Campus will reduce the pressure on the local housing market. However, despite these measures, a residual impact on the housing market remains. The Councils are particularly concerned about the impact of the most vulnerable groups in the area. In addition, the Councils anticipate impacts on the tourism accommodation market.

Additionally, there may be resulting social care and safeguarding issues from the housing pressure.

29.4. The Councils support the proposed Housing Fund to mitigate impacts, and recognise that the Tourism Fund and the Public Services Contingency Fund may contribute to mitigating some of the wider impacts.

Table 29: Summary of impacts - Housing					
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative / Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)	Policy context
29a	Potential significant adverse impact on the housing availability around the site in East Suffolk with potential overspill into adjacent authorities:	C	Negative	Avoid: Completion of workers caravan park at LEEIE at earliest stage – part of implementation plan - requirement Avoid: Completion of accommodation campus early during construction (well before peak) - part of implementation plan – requirement Mitigate: Housing Fund to mitigate against increased pressure on the housing market	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest development, e.g., housing and accommodation facilities. Mitigation may be required to mitigate impacts.
29b	Social impacts from housing pressure on the housing market, specifically impacts on vulnerable individuals and household increasing risk of financial difficulty and homelessness, availability of key work housing, safeguarding issues associated with renting out rooms, impact on care home provision	C	Negative	Mitigate: Housing Fund to focus on provision of housing for vulnerable groups - obligation Mitigate: Provision of preventative work with landlords and renters to reduce safeguarding risks – through housing fund or other means - obligation Mitigate: Additional measures to prevent impacts on vulnerable people receiving social care support through Public Services Resilience Fund (see above) - obligation	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest development, e.g., housing and accommodation facilities. Mitigation may be required to mitigate impacts.

29c	Adverse impact on availability of holiday accommodation for tourists, which may result in a "boom and bust" effect for accommodation market	C / O	Negative	Mitigate: An element of the Housing Fund to be ring-fenced specifically to address and negate adverse impacts on the tourist market of East Suffolk - obligation Mitigate: Tourism Fund (see above)	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest development, e.g., housing and accommodation facilities. Mitigation may be required to mitigate impacts.
29d	Outage workforce may put continued pressure on the housing market	O	Negative	Housing fund may have provided sufficient resilience in the existing housing market, enabling it to be in a better position to offer accommodation to an outage workforce	NPS EN-1 notes influx of construction workers and associated local demographic changes may alter demand for services and facilities in settlements nearest development, e.g., housing and accommodation facilities. Mitigation may be required to mitigate impacts.
29e	Legacy of housing fund projects of an increased housing stock	O	Positive	n/a	NPS EN-1 notes potential positive provisions from developers in terms of legacy benefits.
29f	Potential legacy for tourism providers of investment from tourism and housing fund	O	Positive	n/a	NPS EN-1 notes potential positive provisions from developers in terms of legacy benefits.

Policy context

National Policy Statements

29.5. There is limited specific reference to accommodation or housing needs during construction of an energy infrastructure development within EN-1.

29.6. Paragraph 5.12.3 of Section 5.12 (Socioeconomics) notes that an influx of construction workers during the different construction, operation, and decommissioning phases may have impacts on local population dynamics, and subsequent impacts on demand for services and facilities in settlements nearest construction, of which housing and accommodation could apply.

Local Plan Policy

29.7. Policy SCLP3.4: Proposals for Major Energy Infrastructure Projects notes the need to mitigate the impacts arising from these, including providing appropriate packages of local community benefit to mitigate the impacts of disturbance experienced by the local community for hosting major infrastructure projects, including issues with community safety and cohesion. It also states the development and associated infrastructure proposals will seek to deliver positive outcomes for the local community and surrounding environment.

Context

29.8. The Sizewell C development requires a massive influx of workers to this area of the County to service the construction phase. The number of workers projected to work on the project is 7,900 plus 600 working on Associated Development sites.

29.9. Of these 7,900 workers, 35% are projected to be home-based, with all 600 workers on Associated Development sites (Freight Management Facility, Southern Park and Ride, Northern Park and Ride, and the Accommodation Campus), projected to be home-based workers. This means 3444 of 8500 workers are projected to be home-based.

29.10. The Councils have requested that the Applicant should aim to increase this projected forecast for home-based workers but for the purposes of this submission, the worst-case scenario of 5,056 workers being non-home based has been considered (the Applicant's definition for a non-home-based worker is one living over 90 minutes from the site).

Gravity Model

29.11. A Gravity Model is used by the Applicant to predict the likely areas that workers will want to live, this is impacted by availability of accommodation and numbers of workers. ESC commissioned a piece of work assessing and testing the robustness of this gravity

model and its predictions for us to be satisfied that it accurately represents future outcomes on our housing market.

29.12. This piece of work was carried out by Aecom and is submitted as an **(APPENDIX 2: 10)** to this report. Aecom's brief was to:

i. Undertake a review of the gravity model, with a particular focus on understanding the sources of data in the model and any limitations around this data; and

ii. Undertake a review of the accommodation strategy adopted by the Applicant to understand how the Gravity Model has informed the strategy.

29.13. The Gravity Model assesses 5880 non-home-based workers who would require temporary accommodation within 60 minutes of the site. The type of temporary accommodation required by non-home-based workers has been estimated based on experience during construction of Sizewell B, recent monitoring during construction of Hinkley Point C, and incorporating estimates for types of roles required and associated contract type and earnings. It also takes into consideration workers who may choose to purchase homes in the locality.

29.14. Gravity Model assumptions:

i. 3000 workers living in campus / caravan site;

ii. 880 workers anticipated to have bought homes and live in the owner-occupied sector;

iii. 800 workers living in tourist accommodation; and

iv. 1200 workers living in the private rental sector.

29.15. The Gravity Model has distributed workers based on their inputs to the model:

i. How far individuals are willing to commute;

ii. Affordability and availability of accommodation;

iii. Availability of local workforce; and

iv. Cost of journey.

29.16. Aecom had previously been involved in assessing the Gravity Model from a transport perspective for SCC, overall, Aecom's review found a number of small issues within the Gravity Model but concluded that these would be unlikely to impact on the conclusions of the transport assessment work. However, the review did note that whilst the gravity functions consider the availability of accommodation/workers in determining the attractiveness of a location, it does not treat this as a constraint. If job numbers were to increase, there could be a situation where the number of workers in an area exceeded

available accommodation. This could lead to undue pressure in certain areas that may require additional mitigation measures.

29.17. Aecom's review of the Gravity Model focused on its role in informing the Accommodation Strategy for Sizewell C. Given the Accommodation Strategy is focussed on accommodation for non-home-based workers, the review of data inputs into the gravity model was concentrated on those inputs which impact on the distribution of non-home-based workers.

29.18. Any change to the anticipated number of non-home-based workers (5880 for the purposes of the Model) would impact the outcome of the gravity model.

29.19. Aecom's review of the Accommodation Strategy found that at the macro level the Accommodation Strategy uses assumptions on number of workers and types of accommodation required to demonstrate that there is available accommodation within the east Suffolk area. However, there may be issues with accommodation supply when smaller spatial areas are considered. A summary of three main accommodation types for non-home-based workers is provided below: -

29.20. Tourist Accommodation: inputs to the gravity model show that there is available tourist accommodation within 60-minutes of the site to accommodate the 800 non-home-based workers expected to seek tourist accommodation. Outputs from the gravity model show that the demand for this accommodation will be concentrated in those areas closest to the Sizewell C site, for example: demand for tourist accommodation in Leiston could occupy 84% of available stock. This would impact on the tourism sector in Leiston. During summer months the Sizewell C workers could displace tourists, who it is suggested have higher average daily expenditure than workers, and impact on the local economy.

29.21. Private Rental Sector Accommodation: similar to tourist accommodation, at the macro level there is available accommodation in the private rental sector to accommodate the level of demand from non-home-based workers. However, the Gravity Model shows that workers are likely to seek accommodation close to the site in order to limit their travel time. The Model shows that workers would concentrate in Leiston, Aldeburgh, Yoxford and Saxmundham. At the peak period of demand, this shows that the demand for accommodation will exceed the frictional vacancy (the amount of vacant space needed to allow normal, orderly operation) in all four of these areas. This could impact on the availability of accommodation for local residents of these areas, with a particular impact on those people in the lower income and vulnerable groups. Mitigation is identified as being required in the Applicant's Accommodation Strategy [APP-613].

29.22. Owner-Occupied Accommodation: workers at the Sizewell C site seeking to buy accommodation will require less than 1% of available housing stock within the area. The demand for owner-occupied accommodation is therefore likely to have a negligible impact on the housing market across the entire study area. They are likely to be concentrated closer to the site so this could account for 11-12% of available accommodation in Leiston. However, this is likely to build up over a number of years and therefore not be a shock to the housing market.

29.23. The submitted Accommodation Strategy [APP-613] considers that a conservative approach has been adopted in assessing where demand for Sizewell C workers may impact on available accommodation within the local area. As a result of this conservative approach, the Councils consider that the figures in the gravity model are likely to be an underestimation of potential impacts. However, this is a limitation of the available datasets.

Accommodation Campus

29.24. The Applicant proposes an on-site accommodation campus housing 2,400 workers. The Councils consider that this proposal is an efficient way to house a large proportion of the workers adjacent to the Main Development Site – thus removing many bus movements from public highways. The Councils agree with the description of the accommodation campus site location and context contained in the DCO Submission (Appendix A Main Development Site Design and Access Statement [APP-585, APP-586, APP-587]). The campus location is west of the boundary of the Suffolk Coast and Heaths AONB but is within the setting of the AONB. In addition, from a contextual basis, the campus is within the parish boundary of Leiston-cum-Sizewell but lies to the south of the shared boundary with Theberton and Eastbridge Parish Council who have an equal relationship to the campus although they do not host any element of it.

29.25. The Councils are satisfied that locating a campus in either Ipswich or Lowestoft (which could have provided potential legacy benefit in the form of hotel conversion or student accommodation provision) would not meet the needs of the Applicant and the required ability for the workforce to be close to the Main Development Site. A campus in either Ipswich or Lowestoft would involve increased bus movements on an already busy highway network which would not be welcomed.

29.26. Combined Heat and Power serving campus: specific noise mitigation will be needed to ensure sound levels from final proposal would not exceed 35dB LAr from the nearest residential receptor. Resultant magnitude of impact on health and wellbeing is low, minor

adverse, not significant. The receptors most likely to be impacted, should there be any noise increase, will be occupants of the accommodation campus – there should be embedded mitigation in the detailed design of the accommodation campus to address any potential noise implications.

29.27. Occupiers of the campus will be encouraged to use the sports facilities proposed at Leiston Leisure Centre, it is expected that there will be a minibus service from the campus to the leisure centre, this should offer a drop-off into the town centre. Although this will hopefully have benefits (see below), it may well lead to tensions within the town resulting from workers mixing with residents. For further information see our section on community impacts.

29.28. There have been concerns raised from residents of Eastbridge that having the campus in close proximity to the hamlet of Eastbridge would have a negative impact on residents. The campus is proposed to be secure and self-sufficient. However, some workers are likely to want to explore their surroundings and may visit the local pub, the Eel's Foot Inn, which could lead to tension with local residents, dependent on behaviour.

29.29. The accommodation campus should be available, preferably on a phased basis, before peak levels of construction workers are on site. The phasing of the accommodation campus needs to be such that it is operational at the late stages of the Early Years of construction as non-home-based worker numbers begin to rise to peak workforce numbers to ensure that the local housing market is not adversely impacted.

29.30. To deal with the size of the peak workforce, and changes to the size of the workforce over time, the Councils would welcome consideration of opportunities for flexibility in being able to increase / reduce the size of the accommodation campus as and when required.

Workers' caravan site at Land East of Eastlands Industrial Estate (LEEIE)

29.31. The Councils are supportive of proposals for a workers' caravan site with 400 pitches, housing up to 600 workers on LEEIE. This accommodation provision will reduce pressure on the private rented and tourist accommodation sectors in East Suffolk and the submitted layout for the caravan site meets the environmental health requirements for licensed caravan park provision.

29.32. The Councils have previously raised concerns regarding the size of the caravan site proposed at the LEEIE. However, the Applicant has revised the layout and the Councils are satisfied from a health and safety perspective that 400 pitches could be provided on the site.

29.33. The Councils remain unconvinced that workers supplying their own caravan will be willing or able to share with other workers; particularly in the current context of Covid-19 when this may well not be appropriate. As such, capacity may only be at 400 people total.

29.34. In addition, it is not clear that workers in the later stages of the construction – mechanical and engineering etc. are likely to bring their own caravans – if they do not, the LEEIE caravan site could lie dormant. The Councils welcome the suggestion that static caravans could be brought to the site as a suitable alternative. However, the Councils would seek to be involved in such plans to ensure that the site is big enough to host statics in a safe manner with consideration given to the fact that overall capacity may need to be reduced. There may need to be flexibility in the Housing Fund to accommodate changes to the Applicant's provision of accommodation at the LEEIE if this drops to unacceptable levels.

29.35. The Councils request that the caravan site at the LEEIE is available prior to work commencing on the Main Development Site – current understanding is that it will be at least 12 months into construction before the LEEIE will be available. This is unacceptable and could lead to adverse impacts on the local area potentially from unauthorised encampments emerging in the locality. The caravan park element of the LEEIE should be prioritised for very early provision.

Non-home-based Workers in Tourist Accommodation

29.36. The gravity model assumes approximately 800 workers at peak will be living in tourist accommodation – this includes caravan sites, holiday rentals, hotels and chalet sites. However, this is unlikely to be during the peak holiday season as workers would be priced out of the market. However, with the drive in the tourist economy for year-round promotion of the region, this could have a negative impact on availability of holiday accommodation for tourists. The Applicant proposes that an element of the Housing Fund be ring-fenced specifically to address and negate adverse impacts on the tourist market of East Suffolk. Measures that this element of the Fund could be used for includes: grants to enable local providers to gain planning consent for expansion and grants to enable local providers to seek extensions to their current licences. The Councils would welcome the Fund being used to match fund or give loans to providers. An example would be a loan or match funding to enable a caravan park provider to expand their offering for Sizewell C workers by constructing a new toilet / shower block for worker use separate from holiday maker facilities. This element of the Fund has not yet been discussed in detail with the Applicant.

Learning from Hinkley Point C

29.37. The independent Oxford Brookes Study **(APPENDIX 2: 1)** commissioned by the New Nuclear Local Authorities Group, highlights several learning points from Hinkley Point C which relate to accommodation the report notes (page 59) that an assessment of accommodation actuals against predictions is complicated by differing views of predictions and accommodation type definitions, and particularly by most predictions being for peak employment (with all campuses assumed then operating at/near capacity), with the study being undertaken about two to three years before peak. The report indicated that the actual locations of NHB workers do seem to be closer to the site, and more concentrated in Sedgemoor (esp. Bridgwater) than predicted, and more in the Private Rented Sector (PRS) tenure category. The report notes that it is difficult within the constraints of publicly available data, to identify housing impacts on local vulnerable groups, although there does not seem to have been to date a noticeable impact on homelessness in Somerset.

29.38. The report refers to a "lack of consistent data on accommodation impacts from both EDF Energy and Local Authority (who are required to report on s106 Housing Initiative spending)" (page 62) It then recommends (page 64) for the Examining Authority of future New Nuclear Build DCO applications to "Ensure that predictions contain longitudinal timelines, showing predicted evolution of impacts over key phases of the construction stage, and into full operation, for example for topics such as home-based and non-home-based workforce numbers, accommodation tenure and distribution".

Construction Phase impacts

Neutral

29.39. Housing workers in the accommodation campus and the LEEIE caravan park will lessen pressure on the private rented market in East Suffolk, although overall there is still expected to be a negative impact as a result of workers not choosing to reside in these facilities.

29.40. Community impacts of accommodation campus - as there will be basic gym and running facilities at the campus site, along with dining facilities, the expectation is that the majority of workers living at the campus would remain at the campus site with potential trips to the Leiston Leisure Centre. Therefore, the majority of workers would largely reside at the campus with minimal external visits.

29.41. Workers will be expected to abide by the Code of Professional Conduct thus, assuming that this is effective, the presence of the accommodation campus and workers caravan site should have a neutral impact on the surrounding town and villages. However, as noted above and elsewhere, concerns have been raised that the presence of the

accommodation campus may lead to tensions within Leiston resulting from workers mixing with residents, and may also have a negative impact on residents of the nearby hamlet of Eastbridge. Such impacts and measures to address these are discussed in the community impacts section.

Negative

29.42. The Applicant is reliant on the peak workforce increase of 7,900 + 600 workers who will be predominantly non-home-based; this has the potential to significantly adversely impact on housing availability around the site with potential overspill into adjacent authorities. The Councils would prefer the Applicant to focus on using home-based workers to minimise impact on the local housing market.

29.43. It is expected that the construction workforce may put pressure on the housing market, particularly on the most vulnerable residents. Potential impacts that are of particular concern, which affect housing as well as social services, include:

i. Potential effects on vulnerable young people and care leavers, some of whom are in housing need or vulnerable to homelessness;

ii. Potential increase in rents in the Private Rented Sector and impact on families and vulnerable households, potentially resulting in financial difficulty and homelessness;

iii. Potential effects on housing for key workers as a result of increase in rents, which may impact on availability of key workers in the local area;

iv. Safeguarding issues associated with renting out rooms (awareness raising programme may be required);

v. Economic incentives for care providers to change use of premises from specialist housing to general market housing, which could increase costs of delivering care and cause shortages of suitable accommodation (see Public Services section).

29.44. If the caravan park at the LEEIE is not available at the earliest stages, early years workers will have to find alternative accommodation. There is concern that this may result in unauthorised caravan parks in East Suffolk requiring enforcement by ESC.

29.45. If the accommodation campus is not available before peak levels of construction workers are on the site, this will exacerbate negative impacts the local housing market.

29.46. The Gravity Model assumes approximately 800 workers at peak will be living in tourist accommodation – this includes caravan sites, holiday rentals, hotels and chalet sites. This could have a negative impact on availability for tourists of holiday accommodation.

29.47. There may be an impact on tourism accommodation as some holiday makers not willing to stay at a site that also accommodates transient construction workers.

Operational phase impacts

Positive

29.48. The Housing Fund will boost supply in East Suffolk, post- construction of Sizewell C, which should ensure that the housing stock of East Suffolk increases and that local housing markets are able to accommodate future growth.

29.49. There is potential legacy from tourism providers in the vicinity if they can improve their facilities using funding from the Tourism and Housing Funds. Providing additional accommodation at existing providers will avoid adverse impact on their "normal" business and provide additional income throughout the construction period of Sizewell C as well as extended facilities post construction of Sizewell C, dependent on planning and licencing.

Neutral

29.50. During the operational phase of the Sizewell C proposal there are forecast to be 900 permanent roles at the station. It is anticipated that a large number of these will be required to live within a 40-minute drive of the station – this is approximately 25 miles, or as far as the outskirts of Ipswich to the South but not as far as Lowestoft to the north. However, it is anticipated that the existing housing market will be able to accommodate demand from workers during the operational phase of the development.

29.51. Tourism: As referred to in the tourism section, the Councils are concerned about a "boom and bust" effect on parts of the tourism sector at the end of the construction period. Accommodation providers may, during the construction period, have become reliant on business related to the construction workforce of Sizewell C. This will, at least to a degree, have displaced regular tourist visitors who may have stayed previously at these businesses. The immediate impact on the sector could potentially be severe.

29.52. Outages: approximately every 18 months each reactor will require a planned outage for re-fuelling, as the reactor is shut down the opportunity is taken to carry out a host of other tasks at the shutdown reactor during that usually eight – twelve-week period. With two reactors at Sizewell C, and the existing Sizewell B station, there could be scheduled outages every six months at Sizewell, this can result in up to 1000 more workers at the site. This has implications for accommodation in the local area. Some of the legacy provision arising from bringing additional homes back into use and possible expansions at existing tourist accommodation sites could support the regular outages. However, this will have ongoing impacts in the local area, some of which are economic benefits, the outputs from the Housing Fund should support accommodation impacts in the future.

Required Mitigation

29.53. The Councils support the embedded mitigation to the project in the form of the accommodation campus and the caravan site at LEEIE. Subject to these being provided in an appropriately timely fashion in the construction programme, the Councils are satisfied that these two measures will provide a good basis for mitigating adverse impacts arising from influx of workers to the local area to work on the project.

Requirements and obligations

29.54. Requirements - The phasing of development requirement will be essential in ensuring that the campus and caravan park are appropriately scheduled in the construction programme to ensure they are in place at an appropriate time.

29.55. S106 Obligations - The Councils support the principle of a Housing Fund providing it is robust and flexible to meet the needs of a potentially changing housing market. It is anticipated that the majority of the Fund would be required to be spent and invested in the first 7 years of construction in order to provide additional resilience in the local housing market. The Councils will continue to work with the Applicant on the principles and agreeing governance of the Fund. We will also need to ensure that it is sufficiently robust to meet the anticipated needs of East Suffolk during the build-up to peak construction. In particular, we will be seeking to ensure that construction workers do not displace existing residents into unsuitable housing or homelessness. A robust Housing Fund will provide the Councils with the resources required to ensure adverse impacts are mitigated and where possible provide enhancements to our housing market through programmes like bringing empty homes back into use.

29.56. Tourism Sector: The Applicant proposes that an element of the Housing Fund be ring-fenced specifically to address and negate adverse impacts on the tourism market of East Suffolk and ensure that adequate housing supply for workers can be made available without adversely impacting the tourist visitor economy throughout the year. Measures that this element of the Fund could be used for include: grants to enable local providers to gain planning consent for expansion and grants to enable local providers to seek extensions to their current licences. The Councils would welcome the Fund being used to match fund or give loans to providers. An example would be a loan or match funding to enable a caravan park provider to expand their offering for Sizewell C workers by constructing a new toilet / shower block for worker use separate from holiday maker facilities. This element of the Fund has not yet been discussed in detail with the Applicant.

29.57. RAMS: Details on these measures can be found in the ecology and biodiversity section.

30. Quality of Life and Wellbeing (Lead authority ESC)

Summary

30.1. Quality of life draws on many of the specific themes discussed above to establish the overall impact of the development on the lived experience of people in the area. A balanced consideration of overall quality of life covers the themes of visual amenity, environmental and landscape quality, amenity and recreation, noise and vibration, air quality, traffic and transport, health, perceived and actual community safety, the economy and access to public services; all of which are issues that affect day-to-day life in communities.

30.2. The Councils conclude that there will be residual adverse impacts on the quality of life and wellbeing of individuals and their communities. These need to be offset by the proposed Community Fund.

Table 30: Summary of impacts – Quality of life
(Please cross-refer to the more comprehensive impact descriptions under the issue specific headings)

Ref No.	Description of Impact	Construction (C) / operation (O)	Negative/ Neutral/ Positive	Required mitigation and how to secure it (change/requirement /obligation)	Policy context
Construction					
30a	Impacts on natural environment, landscape quality, heritage features, biodiversity – affecting the enjoyment of the natural environment	C	Negative	Residual community, quality of life and wellbeing impacts to be mitigated through proposed Community Fund – obligation Other avoidance, mitigation and compensation measures are covered under the relevant issue headings in this LIR	NPS EN-1 reflects government acceptance of biodiversity's essential role in enhancing the quality of life and wellbeing, and recognises need to protect most important biodiversity and geological conservation interests. Notes excessive noise can have wide-ranging impacts on the quality of human life, health (for example owing to annoyance or sleep disturbance) and use and enjoyment of areas of value like quiet places and areas with high landscape quality. Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity.
30b	Amenity and Recreation / Public rights of way	C	Negative		
30c	Noise, vibration, air quality	C	Negative		
30d	Traffic and transport - road safety, congestion, noise, air quality, pedestrian amenity, severance and driver delay, with a potentially higher perceived impact than the actual impact	C	Negative		
30e	Communities positively impacted by Two Village Bypass and Sizewell Link Road (noise, vibration, air quality, severance, amenity)	C / O	Positive		
30f	Health and wellbeing – mental health, stress and anxiety	C	Negative		
30g	Economic and skills opportunities – construction jobs	C	Positive		
30h	Potential negative impact on some economic activity/sectors including tourism	C	Negative		
30i	Community safety and community cohesion impacts (real and perceived)	C	Negative		
30j	Pressure on housing market – particularly impacting vulnerable and lower income residents	C	Negative		
30k	Impacts on access to public services	C	Negative		
30l	New sports facilities	C / O	Positive		
30m	Localised increased flood risk	C	Negative		
30n	A number of residents may not feel personally affected by the construction activities, and as a result do not consider their quality of life and wellbeing to be changed.	C	Neutral		
Operation					

30o	Once construction activity has ceased and environments have been restored, the impact on quality of life will have been considerably reduced for most, although it is clear that some residents will still feel negative or indeed positive impacts.	O	Neutral	Community Fund to continue for early post-construction period – obligation Other avoidance, mitigation and compensation measures are covered under the relevant issue headings in this LIR	NPS EN-1 reflects government acceptance of biodiversity's essential role in enhancing the quality of life and wellbeing, and recognises need to protect most important biodiversity and geological conservation interests. Notes excessive noise can have wide-ranging impacts on the quality of human life, health (for example owing to annoyance or sleep disturbance) and use and enjoyment of areas of value like quiet places and areas with high landscape quality. Noise resulting from a proposed development can also have adverse impacts on wildlife and biodiversity.
30p	Economic and skills opportunities – operational jobs	O	Positive		
30q	Potential "boom and bust" effect on local economy	O	Negative		
30r	New sports facilities as legacy benefit	O	Positive		
30s	Natural environment, landscape quality, biodiversity –impact of permanent buildings and structure on enjoyment and perception of this	O	Negative		
30t	Coastal change / impacts on coast path	O	Negative		
30u	Perception of presence of a nuclear power station and interim nuclear waste storage	O	Negative		

National Policy

NSP EN-1

30.3. Whilst NPS EN-1 refers to a number of community impacts to be assessed and considered, it also specifically refers to two aspects of quality of life impacts to be taken into consideration. It refers to the "general acceptance of biodiversity's essential role in enhancing the quality of life" (para 5.3.5) and that sites of regional and local biodiversity and geological interest have also a fundamental role to play in "contributing to the quality of life and the well-being of the community" (para 5.3.13). It also states that consent should not be granted unless the IPC (now ExA) is "satisfied that the project will avoid significant adverse impacts on health and quality of life from noise".

Local Plan Policy

30.4. Similarly, while there is no specific Local Plan policy on quality of life, the Suffolk Coastal Local Plan 2020 refers to:

i. The exceptional quality of the natural, built and historic environment makes the plan area a very special place to live and work and a popular destination for visitors and tourists. This resulting high quality of life brings with it the responsibility of preserving this heritage as a key priority, for its own intrinsic value as well as for the health, prosperity and well-being of the residents (paragraph 1.14).

ii. And, in relation to environmental quality, "The high-quality natural environment is important to many local communities as it positively contributes to quality of life, quality of place and mental health" (paragraph 10.16).

Context

30.5. Quality of life draws on many of the specific themes discussed above to establish the overall impact of the development on the lived experience of people in the area. A balanced consideration of overall quality of life covers the themes of visual amenity, environmental and landscape quality, amenity and recreation, noise and vibration, air quality, traffic and transport, health, perceived and actual community safety, the economy and access to public services; all of which are issues that affect day-to-day life in communities. It also touches on issues such as tourism, although these are primarily addressed in subject specific chapters elsewhere within the LIR.

30.6. For the purposes of this document, quality of is taken to mean any factor that may adversely impact an individual's expectation and perception of their surrounding environment. Adverse impacts may result from disturbance factors such as intrusion,

anxiety and perception of risk, nuisance and loss of amenity, noise, air quality, light pollution, transport environmental impacts, disorder, crime, loss or perceived loss of good access to public services and change in landscape and biodiversity character.

30.7. The demographic of East Suffolk, dominated by retired individuals who are more likely to be at home for long periods, may predispose the community to experience a greater level of impact than in other locations.

30.8. It is noted elsewhere in this LIR that the wider area surrounding the development site is in large parts of a rural nature, with a high degree of tranquillity, with generally comparably quiet roads, with parts of the area feeling relatively remote and unspoilt. These are all aspects perceived to contribute to residents' quality of life.

30.9. Less tangible, perception and quality of life impacts are recognised by the Applicant, described as "residual in-combination effects on local communities as a result of combined environmental effects, both perceived and real. In some instances, these cannot be directly mitigated through physical design measures, and require a more reactive approach." In recognition of these impacts, the Applicant proposes to offer a Community Fund "to help mitigate these effects through schemes, measures and projects which promote the economic, social or environmental well-being of those communities and enhance their quality of life". (ES Vol 2 Chapter 9, 9.8.65 and 9.8.66 [APP-195].

30.10. The following assessment brings together the diverse elements of the development that impact upon the quality of life in Suffolk, with cross-references to the sections where each issue is discussed in more detail.

30.11. This is then followed in the LIR by a Locality Impact section below with locality specific case studies to illustrate the cumulative impact on specific communities, which indicate the level of quality of life impacts on these communities. It highlights that the combined effect of impacts identified by the Applicant and the long duration of even minor construction impacts has potential to cause incremental worsening in quality of life.

30.12. It is important to note that whilst some residents will experience significant benefits from the development particularly in relation to jobs and skills development, a large number of residents will not benefit from these. So, whilst there are positive impacts on quality of life listed, quite often at an individual basis these cannot make up for the negative impacts felt by residents across the topic areas below.

Construction impacts

Positive

30.13. Bypassed communities - At a localised level, residents living along the existing A12 in Stratford St Andrew and Farnham, and the existing B1122 in Middleton Moor and

Theberton, may see improved quality of life due to traffic being removed from the villages onto the Two Village Bypass and Sizewell Link Road, and this reduced noise, vibration, air pollution and severance. (See the section on Associated Development sites)

30.14. Economic and skills opportunities – The LIR recognises the significant economic opportunities for the local area from Sizewell C. Job and career opportunities, as well as skills enhancement opportunities and raising aspirations of young people, are important benefits for residents. Those who benefit from these opportunities may see this as a positive impact on their quality of life. (See the sections on Economic and Supply Chain Impacts and Skills, Employment and Education)

30.15. New sports facilities – Investment by the Applicant into new sports facilities in Leiston, which will be accessible also for locals, may be a factor that improves quality of life for some. (See the subsection on Sports and recreation)

Neutral

30.16. It is noted that a number of residents may not feel personally affected by the construction activities, and as a result do not consider their quality of life and wellbeing to be changed. This should not detract from the fact that a significant number of residents will feel negatively affected.

Negative

30.17. Natural environment, landscape quality, biodiversity – The LIR sets out in some detail the impact of the construction of the development on the natural environment. With regards to the AONB, its identified indicators of Natural Beauty and Special Qualities directly relate to quality of life and wellbeing, all of them being subject to large and medium scale effects, some at a localised level, others affecting a wider area. This includes negative effects on landscape and scenic quality, relative wildness, relative tranquillity, natural heritage features and health and wellbeing. Given the general acceptance of biodiversity's essential role in enhancing the quality of life referred to in EN-1, it is clear that these impacts will negatively affect the enjoyment of the natural environment and thus the quality of life of residents. (See the sections on Landscape and Visual Impact, the AONB, Ecology and Biodiversity and the Historic Environment)

30.18. Amenity and recreation – The development will have a negative impact on the quality and amenity of the recreation and access network around the Main Development Site and Associated Development sites. Impacts will be direct (diversions and closures) and indirect (changes to the amenity value and quality of the user experience due to increased activity such as traffic and construction activity, resulting in noise, loss of views, loss of

tranquillity, light pollution). This includes adverse impacts on popular existing public rights of way on the coast, namely the nationally promoted Suffolk Coast Path, the proposed England Coast Path National Trail, and the Sandlings Walk, as well as locally valued walks, such as Kenton Hills and the countryside surrounding the Two Village Bypass and Sizewell Link Road (see the section on PRoW and Amenity and Recreation and Amenity and Recreation).

30.19. Noise, vibration, air quality – The LIR highlights impacts of noise and vibration, and in some instances air quality, on residential receptors, particularly along the main transport routes (A12/B1122 and the East Suffolk Line and Leiston branch line), but also as a result of traffic impacts in town and village centre locations – particularly Leiston and Wickham Market. Noise and dust from construction activity at the Main Development Site may impact on the amenity of walkers and cyclists in the area (see the section on Noise and Vibration and Air Quality).

30.20. Flood risk – The LIR raises concerns that flood risk may be increased in specific locations. This concern may have an impact on mental health and wider quality of life of affected residents (see the section on Flood and Water).

30.21. Traffic and transport – The LIR highlights concern around the substantial amount of additional road traffic to be created as a result of the construction activity, both from HGV freight traffic and workforce car and bus traffic. This will have associated impacts on road safety, congestion, noise, air quality, pedestrian amenity, severance and driver delay, with a potentially higher perceived impact than the actual impact. In addition, the proposed night-time freight rail movements will impact on night-time noise and vibration along the rail routes. The LIR also refers to concerns of increased on-street parking in the local area (as a result of more houses in multiple occupation and fly parking), impacting on availability of parking for existing residents. All of these have important impacts on the quality of life of a large number of residents along all the transport routes to/from the site, and may affect their mental and physical health. (See the section on transport).

30.22. Health and wellbeing – Construction activity, increased traffic, and the presence of a large incoming non-home-based workforce may affect the mental health of residents, and cause stress and anxiety. (See the section on Quality of Life and Wellbeing).

30.23. Community safety and community cohesion – The LIR raises concerns about community cohesion and community safety impacts as a result of the influx of a sizeable non-home-based workforce. Importantly, even if there is no measurable impact, the

presence of the sizeable workforce may give the perception of impacts, increasing fear and affecting mental health of some. (See the section on Community Impacts).

30.24. Accommodation and housing - The construction workforce may put pressure on the housing market, particularly on the most vulnerable residents. Whilst the proposed Housing Fund is set up to address this issue, there is a risk of some negative impacts significantly affecting the quality of life of those affected. (See the section on Accommodation and Housing).

30.25. Access to public services – The LIR raises concerns around impacts on access to public services for residents. This includes access to health services, school and early years places, social care, emergency services, and continued availability of the Household Waste Recycling Centre at Lovers Lane. Even an unfounded perception of reduced access to these services could impact quality of life. (See the section on Public Services).

30.26. Potential negative impact on economic activity – The LIR sets out concerns about negative impacts on the tourism industry (see the section on Tourism), displacement effects potentially affecting the viability of local businesses (see the section on Economic and supply chain impacts), and the economic cost of congestion to some businesses. (See the subsection on negative Economic impacts).

Operational impacts

Positive

30.27. Economic and skills opportunities – The LIR recognises the employment opportunities of the proposed 900 permanent jobs at the operational power station. Those who benefit from these opportunities may see this as a positive impact on their quality of life. For further information see the subsection on operational phase economic benefits.)

30.28. New sports facilities – Investment by the Applicant into new sports facilities in Leiston, which will be accessible also for locals, may be a factor that improves quality of life for some. See the subsection on the Leiston sports facilities for further information.

30.29. Landscape improvements – As part of the site restoration, large areas of the construction site will be restored to heathland, resulting in improved amenity and landscape in those settings. See the section on landscape restoration for further details.

Neutral

30.30. Once construction activity has ceased and environments have been restored, the impact on quality of life will have been considerably reduced, although it is clear that some residents will still feel negative impacts.

Negative

30.31. Natural environment, landscape quality, biodiversity – As set out in this LIR, the buildings which comprise the Main Development Site will result in a *significant and lasting adverse residual impact* on the character and special qualities of the AONB within the locality of the main site, and will thus continue negatively affect the enjoyment and perception of the natural environment and thus the quality of life of residents. Further information on these elements can be found in the sections on landscape impacts, the AONB and ecology respectively.

30.32. Economic impacts – there is a possibility at the end of the construction period for the area to see a "boom and bust" effect, with negative economic and employment impacts as a result of the large construction workforce being laid off and contracts with local businesses concluding.

30.33. Coastal change and coast path – the LIR identifies the risk of impacts on the coastline from the development, including whether the Soft Sea Defence Feature is sustainable in the long term. There is concern that coast path along the front of the development site is left more vulnerable to erosion from coastal processes and subject to beach recharge works during operation, with potential considerable impact on amenity. See the sections on coastal change and PRoW for more detail.

30.34. Presence of a nuclear power station and interim nuclear waste storage – The risks related to the presence of a nuclear power station and nuclear waste in the locality may be of concern to some residents and affect their mental health.

Required mitigation – Community Fund

30.35. The issue specific sections referred to above provide detailed commentary on specific embedded mitigation and obligations to mitigate the specific impacts.

30.36. However, the Councils believe that the quality of life and wellbeing impacts cannot be directly mitigated in full – this is partly a result of individual perception of personal impact that plays an important role in self-defining quality of life and wellbeing. The Applicant recognises the principle of such residual in-combination effects on local communities as a result of combined environmental effects, both perceived and real.

30.37. The Applicant proposes to provide a Community Fund to help mitigate these effects through schemes, measures and projects which promote the economic, social or environmental well-being of those communities and enhance their quality of life. This would be secured through an obligation in the Section 106 Agreement.

30.38. The Councils welcome the continued commitment to the Community Fund in order to tackle residual impacts but there is no detail about the scale of the proposed funding as

yet. The Councils urge the Applicant to work closely with the Councils to design and develop this fund and to engage local community representatives in the process using a co-production approach.

30.39. So that it can respond to the breadth of quality of life, wellbeing and wider community impacts, the Councils request that the Community Fund should support new opportunities as well as projects to mitigate specific identified impacts, i.e., take a holistic view of what would offset the negative impacts of the proposed development upon east Suffolk communities.

30.40. It should be noted that several of the other residual mitigation funds may also allow funding projects that could directly improve the quality of life of residents. These include, most notably, Natural Environment Fund, Tourism Fund and Housing Fund.

Whole project issues

31. Implementation and Deliverability Risks (Lead Authorities SCC and ESC)

Summary

31.1. In a project as complex and extensive as Sizewell C, the sequence and timing of different parts of the project are likely to be difficult to achieve precisely in the order that is anticipated in this proposal. This is the case even in a very well-run development and not achieving this could be a consequence of any number of unexpected circumstances from unpredicted adverse ground conditions to the failure of sub-contractors and the supply chain consequences of completely external factors such as we have seen with the recent pandemic and transport delays. An example of this has been at Hinkley Point C construction where, for a variety of reasons, the materials jetty was delivered later than originally planned, necessitating a switch to carrying more material by road for the period until it was completed. This required further approaches to amend the consented DCO.

31.2. The risks of this happening at Sizewell C could have wide implications for the residents, businesses and environment of the area and it is therefore important to ensure that such changes are monitored, the possible risks surrounding these identified and measures are in place to control and/or mitigate for them. The Councils welcome the appropriate contingency strategies including controls and mitigation measures to ensure adverse effects are mitigated during the construction period.

31.3. The section below looks at a number of risk areas, the factors contributing to such a risk, the possible consequences, and the potential mitigation and contingency packages that may be required.

Table 31: Summary of impacts – implementation and deliverability risks				
Ref No.	Description of Impact	Construction (C) / operation (O)	Negative / Neutral/ Positive	Required mitigation and how to secure it (change/requirement/obligation)
31a	Failure to achieve provision of rail or marine facilities, in the time proposed by the Applicant, is likely to result in increased pressure upon road transport. This could result in levels of traffic which then exceed those set out in the ES.	C	Negative	Caps on the number of HGVs accessing the site; contingency funding for additional mitigation measures – obligation/requirement
31b	Delay in delivery of Park and Ride sites, direct bus services, and changes to the number of workers travelling directly to site could result in additional traffic, resulting in additional congestion and pressure on communities	C	Negative	Limits to maximum number of workers employed on main site – obligation/requirement Monitoring and contingency measures - obligation Workforce should not exceed Early Year assessed figures until park and ride sites are completed - obligation/requirement
31c	Delays in delivery of Two Villages Bypass and Sizewell Link Road and other highway mitigation may prolong and exacerbate impacts on local communities	C	Negative	Cap on HGV movements until both roads are open to Sizewell C construction traffic - obligation/requirement
31d	Delay in delivery of road safety schemes may heighten accident risks at those locations	C	Negative	Temporary measures as contingency - obligation Monitoring- obligation
31e	Late delivery of accommodation campus and/or workers caravan site puts further pressure on housing market	C	Negative	Limit to the number of people that can be employed on the site until each of the accommodation facilities is completed unless further effective mitigation measures can be put into place - requirement
31f	Late delivery of ecological mitigation measures may increase the adverse impact on species/habitats	C	Negative	If translocation sites or foraging areas are not judged to be adequately established, development of sites where species would be adversely affected should not be able to go forward unless and until other contingency measures have been put into place - obligation.

31g	Project over-run would prolong disruption to local communities	C	Negative	Mitigations and compensation funding to be set in a way that they continue until the end of the construction period rather than having fixed sums or timeframes - obligation
31h	Late delivery of the B19 and coast path diversion.	C	Negative	Requirement or Obligation that neither BW19 nor the coast path can be closed prior to opening of the diversion route

Learning from Hinkley Point C

31.4. The Oxford Brookes Study (**APPENDIX 2: 1**) commissioned by the New Nuclear Local Authorities Group, highlights several learning points from Hinkley Point C which relate to implementation and deliverability risks.

Factors for differences between actual and predicted impacts

31.5. The study compares actual impacts with those predicted in the Hinkley Point C DCO, seeks to explain factors for differences, and provides recommendations for future NSIP DCOs. Many of the factors identified related to implementation and deliverability, including long time delays in commencement of construction project; project modifications; changes in baseline conditions; inadequate resourcing of monitoring; lack of trigger points in DCO/s106 obligations and requirements; lack of clarity in definition of some indicators; over-focus on peak construction impacts; and inadequacies of predictive techniques. Some of these categories overlap; for example, project and baseline changes are more likely with a lengthy authorisation process. Finally, there are also the challenges faced by a major UK NNB project with no recent UK comparators. Table 31 below from the study (page 60/61) sets out the factors in more detail:

Table 32: Hinkley Point C – Factors for differences between actual and predicted impacts (Source: Oxford Brookes University 2019, page 60/61)	
Time delays in commencement of construction project	• Major delay in commencement of main construction stage, with predictions dated by at least 5 years. • The predictive data on the construction workforce requires a refresh against a timeline to reflect a more adaptive impact assessment, moving towards peak
Project modifications	• For example, for HPC this includes delay in delivering the temporary jetty; provision of only one Bridgwater Accommodation Campus; and revised s106 re level of PRS accommodation; changes to various buildings and structures, and to delivery of highway improvement schemes; and construction programme changes in timing between two reactor units.
Changes in baseline conditions	• For example, includes: significant changes in local and regional unemployment levels from the higher levels predicted in baseline studies to lower levels in 2018/19, and in the accommodation baseline.
Inadequate resourcing of the monitoring and auditing activities	• Needs to be a priority for both developer and LAs, the latter with service agreement with the developer. • The Councils did seek funding to monitor the HPC project in implementation and this was not supported by EDFE or examined/ challenged by the Examining Authority.
Lack of clarity on definition of some indicators	• For example, for employment -- what is a worker, which workers should be included in the site profile, and what is the predicted average homebased workforce over the project life? The DCO examination was an opportunity missed for clarification of such socio-economic issues. • For example, accommodation–what is latent accommodation? • Lack of targets for some indicators – for example, for several accommodation indicators.
Lack of trigger points in DCO/s106 obligations and requirements	• For example, lack of including, or delay in meeting, DCO trigger points in relation to completion of temporary jetty, Bridgwater Campus accommodation, and Park and Ride sites.

	• Failures of DCO examination to assess the robustness of the accommodation strategy/s106. • Poor wording in DCO requirements. • Need for more congruence between DCO and s106
Over-focus on peak construction impacts	• Whilst some sector predictions include evolution of impacts over the construction stage (eg-- for employment local content), longitudinal timelines are missing for other sectors (especially accommodation), leading to mismatch between actual current civils stage and predicted peak impacts.
Degree of accuracy of some predictive techniques	• For example -- concerns about effectiveness of gravity model approach in forecasting local geographical distribution of NHB workforce

31.6. Most of the issues identified for Hinkley Point C in the table above have relevance for Sizewell C, and should in the Councils' view be considered as part of the DCO. For example, there are risks of delays of the commencement of the Sizewell C project, as well as of changes to base line data. This section highlights the risk for key infrastructure to be delivered late, or become undeliverable. The concerns at Hinkley Point C of too much focus on peak construction impacts should be avoided for Sizewell C. In relation to the implementation and deliverability risks, the lesson from Hinkley Point C of lack of trigger points in DCO/S106 obligations and requirements should be addressed in the Sizewell C obligations and requirements.

Recommendations from the report

31.7. The report offers a list of recommendations for future New Nuclear Build development arising from the learning from Hinkley Point C (page 63-65).

31.8. Directed primarily at the developer, the report recommends (page 63): "It should be recognised that some construction impact predictions (e.g., workforce labour demand curve, and accommodation tenure mix) may require a refresh against a timeline to review and update baseline conditions, actions and project evolution (especially moving towards peak construction). This should be part of an effective adaptive impact assessment process (plan, monitor and manage).

31.9. KPIs need to be clearly set out and consistently monitored. There will be a need for changes to some KPIs, and the need for new ones as the project unfolds; these changes and additions need to be transparent and agreed in a consistent way by monitoring bodies".

The report then suggests for the ExA (page 64) to "*adopt*: *a robust approach in the DCO process to clarify requirements for monitoring and public reporting of actual performance against a full set of socio-economic and environmental health/ biophysical indicators/KPIs. Why do you wish to monitor? Is there relevant expertise in the LPA to interpret data? If not does the s106 provide for buying in this expertise? Where will it be reported? if thresholds are breached what are the consequences?*

"*Ensure that there is clear 'trigger points' in the DCO in relation to completion of associated developments – such as temporary jetty, campus accommodation, and Park and Ride sites.*

"*Ensure that predictions contain longitudinal timelines, showing predicted evolution of impacts over key phases of the construction stage, and into full operation, for example for topics such as HB and NHB workforce numbers, accommodation tenure and distribution.*"

31.10. These learning points are reflected in the considerations outlined in the following heading.

Transportation of materials

Risk factor

31.11. The updated transport strategy relies on use of different modes of delivery of materials: rail, road and marine, which is supported in principle by the Councils. The failure to achieve the implementation of any one of these modes in the timeline suggested by the Applicant would place additional pressure on the other modes or result in a slowing of the construction project itself. The factors that could be a risk here include (but are not limited to):

i. Delivery of the upgrade of the Sizewell Branch Line and sidings at LEEIE not being achieved within the expected timeframe from the start of construction so that deliveries by 2 trains a day can commence.

ii. Necessary works on East Suffolk Line not being achieved by Network Rail in the same timeframe as the previous works to allow any freight trains to serve the site.

iii. Completion of the Green Rail Route and associated unloading facilities not being achieved within the expected timeframe from the start of construction so that deliveries by 4 trains a day can commence.

iv. Non-delivery of either or both BLFs, disrupting proposals for materials and/or AILs to be delivered by marine routes.

Possible consequences

31.12. The failure to achieve provision of rail or marine facilities in the time proposed by the Applicant is likely to result in increased pressure on road transport. There is the danger that this could result in levels of traffic which then exceed those set out in the ES, the ES Addendum, the TA, and the TA Addendum, and certainly would be greater than the levels that the Councils have aspired to in seeking to achieve a sustainable balance between road, rail and marine transport. The consequences for Suffolk communities could be prolonged and possibly increased levels of HGV use of roads with the attendant congestion, noise, vibration, air quality, community severance and road safety impacts.

Potential mitigations and contingencies

31.13. Caps should be imposed on the number of HGVs accessing the site to ensure that further consideration is given to other mitigating measures to be put into place if it becomes clear that the caps are likely to be exceeded at any point in the construction process, or if the adverse consequences of such additional HGV demands are of such a scale that the pace of construction should be reduced to be more consistent with what can be managed within an acceptable transport regime.

Transportation of workers

Risk factor

31.14. Various issues may affect the numbers of workers travelling to the site and the means by which they do so. These could include:

i. Distribution of accommodation of workers not reflecting that assumed in the gravity model leading to redistribution of trips on the highway network invalidating assumptions made in the TA and ES.

ii. Delay to the delivery of on-site car park, meaning that there is a risk of fly-parking across the immediate area.

iii. Late delivery of northern and southern Park and Ride sites, meaning that alternative temporary facilities would be required or that workers would continue to have to drive direct to the Main Development Site.

iv. Late delivery of direct bus services with more workers driving direct to the site.

v. Greater concentration of workers in the immediate area around the site (as has happened at Hinkley Point C), meaning that there is a change in the balance of those workers driving direct to the site as against those using park and ride facilities.

vi. More workers drive to local facilities rather than walk or cycle (out of work hours)

Possible consequences

31.15. The impacts of these changes from current assumptions could result in additional traffic continuing to need to access the site car parks with consequences for congestion and pressure on communities. In addition, this would lead to less sustainable transport outcomes.

Potential mitigations and contingencies

31.16. Limits imposed on the number of workers able to be employed until the Main Development Site car park is completed.

31.17. If more workers come from the immediate area than originally modelled, then monitoring to trigger greater efforts to encourage access by dedicated bus services and further limits on workers being able to use Main Development Site car park.

31.18. Workforce should not exceed Early Year assessed figures until park and ride sites are completed.

Transport impacts on communities

Risk factors

31.19. The Applicant is proposing to provide a number of major Associated Developments which will take traffic away from communities that may otherwise be significantly adversely affected. The Two Villages Bypass and Sizewell Link Road both present major new pieces of highway infrastructure including structures such as the Alde River Overbridge on the former and the Pretty Road Footbridge and Railway Overbridge on the latter. They are anticipated to be completed relatively early in the construction process to divert traffic away from communities, but in themselves present complex engineering projects.

Possible consequences

31.20. The two new roads are intended to divert traffic away from sensitive communities before there are significant increases in HGV and other vehicle movements to the Main Development Site. If they are substantially delayed, then the adverse consequences that have been listed for those communities in earlier sections (see transport section) will be prolonged and may be exacerbated if traffic volumes increase further.

Potential mitigations and contingencies

31.21. There should be a clear cap on HGV movements until both roads are open to Sizewell C construction traffic.

Road safety schemes

Risk factors

31.22. There are a number of transport improvements which are included in the project for road safety measures. These include junction improvements at the A12/B1119, the A1094/B1069, the A140/B1078, the A12/A144 and the B1078/B1079. It may be that these schemes are not implemented at the time anticipated, with the consequence that traffic volumes would have built up to a point when the safety issues become of concern. Forecasting the impact of additional traffic on road safety is not an accurate calculation and hence clusters of accidents may occur where numbers have been relatively low in the past.

Possible consequences

31.23. If traffic volumes build up to levels beyond those considered appropriate for the existing design of these junctions, then there is a heightened risk of accidents at these locations.

Potential mitigations and contingencies

31.24. It may be necessary to impose temporary measures on these junctions to reduce risks, such as speed limits or traffic control, which in themselves could lead to additional congestion and delay for traffic. This would have to be monitored and managed through the measures for the Transport Review Group and contingency funding.

Housing market

Risk factors

31.25. The housing market in the area is going to be heavily influenced by the success of the measures to accommodate the non-home-based workforce. The accommodation campus is intended to house a substantial proportion of the non-home-based workforce. In earlier years, the caravan site at the LEEIE performs a similar function. If the schemes are delivered late, then a greater number of workers will have to look to housing elsewhere in the wider area.

Possible consequences

31.26. A late delivery of the two accommodation schemes referred to and the consequent wider dispersal of the workforce could have impacts on the housing market and on transport. For the housing market, this could put further pressure on sensitive sectors with wider consequences for other users of the housing stock, including on the private rented sector and on the tourist market to a scale that has not been anticipated within the ES. In terms of transport, it could result in the workforce living in locations where they need to travel to and from the site with additional pressure on roads, bus services and fly parking.

Potential mitigations and consequences

31.27. A means of controlling this impact would be to include a limit to the number of people that can be employed on the site until each of the accommodation facilities is completed unless further effective mitigation measures can be put into place.

Ecology

Risk factors

31.28. A number of mitigation measures are proposed to reduce the impact on ecology across the wider area affected by the construction of Sizewell C. Some are long term but others are required at an early stage to allow for the translocation of fauna from sites directly affected by construction or to provide foraging grounds for species such as the

marsh harrier or bats as others are lost to development. There is a risk that the appropriate receptor or foraging areas may not be sufficiently prepared to fulfil their role. It is not just that the areas should be set aside, but that the ground and vegetation conditions should have developed to an appropriate level to provide suitable habitat (for example vegetation and prey availability conditions need to be adequate at reptile receptor sites).

Possible consequences

31.29. The failure to provide adequate mitigations in a timely manner would have an adverse impact on the success of protecting the various protected species in a way envisaged by the ES.

Potential mitigations and contingencies

31.30. If translocation sites or foraging areas are not judged to be adequately established, then development of sites where species would be adversely affected should not be able to go forward unless and until other contingency measures have been put into place. This should be agreed by the Environmental Review Group and funded by the Applicant through ecological contingency funding.

Project Over-run

Risk factors

31.31. Experience with other projects carried out by the Applicant using the same technology, particularly in Finland and France, shows that there has been considerable delay in commissioning these projects by comparison with the targets initially set. There is every likelihood that, with the experience of these schemes and those at Hinkley Point C and in China, the methods of construction will have been well tested and will run to time. However, as referred to above, there is still the possibility that local conditions result in delay and the actions of others outside the organisation disrupt complex supply chains. While impacts on individual issues have been described in previous paragraphs, the consequences of delay overall would mean that communities would have to accept continued construction in their area with the attendant disruption to their quality of life.

Potential Consequences

31.32. The impact on quality of life generally has been set out elsewhere in this document (see quality of life section). Project delay would mean that there would be continued impacts on the local community, possibly extending the disruption by months or even years.

Possible mitigation and contingencies

31.33. In providing for mitigation for the construction phase of the project, these should be set in a way so that they continue until the end of that period rather than having fixed sums or timeframes. Arrangements should be in place that allows annual payments to continue until the end of construction.

32. Cumulative Impacts (Lead authorities ESC and SCC)

Summary

32.1. In recent years there have been a number of proposals for energy related development in the administrative area of ESC. There are a number of consented and operational offshore windfarms, with onshore infrastructure, the existing nuclear power station sites, and proposals for further offshore windfarms and interconnectors. Accompanying this are related demands on the National Grid and therefore Grid extension proposals required by development in East Suffolk but impacting across the wider Suffolk County area.

32.2. The potential for cumulative impacts that would further exacerbate the issues identified in the previous sections is significant, and adds to the complexity of reviewing and assessing the impacts of Sizewell C and considering the required mitigation measures.

Policy context

National Policy

32.3. The Overarching NPS EN-1 directs the IPC (now ExA) to consider "how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place".

32.4. Paragraph 5.12.3 of Section 5.12 (Socioeconomics) identifies the potential cumulative impact of development proposals. It notes that if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.

Local Plan Policy

32.5. The Sizewell C site and the Associated Development is within the administrative area of ESC. It has three adopted Local Plans providing full area coverage comprising the Suffolk

Coastal Local Plan 2020, Waveney Local Plan, 2019 and Local Plan for the Broads Authority, 2019.

32.6. The Suffolk Coastal Local Plan Policy SCLP4.4: *Proposals for Major Energy Infrastructure Projects* notes that proposals will be considered against a number of policy requirements including: "Cumulative impacts of projects are taken into account and do not cause significant adverse impacts".

Other key projects under development

Energy related projects

32.7. The map at Fig. 1 on page 23 provides an overview existing and proposed energy related projects, with the following Table 33 providing more detail on the individual schemes.

Table 33:	Energy related projects with potential for cumulative impacts with Sizewell C			
	Project	**Developer**	**Stage**	**Description**
Offshore Wind Farms	Galloper Offshore Wind Farm	RWE / SSE	Operational	This windfarm is off the south east coast of Suffolk. The cable route comes ashore at Sizewell and there is a sub-station to link to the National Grid north of Sizewell Gap Road. http://www.galloperwindfarm.com/
	Greater Gabbard Offshore Wind Farm	RWE / SSE	Operational	Offshore windfarm 43km off Suffolk coast. Cable comes ashore at Bawdsey and then underground to Bramford National Grid sub-station, west of Ipswich. https://www.scottishpwerrenewables.com/pages/east_anglia_one.aspx
	East Anglia ONE Limited Offshore Wind Farm	ScottishPower Renewables	Operational	Offshore windfarm 43km off Suffolk coast. Cable comes ashore at Bawdsey and then underground to Bramford National Grid sub-station, west of Ipswich. https://www.scottishpowerrenewables.com/pages/east_anglia_one.aspx
	East Anglia THREE Offshore Wind Farm	East Anglia THREE Limited	Approved	Consented August 2017. Looking to commence discharge of requirements. Offshore windfarm 69 km off Norfolk coast. Cable to come ashore at Bawdsey and use ducting already laid as part of the East Anglia 1 route to Bramford. https://www.scottishpowerrenewables.com/pages/east_anglia_three.aspx
	East Anglia ONE NORTH Offshore Wind Farm	East Anglia ONE NORTH Limited	Examination in Process	Examination in progress. Offshore windfarm. Proposed to come ashore north of Thorpeness, run along south side of Sizewell Gap Road and end at new transformer sub-station and National Grid sub-station at Friston. https://infrastructure.planninginspectorate.gov.uk/projects/eastern/east-anglia-one-north-offshore-windfarm/
	East Anglia TWO Offshore Wind Farm	East Anglia TWO Limited	Examination in Process	Offshore windfarm. Proposed to come ashore at Thorpeness and parallel East Anglia One North route to a separate transformer station at Friston but utilising the same National Grid sub-station as East Anglia 1. https://infrastructure.planninginspectorate.gov.uk/projects/eastern/east-anglia-two-offshore-windfarm/
	Galloper Extension (Five Estuaries) Offshore Wind Farm	Galloper Wind Farm Limited		Pre-application. The Councils understand that it has received a connection offer in East Anglia. https://fiveestuaries.co.uk/
	Greater Gabbard Offshore Wind Farm extension (North Falls)	SSE / RWE	Preliminary stages	The Councils understand that it has received a connection offer from National Grid but not at a specific location. https://www.sserenewables.com/offshore-wind/projects/north-falls/

Seabed Leasing	Offshore Wind Farms seabed leasing	Crown Estate		The next phase of the Offshore Wind Leasing Round 4 process - the multi-cycle bidding process under Invitation to Tender Stage 2 - is now underway. Once all Bidding Cycles have concluded, the link below will be updated with details of the outcome, including the identity of successful bidders, and the location and capacity of their proposed projects. https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/offshore-wind-leasing-round-4/
Undersea High Voltage DC Interconnectors	Nautilus Interconnector	National Grid Ventures	Pre-application	Link from Belgium to transformer station to connect to the National Grid sub-station at Friston. https://www.nationalgrid.com/group/about-us/what-we-do/interconnectors-connecting-cleaner-future/nautilus-interconnector
	Eurolink	National Grid Ventures	Preliminary Stages	This is a link from Netherlands to UK. Connection point not clarified at this stage. https://www.nationalgrid.com/our-businesses/national-grid-ventures/interconnectors-connecting-cleaner-future#tab-2
	SCD1	National Grid	Preliminary Stages	Shown as a link from Suffolk to Kent. Would require transformer station at northern end and connection from the National Grid. https://www.nationalgrid.com/uk/electricity-transmission/document/130691/download
Onshore Overhead Transmission	Bramford to Twinstead	National Grid	Pre-application	New overhead 400KV line from Bramford (west of Ipswich) to Twinstead (south of Sudbury). https://www.nationalgrid.com/uk/electricity-transmission/network-and-infrastructure/bramford-twinstead-connection-project https://www.nationalgrid.com/uk/electricity-transmission/document/130691/download
	– AENC Bramford to Norwich	National Grid		400KV lines and ATNC Bramford to Tilbury - 400KV lines - Recommended in Network Options Assessment by National Grid Electricity System Operator January 2021. Confirmation of whether either or both of these will go ahead is not expected to be made by National Grid Electricity Transmission until June 2021. The Network Options Assessment 2021 can be found at: https://www.nationalgrideso.com/research-publications/network-options-assessment-noa

Significant housing and employment site allocations in the Local Plan

32.8. The Local Plans for the District promote growth throughout the whole District. The Suffolk Coastal Local Plan was adopted in September 2020. The Local Plan covers the period 2018 - 2036, with total housing growth for this period being at least 9,756 new homes. The employment sites would provide up to 6,500 new jobs in the Local Plan area. The Waveney Local Plan was adopted in March 2019 and covers the same period with the total housing growth being 8223 homes, and employment sites to provide up to 5,000 new jobs in the plan period.

32.9. The key housing and employment sites from both Local Plans are set out in Table 33 and Table 34 below.

Table 34: Key housing sites identified in the Suffolk Coastal and Waveney Local Plans

Policy	Location	Allocation
Suffolk Coastal Local Plan		
Policy SCLP2.1	Growth in the Ipswich Strategic Planning Area (which is the total areas of ESC, Ipswich Borough Council and Babergh and Mid Suffolk Councils) -	The collective delivery of at least 35,334 dwellings across the Ipswich Housing Market Area.
Policy SCLP12.3	North Felixstowe Garden Neighbourhood	2,000 dwellings
Policy SCLP12.4	Land North of Conway Close and Swallow Close, Felixstowe	150 dwellings
Policy SCLP12.19	Brightwell Lakes –	2,000 dwellings
Policy SCLP12.24	Land at Humber Doucy Lane	150 dwellings
Policy SCLP12.25	Suffolk Police HQ, Portal Avenue, Martlesham	300 dwellings
Leiston – Neighbourhood Plan made 2017		for the period 2015 – 2029, about 400 dwellings
Policy SCLP12.32	Former Council Offices, Melton Hill	100 dwellings
Policy SCLP12.47	Land to the South of Darsham Station	120 dwellings
Policy SCLP12.60	Land between High Street and Chapel Lane, Pettistree (adjoining Wickham Market)	150 dwellings
Policy SCLP12.64	Land off Howlett Way, Trimley St Martin	340 dwellings
Policy SCLP12.65	Land adjacent to Reeve Lodge, High Road, Trimley St Martin	150 dwellings
Policy SCLP12.33	Land at Woodbridge Town Football Club	120 dwellings
Policy SCLP12.29	South Saxmundham Garden Neighbourhood	800 dwellings including employment land to the west of the A12
Waveney Local Plan		
Policy WLP2.4	Kirkley Waterfront and Sustainable Urban Neighbourhood	1,380 dwellings
Policy WLP2.13	13 North of Lowestoft Garden Village	1,300 dwellings

Policy WLP2.16	Land South of The Street, Carlton Colville/Gisleham	900 dwellings
Policy WLP2.14	Land North of Union Lane, Oulton	150 dwellings
Policy WLP2.15	Land Between Hall Lane and Union Lane, Oulton	190 dwellings
Policy WLP3.1	Beccles and Worlingham Garden Neighbourhood	1,250 dwellings
Policy WLP3.2	Land West of London Road, Beccles	280 dwellings

32.10. Total housing growth 2014 – 2036 by settlement (Waveney Local Plan):

i. Lowestoft area (Lowestoft, Carlton Colville, Corton, Gisleham, Oulton and Oulton Broad) - 5206 dwellings

ii. Beccles and Worlingham – 1458 dwellings

iii. Halesworth and Holton – 762 dwellings

iv. Bungay – 557 dwellings

v. Southwold and Reydon – 387 dwellings

vi. Strategy for Waveney rural areas – 865 dwellings

Table 35: Key employment sites identified in the Suffolk Coastal and Waveney Local Plans

Policy	Site
Suffolk Coastal Local Plan	
Policy SCLP12.7	Port of Felixstowe
Policy SCLP12.10	Land at Haven Exchange, Felixstowe
Policy SCLP12.21	Ransomes, Nacton Heath
Policy SCLP12.29	South Saxmundham Garden Neighbourhood, employment land to the west of the A12
Policy SCLP12.35	Former Airfield, Debach
Policy SCLP12.36	Carlton Park, Main Road, Kelsale cum Carlton
Policy SCLP12.39	Former Airfield, Parham
Policy SCLP12.40	Bentwaters Park, Rendlesham
Waveney Local Plan	
Policy WLP2.2	PowerPark, Lowestoft
Policy WLP2.5	East of England Park, Lowestoft
Policy WLP2.17	Land at South Lowestoft Industrial Estate
Policy WLP3.3	Land South of Benacre Road at Ellough Airfield, Ellough

Relevant allocations in Neighbouring Local Plan

Ipswich Borough Council

32.11. Ipswich Borough Council adopted Local Plan 2011 – 2031 includes Policy CS10: Ipswich Garden Suburb of 3,500 dwellings. The Emerging Ipswich Local Plan Review 2018 – 2036 has been Examined and includes for this period at least 8,010 new homes.

32.12. Employment: as set out in the emerging Local Plan one of the objectives is the creation of approximately 9,500 additional jobs to be provided in Ipswich to support growth in the Ipswich Strategic Planning Area between 2018 and 2036.

Babergh and Mid Suffolk District Councils

32.13. Babergh and Mid Suffolk District Councils are working on a Joint Local Plan which was formally submitted for Independent Examination by the Secretary of State for Housing, Communities and Local Government on 31 March 2021. The submitted document proposes, using the standard method total, 7,904 homes in Babergh and 10,165 in Mid Suffolk for the Plan period.

32.14. Employment: the emerging Local Plan sets out policies for encouraging and supporting sustainable economic growth and ensuring a continuous range and diversity of sites and premises are available. Employment sites identified include:

i. Gateway 14, Stowmarket. 63 hectares logistics and business park with up to 2.36 million sq. ft of floor space;

ii. Valley Ridge (previously known as SnOasis), Great Blakenham. Staycation resort with a focus on year-round leisure and short breaks for families. Up to one million visitors per year. The complex is set to create around 2,000 jobs during construction and about 1,800 once open;

iii. Eastern Gateway, Sproughton. 14 hectares Enterprise Zone which forms part of a larger 36 hectares regeneration site with up to 1 million sq.ft of floor space; and

iv. Freeport East, centred upon the Port of Felixstowe and Harwich International Port. One of the eight new freeports announced by the Chancellor in March 2021. Estimated to create 13,000 new jobs over the next five years.

Proposed national transport schemes

32.15. The delivery of growth across the Ipswich Strategic Planning Area also has implications on the A14 trunk road, managed by Highways England, and on rail capacity across the region too. Highways England have proposals for delivery of a number of junctions on the A14 to the east, south and west of Ipswich under RIS 2 funding. The implications of delivering these improvements alongside Sizewell C proposals and potential other energy project related construction will need to be considered. A detailed and deliverable Implementation Plan for Sizewell C will help with beginning this assessment.

Cumulative impacts – Sizewell C construction phase

Natural Environment

Positive

32.16. None identified.

Neutral

32.17. None identified.

Negative

32.18. Cumulative ecology impacts: Paragraph 3.5.12 of ES Volume 10 Project-wide, Cumulative and Transboundary Effects Chapter 3 Assessment of Project-wide Effects [APP-577] concludes that no significant adverse effects on bats are predicted from the different project elements cumulatively during construction. However, for the reasons set out in Chapter 8 above, the Councils consider that the cumulative impacts on foraging and commuting bats arising from the Main Development Site and the Sizewell Link Road have not been fully assessed and could give rise to impacts greater than those predicted in the ES. Insufficient mitigation measures are included in the application to address such impacts.

32.19. Appendix 10.4.C of the ES Addendum [AS-201] updates the assessment of cumulative impact on terrestrial ecology and ornithology to include the East Anglia One North and East Anglia Two offshore windfarm projects. Most impacts are assessed to be non-significant, with the exception of the impact on farmland birds during the early construction phase assessed as being Moderate Adverse, Significant [AS-201]. No specific mitigation measures are included to address this impact and there does not appear that measures could be fully incorporated within the existing red line boundary, therefore it appears likely to require mitigation measures through separate mitigation funding, such as a Natural Environment Fund.

Coastal processes and geomorphology

32.20. The impacts assessed in the DCO and by the Councils are defined as the potential impact upon Sizewell C of a change to the natural development of the shoreline by the development described. The Councils would expect that the Sizewell C development will include management and mitigation measures to ensure no significant negative impacts attributable to the development, affect the identified development sites. This is not certain to be the case.

32.21. The scope of the CPMMP must be designed to include a capability for such impacts to be identified and for appropriate mitigation to be applied.

Negative

32.22. Sizewell C's Construction phase is assumed to be completed by 2035. The construction phase may be subject to the following cumulative impacts with other projects.

32.23. East Anglia One North and East Anglia Two windfarm cable landing at Thorpeness. Expected to be completed by 2025. The design has considered Sizewell C and the cable landing site was selected to avoid a significant trenching impact on the crag outcrop at

Thorpe Ness. The outcrop anchors the southern end of the Sizewell bay. Avoidance of damage to the crag is important.

32.24. There is a very low likelihood of a negligible negative impact of this activity on the Sizewell C development from a coastal change perspective.

32.25. ESC coastal defence works at Thorpeness. To be started by 2025 and potentially ongoing to ~2065. There is potential for new community funded coast protection works over the northern Thorpeness village frontage to resist a local erosion trend that is exceeding forecasts in strategic plans. The work has potential to temporarily disrupt natural coastal change locally to Thorpeness. Accordingly, the work is likely to include a time limited planning condition requiring removal of any hard defences by ~ 2060 which will restore an environment that allows natural change to prevail. Any permanent works will be the subject of consultation with stakeholders including, the Applicant.

32.26. The Applicant's position is that Thorpeness Village is beyond the zone of influence of the Sizewell C development. The Councils disagree and take the view that Thorpeness is close enough, and of a sufficiently sensitive nature to warrant inclusion on a precautionary basis because of the potential for the Sizewell C development to interrupt sediment movement that may have an impact on Thorpeness.

32.27. There is a low likelihood of a low negative impact of coastal defence works at Thorpeness on the Sizewell C development.

32.28. If the Sizewell C development interrupts sediment movement, then the Councils believe that Thorpeness village is at risk of a negative impact.

Transport

Positive

32.29. None identified.

Neutral

32.30. None identified.

Negative

32.31. A14 and A12 Corridor: Whilst traffic directly attributable to the Sizewell C project will result in a limited impact on overall traffic growth on the A14, its impact would be a contributor to delays / congestion. The eastbound A14 goes to the Port of Felixstowe which is a key economic driver for East Suffolk and of national importance. The Port is reliant on both the road and rail networks. This is of concern especially when combined with Highways England undertaking RIS 2 works at the same time (see Table 13: in the transport section).

32.32. A12 Corridor: As noted in the Traffic and Transport section above, the Sizewell C development has the potential to cause / contribute to substantial delays along the A12 due to the delivery of a number of required mitigation measures, including 5 new roundabouts on the A12. In addition, a number of other works are likely to come forward in a similar timeframe, including works to enable the consented Brightwell Lakes development to the east of Ipswich, works required to enable the ScottishPower Renewables offshore wind projects at the A12 Friday Street junction, works to enable new development at Saxmundham and other improvement works by SCC as Highways Authority to deal with existing and planned growth along the A12 corridor.

32.33. The Councils are concerned that this accumulation of works, each necessary and important in their own right, could cause disruption, driver delay, and adversely impact road safety. The Councils recognise that the Applicant's ES and Transport Assessment can only be based on the information available at the point of submission, which is a limitation when assessing cumulative impacts, as other forthcoming schemes continue to be developed, each with their own additional and evolving assessments. This makes it even more essential that delivery of any improvement works is managed and coordinated with great care and that contingent mitigation funding is available in the event that serious impacts occur. Coupled with highway works related to other major projects in the vicinity and unforeseen or unplanned highway works, this could lead to issues on the highway network not mitigated for currently. Other forthcoming projects will be expected to undertake their own cumulative assessment, but we must highlight concerns with regards to schemes under consideration or already consented.

32.34. In order to ensure that impacts are minimised as much as possible there needs to be a clear understanding of the potential co-ordination of likely highway works – attributed to consented or forthcoming projects, or being proposed by Highways England and the highway authority, to coordinate works in order to minimise disruption. In order to ensure that impacts are minimised as much as possible there needs to be a clear understanding of the potential co-ordination of likely highway works – attributed to consented or forthcoming projects, or being proposed by Highways England and the highway authority, to coordinate works in order to minimise disruption.

32.35. To do this, the Councils will need a clear understanding of when all projects are to be delivered and the potential to look at the impacts of the delivery programmes to ensure that existing residents are not, e.g., adversely affected by night-time construction noise on the A12, which could be avoided with careful planning of timetabling and implementation.

32.36. There is a particular risk that, should the Applicant's proposals to increase the use of sea and rail transport prove too difficult to deliver, the additional pressure on the A12 could seriously exacerbate these cumulative problems.

32.37. The Councils wish to avoid a scenario in which A12 improvements cannot be delivered before the start of Sizewell C construction and that either the Highway Authority must delay improvements, which may put funding for improvement schemes at risk, or press ahead with improvements and risk causing disruption to Sizewell C construction traffic. Both options would create significant financial, operational and reputational risk burdens for the Highways Authority and the Applicant. They would also have the potential to cause harm to the wellbeing of residents living close to impacted highways who may have to suffer through 24-hour vehicles / highway works to minimise disruption to the Sizewell C construction timetable. The Councils aim is to work with all parties to minimise this prospect.

32.38. Some communities located along the A12 corridor would suffer from cumulative impacts taking into account non-Sizewell C projects. Taking into account East Anglia One North and East Anglia Two, Little Glemham and Marlesford would experience an increased impact from fear and intimidation, from minor adverse to moderate adverse.

32.39. There is also concern regarding the cumulative pressures on the rail line to Sizewell C. The indication is that the rail paths will be mostly at night so will not affect the existing passenger trains. However, if delivery of mitigation is not on time there may be pressures for more paths and/ or more HGV's using the road. This needs to be carefully considered and the Councils look to the Applicant, in discussion with Network Rail, to evidence that the programme for rail delivery has been assessed to address these concerns and has contingency proposals in place.

32.40. There is also the currently unresolved or mitigated to an appropriate level, issue of the noise impact on sensitive residential receptors arising from the overnight rail paths proposed to serve the Sizewell C project. For further details see the Noise and Vibration section above.

32.41. Additionally, there also needs to be reassurance that the delivery of rail paths to Sizewell C does not impact on the increasing number of rail paths being provided to serve the Port of Felixstowe. The conflicts, if they were to occur would be from Westerfield Junction to the south West to Ipswich.

Socio-economic impacts

Positive

32.42. Economic development and skills: By utilising existing programmes across the County, the cumulative impact of growth across the County can be managed to secure improvements and expansion in existing skills and education programmes. Some of these are considered specifically with reference to the Sizewell C project but the Councils have also signed Memorandums of Understanding with Scottish Power Renewables (promoter and developer of East Anglia One, East Anglia Three, East Anglia One North and East Anglia Two), in relation to skills and employment opportunities. Other projects including that of Sizewell C will be expected to positively impact on the Councils' ability to develop any such programmes and aspirations further.

32.43. The delivery of the Sizewell C project must be seen in the context of achieving the growth aspirations of the government, NALEP, and the Councils through its Strategic Plan, and aligned documents, and the two Local Plans providing a spatial programme to ensure these objectives are achieved in a planned and coordinated way to deliver sustainable jobs and homes whilst maintaining and enhancing the special qualities the County and East Suffolk District have which attracts residents, business and visitors. The Sizewell C project will enable the potential coordination and earlier delivery of some of the sites in the local plans (not just East Suffolk's) and may therefore act as a catalyst for planned growth and regeneration. The Local Plans are predicated on securing the necessary infrastructure at the right time and working with delivery partners, including Highways England and the Highway Authority, so there is an opportunity to coordinate timing and delivery of schemes and their funding to deliver collective objectives sooner.

Negative

32.44. Economic development and skills: The assessment of cumulative impacts on skills demand is incomplete for a number of reasons. For example, the assertion that there will not be a significant effect on demand for civil engineering skills has not been tested in the ES. A more granular and up-to-date timetable for the East Anglia One North and East Anglia Two projects is now available, and more is known about other projects coming forward in the region such as National Grid Electricity Transmission's Bramford to Twinstead reinforcement work among other transmission projects recommended to proceed in the Network Options Appraisal.

32.45. Due to the significant pipeline of major infrastructure works in Suffolk, there is a reasonable expectation that there will be pressure on the regional civils workforce in the near-to-medium term.

32.46. Accommodation: Subject to an appropriately-sized Housing Fund it is anticipated that the Sizewell C proposal will be able to mitigate for its own workers' impacts on the local housing market. This has taken into consideration that it may be constructed at the same time as other major projects in the area – energy projects and transport proposals if they are consented including the East Anglia One North and East Anglia Two proposals. This may put pressure on local workforce and result in workers needing to travel into the area. Pressure on the local housing market and local tourist accommodation market would result in workers having to potentially lodge further afield – this could be Ipswich, Norwich or Cambridge potentially. As larger towns / cities they will have greater capacity to accommodate an overspill workforce, therefore this is not considered to require additional mitigation by the Applicant.

32.47. There is a concern that there could be unauthorised encampments across the District if pressures on the local market are not alleviated by the Housing Fund measures. To minimise this the Councils are working with the Applicant separately to provide a One-Stop Shop service for planning, licencing, Fire Safety, Sizewell C accommodation service, and enforcement, to offer advice to potential landlords and camp site / holiday park owners on the rules and regulations that they will need to abide by in order to be able to offer accommodation to Sizewell C workers. However, any provision would not be limited to Sizewell C workers and provided it boosts resilience in the Housing market and supply, the Councils will be supportive.

32.48. School capacity: It is difficult to forecast school capacity for the period of construction. Pupil forecasts are currently only available until 2022, which is before the main workforce arrives at site for construction. Additional pressures on school places are expected over the coming years as a result of additional dwellings being proposed in the catchment areas. In addition, the Suffolk Coastal Local Plan includes an allocation of 800 houses in Saxmundham. Further joined-up discussions are required to consider the in-combination impacts of these proposals, including any traffic impacts from school transport to public and private schools.

32.49. Perception of development: The construction of Sizewell C will have a very significant impact, not just on the immediate environs of the development itself, but also more widely across the area affected by traffic and Associated Development. If others of the list of energy projects set out above come forward, this will give a perception that the scope of the area affected by development is yet more extensive. Other energy schemes (initially East Anglia One North and Two) are likely to have an impact on land to the north

of Thorpeness, running along the south side of Sizewell Gap and then to the south of Leiston, ending up at sub-stations in the Friston area. While the construction periods for these schemes are significantly less than that for Sizewell C, a succession of them could create an impact that lasts almost as long as the Sizewell construction period. The cumulative impact of such development projects could then have an additional impact on the tourism industry but with the same drivers as the impacts noted in the Tourism section above. For local residents, it would impact on the quality of life and in particular for places such as Leiston which would see themselves as all but surrounded by development projects.

32.50. Mitigation for these impacts would have to come in the same ways that have been identified for the Sizewell C project alone but further resources would need to be put towards them. Thus, funding to assist the tourism industry from other projects would need to be added to the tourism fund provided by the Sizewell C Project while further provision of community funding would allow some compensation for the quality of life issues.

Cumulative impacts - operational phase of Sizewell C

32.51. With the exception of issues around coastal processes and geomorphology covered below, cumulative impacts during the operational phase of the Sizewell C power station are less critical. There will be 900 workers at the station who will be expected to either live or move into the area (workers are often restricted to living within 25 miles of the station). Additionally, every 18 months each reactor will have a planned outage, these will largely be planned alongside outages at Sizewell B. The worst-case scenario would be an unplanned outage coinciding with a planned outage resulting in around 2000 outage workers being required at Sizewell. This could have serious implications for accommodation providers and the highway network. However, planned outages will currently take place outside of the construction timetables for other proposals in the vicinity so cumulative impact is unlikely.

Coastal processes and geomorphology

32.52. Sizewell C's operational phase is assumed to commence in 2035 and continue to the date of site life expiry and full removal of all structures, including the spent fuel store, that is assumed to be around 2160. The potential developments considered in this section are not those listed in the cumulative tables above, but are important considerations in relation to coastal process and geomorphology.

32.53. Management of Minsmere Sluice outfall: The structure disrupts natural longshore sediment movement and probably traps sediment that would otherwise disperse over the wider Sizewell bay. Failure / breakdown is anticipated ~ 2050-2075 and the outfall is not

expected to be rebuilt which will allow a more natural shoreline realignment to develop over time. This could potentially increase sediment volumes moving southward from its location to feed frontages including Sizewell C and beyond. This may positively impact the Sizewell C development.

32.54. Management of Blyth harbour entrance structures: The piers act as control to north end of the Sizewell bay. If they are allowed to deteriorate and fail their breakdown will move the coastal control point to another place, potentially Southwold town, leading to a shoreline realignment over time potentially increasing sediment volumes moving southward that may benefit the Sizewell C frontage. There is a low probability of a low positive impact, but is unlikely to affect the Sizewell C site within the lifetime of the development.

32.55. Decommissioning of the Sizewell B nearshore outfall: This structure is believed to create a salient (local area of accretion) on shore immediately to landward of the Sizewell B outfall. This salient is an accumulation of material that would otherwise be spread over the adjacent frontages. It may also act to interrupt alongshore sediment movement under sustained uni-directional wind conditions.

32.56. Decommission / removal is expected to switch off the effect leading to dispersal of the retained material over Sizewell B and Sizewell C frontages. There is a high probability of a moderate positive impact.

32.57. Decommissioning and removal of Sizewell A and Sizewell B platforms and flood defences: The forecast for long term coastal change over these respective frontages in report TR311 [APP 312] suggests that the sea defences of both may be reached by a retreating shoreline within the site life of Sizewell C. The Suffolk SMP **(APPENDIX 1: 12)** also predicts that the Sizewell B defence will be reached by a naturally changing shoreline in a Without Sizewell C scenario by 2100.

32.58. Removal of the Sizewell A and B defences leading to exposure of the Sizewell C site southern flank probably represents a worst case for Sizewell C. The consequences of potential impacts will be considered by the design of Sizewell C and by pre-decommissioning studies required for each site.

32.59. There is potential for a range of impacts. It is unlikely that a negative impact will be allowed to occur.

32.60. Management of Minsmere coastal frontage: The Environment Agency and RSPB both have management responsibilities for the Minsmere coastal frontage. The Councils understand that RSPB has developed an adaptation plan in anticipation of coastal retreat.

32.61. In line with SMP policy it is expected that neither Environment Agency nor RSPB will promote work to resist natural coastal change, other than to maximise the residual life of the Sluice outfall structure that acts as a coastal control point.

32.62. DCO documents have considered the potential consequences on the Sizewell C development of foreseeable management actions by Environment Agency and RSPB including the potential for a breach to develop in the dune flood defence leading to low lying land to the north of Sizewell C becoming tidally or permanently flooded. It is understood that the north facing Sizewell C site boundary is designed to be resilient to the risk of increasing exposure to flood risk and open sea wave and current conditions.

32.63. There is a high likelihood of a neutral impact on the Sizewell C development.

32.64. Coastal management at Dunwich: Coastal management policy for the Dunwich cliff frontage supports natural change thereby allowing a continuation of potential sediment release from cliff erosion.

32.65. There is a geotextile-bag defence, buried at Dunwich Village to slow, not prevent, long term coastal change. The local community is promoting potential works to slow natural change over the cliffed village frontage and adjacent low-lying land to the north, both of which have potential to alter sediment release and alongshore movement. If these works are taken forward, they will be the subject of consultation with stakeholders including the Applicant.

32.66. There is a low likelihood of a low negative impact on the Sizewell C development.

Required mitigation (construction and operation)

32.67. A12 corridor: The carefully planned delivery of road and rail mitigation for Sizewell C must be planned with full knowledge and appreciation of other planned growth. It is therefore incumbent on all parties, including the Applicant, the Councils, Highways England, Network Rail and Department for Transport (as necessary) to coordinate the provision of all transport mitigation and have well developed contingency plans in place based on detailed risk assessments if delivery of a planning intervention is delayed or stalled etc. These assessments should look at the amenity impacts on nearby residents and businesses. This is one of the key challenges of this project and as part of the required carefully planned coordination it is also necessary to have in place a robust communication plan which promotes and identifies the delivery of works, including delays, and be seen as part of a wider promotional programme to promote east Suffolk as a place for residents, visitors and business. The improvements to the A12 corridor must not be compromised by the Sizewell C project. To that end, the Councils request that, in addition to measures

highlighted in the Traffic and Transport section above, the Applicant commit to collaborate with the Councils to ensure that all A12 improvements are delivered in a timely manner

32.68. Economic development and skills: The Councils consider that the Applicant's assessments should be updated to split out the defined work phases (Enabling, Main Civils, Mechanical, Electrical and Heating, ventilation and air conditioning], Commissioning and Operation) and then cumulative demand assessed against the same and similar phases of all in scope projects and projects that have come forward since this assessment.

33. Summary of project-wide impacts

33.1. To consider project impacts across the development, the Councils have brought together in the following table all project wide impacts, and related required mitigation, requirements and obligations across all topic areas. Please note that this table does not include site specific impacts, which are brought together in the next section.

Table 36: Summary of project-wide impacts

Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
36a	Construction of power station	<u>Air Quality</u> Electric vehicle charging points marginally reduce overall carbon footprint and air quality impact of the development and encourage use of electric vehicles in the area. <u>Supply chain and economic development</u> Investments in local economy as part of the construction programme and associated local/regional supply chain opportunities – however, "Lift and shift" may risk maximising local supply chain opportunities.	<u>Landscape and Visual Impact</u> Significant impacts on the AONB and its special qualities, which could have an effect on the purpose of the designation. <u>Ecology and Biodiversity</u> Fragmentation and possible local extinction of populations of various bat species, including the nationally rare barbastelle bat. Residual, cumulative adverse impacts (judged as Minor Adverse, Not Significant in the ES) are not fully addressed. Displacement/increase in number of visitors to designated nature conservation sites resulting in increased recreational disturbance impacts. <u>Coastal change / geomorphology</u> Potential coastal change impacts during construction from Permanent HCDF, which may result in loss of habitat, LVIA impacts, recreational beach width, amenity value, sheet piling impacts, prevention of natural coastal evolution.	<u>Minerals and Waste</u> Minerals and Waste safeguarding. Conventional Waste Management. <u>Coastal change / geomorphology</u> Potential coastal change impacts during construction from Permanent HCDF, which may result in prevention of natural coastal evolution. <u>Major accidents and disasters</u> Impact on existing off-site radiation emergency arrangements of Sizewell C construction site. <u>Communities</u> Construction workers' Code of Conduct may reduce impacts on community safety and community cohesion.

		Opportunity for additional spend in the area from workforce. <u>Employment, skills and education</u> 25,0000 employment opportunities from the construction; opportunity for significant local employment creation – however, risk that home based worker target cannot be met. Opportunity to enhance skills and prospects of local workforce, and improvement Suffolk's skills and training offers – also leaving legacy post-construction. Opportunities for unemployed and under-employed. <u>Tourism</u> Business benefits of workforce taking up tourism accommodation. Sizewell C Visitor centre as tourist attraction. <u>Communities</u>	Potential coastal change impacts during construction from Permanent BLF and Temporary BLF, which may result in Loss of habitat, LVIA impacts, recreational impacts, coastal processes impact, piling, dredging, barge berthing platform, alter wave and current patterns, and seabed levels, lead to local accretion / erosion change effects at shoreline. Potential impacts of CDO, FRR to interfere with nearshore sediment transport pathways. Impacts of Temporary HCDF regarding Loss of habitat, LVIA impacts, recreational impacts, piling, prevent natural change. Impacts of temporary construction work – excavation, dredging, stockpiling. <u>Archaeology</u> Potential for material disturbance of archaeological remains, at any of the development sites. <u>Traffic and Transport</u> A substantial negative impact on the highway network due to additional road traffic from construction activity, with associated impacts on road safety, congestion, noise, air quality, pedestrian amenity, severance and driver delay, as well as carbon footprint. Reduced residual capacity on the nationally important A14 as a result of construction traffic HGVs, leading to increased delays and congestion particularly of Junction 58 'Seven Hills' and Junction 55 'Copdock', leading to increased delay and congestion at these locations, and increased pressure on the A14 Orwell Bridge, with additional congestion during bridge closures.	Reduced impact on public and community health from construction workforce as a result of onsite health care provision including preventative measures. <u>Quality of life</u> A number of residents may not feel personally affected by the construction activities, and as a result do not consider their quality of life and wellbeing to be changed.

		New sports facilities in Leiston which would be available for shared used with communities during construction, and would be legacy benefit. <u>Quality of life</u> Economic and skills opportunities – construction jobs. New sports facilities.	On the A12 between A14 'Seven Hills' and Lowestoft, as result of increased construction related HGV, LGV, AIL, abnormal load and car traffic: reduced resilience and capacity, potential for road safety incidents, driver delay as a result of construction traffic; Increased severance and anxiety of vulnerable road users and reduced amenity; Increased journey time between A14 Seven Hills and the A1152 junction at Woodbridge; reduced residual capacity at a number of by Suffolk junctions; and reduced exit capacity for the large number of less busy side roads and accesses along the road which will increase delay, the likelihood of crashes and reducing access to facilities. Impacts from increased traffic on the following other A and B roads in relation to reduced resilience, capacity, vulnerable road user amenity/increased anxiety, increased severance and increased potential for road safety incidents: B1125 A1120 B1078/B1079 A1094 B1069, A144 A145 B1119 B1122 prior to delivery of Sizewell Link Road Other roads may be impacted as result of displacement of car journeys. Detrimental effect on the road surface of Suffolk highway network due to the number of construction HGVs, AILs and abnormal loads.	

			Reduced network resilience as a result of the constant daytime presence of construction traffic on the highway network, which will limit the County Council's ability to undertake necessary road maintenance during normal working hours without significant detrimental impact on the operation of the highway, as the HGV route to Sizewell. Economic impacts of journey delays. Reduced availability of on street parking in areas in vicinity of the site, as a result of increased numbers of houses in multiple occupation and fly parking. <u>Noise and Vibration</u> Adverse impact from rail freight movements along East Suffolk Line and Leiston Branch Line, particularly night-time noise. Adverse noise and vibration impacts resulting from additional road traffic, particularly HGVs, with currently proposed design measures not representing mitigation for reducing road traffic noise at source. <u>Air Quality</u> Emissions from construction HGVs across the road network, with the risk that HGV movements could be greater than assessed, Councils propose a cap based on assessed levels. <u>Flood and Water</u> Potential for increase of coastal flood risk. <u>Sustainability</u> Greenhouse gas emissions from construction activity.	

			Use of resources and generation of waste during construction (particularly materials). <u>Major accidents and disasters</u> Potential risk arising from a major construction site in this location, and from an operating nuclear power station in this location. <u>Supply chain and economic development</u> Adverse impact on businesses as a result of workforce displacement and churn, and disruption/displacement in local wider supply chain. Economic cost of congestion and journey time delays to local businesses, as a result of increase in construction traffic and highway works. Indirect impacts of housing market pressures on business. <u>Employment, skills and education</u> Labour market churn issues and impacts on wider business community. <u>Tourism</u> Potentially significant impact on Suffolk as a tourism destination. (forecast 17% reduction in overall willingness to visit during construction). Displacement of tourists from accommodation as a result of demand from workforce. <u>Public services</u>	

			Impact of non-home-based workers on school capacity and Early years provision. Impact on/ risks for the wellbeing and learning of pupils at school, as a result of safeguarding concerns, emotional wellbeing and children with English as Additional Language. Risk of direct safeguarding impact on young people as victims and an indirect impact on dependent children and children of partners with whom the Sizewell C workforce form relationships. Increase in demand for under 5s and family services, particularly Health Visitor Services, as a result of increase in children arising from incoming workforce Impacts on social care and community health– risk of loss of residential based care provision; increased delays in delivery of care and costs for home care and community health; and increased shortage of social care and community health workforce. Risk of increase of issues resulting from unsafe sexual activity of the workforce, with impacts on the sexual health of the resident population. Potential impacts on the CCG and NHS in terms of increased demand on primary healthcare, acute healthcare, ambulance service, dental health and pharmacies. Delayed emergency services response times as a result of traffic congestion, including abnormal loads. Increase in demand of fire and rescue services as result of population and traffic increase; and as a result of project site specific activities. Increase in demand of policing services, in terms of provision of custody, Command and Control Room and Crime Co-ordination Centre resourcing and local policing resources, as well as roads policing.	

			<u>Communities</u> Risk of increased ASB, crime and non-crime community safety issues in locality; increased community cohesion tensions as result of incoming workforce. Increased risk of risk of criminal exploitation (county lines and modern slavery), Violence Against Women and Girls, Men and Boys (including domestic abuse and sexual violence), radicalisation and Hate Crime as result of incoming workforce. <u>Housing</u> Potential significant adverse impact on the housing availability around the site in East Suffolk with potential overspill into adjacent authorities. Social impacts from housing pressure on the housing market, specifically impacts on vulnerable individuals and household increasing risk of financial difficulty and homelessness, availability of key work housing, safeguarding issues associated with renting out rooms, impact on care home provision. Adverse impact on availability of holiday accommodation for tourists, which may result in a “boom and bust” effect for accommodation market. <u>Quality of life</u> Impacts on natural environment, landscape quality, heritage features, biodiversity – affecting the enjoyment of the natural environment. Amenity and Recreation / Public rights of way. Noise, vibration, air quality. Traffic and transport - road safety, congestion, noise, air quality, pedestrian amenity, severance and driver delay, with	

			a potentially higher perception of impact than the actual impact. Health and wellbeing – mental health, stress and anxiety. Potential negative impact on some economic activity/sectors including tourism. Community safety and community cohesion impacts (real and perceived). Pressure on housing market – particularly impacting vulnerable and lower income residents. Impacts on access to public services. Localised increased flood risk. Implementation and deliverability risks Failure to achieve provision of rail or marine facilities, in the time proposed by the Applicant, is likely to result in increased pressure upon road transport. This could result in levels of traffic which then exceed those set out in the ES. Delay in delivery of Park and Ride sites, direct bus services, and changes to the number of workers travelling directly to site could result in additional traffic, resulting in additional congestion and pressure on communities Delays in delivery of Two Villages Bypass and Sizewell Link Road may prolong and exacerbate impacts on local communities Delay in delivery of road safety schemes may heighten accident risks at those locations Late delivery of accommodation campus and/or workers caravan site puts further pressure on housing market Late delivery of ecological mitigation measures may increase the adverse impact on species/habitats Project over-run would prolong disruption to local communities	
36b	Operation of power station	Coastal change / geomorphology	Ecology and Biodiversity	Coastal change / geomorphology

		Operational impacts of permanent HCDF – Potential reduction in coastal change over Minsmere frontage and S ediment interruption and entrapment increasing over time. <u>Sustainability</u> Low carbon energy generation. Supply chain and economic development Supply chain opportunities of operational power station (including outages). Legacy of experienced and accredited businesses to enter global nuclear supply chain and wider local and national energy project opportunities. <u>Employment, skills and education</u> Opportunity to enhance skills and prospects of local workforce, and improvement Suffolk's skills and training offers – also leaving legacy post-construction. 900 operational jobs, with local employment	Impacts on nearby European designated sites as a result of changes in coastal processes. <u>Coastal change / geomorphology</u> Operational impacts of permanent HCDF - Reduction in coastal change over Minsmere frontage and Sediment interruption and entrapment increasing over time. Operational impacts of SCDF – primary mitigation for HCDF but requiring reactive secondary mitigation in the form of beach replenishment Operational impacts of permanent BLF in terms of Dredging, alters wave and current patterns, and seabed levels, lead to local accretion / erosion change effects at shoreline. Potential impacts of CDO, FRR to interfere with nearshore sediment transport pathways. <u>Traffic and Transport</u> Additional traffic impact from operational work force and outage staff. Potential for legacy benefit if noise reducing rail infrastructure improvements are undertaken. <u>Flood and Water</u> Potential for increase of coastal flood risk. Supply chain and economic development Potential "boom and bust" effect for the local economy at end of construction period. <u>Employment, skills and education</u> Negative long-term impact on individual career prospects if demobilisation and legacy for workers is not addressed.	Operational impacts of permanent HCDF – Reduction in coastal change over Minsmere frontage and Sedime nt interruption and entrapment increasing over time. Operational impacts of permanent BLF in terms of Dredging, alters wave and current patterns, and seabed levels, lead to local accretion / erosion change effects at shoreline. Potential impacts of CDO, FRR to interfere with nearshore sediment transport pathways. <u>Quality of life</u> Once construction activity has ceased and environments have been restored, the impact on quality of life will have been considerably reduced for most, although it is clear that some residents will still feel negative or indeed positive impacts.

		opportunities, and opportunities as result of Suffolk becoming an attractive location as base for outage workers. <u>Tourism</u> Sizewell C Visitor centre as tourist attraction. <u>Communities</u> New sports facilities in Leiston which would be available for shared used with communities during construction, and would be legacy benefit. <u>Housing</u> Legacy of housing fund projects of an increased housing stock. Potential legacy for tourism providers of investment from tourism and housing fund. <u>Quality of life</u> Economic and skills opportunities – operational jobs. New sports facilities as legacy benefit.	Unemployment as project demobilises – "boom and bust". <u>Tourism</u> Potential "boom and bust" effect on tourism accommodation if becoming reliant on workforce bookings. Potential that recovery of tourism sector may take several years after construction period. <u>Housing</u> Adverse impact on availability of holiday accommodation for tourists, which may result in a "boom and bust" effect for accommodation market. Outage workforce may put continued pressure on the housing market. <u>Quality of life</u> Potential "boom and bust" effect on local economy. Natural environment, landscape quality, biodiversity –impact of permanent buildings and structure on enjoyment and perception of this. Coastal change / impacts on coast path. Perception of presence of a nuclear power station and interim nuclear waste storage.	

36c	Required mitigation	<u>Landscape, Visual Impact, Ecology, biodiversity</u> Embedded landscape mitigation through the LEMP Code of Construction Practice and LEMP to control implementation and long-term management of ecological mitigation and compensation measures. <u>Soils and agriculture</u> When the sites are no longer required, the land will be returned to agricultural use, often returning to baseline conditions. Coastal change and geomorphology Built in mitigation to counter probable negative impacts of HCDF, permanent BLF, CDO, FRR. SCDF as primary mitigation, mainly for HCDF but also any other impact on the shoreline from marine works. A maintained SCDF has potential to sustain a 'neutral' Without Sizewell C sediment movement scenario. Secondary mitigation (mainly for HDCF, permanent BLF, DCO, FRR): Bypassing, recycling and other has potential to correct any HCDF sediment blockage impacts beyond the range of the SCDF. <u>Noise and Vibration</u> Embedded project mitigation – engineering and operation solutions including continuous welding on the East Suffolk and Leiston Branch line. <u>Air Quality</u> Embedded mitigation such as requiring a percentage of HGVs to be Euro VI. <u>Flood and Water</u> Change of proposals to implement SuDS measures in all locations. Coastal flood risk requires input from relevant authority. <u>Sustainability</u> Minimise need for construction traffic, and maximise sustainable transport modes. <u>Supply chain and economic development</u> Applicant is encouraged to engage in inward investment activities to maximise local economic benefit.

		Applicant is encouraged to work with Councils on innovative schemes to encourage non-home-based workforce to spend money locally. <u>Employment, skills and education</u> Applicant to set clear, ambitious and SMART employment targets. <u>Housing</u> Completion of workers caravan park at LEEIE at earliest stage – part of implementation plan. Completion of accommodation campus early during construction (well before peak) – part of implementation plan. Housing Fund to boost resilience in the housing market. <u>Quality of life</u> Residual community, quality of life and wellbeing impacts to be mitigated through proposed Community Fund. Avoidance, mitigation and compensation measures are covered throughout the LIR.
36d	Requirements and obligations	<u>Landscape and Visual Impact</u> Requirement 14 - Secure embedded landscape mitigation via the LEMP. Requirement 9 and 15 - External lighting plan. Requirement 14 - Secure landscape restoration through LEMP. S106 - Residual mitigation funding through Natural Environment Fund. <u>Ecology and Biodiversity</u> Requirement 2 – Code of Construction Practice (CoCP) including terrestrial ecology and ornithology mitigation measures, and prevention of construction impacts. Requirement 4 – Terrestrial Ecology Monitoring Plan. Requirement 14 – Landscape works for Work No. 1A, including Landscape and Ecological Management Plan (LEMP) requirement. Requirement 14A – Fen Meadow Plan Requirement 14B – Wet Woodland Plan S106 – European sites mitigation fund; Fen Meadow mitigation strategy; Suffolk Coast Recreational Disturbance Avoidance and Mitigation Strategy (RAMS) financial contribution; Landscape and Natural Environment Fund. Commitment to pre-commencement surveys (as required) to inform the final details of mitigation measures is needed (new Requirement).

		<u>Soils and agriculture</u> Compensation – to affected farmers through appropriate compulsory acquisition fees. S106 - recognition of this permanent loss of agricultural land should be reflected through mitigation and compensation proposals through the Natural Environment Fund. <u>Coastal change and geomorphology</u> Requirement – coastal defences HCDF and SCDF – approval of design changes. Requirement – Maintenance Activities Plan. Requirement – Coastal Process Monitoring and Mitigation Plan – scope, approval process, content to be secured by requirement. Requirement / S106 – Marine Technical Forum – scope and responsibilities. Requirement - removal of HCDF at decommissioning required to restore a naturally functioning 'neutral' shoreline. To be the default forward planning position unless changed by future environmental impact assessment. Decommissioning and Removal to be secured by requirement. Requirement – approval of design changes for permanent and temporary BLF. Requirement - the zone for baseline monitoring and mitigation to extend southward to include Thorpeness village. Requirement - monitoring for Coralline crag outcrop to allow detection of any potential negative impacts (not limited to physical) from the Sizewell C development. Requirement – currently remain unclear on how the Applicant will identify an impact caused by the development over frontages beyond a maintained SCDF, without having in place a process to predict shoreline change in a without Sizewell C condition. <u>Historic Environment</u> S106 – secure repairs to Upper Abbey Farm Barn. <u>Archaeology</u> Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. Traffic and Transport S106 - Caps to control movement of HGVs on Suffolk's road network (hourly, daily and quarterly). S106 - Traffic Incident Management Plan, Construction Traffic Management Plan. Construction Workers Travel Plan.

		S106 - Monitoring and mitigation requirements and governance arrangements of Transport Review Group. S106 – contribution towards capacity improvements along the A12 between Seven Hills and Woodbridge. S106 – funding for junction and safety improvements at a range of locations identified. S106 – Applicant to commit to funding the increased levels of required remediation and costs through maintenance. S106 – Mitigation / compensation fund for local economic impacts. S106 - Mitigation package for on-street parking impacts to be agreed. Requirement – Protective provisions for the local Highway Authority <u>Access (PRoW), Amenity and Recreation</u> S106 – ProW fund to mitigate negative impacts to be expanded to include all those sites where there is a negative local impact identified and not just those with moderate to major impact identified. <u>Noise and Vibration</u> S106 – Noise Mitigation and compensation Scheme – to be offered to residents at a lower significance value than SOEL. To include acoustic fencing / boundary treatments or insulation to properties, as well as upgraded glazing. S106 – mitigation / compensation measures to be compensate for impacts on amenity and recreation and PRoW – Natural Environment Fund? S106 – provision for new quiet road surfaces and, if and where applicable, roadside noise barriers, as well as landscaping. Air Quality Requirement - Screening, fencing, turfing of stockpiles and earthbunds within 350m of sensitive human health and ecological receptors. Requirement - Code of Construction Practice to include construction dust air quality mitigation, commitment for Stage V NRMM, commitment for Euro VI HGV (with a cap for non-Euro VI vehicles). Requirement – secure appropriate number of electric charging points at the car park. S106 - regular monitoring and responding mitigation, including dust deposition monitoring. S106 – residual ecological impacts may need to be reflected in ecological mitigation/compensation measures, including in the scale of the Natural Environment Fund. S106 - secure cap on numbers of HGVs (hourly/daily/quarterly). <u>Flood and Water</u> Requirement – suitable provisions for control and approval of detailed drainage mitigation measures to ensure suitability and acceptability.

		<u>Major accidents and disasters</u> S106 - Mitigation that takes into consideration other large scale development projects in place throughout the construction and operation. Requirement - Suffolk Resilience Forum Radiation Emergency Plan under Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR19) to be updated before construction work commences, and construction works to implement the provisions of this plan <u>Supply chain and economic development</u> S106 - Mitigation plan to increase local economic benefit and reduce negative impacts including displacement, boom and bust effect. S106 - Funding for economic development resource to help with delivering the mitigation plan. S106 - Suitable governance involving the Councils to maximise opportunities. S106 – Fund to mitigate / compensate for economic cost of congestion. S106 - Tangible mechanisms for ensuring that the skills base developed for Sizewell C is as transferable as possible to other key sectors in the local economy. <u>Employment, skills and education</u> S106 – Job service to be funded to be wider than just supply chain related and to be maintained for the post-construction period to help alleviate the post-construction impact. S106 – Employment outreach fund. S106 – Activity to increase the size and diversity of the labour market pool. S106 - Suitable governance involving the Councils to maximise opportunities. S106 - Adopt and fund a dynamic approach to monitoring skills, employment and education outcomes and impacts. S106 - Funded “skills for supply chain” programme to include investment for skills in the wider economy. S106 - Funding for a regional skills coordination function. S106 - Capital and revenue fund for local skills infrastructure and improving local training offers. S106 - Apprenticeship strategy. S106 - Bursary scheme to remove barriers to training and employment. S106 - Mechanisms for ensuring that the skills base developed for Sizewell C is as transferable as possible to other key sectors in the local economy. <u>Tourism</u>

		S106 - Tourism Fund of scale appropriate to the level of potential impact, available before start of construction and until post-construction. S106 - Housing Fund has an element of measures to deal with impacts on tourism accommodation. S106 – Visitor centre to be secured. Applicant to work with local stakeholders to commission research that will help to define a vision and options for the proposed visitor centre that will maximise benefits for the local economy. <u>Public services</u> Requirement – Workers Code of Conduct. S106 - Agree clear monitoring process to collect robust workforce data to predict demand, and to identify additional impacts. S106 - Funding for additional preschool and primary places at Leiston Primary School. S106 - Contingency fund for school transport. S106 - Funds to be made available to schools for additional pupil support resources. S106 - Funding for the provision of additional Health visitor resources (estimated around 1.5 FTE) S106 – Health campaigns for Sizewell C workforce (including sexual health promotion) S106 - Onsite occupational health care provision. S106 - Public Services Contingency Fund to be set up to enable mitigating such impacts. S106 - Workers' sexual health services to be included in onsite occupational health care provision, and to be commissioned through SCC Suffolk Public Health. S106 – Funding for additional demand for community sexual health services arising from the Sizewell C workforce S106 - Package of mitigation measures and funding to be agreed between CCGs, NHS and the Applicant. S106 - Robust incident management protocol and associated funding for main access routes, developed in cooperation with emergency services and national and local highway authorities. S106 - Solutions to mitigate delayed response times to be considered further with emergency services. S106 - Package of mitigation measures and funding, to include mitigation of increase in Fire and Rescue service demand, preventative work, and working with the Applicant to devise strategies and conduct specific training to manage the unique risks presented by the project. S106 - Package of mitigation measures and funding to be agreed between Suffolk Constabulary and the Applicant. <u>Communities</u> Requirement – Workers Code of Conduct secured. S106 - Funding for construction of the sports facilities at Leiston and a 'sink' fund for refurbishment at the end of the construction phase.

		S106 - Provision through the ESC Public Services Contingency Fund towards mitigation measures (including staffing, awareness rising, project funding, increase in capacity to deal with impacts) to be delivered through East Suffolk Community Safety Partnership in response to these issues. S106 - Funding towards provision of additional community policing resources to mitigate community safety risks, increased crime and ASB in hot spot areas. S106 - Community Impact reports; with drafting to involve Councils. S106 - Provision through the SCC Public Services Contingency Fund towards mitigation measures (training, staffing, awareness rising, increase in capacity to deal with impacts) to be delivered through SCC Community Safety in response to these issues. <u>Housing</u> Requirement – implementation plan with accommodation provision scheduled early. S106 – Housing Fund to boost resilience in the housing market, provide support for vulnerable groups in society. S106 – Additional measures to prevent impacts on vulnerable people receiving social care support through the Public Services Resilience Fund. S106 – element of Housing Fund specifically to address and negate adverse impacts on the tourist market of East Suffolk. <u>Quality of life</u> S106 – Community Fund – to continue for early post-construction period as well as during construction. Implementation and deliverability risks S106 – Caps on the number of HGVs accessing the site; contingency funding for additional mitigation measures S106 – Limits to maximum number of workers employed on main site S106 – Monitoring and contingency measures - obligation S106 – Workforce should not exceed Early Year assessed figures until park and ride sites are completed - obligation/requirement S106 – Cap on HGV movements until both roads are open to Sizewell C construction traffic - obligation/requirement S106 – Limit to the number of people that can be employed on the site until each of the accommodation facilities is completed unless further effective mitigation measures can be put into place - requirement S106 – If translocation sites or foraging areas are not judged to be adequately established, development of sites where species would be adversely affected should not be able to go forward unless and until other contingency measures have been put into place - obligation. S106 – Mitigations and compensation funding to be set in a way that they continue until the end of the construction period rather than having fixed sums or timeframes - obligation

Summary of impacts by site and location

The LIR has discussed in the previous sections the impacts of the development by issue. The following section brings together those impacts for specific locations. This allows an overview of project impacts cumulatively at specific locations. It first provides impact tables for the Main Development Site and Associated Development sites, bringing together the site-specific impacts identified in the sections above. It then considers the project impacts on specific communities cumulatively.

34. Main Development Site

34.1. The LIR discusses details of impacts on the Main Development Site within the issue specific sections above. In this section, the main identified impacts on the Main Development Site are brought together in one summary. During the construction scenario the Main Development Site stretches across the width of the AONB from the coast inland. The ES assessment includes a number of Associated Development sites within or adjacent to the Main Development Site, namely: permanent BLF, temporary BLF, the LEEIE, and the accommodation campus. As their locations are so closely interrelated with the Main Development Site, their impacts are considered within this section

34.2. To assist in providing an overview, the Councils have divided the Main Development Site into three sections:

i. Power station platform / beach (including SSSI crossing and BLF)

ii. Main construction area (including accommodation campus)

iii. LEEIE and Lovers Lane.

Please refer to the relevant issue specific sections for details of each of the issues referred to in these tables.

Power station platform /beach (including SSSI crossing and BLFs)

34.3. The following table provides a summary of impacts arising from the power station platform itself, during construction and operation. For the purpose of this summary table, this includes impacts on Sizewell Beach, and the SSSI, and the proposals of the SSSI crossing and the permanent and temporary BLFs.

34.4. The key concerns, which are mostly both construction and permanent impacts, include loss of and disturbance to the SSSI, impacts on the landscape character locally, amenity impacts on Sizewell Beach, and issues related to coastal process and resulting long term impacts on Sizewell Beach.

Table 37: Overview of Main Development Site impacts - Power station platform / beach (including SSSI crossing and beach landing facilities)

Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
37a	Construction of power station		<u>Landscape and ecology</u> Significant adverse impacts on landscape character and visual amenity and wider landscape through introduction of significant construction activity at Main Development Site, with limited screening opportunities. Loss of part of Sizewell Marshes SSSI. Loss/reduction of ecological connectivity between parts of Sizewell Marshes SSSI (due to SSSI crossing structure) At least temporary loss of part of Suffolk Shingle Beaches CWS. Minor Adverse, Not Significant impacts on otter and water vole. <u>Coastal change/geomorphology</u> Potential coastal change impacts during construction from Permanent HCDF, which may result in Loss of habitat, LVIA impacts, recreational beach width, amenity value, sheet piling impacts, prevention of natural coastal evolution. Potential coastal change impacts during construction from Permanent BLF and Temporary BLF, which may result in Loss of habitat, LVIA impacts, recreational impacts, coastal processes impact, piling, dredging, barge berthing platform,	<u>Coastal change/geomorphology</u> Coast Path can be kept open for the majority of the time during construction and operation of the permanent BLF. Potential coastal change impacts during construction from Permanent HCDF, which may result in prevention of natural coastal evolution. (Could be negative or neutral) <u>Soil and agriculture</u> Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.

			alter wave and current patterns, and seabed levels, lead to local accretion / erosion change effects at shoreline. Potential impacts of CDO, FRR to interfere with nearshore sediment transport pathways. Impacts of Temporary HCDF regarding Loss of habitat, LVIA impacts, recreational impacts, piling, prevent natural change. Impacts of temporary construction work – excavation, dredging, stockpiling. <u>Heritage</u> Impact on Coastguard Cottages at Dunwich from Main Development Site construction. <u>Archaeology</u> Potential for material disturbance and destruction of archaeological remains. <u>Access, Amenity and recreation</u> Significant adverse impacts on the amenity and recreation value of the PRoW in the Main Development Site, with disturbance at the beach front and temporary closure of the Coast path, with much longer and less attractive diversion route. Change to the existing rural noise climate around Main Development Site affecting amenity and recreation. <u>Noise and vibration</u> Change to the existing rural noise climate around Main Development Site affecting amenity and recreation.	

			<u>Air quality</u> Dust nuisance impacts from construction, with potential impacts on ecology and amenity, further mitigation required. Air quality impacts from NRMM potentially significant, commitment to low emission NRMM requested. <u>Flood and water</u> Potential for increase of coastal flood risk.	
37b	Operation of power station	<u>Coastal change / geomorphology</u> Operational impacts of permanent HCDF – Potential reduction in coastal change over Minsmere frontage and Sediment interruption and entrapment increasing over time.	<u>Landscape and Visual Impact</u> Permanent land take within the AONB. <u>Ecology and Biodiversity</u> SSSI crossing fragments connectivity between Sizewell Marshes SSSI and Minsmere for some species groups. Net loss of SSSI wetland habitats (fen meadow, wet woodland, reedbed and ditches) if insufficiently mitigated/compensated or mitigation/compensation fails. Potential loss of part of Suffolk Shingle Beaches CWS in the longer term, including if beach recharge is required in the future. Potential impacts on coastal designated sites as a result of changes in coastal processes. <u>Coastal change/geomorphology</u> Operational impacts of permanent HCDF - Reduction in coastal change over Minsmere frontage and Sediment interruption and entrapment increasing over time.	<u>Coastal change / geomorphology</u> Operational impacts of permanent HCDF – Reduction in coastal change over Minsmere frontage and Sediment interruption and entrapment increasing over time. Operational impacts of permanent BLF in terms of Dredging, alters wave and current patterns, and seabed levels, lead to local accretion / erosion change effects at shoreline. Potential impacts of CDO, FRR to interfere with nearshore sediment transport pathways. <u>Access (ProW), Amenity and Recreation</u> Restoration of existing permissive walking access through Kenton and Goose Hills to the coast-route of the Sandlings Walk.

			Operational impacts of permanent BLF in terms of Dredging, alters wave and current patterns, and seabed levels, lead to local accretion / erosion change effects at shoreline. Potential impacts of CDO, FRR to interfere with nearshore sediment transport pathways. <u>Access (PRoW), Amenity and Recreation</u> Significant adverse impacts on the amenity and recreation value of the PRoW in the Main Development Site, particularly the public footpath (E-363/021/0) and also the proposed England Coast Path National Trail along the coastal frontage. Significant concern that the proposed design places the public footpath and footpath corridor seaward of its current location and further seaward from the original submission, leaving it more vulnerable to erosion from coastal processes and subject to beach recharge works during operation and perhaps during construction. <u>Noise and Vibration</u> Potential for adverse impact to sensitive receptors from additional noise during operation of the power station. Continuous plant noise with tonal/other characteristics that would change the sound climate and character of areas on a semi-permanent basis. <u>Flood and Water</u> Potential for increase of coastal flood risk.	

			Archaeology If archaeological remains of high significance requiring preservation in situ are defined during assessment work, measures would need to be in place throughout operation to ensure that disturbance continues to be prevented	
37c	Required mitigation	Landscape and ecology Embedded landscape mitigation through the LEMP Embedded ecological mitigation through CoCP and LEMP Further reduce ecological impact on SSSI by redesigning the SSSI crossing. Operation: SCC: Reduce impact by implementing alternative power export solution that does not require pylons and overhead lines (unless proven to be impossible within the site constraints) Operation: SCC: Remove outage car park from its location within the AONB (unless proven to be operationally impossible). Coastal change and geomorphology Built in mitigation to counter probable negative impacts of HCDF, permanent BLF, CDO, FRR. SCDF as primary mitigation, mainly for HCDF but also any other impact on the shoreline from marine works. A maintained SCDF has potential to sustain a 'neutral' Without Sizewell C sediment movement scenario. Secondary mitigation (mainly for HDCF, permanent BLF, DCO, FRR): Bypassing, recycling and other has potential to correct any HCDF sediment blockage impacts beyond the range of the SCDF. Design Embedded good design using an appropriate and agreed design code Access, Amenity and Recreation Appropriate and agreed off-road diversion for the Coast Path and Sandlings Walk during periods of closure is required. Flood and Water Coastal flood risk requires input from relevant authority. Quality of life Residual community, quality of life and wellbeing impacts to be mitigated through proposed Community Fund.	

		<u>Soil and agriculture</u> Embedded processes within a Land Contamination Management Plan Avoidance, mitigation and compensation measures are covered throughout the LIR.
37d	Requirements and obligations	<u>Landscape and ecology</u> Requirement 14 - Secure embedded landscape mitigation via the LEMP. Requirement 9 and 15 - External lighting plan. Requirement 14 - Secure landscape restoration through LEMP. Requirement 2 – Code of Construction Practice (CoCP) including terrestrial ecology and ornithology mitigation measures, and prevention of construction impacts. Requirement 4 – Terrestrial Ecology Monitoring Plan. Requirement 14A – Fen Meadow Plan Requirement 14B – Wet Woodland Plan Commitment to pre-commencement surveys (as required) to inform the final details of mitigation measures is needed (new Requirement). S106 – Fen Meadow mitigation strategy S106 - Residual mitigation funding through Natural Environment Fund. <u>Coastal change and geomorphology</u> Requirement – coastal defences – approval of design changes. Requirement – Maintenance Activities Plan. Requirement – Coastal Process Monitoring and Mitigation Plan – scope, approval process, content to be secured by requirement. Requirement / S106 – Marine Technical Forum – scope and responsibilities. Requirement - removal of HCDF at decommissioning required to restore a naturally functioning 'neutral' shoreline. To be the default forward planning position unless changed by future environmental impact assessment. Decommissioning and Removal to be secured by requirement. Requirement – approval of design changes for permanent and temporary BLF. <u>Archaeology</u> Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. <u>Access (PRoW), Amenity and Recreation</u> S106 – ProW fund to mitigate negative impacts to be expanded to include all those sites where there is a negative local impact identified and not just those with moderate to major impact identified.

		Noise and Vibration S106 – mitigation / compensation measures to be compensate for impacts on amenity and recreation and PRoW – Natural Environment Fund? Requirement - Code of Construction Practice to include construction dust air quality mitigation, commitment for Stage V NRMM, commitment for Euro VI HGV (with a cap for non-Euro VI vehicles). S106 - regular monitoring and responding mitigation, including dust deposition monitoring. Community impacts S106 – Community Fund – to continue for early post-construction period as well as during construction. Soil and agriculture Requirement – Land Contamination Management Plan

Main site construction area (including accommodation campus)

34.5. The following table provides a summary of impacts arising from the main site construction area, between Goose Hill and the SSSI crossing and the B1122/Eastbridge Road, including the accommodation campus. The Applicant proposes a range of uses for this area, including laydown facilities, stockpiling, borrow pits, main site entrance and site car parking, the temporary rail sidings of the Green Rail Route, and the accommodation campus (with ancillary facilities and car parking).

34.6. The Councils are supportive of proposals for the accommodation campus, as it will reduce pressure on the private rented and tourist accommodation sectors in the local area and reduces the need to travel to site. The Councils are also supportive of the principle of using borrow pits and stockpiles as part of a materials strategy that prioritises use of materials on or near the power station platform.

34.7. However, the Councils have a number of concerns about the proposals and their impact on the environment.

Table 38: Overview of Main Development Site impacts - Main site construction area (including accommodation campus)				
Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
38a	Construction of power station		<u>Landscape and ecology</u> Significant adverse impacts on landscape character and visual amenity and wider landscape through introduction of significant construction activity at Main Development Site, with limited screening opportunities. Loss of part of Sizewell Marshes SSSI. Loss/reduction of ecological connectivity between parts of Sizewell Marshes SSSI Loss of part of Sizewell Levels and Associated Areas CWS. Fragmentation and possible local extinction of populations of various bat species, including the nationally rare barbastelle bat. Potential significant adverse impact on natterjack toad terrestrial habitat. Minor adverse, not significant impacts on otter, water vole, badgers, reptiles, birds (species not associated with designated sites) and other UK Priority species. Residual non-significant adverse impacts are not fully addressed cumulatively <u>Heritage</u> Major adverse effects on Upper Abbey Farmhouse and barn. Moderate adverse effects on Abbey Cottage. <u>Archaeology</u>	<u>Access (ProW), Amenity and Recreation</u> Restoration of existing permissive walking access through Kenton and Goose Hills to the coast- route of the Sandlings Walk. <u>Soil and agriculture</u> Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.

			Potential for material disturbance and destruction of archaeological remains. <u>Design</u> Potential for inappropriate materials, layout and landscaping for the accommodation campus and ancillary buildings. <u>PRoW</u> Significant adverse impacts on the amenity and recreation value of the PRoW in the main development construction site, particularly closures of public footpath (E-363/021/0), the public bridleway through the campus site (E-363/019/0), and closure of the permissive path along Goose Hill which is used by the Sandlings Walk. <u>Noise and vibration</u> Adverse to significant adverse noise and vibration impact of construction activity of Main Development Site on residential receptors persisting length of construction period, with some of the construction taking place 24 hours a day. Change to the existing rural noise climate around Main Development Site affecting amenity and recreation. <u>Air quality</u> Dust nuisance impacts from construction, in particular in relation to stockpiles and borrow pits, with potential impacts on residential	

			receptors, ecology and amenity, further mitigation required. Air quality impacts from NRMM potentially significant, commitment to low emission NRMM requested. <u>Flood and water</u> At several sites non-SuDS measures are proposed. <u>Transport</u> Disruption caused by construction of highway works	
38b	Operation of power station	<u>Ecology and biodiversity</u> Conversion of formerly arable land at the Main Development Site to semi-natural habitats / heathland. Landscaping of former construction land to heathland mosaic. <u>Historic Environment</u> Moderate positive effect/impact of repair on Upper Abbey Farm Barn. <u>Access, Amenity, Recreation</u> Retention of the inland alternative Bridleway route which will provide a link in the currently fractured	<u>Historic Environment</u> Moderate adverse effects on Abbey Cottage. <u>Archaeology</u> If archaeological remains of high significance requiring preservation in situ are defined during assessment work, measures would need to be in place throughout operation to ensure that disturbance continues to be prevented <u>Design</u> Potential for inappropriate finishes and materials to turbine halls, OSC, gateway building.	

		bridleway north-south bridleway network. Provision of a bridleway link from the new bridleway in Aldhurst Farm to public bridleway 19 at the Kenton Hills car park.		
38c	Required mitigation	<u>Landscape and ecology</u> Embedded landscape mitigation through the LEMP Embedded ecological mitigation through CoCP and LEMP <u>Access, Amenity and Recreation</u> Appropriate and agreed off-road diversion for the Coast Path and Sandlings Walk during periods of closure is required. Retention of alternative bridleway route including the link to Lovers Lane at the King Georges Avenue junction and from Aldhurst Farm to Kenton Hills and bridleway 19. <u>Flood and water</u> Change of proposals to implement SuDS measures in all locations. <u>Accommodation</u> Completion of accommodation campus early during construction (well before peak) – part of implementation plan. <u>Quality of life</u> Residual community, quality of life and wellbeing impacts to be mitigated through proposed Community Fund. <u>Soil and agriculture</u> Embedded mitigation in a Land Contamination Management Plan Avoidance, mitigation and compensation measures are covered throughout the LIR.	
38d	Requirements and obligations	<u>Landscape and ecology</u> Requirement 14 - Secure embedded landscape mitigation via the LEMP. Requirement 9 and 15 - External lighting plan. Requirement 14 - Secure landscape restoration through LEMP.		

		Requirement 2 – Code of Construction Practice (CoCP) including terrestrial ecology and ornithology mitigation measures, and prevention of construction impacts. Requirement 4 – Terrestrial Ecology Monitoring Plan. Requirement 14A – Fen Meadow Plan Requirement 14B – Wet Woodland Plan Commitment to pre-commencement surveys (as required) to inform the final details of mitigation measures is needed (new Requirement). S106 –Suffolk Coast Recreational Disturbance Avoidance and Mitigation Strategy (RAMS) financial contribution S106 - Residual mitigation funding through Natural Environment Fund. <u>Soils and agriculture</u> Compensation – to affected farmers through appropriate compulsory acquisition fees. <u>Historic Environment</u> S106 – secure repairs to Upper Abbey Farm Barn. <u>Archaeology</u> Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. <u>Design</u> Requirement – design details and materials to be agreed for identified temporary and permanent buildings. S106 – Design Review Panel to work with / advise on design details and materials <u>Access (PRoW), Amenity and Recreation</u> S106 – ProW fund to mitigate negative impacts to be expanded to include all those sites where there is a negative local impact identified and not just those with moderate to major impact identified. <u>Noise and Vibration</u> S106 – Noise Mitigation Scheme – to be offered to residents at a lower significance value than SOEL. To include acoustic fencing / boundary treatments or insulation to properties, as well as upgraded glazing.

		S106 – mitigation / compensation measures to be compensate for impacts on amenity and recreation and PRoW – Natural Environment Fund <u>Air Quality</u> Requirement - Screening, fencing, turfing of stockpiles and earthbunds within 350m of sensitive human health and ecological receptors. Requirement - Code of Construction Practice to include construction dust air quality mitigation, commitment for Stage V NRMM, commitment for Euro VI HGV (with a cap for non-Euro VI vehicles). Requirement – secure appropriate number of electric charging points at the car park. S106 - regular monitoring and responding mitigation, including dust deposition monitoring. S106 – residual ecological impacts may need to be reflected in ecological mitigation/compensation measures, including in the scale of the Natural Environment Fund. <u>Flood and Water</u> Requirement – suitable provisions for control and approval of detailed drainage mitigation measures to ensure suitability and acceptability. <u>Community impacts</u> S106 – Community Fund – to continue for early post-construction period as well as during construction. <u>Soil and agriculture</u> Requirement – Land Contamination Management Plan

Land East of Eastlands Industrial Estate (LEEIE) including Lovers Lane

34.8. The Applicant proposes a range of uses for the LEEIE, including a workers' caravan site, and early years Park and Ride site, new rail sidings, and materials stockpiling.

34.9. The Councils are supportive of proposals for a workers' caravan site with 400 pitches, as it will reduce pressure on the private rented and tourist accommodation sectors in the local area and reduces the need to travel to site. The Councils are also supportive of the Early years Park and Ride Facility.

34.10. However, the Councils have a number of concerns about the detailed proposals, most notably the impacts on surface water flooding, and noise and vibration impact of the rail sidings and stockpiling activities.

Table 39: Overview of Main Development Site impacts –Land East of Eastlands Industrial Estate (LEEIE) including Lovers Lane				
Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
39a	Construction of power station	<u>Access, amenity and recreation</u> Provision of a new off-road bridleway link from the Sandy Lane bridleway (E-363/019/0) south to Lovers Lane and King Georges Avenue junction.	<u>Soil and agriculture</u> Temporary loss of agricultural land at LEEIE <u>Waste management</u> <u>SCC:</u> Operational capacity / safe operations at Lovers Lane HWRC <u>Noise and vibration</u> Adverse to significant adverse noise and vibration impact of construction activity of Main Development Site on residential receptors persisting length of construction period, with some of the construction taking place 24 hours a day. Adverse impact from rail freight movements along Leiston Branch Line and LEEIE sidings, particularly night-time noise. <u>Air quality</u> Dust nuisance impacts from construction including stockpiling and materials handling, with potential impacts on residential receptors and amenity, further mitigation required. <u>Flood and water</u> No acceptable drainage strategy for LEEIE, with risk of increased surface water flood risk	<u>Accomodation</u> Caravan site reduces pressure on accommodation market Caravan site and early Park and Ride reduces transport movements <u>Soil and agriculture</u> Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.

			No acceptable drainage strategy available – risk of increased runoff rates and flood risk at Valley Road; not a SUDS <u>Road safety</u> Road safety impacts and to a lesser extent delays on Lover's Lane due to increase in turning movements of HGVs and buses Road safety impacts related to Lovers Lane HRWC <u>Transport</u> Disruption cause by construction of highway works <u>Archaeology</u> Potential for material disturbance and destruction of archaeological remains	
39b	Operation of power station	<u>Minerals and waste</u> Legacy of Lovers Lane HWRC mitigation (if applicable). <u>Transport</u> Potential for Valley Road to become pedestrian/cycle only	<u>Archaeology</u> If archaeological remains of high significance requiring preservation in situ are defined during assessment work, measures would need to be in place throughout operation to ensure that disturbance continues to be prevented	<u>Landscape</u> full restoration of the land to former state (largely agricultural)
39c	Required mitigation	<u>Soils and agriculture</u> When the sites are no longer required, the land will be returned to agricultural use, often returning to baseline conditions. <u>Minerals and Waste</u> <u>SCC:</u> Relocation of, or improvements to access arrangements at, Lovers Lane HWRC. <u>Flood and water</u> Change of proposals to implement SuDS measures and ensure surface water flood risk is not increased.		

		<u>Accommodation</u> Completion of workers caravan park at LEEIE at earliest stage – part of implementation plan. <u>Soil and agriculture</u> Embedded mitigation in Land Contamination Management Plan
39d	Requirements and obligations	<u>Landscape and ecology</u> Requirement 9 and 15 - External lighting plan. Requirement 14 - Secure landscape restoration through LEMP. Requirement 2 – Code of Construction Practice (CoCP) including terrestrial ecology and ornithology mitigation measures, and prevention of construction impacts. S106 - Residual mitigation funding through Natural Environment Fund. <u>Soils and agriculture</u> Compensation – to affected farmers through appropriate compulsory acquisition fees. S106 - recognition of this permanent loss of agricultural land should be reflected through mitigation and compensation proposals through the Natural Environment Fund. <u>Noise and Vibration</u> S106 – Noise Mitigation Scheme – to be offered to residents at a lower significance value than SOEL. To include acoustic fencing / boundary treatments or insulation to properties, as well as upgraded glazing. <u>Air Quality</u> Requirement - Screening, fencing, turfing of stockpiles and earthbunds within 350m of sensitive human health and ecological receptors. Requirement - Code of Construction Practice to include construction dust air quality mitigation, commitment for Stage V NRMM, commitment for Euro VI HGV (with a cap for non-Euro VI vehicles). S106 - regular monitoring and responding mitigation, including dust deposition monitoring. <u>Flood and Water</u> Requirement – suitable provisions for control and approval of detailed drainage mitigation measures to ensure suitability and acceptability.

		Archaeology Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. Community impacts S106 – Community Fund – to continue for early post-construction period as well as during construction. Soil and agriculture Requirement – Land Contamination Management Plan

35. Associated Development Sites

35.1. The LIR discusses details of impacts on the Associated Development sites within the issue specific sections below. In this section, the main identified impacts on each of the Associated Development sites are brought together in one summary. Please refer to the relevant issue specific sections for details.

Two Village Bypass

35.2. The Applicant proposes a new bypass to remove through traffic from the existing A12 through the communities of Farnham and Stratford St Andrew, which then also avoids an existing narrow pinch point, known as the Farnham Bend, improving road network resilience.

35.3. The transport section above explains the relationship of the proposals with the unfulfilled aspirations of a four-village bypass around the villages of Marlesford, Little Glenham, Startford St Andrew and Farnham.

35.4. The Councils consider that the proposed Two Village Bypass is proportionate to the Applicant's development, as the minimum required mitigation for the affected communities. The bypass will remove construction traffic from the communities of Farnham and Stratford St Andrew mitigating related amenity and severance impacts for residents and improve network resilience by providing an alternative route to traffic during incidences. The bypass will provide an improved junction layout at A12 / A1094 Friday Street and is likely to reduce the number of road collisions

at the junction. The Councils consider that the Two Village Bypass is a legacy benefit, providing a higher speed route bypassing the two villages, improving journey times and helping to support the Suffolk economy.

35.5. Being a major scheme, the Two Village Bypass despite its overwhelmingly positive impact, given it is a road will inevitably have some negative impacts on landscape, ecology and heritage, as well as residential amenity of properties close to the route of the bypass. The Councils consider that the merits of the bypass far outweigh the negative aspects.

Table 40: Overview of Associated Development impacts – Two Village Bypass

Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
40a	Construction of Associated Development facility	None	<u>Transport</u> Online works of A12/A1094 roundabout and new roundabout to west of Stratford St Andrew would lead to additional delay on A12 Road safety impacts prior to the completion of the A12 / A1094 roundabout, as result of additional HGV traffic and construction workforce traffic moving through the junction. <u>Noise and vibration</u> Impacts during construction <u>Archaeology</u> Potential for material disturbance and destruction of archaeological remains <u>Ecology</u> Loss of connectivity for foraging and commuting bats due to hedgerow loss/re-orientation Loss of habitat for breeding birds.	<u>Soil and agriculture</u> Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.

			Impact on Foxburrow Wood County Wildlife Site. Loss of veteran trees. Loss of floodplain grazing marsh (a UK Priority habitat).	
40b	Construction of Power station – after completion of Two Village Bypass	<u>Transport</u> Improved amenity, reduced noise, vibration and air quality impacts and reduced severance along existing A12 through bypassed communities as a result of existing traffic being bypassed. Removal Farnham Bend pinchpoint on the main A12 <u>Tourism</u> the A12 is the main transport artery to access the Suffolk Heritage Coast and the Area of Outstanding Natural Beauty and the bypass addresses the worst pinch point which would cause congestion and discourage visitors. <u>Ecology</u> SuDS ponds/basins may provide new aquatic habitats (dependent on design) <u>Heritage</u> Significant beneficial effects for designated heritage assets within Farnham and Stratford St Andrew	<u>Landscape</u> Cuts across a well-established landscape pattern Affects the established landscape setting of a number of heritage assets, including Glemham Hall parkland Ecology See above <u>Soils and agriculture</u> Loss of 123.5 ha of primarily Grade 2 and Grade 3 agricultural land <u>Heritage</u> Impact on Farnham Hall, St Mary's Parish Church, Little Glemham Hall from Two Village Bypass <u>Archaeology</u> If archaeological remains of high significance requiring preservation in situ are defined during assessment work, measures would need to be in place throughout operation to	<u>Transport</u> Removal of construction traffic from existing A12 through communities of Farnham and Stratford St Andrew <u>Ecology</u> Design and mitigation measures avoid any direct impacts on the River Alde. Inclusion of mammal access(es) where embankment and bridge cross Alde River valley.

			ensure that disturbance continues to be prevented PRoW Significant adverse effects on the amenity and recreation value of the network of PRoW affected by the Two Village Bypass. Flood and Water Not demonstrated that SuDS and sufficient surface water mitigation can be delivered. Noise and vibration Significant adverse noise effects are anticipated at number of properties along the line of the new Bypass.	
40c	Operation of power station	The positive impacts identified for construction are expected to continue during operation. Transport Two village bypass legacy benefit – improved journey times, improved safer junction layout at A12/A1094 junction	The negative impacts identified under construction will continue during operation. Transport Additional maintenance burden of the new road on SCC	Ecology New woodland planting will provide some new habitats as it matures, which will eventually be greater than that lost. Improvements to retained floodplain grazing marsh may compensate for the net loss of habitat area.
40d	Required mitigation	Further noise mitigation measures required for properties adjacent to new road in both construction and operational periods Further compensation measures to address the loss of veteran trees LEMP needs to be provided Embedded mitigation in Land Contamination Management Plan		

40e	Requirements / Obligations	Transport Proposals for design and construction, including traffic management, to be approved by highway authority. Bond against cost of relevant highway way works Phasing of works Landscape and ecology CoCP and LEMP to control implementation and long-term management of ecological and landscape mitigation and compensation measures. Archaeology Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. Soil and agriculture Requirement – Land Contamination Management Plan

Sizewell Link Road

35.6. The Applicant proposes a new link road from the construction site to the A12, proposed to run principally in parallel to the existing B1122, and bypassing the villages of Middleton Moor, Theberton and parts of Yoxford. Both Councils consider a new Link Road necessary to mitigate the impacts of construction traffic on these communities. They consider that the proposed routeing makes the Sizewell Link Road an acceptable mitigation for the impacts of construction traffic, although note that the Applicant has not fully evidenced that the proposed route results in the optimal outcomes in terms of journey times, distance, and related carbon emissions for deliveries to the construction site and in terms of legacy benefit.

35.7. The road is of significant length, meaning that its construction and operation will have clear impacts on e.g., ecology, landscape, and soil and agriculture.

35.8. Whilst both Councils consider a new Link Road necessary to mitigate the impacts of construction traffic, SCC and ESC have come to different conclusions as to the merit of permanency of the Sizewell Link Road: SCC as the Highway Authority prefer for the Sizewell Link Road to be

removed on completion of the Sizewell C project as the ongoing long-term environmental damage is not justified by transport benefits once the construction period is concluded. However, ESC considers the long terms benefits of the Sizewell Link Road as a dedicated and purpose-built HGV route to Sizewell A, B and C and easier access to Leiston justifies its permanency particularly as a replacement for a long stretch of the B1122 bringing benefits to residents of that stretch of highway and enabling its promotion as a cycle friendly route from Sizewell towards the A12. Both Councils agree that, if the ExA takes the view that the Sizewell Link Road is to be retained, a number of additional measures need to be put in place to mitigate and manage impacts. These positions are described in more detail at paragraph 16.87 of the transport section.

Table 41: Overview of Associated Development impacts – Sizewell Link Road

Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
41a	Construction of Associated Development facility	None	Transport Prior to delivery of Sizewell Link Road: Impacts of additional construction traffic for Main Development Site and Sizewell Link Road on B1122 and communities of Middleton Moor and Theberton – driver delays, road safety, severance Online works (roundabout at A12 and four locations tying in the new road with the existing B1122) will lead to driver delays and road safety impacts Ecology Loss of connectivity for foraging and commuting bats due to hedgerow loss/re-orientation Loss of habitat for breeding birds. Small amount of woodland lost to construction. Loss of ponds (one permanently).	Soil and agriculture Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.

			Loss of habitat and habitat fragmentation impacts on great crested newts. <u>Noise and vibration</u> Impacts during construction <u>Archaeology</u> Potential for material disturbance and destruction of archaeological remains	
41b	Construction of Power station after completion of Sizewell Link Road	<u>Transport</u> Improved amenity, reduced noise and vibration and air quality impacts and reduced severance along existing B1122 through bypassed communities as a result of existing traffic being bypassed.	<u>Landscape</u> cut across a well-established landscape pattern Affects the established landscape setting of a number of heritage assets <u>Ecology</u> As above <u>Soils and agriculture</u> Loss of Grade 2 and Grade 4 agricultural land <u>PRoW</u> Significant adverse effects on the amenity and recreation value of the network of PRoW affected by the Sizewell Link Road. <u>Flood and Water</u> Not demonstrated that SuDS and sufficient surface water mitigation can be delivered.	<u>Ecology</u> Inclusion of suitably sized and located mammal culverts will maintain connectivity for otters. <u>Noise/amenity</u> A number of houses, particularly in Theberton and Middleton Moor, will be affected by road traffic noise of traffic on the current quiet side of their property

			Noise and vibration Significant adverse noise effects are anticipated at number of properties along the line of the new Link Road. Archaeology If archaeological remains of high significance requiring preservation in situ are defined during assessment work, measures would need to be in place throughout operation to ensure that disturbance continues to be prevented	
41c	Operation of power station	Transport Dedicated HGV road to Sizewell A, B and C Removal of traffic through communities of Theberton and Middleton Moor Opportunity to downgrade existing B122 to become quiet road with priority to walking and cycling Ecology SuDS ponds/basins may provide new aquatic habitats (dependent on design Considerable amounts of new woodland and hedgerow planting are proposed as part of the scheme.	Transport Additional maintenance burden for SCC in perpetuity, without the new road having a specific additional function or significant long term legacy benefit being a road running parallel to an existing route Ecology, landscape, soils and agriculture, PRoW, flood and water, noise and vibration, Archaeology The impacts identified under "construction" will continue during operation and in perpetuity of the road's existence.	
41d	Required mitigation	SCC request to construct Sizewell Link Road as a temporary haul road and remove it after completion of construction period; a lesser standard of construction could reduce impacts of the Link Road, and removal after completion would remove the impacts. ESC's support permanency of the Sizewell Link Road after completion of the Sizewell C project as proposed by the Applicant		

		If Sizewell Link Road is to be retained, existing B1122 to be downgraded as a quiet road Further noise mitigation measures required for properties adjacent to new road in both construction and operational periods LEMP needs to be provided Embedded mitigation Land Contamination Management Plan
41e	Requirements / Obligations	<u>Transport</u> Maintenance contribution by the Applicant to SCC towards retention of the SLR Bond against cost of relevant highway way works Financial obligation to downgrade existing B1122 as quiet road Proposals for design and construction, including traffic management, to be approved by highway authority. Phasing of works <u>Landscape and ecology</u> CoCP and LEMP to control implementation and long-term management of landscape and ecological mitigation and compensation measures. <u>Archaeology</u> Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. <u>Soil and agriculture</u> Requirement – Land Contamination Management Plan

Northern Park and Ride Site

35.9. The Park and Ride sites aims to reduce car movements of the construction workforce to the Main Development Site, by transporting a significant proportion of staff to/from the site by bus. This principle is supported by the Councils as a sustainable transport approach. The location of the Northern Park and Ride Site is accepted by the Councils as appropriate, and the Councils consider for this site that the benefits of having a Park and Ride site outweigh its negative impacts. The Park and Ride site will only be available during the construction period; therefore, during operation of the power station, once the site has been restored to its former state, the impact will be neutral.

Table 42: Overview of Associated Development impacts – Northern Park and Ride site				
Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
42a	Construction of Associated Development facility	None	<u>Transport</u> Increased congestion and delay on local road network as result of HGV and car trips to construction site Additional delay on the A12 due to online highway works for construction of new roundabout <u>Ecology</u> Loss of habitat for breeding and wintering birds. <u>Archaeology</u> Potential for material disturbance and destruction of archaeological remains	<u>Soil and agriculture</u> Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.
42b	Construction of Power station - operation of Associated Development site	<u>Sustainability</u> Electric vehicle charging points encourage use of electric vehicles in the District.	<u>Transport</u> Proposed new A12 roundabout will lead to a minor increase in delay on the road network <u>Landscape</u> Change from current agricultural use to transport hub facility Visual impacts <u>Ecology</u> See above <u>Soils and Agriculture</u>	<u>Transport</u> Reduction of overall vehicle mileage on the network associated with worker trips and will significantly increase of number of staff travelling to/from the site by public transport provision of parking facilities for cycles, motorcycles and electric vehicles has the potential to reduce the impacts of the Park and Ride <u>Ecology</u>

			Temporary loss of primarily (78%) Grades 1, 2 and 3a agricultural land <u>Flood and Water</u> Further clarification on compliance with policy required <u>Archaeology</u> If archaeological remains of high significance requiring preservation in situ are defined during assessment work, measures would need to be in place throughout operation to ensure that disturbance continues to be prevented	Bat assemblage – subject to implementation of the identified mitigation measures. Great crested newts – no significant impacts subject to identified mitigation measures being implemented.
42c	Operation of power station	<u>Transport</u> Potential for legacy benefit of retaining small proportion of parking associated with railway station parking		<u>Landscape</u> full restoration of the land to former state (largely agricultural)
42d	Requirements / Obligations	<u>Transport</u> Phasing of Park and Ride facility construction Bond against cost of relevant highway way works, including reinstatement of existing highway Package of mitigation measures to mitigate impacts on Wickham Market; Design and construction proposals to be approved by the highway authority Funding for additional traffic management Controls for workforce numbers pre-delivery of the Park and Ride site, and during park construction Monitoring of use of the site <u>Landscape and ecology</u> CoCP and LEMP to control implementation and management of ecological mitigation and compensation measures.		

		<u>Archaeology</u> Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. <u>Soil and agriculture</u> Requirement – Land Contamination Management Plan

Southern Park and Ride Site

35.10. The Park and Ride sites aims to reduce car movements of the construction workforce to the Main Development Site, by transporting a sizeable proportion of staff to/from the site by bus. The Southern Park and Ride also includes a Postal Consolidation Facility, which may reduce vehicle mileage associated with LGVs. This principle is supported by the Councils as a sustainable transport approach. The location of the Southern Park and Ride Site is accepted by the Councils as appropriate. During the pre-application period, the Councils queried whether the site should be located further south towards Ipswich, but they are content that the proposed location is acceptable to reduce traffic impacts. The Councils consider for this site that the benefits of having a Park and Ride site outweigh its negative impacts. The Park and Ride site will only be available during the construction period; therefore, during operation of the power station, once the site has been restored to its former state, the impact will be neutral.

Table 43: Overview of Associated Development impacts – Southern Park and Ride site				
Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
43a	Construction of Associated Development facility	None	Transport Increased congestion and delay and reduced road safety on local road network as result of HGV and car trips to construction site, particularly for B1078/B1116 roundabout and slips Risk of significant in-combination air quality impacts from HGVs in Stratford St Andrew pre-completion of bypass, limits on HGV emission standards under discussion. Archaeology Potential for material disturbance and destruction of archaeological remains.	Soil and agriculture Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.
43b	Construction of Power station - operation of Associated Development site	Transport Proposed improvements to B1078/B1116 roundabout minor legacy benefit. Sustainability Electric vehicle charging points encourage use of electric vehicles in ESC District.	Transport Increased car journeys on B1078/B1079, with driver delay and road safety impacts, through Wickham Market and at other locations. Soils and agriculture change from current agricultural use to transport hub facility. Landscape Visual impacts. Flood and Water	Transport Reduction of overall vehicle mileage on the network associated with worker trips and will significantly increase of number of staff travelling to/from the site by public transport. Traffic Incident Management Area may reduce construction traffic impacts in the event of an incident to the North on the A12. Reduction of total vehicle mileage associated with LGVs as a result of the proposed Postal Consolidation Facility.

			Outline Drainage Strategy principles for this site not compliant with policy – proposals not compliant with SuDS approach. Due to lack of infiltration testing, not clear whether surface water drainage strategy is deliverable within the Order Limits. <u>Archaeology</u> If archaeological remains of high significance requiring preservation in situ are defined during assessment work, measures would need to be in place throughout operation to ensure that disturbance continues to be prevented.	provision of parking facilities for cycles, motorcycles and electric vehicles has the potential to reduce the impacts of the Park and Ride.
43c	Operation of power station	None	<u>Soils and Agriculture</u> Temporary loss of primarily Grades 3a, 3b and 4 agricultural lands	<u>Landscape</u> Full restoration of the land to former state (largely agricultural)
43d	Requirements / Obligations	<u>Transport</u> Phasing of Park and Ride facility construction including B1078 road safety schemes Bond against cost of relevant highway way works, including reinstatement of existing highway Package of mitigation measures to mitigate impacts on Wickham Market; Design and construction proposals to be approved by the highway authority Funding for additional traffic management Controls for workforce numbers pre-delivery of the Park and Ride site, and during park construction Monitoring of use of the site <u>Landscape and ecology</u> CoCP and LEMP to control implementation and long-term management of landscape and ecological mitigation and compensation <u>Archaeology</u>		

		Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. <u>Soil and agriculture</u> Requirement – Land Contamination Management Plan

Freight Management Facility

35.11. The Applicant proposes a Freight Management Facility near the Seven Hills A12/A14 junction, to manage HGV movements along the A12 to the construction site. The Councils support the principle of a Freight Management Facility as it is considered to increase the likelihood of better management of the approach of freight vehicles to the site and on the A12 north of Seven Hills. Whilst the proposed location of the Freight Management Facility is considered by the Councils in principle acceptable subject to resolution of the issues raised below, the Applicants have failed to properly evidence that this location is optimal in terms of managing HGVs particularly in the case of closures of the Orwell Bridge, and that a potential alternative location to the west of the Orwell Bridge with possible increased benefit was not feasible.

Table 44: Overview of Associated Development impacts – Freight Management Facility

Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
44a	Construction of Associated Development facility	None	<u>Transport</u> Delays on Felixstowe Road and A1156 as a result of construction access arrangements <u>Ecology</u> Loss of habitat for breeding and wintering birds. <u>Archaeology</u> Potential for material disturbance and destruction of archaeological remains	<u>Soil and agriculture</u> Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.

44b	Construction of Power station – operation of FMF	None	<u>Transport</u> Additional movements across the Junction 58 Seven Hills roundabout from HGVs first travelling to the FMF and then travelling from the FMF to the construction site: Increased driver delays and congestion In-combination impact with construction traffic for Brightwell Lakes housing development Potential queuing back onto highway if FMF exceeds its operational capacity (particularly during incidents) – delay and congestion Safety impacts on cyclists using Felixstowe Road Impacts on "Operation Stack" at Felixstowe Road <u>Landscape</u> Change from current agricultural use to transport hub facility. Visual impacts. <u>Ecology</u> As above <u>Soils and agriculture</u> Temporary loss of Grade 3 and Grade 4 agricultural land <u>Flood and Water</u> Outline Drainage Strategy principles for this site not compliant with policy – not proposing SuDS approach <u>Archaeology</u> If archaeological remains of high significance requiring preservation in situ are defined during assessment work,	<u>Transport</u> Better management of HGV movements to the construction site along A12 north of Seven Hills

			measures would need to be in place throughout operation to ensure that disturbance continues to be prevented.	
44c	Operation of power station	None	None	<u>Landscape</u> Full restoration of the land to former state (largely agricultural)
44d	Requirements / Obligations	<u>Transport</u> Bond against cost of relevant highway way works, including reinstatement of existing highway Design and construction proposals to be approved by the highway authority Traffic Incident Management Plan to be submitted, including proposals for use of FMF during incidents Monitoring of operation of Seven Hills Junction <u>Landscape and ecology</u> CoCP and LEMP to control implementation and long-term management of landscape and ecological mitigation and compensation <u>Archaeology</u> Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. <u>Soils and agriculture</u> Requirement – Land Contamination Management Plan		

Green rail route

35.12. The Applicant proposes to extend the Sizewell Branch Line into the Main Development Site. As this will facilitate the delivery of the rail element of the freight management strategy, the Councils are supportive of the principle of this proposal and consider that negative impacts are outweighed by the transport benefits.

Table 45: Overview of Associated Development impacts – Green rail route				
Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
45a	Construction of Power station	None	<u>Landscape</u> Green Rail Route would cut across a well-established landscape pattern <u>Soils and Agriculture</u> Temporary loss of 22ha agricultural land <u>Heritage</u> Green rail route impacts on Leiston Abbey group <u>Archaeology</u> Potential for material disturbance and destruction of archaeological remains. If archaeological remains of high significance requiring preservation in situ are defined during assessment work, measures would need to be in place throughout operation to ensure that disturbance continues to be prevented. <u>PRoW</u> Significant adverse impacts on the amenity and recreation value of the public footpaths affected by the Green Rail Route. <u>Flood and water</u>	<u>Transport</u> Delivery of the Green Rail Route will facilitate the delivery of the proposed levels of rail freight deliveries, thus reducing the overall freight impact of HGVs. <u>Soil and agriculture</u> Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.

			Potential to increase existing surface water flood risk to residential properties on Abbey Road, Leiston. <u>Noise and vibration</u> Some disturbance of residents	
45b	Operation of power station	<u>Flood and water</u> Green Rail Route potential for flood risk legacy benefit to the properties on Abbey Road.	None	<u>Soils and agriculture</u> Full restoration of the land to former state (largely agricultural) The Green Rail Route attenuation basin at Abbey Road is currently only temporary and benefits will not continue through the operational phase
45c	Requirements / Obligations	<u>Archaeology</u> Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. <u>Soil and agriculture</u> Requirement – Land Contamination Management Plan		

Yoxford Roundabout

Table 46: Overview of Associated Development impacts – Yoxford roundabout				
Ref no.	Scenario	Positive Impacts	Negative Impacts	Neutral Impacts
46a	Construction of Associated Development facility	None	<u>Transport</u> Impacts of construction traffic on driver delay and road safety. <u>Archaeology</u> Potential for material disturbance and destruction of archaeological remains.	<u>Soil and agriculture</u> Provided an appropriate Land Contamination Management Plan is required and adhered to, contaminated land matters can usually be resolved.
46b	Construction of Power station	<u>Transport</u> Upgrade to existing junction – improved access from B1122 onto A12	<u>Transport</u> Minor increase on delay to A12 southbound movements. <u>Flood and water</u> Potential to increase existing surface water flood risk to residential properties. <u>Archaeology</u> If archaeological remains of high significance requiring preservation in situ are defined during assessment work, measures would need to be in place throughout operation to ensure that disturbance continues to be prevented.	<u>Ecology</u> Roadside Nature Reserve 197 is retained outside of the development boundary
46c	Operation of power station	<u>Transport</u> Upgrade to existing junction – improved access from B1122 onto A12	The impacts identified under "Construction of Power station" remain.	None

46d	Requirements / Obligations	<u>Transport</u> Proposals for design and construction, including traffic management, to be approved by highway authority. Completion of roundabout early in the construction phase Bond against cost of relevant highway way works Phasing of works <u>Archaeology</u> Requirement – to be amended to effectively secure further assessment, mitigation, post-excavation analysis, reporting, publication and archive deposition S106 – suitable resourcing for SCC archaeological services participation in mitigation measures. <u>Soil and agriculture</u> Requirement – Land Contamination Management Plan

36. Specific impacts on identified communities

Introduction

36.1. The following section considers the impact on communities which are either in close proximity or host to the Main Development Site or have significant Associated Development's in their locality. Where the impacts have already being dealt with in the issue specific sections above the relevant passages are cross-referenced at the end of this section.

36.2. A number of communities were identified by the Applicant as being in close proximity to the Main Development Site or Associated Developments. To enable local community involvement, a number of working groups or regular series of meetings were organised by the Applicant, with involvement of the Councils where these included matters under their jurisdiction, for example schemes requiring improvement to local highways. The Applicant, together with the Councils, and working with local communities, identified two specific groups:

36.3. Leiston-cum-Sizewell: Town centre and sustainable transport to mitigate Sizewell C construction and operational impacts associated with the Main Site Development; and

36.4. Wickham Market: Highway mitigation adjacent to the Southern Park and Ride.

Both groups are working with the Applicant to identify acceptable solutions for inclusion as planning obligations.

36.5. In addition to these two communities (included below), the Councils have also included sections on impacts on a number of other communities, due to their hosting either the Main Development Site or Associated Development sites, resulting in cumulative community project impacts. The communities considered under separate headings below are (listed from closest to the Main Development Site outwards):

i. Leiston-cum-Sizewell;
ii. Theberton and Eastbridge;
iii. Middleton-cum-Fordley;
iv. Yoxford;
v. Darsham;
vi. Kelsale-cum-Carlton;
vii. Farnham and Stratford St Andrew;
viii. Wickham Market; and
ix. Levington/Bucklesham.

36.6. In addition, there is a section on the A12 and East Suffolk Line Communities, in recognition of the wide group of communities along the routes of the A12 and the East Suffolk Line that will experience similar types of community impacts from construction-related vehicle movements.

36.7. The Councils acknowledge that there are a number of other communities not specifically listed here that will be impacted by the Sizewell C proposal, where appropriate they have been referred to throughout this LIR. Not being specifically included in this section is not intended to diminish or take away potential impacts from those communities.

Leiston-cum-Sizewell

36.8. In 2016, the population of Leiston was 5,476. 70.4% of the Leiston population are economically active and on average they travel 15.5km to work. 1,092 people in 2016 commuted out of Leiston for work with 2,101 commuters into Leiston. (Statistics for Leiston taken from the Suffolk Coastal Local Plan (**APPENDIX 1: 1).** There are approximately 2,600 homes in Leiston, and 31.8% of these are one person households. 21.4% have no car. On average there are 2.3 persons per household.

36.9. Leiston-cum-Sizewell made its Leiston Neighbourhood Plan **(APPENDIX 1: 4)** in March 2017. This Plan sets out a vision and a strategy for Leiston supported by ESC, the Plan will guide future developments in Leiston until 2029.

36.10. Reference is made in the Local Plan to the significant impact proposals such as Sizewell C will have on the community of Leiston and the importance for the Councils and the local community to work in partnership to ensure that any impacts of major projects are mitigated to the benefit of Leiston and also the wider natural environment.

36.11. Leiston is located within the setting of the AONB. It is an area which makes a significant contribution to the local economy and provides a variety of employment opportunities. The Leiston Neighbourhood Plan provides for a mix of community facilities, services and residential development over the plan period to support this.

36.12. The LIR identifies a number of potentially wide-ranging impacts on Leiston, including increased traffic and congestion, fly parking, noise and disturbance particularly from activities at the LEEIE, impacts on housing and accommodation, community safety and community cohesion, impacts on local services, and, cumulatively, effects on people's mental health and wellbeing. At the same time, Leiston, as the closest town, has the opportunity to particularly benefit from job and skills opportunities arising from the development.

36.13. There have been ongoing discussions between the Applicant and Leiston-cum-Sizewell Town Council with regards to mitigation for construction and operational traffic in Leiston, in particular through the centre of the town. This includes increased provision for cycling and public transport access. A costed, formal mitigation package is being worked up and should be consulted upon around the time of the submission of this LIR, the consultation will be led by the Town Council supported by the Applicant and the Councils.

36.14. However, mitigation for the town should not be limited solely to highway improvements. The Town Council has a number of requests for which it seeks support from the Applicant, either as embedded or external mitigation to the project, or through the Community Fund. They include (this list is not exhaustive):

i. To make transit through Leiston town centre (and residential areas) undesirable for Sizewell C traffic.

ii. To reduce anticipated overload at the White Horse traffic lights.

iii. Make the town centre safe for pedestrians by incorporating pedestrian led measures, widening pavements, and doing public realm improvements in Main Street, High Street and Sizewell Road.

iv. Working to create new cycling routes that tie-in with the DCO, the Travel Plan and local amenity for residents and workers, to encourage greater use of cycles.

v. Address additional demand for community facilities in Leiston. With over 80% of the construction and virtually all the workforce residing or using the facilities in the Parish this almost doubles the population and the pressures this will bring, albeit unpredictable at the moment, must be monitored.

vi. Welcome the new sports facilities and the opportunities they bring for the town.

vii. Would like to ensure that the Community Fund recognises and ringfences IP16 for a significant portion of the Fund, and would welcome investment in the revamped Waterloo Centre via the Community Fund to provide facilities and services for local families and workforce families that make the move to Leiston. Welcome measures for skills and education and would like a significant number of apprenticeships and other skills initiatives to be in partnership with Alde Valley Academy and College on the Coast.

viii. Smaller issues such as discussion on bus routes, shuttle from campus to sports centre, signage, stopping up Valley Road, cycle improvements, crossing point from Aldhurst Farm to Kenton Hills, retaining an undiminished household waste recycling site without reduced road safety.

36.15. As the host town for the majority of the proposal, during construction and operation, the Councils consider Leiston-cum-Sizewell to have a key role during the Examination process and are happy to work alongside the Town Council to ensure the identified impacts are properly mitigated and that the identified opportunities are available to the Town. It is also important that the inclusion of Leiston-cum-Sizewell is given careful consideration when funds to mitigate and compensate for the development are being established.

Theberton and Eastbridge

36.16. Theberton and Eastbridge are small villages on and accessed via the B1122, to the north of the Sizewell C construction site. Theberton has a parish of circa 280 residents, Eastbridge around 120 people (400 people total).

36.17. The ESC village profile identifies Theberton as having 174 dwellings, with the average age of occupants as 49.2 years, and a working age population of 164 persons (October 2019). Eastbridge does not have its own village profile as is much smaller but it has approximately 40 houses with a popular village pub, the Eels Foot Inn, and is approximately 4 miles north of Leiston and 2 miles from the North Sea.

36.18. Theberton and Eastbridge are located in the setting of the AONB but not within the boundaries of the AONB. They host an element of the proposed Sizewell Link Road but the remainder of the development proposals are outside of the parish boundary. However, as the conduit for the main access to the site they will be impacted in particular by vehicular traffic and especially during the Early years of the development before the Sizewell Link Road is available for use.

36.19. The construction site will be approximately 250 metres from the village of Eastbridge, in particular the borrow pits will be the closest element of construction to the village.

36.20. The Suffolk Coastal Local Plan references the potential impact Sizewell C will have on local communities; we seek to ensure that any impacts of projects are mitigated. Potential impacts on Theberton and Eastbridge include:

i. Significant increases in construction light, dust and noise pollution (whole parish but in particular for Eastbridge);
ii. No mitigation for the B1122 in the form of crossings, speed limits, visibility improvements;
iii. Closing Pretty Road and Moat Road leading to community access severance;
iv. No noise mitigation proposals for Theberton houses;

v. Unacceptable use of B1122 during Early Years and Sizewell B relocated facilities proposals;
vi. Insufficient controls for LGVs travelling to and from the site;
vii. Potential for Eastbridge to become a rat-run for drivers including workers;
viii. Speed limits needed in Eastbridge;
ix. No additional planning for accommodation to address increase in maximum workforce – this could adversely impact the rental sector and tourism and social housing sectors;
x. Unsubstantiated claims for embedded mitigations for pollution and run off from site roads, spoil heaps and borrow pits;
xi. Concern for impacts on two pubs in Theberton and Eastbridge;
xii. Proposed Sizewell Link Road will divide farms and fields making some family farms no longer viable; ands
xiii. Concerns over delays to emergency services response due to increased traffic.

36.21. A number of the items raised above are common themes across the Sizewell C development project and are dealt with elsewhere in this LIR. Specific items relating to Theberton and Eastbridge are covered in this section.

36.22. The B1122 road runs from Yoxford linking to Lovers Lane and the Sizewell Gap Road, it is the HGV route for Sizewell B. Parts of the B1122 were re-surfaced relatively recently as part of proposals for the Dry Fuel Store at the Sizewell B site.

36.23. The B1122 cuts through the centre of Theberton, and increased use of this road by HGV traffic servicing the Sizewell C construction could be devastating for the village. In particular, it would be very difficult and unsafe for pedestrians to cross the road, and the road would become unsafe for cyclists. As such, in May 2016, SCC supported by ESC appointed Accent to carry out a Sizewell C Impact Assessment report to assess the perceived community impacts of increased traffic associated with the construction of the Sizewell C power station **(APPENDIX 2: 2).**

36.24. The Accent report had residents from Yoxford, Middleton and Theberton roughly equally represented in the survey. Construction traffic was the single largest concern, and a considerable majority anticipated that they would become dissatisfied living where they are with Sizewell C construction traffic. Volume of traffic was the most common specific aspect concerning respondents followed by lorries and other heavy vehicles, traffic speed and pedestrian safety. This was followed by concerns with getting in or out of driveways and side roads, duration of the works, noise and vibration and pollution / air quality.

Similar concerns were raised in the in-depth interviews. A number of participants drew on previous experience during construction of Sizewell B, the construction of the Sizewell B Dry Fuel Store and Sizewell B outages.

36.25. The Applicant has changed its proposals to include the Sizewell Link Road which will take the majority of vehicular traffic away from the B1122 through Theberton once it is operational including all HGV traffic. However, the Councils concur with the Parish Council's identification that during the 'Early Years' there will be a significant number of vehicles using the B1122 through Theberton with no mitigation identified for the village in the form of safe crossings or noise mitigation (prior to the Sizewell Link Road coming online). If the ES identifies impacts, such as on pedestrians or in terms of noise, these will have to be addressed by the Applicant. The Councils highlight this as an area of concern for Theberton in particular, and will discuss with the Applicant potential opportunities for improvements during the 'Early Years' of construction. Additional measures may also be funded through the Sizewell C Community Fund with appropriate application.

Middleton-cum-Fordley

36.26. Middleton including Middleton Moor is defined as a small village in the Settlement Hierarchy. The ESC village profile for Middleton states it has a population of 343, comprising 206 dwellings, an average age of around 55, and a working age population of around 180 (October 2019, Village profile www.eastsuffolk.gov.uk - figures taken from the 2011 Census).

36.27. Middleton and Middleton Moor are the first village on the B1122 from the Yoxford roundabout. HGVs and AILs travelling from the north on the A12 will make a left turn at the new Yoxford roundabout and travel approximately one mile on the B1122 before dropping down onto the Sizewell Link Road. In the Early years before the Sizewell Link Road is constructed and operational, the B1122 will be the HGV and AIL route from the A12 to the site. Residents in this area will therefore be impacted by construction traffic throughout the construction phase of Sizewell C and continuing through the operational phase.

36.28. Middleton-cum-Fordley Parish Council submitted a relevant representation to the Examination identifying a number of concerns with the Sizewell C proposal and in particular issues affecting their village including:

i. Sufficient supply of potable water provision not identified;
ii. Traffic to the site in particular with reference to the badly located link road – which needs to be in place before works commence;
iii. Impacts on emergency services ability to respond;

iv. No net gain from employment for local people;

v. Loss of amenities and quality of life; and

vi. Serious threat to tourism.

The majority of these concerns are addressed elsewhere in this report so will not be repeated here.

36.29. It is expected that the Noise Mitigation Scheme will have proposals for properties on the B1122 adversely affected by noise and vibration from HGVs, AILs and other cars and LGV vehicles that will be using this stretch of highway but this has yet to be confirmed.

36.30. The turning for Middleton is prior to the drop-down for the Sizewell Link Road. The residents of Middleton as well as those of Middleton Moor will therefore be impacted by the Sizewell C project during the length of its construction period.

36.31. Should it be determined that the Sizewell Link Road is to be removed post-construction of Sizewell C, the B1122 will revert to being the primary HGV route for Sizewell A, B and C, potentially impacting on residents of Middleton and Middleton Moor during the operational phase of the station.

36.32. As with Theberton and Eastbridge above, the Councils note that during the 'Early Years' there will be a significant number of vehicles using the B1122 through Middleton with no mitigation identified for the village in the form of safe crossings or noise mitigation. If the ES identifies impacts, such as on pedestrians or in terms of noise, these will have to be addressed by the Applicant. The Councils highlight this as an area of concern for Middleton in particular, and will discuss with the Applicant potential opportunities for improvements during the 'Early Years' of construction. Additional measures may also be funded through the Sizewell C Community Fund with appropriate application.

36.33. Residents of Middleton were incorporated in the Accent report and survey work detailed above and the concerns highlighted through that report can be equally applied to Middleton and Middleton Moor.

Yoxford

36.34. Yoxford is a large village in the valley of the River Yox and is framed by the mature landscaped grounds of three country houses. The A12 cuts through the eastern section of the village and the B1122 joins the A12 at Yoxford. Yoxford is located in a particularly rural area with limited development. It has a population of approximately 725 people with 394 dwellings (Village Profile 2019 – www.eastsuffolk.gov.uk - figures taken from 2011 census). Just over half of the population is working age and there are 129 families with dependent

children. The A1120, a popular tourist route west to east across Suffolk, cuts through the centre of Yoxford.

36.35. The Sizewell C proposal incorporates a new roundabout at the junction of the B1122 with the A12 at Yoxford (the 'Yoxford Roundabout'), and the proposed Sizewell Link Road, with its junction with the A12 situated before Yoxford heading north on the A12 from Ipswich. The proposed Northern Park and Ride site just North of Yoxford at Darsham. HGVs and Park and Ride buses travelling from Lowestoft and Darsham on the A12 will turn off the A12 at the new roundabout onto the B1122, and HGVs travelling north on the A12 will turn off the A12 at the Sizewell Link Road. Once the Yoxford roundabout and Sizewell Link Road are fully operational there will be no HGVs for Sizewell C in Yoxford.

36.36. The Suffolk Coastal Local Plan references the potential impact Sizewell C will have on local communities; we seek to ensure that any impacts of projects are mitigated.

36.37. Potential impacts on Yoxford include:

i. Adverse impact on tourism resulting from the Applicant's unacceptable reliance on roads for transport;

ii. Adverse impact on residents through increased noise and congestion (e.g., HGVs and vehicles transporting abnormal indivisible loads using routes around Yoxford) leading to increased journey times;

iii. Road safety, severance and amenity impacts of increased traffic;

iv. No mitigation for community severance caused by increased traffic on the A12 and A1120;

v. Noise and light pollution from Northern Park and Ride will adversely impact amenity and directly impact some Yoxford residents, with no mitigation proposed;

vi. Anticipated effects on designated heritage assets within Yoxford and its surroundings;

vii. Accommodation need will distort the private rented sector of the local housing market making it harder for local people to secure housing; and

viii. Housing need will reduce the number of tourist beds available in the future.

36.38. A number of these issues are covered elsewhere in this LIR. Yoxford-specific mitigation proposals are being embedded in the project but delivery of these is critical to their success. We agree with Yoxford Parish Council as stated their relevant representation [RR-1277]that the Sizewell Link Road needs to be brought online at the start of the project, as does the Yoxford roundabout.

36.39. Issues around community severance are perhaps not as clear to demonstrate as resulting directly from the Sizewell C construction particularly as the busy A12 already runs through the western end of the village, but where the ES identifies impacts, such as on pedestrians or in terms of noise, these will have to be addressed by the Applicant. The Councils will work with the Parish and the Applicant to explore opportunities for such proposals. Additional measures may also be funded through the Sizewell C Community Fund with appropriate application.

Darsham

36.40. Darsham is defined as a small village in the Settlement Hierarchy.

36.41. The ESC village profile for Darsham states it has a population of 300, comprising 176 dwellings, an average age of around 57, and a working age population of around 150 (October 2019, www.eastsuffolk.gov.uk figures taken from 2011 census). Darsham has had an increase in housing of approximately 30% with a further 120 houses planned on the A12 near the Westleton Road. An 80-bed motel is planned next to the garage and 170 holiday lodges on the grounds of High Lodge. This, if built out, will create a greatly increased volume of vehicular traffic - some of which may not have been included in the cumulative assessment by the Applicant due to timing.

36.42. The Northern Park and Ride facility will be located in Darsham for construction workers approaching Sizewell from the north on the A12. The site lies to the west of Darsham and the A12, to the east of the East Suffolk Line, and to the north of Darsham railway station. The development site is approximately 28 hectares of land, including sections of the A12 and Willow Marsh Lane towards the north of the site.

36.43. The proposed development is temporary and would remain in situ until it is no longer required for the construction of the Sizewell C power station, approximately 9-12 years.

36.44. Potential impacts on Darsham include:

i. Potential for Darsham to become a rat run; traffic rat-running down The Street during congestion periods on the A12 or during level crossing closures.

ii. Increase in vehicular traffic in the village. The proposed construction of roundabout at the Northern Park and Ride junction at Willow Marsh Lane and at the B1122 junction in Yoxford will likely cause congestion on this section of the A12.

iii. Noise and pollution from congestion and issues with traffic flow.

iv. Level-crossing closures.

v. Potential road safety risks, including increased risks related to the rail level crossing at Darsham as a result of increased HGV, bus and car traffic

Kelsale-cum-Carlton

36.45. Kelsale-cum-Carlton is a parish that lies north of Saxmundham and is located inland. It has a population of around 1000 and 500 dwellings, it is one of the larger parishes in the district (October 2019, www.eastsuffolk.gov.uk, figures taken from 2011 census).

36.46. The Parish will be affected by a number of transport related impacts from Sizewell C: potential impacts in respect of the A12 to the west, the Sizewell Link Road to the north west corner (west to east), Leiston Branch Line to the south and the Theberton Bypass to east (running north to south).

36.47. The Sizewell Link Road is proposed to leave the A12 in this parish and travel across the parish into Theberton. Kelsale is considered a small village in the Local Plan hierarchy. The Parish Council are asking their residents for their feedback on proposals for the Sizewell Link Road, in particular whether it should be retained post-construction.

36.48. Impacts on the community relate to the construction and operation of the A12 western roundabout for the Sizewell Link Road. This will lead to loss of amenity, vibration, light, noise, traffic pollutants, visual impacts and dirt / dust nuisance on nearby residents, farms and businesses.

36.49. Significantly heavier traffic will increase severance, in particular at Rendham Road. The potential increase in road noise and air pollutants may impact residents at North Green / Town Farm Road western end, Curlew Green, Dorley's Corner, the western end of Carlton Road and properties directly adjacent to the A12. To the east the Sizewell Link Road with its blocking of Pretty Lane/Moat Lane means the parish will be encircled by aspects of the development. Direct impact will be on local businesses, residents, visitors, tourists and couriers and their ability to go about their respective activities without disruption.

36.50. Measures may be required to ensure that the Parish does not become a rat-run with vehicles other than HGVs self-routing through the Parish.

36.51. During construction the Sizewell Link Road will isolate and sever the Parish by impeding access to PRoW. The Road will remove from cultivation prime arable farmland which may threaten farm viability.

Farnham and Stratford St Andrew

36.52. Farnham and Stratford St. Andrew are two closely located settlements which share a parish council and several facilities, such as the village hall. The majority of the two villages

lies alongside or close to the A12 though with a number of properties in other parts of the parishes. The overall population is just over 300 with a working age population of 190 (2011 census figures, www.eastsuffolk.gov.uk).

36.53. At present the villages are blighted by high volumes of traffic on the A12. In Farnham in particular the houses are very close to the carriageway itself and the bend in the road is a hazard for larger vehicles as there is only limited space for them to pass. Automatic warning signs have been installed to alert drivers when there are oncoming large vehicles. Stratford St Andrew has had an AQMA for a considerable number of years.

36.54. There have been long term aspirations to provide a four-village bypass, taking the A12 route away from Marlesford and Little Glemham as well as Farnham and Stratford St Andrew but it has not been possible to achieve sufficient Government funding to allow this to be built.

36.55. The proposals for a Two Village Bypass as Associated Development with the Sizewell C Project will provide necessary relief for the centre of Farnham and Stratford St Andrew but will also bring road infrastructure and traffic nearer to other properties in Farnham parish.

36.56. Potential impacts on Farnham and Stratford St Andrew include:

i. Substantial benefit for residents living along or close to the A12 once the bypass is completed, including a large reduction in noise and vibration, a significant improvement in air quality, a reduction in the fear and threat from vehicles and in community severance from traffic;

ii. In the early years of construction before the bypass in completed, there will be a significant rise in traffic volumes through the villages without the benefit of any mitigation measures;

iii. By contrast a number of properties in the eastern part of Farnham parish will witness increases in road noise and vibration (in some places listed as significant adverse impact) once the bypass is completed and no mitigation is yet proposed.

iv. There will be a loss of amenity and recreation value of the network of Public Rights of Way in the area affected by the new road; and

v. Heritage assets in Farnham will be adversely affected including Farnham Hall, St Mary's Church, Farnham and Glemham Hall.

Wickham Market and Hacheston

36.57. Wickham Market is defined as a large village in Policy SCLP3.2 Settlement Hierarchy in the Suffolk Coastal Local Plan, Hacheston is defined as a small village **(APPENDIX 1: 2)**.

36.58. Wickham Market is situated to the west of the A12, about fourteen miles south west of the Main Development Site. Located at the junction of the B1078 from Needham Market to the west and B1438 from Woodbridge to the south, the village is a key service centre for neighbouring villages including Pettistree, Hacheston, Marlesford and Campsea Ashe.

36.59. The ESC village profile identifies Wickham Market as having a population of approximately 2200 in 1006 dwellings, an average age of 47, and a working age population of around 1200, figures taken from 2011 census data. The ESC village profile for Hacheston identifies it as having a population of less than 400 people in around 170 dwellings and an area of 7km2.

36.60. Wickham Market has a neighbourhood area approved, as of November 2018, and a Neighbourhood Plan is currently being produced, but has not yet been made.

36.61. The proposed Southern Park and Ride is located north-east of Wickham Market, in the parish of Hacheston. The facility will be approximately 18 hectares in size, located to the east of the B1078/B1116, to the north of the A12. The remainder of the site encompasses the Fiveways roundabout, the B1078, a section of the A12, and an associated slip road where highway improvements are proposed to form the site access. Although the Associated Development is sited within and hosted by Hacheston, a number of impacts arising will be affected by Wickham Market which is why this section combines the two parishes.

36.62. The proposed development is temporary and would remain in situ until it is no longer required for the construction of the Sizewell C power station, approximately 9-12 years.

36.63. There have been ongoing discussions between the Applicant and Wickham Market Parish Council about traffic mitigation measures resulting from the impact of the proposed Park and Ride site and associated impacts on the town centre.

36.64. The expected impacts are due to the expected increased traffic volumes resulting from the proposed positioning, north of the B1078 roundabout, of the Southern Park and Ride site for the duration of the construction period.

36.65. Potential impacts through Wickham Market and on Hacheston include:

i. Adverse traffic impacts resulting from increased traffic volumes, creating significant negative impacts for local road users and residents. Increase in construction traffic and private car movements on the A12 and other local roads. Associated concerns of fly-parking and waiting restrictions;

ii. Additional traffic volumes during construction of Sizewell C are expected to lead to significant negative impacts for local road users and residents as they will: a) involve 700+ daily HGV and 700+ bus and van movements on the A12, and significant extra LGV and private car movements on the B1078, the High Street – and other local roads;

iii. entail up to 1050 cars travelling through the village additionally each day over the construction period, - these figures could be higher due to the shift patterns for a seven-day week / 20-hour working day at the main site;

iv. any benefits to retail outlets in the village centre (from worker purchases) will be outweighed by the detrimental impacts arising from increased traffic, parking, and fly parking on waiting restrictions;

v. Significant increase in noise, vibration, air, and light pollution affecting properties and creating an adverse impact on residential amenity;

vi. affect the slip road from the B1078 Fiveways roundabout to the Southern Park and Ride access making it inadequate to accommodate vehicles needing to access the site or join the A12 north, with tail backs likely to occur around shift change times and creating detrimental impacts on local traffic movements;

vii. The adverse cumulative impact of a number of major energy projects in the area, in addition to unprecedented housing developments in neighbouring towns and villages; and

viii. Reduced safety of pedestrians and cyclists using promoted leisure routes and accessing the Southern Park and Ride.

Levington / Bucklesham

36.66. Levington and Bucklesham are proposed hosts for the temporary, during construction, Freight Management Facility proposed by the Sizewell C development.

36.67. The Freight Management Facility will be predominantly in Levington, with a small element sitting within the parish boundary of Bucklesham. Levington is a parish of around 120 dwellings and 260 occupants (October 2019, www.eastsuffolk.gov.uk, figures taken from 2011 census data), the average age is 50 years old and about two thirds of the population are of working age.

36.68. Bucklesham has a population with 240 dwellings and a population of just over 500, with a similar average age and proportion of people of working age as Levington (October 2019, www.eastsuffolk.gov.uk, figures taken from 2011 census data). The majority of the

parish of Bucklesham is across the A14 from the proposed site of the Freight Management Facility.

36.69. Both parishes are defined as small villages within the Suffolk Coastal Local Plan 2020.

36.70. The site of the proposed Freight Management Facility is adjacent an allocation in the Local Plan (SCLP12.20) of 22.5ha for B1 and B2 employment uses, Land at Felixstowe Road, Nacton, as the potential to result in a significant increase in traffic locally. The allocated site is identified as being well related to the A12 and the A14 and in a part of East Suffolk which provides good access to Ipswich.

36.71. The site for the Freight Management Facility is accessed from Felixstowe Road. HGVs leaving this facility will need to turn right from the facility onto Felixstowe Road (the old A45), and a further right turn onto the A1156 to access the A12 / A14 Seven Hills roundabout. Vehicles travelling to the site would come off the A14 eastbound off-slip at Junction 58 Seven Hills and instead of using the free flow slip towards A12 north (towards the construction site) they would turn right towards A1156. These vehicle movements are likely to impact on residents using these roads through additional congestion caused by slow moving HGVs, and increased delay and road safety risks at the strategically important junction of Seven Hills and the A1156/Felixstowe Road junction.

36.72. This significant amount of additional traffic and the Freight Management Facility itself will bring with it noise and pollution alongside congestion, noting that will operate for long hours seven days per week. The change from current agricultural use to transport hub facility will also have landscape and visual impacts.

A12 and East Suffolk Line Communities

36.73. A wide group of communities along the routes of the A12 and the East Suffolk Line will experience similar types of impact from construction-related movements. Those which are not the target of specific mitigation measures (such as the Sizewell Link Road and Two-Village Bypass) are discussed here. The communities along the A12 south of the B1122 are Martlesham, Woodbridge, Melton, Campsea Ashe, Marlesford, Little Glemham, Kelsale-cum-Carlton and Saxmundham. Communities along the A12 north of the B1122 include Blythburgh and Lowestoft.

36.74. These communities all rely on the A12 as the main connection to the strategic road network joining to the A14 at Ipswich. Some may be particularly affected with the A12 already severing these communities and with residential properties being very close to the A12. The existing severance may be significantly exacerbated by increased vehicular movements leading to additional noise and vibration, increased potential for pollution and

health and well-being issues. Other residents may be geographically remote enough not to suffer impacts directly, but all are likely to experience effects on the A12 itself such as reduced capacity, increased driver delay and deteriorated road safety. Detailed discussion of impacts on the A12 can be found in the Traffic and Transport section above.

36.75. The impacts north and south of the B1122 are similar in nature but different in detail, as the estimated split of large vehicles is assumed to be 15% from the north and 85% from the south whilst lighter vehicles are more evenly distributed.

36.76. During construction, the increase in HGVs, AILS and abnormal loads, buses and light vehicles will increase severance and anxiety for vulnerable road users and will reduce amenity for communities along the A12 corridor. This traffic will also reduce capacity at busy junctions along the A12, notably at the A1152 junction at Melton. During construction of the Two Village Bypass, online works to the A12/A1094 Friday Street Junction will be taking place whilst having to cope with increased HGV traffic. The LIR also identifies that increased unrestricted construction traffic (LGVs and cars) and displacement traffic of cars avoiding the A12 may lead to additional strain on other roads, including minor roads, near the A12, such as the B1069/A1152, B1125, A1094 or B1078. Full discussion of these effects can be found in the Traffic and Transport section above.

36.77. The increase in construction traffic along the A12 will also reduce exit capacity for the large number of side roads and accesses along the road, reducing the capacity to undertake a safe manoeuvre from these side roads, increasing delay, the likelihood of crashes and reducing access to facilities, which will be of great concern to local communities.

36.78. Taking into account cumulative impacts from East Anglia One North and East Anglia Two, the cumulative traffic impact on fear and intimidation in Marlesford and Little Glemham rises from minor adverse to moderate adverse. This is a significant effect.

36.79. Communities on the East Suffolk Line such as Woodbridge, Melton, Campsea Ashe, Kelsale-cum-Carlton and Saxmundham would additionally experience effects from the increased, largely night-time, rail traffic on the East Suffolk line. There is great concern locally about railway noise and vibration and the resulting sleep disruption would have a major adverse impact on residents, this is referenced in the Noise and Vibration section. Noise disturbance may be exacerbated by the audible warning signals on many of the level crossings in the area if they are not upgraded during the process of making improvements to the East Suffolk Line.

36.80. Kelsale-cum-Carlton will be impacted by the construction of the Sizewell Link Road, which passes through the parish. The road will sever access to parts of the Public Rights of Way network.

36.81. It will be important to appreciate the joint effect of the accumulation of these separate impacts on these communities.

Annex and Appendices

37. ANNEX Additions to the main LIR document

A	Pen profiles of key Council officers
B	Sizewell B relocated facilities
C	Suffolk Traffic and Transport network - context
D	Sizewell C Economic Development, Skills, Education and Employment principles
E	Sizewell C design principles: the local perspective
F	Suffolk principles for the management of the Sizewell estate
G	Suffolk ecology principles for Sizewell C
H	Suffolk access principles for Sizewell C
I	RAMS calculation
J	Suggested / revised requirements
K	Historic environment critical assessment
L	Site by site assessment of archaeological impacts and mitigation measures
M	Transport related mitigation, requirements and obligations
N	Community Safety Partnership / Safer Stronger Communities Board Action Plans
O	Main Development Site – Coastal Geomorphology: Additional information

38. APPENDIX 1 Policy, Strategy and reference documents

1	Suffolk Coast and Heaths Area of Outstanding Natural Beauty Management Plan 2018 – 2023
2	Suffolk Coastal Local Plan 2020
3	Suffolk Minerals and Waste Local Plan 2020
4	Leiston Neighbourhood Plan
5	Suffolk Local Transport Plan Part 1 Transport Strategy
6	Suffolk Local Transport Plan Part 2 Implementation Plan
7	Suffolk Green Access Strategy Rights of Way Improvement Plan 2020 – 2030
8	Suffolk Travel Plan Guidance
9	Suffolk Guidance for Parking
10	NALEP Economic Strategy for Norfolk and Suffolk
11	NALEP Integrated Transport Strategy for Norfolk and Suffolk
12	Extracts - Suffolk Shoreline Management Plan SMP 7
13	East Marine Plan
14	East Suffolk Growth Plan 2018 – 2023
15	East Suffolk Business Plan
16	East Suffolk Strategic Plan 2020 – 2024
17	Suffolk County Council Priorities 2017 – 2021
18	EDF Energy, SCC and SCDC signed Planning Performance Agreement November 2010
19	Natural Beauty and Special Quality Indicators of the AONB
20	Recreational Disturbance Avoidance and Mitigation Strategy (RAMS)
21	AONB: The selection and use of colour in developments guide
22	Section 106 Developers Guide to Infrastructure Contributions in Suffolk
23	State of the AONB Report 2018
24	Suffolk Flood Risk Management Strategy
25	Leiston Surface Water Management Plan Update

26 Map of flood depths of the Leiston Surface Water Management Plan
27 Plan of the surface water flood risk for properties on Abbey Road, Leiston
28 Plan of the surface water flood risk the area around Yoxford

39. APPENDIX 2 Commissioned reports and miscellaneous docs

1 Study on the impacts of the early-stage construction of the Hinkley Point C Nuclear Power Stage: Monitoring and Auditing Study Final Report
2 Accent report: Sizewell C Impact Assessment May 2016
3 BSG Ecology Review of Bat Impact Assessment October 2020
4 BSG Ecology Review of Bat Impact Assessment: Second Review March 2021
5 Network Rail Anglia Route Study March 2016
6 Adrian James Acoustics: Noise assessment technical memoranda
7 The Energy Coast – Implications, Impact and Opportunities for Tourism on the Suffolk Coast 2019
8 Sizewell C Economic Impact Assessment 2018
9 2019 Volume and Value Study by Destination Research (www.thesuffolkcoast.co.uk)
10 Aecom Review of the Gravity Model from an accommodation perspective for ESC