

The Sizewell C Project

9.11 Responses to the ExA's First Written Questions (ExQ1)
Volume 3 - Appendices
Part 1 of 7

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1 BACKGROUND / PURPOSE

1.1 Background

1.1.1 Annex C to the Rule 6 Letter published by PINS on 23rd February 2021 sets out the ExA's initial assessment of principal issues. In that Annex, with regard to 'policy and need', ExA states that it will seek to consider

"*The need for the proposed development including in terms of national considerations and the local economy*"

1.1.2 SZC Co note that the Overarching National Policy Statement EN-1 sets out (in terms of PINS' decision making) that for development proposed within nationally designated landscapes:

"*The IPC [PINS] may grant development consent in these areas in exceptional circumstances. The development should be demonstrated to be in the public interest, and consideration of such applications should include an assessment of the need for the development, in terms of national considerations[1], and the impact of consenting or not consenting it upon the local economy*".

1.2 Purpose

1.2.1 Throughout statutory consultation and engagement, SZC Co has sought to communicate the scale of local and regional economic benefits that the Project would bring, and has set this out within the application for development consent within:

- **The Economic Statement** (Doc Ref 8.9); and
- The Socio-economic Chapter of the Environmental Statement **(Volume 2, Chapter 9).**

1.2.2 This paper intends to:

- **Summarise and contextualise the overwhelmingly positive economic effects –** for example in terms of labour markets and the supply chain by:

[1] National considerations should be understood to include the national need for the infrastructure as set out in Part 3 of the NPS and the contribution of the infrastructure to the national economy

  - Sign-posting ExA to the relevant sections of the application for development consent that consider the **Project's effects on the local economy if consented;** and
  - Considering the potential consequences for the local economy if the Project were **not to be consented**, including a review of local and regional economic and other planning policy that anticipates and is supportive of growth in the energy sector because of the benefits it will bring (noting that Sizewell C is the largest single component of that); and

- Set out the measures SZC Co and regional and local partners have agreed to **enhance local and regional economic benefits.**

1.3 Definition of "Local Economy"

1.3.1 There is no single definition of "local". For a project of this scale, the impacts will spread over a relatively wide area. The project has estimated its impacts at different administrative and functional spatial scales – local authority areas, the East of England region, the Functional Economic Market Area(s) (FEMA(s)) and a bespoke travel to work area, called the construction daily commuting zone (CDCZ) that covers an area up to 90 minutes travel time from the site.

1.3.2 Sizewell C is critical in delivering on local and regional economic and planning policy objectives. A raft of local and regional economic policy and strategy is predicated on the delivery of Sizewell C – as set out at **Section 4.2** of the **Economic Statement (Book 8.9)** within the application for development consent.

1.3.3 When planning for economic growth, the Government's Planning Practice Guidance (PPG) states that economic needs should be assessed in relation to relevant Functional Economic Market Areas (FEMAs), that is, the spatial level at which local economies and markets actually operate.

1.3.4 In most cases, FEMAs will extend beyond existing administrative boundaries (e.g. district or county areas), but administrative boundaries also provide helpful definitions in terms of data collection for National Statistics, and also provide statutory economic development functions.

1.3.5 Economic data is generally produced across all administrative geographies, though more recent and different datasets are available at a local authority scale. Generally, economic effects are relevant to wider scales as this is the level at which labour markets operate and at which business services, skills provision, and education are planned for.

1.3.6 Alongside administrative boundaries, local and regional economies can be defined by the organisation of business communities (for example, within a Local Enterprise Partnership – which are effectively local definition of FEMAs), or scope of a Destination Management Organisation or Tourist Board). They may also be defined by self-contained commuting areas known as 'Travel to Work Areas' which have a recognised spatial geography published by the Officer for National Statistics.

1.3.7 For a construction labour market, particularly for a project the scale of Sizewell C, the Project's 'local' economic impacts may be defined by the distribution of its workforce across a 'construction daily commuting zone' or CDCZ. For Sizewell C, that area is wider than these administrative or other geographies, covering an area within 90-minutes travel from the Main Development Site extending across the East of England.

1.3.8 Supply chain effects are generally considered at a regional scale – for example at Hinkley Point C, EDF Energy reports to BEIS based on a geography that covers the former Government Office Region of South West England and parts of Wales.

1.3.9 Sector-specific economies may be considered by stakeholders to be smaller – such as the local economy of the Suffolk Coast and Heaths AONB as defined by its 'special qualities'.

1.3.10 As such, definition of a 'local' economy is not straight-forward, and the Project is being brought forward in a location that will impact on several functional sub-regional economies.

1.3.11 The economic context is therefore necessarily split across a number of spatial scales depending on the internal (i.e. project-driven) or external (i.e. policy-driven) factors:

- **East Suffolk (ESC) (district)** – ESC is an administrative body responsible for delivery of economic development and regeneration services at a district scale.
- **Suffolk (county)** – SCC is an administrative body responsible for delivery of economic development services including strategy development (along with NALEP), business support, inward investment and sector development.
- **NALEP Area** – NALEP is an organisation that works with businesses, local authority partners and education institutions to drive growth and enterprise in Norfolk and Suffolk.

- **The East of England** – covering Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk and Suffolk, represents the wider 'local' labour pool and supply chain market.

- **The labour market** – The CDCZ (90 minutes travel time from the site). The CDCZ is defined as the wards within an approximate 90-minute commute time of the main development site. The CDCZ is used primarily to define the local (or "home-based" (HB)) labour market for the construction phase. The definition of the CDCZ involves consideration of a range of factors which affect workers' willingness to commute, including time, distance and travel allowances; plus findings from other studies of the mobility of UK construction workers.

2 LOCAL AND REGIONAL ECONOMIC EFFECTS

2.1 Policy Context

2.1.1 Sizewell C is embedded in local planning policies in adopted Local Plans for East Suffolk Council – as set out in the **Environmental Statement** at Volume 1, Appendix 6E - for example:

- The Suffolk Coastal Core Strategy (2013) states that "the value of the district's economy to the wider national economic objectives will have been realised"; and Strategic Policy SP13 – Nuclear Energy which recognises "the opportunity to maximise the potential benefits, notably in respect of opportunities to achieve renown with its associated economic benefits, e.g. a reputation as a 'centre of nuclear excellence'"

- The East Suffolk Business Plan (2015) notes that "The proposed new Sizewell C nuclear power station is identified as a huge opportunity for growing the East Suffolk economy"

- The East Suffolk Economic Growth Plan (2018) notes that "the energy sector is identified as crucial for East Suffolk, and there are "huge possibilities" surrounding nuclear power, especially in relation to Sizewell C"

2.1.2 Further detail is included at **Section 2.9** below.

2.2 Headline Effects

2.2.1 New nuclear investment is big enough to make a material, positive contribution to local employment and to create a catalyst for change whilst not overwhelming the ability of the dynamic local economy to cope.

2.2.2 The **Economic Statement** (Doc Ref. 8.9) sets out that the construction phase would provide a fixed-term boost to the local economy. At up to twelve years, this would be a sustained and relatively long-term boost – especially in the context of the peripatetic nature of construction projects – and would help to transform the economy and the employment prospects of local residents

2.2.3 The Construction Phase would:

- Support around **2,400 additional local jobs at the peak of construction** activity (for existing residents of the CDCZ, most of which would be within Suffolk) – equivalent to 7% of construction jobs in the CDCZ;
- Result in additional spending of around £260m by non-home based (NHB) workers in the 60-minute area, most of which would be in East Suffolk district, and £60m by HB workers, most of which would be in Suffolk (county);
- Be likely to result in the retention of around £1.5bn in supply chain contracts across the East of England – around 10% of annual construction output (so approx.. 1% over the lifetime of the Project).

2.2.4 The Operational Phase would:

- Support **900 permanent jobs** and an **additional workforce of around 1,000 during planned outages.** This is an increase of 36% in jobs in energy generation in Suffolk.
- Provide a long-term boost to the economy - increasing **GDP by around £225m per year** and supporting jobs with associated **wages of £44.5m per year.**

2.2.5 As set out in the Environmental Statement (Volume 2, Chapter 9, Table 9.52), the Project has been assessed to result in:

- Moderate beneficial effects in terms of home-based recruitment for the labour market of the CDCZ, enhanced through commitments to employment, skills and education (see **Section 3**);
- Moderate/major beneficial effects in terms of recruitment of home-based workers from economic inactivity or unemployment across the CDCZ;
- Moderate beneficial effects on business and supply chain at both a local and regional scale; and

- Moderate beneficial effects on the local and regional economy through wages and spending.

2.2.6 The Environmental Statement also considers the potential for adverse economic effects – for example the effect of changes to transport infrastructure on business, the effects on the agricultural economy, and the effects on the tourist economy. All of these effects (following proposed mitigation) are considered to be negligible.

2.3 Local Construction (and non-construction) Employment

2.3.1 Sizewell C's workforce requirements mean that an average of nearly 4,000 people will be needed to work directly at the Main Development or Associated Development sites in construction and non-construction support and management/professional roles over the construction period. At peak, this figure increases to 7,900.

2.3.2 In total, the construction of the Project will need over 40,000 person-years of employment across its 12-year construction phase. Our estimates suggest that at least 15,000 of those years will be worked by people who are already living in the CDCZ, equivalent to an average of 1,300 people at any point over the construction phase.

2.3.3 SZC Co estimates that the majority (around 75%) of HB recruitment from the CDCZ would be within Suffolk – this means that based on current construction employment levels in the County, the Project could increase the size of the construction industry in Suffolk by 5%.

2.4 Bringing People into the Labour Market

2.4.1 Since the application was submitted unemployment and economic inactivity across Suffolk have risen by substantially (there are around 2,500 more unemployed people in the County compared to the end of 2019). It is difficult to be precise about how many of them will be able to work on the site, but the evidence from SZB and HPC, combined with additional measures being put in place means that a significant number are likely to find work on the SZC Project.

2.4.2 Part of the workforce would be drawn from people currently out of work, through economic inactivity or unemployment. Based on experience from the construction of Sizewell B, around 20% of HB recruitment could be from unemployment or economic inactivity – this equates to around 480 of the peak HB workforce, which represents around 5% of currently unemployed people in Suffolk.

2.4.3 SZC Co aims to enhance local benefits to social mobility by developing a specific fund for outreach activities and a Sizewell C Bursary, which will target deprived areas and people furthest from the labour market – see **Section 3**.

2.4.4 Another part of the workforce will be drawn from existing employment, either moving with existing employers who gain contracts on the Project, or leaving their role to take up another one. Again using Sizewell B experience, this part of the workforce could represent 725 people at the peak – equivalent to 4% of the construction workforce in Suffolk.

2.4.5 This suggests that the increase in employment would be significant, and make a material difference, particularly for those looking for work, but would not be beyond the capacity of the normal turnover in the labour market to cope.

2.4.6 stakeholders have raised concerns that businesses might lose skilled staff to the project and so have vacancies that are harder to fill.

2.4.7 Where there is a risk of churn in some cases making vacancies harder to fill, SZC Co has proposed a range of measures to widen the skilled talent pool available to employers, broker that workforce to relevant employers, improve competency and qualification in the supply chain, and support employers to win work on the project – see **Section 3**.

2.5 Local / Regional Construction Supply Chain

a) Context – Embedding National Sectors Locally

2.5.1 The development of the Sizewell C Project would create supply chain opportunities, building on the model set by the first in a planned fleet of new nuclear power stations in the UK – EDF Energy's Hinkley Point C.

2.5.2 A significant level of long-term economic benefit is expected as a result of the Sizewell C Project, and in the context of the fleet of planned new nuclear power stations in the UK, there is an opportunity to develop a national specialism in civil construction, and nuclear supply chain expertise which might be centred around 'hotspots' of activity where projects like this are developed.

2.5.3 By successfully embedding part of the national construction, engineering and nuclear supply chains (the business and services that receive the majority of the spending from these industries in the UK) in the regional economy, the Sizewell C Project would contribute to enhanced economic growth, promoting long-term joint working between Hinkley Point C and

Sizewell C and positioning the local labour force and businesses as pacesetters in a major growth sector.

b) Likely Local/Regional Benefits

2.5.4 SZC Co notes that there are a number of local and regional firms that may benefit from contracting opportunities. Some contracts/sub-contracts, and particularly smaller packages and non-construction packages (such as professional and design services, business administration, hospitality, catering, security, transportation, and cleaning), would have a much stronger local and regional element.

2.5.5 Estimates for local/regional supply chain value retention for Sizewell C is based on experience at Hinkley Point C, where committed regional spend equates toa round 7% of total spend on the Project.

2.5.6 If replicated at HPC – and the intention is to do so – this could mean £1.5bn of the overall £20bn Project value being retained in the East of England. Construction GVA in the region is around £4.3bn, so the Sizewell C Project alone could contribute 3% of the region's GVA p/a during construction.

c) Views of the wider supply chain

2.5.7 Beyond the scope of the DCO, The Sizewell C Consortium (representing 200+ UK-based companies and organisations with an interest in delivering Sizewell C) have recently (24th March 2021) agreed a Memorandum of Understanding that identifies for the wider supply chain around 35,000 jobs could be created in Suffolk in the supply chain, or through local spending on goods and services.

2.6 Operational Effects

2.6.1 The operational workforce would start to build up gradually from around year five of the construction phase. The operational phase would likely have 700 employees directly employed by SZC Co. and a further 200 as contractors. This would provide a major, long-term boost to the local economy (doubling the number of jobs in energy generation, and leading to a 1% increase in jobs altogether).

2.6.2 When operational, Sizewell C would cause an increase of 36% in jobs within energy generation sector in Suffolk (based on 2018 ONS BRES data which shows there are currently 2,500 jobs in SIC 351: Electric Power Generation, Transmission and Distribution). This would represent a beneficial effect in terms of the policy aspirations of the local authorities,

LEP and the sub-regional economy. This would be a moderate beneficial effect at the local level which would be significant.

2.7 Consideration of Potential Adverse Effects / Other NPS-relevant sectors

a) Tourism

2.7.1 SZC Co recognises the importance of the tourist economy in the area, particularly as a special economic quality for the Suffolk Coast and Heaths AONB. As set out in the Economic Statement (Book 8.9, Section 6) and Environmental Statement (Volume 2, Chapter 9 – from paragraph 9.7.63 to 9.7.96), there is little evidence to suggest that the Project would have a significant adverse effect on the tourist economy of the Suffolk coast.

2.7.2 Of particular importance is evidence from Hinkley Point C, where (potentially) as a result of a Tourism Fund, predicted adverse effects (as predicted by the Project's opponents) have not occurred. The industry has reacted positively, and data collected by SEAG has shown that business confidence and visitor perception has improved during this period. This is backed up by public datasets on spend and visitor numbers, which have also grown (and grown relative to the national rate of growth).

2.7.3 Stakeholders have raised concerns that the project could have adverse effects on one of the most important economic sectors. Research for SZC Co which is included in the ES identifies that potential visitors with the least information about SZC are most likely to be concerned about its impacts on their visit. SZC Co has therefore proposed a Tourism Fund within the S106 in order for local stakeholders to invest in promotional, marketing and other initiative and projects that would enhance the visitor draw and reduce the potential for negative perceptions of the Project to influence visitor behaviour.

2.7.4 Additionally, the Project may in fact have a substantial gross beneficial economic effect in terms of it's workforce's use of local tourist accommodation in off-peak periods, and SZC Co note that the potential for displacement or loss of spending where workers occupy tourist accommodation (instead of tourists) is negligible.

b) Agriculture

2.7.5 As set out in the **Environmental Statement** (Volume 2, Chapter 9 – from paragraph 9.7.97 to 9.7.103), any economic effects on agricultural output would be very localised, and insignificant in the context of Suffolk's agricultural economy (with agricultural land permanently removed by the

Project representing 0.04% of the 330,000ha of productive agricultural land in the county.

2.7.6 As a proportion of the total employment in the agricultural sector in Suffolk, this would equate to an average loss of around 4 jobs in this sector based on average jobs per hectare in the sector in Suffolk.

2.8 Special (Economic) Quantities of the AONB

2.8.1 Working in partnership, SZC Co, as part of the preparatory work for the proposed Sizewell C, in consultation and agreement with the AONB Partnership, District Council and County Council produced a document setting out the Natural Beauty and Special Qualities of the Suffolk Coast and Heaths AONB[2] .

2.8.2 In terms of the area's special qualities, it states that "landscape, community and economy are closely intertwined", and in-particular that:

"*The landscape is an important contributor to the local economy. The coast in particular is a major tourist destination. Other notable contributors to the local economy are recreational sailing (with associated boatyards and moorings), farming, energy generation at Sizewell and attractions/events in and close to the AONB such as Minsmere RSPB Reserve, Snape Maltings, Latitude Festival and Aldeburgh Festival".*

2.8.3 It also states that there is:

"Evidence of clearly defined 'brand' that is underpinned by the local landscape"

2.8.4 And that an indicator of special qualities for the AONB is:

Active promotion of the Suffolk Coast as a tourist destination founded on the special qualities of the area and more specifically as part of branding associated with local products (e.g. Adnams) and the 'energy coast'

2.8.5 SZC Co has been cognisant of the special economic qualities of the AONB in developing its plans for the Project – SZC Co has considered this in the ES impact assessment, and notwithstanding the sensitivities identified, the AONB Partnership also recognises the importance of the Sizewell campus and the wider Energy Coast.

[2] https://www.eastsuffolk.gov.uk/assets/Planning/Adastral-Park/Environmental-Statement-Volume-2b-appendices/Appendix-H6-Suffolk-Coast-and-Heaths-AONB-Natural-Beauty-and-Special-Qualities-Indicators-November-2016.pdf

2.8.6 It is clear that the AONB Partnership recognises that Sizewell's energy generation is a notable contributor to the local economy and the 'energy coast' is part of the branding of the area, but that this needs to retain balance with the other key contributors – coastal tourism, recreation and attractions and events including RSPB Minsmere.

2.8.7 In order to promote and contribute towards the maintenance of these special economic characteristics of the AONB, SC Co has:

- Undertaken a detailed evaluation of the **tourist economy** and potential risks that the Project might pose to the perception of visitors and brand of the area – this has identified that significant effects are unlikely, but in order to Address the risk of low-information visitors being deterred from visiting, a **Tourism Fund** is proposed as part of the S106, managed and implemented by regional stakeholders, is an effective way of reducing risk and providing resilience to the tourist economy.

  SZC recognises that its environmental legacy will be important in supporting a balanced AONB economy, especially with tourism in mind – and as such has developed a **wide range of mitigation for LVIA, ecological, marine environment, transport, recreation/amenity and socio-economic/community effects** in order to preserve the physical and economic aspects of the AONB while still delivering the nationally significant benefits of new nuclear.

- Assessed the likely significant effects on the area's **agricultural economy** – concluding that permanent, long-term effects would be insignificant in the scale of the wider economy, but that where individual landholdings are affected, compensation will be provided.

- Proposed within the S. 106 Agreement a resilience **fund for RSPB Minsmere**, alongside other environmental mitigation, which will deliver practical measures to promote the socio-economic status of the reserve (which the AONB recognises is closely linked to the tourist economy and the natural environment).

- Proposed a range of initiatives within the S. 106 Agreement that **promote the wider 'energy coast' aspirations** of the region, in a sustainable way that underpins the economic stability of the low-carbon sector on the Suffolk coast through supply chain, employment, skills and training activities.

2.9 Impact of Not Consenting

a) Loss of benefits

2.9.1 As set out above, without the scheme, the local economy would not benefit from:

- **2,400 additional local jobs at the peak of construction** activity (for existing residents of the CDCZ, most of which would be within Suffolk) – equivalent to 7% of construction jobs in the CDCZ;
- **Additional spending** of around **£260m by non-home based (NHB) workers** in the 60-minute area, most of which would be in East Suffolk district, and **£60m by HB workers**, most of which would be in Suffolk (county);
- The **retention of around £1.5bn in supply chain contracts** across the East of England – around 10% of annual construction output (so approx.. 1% over the lifetime of the Project).
- **900 permanent jobs** and an **additional workforce of around 1,000 during planned outages.** This is an increase of 36% in jobs in energy generation in Suffolk.
- A long-term boost to the economy - increasing **GDP by around £225m per year** and supporting jobs with associated **wages of £44.5m per year**.

b) Failure to Deliver Local / Regional Policy

2.9.2 economic priorities and can contribute to addressing local needs and boosting the local economy. The planning system is expected to facilitate such developments, and work with LEPs, businesses and other local partners to ensure their delivery.

2.9.3 Sizewell C is critical in delivering on local and regional economic and planning policy objectives. A raft of local and regional economic policy and strategy is predicated on the delivery of Sizewell C – as set out at Section 4.2 of the Economic Statement (Book 8.9) within the application for development consent – for example:

- **NALEP's Local Industrial Strategy** (NALEP, 2019) recognises the importance of the low carbon energy sector in general, and the Sizewell C Project in particular, to the future economic success of the area. Sizewell C would have an important role to play not only in the clean

energy sector but also in a number of the underpinning sectors within the strategy such as manufacturing and construction. Sizewell C is considered a key component in tackling low productivity and wages and supporting businesses to increase their competency.

- The **Norfolk and Suffolk Economic Strategy** (NALEP, 2017) highlights the Energy Coast, including Sizewell, as one of six major growth locations in the region. It sets out that the Energy Coast will contribute to a significant level of employment across construction with an emerging specialism in modern construction and sustainable design, as well as being a significant contributor to the national economy.

- The aim is to be a centre for the UK's clean energy sector, emphasising the importance of nuclear power and with a high level ambition of linking investment in skills more closely with communities and businesses to provide more opportunities for residents, capitalising on the region's supply chain, strategic location, skills base and connectivity to other regions in order to drive up GVA.

- The **Suffolk Growth Strategy** (SCC, 2013) defines the SCC's ambitions to strengthen the Suffolk economy: to create more, higher value, better-paying jobs, and more wealth. This will be achieved by building on the area's distinctive competitive economic and environmental advantages and driving green economic growth.

- Energy is identified as a key growth sector, and the strategy highlights the substantial employment opportunities associated with the Sizewell C Project. The plan identifies growth opportunities driven by the Sizewell C Project, including temporary construction employment opportunities, permanent employment opportunities once the Sizewell C Project is operational, and opportunities for associated economic activity including in research and development.

2.9.4 Sizewell C is embedded in local planning policies in adopted Local Plans for East Suffolk Council – as set out in the Environmental Statement at Volume 1, Appendix 6E - for example:

- The Suffolk Coastal Core Strategy (2013) states that "*the value of the district's economy to the wider national economic objectives will have been realised"; and Strategic Policy SP13 – Nuclear Energy which recognises "the opportunity to maximise the potential benefits, notably in respect of opportunities to achieve renown with its associated economic benefits, e.g. a reputation as a 'centre of nuclear excellence*'"

- The East Suffolk Business Plan (2015) notes that "*The proposed new Sizewell C nuclear power station is identified as a huge opportunity for growing the East Suffolk economy*"

- The East Suffolk Economic Growth Plan (2018) notes that "*the energy sector is identified as crucial for East Suffolk, and there are "huge possibilities" surrounding nuclear power, especially in relation to Sizewell C"*

c) Supporting "Energy Coast" Objectives

2.9.5 Sizewell C is a key component of the wider regional objectives and and is by far the largest single opportunity for the 'Energy Coast' in Suffolk and Norfolk which also includes substantial offshore wind infrastructure.

2.9.6 Sizewell C would also partner with the newly announced 'freeport' of Felixstowe and Harwich, to create a hydrogen hub.

2.9.7 The region has already invested heavily through the LEP's Energy Hub and strategies (above) to deliver the skills infrastructure that can deliver the Energy Coast objectives, which rely heavily on Sizewell C as a catalyst (for example, new Energy Innovation Centre at East Suffolk College in Lowestoft and West Suffolk College Energy Skills Centre.

3 MAXIMISING / ENHANCING LOCAL BENEFITS

3.1 Outreach Fund and Sizewell C Bursary

3.1.1 The **Economic Statement** (Doc Ref 8.9) presents the economic benefits of the Sizewell C Project, and also the outline measures that will be secured through a S. 106 Agreement to promote and enhance those benefits in the local economy.

3.1.2 By enacting the detailed measures set out in the **Employment, Skills and Education Strategy** (Annex A to the **Economic Statement**) and **Supply Chain Strategy** (Annex B to the **Economic Statement**), the Project has demonstrated its commitment to:

- Delivering a workforce to safely and efficiently deliver the NSIP;

- Focus activities on supporting the skills needed for both the Project and the wider region, including legacy skills identified by Suffolk County Council's Technical Skills Legacy Study (2019); and

- Focus on locations and communities where employment, skills and education initiatives will have the greatest social mobility benefits.

3.1.3 SZC Co intends to provide the regional and local skills infrastructure and stakeholders with as much information about the Project as practicable in order for those stakeholders to direct funding and measures towards effective outcomes. Each year, a group including SZC Co, District and County Councils, NALEP and the Chamber of Commerce will approve a new set of objectives in order to deliver the commitments listed above.

3.1.4 The following paragraphs summarise how the measures identified would promote and secure local economic benefits for the Project.

3.2 Outreach Fund and Sizewell C Bursary

3.2.1 SZC Co recognise the importance of seeking to improve social mobility by removing barriers to the labour market, and proposes to release an annual Outreach Fund intended to support the delivery of measures/programmes that increase the pool of "Work Ready" individuals within the region's talent pool and to deliver social value, bridging the gap to the labour market, and increasing the supply of people ready to access "Job Ready" programmes and subsequently gain access to the skilled positions being created by the region, of which the Sizewell C Project is part.

3.2.2 Sizewell C Employment Outreach Initiatives will focus on hard-to-reach groups and communities experiencing relative deprivation, delivering social value, and to increase diversity in the workforce, and will be determined collaboratively in relation to existing skills and training infrastructure and outreach programmes and partnership working with successful 3rd Sector organisations, such as Inspire Suffolk.

3.2.3 This will work alongside a bursary scheme aimed at supporting the removal of barriers for employment pathways into the Project for local students, particularly in areas of relative deprivation, that haven't reached the required entry level requirements.

3.3 Commitment to Regional Skills Coordination

3.3.1 SZC Co recognise the importance of linking the Project with the wider set of infrastructure projects in order to create a long-term lasting legacy of skills and sustainable employment for the region. To that end, SZC Co will provide annual funding during the Sizewell C construction period as a contribution towards a regional skills co-ordination function embedded within Suffolk County Council. This would 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.

3.3.2 Activities under this definition include developing initiatives to help ensure a sufficient supply of skills and capabilities are available at the right time to enable the growth of the energy industry in Suffolk and look to promote the creation of inclusive growth by working to ensure the right provision and opportunities are made available to the residents of Suffolk; and providing links and co-ordination between Sizewell C, skills/training providers and wider regional stakeholders.

3.3.3 The key purpose for this function is to enable a single pivot point linking the Sizewell C Project and its contractors with regional skills and training providers, in order to avoid duplication of activates, and provide transparency, organisation and simplification.

3.3.4 The functions may change over time depending on e.g. economic cycle, project delivery, skills infrastructure needs and local, regional and national policy - as such, the contribution should be consistent but its application flexible and determined annually which will prioritise and focus the activities related to Sizewell C for the function

3.3.5 In order to inform this function, SZC Co and its main contractors will regularly produce and update Workforce Delivery Strategies for each phase of works, and this will include a detailed Skills Prospectus for use by the region in wider skills planning.

3.3.6 The Skills Prospectus will provide information for:

- People in education and likely to seek entry to the workforce in roles linked to the Project (and wider regionally important skillsets and legacy roles);
- People who are 'work ready' but not 'job ready' - to demonstrate the pathways to employment and opportunities for upskilling and support outreach activities;
- People who are 'job ready' who need support to enter the Project or other regionally significant opportunities (e.g. via the Jobs Service);
- Training providers, education institutions (including schools benefitting from the SZC CO Education Programme) and regional skills and employment services - to support them to access S. 106 funding relevant to their activities where outcomes would support the Sizewell C Project's skill demand and regional legacy skills; and

- Businesses and employers seeking to gain skills, accreditations and support to retain employees and win work on the Project.

3.4 Asset Skills Enhancement and Capability (ASEC) Funding

3.4.1 SZC Co will provide funding that will help to enhance the existing skills infrastructure in the local economy - funding initiatives to enhance the supply of skills related to the Sizewell C Project and regional needs and aspirations, by investing in skills and training provision (such as apprenticeships) within the region's existing further education, training provider and higher education sectors.

3.4.2 This will include revenue projects like curriculum development, development and retention of specialist trainers, and working capital projects such as equipment to deliver courses, re-fit for existing facilities as required to meet the needs of the workforce at each phase of the Sizewell C Project.

3.4.3 The aim of ASEC initiatives is to generate local provision to satisfy joint ambitions of the Region, and to deliver the requirements of each phase of the Project, and effectively support the programmes to make the "Work Ready" individuals supported by the Sizewell C Employment Outreach Fund "Job Ready".

3.4.4 In using the ASEC Fund, SZC Co require that the funding is used to leverage match-funding for the region, and can be applied to existing capital facilities and resources for the wider infrastructure sector in the region.

3.5 Supply Chain Measures

3.5.1 A suite of supply chain engagement measures is set out in the Supply Chain Strategy appended to the Economic Statement, including the sharing of information, support with procurement and outreach activities that will prioritise local and regional firms for contracts available on the Project.

3.5.2 SZC Co will also provide a programme of support for skills, qualifications and competency enhancement for businesses with the potential to be in the regional/local supply chain for the Sizewell C Project (and where there is common demand, other regional infrastructure projects). This includes activities for local supply chain improvement through up-skilling the workforce of local companies and businesses (initially focussed on Supervision, Quality and Management), and engagement with prospective suppliers to support them to win work on the Sizewell C Project, including

by helping them to focus on the skills they need e.g. apprenticeship and training requirements, and helping them prepare for recruitment creation once they are part of the supply chain.

3.5.3 This includes engaging appointed suppliers with project infrastructure such as the Jobs Service, and supporting them to leverage other regional resources available to improve skills relevant to the supply chain, through pre-employment training and brokerage to apprenticeship programmes.

3.6 Apprenticeships and Transition from Education to Employment

3.6.1 SZC Co will develop an Apprenticeship Strategy for each phase of the construction programme, with the objective of promoting and clearly communicating the scale of opportunity, and the activities that contractors will undertake to maximise opportunities within SZC Co's overall estimates of the scale of opportunity to local people and providers, and encourage and support local providers to deliver as many of those apprenticeships as practicable, and local people to access them.

3.6.2 SZC Co will also roll out Young Sizewell C - a service provided by SZC Co including a suite of measures to support the creation of clearer pathways into jobs, building on and enhancing existing measures in the region. The Young Sizewell C Programme (for those aged 16-21) will essentially be the bridge between education and the workforce for those that opt in, and help to progress and motivate those that are interested. This will:

- Help people understand size and scale of opportunity - creating a pipeline into the Project or to backfill other positions.
- Provide young people with the first opportunity to see and access apprenticeships on the Sizewell C Project.
- Provide links to the supply chain through work experience, advice and information.
- Work with a regional development team and cross-cut different existing platforms such as DWP, JCP, Councils and Education sector representatives.
- Be relevant to the region and its skills needs and programmes - for example using integrated platforms like ICanBeA.
- Generate Labour Market Information and intelligence in order to capture those most at risk of NEET.

3.7 Brokering Employment

3.7.1 Sizewell C will seek to replicate the success of Hinkley Point C's Jobs Brokerage Service. established and run by SZC Co during the Construction Period that builds, maintains and manages a talent pool of local people to drive local employment for the Sizewell C Project. While operating for the Sizewell C Project it will also be made available to other related regional projects and employers. The Sizewell C Jobs Service will:

- Primarily aim to deliver employment (via a talent pool of relevant skills) needed for the Sizewell C Project and to provide re-brokerage within the Project and its supply chain to reduce churn and promote sustainable careers.
- Be capable of being accessed by local businesses that may be part of the Sizewell C supply chain or offer goods/services needed for the Project and wider regional infrastructure, where re-brokerage may be beneficial for backfilling where there is a risk of increased labour market churn making some vacancies harder to fill in existing firms.
- Be intrinsically linked to activities already in place, and in-place in the future (via the Sizewell C Project, wider EDF Energy activities and regional projects/activities where appropriate) including Young Sizewell C for school-leavers and the HPC-SZC Conveyor.
- Offer vacancies created by the Sizewell C supply chain, including apprenticeships.
- Generate LMI for the purposes of Project and Regional analytical benefit, and to support the effective implementation of other measures.

APPENDIX 2B RESPONSE TO EXAMINING AUTHORITY'S QUESTION G.1.57

HERBERT SMITH FREEHILLS

Sizewell C Project

Response to Examining Authority's Question G1.57

Introduction

1. This [note] responds to question G1.57, which asked as follows:

> **"G1.57 Legislation**
>
> Section 3 of the Planning Statement [APP-590] entitled Legislative and Policy Context after a description of policy and some parts of the Planning Act 2008, then, in a paragraph entitled "Other legislative requirements", refers the reader to the Legislation and policy context sections of the ES at Chapter 1 of each volume for the relevant law, and to the Schedule of Other Licences, Consents and Agreements [APP-153]. In fact the ExA has found the lists near the opening of the chapters of the volumes, for example in section 7.2 of the main site terrestrial ecology chapter [APP-461]. They in turn refer the reader to Volume 1 Appendix 6 [APP-171].
>
> Whilst this is helpful to a point, the documentation does not spell out how the legislation applies and the steps the Secretary of State and the ExA are expected to take. For example, the ExA has been unable to find any reference to ss.28G and 28I of the Wildlife and Countryside Act 1981 and the duties they contain. In contrast, there is a mention of the approach to ss.40 and 41 of the Natural Environment and Rural Communities Act 2006, though the relevant parts of the Convention on Biodiversity 1992 are not referred to. Nor does, for example, Appendix 6J state how the various international conventions and treaties

have been incorporated into the laws of England and Wales. Appendix 6R, whilst it refers to the Marine and Coastal Access Act 2009, does not deal with the duties under ss.125 and 126.

Returning to the topic chapters of the ES, having once listed the legislation they do not refer to it again.

Please will the Applicant prepare a statement of the legislation and international obligations which apply, explaining the actions and steps which the ExA and SoS should take to comply with them."

2. The table below identifies only legislation that imposes a substantive duty or obligation on the decision maker in determining the application. The table does not identify legislation or international obligations that do not contain obligations that are directly applicable to the Examining Authority and/or the Secretary of State, nor does it contain provisions that impose procedural obligations only or those which are referred to in the Environmental Statement ('ES') because compliance with such forms part of the tertiary mitigation.

3. Those legislative provisions of specific relevance to each ES chapter are referred to in the specific chapters.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
Marine and Coastal Access Act 2009	General duty in relation to marine conservation zones. **125 General duties of public authorities in relation to MCZs** (1) This section applies to any public authority having any function the exercise of which is capable of affecting (other than insignificantly)— (a) the protected features of an MCZ; (b) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependent. (2) Every public authority to which this section applies must (so far as is consistent with their proper exercise)— (a) exercise its functions in the manner which the authority considers best furthers the conservation objectives stated for the MCZ; (b) where it is not possible to exercise its functions in a manner which furthers those objectives, exercise them in the manner which the authority considers least hinders the achievement of those objectives. (3) If a public authority considers that any of its functions is such that the exercise of the function would or might significantly hinder the achievement of the conservation objectives for an MCZ, it must inform the appropriate statutory conservation body of that fact.	Exercise functions in a manner which best furthers - or where that is not possible, least hinders - the conservation objectives for MCZs in accordance with section 125. Comply with obligations to inform the appropriate statutory nature conservation body ('SNCB') and have regard to its advice, where relevant.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(4) Subject to subsection (6), subsection (5) applies in any case where a public authority intends to do an act which is capable of affecting (other than insignificantly)— (a) the protected features of an MCZ; (b) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependent. (5) If the authority believes that there is or may be a significant risk of the act hindering the achievement of the conservation objectives stated for the MCZ, the authority must notify the appropriate statutory conservation body of that fact. (6) Subsection (5) does not apply where— (a) the appropriate statutory conservation body has given the authority advice or guidance under section 127 in relation to acts of a particular description, (b) the act which the authority intends to do is an act of that description, and (c) the advice or guidance has not ceased to apply. (7) Where the authority has given notification under subsection (5), it must wait until the expiry of the period of 28 days beginning with the date of the notification before deciding whether to do the act. (8) Subsection (7) does not apply where—	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(a) the appropriate statutory conservation body notifies the authority that it need not wait until the end of the period referred to in that subsection, or (b) the authority thinks that there is an urgent need to do the act. (9) If a public authority considers that a relevant event has occurred, it must inform— (a) the relevant authority, and (b) the appropriate statutory conservation body, of that fact. (10) A "relevant event" is any act— (a) in relation to which the public authority exercises functions, (b) which the authority believes to be an offence, and (c) which the authority considers will or may significantly hinder the achievement of the conservation objectives for an MCZ. (11) For the purposes of subsection (9) "relevant authority" means— … (c) in relation to any other MCZ, the MMO. (12) In carrying out its duties under this section a public authority must have regard to any advice or guidance given by the appropriate statutory conservation body under section 127. (13) In this section— "act" includes omission;	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	"public authority" does not include a Northern Ireland Minister or Northern Ireland department.	
Marine and Coastal Access Act 2009	Duty in respect of certain decisions, including determination of an application for development consent. **126 Duties of public authorities in relation to certain decisions** (1) This section applies where— (a) a public authority has the function of determining an application (whenever made) for authorisation of the doing of an act, and (b) the act is capable of affecting (other than insignificantly)— (i) the protected features of an MCZ; (ii) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependent. (2) If the authority believes that there is or may be a significant risk of the act hindering the achievement of the conservation objectives stated for the MCZ, the authority must notify the appropriate statutory conservation body of that fact. (3) Where the authority has given notification under subsection (2), it must wait until the expiry of the period of 28 days beginning with the date of the notification before deciding whether to grant authorisation for the doing of the act. (4) Subsection (3) does not apply where—	Where relevant, comply with the obligations to inform the SNCB of a significant risk of an act hindering an MCZ's conservation objective in accordance with section 126, and have regard to their advice. Not grant development consent unless satisfied that the condition in either subsection (6) or (7) is met.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(a) the appropriate statutory conservation body notifies the authority that it need not wait until the end of the period referred to in that subsection, or (b) the authority thinks that there is an urgent need to grant authorisation for the doing of the act. (5) The authority must not grant authorisation for the doing of the act unless the condition in subsection (6) or the condition in subsection (7) is met. (6) The condition in this subsection is that the person seeking the authorisation satisfies the authority that there is no significant risk of the act hindering the achievement of the conservation objectives stated for the MCZ. (7) The condition in this subsection is that, although the person seeking the authorisation is not able to satisfy the authority that there is no significant risk of the act hindering the achievement of the conservation objectives stated for the MCZ, that person satisfies the authority that— (a) there is no other means of proceeding with the act which would create a substantially lower risk of hindering the achievement of those objectives, (b) the benefit to the public of proceeding with the act clearly outweighs the risk of damage to the environment that will be created by proceeding with it, and (c) the person seeking the authorisation will undertake, or make arrangements for the undertaking of, measures of equivalent environmental	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	benefit to the damage which the act will or is likely to have in or on the MCZ. (8) The reference in subsection (7)(a) to other means of proceeding with an act includes a reference to proceeding with it— (a) in another manner, or (b) at another location. (9) In a case falling within subsection (7), the authority must, if it has power to grant the authorisation subject to conditions, exercise that power so as to make it a condition of the authorisation that the measures mentioned in subsection (7)(c) are undertaken. (10) In carrying out its duties under this section a public authority must have regard to any advice or guidance given by the appropriate statutory conservation body under section 127. (11) In this section— "act" includes omission; "authorisation" means any approval, confirmation, consent, licence, permission or other authorisation (however described), whether special or general; "damage" includes the prevention of an improvement; "public authority" does not include a Northern Ireland Minister or Northern Ireland department.	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
Infrastructure Planning (Environmental Impact Assessment) Regulations 2017	Duty to have regard to environmental information in deciding whether to grant development consent. **21 Consideration of whether development consent should be granted** (1) When deciding whether to make an order granting development consent for EIA development the Secretary of State must— (a) examine the environmental information; (b) reach a reasoned conclusion on the significant effects of the proposed development on the environment, taking into account the examination referred to in sub-paragraph (a) and, where appropriate, any supplementary examination considered necessary; (c) integrate that conclusion into the decision as to whether an order is to be granted; and (d) if an order is to be made, consider whether it is appropriate to impose monitoring measures. (2) The reasoned conclusion referred to in paragraph (1)(b) must be up to date at the time that the decision as to whether the order is to be granted is taken, and that conclusion shall be taken to be up to date if in the opinion of the Secretary of State it addresses the significant effects of the proposed development on the environment that are likely to arise as a result of the development described in the application. (3) When considering whether to impose a monitoring measure under paragraph (1)(d), the Secretary of State must—	In deciding whether to grant development consent, the Secretary of State must examine the environmental information and reach a reasoned conclusion on the significant effects of the proposed development on the environment and integrate that conclusion into the decision determining the application. Consider whether to impose monitoring measures.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(a) if monitoring is considered to be appropriate, consider whether to make provision for potential remedial action; (b) take steps to ensure that the type of parameters to be monitored and the duration of the monitoring are proportionate to the nature, location and size of the proposed development and the significance of its effects on the environment; and (c) consider, in order to avoid duplication of monitoring, whether any existing monitoring arrangements carried out in accordance with an obligation under the law of any part of the United Kingdom, other than under any law that implemented the Directive, are more appropriate than imposing a monitoring measure.	
Marine Works (Environmental Impact Assessment) Regulations 2007	Duty to have regard to environmental information in deciding whether to grant development consent. **21A Conclusion about environmental impact** (1) The appropriate authority must consider (ensuring that in doing so it has or has access to any expertise it considers necessary)— (a) the environmental statement; (b) any further information provided by the applicant pursuant to a notification under regulation 14(1); (c) the outcome of the process set out in Schedule 5 in relation to any representations received pursuant to the statement referred to in regulation 16(2)(g);	In deciding whether to grant EIA consent in respect of a regulated activity (as defined in regulation 2), the Secretary of State must consider the information listed in subsection (1) and reach a conclusion about the likely significant effects of the proposed development on the environment. The Secretary of State must have regard to the items listed in section 22(1) including the conclusion

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(d) any representations in response to consultation made by the consultation bodies pursuant to the letter referred to in regulation 17(1)(a)(iv); (e) the outcome of any consultation of the authorities of EEA States carried out in accordance with regulation 20; and (f) any features of the project in relation to the regulated activity being carried out, or measures which the applicant proposes to take, which would have the effect of avoiding, preventing, reducing or offsetting any likely significant adverse environmental effects of the regulated activity. (2) Following the consideration required by paragraph (1), the appropriate authority must reach a conclusion about the likely significant effects of the project (including the expected effects deriving from the vulnerability of the project to risks of major accidents or disasters) on— (a) population and human health; (b) biodiversity, with particular attention to species and habitats protected under any law of any part of the United Kingdom that implemented the Habitats Directive and the Wild Birds Directive; (c) land, soil, water, air and climate; (d) material assets, cultural heritage and the landscape; and (e) the interaction between the factors referred to in sub-paragraphs (a) to (d). **22 The EIA consent decision**	reached under section 21A in determining the application. Consider whether to impose monitoring measures.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(1) In reaching its EIA consent decision, the appropriate authority must have regard to the relevant legislation and must consider— (a) the application; (b) its conclusion under regulation 21A(2) (including whether the conclusion is up to date); (c) whether monitoring of the significant adverse environmental effects of the regulated activity is appropriate and, if so— (i) whether (in order to avoid duplication) existing monitoring arrangements in accordance with an obligation under the law of any part of the United Kingdom can be relied on; and (ii) whether conditions need to be attached to the regulatory approval; (d) if monitoring is considered to be appropriate, whether conditions need to be attached to the regulatory approval to make provision for potential remedial action; and (e) whether any other conditions need to be attached to the regulatory approval with respect to the likely significant effects of the project. (2) The appropriate authority must not, following its consideration under regulation paragraph (1)(c), attach conditions to a regulatory approval in respect of a regulated activity unless it is satisfied that the type of parameters to be monitored and the duration of monitoring are proportionate to the nature, location and size of the regulated activity and the significance of its effect on the environment. (3) The appropriate authority must not make a decision under paragraphs (1) and (2) unless it is satisfied that any conclusion under regulation 21A(2)	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	in respect of the regulated activity is up to date (and a conclusion is taken to be up to date if, in the opinion of the appropriate authority, it addresses the likely significant environmental effects of the project). (4) Taking into account the nature and complexity of the application and the regulated activity, the appropriate authority must reach its EIA consent decision within a reasonable period of time beginning with the date on which it is given all the information it is required to consider under regulation 21A(1).	
Equality Act 2010	Public sector equality duty. **149 Public sector equality duty** (1) A public authority must, in the exercise of its functions, have due regard to the need to— (a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act; (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it; (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it. Relevant characteristics are defined in subsection (7).	In exercising functions, the Examining Authority and Secretary of State must have due regard to the statutory objectives referred to in section 149. This includes reaching a conclusion on whether the potential impacts of the proposal are likely to result in any significant differential impacts on any of the protected characteristics referred to in section 149.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
Countryside and Rights of Way Act 2000	General duty on public authorities exercising functions so as to effect land in an area of outstanding natural beauty. **85 General duty of public bodies etc.** (1) In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty, a relevant authority shall have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty. (2) The following are relevant authorities for the purposes of this section— (a) any Minister of the Crown, (b) any public body …	The Examining Authority and the Secretary of State must have regard, in discharging its function, to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty.
Wildlife and Countryside Act 1981	General duty in respect of SSSIs. **28G Statutory undertakers, etc.: general duty.** (1) An authority to which this section applies (referred to in this section and in sections 28H and 28I as "a section 28G authority") shall have the duty set out in subsection (2) in exercising its functions so far as their exercise is likely to affect the flora, fauna or geological or physiographical features by reason of which a site of special scientific interest is of special interest. (2) The duty is to take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and	Examining Authority and Secretary of State (as section 28G authorities) must apply the duty in section 28G(2). Before determining the application for development consent, the steps in section 28I must be followed.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest. (3) The following are section 28G authorities— (a) a Minister of the Crown (within the meaning of the Ministers of the Crown Act 1975) or a Government department; (b) the National Assembly for Wales; (c) a local authority; (d) a person holding an office— (i) under the Crown, (ii) created or continued in existence by a public general Act of Parliament, or (iii) the remuneration in respect of which is paid out of money provided by Parliament; (e) a statutory undertaker; and (f) any other public body of any description. … **28I.— Statutory undertakers, etc.: duty in relation to authorising operations.** (1) This section applies where the permission of a section 28G authority is needed before operations may be carried out. (2) Before permitting the carrying out of operations likely to damage any of the flora, fauna or geological or physiographical features by reason of	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	which a site of special scientific interest is of special interest, a section 28G authority shall give notice of the proposed operations to Natural England. (3) Subsection (2) applies even if the operations would not take place on land included in a site of special scientific interest. (4) The authority shall wait until the expiry of the period of 28 days beginning with the date of the notice under subsection (2) before deciding whether to give its permission, unless Natural England have notified the authority that it need not wait until then. (5) The authority shall take any advice received from Natural England into account— (a) in deciding whether or not to permit the proposed operations, and (b) if it does decide to do so, in deciding what (if any) conditions are to be attached to the permission. (6) If Natural England advise against permitting the operations, or advise that certain conditions should be attached, but the section 28G authority does not follow that advice, the authority— (a) shall give notice of the permission, and of its terms, to Natural England, the notice to include a statement of how (if at all) the authority has taken account of Natural England's advice, and (b) shall not grant a permission which would allow the operations to start before the end of the period of 21 days beginning with the date of that notice.	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(7) In this section "permission" , in relation to any operations, includes authorisation, consent, and any other type of permission (and "permit" and "permitting" are to be construed accordingly).	
Conservation of Habitats and Species Regulations 2017	Duty to secure compliance with the Habitats Directive and the new Wild Birds Directive. **9.— Duties relating to compliance with the Directives** (1) The appropriate authority, the nature conservation bodies and, in relation to the marine area, a competent authority must exercise their functions which are relevant to nature conservation, including marine conservation, so as to secure compliance with the requirements of the Directives. (2) Paragraph (1) applies, in particular, to functions under these Regulations and functions under the following enactments— (a) the Dockyard Ports Regulation Act 1865; (b) section 2(2) of the Military Lands Act 1900 (provision as to byelaws relating to the sea, tidal water or shore); (c) Part 3 of the 1949 Act (nature conservation); (d) the Harbours Act 1964; (e) section 15 of the Countryside Act 1968 (areas of special scientific interest); (f) Part 2 of the Control of Pollution Act 1974 (pollution of water);	The Secretary of State must have regard to, and exercise its functions so as to secure compliance with, the requirements of the Habitats and Wild Birds Directives.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(g) Part 1 (wildlife) and sections 28 to 28S and 31 to 35A of the WCA 1981 (which relate to sites of special scientific interest); (h) the Water Resources Act 1991; (i) the Land Drainage Act 1991; (j) the Sea Fisheries Acts within the meaning of section 1 of the Sea Fisheries (Wildlife Conservation) Act 1992 (conservation in the exercise of sea fisheries functions); (k) the Natural Environment and Rural Communities Act 2006; (l) the Planning Act 2008; (m) the Marine Act, in particular any functions under Parts 3, 4, 5 and 6 of that Act (marine planning, marine licensing, nature conservation and management of inshore fisheries, respectively); and (n) the Natural Resources Body for Wales (Establishment) Order 2012, where the functions are exercised for purposes related to nature conservation. (3) Without prejudice to the preceding provisions, a competent authority, in exercising any of its functions, must have regard to the requirements of the Directives so far as they may be affected by the exercise of those functions. (4) … (4A) In complying with their duties under paragraphs (1) and (3), the nature conservation body and a competent authority must have regard to any guidance issued under regulation 3A(4)—	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(a) by the Secretary of State, in relation to England; or (b) by the Welsh Ministers, in relation to Wales. (5) In paragraph (1), "marine area" includes— (a) the Northern Ireland inshore region; and (b) the Scottish inshore region.	
Conservation of Habitats and Species Regulations 2017	Duty to take steps to secure compliance with the objective of preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds. **10.— Duties in relation to wild bird habitat** (1) Without prejudice to regulation 9(1), the appropriate authority, the nature conservation bodies and, in relation to the marine area, a competent authority must take such steps in the exercise of their functions as they consider appropriate to secure the objective in paragraph (3), so far as lies within their powers. (2) Except in relation to the marine area, the Environment Agency, the Forestry Commissioners1, local authorities, the Broads Authority and National Park authorities must take such steps in the exercise of their functions as they consider appropriate to contribute to the achievement of the objective in paragraph (3). (3) The objective is the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of	The Secretary of State must take steps in the exercise of functions to secure the objective in subsection (3).

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	such habitat, as appropriate, having regard to the requirements of Article 2 of the new Wild Birds Directive (measures to maintain the population of bird species). (4) Paragraph (1) applies, in particular, to— (a) functions under these Regulations; (b) functions under the following enactments— (i) sections 17, 18, 20 and 21(6) of the 1949 Act (nature reserves); (ii) section 7 of the Natural Environment and Rural Communities Act 2006 (management agreements); (iii) Parts 3, 4, 5 and 6 of the Marine Act (marine planning, marine licensing, nature conservation and management of inshore fisheries, respectively); (c) any function exercisable in relation to town and country planning. (5) Paragraph (2) applies, in particular, to— (a) functions under these Regulations; (b) functions under the following enactments— (i) sections 21 and 90 of the 1949 Act (nature reserves and local authority byelaws, respectively)3; (ii) sections 3 and 10 of the Forestry Act 1967 (management of forestry land, and applications for felling licence and decision of Commissioners thereon, respectively) 4; (iii) sections 3 and 6 of the Norfolk and Suffolk Broads Act 1988 (the Broads Plan and byelaws, respectively)5;	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(iv) section 66 of the Environment Act 1995 (National Park Management Plans)6; (v) sections 38 and 39 of the Flood and Water Management Act 2010 (which relate to incidental flooding or coastal erosion)7; (c) any function exercisable in relation to town and country planning. (6) In section 123(3)(a) of the Marine Act (creation of network of conservation sites), as it applies in relation to the marine area8, the reference to "the conservation or improvement of the marine environment" includes the objective in paragraph (3), and accordingly the duty in section 124 of the Marine Act (report) applies in relation to that objective. (7) In considering which measures may be appropriate for the purpose of securing or contributing to the objective in paragraph (3), appropriate account must be taken of economic and recreational requirements. (8) So far as lies within its powers, a competent authority in exercising any function in or in relation to the United Kingdom must use all reasonable endeavours to avoid any pollution or deterioration of habitats of wild birds (except habitats beyond the outer limits of the [seaward limits of the offshore marine area (as defined in regulation 4(2)). (9) The appropriate authority must take any steps it considers necessary to facilitate or co-ordinate arrangements to secure the taking of steps under paragraphs (1) and (2) by the bodies mentioned in those paragraphs.	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(10) After consultation with the appropriate nature conservation body, the appropriate authority must give guidance to the Environment Agency, the Forestry Commissioners, the Natural Resources Body for Wales, local authorities, the Broads Authority, National Park authorities and any other competent authority it considers appropriate— (a) to facilitate the determination by those bodies of the extent to which the diversity and area of habitat for wild birds is sufficient; and (b) on the steps that it may be appropriate to take under paragraph (1) or (2). (11) In exercising a function to which paragraph (1) or (2) applies, a body to which guidance has been given under paragraph (10) must have regard to that guidance. (12) In this regulation— (a) references in paragraphs (1), (9) and (10) to the appropriate authority— (i) to the extent that this regulation applies in relation to Scotland, include the Secretary of State exercising functions in relation to Scotland; and (ii) to the extent that this regulation applies in relation to Northern Ireland, include the Secretary of State exercising functions in relation to Northern Ireland; (b) in paragraphs (1) and (2), "marine area" includes— (i) the Northern Ireland inshore region; and (ii) the Scottish inshore region; and (c) "local authority" has the same meaning as in regulation 7.	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
Conservation of Habitats and Species Regulations 2017	Duty to undertake an appropriate assessment. **63.— Assessment of implications for European sites and European offshore marine sites** (1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which— (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and (b) is not directly connected with or necessary to the management of that site, must make an appropriate assessment of the implications of the plan or project for that site in view of that site's conservation objectives. (2) A person applying for any such consent, permission or other authorisation must provide such information as the competent authority may reasonably require for the purposes of the assessment or to enable it to determine whether an appropriate assessment is required. (3) The competent authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specifies.	The Secretary of State must carry out an appropriate assessment in accordance with regulation 63 and only grant the application after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site, or that the test in regulation 64 (considerations of overriding public interest) is met.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(4) It must also, if it considers it appropriate, take the opinion of the general public, and if it does so, it must take such steps for that purpose as it considers appropriate. (5) In the light of the conclusions of the assessment, and subject to regulation 64, the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be). (6) In considering whether a plan or project will adversely affect the integrity of the site, the competent authority must have regard to the manner in which it is proposed to be carried out or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given. (7) This regulation does not apply in relation to—[...] (c) a plan or project to which any of the following apply— (i) the Offshore Petroleum Activities (Conservation of Habitats) Regulations 20012 (in so far as this regulation is not disapplied by regulation 4 (plans or projects relating to offshore marine area or offshore marine installations) in relation to plans or projects to which those Regulations apply); (ii) the Environmental Impact Assessment (Agriculture) (England) (No. 2) Regulations 20063; (iii) the Environmental Impact Assessment (Agriculture) (Wales) Regulations 2017; or	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(iv) the Merchant Shipping (Ship-to-Ship Transfers) Regulations 2020. (8) Where a plan or project requires an appropriate assessment both under this regulation and under the Offshore Marine Conservation Regulations, the assessment required by this regulation need not identify those effects of the plan or project that are specifically attributable to that part of it that is to be carried out in the United Kingdom, provided that an assessment made for the purpose of this regulation and the Offshore Marine Conservation Regulations assesses the effects of the plan or project as a whole. (9) In paragraph (1) the reference to the competent authority deciding to undertake a plan or project includes the competent authority deciding to vary any plan or project undertaken or to be undertaken. **64.— Considerations of overriding public interest** (1) If the competent authority is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), it may agree to the plan or project notwithstanding a negative assessment of the implications for the European site or the European offshore marine site (as the case may be). (2) Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either—	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or (b) any other reasons which the competent authority, having due regard to the opinion of the appropriate authority, considers to be imperative reasons of overriding public interest. (3) Where a competent authority other than the Secretary of State or the Welsh Ministers desires to obtain the opinion of the appropriate authority as to whether reasons are to be considered imperative reasons of overriding public interest, it may submit a written request to the appropriate authority— (a) identifying the matter on which an opinion is sought; and (b) accompanied by any documents or information which may be required. (4) In giving its opinion as to whether the reasons are imperative reasons of overriding public interest, the appropriate authority must have regard to the national interest, and provide its opinion to the competent authority. (4A) Before giving its opinion as to whether the reasons are imperative reasons of overriding public interest, the appropriate authority must consult the following, and have regard to their opinion— (a) the Joint Nature Conservation Committee; (b) where the appropriate authority is the Secretary of State, the devolved administrations; (c) where the appropriate authority is the Welsh Ministers, the Secretary of State, and the other devolved administrations; and	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(d) any other person the appropriate authority considers appropriate. (5) Where a competent authority other than the Secretary of State or the Welsh Ministers proposes to agree to a plan or project under this regulation notwithstanding a negative assessment of the implications for the site concerned— (a) it must notify the appropriate authority; and (b) it must not agree to the plan or project before the end of the period of 21 days beginning with the day notified by the appropriate authority as that on which its notification was received, unless the appropriate authority notifies it that it may do so. (6) Without prejudice to any other power, the appropriate authority may give directions to the competent authority in any such case prohibiting it from agreeing to the plan or project, either indefinitely or during such period as may be specified in the direction.	
Conservation of Offshore Marine Habitats and Species Regulations 2017	Duty to exercise functions so as to secure compliance with the requirements of the Habitats Directive and the Wild Birds Directive. **6.— Duty of competent authorities** (1) In relation to the offshore marine area, any competent authority having functions relevant to marine conservation must exercise those functions so as to secure compliance with the requirements of the Habitats Directive and the Wild Birds Directive.	The Secretary of State must exercise functions relevant to marine conservation so as to secure compliance with the requirements of the Habitats Directive and the Wild Birds Directive, and secure the objective in subsection (4).

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(2) Paragraph (1) applies, in particular, to functions under the following enactments— … (m) the Planning Act 2008; (n) the Marine Act, in particular any functions under Parts 3, 4, 5 and 6 of that Act (marine planning, marine licensing, nature conservation and management of inshore fisheries, respectively); and (o) these Regulations. (3) Without prejudice to the generality of paragraph (1), in relation to the offshore marine area a competent authority must take such steps in the exercise of its functions as it considers appropriate to secure the objective in paragraph (4), so far as lies within its powers. (4) The objective is the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat, as appropriate, having regard to the requirements of Article 2 of the Wild Birds Directive. (5) In paragraph (4), "the United Kingdom" includes the offshore marine area. (6) In subsection (3)(a) of section 123 of the Marine Act (creation of network of conservation sites), as it applies in relation to the offshore marine area, the reference to "the conservation or improvement of the	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	marine environment" includes the objective in paragraph (4), and accordingly the duty in section 124 of the Marine Act (report) applies in relation to that objective. (7) In considering which measures may be appropriate for the purpose of securing or contributing to the objective in paragraph (4), appropriate account must be taken of economic and recreational requirements. (8) In this regulation "the Marine Act" means the Marine and Coastal Access Act 2009.	
Conservation of Offshore Marine Habitats and Species Regulations 2017	**28.— Protection of European offshore marine sites and European sites** (1) Before deciding to undertake, or give any consent, permission or other authorisation for, a relevant plan or project, a competent authority must make an appropriate assessment of the implications of the plan or project for the site in view of that site's conservation objectives. (2) In paragraph (1), a "relevant plan or project" is a plan or project which— (a) is to be carried out on or in any part of the waters or on or in any part of the seabed or subsoil comprising the offshore marine area, or on or in relation to an offshore marine installation;	The Secretary of State must carry out an appropriate assessment in accordance with regulation 28 and only grant the application after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site, or that the test in regulation 29 (considerations of overriding public interest) is met.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(b) is likely to have a significant effect on a European offshore marine site or a European site (either alone or in combination with other plans or projects); and (c) is not directly connected with or necessary to the management of the site. (3) A person applying to a competent authority for any consent, permission or other authorisation for a plan or project in the offshore marine area must provide such information as the competent authority may reasonably require— (a) to enable it to determine whether an assessment under paragraph (1) is required; or (b) for the purposes of an assessment under paragraph (1). (4) The competent authority must for the purposes of the assessment— (a) where it relates to a European offshore marine site, consult the Joint Committee; (b) where it relates to a European site in England, consult Natural England; (c) where it relates to a European site in Wales, consult the Natural Resources Body for Wales; (d) where it relates to a European site in Scotland, consult Scottish Natural Heritage; (e) where it relates to a European site in Northern Ireland, consult the DAERA; and	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(f) if it considers it appropriate, take the opinion of the general public and if it does so, take such steps for that purpose as it considers appropriate. (5) In the light of the conclusions of the assessment, and subject to regulation 29, the competent authority may agree to the plan or project only if it has ascertained that it will not adversely affect the integrity of the European offshore marine site or European site (as the case may be). (6) In considering whether a plan or project will adversely affect the integrity of a site, the competent authority must have regard to the manner in which it is proposed to be carried out and to any conditions or restrictions subject to which the competent authority proposes that the consent, permission or other authorisation should be given. … (8) Where a plan or project requires an appropriate assessment both under this regulation and under the Conservation Regulations, the assessment so far as relating to that part of it that is to be carried out in the offshore marine area need not identify the extent to which the effects of the plan or project are specifically attributable to that part, provided that an assessment made for the purposes of this regulation and the Conservation Regulations assesses the effects of the plan or project as a whole. (9) In paragraph (8) "the Conservation Regulations" means the 1994 Regulations or the 2017 Regulations (as the case may be). (10) In this regulation—	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	"England" includes so much of the internal waters and territorial sea of the United Kingdom as are not part of Northern Ireland, Scotland or Wales; and "Northern Ireland" has the same meaning as in the Northern Ireland Act 1998. **29.— Considerations of overriding public interest** (1) If it is satisfied that, there being no alternative solutions, the plan or project referred to in regulation 28(1) must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), the competent authority may agree to the plan or project notwithstanding a negative assessment of the implications for the site. (2) Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either— (a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or (b) any other imperative reasons of overriding public interest. (3) A competent authority [other than the relevant administration may not agree to a plan or project under paragraph (1) for any reason referred to in paragraph (2)(b) unless it has had due regard to the opinion of the [relevant administration in satisfying itself that there are such reasons.	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(4) Where a competent authority other than the relevant administration desires to obtain the opinion of the [relevant administration as to whether reasons are to be considered imperative reasons of overriding public interest, it must submit a request to the [relevant administration — (a) identifying the matter on which an opinion is sought; and (b) accompanied by any documents or information that may be required. (5) In giving its opinion as to whether the reasons are imperative reasons of overriding public interest, the relevant administration must have regard to the national interest, and provide its opinion to the competent authority. (6) Before giving its opinion as to whether the reasons are imperative reasons of overriding public interest, the relevant administration must consult the following, and have regard to their opinion— (a) the Joint Nature Conservation Committee; (b) where the relevant administration is the Secretary of State, the devolved administrations; (c) where the relevant administration is a devolved administration, the Secretary of State and the other devolved administrations; and (d) any other person the relevant administration considers appropriate. (7) In this regulation, "the relevant administration" means— (a) in relation to a plan or project relating to an activity other than one specified in regulation 55(16)— (i) where the plan or project is to be carried out in the Scottish offshore region, the Scottish Ministers; and	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(ii) where the plan or project is to be carried out in the Welsh offshore region, the Welsh Ministers; and (b) in relation to a plan or project relating to an activity specified in regulation 55(16), or in any case not falling within sub-paragraph (a)(i) or (ii), the Secretary of State.	
Natural Environment and Rural Communities Act 2006	Duty to have regard to the purpose of conserving biodiversity. **40 Duty to conserve biodiversity** (A1) This section applies where— (a) … (b) any other public authority is exercising its functions in relation to England. (1) The public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. (2) In complying with subsection (1), a Minister of the Crown or government department must in particular have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992. (3) Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat. (4) "Public authority" means any of the following–	The Secretary of State and Examining Authority must have regard to the purpose of conserving biodiversity in the exercise of its functions. The Secretary of State must have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992. The Secretary of State must take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under s.41.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(a) a Minister of the Crown; (c) a public body (including a government department, a local authority and a local planning authority); (d) a person holding an office– (i) under the Crown, (ii) created or continued in existence by a public general Act, or (iii) the remuneration in respect of which is paid out of money provided by Parliament; (e) a statutory undertaker. (5) In this section– … "Minister of the Crown" has the same meaning as in the Ministers of the Crown Act 1975 (c. 26); … **41 Biodiversity lists and action (England)** (1) The Secretary of State must, as respects England, publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are of principal importance for the purpose of conserving biodiversity. (2) Before publishing any list the Secretary of State must consult Natural England as to the living organisms or types of habitat to be included in the list.	

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(3) Without prejudice to section 40(1) and (2), the Secretary of State must– (a) take such steps as appear to the Secretary of State to be reasonably practicable to further the conservation of the living organisms and types of habitat included in any list published under this section, or (b) promote the taking by others of such steps. (4) The Secretary of State must, in consultation with Natural England– (a) keep under review any list published under this section, (b) make such revisions of any such list as appear to the Secretary of State appropriate, and (c) publish any list so revised as soon as is reasonably practicable after revising it.	
Infrastructure (Decisions) Regulations 2010	Duty to have regard to desirability to preserving listed buildings, conservation areas and scheduled ancient monuments. **3. Listed buildings, conservation areas and scheduled monuments** (1) When deciding an application which affects a listed building or its setting, the Secretary of State must have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses. (2) When deciding an application relating to a conservation area, the Secretary of State must have regard to the desirability of preserving or enhancing the character or appearance of that area.	When striking the planning balance, the Secretary of State must apply the duty in regulation 3 in respect of listed buildings, conservation areas or scheduled ancient monuments.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
	(3) When deciding an application for development consent which affects or is likely to affect a scheduled monument or its setting, the Secretary of State must have regard to the desirability of preserving the scheduled monument or its setting.	
Infrastructure (Decisions) Regulations 2010	Duty to have regard to factors when determining whether to issue deemed marine licence. **3A. Deemed consents under the Marine and Coastal Access Act 2009** This regulation applies in relation to an application where the Secretary of State is considering whether to include in an order granting development consent a provision deeming a marine licence to have been issued under Part 4 of the Marine and Coastal Access Act 2009, by virtue of section 149A of the Act. (2) When deciding an application to which this regulation applies, the Secretary of State must have regard to— (a) the need to protect the environment, (b) the need to protect human health, and (c) the need to prevent interference with legitimate uses of the sea.	In determining whether or not to include in a DCO a provision deeming a marine licence, the Secretary of State must have regard to the matters included in subsection (2).
Water Environment (Water Framework Directive) (England	Duty to have regard to river basin management plans. **33. River basin management plans: duties on public bodies**	In determining the application for development consent, the Secretary of State must have regard to the plans identified in regulation 33.

Legislation	Duty or Requirement	Steps to be Taken by Examining Authority and/or Secretary of State
and Wales) Regulations 2017	The Secretary of State, the Welsh Ministers, the Agency, NRW and each public body must, in exercising their functions so far as affecting a river basin district, have regard to— (a) the river basin management plan for that district as approved under regulation 31, and (b) any supplementary plan prepared under regulation 32.	

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APPENDIX 5A LEGAL AND POLICY REQUIREMENTS RELATING TO THE ASSESSMENT OF ALTERNATIVES

HERBERT SMITH FREEHILLS

Sizewell C

Response to Examining Authority's Question AI1.0

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1. **INTRODUCTION**

1.1 This Appendix responds to question AI1.0, which asked as follows:

"AI1.0 General assessment principles

Having regard to NPS EN-1, Section 4.4:

(i) Please identify all legal and policy requirements relating to the assessment of alternatives applicable to this project and summarise the Applicant's compliance with those requirements;

(ii) Please identify any such legal or policy requirements where compliance has not yet been agreed with the relevant statutory regulator? For example, in relation to the Habitats Directive, the Water Framework Directive or flood risk."

1.2 NPS EN-1 states that *"As in any planning case, the relevance or otherwise to the decision-making process of the existence (or alleged existence) of alternatives to the proposed development is in the first instance a matter of law, detailed guidance on which falls outside the scope of this NPS. From a policy perspective this NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option"* (4.4.1).

1.3 The table below summarises the particular statutory provisions and policies that impose an obligation to consider alternatives (column 1), the applicable test or requirement (column 2), and an indication of where to find details of compliance with those requirements (column 3). The Secretary of State, as decision maker, will bear ultimate responsibility for applying the tests set out in column 2. As such, whilst relevant stakeholders have been consulted about the Applicant's approach to compliance with these requirements, the Applicant has not sought to obtain agreement in respect of overall compliance.

1.4 At this stage, written representations have not yet been received from the relevant stakeholders. In accordance with paragraph 73 of the guidance ('Planning Act 2008: Guidance for the examination of applications for development consent'), written representations should "include each party's detailed case and set out the reasons why they support or oppose the application. It should identify those parts of the application and specific matters with which they agree, and those parts or matters where they do not agree. Reasons for any agreement or disagreement should be provided." As such, once received, it should become apparent from those representations the extent to which the relevant stakeholders do or do not take issue with the Applicant's assessment, as against any or all of the requirements set out below.

1.5 Discussions with stakeholders will continue to take place on an ongoing basis such that if any issues arise regarding, amongst other things, the consideration of alternatives, these can be raised and addressed as appropriate.

Statutory Provision or Policy	Test or Requirement	Details of Compliance
Legal Requirements		
Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 Regulation 14 "(1) An application for an order granting development consent for EIA development must be accompanied by an environmental statement." "(2) An environmental statement is a statement which includes at least— (d) a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment; … (f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected." Schedule 4, Para 2: "A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for	Requirement that the application is accompanied by an ES, which includes (i) a description of reasonable alternatives and (ii) an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.	Site Specific Alternatives Chapters in the ES: • Intro to ES: [APP-175] • MDS: [APP-190] • MDS Appendix 6A: [APP-191] • NPR: [APP-353] • SPR: [APP-383] • TVB: [APP-414] • SLR: [APP-450] • Yoxford: [APP-483] • Freight: [APP-514] • Rail: [APP-544]

Statutory Provision or Policy	Test or Requirement	Details of Compliance
selecting the chosen option, including a comparison of the environmental effects."		
Marine Works (Environmental Impact Assessment) Regulations 2007 Regulation 12 "(1) Where an application is made for a regulatory approval in relation to a regulated activity to which this Part applies, neither the regulator nor the appropriate authority may deal with the application or exercise any functions under these Regulations in relation to it until the appropriate authority has received the following material from the applicant" … "(d) an environmental statement in respect of the project;" "(2) An environmental statement must — … (b) include at least – … (iv) a description of the reasonable alternatives studied by the applicant, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment; …	When considering an application for regulatory approval in relation to a regulated activity, the Secretary of State: Requirement that the application is accompanied by an ES, which includes (i) a description of reasonable alternatives and (ii) an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.	Main development site Alternatives Chapter: [APP-190]

Statutory Provision or Policy	Test or Requirement	Details of Compliance
(vi) any additional information specified in Schedule 3 relevant to the specific characteristics of the particular project or type of project and to the environmental features likely to be significantly affected." Schedule 3, Para 2: "A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the applicant, which are relevant to the proposed project, the regulated activity and their specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects."		
The Conservation of Habitats and Species Regulations 2017 Regulation 64 "64.— Considerations of overriding public interest (1) If the competent authority is satisfied that, there being no alternative solutions, the plan or project must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), it may agree to the plan or project notwithstanding a negative assessment of the implications for the European site or the European offshore marine site (as the case may be). (2) Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either—	In considering whether the Secretary of State is satisfied that the project must be carried out for imperative reasons of overriding public interest, the Secretary of State must conclude that there are "no alternative solutions".	sHRA Alternatives: [APP-150]

Statutory Provision or Policy	Test or Requirement	Details of Compliance
(a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or (b) any other reasons which the competent authority, having due regard to the opinion of the appropriate authority considers to be imperative reasons of overriding public interest."		
Conservation of Offshore Marine Habitats and Species Regulations 2017/1013 Regulation 29 "29.— Considerations of overriding public interest (1) If it is satisfied that, there being no alternative solutions, the plan or project referred to in regulation 28(1) must be carried out for imperative reasons of overriding public interest (which, subject to paragraph (2), may be of a social or economic nature), the competent authority may agree to the plan or project notwithstanding a negative assessment of the implications for the site. (2) Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either— (a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or (b) any other imperative reasons of overriding public interest.	In considering whether the Secretary of State is satisfied that the project must be carried out for imperative reasons of overriding public interest, the Secretary of State must conclude that there are "no alternative solutions".	sHRA Alternatives: [APP-150]

Statutory Provision or Policy	Test or Requirement	Details of Compliance
(3) A competent authority other than the relevant administration may not agree to a plan or project under paragraph (1) for any reason referred to in paragraph (2)(b) unless it has had due regard to the opinion of the relevant administration in satisfying itself that there are such reasons."		
Water Framework Directive 2000/60/EC Derogation tests – Article 4.7 "Member States will not be in breach of this Directive when: … (d) the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option." (Transposed into domestic law by the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. See regulation 33 for the duty on the Secretary of State (in respect of which see the Applicant's response to EXAQ G.1.57).	In considering whether derogation is justified and applying the derogation tests in Article 4.7, the Secretary of State must be satisfied that: there is no significantly better environmental option for achieving the benefits expected to result from the proposal or, if there is such an option, it is ruled out as technically infeasible or disproportionately expensive.	Water Framework Directive Compliance Assessment Report APP-619 to APP-633 and Addendum AS-277 to AS-279
Marine and Coastal Access Act 2009 126 Duties of public authorities in relation to certain decisions (1) This section applies where— (a) a public authority has the function of determining an application (whenever made) for authorisation of the doing of an act, and (b) the act is capable of affecting (other than insignificantly)—	In determining the application, in respect of which the Secretary of State is not satisfied that there is no significant risk of hindering the achievement of the conservation objectives stated for an affected MCZ, the Secretary of State is satisfied that *inter alia*, there is no other means of proceeding with the act which would create a substantially	• MDS: [APP-190] • MDS Appendix 6A: [APP-191]

Statutory Provision or Policy	Test or Requirement	Details of Compliance
(i) the protected features of an MCZ; (ii) any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependent. (2) If the authority believes that there is or may be a significant risk of the act hindering the achievement of the conservation objectives stated for the MCZ, the authority must notify the appropriate statutory conservation body of that fact. (3) Where the authority has given notification under subsection (2), it must wait until the expiry of the period of 28 days beginning with the date of the notification before deciding whether to grant authorisation for the doing of the act. (4) Subsection (3) does not apply where— (a) the appropriate statutory conservation body notifies the authority that it need not wait until the end of the period referred to in that subsection, or (b) the authority thinks that there is an urgent need to grant authorisation for the doing of the act. (5) The authority must not grant authorisation for the doing of the act unless the condition in subsection (6) or the condition in subsection (7) is met. (6) The condition in this subsection is that the person seeking the authorisation satisfies the authority that there is no significant risk of the act hindering the achievement of the conservation objectives stated for the MCZ. (7) The condition in this subsection is that, although the person seeking the authorisation is not able to satisfy the authority that there is no significant risk of the act hindering the achievement of	lower risk of hindering the achievement of those objectives. This includes (i) in another manner and (ii) at another location.	

Statutory Provision or Policy	Test or Requirement	Details of Compliance
the conservation objectives stated for the MCZ, that person satisfies the authority that— (a) there is no other means of proceeding with the act which would create a substantially lower risk of hindering the achievement of those objectives, (b) the benefit to the public of proceeding with the act clearly outweighs the risk of damage to the environment that will be created by proceeding with it, and (c) the person seeking the authorisation will undertake, or make arrangements for the undertaking of, measures of equivalent environmental benefit to the damage which the act will or is likely to have in or on the MCZ. (8) The reference in subsection (7)(a) to other means of proceeding with an act includes a reference to proceeding with it— (a) in another manner, or (b) at another location. (9) In a case falling within subsection (7), the authority must, if it has power to grant the authorisation subject to conditions, exercise that power so as to make it a condition of the authorisation that the measures mentioned in subsection (7)(c) are undertaken. (10) In carrying out its duties under this section a public authority must have regard to any advice or guidance given by the appropriate statutory conservation body under section 127. (11) In this section— "act" includes omission;		

Statutory Provision or Policy	Test or Requirement	Details of Compliance
"authorisation" means any approval, confirmation, consent, licence, permission or other authorisation (however described), whether special or general; "damage" includes the prevention of an improvement; "public authority" does not include a Northern Ireland Minister or Northern Ireland department.		
Policy Requirements		
NPS-EN1 Development proposed within nationally designated landscapes "5.9.10 Nevertheless, the IPC may grant development consent in these areas in exceptional circumstances. The development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of: *Inter alia* "the cost of, 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;"	In considering whether to grant development consent for development proposals within nationally designated landscapes, have regard to (*inter alia*) the cost of, and scope for, developing elsewhere, outside the designated area, or meeting the need in some other way.	Site Selection Report (Appended to Planning Statement): [APP-591]
NPS EN-1 Flood risk: The Sequential Test 5.7.13 Preference should be given to locating projects in Flood Zone 1 in England or Zone A in Wales. If there is no reasonably available site in Flood Zone 1 or Zone A, then projects can be	(1) Has the sequential approach been applied as part of site selection? (2) Has the sequential approach been applied at the site level to minimise risk	Site Specific Flood Risk Assessments: APP-093 to APP-144, AS-018, AS-157 to AS-172 and Doc Ref. 5.6Ad

Statutory Provision or Policy	Test or Requirement	Details of Compliance
located in Flood Zone 2 or Zone B. If there is no reasonably available site in Flood Zones 1 or 2 or Zones A & B, then nationally significant energy infrastructure projects can be located in Flood Zone 3 or Zone C subject to the Exception Test. Consideration of alternative sites should take account of the policy on alternatives set out in Section 4.4 above. The Exception test 5.7.15 The Exception Test is only appropriate for use where the sequential test alone cannot deliver an acceptable site, taking into account the need for energy infrastructure to remain operational during floods. 5.7.16 All three elements of the test will have to be passed for development to be consented. For the Exception Test to be passed: it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk; the project should be on developable, previously developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously developed land subject to any exceptions set out in the technology-specific NPSs; and a FRA must demonstrate that the project will be safe, without increasing flood risk elsewhere subject to the exception below and, where possible, will reduce flood risk overall.	by directing the most vulnerable uses to areas of lowest flood risk? Where the exception test is applicable: (3) If it is not on previously developed land, is the Secretary of State satisfied that there are no reasonable alternative sites on developable previously developed land, subject to any exceptions set out in the technology-specific NPSs.	

Statutory Provision or Policy	Test or Requirement	Details of Compliance
NPS EN-1 Biodiversity 5.3.7 As a general principle, and subject to the specific policies below, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives (as set out in Section 4.4 above); where significant harm cannot be avoided, then appropriate compensation measures should be sought.	Requirement that reasonable alternatives have been considered in order to avoid significant harm to biodiversity and geological conservation interests.	Site Selection Report (Appended to Planning Statement): [APP-591]

APPENDIX 5B CAMPUS TECHNICAL NOTE

Sizewell C – Campus Site Selection Technical Note

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1. Executive Summary

In their response to EDF Energy's Stage 2 consultation, the Joint Local Authorities stated:

"While the Councils understand the rationale of an accommodation campus located at or close to the construction site, we remain concerned about the environmental impacts of the proposed site location, which may cause overload on the sensitive environment of the AONB. The Councils expect a review of potential alternative sites for the accommodation campus, to consider whether or not there are credible alternative sites in proximity to the development site, which may be considered to have less environmental impact, more legacy potential and/or better community integration."

EDF Energy considers that it has already undertaken a robust alternatives assessment for the campus site and this Technical Note sets out the site selection process that was undertaken.

The site selection process for Sizewell C benefited from lessons learnt from previous power station construction projects including Sizewell B, Flamanville 3 in Normandy and Hinkley Point C in Somerset. However, as required by National Policy Statements EN1 and EN6, the site specific and local environmental, socio-economic and transport considerations have resulted in a Sizewell C specific campus strategy comprising a campus of 2400 bed spaces on the Sizewell C development site.

Site selection for all associated development began in earnest in early 2010, with a total of thirteen potential campus sites considered at Step 1, the initial appraisal process. Eight of these were taken forward to Step 2 and ten new potential campus sites added. Locations were identified through a combination of suggestions from Suffolk County Council (SCC) and Suffolk Coastal District Council (SCDC), contact with landowners or agencies, and EDF Energy field survey.

The eighteen sites underwent an internal screening process, involving field survey of the sites and their environs from public rights of way to determine land-use, make a preliminary visual assessment of their environmental setting and to identify obvious potential environmental constraints. This was followed by a desk-based review of potential flood risk and a review of statutory landscape and ecological designations relating to the sites and their surrounds.

Following this, five sites were discounted, a further five were taken forward but discounted for campus use, and two were merged into other sites, therefore leaving a total of six campus sites taken forward to detailed Technical Appraisal by EDF Energy's consultants. This was to ensure that specialist technical evaluation of site conditions and development potential was provided at an early stage in the process of decision making, in order to provide a robust framework and audit trail for decision making.

Following Technical Appraisal, a workshop was held with the Councils to set out the work undertaken and proposed layouts for each of the associated development sites. It was explained that three campus sites had been selected to take forward to Stage 1 consultation which ran from November 2012 to February 2013. These were:

- Option 1: Development Site Campus (identified as the project's preferred site)
- Option 2: Sizewell Gap
- Option 3: Leiston East

Public responses to Stage 1 identified Option 1 as the most "appropriate" site by respondents, favoured due to proximity to the main construction site and distance from local communities, and this was the only site that received more "appropriate" than "inappropriate" responses, in total more than Option 2 and 3 combined. Option 2 received the least "appropriate" responses with a similar number of "inappropriate" responses to Option 3. Statutory and other local stakeholders' responses

showed a less clear preference for one site with both Option 1 and 3 receiving a similar level of support and concern. Option 2 was least preferred.

Following Stage 1, each of the three campus site options was assessed against a set of criteria including consultation, engineering and operational considerations, environmental considerations, transport, community, land interests, land use and planning strategy and policy. As a result of this, Option 2 (Sizewell Gap) was considered to be the least preferred location for the campus due to the constraints identified on this site. The benefit of the land being owned by EDF Energy was not regarded sufficient to outweigh these constraints. Of the two remaining sites, Option 1 (Development Site) had the least number of constraints compared to Option 3 (Leiston East). Option 3 also had significant costs associated with transportation/travel time. Therefore, Option 1 was taken forward as the preferred site on which to undertake geotechnical investigations and additional environmental studies, in order to develop a preliminary campus design ahead of Stage 2 consultation.

At a Community Forum on 27 March 2014, the project announced that it intended to progress with its preferred option, Option 1 Development Site Campus. Option 2 was discounted and Option 3 was to be kept in reserve. It was explained that the project needs to attract and retain a high-calibre non-home-based workforce, in competition with other projects, and that a high-quality campus with comprehensive facilities and direct access to site would be a key element in attracting the best workers and meeting their accommodation needs.

Following geotechnical site investigations and a master planning exercise, Option 3 was discounted and Option 1 was presented as the chosen campus site at Stage 2. This ran from November 2016 to February 2017 and presented two layout options for the campus: one with accommodation both sides of Eastbridge Road and one with accommodation to the east of Eastbridge Road only (with sub-options of sports fields to the west of Eastbridge Road or off-site, in order to provide legacy).

In July 2017, SCC published a "Sizewell C Accommodation Campus Study" (dated 21.6.17). This was produced by Boyer / Cannon and their purpose was to evaluate the preferred accommodation campus proposed by EDF Energy at Stage 2 and assess whether there are *"any sites that might be genuine alternatives that would be better placed to accommodate the campus development"*.

In its foreword, SCC states that:

"Boyer has produced a report which shows that there are a number of possible alternatives to EDF Energy's current proposal which are likely to meet their criteria but appear to be more acceptable in wider planning terms. The conclusions of the report are those of the consultants, not the County Council, nor does it advocate any one of the sites assessed, but it reinforced the concern of the Council that there are options available that would overcome the disadvantages of the existing proposal but that have not yet been considered by EDF Energy."

EDF Energy has reviewed the Boyer / Cannon report and does not consider that it identifies any better sites that have not yet been considered by the project. Of the eight sites considered by Cannon, four are sites already consulted upon by EDF Energy: Options 1, 2 and 3 for campus at Stage 1 and the Land to the east of Eastlands Industrial Estate at Stage 1 and 2, which has been identified by the project for other uses including caravans. Of the remaining four sites, one includes part of a site EDF Energy considered for caravans pre-Stage 1, the northern part of another includes part of the green rail route, one was discounted by Boyer / Cannon as part of the report leaving just one "new" site, which has already drawn community opposition (http://leavethelayersalone.org/) and is subject to a planning application by Hopkins Homes.

SCC goes on to state:

"Accordingly, the County Council calls upon EDF Energy to undertake a wider appraisal of options for development of a campus, to take into account wider issues affecting communities and the environment and publish a clear justification of the position taken in due course. The County Council would be willing to work with EDF in pursuing this work."

EDF Energy considers that its site selection process has been sufficiently robust to fulfil the requirements for the consideration of "alternatives". The project recognises that there are community concerns and potential significant environmental effects associated with the Development Site Campus, particularly in combination with other aspects of the development, and that both sensitive design and appropriate mitigation measures will be required to minimise impacts of the campus. However, the site selection process and the Boyer / Cannon report clearly show that there would be issues to address with any campus site given the location of the Sizewell C development site, in a largely rural area with small surrounding settlements. However, co-locating the campus with the construction area would provide benefits not achievable on any other site including a reduction in traffic commuting daily to site and project efficiencies.

2. Structure of Technical Note

This Technical Note covers the period up to Stage 2 consultation, in addition to the Suffolk County Council Accommodation Campus report.

The Technical Note begins by describing the project's understanding of its obligations to consider alternatives. It then sets out EDF Energy's campus site selection process in chronological order, starting with Step 1 and Step 2 which resulted in the choice of the three campus options presented at Stage 1. A brief summary of what was presented at Stage 1 is then provided, including the two accommodation questions included on the Consultation Questionnaire, one on strategy and one on the campus options.

Details of public and stakeholder feedback to Stage 1 is provided, along with the internal criteria for choosing Option 1 in preference to Options 2 and 3. Reasons why a single rather than multi-site strategy was adopted, why a campus on the development site is preferred and why it was not considered appropriate to locate a campus in a large urban centre are also provided, in response to feedback on the accommodation strategy at Stage 1. The Note then briefly describes what was presented at Stage 2 before considering the Suffolk County Council Accommodation Campus report. Further detail on a number of the sections above is provided in the Appendices.

3. Alternatives

In accordance with its statutory duties under the Planning Act 2008, EDF Energy considers that it has engaged positively with the Joint Local Authorities and other stakeholders in order to identify the most appropriate site for the campus development. This has included carrying out a robust alternatives assessment with a view to avoiding, reducing or mitigating the associated environmental effects. In preparing the environmental information in support of the application, EDF Energy will be under a separate statutory duty to report on its consideration of alternatives sites and their specific characteristics, and provide an indication of the main reasons for selecting its preferred option. The fundamental question is the appropriate scale of any search for alternatives, taking into account the environmental, social and economic effects, and where relevant, the technical and commercial feasibility of the options available. NPS EN-1 makes clear that the consideration of alternatives in order to comply with policy requirements should be carried out in a "proportionate manner". EDF Energy considers that it has assessed all reasonable alternatives, including all of the options contained in the report commissioned by SCC.

It is understood that where the consideration of alternatives includes different proposed locations for development, consultation may inform an applicant's decision making but not necessarily result in a change to the preferred option. Site selection is ultimately a matter for the applicant, taking into account the criteria set out above. In EDF Energy's view, the proposed campus location is the best of the potential alternatives, for the reasons set out in this report. However, ultimately, the role of the Secretary of State will be to assess if the proposed location is acceptable in planning terms, rather than to assess whether it is the best of all possible alternative locations.

4. Step 1 – Site Identification and Pre-Screening 2010-2011

Initial Studies

The Associated Development site selection process commenced in 2010, ahead of the Stage 1 consultation. Potential campus sites were considered alongside other associated development options. The national and legal policy context, relating to planning, environment and transport was considered and initial studies were commissioned from external consultants. Work comprised:

- High level assessment against sizing criteria
- Site visits
- Preliminary desk studies
- Phase 1 Habitat Surveys including Bird, Great Crested Newt and Reptile survey during March-June 2011
- Early information on EIA topic areas from scoping
- Initial socio-economic assumptions on peak workforce (5600), home-based workers at peak (34%) and shift patterns
- Gravity Model and Transport Modelling
- Marine Off-Loading Facility Study
- Rail Study
- Constructability Study

Location and Legacy

Initially off-site campus options were considered in the following categories. Potential for legacy uses to benefit the local community were considered.

- Close to Leiston
- North of Leiston
- More distant "satellite" locations

Environmental Considerations

A key aspect of the site selection process was the desire to avoid and reduce potential adverse environmental effects. Therefore, the majority of site options had the following characteristics:

- No ecological designations within the site or immediate proximity.
- Whole of site within Flood Zone 1 but 1 in 30 and 1 in 200 rainfall events modelled and mapped by the Environment Agency used to consider potential surface water issues.
- Generally no watercourses in or near the site.

While efforts were made to avoid potential environmental constraints and sensitive receptors, the limited availability of suitably located brownfield sites meant that some sites considered would, if developed, have potential environmental effects including on:

- The Suffolk Coast and Heaths AONB.
- Landscape character and visual amenity.
- Ecological value.
- Heritage assets.
- Public rights of way.
- Localised noise, dust and lighting.

In terms of decision-making, sites taken forward did not always have less significant potential adverse environmental effects than those discounted. However, on balance, sites were retained that best met the strategic needs of the project while avoiding or reducing likely significant adverse effects.

Construction Considerations

Associated development was considered in the context of potential constraints and opportunities associated with the development of the Sizewell C project as a whole, including the construction area and access road associated with the main development site.

Initial consideration was given to ground conditions in terms of depths and quality of groundwater and underlying geology, in order to inform appropriateness of design of sustainable drainage measures. Requirements for raw water and sewerage were not key determining factors in the site selection process as it was assumed that bespoke facilities such as package treatment could be utilised if necessary.

Campus Sizing

An area of approximately 30ha was assumed for a campus (providing a minimum of 2000 beds) at the initial site selection stage. This was based on the HPC development site campus (now "Hinkley Campus") and Bridgwater A campus (now "Sedgemoor Campus") average m^3 / person. This would allow space for the following:

- Accommodation blocks based on the HPC design (3 storey, 35 units)
- Amenity block (2 storey)
- Bus terminus and parking
- Car parking (based on 1.6 share factor)
- Internal circulation roads
- Ancillary buildings (including utilities plant enclosures etc.)
- External recreation
- Attenuation ponds
- Topsoil storage (for site restoration purposes)
- Landscaping

Consideration of the need for additional ecological areas (Great Crested Newt, badgers, habitat migration and linear ecological features (such as bat routes)) was excluded.

Initial Site Appraisal

Thirteen potential campus sites were considered in the initial appraisal process which took place from 2010 to 2011. These sites were selected in various ways, including project field survey, approaches by Agencies or Landowners and suggestions by Suffolk County Council and Suffolk Coastal District Council. Three of the thirteen were ruled out at the initial screening stage, two further sites were retained for consideration for potential associated development use but discounted for campus, one of which became the proposed northern park and ride site at Darsham. The remaining eight sites were taken forward for consideration for potential campus use to Step 2, as follows:

Table 1: Sites discounted in initial site appraisal

Site Code	Site Name	Origin	Description	Carried forward to Step 2	Reasons
PREL 1	Aldhurst Farm, Leiston	Existing contact with landowner	Arable farmland, wetland, agricultural outbuildings.	No	Landscape and visual impact, access capacity. However, whilst not supporting AD site development, identified that land provides opportunity for SSSI replacement habitat.
PREL 2	Land north of Jewsons, Leiston	SCDC/SCC	Vacant site comprising extensive area of made ground, fronting Abbey Road.	No	Site owner in negotiation with third party.
PREL 8	Site at Junction of A12 and B1122, Yoxford	SCDC/SCC	Arable site with pond. Elevated position relative to public highway.	No	Site levels elevated / visual impact. Possible Great Crested Newt presence.

Table 2: Sites taken forward to Step 2

Site Code	Site Name	Origin	Description	Carried forward to Step 2
PREL 3	Land west of Lovers Lane (north of King G Ave)	SCDC/SCC	See CL3 / LA1 Appendix 1	Yes
PREL 4	Land west of Lover's Lane (south of King G Ave)	SCDC/SCC	See CL4 / LA1b Appendix 1	Yes
PREL 6a	Leiston Caravan Park Site	SCDC/SCC	Small (2ha), triangular site in centre of Leiston	Yes, but not for campus
PREL 6c	Land at BEGL Sports and Social Club, Leiston	SCDC/SCC	See CL1 Appendix 1 Note: This proposal initially excluded land south of Grimsey's Lane	Yes
PREL 7a	Darsham (west side of A12)	SCDC/SCC	See SA2 Appendix 1	Yes
PREL 7b	Darsham (east side of A12)	SCDC/SCC	27.9ha site north of Darsham station – now comprises proposed northern park and ride site	Yes, but for park and ride
PREL 9	Site at Rendham Road, Saxmundham	SCDC/SCC	See SA1 Appendix 1	Yes
PREL 14	Former Pig Farm (East of Leiston Railhead)	EDF Energy field survey	See CL2 Appendix 1	Yes
PREL 25	Bowling Green, Saxmundham	Agency	See SA3 Appendix 1	Yes
PREL 29	Greenhouse Plantation (east)	EDF Energy field survey	See CN4 Appendix 1	Yes

Consultation

A number of meetings were held with Suffolk County Council (SCC) and Suffolk Coastal District Council throughout the site selection process including a workshop on Associated Development on 24 April 2010. The key outcomes were:

- PREL 1 Aldhurst Farm to be discounted due to landscape / visual concerns.
- PREL 6c Land at BEGL Sports and Social Club favoured by SCC / SCDC – project identified action to negotiate extension of site south of Grimsey's Lane.
- Councils advised that local community likely to favour large campuses to disparate campuses.
- Councils considered PREL 7b Darsham (east side of A12) relatively preferable to PREL 7b Darsham (west side of A12) for accommodation given extant planning permissions (hotel). Legacy also better for service infrastructure.
- PREL 3 Land west of Lovers Lane (north of King G Ave) and PREL 4 Land west of Lover's Lane (south of King G Ave) not deemed ideally suited for campus due to visual impact concerns.
- PREL 9 Site at Rendham Road, Saxmundham deemed to have potential for satellite campus.

In addition to this, there was a meeting in October 2010 to discuss legacy accommodation options (general discussion on issues and options only) and meetings in April and May 2011 on development assumptions for transport studies and rail options as set out in the rail study. These had a bearing on campus site selection in terms of potential traffic impacts associated with Sizewell C.

5. Step 2 – Due Diligence 2012

In 2012 and in the lead up to Stage 1 consultation, a series of discussions were held with stakeholders and internally between specialist transport, environmental and planning consultants and the Sizewell C engineering team. The discussions with the engineering team highlighted a preference for good quality, flexible campus accommodation as close to site as possible. Discussions with the local authorities indicated that the local community is likely to prefer large campuses to disparate campuses. A number of additional sites were added to the nine sites carried forward from Step 1. These were either identified from EDF Energy field survey of comprised land already on or adjacent to the EDF Energy Estate.

Change in Location Criteria

Additional search areas for campus in Step 2 were limited to land south of Theberton and north of Leiston – this followed initial traffic modelling results for the project as a whole and was aimed at minimising traffic movement through these communities. The only exception to this was the site at Darsham which was retained due to proximity to one of the northern park-and-ride site options. New sites introduced at this stage included new off-site campus options close to and to the east / north of Leiston. An on-site campus was introduced into the list at this stage. This followed advice from the construction team, based on emerging Tier 1 and project feedback from Hinkley Point C and confirming historic practice, that an on-site campus would be the most favourable option as it:

- Would remove or significantly reduce reliance on car and bus travel for workers to get to and from the Sizewell C construction site.
- Could avoid substantial costs that could otherwise accrue to cover non-home-based workers time travelling to andfrom site and the associated industrial relations issues that could also be significant.
- Could provide construction efficiency gains.
- Would be popular with the non-home-based workforce and of greater convenience.

Internal Screening

This work was carried out by the internal project development team. Environmental and field reconnaissance of the sites and their environs was carried out from public rights of way to determine land-use, make a preliminary visual assessment of their environmental setting and to identify obvious potential environmental constraints including:

- Landscape setting
- Degree of screening
- Proximity to nearest dwellings and settlements
- Topography / proximity to watercourses
- Public Rights of Way
- Contaminated Land (made ground or sources such as nearby landfill)
- Ecological constraints (semi-natural habitats, ponds and watercourses)
- Access / egress issues
- Utilities e.g. power lines

This field survey was followed by a desk-based review of potential flood risk with reference to the Environment Agency's flood risk maps (http:/maps.environment-agency.gov.uk/wiyby) and a review of statutory landscape and ecological designations relating to the sites and their surrounds using the former DEFRA website (http:// magic.defra.gov.uk). An internal "Preliminary Screening and Technical Evaluation of Potential Sites for Associated Development" report was produced in May 2012. This recommended discounting of certain sites.

Technical Appraisal

Following on from the internal screening exercise, consultants were appointed to undertake appraisal of the proposed sites. This was to ensure that specialist technical evaluation of site conditions and development potential was provided at an early stage in the process of decision making, in order to provide a robust framework and audit trail for decision making.

Consultants were asked to identify constraints and opportunities associated with each site, with respect to environmental, development and highway access and transportation disciplines and to identify potential "showstoppers" i.e. constraints which were so substantive that development would be precluded for a particular site. Where development was considered practical, the study aimed to identify the magnitude and potential significance of any constraints and to propose preliminary layout and design measures to overcome them. The intention was to apply a consistent and objective approach to the identification of potentially suitable sites and to the assessment of constraints and options in order to ensure that the relative merits and constraints of the sites could be understood. In turn, this allowed EDF Energy to clearly identify the rationale for the identification of specific sites to take forward through formal consultation and ultimately for inclusion in the Development Consent Order application for Sizewell C.

Three consultants were appointed: AMEC (now Wood) for environment and to manage the exercise and pull together the final report, RHDHV for development and WSP for transport. Data was collected via desk-based sources and through site visits. Most site visits were carried out during the week commencing 15 July 2012 and were conducted jointly by representatives of EDF Energy, AMEC, WSP and RHDHV. This enabled the views of the project team on the features and issues relevant to each of the sites to be shared in the field and development opportunities and constraints to be considered in an interactive manner. A limited number of additional potential sites were identified during the site visits and rationalisation of site boundaries to accommodate proposed development requirements was also undertaken at this stage.

Environment (AMEC)

The study commenced with the acquisition and collation of a range of environmental data to allow the environmentally sensitive features and receptors in the locality of the sites to be identified. This was imported to a Geographic Information System (GIS) to allow environmental features/receptors to be identified spatially relative to the potential campus site boundaries.

An initial series of maps displaying potentially sensitive environmental features/receptors overlaid on site boundary plans was then used in the field to inform the site visits. Where possible, given the restriction of access to public rights of way, the status of the mapped features was verified during the visits. Particular attention was paid to site boundary conditions, specifically the presence of hedgerow and trees with respect to their age, maturity and the degree of screening they afforded. Existing land usage within and adjacent to the sites was noted together with the presence and condition of surface water features (ditches, ponds and streams). With respect to amenity issues (noise and air quality) the nearest residential dwellings and other potentially sensitive properties (such as care homes) were identified. Potential lines of sight afforded into the site from existing properties were noted taking into account the presence of screening afforded by existing vegetation and/or topography. Following the site visits further desk-based study was undertaken involving technical specialists for each of the environmental disciplines under consideration.

The conclusions of the study took into account the environmental mapping data for the sites, other relevant data sources, information from the site visits and knowledge of site specific or local conditions from pre-Stage 1 survey work (e.g. ecological surveys, air quality monitoring) to identify whether potential environmental constraints to development existed and to reach preliminary conclusions with respect to the significance of such constraints and the need for specific design / mitigation measures.

Transport (WSP)

This study commenced with desk-based assessment followed by site visits to consider suitability of routes to / from the site in addition to site access / egress constraints. WSP also undertook some "spot" short-term traffic counts during peak times at each location, where necessary to fill-in gaps in the available traffic survey data.

For each individual site, potential highway accesses were first considered by reviewing online resources including OS vector mapping, personal injury accident data for 2005-10 and satellite mapping through WSP's in house GIS software. Images from Google street view were also used to give an initial driver's eye view of the horizontal and vertical alignment of the public highway at and around the site.

Following the site visits, OS digital vector mapping was utilised for initial design work on each access to be undertaken. The study brief excluded any junction capacity analysis at this preliminary appraisal stage, so the likely form of the junction was determined by professional judgement following the site inspections on the basis of some initial EDF Energy estimates of likely vehicle movements in and out of each category of associated development site.

Initial design work was based on the design standards and guidance in the Design Manual for Roads and Bridges (DMRB), on the basis that this was the document which it was considered Suffolk County Council (SCC), the local highway authority, would most likely use to assess the acceptability of the junction proposals. The most relevant DMRB documents referenced were TD16/07 Geometric design of roundabouts and TD42/95 Geometric Design of Major/Minor Priority Junctions.

The majority of the junction design work was based on design speeds currently in place – where this did not prove possible, the implications were noted against each site.

The extent of works which might be required to form a satisfactory access and connection to the wider highway network were also considered, with WSP liaising with AMEC and RHDHV to ensure coordination of access / egress with drainage and utilities considerations. These works were reviewed against the available highway boundary information and any additional land requirements were flagged. Specific consideration was given to highway safety issues in each case and a qualitative cost comparison between sites, based on the site visits, desk-based assessment and outline layouts for access / egress was produced.

Development (RHDHV)

Sites were reviewed to determine their viability in terms of the physical development requirements for the intended use, based on the following main elements:

- Campus sizing requirements as for Step 1 above.
- Suitability of plot size based on parameters determined from layout design undertaken for HPC.
- Consideration of topography based on existing ground levels obtained from Ordnance Survey 1:25,000 scale mapping, Google Earth and supported by site observations.
- Desk-based assessment of ground conditions for development use with respect to likely building foundation solutions.
- Desk-based assessment of ground conditions with respect to surface water drainage disposal supported by observations from site visits undertaken during the week commencing 15 July 2012.
- Proximity of existing statutory undertakers' plant and a high-level assessment of potential for servicing proposed sitesand possible diversion requirements.
- Budget cost estimates for construction of the sites based, where applicable, on HPC associated development construction costs.

Step 2 Sites Considered

Eighteen potential campus sites were considered in the Step 2 Initial Screening process. These comprised the eight sites taken forward for consideration for a campus from Step 1 and ten new sites. Of the eighteen, five were discounted at the end of the Initial Screening process, a further five were taken forward but discounted for campus use, two were merged into other sites, leaving a total of six campus sites taken forward to Technical Appraisal by AMEC, RHDHV and WSP.

All sites considered for campus at Step 2 are set out in the table below. The figure shows the campus sites taken forward to Technical Appraisal. Additional detail on all sites considered at Step 2, including a site description and reasons for being discounted or taken forward to EDF Energy's Stage 1 consultation are set out in Appendix 1.

Figure 1: Location of campus sites taken forward to Technical Appraisal (NB CN5 considered for caravans)

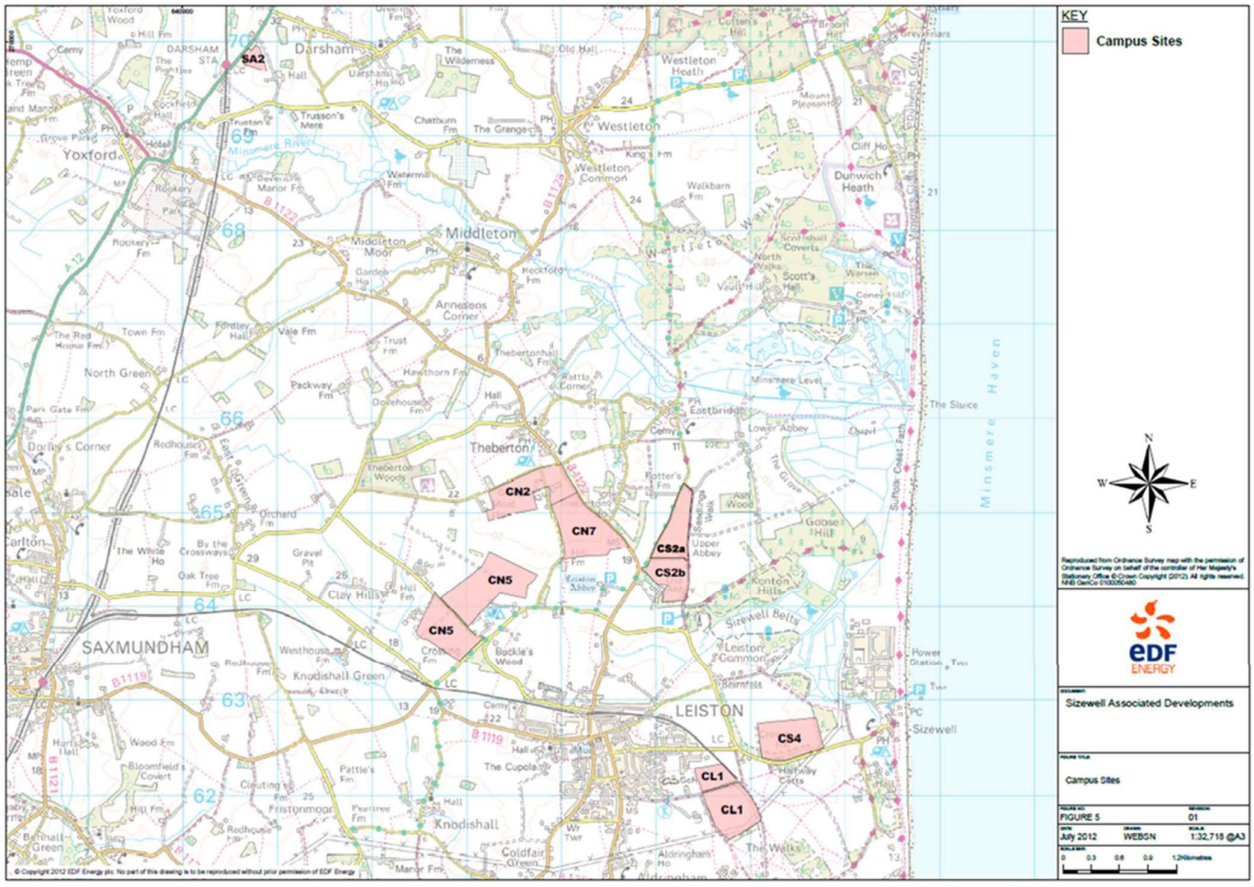


Table 3: Sites considered at Step 2

Site Code	Site Name	Origin	Area (ha)	Carried forward from Step 2 Initial Appraisal to Technical Appraisal by Consultants?
CN1 New	Middleton (South)	EDF Energy field survey	8.3	No
CN2 New	Moat Road	EDF Energy field survey	15.7	Yes
CN3 New	Onner's Lane	EDF Energy field survey	6.01	No
CN4	Greenhouse Plantation (east)	PREL 29	14.06	Yes, merged into CS2a to become CS2b
CN5 New	Abbey Lane	EDF Energy field survey	59.6	Yes, but for caravans
CN6 New	Lover's Lane (North)	EDF Energy field survey	17.1	Yes, but for laydown / warehousing
CN7 New	Theberton Grange (South)	EDF Energy field survey	18.3	Yes
CL1	Land at BEGL Sports and Social Club, Leiston	PREL 6c enlarged to south	31.3	Yes
CL2	Former Pig Farm (East of Railhead)	PREL 14	24.1	Yes, merged into CL1 in part
CL3 / LA3 / LA1a	King George's Avenue (North)	PREL 3 southern part	3.3	Yes, but for laydown / warehousing
CL4 / LA4 / LA1b	King George's Avenue (South)	PREL 4	3.6	Yes, but for laydown / warehousing
CS2a New	Upper Abbey Farm (North)	EDF Energy Estate	29.3	Yes
CS2b New	Upper Abbey Farm (South)	Adjacent to EDF Energy Estate	16.2	Yes, but incorporated into SZC plot plan
CS3 New	Kenton Hills	Adjacent to EDF Energy Estate	31.6	No
CS4 New	Lover's Lane (South)	EDF Energy Estate	24.4	Yes
SA1	Saxmundham – Rendham Road	PREL 9	5.2	No
SA2	Darsham (East of A12)	PREL 7b	3.5	Yes
SA3	Saxmundham – Bowling Green	PREL 25	2.7	No

Technical Appraisal Conclusions

The AMEC report graded the sites using a traffic light system with regards to the different considerations. For development these were:

- Plot size suitable for a minimum of a 2,000 bed campus
- Building foundations
- Surface water disposal
- Foul water treatment assuming sewage disposal possible
- No requirement for major service diversions
- Public utilities in area – telecoms, water, electric, gas
- Highway access

For environment these were:

- Surface water environment (water quality)
- Surface water environment (hydrology and drainage)
- Ecology
- Historic environment
- Air quality
- Noise and vibration
- Landscape and visual
- Geology / groundwater / contaminated land
- Soils and land use

Gradings were as follows and the table below summarises the findings for each site:

- Green – any effects should be able to be mitigated through standard measures / good design
- Yellow – may be some issues but can by mitigated
- Amber – mitigation may be complicated and may not be totally effective
- Red – significant effects which cannot be mitigated. Showstopper

Table 4: Summary of Technical Appraisal results

Site Code / Name	Development	Environment
CN2 New Moat Road	All green except public utilities yellow: uncertain whether existing water, electric, gas utilities able to meet demand, potentially high costs for incoming services, certain to affect 3rd party land / public roads.	Green - Surface water (both categories) and Historic environment. Yellow - Ecology - protected species – potential for adjacent bat roosts. Air quality / Noise and vibration – potential impacts on residential properties within 20m of boundary. Geology / groundwater / contaminated land – possible geotechnical / contamination issues associated with historical landfill / infill. Soils and land use – 75% Grade 2 land, 66% Environmental Stewardship. Amber – Landscape and visual – substantial screen planting required to avoid effects on Ancient Estate Claylands LCT and local residents. Relatively high perimeter to site area may make mitigation difficult due to land-take requirements of necessary measures.

Site Code / Name	Development	Environment
CN4 Greenhouse Plantation (east) -	See CS2a below – merged to form western part of site.	Green - Surface water (both categories), Air quality, Noise and vibration, Geology / groundwater / contaminated land. Yellow – Historic Environment – proximity to Leiston Abbey / potential for settings impacts. Landscape and visual - substantial screen planting required to avoid significant effects on Ancient Estate Claylands LCT, local residents and Leiston Abbey. Small size and linear form of site plus adjacent roads may make mitigation difficult without reduction of site's capacity. Soils and land use – Environmental Stewardship Agreement. Amber – Ecology – woodland to west may support bat foraging / development may interrupt bat flight lines (including Barbastelle).
CN7 New Theberton Grange (South)	Yellow – potential requirement for major service diversions; uncertain whether existing water, electric, gas utilities able to meet demand, potentially high costs for incoming services, certain to affect 3rd party land / public roads. Highway access – need to reduce 4.5m junction criteria to avoid third party land. Remainder Green.	Green - Surface water (both categories). Yellow – Ecology – adjacent woodland may support bat roosts / foraging. Historic environment – proximity to Leiston Abbey (Scheduled Monument plus Listed Buildings/ English Heritage guardianship site), Theberton House (Grade II*) and Hill Farmhouse (Grade II). Air quality / noise - potential impacts on residential properties 20m NW of boundary, 260m to S, Theberton Grange. Landscape and visual - substantial screen planting required to avoid effects on Ancient Estate Claylands LCT / local residents / Leiston Abbey. Relatively compact site means mitigation achievable but would reduce capacity of the site. Geology / groundwater / contaminated land – existing abstraction licences in close proximity – potential impacts on quality / quantity. Abstractor probably has "riparian" protected user rights. Soils and land use – 95% Grade 2 land, 75% Environmental Stewardship.
CL1 Land at BEGL Sports and Social Club, Leiston	Yellow – plot size - some 4 storey blocks may be required; potential requirement for major service diversions; uncertain whether existing water, gas utilities able to meet demand, potentially high costs for incoming services, certain to affect 3rd party land / public roads. Highway access – need to relax speed limit to 40mph to avoid need for third party land. Remainder Green.	Green - Surface water (both categories), Ecology, Historic environment, Air quality, Noise and vibration. Yellow - Geology / groundwater / contaminated land – several abstraction licences in very close proximity (nine, 12-13m from site) – potential impacts on quality / quantity. Abstractor probably has "riparian" protected user rights. Soils and land use – Environmental Stewardship and Organic Stewardship agreements. Amber – Landscape and visual – potential significant effects on local landscape character (Estate Sandlands); south eastern part of site is in Suffolk Coast and Heaths AONB (open fields so not landscape impact but lighting impacts), potential significant visual effects on local residential properties.
CL2 Former Pig Farm (East of Railhead) - Merged into CL1 above		

Site Code / Name	Development	Environment
CS2a New Upper Abbey Farm (North)	Yellow – plot size - some 4 storey blocks may be required. Surface water disposal – ground permeability potentially low limiting opportunities for surface water disposal. Uncertain whether existing water, electric gas utilities able to meet demand, potentially high costs for incoming services, certain to affect 3rd party land / public roads. Remainder Green.	Green - Surface water (both categories) and Historic environment. Yellow - Air quality / Noise and vibration – potential impacts on Upper Abbey Farm and nearby residential properties, users of PRoW. Geology / groundwater / contaminated land – existing groundwater abstraction licence. Soils and land use – 20% Environmental Stewardship Agreement. Amber – Landscape and visual – substantial screen planting required to avoid effects on Ancient Estate Claylands LCT, Estate Sandlands LCT, Upper Abbey Farm and PRoW / regional cycling route. Presence of Upper Abbey Farm and adjacent roads may make mitigation difficult without considerable reduction of site's capacity. Ecology – proximity to protected sites and known Barbastelle bat commuting zones and roosts, Natterer's bat roost close to site (Leiston Abbey), bunker in Leiston Old Abbey woodland is hibernation site for bats.
CS4 New Lover's Lane (South)	Yellow – uncertain whether existing water, gas utilities able to meet demand, potentially high costs for incoming services, certain to affect 3rd party land / public roads. Highway access – need to relax 4.5m junction criteria and / or speed limit to 40mph to avoid major tree loss. Remainder Green.	Green - Surface water (water quality), Historic environment, Noise and vibration, Soils and land use. Yellow – Surface water (hydrology and drainage) – platform and drainage design would need to take into account proximity of flood plain, very close to NE corner of site. Ecology – Potential to disturb species within Sandlings SPA, woodland adjacent to site may support bat roosts. Air quality – proximity of ecological receptors (Leiston-Aldeburgh SSSI and Sandlings SPA within 20m to S of site, Sizewell Marshes SSSI within 100m to NE / human receptors including Halfway cottages within site boundary, private residential property 115m W. Amber – Landscape and visual – within Estate Sandlings LCT Suffolk Coast and Heaths AONB, potential visual impacts on residents and PRoW users also. Substantial screen planting would be required but incremental effect of development may not be significant in context of main Sizewell C development. Geology / groundwater / contaminated land – registered former landfill on site.
SA2 Darsham (East of A12)	Yellow – plot size – fits 270 beds only. Surface water disposal – ground permeability potentially low limiting opportunities for surface water disposal. Amber – Highway access – shared access with petrol filling station and proposed hotel. Remainder Green.	Green - Surface water (both), Ecology, Historic environment. Yellow – Air quality / Noise and vibration – potential impacts on nearby residential properties approx. 80m SE, 20m W of boundary (with garden abutting). Geology / groundwater / contaminated land – proximity of a potentially significant contaminative use (petrol filling station). Soils and land use – ALC Grade 2 land. Amber – Landscape and visual – open site, nearby residential properties likely to result in significant visual effects due to operation of night-time lighting. Small size of site likely to make screening difficult without further reduction of site capacity.

Consultation

Following the initial environmental and constraints screening exercise, the results of the evaluation were presented in a paper issued to the Councils for briefing purposes in advance of a meeting with them which was held in July 2012. This was followed by a meeting with SCDC and SCC on 26 September 2012. Along with EDF Energy and the consultants who produced the report (AMEC, RHDHV, WSP), the project's noise (Sharps Redmore), ecology (Hyder Cresswell) and landscape consultants (LDA design) were in attendance.

There were two objectives of the meeting and these were:

- to update SCC / SCDC on the work that had been undertaken to further examine the sites presented to them inJuly 2012; and
- to present the pros and cons of each site and to understand SCC / SCDC's views on the sites that were likely to be taken forward to Stage 1 Consultation.

The slides presented at the meeting set out:

- An overview of the site optioneering process.
- Sites taken forward to Step 2 appraisal
- Scope of work on development constraints
- Preliminary assessment of suitability of sites based on development and highway access criteria
- Development constraints key findings
- Scope of work on environmental constraints including full list of data sources consulted
- Key environmental findings
- Sizing criteria for campus
- Map of campus sites considered
- Summary findings on each site with potential layout drawings
- Other associated development sites in the same format, including park and rides, laydown and warehousing and freight management

The main feedback on the campus sites was:

CS2 – On-site campus

EDF Energy explained that this option now included the field to the west of the public road (which would bisect the site and needs to be kept open) which creates a plot of 34ha. The various environmental considerations were highlighted, including proximity to Upper Abbey Farm listed house and barn, Leiston Abbey, AONB and wildlife corridors. It was noted that use of this site would allow for the assimilation of Upper Abbey into use within the campus. EDF Energy explained it was very keen on this site due to the significant benefits of close proximity to the main construction area since workers would be able to walk to site thus avoiding buses. The potential for legacy use would likely be limited given its location in open countryside away from Leiston and therefore return to greenfield use would be expected.

SCC noted that lighting is likely to be the key issue – bats in nearby woodland and wildlife corridors, and proximity to Minsmere-Walberswick SPA to the north. EDF Energy agreed and stated that the eastern boundary of the site was recognised as a key constraint. Hyder Cresswell explained that part of the sizing criteria and initial consideration of site layout had been the opportunity of retaining or creating buffers / screens on the sensitive site boundaries, but agreed that lighting and noise are likely to be the key issues associated with this site. EDF Energy noted that the issues associated with

this site must be considered in the context of the main construction area which would occupy the land immediately to the east of the site.

SCC noted that access from the highway would require further consideration (albeit as part of the proposed access to the main construction area), as it would need to be big enough for AILs. SCC also asked whether any highway works could be returned to current position post-construction, but EDF Energy explained that this would be a permanent access for the main site.

SCDC noted that although currently located outside of the 2.4km DEPZ, if the DEPZ were to be extended say to 3km it would lie inside. There would be a meeting with the ONR the following week to discuss the consultation on the DEPZ. EDF Energy said that it could only consult on the basis of the current position i.e. 2.4km DEPZ and would not second-guess if, following the consultation, the ONR decide to widen or reduce it.

EDF Energy also noted that Theberton village defined the northern-most extent of the search area for potential campus sites because to site it further north would not be able to deliver the substantial reductions in traffic through the settlement that a near-site campus would.

SCC queried whether the campus accommodation transport requirements included support staff as well as construction workers. This would need to be included in transport modelling.

CL1 – Leiston East Campus

EDF Energy summarised the issues associated with this site, including requirement for a new access from Sizewell Gap, position within DEPZ, AONB, proximity to Sandlings SPA, and location of PRoW. The site is however well screened and has potential for legacy use. Even during the construction phase the recreation grounds could be made available, with a separate access through the BEGL site (i.e. without needing to go through the secured campus site). The disadvantage of this site compared to the on-site option is the need to bus workers to and from site.

SCDC queried whether this might compromise emergency services response times and noted proximity of residential areas and associated amenity issues, and the relationship with AONB and SPA as key considerations, but acknowledged the potential legacy benefits. SCC noted that the choice between CS2 and CL1 would be a key consideration for the local community. SCDC suggested that whilst CS2 would be preferable for local residents in Leiston, CL1 is likely to be preferred by the Leiston business community.

CN7 – Theberton Grange

EDF Energy highlighted that the site has the advantage of being relatively close to the main construction area, there are no direct issues in terms of statutory landscape/ecological areas and the site is outside the DEPZ. However, proximity to Theberton would be an issue in terms of lighting and other amenity effects, particularly given the open nature of the site.

EDF Energy explained that due to topography and existing screening, properties on the south side of Theberton would have views across a large part of the site that would be difficult to mitigate. Therefore, EDF Energy consider that the high amenity impacts of development on the village are unacceptable particularly when combined with the inevitable transport impacts of Sizewell C on the village.

CS4 – Sizewell Gap

EDF Energy highlighted that the site is within the AONB, DEPZ and is situated between Sandlings SPA to the south and Sizewell Marshes SSSI to the north. EDF Energy explained that the site boundary was being revised to avoid an area of unimproved acid grassland / heathland and that the plot size (45ha) would afford the flexibility for maintaining and creating

suitable buffers / screening. The site access could be to the north-west rather than to the south, as originally proposed. EDF Energy also highlighted the need to consider the site's interface with the nearby site identified for the Galloper Wind Farm infrastructure.

EDF Energy noted that this site had the potential to accommodate the proposed Visitor Centre although the rest of the site would be restored for landscape / ecological benefit.

WSP noted the potential for reducing speeds to 40mph on Lover's Lane. SCC indicated that this would require further investigation, including current speed surveys.

SCC noted that if this site were selected it could delay the delivery of the Landscape Management Plan (LMP), specifically the connectivity between the north and south, but also the integration of the Galloper site within the LMP. However, some of this habitat creation could take place in the unaffected parts of the site during the construction phase.

One SCDC attendee did not favour this site and suggested that advice to members would be to not support this site – largely due to location within AONB (which would be contrary to policy set out in EN1, EN6, the NPPF and the Local Plan). A Visitor Centre may however be acceptable in this location. A further SCDC attendee did not favour this site due to location as it lies within the 2.4km DEPZ.

SCC also noted that a key issue in considering the Galloper site has been the desire to retain a gap between the Sizewell power stations and Leiston.

SCC noted that the choice of AD sites needs to be informed by the overall landscape management plan for both the construction and legacy phases and this option would delay realisation of landscape strategy. EDF Energy stated that some areas of the site could be restored early on to help mitigate this. LDA Design advised that the landscape assessment in both the Construction Phase Masterplan and the longer-term Landscape Management Plan would consider the AD sites and the Main Site works in the round, i.e. the effects of the AD sites will not be considered in isolation.

CN2 – Moat Road

EDF Energy explained that although this site benefits from being close to the main construction area and avoids statutory landscape / ecological designations, the close proximity to Theberton is likely to lead to this site being ruled out from further consideration.

SA2 – Darsham Station

EDF Energy advised that this site does not meet the sizing criteria and, even with 4-storey accommodation, could only deliver approximately 270 beds with no scope for recreation. Access would also need to be through the petrol station. Therefore, this site would not be taken forward to Stage 1 consultation.

A joint meeting was also held with the Environment Agency and Natural England in September 2012 to discuss associated development proposals for Stage 1.

Step 2 Conclusions

Of the six potential campus sites carried forward into Technical Appraisal, only three were selected to be taken forward to Stage 1, as follows:

Table 5: Results of Step 2 site selection

Site Code	Site Name	Carried forward to Stage 1 Consultation?	
CN2	Moat Road	No	Proximity to Theberton
CN7 New	Theberton Grange (South)	No	Proximity to Theberton, other sites better located and easier to screen
CL1 including part of CL2	Land at BEGL Sports and Social Club, Leiston / Former Pig Farm (East of Railhead)	Yes	Campus Option 3 at Stage 1
CS2a including part of CN4	Upper Abbey Farm (North) / Greenhouse Plantation (east)	Yes	Campus Option 1 at Stage 1
CS4 New	Lover's Lane (South)	Yes	Campus Option 2 at Stage 1
SA2	Darsham (East of A12)	No	Does not meet sizing criteria, access constraints

6. Stage 1 Consultation November 2012 – February 2013

Campus Options

Stage 1 consultation ran from 21 November 2012 – 6 February 2013. The Stage 1 summary document explained that the project had developed initial plans for accommodating, and moving, the large number of people who would build Sizewell C, with the aim of reducing the potential traffic pressure caused by workers travelling to and from the Sizewell C development site. It went on to state that the project intends to build a 2-3,000 bed temporary accommodation campus and park and ride facilities near the Sizewell C development site to reduce the number of journeys taken by private car and that this approach would benefit workers, nearby local communities, and the Sizewell C project because:

- it would significantly reduce the amount of travel by workers going to and from the Sizewell C site
- we know from experience that a campus would be likely to be popular with our workers – a similar, smaller campus created for the construction of Sizewell B had a waiting list of people wanting to stay in it
- it would also reduce the pressure on other local accommodation
- housing our construction workers close to the site would bring efficiency and productivity gains - for example, it would make it easier for staff to work flexibly in shifts to meet particular construction needs
- workers' response times would be shorter with key personnel nearby
- a single large campus would make it easier to ensure that our workers adhere to the codes of behaviour

Stage 1 set out that the campus would consist of three or four-storey accommodation buildings, plus indoor and outdoor recreation and leisure facilities, car parking and services including waste and utilities. Land utilised was proposed to be restored to farmland after construction of SZC. Three options were consulted upon, with Option 1, the Development Site Campus (formerly described as Upper Abbey Farm (North) / Greenhouse Plantation (east)), indicated as preferred option. These were described as follows:

- Option 1 Development Site Campus [previously CS2a including part of CN4]: (preferred option) Located next to the main construction site entrance, this option would allow people to walk to work, avoiding the need for buses. This would improve the efficiency of construction and help to limit traffic impacts. The site is outside the AONB and is further away from designated ecological sites than the other two campus options. We would consider ways of bringing Upper Abbey, including the Grade II listed farmhouse and barn, into productive use within the campus. The campus design would also take account of the nearby Leiston Abbey, for example through sensitive siting and the provision of screening.

- Option 2 Sizewell Gap Campus [previously CS4]: This site is south of Sandy Lane and north of Sizewell Gap, about 2.4km from the main construction site entrance, so most people would take a bus to work. The site, which could be used for the proposed Visitor Centre as well as the campus, is within the AONB. There are also a number of important ecological sites in the local area – to the north, the SSSI, and to the south, the Leiston–Aldeburgh SSSI and the Sandlings Special Protection Area (SPA). The site would be screened from these areas.

- Option 3 Leiston East Campus [previously CL1 and part of CL2]: Located in fields to the south of the Sizewell Sports and Social Club, this site is 2.7km from the main construction site entrance, so most journeys to work would be by bus. As it is just east of Leiston, it could benefit businesses there through workers having better access to local services. A new road would be needed to reach the campus and this would lie within the AONB. The site is also in close proximity to the ecologically important Leiston-Aldeburgh SSSI and Sandlings SPA, but would be screened. Once Sizewell C had been built, there might be the potential for the outdoor recreation area to remain for local community use.

Further detail on campus layouts, specification and environmental considerations was provided in the Stage 1 Summary Consultation Document and Environmental Report. All Stage 1 consultation material is public domain and therefore further detail is not repeated here. Stage 1 documentation may be found at:

http://sizewell.edfenergyconsultation.info/szc-proposals/stage-1/

Public Response to Stage 1

Respondents to Stage 1 were asked to complete a Consultation Questionnaire. This included two questions on accommodation as follows:

4 Accommodation
During the peak construction period EDF Energy expects about 34% of the construction workforce would live at home and 66% to live in temporary accommodation in the area. We propose to accommodate between 2,000 and 3,000 workers in a temporary accommodation campus – preferably in the proposed Option 1 campus immediately adjacent to the development site.
The remaining workers are expected to live either in owner occupation, in private rental accommodation, or in tourist accommodation.

What are your views on EDF Energy's overall accommodation strategy? [space to comment provided]

5 Accommodation: Campus
We have three alternative options for the temporary accommodation campus:

a. Option 1: Development Site Campus (our preferred option)
This campus would be immediately adjacent to the Sizewell C development site, next to the site entrance on the B1122.
Do you think this option is: Appropriate / Inappropriate / Don't know [tick boxes provided].

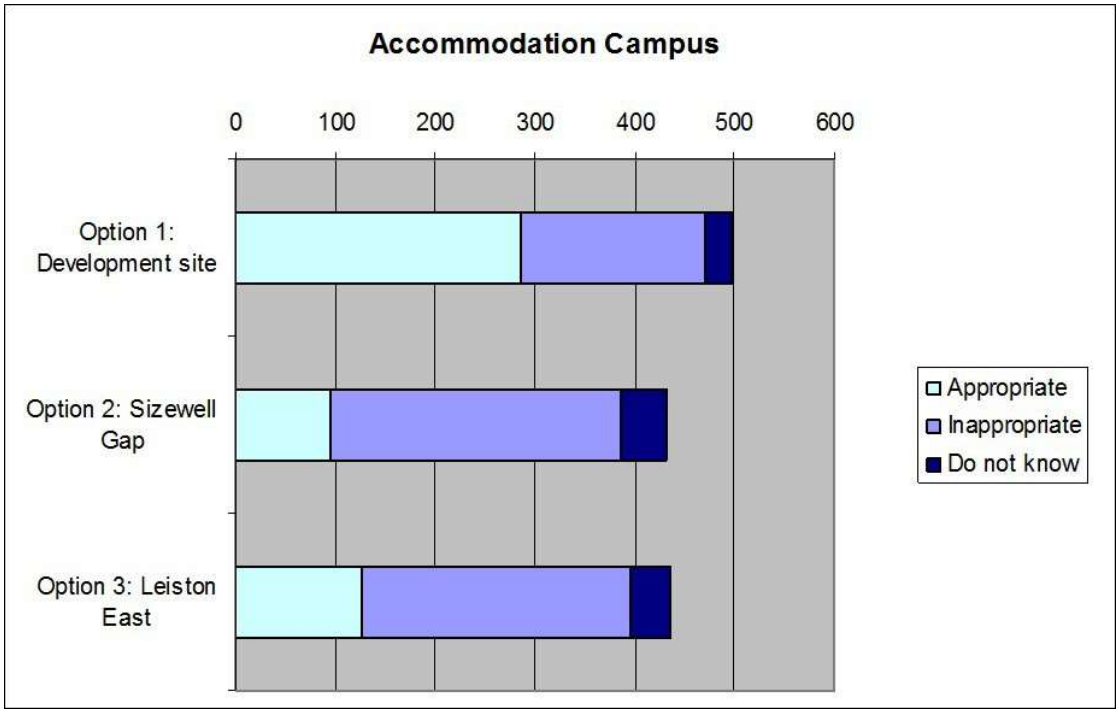
b. Option 2: Sizewell Gap Campus
This site is off the Sizewell Gap, 2.5km from the Sizewell C development site on Lover's Lane.
Do you think this option is: Appropriate / Inappropriate / Don't know [tick boxes provided].

c. Option 3: Leiston East Campus
This site is to the east of Leiston in fields to the south of the Sizewell Sports and Social Club.
Do you think this option is: Appropriate / Inappropriate / Don't know [tick boxes provided].

d. Please explain your preferences below [space to explain choices above or make alternative suggestions provided].

In general, Option 1 was viewed as the most "appropriate" site by respondents and was the only site that received more "appropriate" than "inappropriate" responses, in total more than Option 2 and 3 combined. Option 2 received the least "appropriate" responses with a similar number of "inappropriate" responses to Option 3. The graph below shows this:

Figure 2: Public feedback on campus options at Stage 1 (question 5)



Option 1

Option 1 was favoured by respondents due to proximity to the main construction site and distance from local communities. In terms of geographical distribution, there was no support for either Option 2 or 3 from residents of Leiston, Sizewell and Melton, while the majority of respondents from Saxmundham and Woodbridge chose Option 1 as most appropriate.

However, there was strong opposition to this site from the residents of Eastbridge and Theberton, with no respondents from Eastbridge selecting Option 1 as appropriate and the majority of residents from Theberton selecting it as "inappropriate". Supporting points for Option 1 mentioned by respondents included:

- Less of an impact compared to the other two options.
- Close to construction site which provides operational benefits, reduces travel for workers and local road use, traffic safety and pollution.
- Away from local communities which is seen as desirable to reduce workers visiting local communities and causing anti-social behaviour.
- Less impact on visual amenity and designated sites (outside of AONB).
- Affects fewer rights of way / footpaths.

Opposing points included:

- Transport impact as isolated workers will travel for leisure or amenity using local roads (resident and tourist impact).
- Impact of using B1122 and safety for cyclists.
- Some feel still too far from construction site to walk [thought to be due to some confusion here in relation to site entrance location i.e. current SZB site entrance versus proposed SZC site entrance location].
- Use of greenfield site/undeveloped land.
- Impact on Eastbridge and Theberton – small settlements unable to support workers due to lack of facilities.
- Size of campus overshadowing communities and concern over increase in crime and reduced quality of life for residents.
- Detrimental impact on tourism to settlements.
- Impact on landscape character and visual amenity (negative impact on adjacent AONB).
- Impact on setting of the Minsmere nature reserve and surrounding area. In particular impact on birds, habitats and enjoyment of Minsmere.
- Negative impact on visitors.
- Impact on setting of cultural heritage assets particularly Leiston Abbey, Theberton House and nearby listed buildings.
- Loss of rights of way / footpaths.
- General issues of light, noise and air pollution.
- Access to the site is unsatisfactorily sited on a bend.

Option 2

Option 2 received many "inappropriate" responses and was generally the least favoured site across all nearby residents (some of which were shared with Option 3). Strong opposition to this site came particularly from Leiston, Melton and Sizewell. Supporting points for Option 2 mentioned by respondents included:

- Leiston is close for amenity and recreation facilities and would be good for local businesses, although not as good as Leiston East.
- Construction site is close enough to walk or cycle and any traffic avoids passing through Leiston.
- Development precedent – adjacent land is being used for wind farm substation development even though in AONB and adjacent to SSSI.
- Suggestions of legacy including housing and recreational facilities.

Opposing points included:

- Located within the AONB – major adverse impact on landscape character and visual amenity.
- Use of greenfield site/undeveloped land.
- Proximity to designated sites (SPA and SSSIs).
- Impact on wildlife and disruption to wildlife corridor linking designated areas.
- Proximity to Leiston which would encourage workers to visit raising concerns of anti-social behaviour and impact on quality of life for community.
- Increased traffic from workers driving to site and associated noise impact.
- Impacts on access to Sizewell village, including for tourists.
- General issues of light and noise pollution.
- Impact on bridleway / right of way.

Option 3

Option 3 received more "appropriate" responses that Option 2 but a similar number if "inappropriate" responses. As with Option 2, strong opposition to this site came particularly from Leiston, Melton and Sizewell with no respondents from these locations supporting the site. Supporting points for Option 3 mentioned by respondents included:

- Good balance between distance from construction site and near to communities for leisure and amenity.
- Suitable for legacy due to proximity to Leiston. Legacy such as housing, recreation or employment.
- Edge of town development so minimises impact on countryside, wildlife and designated sites.
- Use of recreational facilities by local people during construction.
- Option benefits local businesses the most.
- Workers can travel to site by bus / walk and avoid travel through Leiston.
- Potential for use of rail for workers using a passenger service to site / wider area.

Opposing points included:

- Too close to Leiston and local schools.
- Negative impact on use of local facilities and anti-social behaviour.
- Increase in traffic as site far enough away to encourage workers to travel by car.
- Impacts on designated sites and partly within AONB which would impact landscape character.
- General change character of the area (semi-rural).

Accommodation Strategy Overall

There was general overall support for EDF Energy's proposed accommodation strategy. Of those who responded to this question, 60% supported the approach, 21% supported with caveats and 19% opposed. In Eastbridge and Theberton the majority of respondents opposed the strategy. However, actual numbers of responses were low (259 respondents in total to this question, of which 49 opposed the strategy) so it is not known how these figures reflect the view of those communities overall. General supporting points on including a campus in the accommodation strategy included:

- Campus will mitigate impacts of large workforce in rural community. Some wish to maximise number of workers in campus accommodation.
- Locate campus as close as possible to construction site (Option 1 or closer) to reduce travel for workers.
- Campus accommodation would reduce traffic on local roads.
- Benefit local businesses.

General opposing points included:

- Concerned by number of workers brought to area relative to current population of nearby towns and villages. Social, environmental and transport impacts.
- Social impacts from anti-social behaviour (particularly drunkenness), crime and demographic changes (predominately male, young and single workforce).
- Issue of integration of workforce with local population.
- Lack of amenity and recreation facilities in the area.
- Impact on services (health, education, policing and refuse). EDF Energy should plan for additional resource and contribution.
- Traffic impacts of workers travelling off-site either at end of working week or for leisure or services in nearby settlements.
- Negative impact on businesses due to tourism impact from presence of campus.
- Visual impact of campus – some felt multi-storey buildings are inappropriate in the area.

In terms of campus location there were opposing views. Some indicated a preference for campus to be located away from communities to reduce anticipated negative impacts. Conversely, some suggested the campus should be built within or close to existing communities to integrate workers and benefit from proximity to local amenities and businesses.

Feedback on campus design and facilities called for the campus to be built to a high quality of design and to high standards for resident's comfort and energy efficiency. Some felt that the campus should include specially designed properties for workers not suited to campus-style accommodation, including those with families. The need for recreational facilities, general amenities and services (particularly healthcare) on the campus site to improve worker's living experience and reduce tendency for workers to leave campus and use nearby services was raised along with concerns about the capacity of local services to cope with a significant increase in users.

Worker behaviour was mentioned, including the need to regulate worker behaviour through codes of conduct to manage behaviour both on and off-campus and to put in place adequate security arrangements.

There was a call to maximise potential for legacy benefits for the community from the campus site. Suggestions included affordable housing, student accommodation, tourist and recreation facilities. However, some felt building a campus for 3,000 workers would impair the project's ability to achieve this and some expressed a preference for the campus to be a temporary development, removed once construction was complete.

A number of comments on alternative strategy were received and these included use of multiple smaller campuses rather than one single site campus because respondents felt:

- This might reduce impacts on local community, infrastructure and environment.
- a single campus is too large in relation to local communities and scale might exacerbate anti-social behaviour.
- smaller campus sites could be built within or near to existing communities.
- this would create sites more suitable for legacy.
- some suggested Leiston East could be suitable as part of this strategy.

Some respondents proposed alternative sites including:

- within or near to towns large enough to provide leisure or amenity for the workers, e.g. larger towns of Ipswich and Lowestoft.
- use of brownfield sites.
- locations suggested include Saxmundham, Lowestoft, Ipswich, Great Yarmouth, Woodbridge, Wickham Market and Leiston.
- further away in order to encourage greater use of the park and ride facilities.
- using land EDF Energy already own.

Key Stakeholder Responses to Stage 1

The table below grades the Statutory and other Local Stakeholder responses to Stage 1. A summary of the content of their responses is provided in Appendix 2.

Red indicates significant issues raised and where mitigation may now overcome these impacts.
Amber indicates significant issues raised but consultee recognises some form of mitigation may reduce impact.
Yellow reflects concern relating to particular issues.
Green is preferred or least bad option.

These show a less clear preference for one site with both Option 1 and 3 securing four red gradings and three green gradings each. Option 2 is less preferred with only one green (where in fact Pro Corda did not express a view on this site at all) and eight red gradings.

Table 6: Key stakeholder response to campus options at Stage 1

	Option 1 Development Site	Option 2 Sizewell Gap	Option 3 Leiston East
SCC / SCDC (Joint Local Authorities Response)			
English Heritage (now Historic England)			
Environment Agency			
Natural England			
Leiston-cum-Sizewell Town Council			
Aldringham-cum-Thorpe Parish Council			
Sizewell Parishes Liaison Group			
Suffolk Coast and Heaths AONB			
RSPB			
Sizewell Residents:			
Pro Corda			
Office for Nuclear Regulation (ONR)	No preference given		
Suffolk Resilience Forum			
Theberton Parish Council			

7. Post Stage 1 Preferred Site Selection

Following Stage 1, EDF Energy reviewed the campus sites that were put forward for development at Stage 1 Consultation, with the aim of identifying a preferred site for geotechnical investigation and preliminary design ahead of Stage 2 consultation. As well as considering Options 1, 2 and 3, further consideration was given to issues raised in relation to accommodation strategy including a multiple versus single site campus strategy and locating a campus or campuses in larger towns such as Ipswich or Lowestoft.

Decision making criteria

Each of the campus site options was assessed against a set of criteria across a variety of topic areas to help identify the most preferred site option for undertaking the boreholes, site investigations and progressing the preliminary design. The following topic areas were identified for assessment.

- Consultation
- Engineering and Operational Considerations
- Environmental Considerations
- Transport
- Community
- Land Interests
- Land Use
- Planning Strategy and Policy

The paragraphs below summarise the findings of each of the topic areas.

Consultation Responses

Option 1 was clearly favoured over Options 2 and 3 by respondents to the Consultation Questionnaire due to its proximity to the main construction site and distance from local communities. However, there was no local neighbour support for this option and statutory and other local stakeholder organisations were divided as to their preference between Options 1 and 3. Option 2 was least favoured by statutory and other local stakeholders.

Responses to Stage 1 indicated that there are environmental considerations to be managed for all Options and a strong rationale for a single site campus would be needed. It was also clear that whichever site was chosen, there would be community concerns. Additional detail on consultation responses is provided in the Stage 1 section above and in Appendix 2.

Engineering and Operational Considerations

Option 1 was selected as the preferred site as it would be more efficient in terms of reduced travel time between the campus and construction site and therefore increase productivity, and would have the lowest capital and operating costs. Option 1 would also allow for tie in with the main construction site and the sharing of infrastructure such as utilities and access road.

However, Option 1 is the most constrained site of the three sites in terms of layout and, at the time of decision making, there was a potential risk presented by the blue rail route option which also required land take in that location. Options 2 and 3 were considered less desirable when compared with Option 1.

Costs are commercially confidential and therefore are not provided in this note. However, in order to illustrate the potential differential between options, an indication as to projected uplift in costs is provided in Appendix 4. This sets out the %

difference between the costs of locating a campus in Leiston versus the main development site, as well as the of one 2000 bed campus versus two 1000 bed campuses. Further detail on the rationale for a single versus multi-site campus us set out in the Case for the Development Site Campus section below.

Overall, Options 2 and 3 were considered less desirable when compared with Option 1.

Environmental Considerations

Option 1 was preferred because it is the only site that lies outside the AONB and is also furthest away from European designated ecological sites so is unlikely to raise any HRA issues. Impacts on the setting of the AONB would need to be considered but any impacts would be temporary and would be moderated by the construction area which would adjoin the campus. However, there could be significant cumulative effects of this option in-combination with other aspects of the project especially in relation to ecological (bats), historic environment (Leiston Abbey) and amenity receptors. Although the impact of the campus taken together with other elements of the development in this area would need to be given careful consideration, especially in respect of the setting of Leiston Abbey, an initial judgement was made that given the intervening features and distance separation between the Abbey and the development, along with the temporary nature of the majority of the elements, it is unlikely consent would be refused.

Option 2 would be least preferred as it is located entirely within an AONB and close to European designated sites. The cumulative impact of this option on the AONB in the context of the project as a whole would be a major issue. Option 3 is partially located within the AONB (campus site access road) and is close to European designated sites. Of all three sites this one has the highest potential HRA risk. If potential disturbance effects were found to be significant, this would require consideration of alternative sites which would favour Option 1 on HRA grounds alone. Environmental considerations are set out in Appendix 3 while Appendix 2 includes stakeholder comments on environmental issues.

Transport

All sites have a benefit in supporting the transport strategy by reducing traffic movement and being located close to the construction site. Option 1 is the preferred option in transport terms as there is no traffic associated with daily movement of campus residents to and from the construction site. However, due to its rural location, there may be local traffic movements associated with the workers seeking alternative amenity and recreational facilities other than those provided on-site, and in association with workers travelling to/from the campus at the beginning and end of the working week. Options 2 and 3 would require bus transport on Lover's Lane and part of the B1122 with associated costs and traffic impacts. Additional detail is provided in Appendix 3.

Community

All options have potential community issues but Option 1 has the benefit of reducing transport impacts. Good quality campus accommodation would encourage workers to remain on the campus site. In addition, the management of worker behaviour (via a Code of Conduct) would help to mitigate community issues. Potential cumulative impacts in-combination with the wider project development proposals would need to be considered, particularly with regard to Leiston Abbey (as a heritage asset and business (Pro Corda)), and proximity to Theberton and Eastbridge. Additional detail is provided in Appendix 3.

Land Interests

The east field of Option 1 was already in EDF Energy ownership. It was noted that there may be a need to pursue access via section 53 of the Planning Act 2008 to the west field in order to undertake ground investigations and environmental studies (and this later proved to be the case). Option 2 was already in the wider EDF Energy ownership. Option 3 was entirely third-party land. Additional detail is provided in Appendix 3.

Land Use

Option 2 would open up new land for development in the rural area which would be considered inappropriate. Option 1 benefits from its location adjacent to the construction site and in terms of confining land use impacts to one area in the locality. This location would be seen as an advantage over those separate from the main construction site. Option 3 benefits from its location adjacent to an existing settlement (preferable in policy terms); however, the site is still 'once removed' from Leiston and the footpath/bridleway network is valued locally for amenity use. Additional detail is provided in Appendix 3.

Planning Strategy and Policy

On balance Option 1 would be preferred from a national policy perspective albeit issues around historic environment and landscape and visual impacts would need to be addressed. Option 2 would be least favoured based on the local policy for sites within an AONB. Due consideration would also need to be made to this policy context for both Options 1 and 3 although to a lesser extent based on proximity/setting. Additional detail is provided in Appendix 3.

Using the criteria identified for assessment, the following table sets out the relative level of constraints identified for each site, using a colour coding "traffic light" system.
Orange (4) – Significant constraints exist.
Amber (3) – Constraints exist.
Yellow (2) – Some minor constraints exist.
Green (1) – No constraints exist at this time

Table 7: Constraints table for post-Stage 1 decision making criteria

	Option 1 Development Site	Option 2 Sizewell Gap	Option 3 Leiston East
Consultation	3	4	3
Engineering and operational	2	4	4
Environment	3	4	4
Transport	2	3	3
Community	3	3	3
Land interests	3	1	2
Land use	2	4	3
Planning	3	4	3

Preferred campus site

Option 2 (Sizewell Gap) was considered to be the least preferred location for the campus due to the constraints identified. The benefit of the land being owned by EDF Energy was not regarded sufficient to outweigh the constraints on this site.

Of the two remaining sites, Option 1 (Development Site) had the least number of constraints compared to Option 3 (Leiston East). Option 3 also had significant costs associated with transportation/travel time. Therefore, Option 1 was proposed as

the preferred site on which to undertake geotechnical investigations and additional environmental studies, in order to develop a preliminary campus design ahead of Stage 2 consultation.

Rationale for an On-Site Campus

Workforce Preference

Experience from other projects, including feedback from Tier 1 contractors at Hinkley Point and Sizewell B (construction and outage workers), indicates that non-home-based workers will wish to minimise their travel time to site. This is both because workers typically commute long distances home to families at the weekends / end of shift periods and because shift lengths will be long, reducing workers' willingness to travel long distances.

The project needs to attract and retain a high-calibre non-home-based workforce, in competition with other projects. A high-quality campus with comprehensive facilities and direct access to site will be a key element in attracting the best workers and meeting their accommodation needs.

Traffic and Transport

EDF Energy considers that an on-site campus would be strategically the most favourable as it would remove, or significantly reduce, reliance on car or mini-bus travel for workers to get to and from the SZC construction site.

Costs

An on-site campus would be lower cost due to synergies with establishment of the main development site construction area and the opportunity to share facilities such as utilities and security. Busing costs of workers for off-site campus locations would also be avoided (see Appendix 4).

Availability of Key Workers

An on-site campus would benefit the construction by allowing for a rapid and effective response to any on-site issues or incidents. It would benefit night shifts or those working irregular unsocial hours and assist through periods of construction which require intensive work e.g. concrete pours. This position was ratified by the preferred HPC Civil Contractor during the HPC examination process.

Improving Welfare

Reducing journey time to work would minimise the effective length of the working day and maximise worker time for rest and leisure, therefore improving welfare and reducing tiredness, which should in turn increase productivity and reduce the risk of accidents. Avoiding workers having to drive home after long shifts (either directly or from park and rides) would also reduce the risk of road traffic accidents.

Experience from HPC and SZB

SZB provided a successful on-site campus during construction, for which there was always a waiting list. Additionally, there was a request for an on-site hostel providing 400 spaces, which could be increased to 700 spaces as part of the previous Hinkley Point C proposals. In 1990, the Inquiry Inspector stated that there were common sense advantages for a hostel to be located adjacent to the construction site as this would be considerably more convenient for the occupants and the site operator, and would reduce traffic on the roads. The Inspector weighed the advantages of an on-site hostel against the possible impacts, including concerns about disturbance to local villages, and concluded that the benefits in providing accommodation for construction workers on-site were tipped in favour, so long as it is properly managed.

In response to PINS questions, as part of the HPC Examination stage, EDF Energy set out its position for the requirement for an on-site campus. The response detailed the significant operational benefits an on-site campus would bring as well as positive transport and sustainability benefits and the relief of pressure on local accommodation, particularly in nearby villages.

In the PINS recommendation report to the Secretary of State (December 2012), in relation to campus size, they concluded that:
"Whilst we are less sure as to whether the size of the campuses proposed is the optimum, we have no evidence to the contrary. Overall, given that there are inevitably significant uncertainties regarding the amount and availability of alternative accommodation, our view is that the proposals are appropriate" (para. 4.143)

In relation to the question of whether there is an overriding operational benefit of workers living on the site, which would outweigh the potential negative effects, PINS stated that:

"As to this matter, it seems to us, that firm evidence to support the 510 bed spaces proposed is lacking. We do not find this surprising but accept that, in general terms there would be significant advantages for the project in housing workers as close as possible to the site. In that way they would be readily available at short notice to tackle any emergencies that arise, and undertake 'out of hours' tasks. The time they would spend travelling to work would be reduced. Whilst this would no doubt be offset in part by an additional need to travel when not working between the site and other nearby centres for leisure and other purposes, it nonetheless seems to us that overall there would be a net reduction in vehicle movements. This would accord with Government's policies on sustainability." (para. 4.231)

PINS were also convinced that worker behaviour would be adequately controlled through the Worker Code of Conduct (para. 4.140).

Rationale for a Single Site Campus

Socio-economic

A number of respondents to Stage 1 suggested that several smaller campuses be used, rather than one single campus, on the basis that social and community impacts may be lowered and economic benefits and legacy opportunities increased. EDF Energy considered this feedback and concluded that, in theory, multiple campuses should enable the economic benefits of the campus-based construction workforce to be distributed among a larger number of communities. This should be more sustainable as existing local facilities should be better able to cope with a lower number of workers. Similarly, local communities should be better able to incorporate a lower number of workers, decreasing social impacts and increasing the likelihood of community cohesion (i.e. workers integrating with existing residents). However, these arguments may not apply for Sizewell C because:

- Due to the small size of the communities in proximity to the Sizewell C Development Site, it is unlikely that EDF Energy would be able to reduce the campus size sufficiently to create the above benefits. For example, the villages of Eastbridge and Theberton combined only have a population or around 400 people. This means that even the smallest Hinkley Point C campus of 150 people (Bridgwater C, which is now not being built but incorporated into the larger Bridgwater A campus) would represent a significant population increase of nearly 40%.
- Socio-economic assessments of the anticipated distribution of non-home-based workers not in campus accommodation have indicated that they will choose to live close to the site, with concentrations particularly in urban areas such as Leiston and Saxmundham. This means that economic benefits will be shared around different

communities but also that social impacts may occur and require mitigation. Adding campus accommodation to these locations would more likely exacerbate any adverse impacts than provide additional benefits over and above that delivered by workers living in tourist, private rented or owner-occupied accommodation.

Worker Behaviour

A single development site campus would allow EDF Energy to provide the most flexible and attractive accommodation offering to potential employees with good quality facilities to encourage them to remain on site. Having all campus workers in one place should also make it easier to ensure to manage worker behaviour and enforce the Code of Conduct. It also provides opportunities for an on-site police presence and provision of other facilities such as a visiting GP which would not be practical if workers were spread out across multiple campuses. Only having to implement one travel and security plan for campus should also make implementing these more effective.

In turn, this should mean fewer problems, in terms of worker behaviour and community disruption, are encountered. Retaining a place in campus is likely to be a strong incentive to behave both on and off campus and the more convenient and attractive the facility, the more this should be the case.

Costs

Appendix 4 shows a percentage cost comparison between a single development site campus of 2000 people and two 1000 bed campuses off site. This shows there are significant cost savings associated with a single site campus, both in terms of capital costs and operational efficiencies. The cost differential would increase if several smaller campuses were built, which would reduce the economic viability of the project as a whole.

Rationale for Not Locating a Campus in a Large Urban Centre

Some of the Stage 1 consultation responses suggested that it would be better to locate some campus accommodation in larger urban areas where services would be better able to cope with the large influx of people and where the campus accommodation could offer more legacy potential. One variant of this proposed was that EDF Energy should consider a smaller on-site campus along with a further campus or campuses in larger urban areas.

Difference between HPC and SZC

In theory this approach sounds sensible. However, the nearest large towns of Ipswich and Lowestoft are located around 42km and 50 minutes' travel time away from the Sizewell C Development Site and are therefore too far from site to be considered attractive by workers. This is a key difference between HPC and SZC in that there is no equivalent settlement to Bridgwater close to Sizewell, where additional worker accommodation could be more sustainably located. Therefore, the HPC strategy of a small campus on the development site with additional campus accommodation in a larger urban area does not translate to Sizewell C.

Effectiveness of Campus as Mitigation Measure

The campus is designed as mitigation for the influx of non-home-based workers into the area during Sizewell C construction; provision of project accommodation should relieve the pressure on existing local accommodation and avoid displacement of tourists and local residents. This will only be effective if workers actually use the campus, not if it is almost empty because workers have chosen to find accommodation closer to site. One way round this might be to compel contractors to take campus accommodation. However, the extended travel time might:

- Deter workers from joining or staying on the Sizewell project.
- Decrease project efficiency due to the extended length of the working day.

- Create industrial relations issues with workers demanding payment for travel time. This would be exacerbated by the presence of an on-site campus as it would create differences in the way different workers were treated.
- Significantly increase costs if travel time had to be paid for (see Appendix 4 which assumes only a 2.5km journey).

Legacy

At the time of site selection, it was not possible to include proposals for permanent housing within the Development Consent Order application and the Planning Inspectorate (PINS) would only consider the merit of the proposals presented to them and not any potential future uses.

Although this has now changed, with the concept of "related housing" being added by the Housing and Planning Act 2016, it is still considered unlikely that a development in Ipswich or Lowestoft would have any more legacy potential than one closer to the Sizewell C Development Site. This is because the nature of accommodation that would be provided for construction workers would be different from that required for permanent housing.

At HPC, the Bridgwater A campus is intended to be dismantled and the land sold for housing post-construction. However, the use of this land for housing did not come about as result of the choice of the Bridgwater A proposals, rather the site is located on the south-western corner of the North East Bridgwater development site where planning permission has already been granted in 2010 for 2,000 homes, employment uses and related development. At the time of DCO submission (October 2011), it was not considered that the campus would conflict with the local authorities' long-term objectives for housing on this site as the remainder of the area would be developed first. This is now well underway with around 50% of the total homes either complete or under construction.

Bridgwater C campus was identified as having potential legacy use for Bridgwater College student accommodation. However, this was not progressed and on 17 October 2017 a non-material change to the DCO was granted permitting the removal of the Bridgwater C accommodation campus from the scope of the HPC project and the addition of 136 bed spaces to the Bridgwater A campus. The Application Statement, published on 31 January 2017, explained that consolidating campus accommodation in Bridgwater onto a single site has advantages to the project in terms of logistics, transportation, security and safety.

Cost

The same cost issues as apply to a single versus multi-site strategy apply here but amounts would increase significantly due to distant from site, particularly for busing. The risk of having to pay worker travel time to work would also increase. % cost increases in Appendix 4 relate to a 2.5km journey from Leiston only so substantially underestimate the increase in a cost of a campus in Ipswich or Lowestoft.)

Community Forum – 27 March 2014

Following Stage 1, a Community Forum was held on 27 March 2014 at which it was explained that the project intended to progress with its preferred option, Option 1 Development Site Campus. Option 2 was discounted and Option 3 was to be kept in reserve. It was explained that:

- The project needs to attract and retain a high-calibre non-home-based workforce, in competition with other projects.
- A high-quality campus with comprehensive facilities and direct access to site will be a key element in attracting the best workers and meeting their accommodation needs.

In response to some feedback suggesting that several smaller campuses be used, the rationale for a single site campus was set out as follows:

- Allows EDF Energy to provide the most flexible and attractive accommodation offering to potential employees with good quality recreational facilities to encourage them to remain on site.
- Makes it easier to ensure that our workers adhere to a Code of Conduct.
- Economies of scale – capital cost and operational efficiencies.
- Significant cost to project is there were to be more than on campus site: £millions.

The benefits to the project of the Development Site Campus were explained as follows:

- Most convenient and popular location for workforce – will help EDF Energy attract and retain high calibre workforce.
- Increased productivity and efficiency through minimising effective length of working day,
- Delivers operational efficiencies.
- Accessibility of workforce e.g. nightshift, concrete pours.
- Avoid any traffic arising from campus residents' daily commute.
- Capital and operation cost of campus remote from construction site: £millions.

Community Forum members raised a number of questions and concerns in response to this and the project's response to these are set out in the Minutes which are available at:

http://sizewell.edfenergyconsultation.info/wp-content/uploads/2016/01/Sizewell-C-Community-Forum-March-2014.pdf

Pre-Stage 2 Consultation

Consultation was undertaken with a variety of stakeholders ahead of Stage 2, including with SCDC / SCC, local community groups, statutory stakeholders for ecology, landscape and design (including AONB) and historic environment (Leiston Abbey). Geotechnical site investigations were undertaken, as well as additional environmental surveys. A preliminary design was drawn up, including sub-options and presented in Stage 2.

8. Stage 2

Stage 2 consultation ran from 23 November 2016 – 3 February 2017 and the Consultation Summary Document set out::

- Campus location - we have identified the main development site as our preferred campus location and are consulting on layout and access options. We are not taking forward the other sites proposed at Stage 1 consultation.
- Campus size - we have reduced the size of the accommodation campus to up to 2,400 bed spaces, from a maximum of 3,000 proposed at Stage 1.
- Temporary caravan accommodation - we are proposing use of land east of Eastlands Industrial Estate in Leiston as an option for a temporary caravan park during construction.

Stage 2 explained that a single campus within walking distance of the construction area would play an important role in attracting a high-quality workforce, while meeting worker needs and helping manage worker behaviour and impacts on the wider community. This approach would also bring economic benefits for local businesses supplying goods and services to the campus. The single, on-site campus would help to address concerns about potential adverse effects in relation to the off-site options presented at Stage 1 consultation. It would:

- Reduce the number of journeys on local roads
- Reduce pressure otherwise placed on tourist and private rented sectors
- Allow flexible working patterns and out of hours working that would be necessary to maintain construction productivity and progress

Concerns expressed by nearby communities both during and after Stage 1 consultation were recognised and it was suggested that with careful landscaping and design, a facility for the temporary workforce would be created with a clearly defined separation between the main development site and neighbouring villages. Two main options, one with two sub-options, were presented and these were:

	Option 1: East and west of Eastbridge Road	Option 2: East of Eastbridge Road only
Campus location	Campus east and west of Eastbridge Road.	Campus on the east side of Eastbridge Road only.
Buildings	Modular accommodation buildings - three storey buildings to the west and four storey buildings to the east.	Three, four and five storey modular accommodation buildings on the east side of Eastbridge Road.
Parking	Single deck car parks and areas between the accommodation buildings.	Double deck car parks and areas between the accommodation buildings.
Amenities	Sports pitches and related facilities - to the east of Eastbridge Road and outside the campus perimeter fence.	Option 2(i): Sports pitches and related facilities in a similar location to those proposed for campus option 1. Option 2(ii): Facilities would be remotely located (at a site to be identified). We encourage you to provide site suggestions in your consultation response.
Access	Directly off the proposed B1122 site entrance roundabout.	Directly off the proposed B1122 site entrance roundabout.
Eastbridge Road	A diversion to Eastbridge Road would allow the closed section of the existing road to be used by the workforce as a pedestrian link through the site.	Eastbridge Road would remain in use with a new link into the main development site roundabout.

Further detail on campus layouts, specification and environmental considerations was provided in the Stage 2 Consultation Document. All Stage 2 consultation material is public domain and therefore further detail is not repeated here. Stage 2 documentation may be found at:

http://sizewell.edfenergyconsultation.info/szc-proposals/stage-2/

In response to Stage 2 consultation, the Joint Local Authorities response included the following:

"While the Council's understand the rationale of an accommodation campus located at or close to the construction site, we remain concerned about the environmental impacts of the proposed site location, which may cause overload on the sensitive environment of the AONB. The Councils expect a review of potential alternative sites for the accommodation campus, to consider whether or not there are credible alternative sites in proximity to the development a site, which may be considered to have less environmental impact, more legacy potential and/or better community integration."

EDF Energy considers that a thorough review of alternative sites was undertaken ahead of Stage 1 consultation. Although this was undertaken a number of years ago, the reasons for discounting sites at the time remain equally valid today and therefore the project does not consider that the site selection process needs to be re-opened.

9. Suffolk County Council's Accommodation Campus Report

Following Stage 2, Suffolk County Council published a "Sizewell C Accommodation Campus Study" (dated 21.6.17). This was introduced by the Council as follows:

"... the Council is aware of concerns in the local area about the impact on the local communities and environment of the current proposals and considers that there should be a further examination of the suggested location for the development of a campus. In order to further this consideration, the Council has commissioned consultants (Boyer – with Cannon Engineering) to look at whether there are possible other options that would meet EDF Energy's criteria for the location of such a facility but also take into account wider planning objectives".

Boyer / Cannon set out that the purpose of their review was to evaluate the preferred accommodation campus proposed by EDF Energy at Stage 2 and also to assess whether there are "any sites that might be genuine alternatives that would be better placed to accommodate the campus development".

Site Selection Criteria

Boyer / Cannon considered sites using their understanding of EDF Energy's criteria and other criteria considered relevant by Suffolk County Council. These criteria were not discussed or agreed with EDF Energy ahead of the review being undertaken.

The "EDF Energy criteria" set out by Boyer / Cannon in 5.14 and 5.15 of their report were as follows:

- Main criterion – to allocate a site that best meets the strategic needs of the project, whilst avoiding or reducing likely significant effects
- Other criteria - proximity to construction site (for the convenience of workers, efficiency of operation and significant benefits in terms of limiting impacts on local communities)
- the ability to get their construction workers to and from the construction site swiftly and efficiently
- the desire to avoid and reduce potential adverse environmental effects

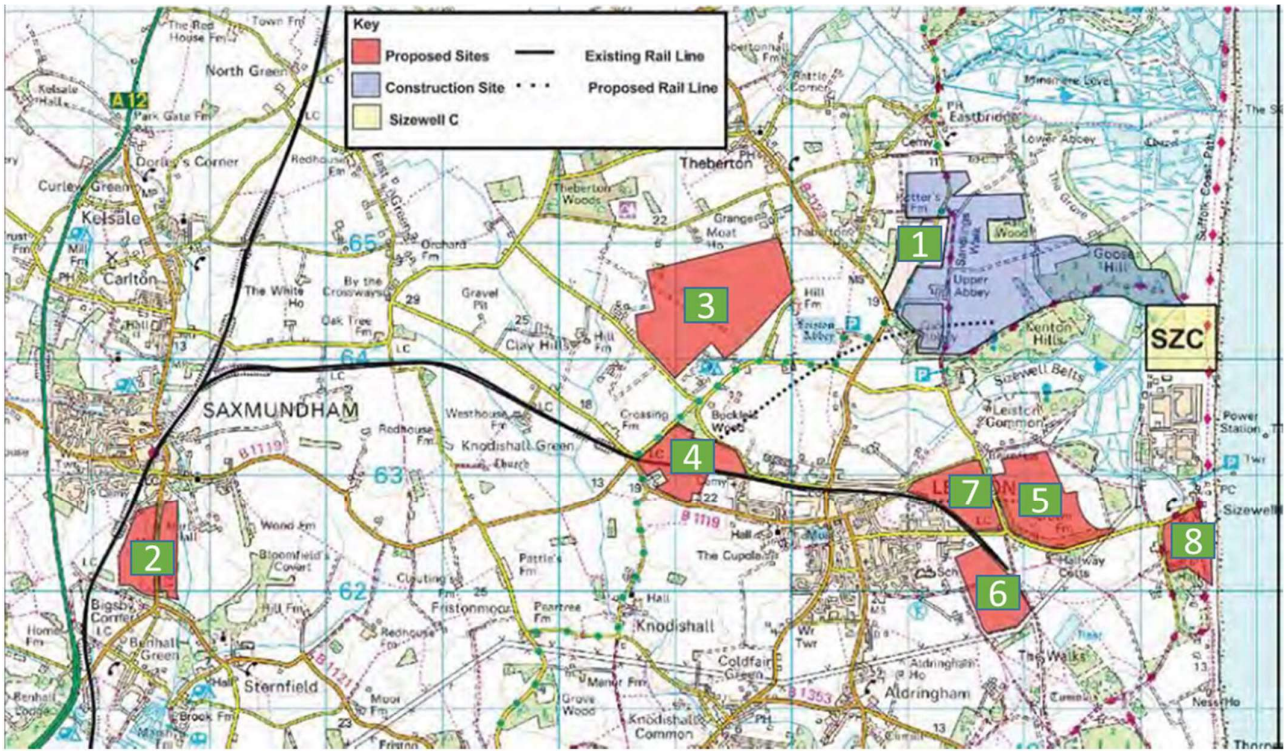
The additional criteria set by Boyer / Cannon and agreed with Suffolk County Council were:

- Environmental Impacts – 5.27 explains that sites were "considered against their distance from designations including Areas of Outstanding Natural Beauty (AONB), Special Landscape Areas (SLA) and whether there were any Public Rights of Way routes through the site".
- Transport Impacts – 5.28 sets out that sites in close proximity to the construction site were considered likely to have a reduced transport impact on existing road networks and users while sites located in close proximity to existing settlements were also positively assessed as they would reduce non-work-related trips to access facilities.
- Legacy Potential – 5.29 states that "sites were assessed positively on the basis that they would have the potential to be developed in the future" e.g. road network, utilities provision, specific buildings or facilities such as sports provision.
- Community Effects – 5.30 explains that "the proximity of sites to existing settlements has been reflected positively". The report considers that this would increase integration, encourage workers to have a strong association with existing settlements and increase their respect for the area "thus overcoming previous community issues which were experienced during Sizewell A and B". The report acknowledges that this view may not be shared by everybody (and indeed feedback from Stage 1 would suggest this view may not be shared by some local communities).

- Amenity Impacts – 5.31 sets out that this includes impacts of a site due to proximity to existing residents, including on noise, lighting and privacy. Sites which were considered to have a limited impact on existing residents were assessed positively.
- Physical Constraints – 5.32 these include size of site, watercourses, existing development which might prevent the site from accommodating development.
- Planning Policy – 5.33 explains that local planning policy was considered to assist in determining potential for future development of each site.

Boyer / Cannon's Proposed Sites

The figure below (Figure 1 from the report, with site numbers added) shows the sites considered:



Source: Sizewell C, Accommodation Campus Report, Figure 1 produced by Cannon, using Ordnance Survey map, annotated with numbers per site by EDF Energy

Eight sites were considered by Boyer / Cannon. Four of these had already been consulted on by the project at Stage 1. Where sites overlap with those presented by EDF Energy at Stage 1 and / or Stage 2 consultation and the Sizewell C project nomenclature is shown in brackets and italics:

Site 1- EDF Energy Preferred Site *(Option 1 - Development Site Campus Stage 1 / Main development site campus Stage 2)*

Site 2 – Saxmundham South

Site 3 – Leiston Airfield *(part includes Step 2 site CN5)*

Site 4 – Leiston West *(northern part includes part of green rail route)*
Site 5 – Sizewell Gap / EDF Energy Option 2 *(part includes Option 2 – Sizewell Gap Campus at Stage 1)*
Site 6 – Leiston East / EDF Energy Option 1 *(Option 3 – Leiston East at Stage 1)*
Site 7 – South Sizewell Gap / Sizewell Coast
Site 8 – Lovers Lane West (*Land to the east of Eastlands Trading Estate – shown in Stage 1 and 2*)

EDF Energy have undertaken an initial screen of the Boyer / Cannon site, including site visits to new sites proposed.

Site 1 – EDF Energy Preferred Site

The Boyer / Cannon assessment raises a number of points both positive and negative. The reasons why this site was selected are set out in this Technical Note.

Site 2 – Saxmundham South

This site is not considered a better alternative than the proposed development site campus because:

- The report identified the inability of the existing transport system to deal with the associated traffic, without the cost and potential environmental impacts of additional highway improvements.
- Suffolk Coastal District Council's initial assessment of alternative accommodation sites (not published but quoted by Boyer / Cannon) concluded that the site is "poorly related to Sizewell and, as a result, traffic impacts are likely to be more severe" and that it lacked legacy potential.
- Possible conflict with a Hopkins Homes application for 225 dwellings, including a new primary school.
- Likely significant effects on the historic environment of development in this location, including settings impacts on Saxmundham Conservation Area, the Grade I listed Church or St John the Baptist and the Grade II listed Hurts Hall and potential impacts on buried archaeology (see Secretary of State's Screening Direction for the Hopkins Homes application NCPU/EIASCR/J3530/77924 and responses to SCDC from Historic England and Suffolk County Council Archaeological Service).
- Community opposition to loss of this land, known as "The Layers", valued locally for its historic, nature and amenity value.
- Loss of project efficiency benefits and increased traffic on local roads due to distance from site.

Site 3 – Leiston Airfield

This site is not considered a better alternative than the proposed development site campus because:

- It would lead to an increase in traffic on local roads and increase journey times for workers.
- The roads from the proposed site to the Sizewell C main development site do not appear to be suitable for buses, particularly where there is on-road parking. This site (CN5) was discounted for campus accommodation pre-Stage 1 due to vehicular movement constraints along Abbey Lane.
- Historic England have already raised concerns about the "wrap around" effect of development in the proximity of Leiston Abbey – this would introduce additional development to the west (while leaving development in the form of the temporary construction area and site entrance to the east) likely increasing the settings impact.
- There would likely be adverse impacts on the amenity of Cakes and Ale caravan site, possibly deterring tourists.
- There are no clear environmental benefits of moving the campus from the development site to the airfield – Boyer / Cannon suggest reducing the height of the campus and spreading it over a wider area but this would increase land take. Aside from this they conclude that the "site does not differ greatly from the EDF Energy Preferred Site".

- The site does not pass Boyer / Cannon's test for legacy or community – it is described as "isolated and poorly located in relation to local amenities, facilities and sustainable transport opportunities" and having "very low potential to contribute to any long lasting legacy"

Site 4 – Leiston West

This site is not considered a better alternative than the proposed development site campus because:

- The proposed green rail route branches off from the existing railway line on this site, precluding development of a campus to the north of the railway line (especially given the proximity of Buckle's Wood ancient woodland).
- It is impractical to consider splitting development either side of a railway line.
- There would potentially be conflict with the 187 dwellings approved on part of the site (planning application ref 16/1961/OUT) - Boyer / Cannon acknowledge that "traffic movements associated with the construction campus may not be totally compatible with the recently approved residential scheme on the adjoining site".
- More widely, there would be significant traffic impacts associated with this site, with the existing infrastructure unlikely to cope without upgrades.
- A significant number of workers using private rented accommodation are expected to live in Leiston thereby delivering economic benefits as part of the wider accommodation strategy. Locating the campus here also may not enhance community integration but rather lead to an over concentration of workers in Leiston.

Site 5 – Sizewell Gap / EDF Energy Option 2 (Option 2 – Sizewell Gap Campus at Stage 1) and Site 6 – Leiston East / EDF Energy Option 1 (Option 3 – Leiston East at Stage 1)

These were identified as potential accommodation campus sites in EDF Energy's Stage 1 consultation. The reasons why these was discounted following Stage 1 are set out in the Post Stage 1 Site Selection section above. In addition, with regard to Site 5 / EDF Energy's Option 2, the Boyer / Canon report concludes that "it was correct to discard this site at Stage 2 due to the environmental impacts on the AONB."

Site 7 – South Sizewell Gap / Sizewell Coast

The Boyer / Cannon report discounts this site stating that (15.23): "The site is considered to be too small for the accommodation campus and is also located in a sensitive location whereby views and the environment are likely to be severely impacted upon. It is therefore unsuitable for the accommodation campus."

Site 8 – Lovers Lane West (Land to the east of Eastlands Trading Estate – shown in Stage 1 and 2)

This site has already been identified by the project for construction and caravan accommodation purposes, as well as potentially for provision of a new rail terminal as an alternative to the green rail route. Stage 2 explained that this land has an important role in the construction of Sizewell C, particularly in the early phase of the project when space is limited in the main power station platform area. It is therefore not available as a potential accommodation campus site.

The project has carefully considered the Boyer / Cannon report. However, having discounted sites either previously consideredby the project, identified for the project for other uses or ruled out by Boyer / Cannon in their report, only one potential "new" site remained. Having re-looked at all sites not discounted by Boyer / Cannon or identified for other uses at Stage 2 by the project, it is EDF Energy's view that all present significant transport challenges and would not support bussing of campus workers to site without infrastructure improvements. All also create potential conflict with other uses – Saxmundham South and Leiston West with existing communities, proposed housing developments and Leiston Airfield with Cakes and Ale and Leiston Abbey. The project therefore does not consider any of these present a "genuine", credible alternative to the

proposed development site campus or that the report has demonstrated that any "would be better placed to accommodate the campus development". None of the proposed sites will therefore be considered further.

10. Conclusion

This Technical Note sets out the approach EDF Energy has taken to site selection for the accommodation campus for Sizewell C, including details of alternative sites considered, reasons why they were discounted and why the Development Site Campus has been chosen as the preferred site.

The project considers that the process has been robust both in terms of amount of technical data gathered for decision-making purposes, the number of sites considered and the consultation process. It does not consider that the Boyer / Cannon report has identified any credible alternative sites that should be considered. Therefore the process of site selection will not be re-opened and the Development Site Campus will remain EDF Energy's preferred site for Stage 3 consultation.

Appendix 1 – Sites considered at Step 2

Site Code	Site Name	Origin	Description	Area (ha)	Taken to Stage 1	Reason
CN1 New	Middleton (South)	EDF Energy field survey	Small field on quite steeply rising ground above Yewtree Farm and very close (within 200-300m) to the village of Middleton. Site circumnavigated by well used/well maintained and waymarked public footpaths – very likely to be used for circular walk from the village. Site adjoins a public recreation ground in the village. Access likely to be very difficult given location on very sharp bend on B1125 at Yewtree Farm and topography. Located outside of the floodplain/low flooding risk. Located outside of the 2.4km DEPZ for Sizewell.	8.3	No	Discounted via EDF Energy early screening due to high amenity impact on Middleton village. Also access/topography issues. Site too small to meet sizing criteria.
CN2 New	Moat Road	EDF Energy field survey	Large, relatively flat field with some immature plantation. Access to the B1122 is via a quiet, narrow lane (Moat Road). At the start of the shift, traffic would have to turn right on B1122, which is not ideal. Site is within 200-300m of Theberton village, which has clear views of the site. There are public footpaths through fields to the south of the village, connecting via Moat Road to form a circular route. There is a small camp site/caravan park in the village. A listed building (a moat house) adjoins the site to the west. A low voltage overhead cable runs SW-NE across the site. Located outside of the floodplain/low flooding risk. Located outside of the 2.4km DEPZ for Sizewell.	15.7	No	Discounted due to high potential for amenity impact on neighbouring properties and public rights of way in Theberton village.
CN3 New	Onner's Lane	EDF Energy field survey	There is a small plantation (Brown's Plantation) sandwiched between the site and the B1122. Access to B1122 is therefore likely to be via Onner's Lane. The site topography slopes towards Osier Bed to the east. There are no public footpaths within/adjacent the site. A low voltage overhead cable runs SW-NE across the site. Located outside of the floodplain/low flooding risk. Located outside of the 2.4km DEPZ for Sizewell.	6.01	No	Discounted via EDF Energy early screening as it is much too small for a single large campus and does not lend itself to other potential uses.
CN4	Greenhouse Plantation (east)	PREL 29 Step 1	Strategically located adjacent to the construction site entrance on the eastern side of the B1122 (so workers will turn left out of the site when travelling to work). The site is well screened and is located at least 1,000m from the nearest villages (Theberton & Eastbridge). The main drawback is that despite being located adjacent to the site entrance it is on private land. Located outside of the floodplain/low flooding risk. Located outside of the 2.4km DEPZ for Sizewell.	14.06	Yes	Incorporated into Development Site Campus.

Site Code	Site Name	Origin	Description	Area (ha)	Taken to Stage 1	Reason
CN5 New	Abbey Lane	EDF Energy field survey	Two large fields located adjacent the Cakes & Ale Caravan Park on part of the former Leiston Airfield. The sites benefit from not being located close to any village but are in open countryside 1.5km West of the B1122. Transport would be challenging. Outgoing traffic from the site would travel along Abbey Lane (a quite busy, single track lane) turning left on the B1122 and then right into the proposed construction site. Leiston Abbey (a Scheduled Monument) is located to the north of Abbey Lane and to the west of the B1122. Located outside of the floodplain/low flooding risk. Located outside of the 2.4km DEPZ for Sizewell. There is a small pond within one of the fields (CN5b) and its suitability for great crested newt would need to be assessed.	59.6	No	Discounted due to vehicular movement constraints along Abbey Lane.
CN6 New	Lover's Lane (North)	EDF Energy field survey	Site comprises two adjacent fields to the north of Lover's Lane between its junction with Abbey Road and EDF Energy's laboratory station at Fiscal Policy. The smaller field at the Abbey Road junction is clearly overlooked by Leiston Abbey and would be difficult to screen effectively on-site given the local topography. The larger, eastern-most field benefits from additional screening from the Abbey in the form of a mature hedge. Located outside of the floodplain/low flooding risk. Located partially inside the 2.4km DEPZ for Sizewell.	17.1	Yes, but not for campus	Discount as a potential campus site as too small but incorporated into Main Development Site.
CN7 New	Theberton Grange (South)	EDF Energy field survey	A large, flat field alongside the B1122 just to the north of the construction site entrance (although workers en-route to SZC would have to turn right on the B1122). Public footpaths run along the site's northern and southern boundaries but none traverse the site. These footpaths do not form part of any circular walks. Although close to Theberton House, the site is well screened by mature vegetation along the road. Apart from a small residence (Grange Cottage) at the site's North-West corner, there are no adjacent properties. Located outside of the floodplain/low flooding risk. Located outside of the 2.4km DEPZ for Sizewell.	18.3	No	Discounted as a potential campus site, in favour of preferable alternatives closer to site and with better landscape screening from Leiston Abbey.

Site Code	Site Name	Origin	Description	Area (ha)	Taken to Stage 1	Reason
CL1	Land at BEGL Sports and Social Club, Leiston	PREL 6c enlarged to south	The site comprises two fields separated by a bridlepath (Grimsey's Lane). Public footpaths also run along the site's northern, western and eastern boundaries (in the latter case, on the opposite side of the track). The smaller, northern-most field abuts a school's athletics ground on its western side, which is screened from view by a mature hedgerow, and the BEGL Sports & Social Club to the north (also screened by a hedge). The site is crossed by high voltage overhead power lines (i.e. running through the larger, southern-most field). Currently pedestrian access to the site is afforded via a bridleway at the junction between Lover's Lane and King George's Avenue. It may also be possible to gain access via BEGL Sports & Social Club although this will require careful consideration and consultation. There may be potential legacy benefits for the Club or town. Alternatively, access could be provided via part of CL2 (see below). Aside from the potential access issues, CL1 is considered to be more favourable than the adjacent CL2 because it lies outside of the Suffolk Coast and Heaths AONB and does not adjoin any other statutory designation. Located outside of the floodplain/low flooding risk. Located inside of the 2.4km DEPZ for Sizewell. Considered to be less favourable than options close to the construction entrance because workers would still need to be bussed to and from site.	31.3	Yes	Retained: becomes part of Campus Option 3.
CL2	Former Pig Farm (East of Railhead)	PREL 14	This large field benefits from having a frontage onto Lover's Lane which the adjacent CL1 does not have. However the site is otherwise considered as being much less favourable than CL1 as it is located within the Suffolk Coast and Heaths AONB and also adjoins a European site (the Sandlings Special Protection Area) and the Leiston-Aldeburgh Site of Special Scientific Interest (SSSI). The site is also crossed by a bridleway (Grimsey's Lane) and another public footpath, and there are further footpaths along some of its boundaries. The site is bisected by high voltage overhead cables. Located outside of the floodplain/low flooding risk. Located inside of the 2.4km DEPZ for Sizewell. There is a large irrigation reservoir located adjacent the site.	24.1	Yes, in part	Discount as a potential campus site in EDF Energy early screening as it is too small but northern section incorporated into CL1 to facilitate access/egress to CL1. Becomes part of Campus Site Option 3.
CL3	King George's Avenue (North)	PREL 3 southern part	A small field abutting the railway and whose northern frontage adjoins the proposed LA1 (railway sidings/laydown/warehousing). There are no obvious ecological, landscape or amenity issues with this site (apart from lying adjacent to an Ogilvy residence). This is not a viable site for a campus (it is far too small in isolation and is not attractive as part of a 'complex' because CL1 is large enough in its own right). CL3 is however ideally located for laydown/warehousing. Located outside of the floodplain/low flooding risk.	3.3	Yes, but not for campus	Discounted for campus use as too small, but incorporated into Main Development Site as an extension of LA1.

Site Code	Site Name	Origin	Description	Area (ha)	Taken to Stage 1	Reason
CL4 / LA4 / LA1b	King George's Avenue (South)	PREL 4	This triangular-shaped field is located on the opposite side of King George's Avenue from CL3 and its hypotenuse adjoins the existing railway sidings. A bridleway runs alongside the site's remaining flank. No public footpaths cross the site and it does not lie within or adjoin any statutory designated area. This is not a viable site for a campus (it is far too small in isolation and is not attractive as part of a 'complex' because CL1 is large enough in its own right). CL4 may however be useful in order to gain access from Lover's Lane into CL1 (although this may be difficult as noted above). It is also ideally located for laydown/warehousing space. Located outside of the floodplain/low flooding risk.	3.6	No	Too small and difficult shape for specific use allocation. Not necessary for main development site.
CS2a New	Upper Abbey Farm (North)	EDF Energy Estate	Ideally located at the entrance to the construction site within EDF Energy owned land outside of the AONB. Given its location it would be possible to keep the campus outside of the construction fence and there would be no need to bus workers to and from site. The site is relatively flat although there is a small sand/gravel pit working on the boundary above Upper Abbey. The site's main potential constraints are its shape/size (including the disused pit noted above) and the site's existing use for nature conservation which will need to be thoroughly investigated (Note: the entire site is contained within newt fencing). It is understood that there are badger setts on-site in the vicinity of the pit. If the site is too constrained for accommodation and amenities, it may be possible to locate the latter (e.g. sports fields) on adjoining arable fields between the site and Ash Wood, these fields being within the AONB. There is a long-distance trail along the site's Eastern boundary but no public footpaths traverse the site. Located outside of the floodplain/low flooding risk. Located outside of the 2.4km DEPZ for Sizewell. This is regarded as the preferred option for a campus outside of the existing construction plot plan.	29.3	Yes	Retained: becomes part of Campus Option 1.
CS2b New	Upper Abbey Farm (South)	Adjacent to EDF Energy Estate	Currently a mix of grassland/arable land use. Would incorporate a Grade 2 Listed Building (Abbey Cottage). Amenity implications for Old Abbey Farm to SW and abut PROW along eastern boundary. Site topography generally level. Land not large enough in itself to accommodate a single large campus but could form part of an on-site campus at the construction site entrance in association with land currently demarcated within the construction plot plan.	16.2	Yes, but not for campus	Incorporated into main development site.

Site Code	Site Name	Origin	Description	Area (ha)	Taken to Stage 1	Reason
CS3 New	Kenton Hills	Adjacent to EDF Energy Estate	This is the location that had previously been proposed in the early 1990s for an on-site campus for SZC. The plantation woodland that would be displaced is not in itself of nature conservation value although the design would need to minimise impacts on the large oak that exist along the plantation's Northern flank which are roost sites for Barbastelle bats and their commuting corridors through and/or around the plantation to the Sizewell Belts beyond would need to be protected. The site is located within the AONB but it would arguably be more favourable to sites that are also within the AONB but in open countryside some distance from SZC. The site would also have the disadvantage of impacting upon public amenity as the woodland is popular with walkers. The site would have significant potential for legacy ecological benefit through restoration to more ecologically value habitat e.g. woodland/scrub/heath. Located outside of the floodplain/low flooding risk. Located inside of the 2.4km DEPZ for Sizewell.	31.6	No	Discounted during EDF Energy early screening due to combination of ecological and public amenity issues. Although passing sizing criterion it is likely to be very constrained in terms of bat habitat and commuting corridors.
CS4 New	Lover's Lane (South)	EDF Energy Estate	This site benefits from being located on EDF Energy land without the ecological constraints posed by CS2, although it has the disadvantage that workers housed there would still need to be bussed to/from site. Ground levels are generally quite flat and there are no public footpaths crossing the site/adjacent fields. The site is located within the AONB but is well screened from Lover's Lane by semi-mature plantation woodland. The eastern field is still under arable use, the western one appears to be fallow/under ecological use (there are a few recent shallow ponds that appear to have been dug presumably for grass snake mitigation?). Located outside of the floodplain/low flooding risk. Located inside of the 2.4km DEPZ for Sizewell.	24.4	Yes	Retained but requiring amendment to account for Galloper Wind Farm development proposals. Becomes Campus Site Option 2.
SA1	Saxmundham – Rendham Road	PREL 9	Site identified within the Local Plan (1994) as a General Employment Area and identified within the SHLAA as having potential to provide 90 residential units. Planning permission granted in Oct 2010 for mixed use comprising business (Classes B1-B8), residential (Class C3) and retail (Class A1). From drive-past it appears that the site has been sold for residential development. It is recommended that the site be discounted on the basis that it does not align with the strategy for a single near-site/on-site campus. Nor is it likely to be suitable for park & ride owing to the small size and location north of Farnham bend which renders it unfavourable compared to sites further down the A12. Located outside of the floodplain/low flooding risk.	5.2	No	Discounted on basis that it failed the sizing criteria and did not align with campus strategy (proximity to site).

Site Code	Site Name	Origin	Description	Area (ha)	Taken to Stage 1	Reason
SA2	Darsham (East of A12)	PREL 7b	Planning permission granted in April 2008 on part of the area for the development of 23 'Eco' holiday lodges (Ref CO7/1669) and in Oct 2010 for an 82 bedroom hotel. Potential for legacy tourism uses. It is recommended that the site be discounted on the basis that it does not align with the strategy for a single near-site/on-site campus. Located outside of the floodplain/low flooding risk. It can also be discounted as a park and ride site in favour of the adjacent PRN-1.	3.5	No	Discounted at August 30 Workshop on basis that it failed the sizing criteria, did not align with campus strategy (proximity).
SA3	Saxmundham – Bowling Green	PREL 25	This site is a sports ground (including a bowling green) located in the northern extremity of the village. There is a camping/caravan park located within the site. It is recommended that this site be discounted as it does not align with the strategy for a single near-site/on-site campus and would destroy an important local recreational amenity serving this small community.	2.7	No	Discounted during EDF Energy early screening on basis that it does not align with campus strategy (too far from site with difficult road links) and would result in the loss of an important local recreation and amenity resource. Site failed sizing criteria.

Appendix 2 – Statutory and Local Stakeholders Responses to Stage 1 Consultation

	Option 1	Option 2	Option 3
SCC / SCDC (Joint Local Authorities Response)	Accommodation strategy: do not agree there is a strong rationale for single site campus. Need to explore alternative strategy (multiple smaller campuses). Overarching comment: full consideration of traffic implications required for each Option.		
	Concerned with significant impact on natural and historic environment, bats and PRoW. But would allow workers to walk to site. Concern over mixed traffic (construction and campus). Feedback from Theberton and Eastbridge important for amenity and local economic considerations.	Discount site due to prominence in AONB. Offers no advantages over 1 or 3.	Concerned. Fewer constraints than Option 1. Could provide legacy benefit (recreation or housing). Increase local traffic. Potential for off-road pedestrian / cycle link to site. Feedback from Leiston important for amenity and local economic considerations.
English Heritage (now Historic England)	Highly visible campus structures on site.		
	Concerned may lead to significant impact / harm to setting of Leiston Abbey.	Some concern – potential impacts on undesignated heritage assets.	Concerned due to impacts on nearby designated heritage assets (600m and 1km).
Environment Agency	Overarching comment: suitable arrangements for foul water disposal required. Flag issue of limited capacity of Leiston STW so require on-site package STP. Consideration of surface water runoff increase in FRA.		
	No preference given – consideration required of infill of disused pit. If waste material proposed, then landfill permit required.	Least preferred - negative effect on connectivity between designated sites (SSSI and SSSI/SPA). Important wildlife corridor. If taken forward would need comprehensive survey and mitigation due to proximity to ecological designations and connectivity.	No comment
Natural England	Concerned – impact on setting of AONB and on character, visual amenity and biodiversity needs to be explored. Consider zoning of site, particularly in relation to bat corridor and buffer. Consider noise and light spill.	Greatly concerned – highest impact on protected landscapes (AONB, SPA and SSSI). Major adverse on AONB. Impacts on landscape character and visual amenity. Biodiversity impacts of noise, lighting, species which may cross sites between designations and recreational use of SSSI/SPA.	Concerned – similar to Option 2 including AONB and designated sites but needs further consideration. Partially within AONB.

	Option 1	Option 2	Option 3
Leiston-cum-Sizewell Town Council	Accommodation strategy: concerned about size and socioeconomic impacts. High standard of design sought. project should consider several smaller campuses located further away. Some permanent housing.		
	Not preferred.	Least preferred – inappropriate due to landscape impacts.	Least preferred – inappropriate due to proximity to and impact on Leiston.
Aldringham-cum-Thorpe Parish Council	Accommodation strategy: single large campus not socially desirable or sensible use of resources. Smaller more sympathetic style campuses with different facilities to suit different social groups may be more acceptable / adapted for useful legacy use.		
	Least preferred - major impact on small communities and offers little potential legacy.	Least preferred – located within AONB and offers no legacy.	Not preferred – good opportunity for a smaller campus with potential for legacy.
Sizewell Parishes Liaison Group	Accommodation strategy: scale unsupported. Single large campus not socially desirable or sensible use of resources. More dispersed accommodation preferred to reduce impacts, create legacy use and provide permanent accommodation.		
	Not preferred - social and environmental impacts on Eastbridge and Theberton including noise, air, light pollution and on AONB.	No preferred – although adjacent to windfarm development, would enable workers to walk to site / Leiston and could provide legacy, is unacceptably close to Leiston.	No preferred – unacceptable for community of Leiston, although could be some incremental benefits from leisure facilities.
Suffolk Coast and Heaths AONB	Accommodation strategy: recognise need for campus.		
	Not preferred – due to impact on Barbastelle bat habitat (particularly from lighting). Any development would need to offset this. Pressure on edge of AONB.	Not preferred – disturbance to habitats (particularly from lighting). Inappropriate in AONB.	Preferred – access to Leiston facilities and potential economic benefit. Edge of town location and opportunity for legacy.
RSPB	Preferred site minimises ecological impacts. Need to consider hydrological effects on Minsmere Levels.	Not preferred – Sandlings SPA and SSSI impact, would limit habitat creation opportunity on Sizewell Estate, within AONB. Significant mitigation required.	Least preferred – Sandlings SPA and SSSI, and proximity to disturbance (e.g. noise and lighting). Public footpath access. Significant mitigation required.
Sizewell Residents:	Good facilities on campus. Expect legacy but in the right way and right place.		
	Preferred. Not in AONB or near designated sites. Best option for traffic movement and to easily screen development. Can control workers.	Not preferred – within AONB and close to SSSI on an existing busy road. Significant traffic problems for Leiston and Sizewell. Concerned about pedestrian movements to Leiston.	Not preferred – road access runs through AONB and close to SSSI on an existing busy road. Increase in traffic for Leiston and Sizewell. Concerned about pedestrian movements in Leiston and proximity to school.

	Option 1	Option 2	Option 3
Pro Corda	Least preferred. Significant impact on Pro Corda, particularly ongoing viability of the charity, safety / crime and perceived risk, noise, visual and other disruption.	No comment.	No comment.
Office for Nuclear Regulation (ONR)	No preference given but should explore consequences for viability of Sizewell Emergency Response Plan.		
Suffolk Resilience Forum	No preference given. All three campus sites within proposed revised DEPZ (4km) although Option 1 is adjacent to the existing 2.4km zone. Do not have capacity to absorb increase in emergency arrangements. EDF Energy will need to resource and develop own arrangements.		
Theberton Parish Council	No preference given. Issue of emergency evacuation of numbers of workers raised. Suggestion that four village bypass would decrease numbers in campus.		

Red indicates significant issues raised and where mitigation may now overcome these impacts.
Amber indicates significant issues raised but consultee recognises some form of mitigation may reduce impact.
Yellow reflects concern relating to particular issues.
Green is preferred or least bad option.

Appendix 3: Post Stage 1 Preferred Campus Selection Considerations

Engineering and Operational Considerations

	Option 1 Development Site	Option 2 Sizewell Gap	Option 3 Leiston East
Constructability	No issues.	No issues.	No issues.
Design Feasibility	All three options can accommodate a minimum 2,000 bed campus		
	Potential compromise of the layout compared to the HPC accommodation/amenity design in order to achieve required capacity on site.	A limited compromise of the layout compared to the HPC accommodation/amenity design in order to achieve required capacity on site.	A limited compromise of the layout compared to the HPC accommodation/amenity design in order to achieve required capacity on site.
	No requirement for bus interchange.	Requirement for bus interchange with potential use of secure direct buses (bonded buses).	Requirement for bus interchange with potential use of secure direct buses (bonded buses).
Operational considerations	Desirable location due to proximity to main construction site.	Less desirable when compared to Option 1.	Less desirable when compared to Option 1.
Security	Benefits from joint arrangements with construction site security.	Separate arrangements for security incurring additional cost.	Separate arrangements for security incurring additional cost.
Scheduling	No issues.	No issues.	No issues.
Cost	Base cost	Relative to Option 1 there is an additional cost for transport of workers by bus to the main site.	Relative to Option 1 there is an additional cost for transport of workers by bus to the main site.
	Industrial relations: Workers able to walk to construction site entrance. No cost.	Industrial relations: Potential additional wages cost due to travel time to construction site.	Industrial relations: Potential additional wages cost due to travel time to construction site.
	Utilities: Least cost as direct connection to main construction site utilities.	Utilities: Additional cost of new separate utilities supplies required.	Utilities: Additional cost of new separate utilities supplies required.
	Construction: economies of scale benefit from main construction site.	Construction: separate construction site setup.	Construction: separate construction site setup.

Environmental Considerations

	Option 1: Development Site	Option 2: Sizewell Gap	Option 3: Leiston East
Terrestrial Ecology & Ornithology	Most distant from ecological designations but known bat roosts and commuting corridor on eastern boundary. Would need to maintain vegetation and create darker corridor along eastern boundary.	Designated sites adjacent to the south (SPA/SSSI) and close to the north (SSSI). Site could also impede connectivity between north and south designated sites. Potential species disturbance to SPA/SSSI and its recreational use.	Designated sites adjacent to eastern boundary and close to southern boundary (SPA/SSSI). Potential species disturbance to SPA/SSSI and its recreational use.
Landscape & Visual Amenity	Located outside but adjacent to the AONB. Potential setting issues to consider in layout/design. Issue tempered by adjacent construction site.	Although quite well screened site lies entirely within AONB. Would need to justify in comparison with alternative site options.	Eastern part of site (access) within AONB. Setting issues moderated by 400kV transmission lines which run over the southern end of the site.
Recreation	Bridleway on eastern boundary and public road to Eastbridge runs through centre of site and is a Sustrans route.	Not likely to be a significant issue.	A number of PRoW/Bridleway cross and in close proximity to the site.
Historic Environment	Setting issues in respect of Leiston Abbey (a Scheduled Monument and Grade I listed building) will be important in relation to layout/design. The setting of other listed buildings in the locality will need to be taken account of.	Potential for unrecorded archaeology although not likely to be a significant issue.	Potential for unrecorded archaeology although not likely to be a significant issue.
Noise & Vibration	Potential localised issue around a few properties located close to site but should be able to mitigate adverse effects.	Potential localised issue around a few properties located close to site but should be able to mitigate adverse effects.	Potential localised issue at nearby properties especially estate to north-west but should be able to mitigate adverse effects.
Air Quality	Unlikely to be significant issue.	Unlikely to be significant issue.	Unlikely to be significant issue.
Soils & Agriculture	Unlikely to be significant issue.	Unlikely to be significant issue.	Unlikely to be significant issue.
Geology & Ground Contamination	Unlikely to be significant issue.	Unlikely to be significant issue.	Unlikely to be significant issue.
Groundwater	Unlikely to be significant issue.	Unlikely to be significant issue.	Unlikely to be significant issue.
Surface Water & Flood Risk	Unlikely to be significant issue.	Unlikely to be significant issue.	Unlikely to be significant issue.
Coastal Processes	N/A	N/A	N/A
Marine Water Quality & Sediments	N/A	N/A	N/A
Marine Ecology	N/A	N/A	N/A

	Option 1: Development Site	Option 2: Sizewell Gap	Option 3: Leiston East
Commercial Fisheries	N/A	N/A	N/A
Navigation	N/A	N/A	N/A
Radiological Effects	Unlikely to be significant issue.	Unlikely to be significant issue.	Unlikely to be significant issue.
Cumulative Impacts	Cumulative impact of different elements of project in-combination on Leiston Abbey, Pro Corda, nearby settlements, and bats.	Cumulative impacts on AONB and nearby designations.	Cumulative impacts on AONB, nearby designations and local community.
Other Issues, e.g. HRA	No HRA issues.	HRA likely to be required due to proximity to Sandlings SPA. Potential disturbance effects through lighting and noise, and increased recreational use of SPA would be the main focus for assessment. Potential conflict due to land being used as part of reptile mitigation strategy for the main site.	HRA likely to be required due to proximity to Sandlings SPA. Potential disturbance effects through lighting and noise, and increased recreational use of SPA would be the main focus for assessment.
Risks	Potential significant cumulative impacts on Leiston Abbey and bat species.	The assessment of potential significant adverse effects as part of the HRA will involve detailed studies and expense. Timing issue for development. Overlap with Galloper Wind Farm temporary works area.	The assessment of potential significant adverse effects as part of the HRA will involve detailed studies and expense. Given the application of the precautionary principle, there is a significant risk that this site could fail the alternatives test.

Transport

	Option 1: Development Site	Option 2: Sizewell Gap	Option 3: Leiston East
Ease of Access	Can tie in with new B1122 junction required for entrance to the construction site. However, this will increase flow through this junction.	Would require a new junction and a likely reduction in the speed limit on Lover's Lane/Sizewell Gap.	Would require a new junction and a likely reduction in the speed limit on Lover's Lane/Sizewell Gap. Would require new access road through edge of AONB and close to ecological designations (SPA/SSSI).
Existing Highway Safety Issues	Not a significant issue.	Not a significant issue.	Not a significant issue.
Accessibility	Further from main facilities in Leiston. Would potentially encourage more car travel to local services.	Able to walk to Leiston for services and amenity facilities.	Best access to Leiston. Walk into Leiston for services and amenity facilities.
Highway Capacity	Preferred site as no traffic associated with daily movement of campus residents to and from the site. However, some traffic movements would be expected with workers travelling to/from the campus in relation to off-site amenity and recreation, and at the beginning and end of the working week.	Traffic movements associated with daily bus traffic on Lover's Lane and part of B1122 but not significant.	Traffic movements associated with daily bus traffic on Lover's Lane and part of B1122 but not significant.
Risks	No significant risk.	No significant risk.	No significant risk.
Cost	Base cost.	Transport of workers by bus.	Transport of workers by bus plus cost of new access road.

Community

	Option 1: Development Site	Option 2: Sizewell Gap	Option 3: Leiston East
Economic Impact	Some expenditure in Leiston (although to lesser extent than options 2 and 3) Potential viability concerns raised by Pro Corda (particularly in considering cumulative impacts of campus, rail route and site entrance).	Increased expenditure in Leiston. Concern over tourism impact given location in the AONB and proximity to Sizewell Beach.	Increased expenditure in Leiston. Concern over tourism impact given proximity to Sizewell Beach and walking routes.
Community Impacts and Benefits	Relieves pressure on Leiston but close proximity to Theberton and Eastbridge. Potential community cohesion issues associated with construction workers using the community resources. Potential negative impact on Leiston Abbey visitor experience. Reduced local project traffic (and associated community amenity benefits). No legacy potential.	Proximity to Sizewell village and Leiston. Potential community cohesion issues associated with construction workers using the community resources. Concern over impact of increased traffic on Sizewell Gap road (potential tourist impact). No legacy potential.	Proximity to Leiston and highest proportion of residential properties. Potential community cohesion issues associated with construction workers using the community resources. Proximity to Alde Valley and Leiston Primary Schools and a Children's Centre. May result in places being sought at alternative schools further away? More potential to open campus facilities to Leiston residents. Concern over potential impact of increased traffic through Leiston and on Sizewell Gap road (potential tourist impact). Some legacy potential.
Community Perceptions	Concerns about noise and lighting disturbance, pressure on local facilities from increased use, conflict with workers and poor worker behaviour. Concerns about safety in terms of traffic and large influx of mainly male workers – may deter applications to local schools and use of Pro Corda. Perceived impact on tourism industry. "Boom and bust" issues leading to businesses not being sustainable post-construction including the night-time economy in Leiston. Overall social impact. Concerns over legacy use, i.e. once developed, sites will not go back to greenfield or lack of potential legacy. Concern over scale and design of campus in a rural location.		

Land Interests

	Option 1: Development Site	Option 2: Sizewell Gap	Option 3: Leiston East
Site Size	34ha	45ha	43ha
Negotiation Status (e.g. CPO, other land)	Partly owned by EDF Energy Nuclear Generation Limited (east field). Negotiation for the freehold acquisition of the west field have ceased at the request of the landowner. Land has to be acquired from same landowner for the main site access road, therefore, campus land likely to be acquired in same transaction regardless of campus site decision.	Owned by EDF Energy Nuclear Generation Limited (part of Sizewell Estate). No acquisition issues.	Heads of Terms agreed for leasehold option agreement with options to extend.
Neighbouring Properties	Too early to be definitive, but likely Part 1 Claimants and potentially NNB voluntary residential schemes contributing to cost.		
	A few nearby properties including Grade II listed buildings. Potential local amenity impacts (e.g. visual, lighting and noise issues) may need to be mitigated.	Properties to the north and south. Potential local amenity impacts may need to be mitigated.	A number of properties. Particularly sensitive is Crown Lands Cottage. Hawsell's Farm (west of the site) is occupied by the Option 3 site landowner. Potential local amenity impacts may need to be mitigated.
Land Access (current use & for ground investigations)	Access not guaranteed until land agreements in place but could be requested.		
	Due to the negotiations having stalled, access for ground investigations looks unlikely in the near future. Agricultural use (arable).	No access issues anticipated. Agricultural use (arable).	Negotiations going well and therefore permission to access land likely to be given (untested). Currently agricultural use.
Other Considerations	Negotiations involve land for access road. May result in acquisition of some residential properties and an amount of additional agricultural land.	No significant issues.	Leasehold only with no potential for legacy as land to be returned reinstated at the end of the lease term.
Risks	Potential for CPO should negotiations fail. CPO would need to be supported by full justification for land required.	No significant issues anticipated.	No significant issues anticipated.

Land Use

	Option 1: Development Site	Option 2: Sizewell Gap	Option 3: Leiston East
Existing Land Uses	Agricultural (east field currently being managed for ecology).	Agricultural	Agricultural
Siting Considerations	Located adjacent to the main construction site forming a contiguous development. This will help confine the impact of development associated with the construction of the power station. Lies entirely outside but adjacent to AONB. Consideration of its setting.	Remote from the construction site. Within the AONB opening up new land for development in rural area.	Remote from the construction site and although located close to Leiston is still 'once removed'. Partly within AONB.
Other considerations (e.g. licences and consents)	None identified at this stage.	None identified at this stage.	None identified at this stage.

Planning Strategy and Policy

	Option 1: Development Site	Option 2: Sizewell Gap	Option 3: Leiston East
Reference to HPC Planning Decision	"Whilst we are less sure as to whether the size of the campuses proposed is the optimum, we have no evidence to the contrary. Overall, given that there are inevitably significant uncertainties regarding the amount and availability of alternative accommodation, our view is that the proposals are appropriate."		
Strategy/Policy (national and local)	All sites subject to national policy Overarching NPS EN-1, Nuclear NPS EN-6 and National Planning Policy Framework, where relevant. Ecology: 'Appropriate weight' will be attached to sites of international, national and local importance, such as SSSIs and SPAs, in the determination of an application for development consent. Option 1 is preferred from an ecological perspective, given its distance to designated sites, compared to Options 2 and 3. If Options 2 or 3 were progressed, it would need to be demonstrated that there are no other more reasonable alternatives, that any impacts have been minimised and mitigated or compensated. Landscape and Visual: Developments which would have an impact on nationally designated landscapes (such as the AONB) will be given 'substantial weight' by the Planning Inspectorate when determining applications for development consent, irrespective of whether they are within or adjacent to the designated site. Therefore the setting and design of the development will require significant consideration irrespective of the site chosen. Socio-economics: Socio-economic effects would arise irrespective of the site chosen; and are unlikely to be significantly different irrespective of the site chosen. In accordance with EN-1 impacts would be identified, minimised and mitigated. Transport: Transport effects would arise irrespective of the site chosen, albeit Option 1 is more preferable from a capacity perspective. In accordance with EN-1 impacts would be identified, minimised and mitigated. Historic Environment: EN-1 states that developments should 'avoid or minimise conflict between conservation of that significance' and where this would occur it should be supported by 'clear and convincing justification'. Therefore Options 2 and 3 are preferred from a historic environment perspective. If Option 1 were to be progressed and it were identified that there would be a significant impact on the Abbey, it would need to be demonstrated that it this development is necessary in order to deliver 'substantial public benefits that outweigh that loss or harm'.		
	The site is designated as Special Landscaped Area ('saved' Local Plan Policy AP13); Suffolk Coast and Heaths AONB lies immediately to the east of the site ('saved' Local Plan Policy AP12, draft Core Strategy Policy SP15); site lies outside of 2.4km DEPZ but within proposed revised 4km zone.	Lies within Suffolk Coast and Heaths AONB ('saved' Local Plan Policy AP12, draft Core Strategy Policy SP15); site is near to SPA/SSSI designations ('saved' Local Plan Policy AP14 Wildlife Habitats and AP15 Designated Areas and habitats); site lies within 2.4km DEPZ and proposed revised 4km zone.	Site located within site 324 of the draft Site Allocations and Proposals Map DPD which is considered potentially suitable for development; site designated as a nuclear safeguarding area (Local Plan Appendix 2, draft Core Strategy Policy SP24); site located just outside of the physical limits of Leiston ('saved' Local Plan Policy AP26); Leiston Conservation Area ('saved' Local Plan Policy AP1) lies

	Option 1: Development Site	Option 2: Sizewell Gap	Option 3: Leiston East
			approx. 700m to the north-east; site is adjacent to SPA/SSSI designations ('saved' Local Plan Policy AP14 Wildlife Habitats and AP15 Designated Areas and habitats); and site located inside 2.4km DEPZ and proposed revised 4km zone.
Planning History	Planning permission (Ref; C6528/2) in March 1986 for continuation of use of land as small-bore rifle and pistol range (renewal) – borrow pit area used for this purpose (discontinued). Planning permission (Ref; C/09/1450) on part of the site to the north of Upper Abbey Farm for construction of ponds for wildlife and conservation.	Proposed Galloper Offshore Wind Farm development on eastern part of site (potential for overlap of temporary construction area with campus site).	Nothing relevant
Legacy	Potential for legacy is not a material planning consideration and cannot be considered by the Planning Inspectorate, or Secretary of State, as part of its decision. Additionally, the constraints of bespoke campus development does not lend itself to future adaptation. Therefore, no legacy use is to be pursued as part of the SZC campus scheme.		
			If EDF Energy pursue land interest through private agreement (leasehold) would not support legacy use of this site.
Other considerations (e.g. licences and consents)	None identified at this stage.	None identified at this stage.	None identified at this stage.

Appendix 4: % Cost Comparison

Costs are confidential and therefore are not provided here. However, in order to illustrate the potential differential between on and off-site campus options, an indication as to projected uplift in costs is provided.

Additional costs of campus in Leiston versus main development site

Assumptions:

- A campus of 2000 beds located at the site entrance versus a campus of 2000 beds located a few kilometres off site (for example 2.5 km at Leiston).
- 7-year occupancy period.
- Where there was uncertainty in the cost estimate, smallest value chosen.
- Land costs not included.
- "Value" (welfare and cost) of a shorter working day and productivity gains associated with an on-site campus difficult to quantify therefore not included in the calculation.
- Quality of a two-star hotel.
- Uplift is expressed as % of total cost.

Topic	Assumption	Uplift
Design	All Options sufficient size so design effort same whatever the location.	0%
Environment	All Options located on agricultural land so cost of environmental studies and mitigation measures, including landscaping, would be the same whatever the campus location.	0%
Existing ground conditions	Ground conditions could be different from one site to the other, so foundations of buildings and structures may differ. However, campus buildings are relatively light so assume that same type of traditional foundation design used for each site.	0%
Construction	Option 1 would benefit from co-location with the construction site (shared site clearance, site entrance infrastructure (new access road / roundabout). Options 2 and 3 would require these works to be carried out separately.	0.3%
Utilities	Option 1 water, electricity, telecoms would be an extension of utilities on the construction site, whereas utilities on Options 2 and 3 would require specific connections to be constructed. Extra costs reflect only the construction cost of these new connections (based on standard costs). In reality, local sewage system could be incapable of sustaining the campus load which could imply a serious upgrading and more significant costs (not included here).	1.5%
Security	Security for Option 1 could be equipped (lighting, CCTV, fencing) and managed (staffing, patrols) as an extension of the main development site construction area security. Options 2 and would require separate arrangements and staffing.	0.4%
Busing	Workers accommodated on Option 1 could walk to the site entrance turnstiles and to take the shuttle bus service inside the construction area to join their workplace. Workers accommodated at Option 2 or 3 would have to be transported by bus to the site entrance before entering the site. This busing service would require additional construction costs for pick-up and drop off facilities on the campus, as well as costs of dedicated buses and drivers (acquisition, maintenance, wages).	6.3%
Total		8.6%
Travel time risk	Assumed to be 10 min each trip / 20 min per day plus waiting time. Possibility that workers will try to charge travel to work time. In line with HPC, SZC would try to avoid this hence this is a risk and not included in total.	28.4%

Cost Difference between a single Campus of 2000 beds and two Campuses of 1000 beds each

All assumptions as above except that campus of 2000 beds at the site entrance compared with one campus of 1000 beds at site entrance and one campus of 1000 beds a few kilometres off site (for example 2.5 km at Leiston) considered.

Topic	Assumptions	Uplift
Design	Having 2 campuses would require additional design work. Design work generally estimated to be 1% of the construction cost - assume increase in design effort of 0.5% of the total construction cost. Also includes additional geotechnical surveys needed for the second site.	0.6%
Environment	Cost of additional surveys and mitigation measures.	0.1%
Existing ground conditions	Ground conditions could be different from one site to the other, so foundations of buildings and structures may differ. However, campus buildings are relatively light so assume that same type of traditional foundation design used for each site.	0%
Construction	Likely that combined overall construction surface would be larger for 2 campuses on 2 different sites (e.g.duplication of buildings such as security lodge, site entrance and highways connection). Loss of construction synergy effect of having everything to be constructed on the same site.	4.6%
Utilities	Utilities of campus at site entrance (water, electricity, telephone) would be extension of utilities on construction area. A second campus site would require specific connections be constructed. Extra cost reflects only the construction cost of these new connections (based on standard costs). In reality, local sewage system could be incapable of sustaining the campus load which could imply a serious upgrading and more significant costs (not included here).	1.5%
Security	Security for Option 1 could be equipped (lighting, CCTV, fencing) and managed (staffing, patrols) as an extension of the main development site construction area security. Options 2 and would require separate arrangements and staffing.	2.5%
Busing	Workers accommodated on Option 1 could walk to the site entrance turnstiles and to take the shuttle bus service inside the construction area to join their workplace. Workers at an off-site campus would have to be transported by bus to the site entrance before entering the site. This busing service would require additional construction costs for pick-up and drop off facilities on the campus, as well as costs of dedicated buses and drivers (acquisition, maintenance, wages).	3.9%
Total		16.3%
Travel time risk	Assumed to be 10 min each trip / 20 min per day plus waiting time. Possibility that workers will try to charge travel to work time. In line with HPC, SZC would try to avoid this hence this is a risk and not included in total.	28.4%

APPENDIX 5C TWO VILLAGE BYPASS SUMMARY PAPER

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1 INTRODUCTION

1.1.1 The need for the two village bypass and the justification for the route selected is set out in the Site Selection Report [APP-591] appended to the Planning Statement, the Two Village Bypass Planning Statement appended to the Planning Statement [APP-595], and Volume 5, Chapter 3 (Alternatives and Design Evolution) of the ES [APP-414]. This Summary Paper has been prepared to summarise the key reasons why a bypass of the Farnham bend is necessary, and why the chosen route for the bypass is the most appropriate.

2 THE NEED FOR THE TWO VILLAGE BYPASS

2.1 Principle of the two village bypass

2.1.1 The principal purpose of the two village bypass is to remove traffic from Farnham in recognition of the unsuitability of the "Farnham bend" for heavy construction vehicles and abnormal indivisible loads, particularly if passing one another and to respect the amenity of Farnham, where homes are clustered close to the A12. Use of the existing A12 through Farnham for construction traffic would create congestion, delays and safety risks on this narrow stretch of road. Furthermore, the increase in Heavy Goods Vehicle (HGV) movements from Sizewell C traffic would have severance and environmental impacts on the communities of Stratford St Andrew and Farnham in the event that no bypass is provided.

2.1.2 The Transport Assessment (TA) and the TA Addendum set out in detail the flows from the Sizewell C construction traffic through the Farnham bend in the Early Years prior to the opening of the two village bypass. The Early Years assessments relate to 2023, when there would be up to 300 HGV deliveries per day by road (600 two-way movements) travelling from the wider highway network to the main development site. At Peak Construction (2028), the TA Addendum assumed 250 HGV deliveries (500 movements) per day on a typical day and 350 HGV deliveries (700 movements) per day on the busiest day[1].

2.1.3 However, following the DCO application submission, SZC Co. undertook additional assessment work on the two village bypass and has calculated the likely traffic flows on the Farnham Bend during 2028 Peak Construction if the two village bypass is in place (as proposed in the DCO application) and if the two village bypass was not provided. These flows are presented in Table 2.1 below.

[1] Transport Assessment Addendum (Doc Ref 8.5(A)Ad) [AS-266]

Table 2.1: Breakdown of AAWT traffic flows by hour and vehicle type at Peak Construction (2028)

Location 23 (A12 Farnham Bend)	Reference case 2028		2028 Peak Construction (typical day) without a 2VBP		2028 Peak Construction (typical day) with a 2VBP		% Increase (2028 Reference Case vs 2028 Peak Construction without a 2VBP)
Time	HDVS p/h	Total vehs. p/h	HDVS p/h	Total vehs. p/h	HDVS p/h	Total vehs. p/h	HDVS p/h
6am-7am	55	769	70	806	0	8	27%
7am-8am	83	1523	136	1596	2	21	64%
8am-9am	96	1618	169	1719	2	25	76%
3pm-4pm	82	1768	151	1889	1	27	84%
4pm-5pm	73	1958	139	2048	3	22	92%
5pm-6pm	41	1721	100	1827	2	21	143%
6pm-7pm	29	1461	71	1564	2	17	144%

2.1.4 Table 2.1 shows that there will be a significant number of Heavy Duty Vehicles (HDV's)[2] travelling through Farnham and the Farnham bend at Peak Construction as a result of Sizewell C. The network peak hours are 8am-9am and 5pm-6pm. Table 2.1 shows that during these network peak hours, there will be a 76% and 143% increase in HDVs respectively through Farnham during Peak Construction (typical day) as a result of Sizewell C construction traffic. This is a significant increase in the number of HGV movements negotiating this narrow bend, and would reduce average speeds through this single carriageway section, increase congestion and journey unreliability.

[2] HDV flows include the flows of HGV's and buses

2.1.5 A bypass is needed to remove traffic from Farnham in recognition of the increased likelihood of congestion and the unsuitability of the "Farnham bend" for heavy construction vehicles and abnormal indivisible loads, particularly if passing one another and to respect the amenity of Farnham, where homes are clustered close to the A12. The unsuitability of the Farnham bend is discussed in Section 2.2 below, and the potential impacts on amenity are discussed in Section 2.3 and 2.4 below.

2.2 Historic proposals for a bypass

a) Highways Agency proposals

2.2.1 There is a long history of proposals for a bypass on the stretch of the A12 between the Wickham Market bypass and the Friday Street junction where the A12 meets the A1094.

2.2.2 In 1987 the Government proposed a bypass of Stratford St Andrew and Farnham as part of the Roads Programme[3]. Further studies and options were developed by the Highways Agency in the late 1980s and early 1990s, culminating in a Public Inquiry in 1995 into the Highways Agency's preferred option for a dual-carriageway bypass of Farnham, Stratford St Andrew, Little Glemham and Marlesford, known as 'the four villages'. The Inquiry confirmed the Highways Agency's preferred option, having considered a number of alternatives, but the scheme did not progress any further due to Government funding cuts in 1996.

2.2.3 The objectives of the Highways Agency's preferred option of a dual-carriageway, four village bypass included regional benefits – particularly a reduction of journey times and transport costs for exporters accessing ports such as Lowestoft, in addition to the need to bypass traffic away from *"the unsuitable route through the villages"* and to *"improve the quality of life for those living alongside the A12"* (para. 4.8 of the Inspector's Report 1995[4]).

2.2.4 The Highways Agency's preferred option from 1995, a four-village, dual-carriageway bypass was considered to be appropriate by the Inspector in meeting the objectives of the bypass, including the wider regional objectives.

2.2.5 In terms of the need to remove traffic from the route of the existing A12, the Inspector concluded that:

[3] 'Policy for Roads in England: 1987' (April 1987)
[4] Highways Agency, 1995, A12 (Wickham Market to Saxmundham) Improvement Inspectors Report (Ref. 507565/2/A12/119)

> *There is an unacceptably high accident rate on the present A12. There are also many frontage properties which suffer intolerably from noise, air pollution, intrusion and danger. This is becoming steadily worse.* (para. 10.3.1 of the Inspector's Report 1995)
>
> *Very few objectors did not accept the need for some relief measures to be carried out, and it is clear to me that the need for improvement in the present conditions is incontrovertible.* (para. 10.3.2 of the Inspector's Report 1995)

2.2.6 As well as the preferred option, 15 alternative options were considered by the Inspector. These included different horizontal and vertical alignment options. Whilst none of the alternatives were preferred to the Highways Agency's preferred alignment, the Inspector did propose that a modification to lower the route by 2m (as proposed in Alternative 15) should be adopted to reduce noise impacts on the residential properties in the Farnham Hall area.

b) Suffolk County Council Proposals

2.2.7 In June 2001, the A12 was de-trunked north of the A14 Seven Hills interchange and control passed to Suffolk County Council (SCC). Between 2006 and 2018, SCC published several studies for improvements to the stretch of the A12 between the Wickham Market bypass and the Friday Street junction.

i. A12 Four Villages Study (2006)[5]

2.2.8 The A12 Four Villages Study (2006) study included an assessment of four route options as well as an option for a new roundabout at Farnham.

2.2.9 The options assessed included consideration of two routes for a four village bypass (routes LB1 – the Highways Agency's preferred dual-carriageway option from 1995 – and LB2 – a single carriageway option), a smaller bypass of Farnham and Stratford St Andrew (route SB1), and a bypass of Little Glemham (route SB4). Option O2 proposed a junction realignment in Farnham by way of a new roundabout at the Farnham bend. Route SB1 also included a roundabout but between Stratford St Andrew and Farnham, close to the existing River Alde bridge crossing. Consideration was also

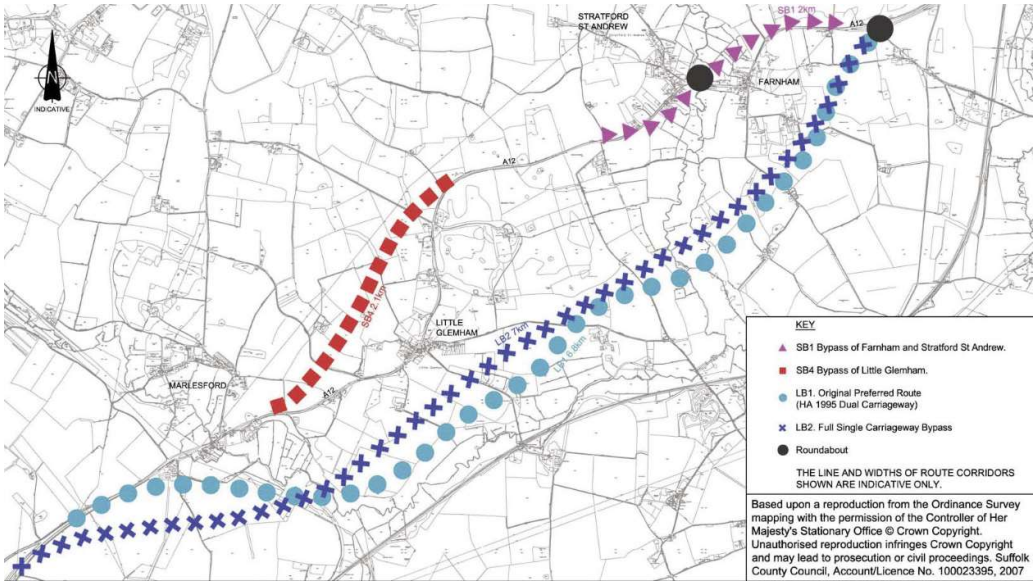
[5] The Landscape Partnership and AECOM working as part of Suffolk Transport & Environment Partnership on behalf of Suffolk County Council (2006), Environmental Assessment of route options

given to smaller scale traffic measures such as signal control, speed limits, enhanced pedestrian / cycle facilities and advisory signs.

2.2.10 The route options are shown in **Plate 2.1**.

Plate 2.1: A12 – Four village route options

(Source: A12 Four Villages Study, December 2006)



2.2.11 The study noted that:

> *For many years the perceived solution to traffic problems in 4 villages in east Suffolk; Farnham, Little Glemham, Stratford St Andrew and Marlesford … has been seen, particularly by local people, as being a bypass. Proposals for route options date back to 1995, when a full dual carriageway bypass scheme was taken successfully through Public Inquiry, but subsequently removed from the programme. Re-examination of the proposals in a desktop study in 2004 found that the higher importance now placed upon environmental issues would make the case for a bypass harder to justify than might have been the case previously, given the very high impact that a major scheme would have on the valuable ecological, cultural and landscape features in this area.* (para. 1.1.1)

2.2.12 In paragraph 4.1.5 the study stated that:

> *Any bypass or relief road would bring obvious benefits to the villages, however, the improvements within the villages would be offset by negative impacts to the wider*

> *landscape and biodiversity interest of the surrounding countryside.*

2.2.13 The Executive Summary added that *"The level of negative impact is generally greater for those options which traverse the floodplains, and is greater for longer routes than shorter routes".*

2.2.14 The assessment concluded that, whilst the four-village bypasses LB1 (the 1995 preferred option) and LB2 (a single carriageway option) could deliver moderate beneficial noise and air quality impacts (due to a reduction in noise levels and being at a greater distance from properties in all four villages), there would be moderate to large adverse impacts on landscape, heritage, biodiversity and water environment.

2.2.15 Option O2 for a roundabout at the Farnham bend was not favoured as it would have required the demolition of the Grade II listed Old Post Office and would have compromised the setting of three other listed buildings. It was also considered to be out of scale with the village, eating into footways and leaving them dangerously narrow, and generally being visually intrusive. Having a roundabout within the village was also expected to result in slowing/accelerating and queuing traffic, which would lead to a deterioration in air quality at some residential properties.

2.2.16 Of the options assessed, the shorter route options, SB1 (a two village bypass of Farnham and Stratford St Andrew) and SB4 (a bypass of Little Glemham), were preferred as they could deliver minor benefits to noise and air quality with only moderate adverse environmental impacts (SB1 would have likely moderate impacts on heritage, biodiversity and the water environment whereas SB4 would have moderate impacts on heritage).

2.2.17 In conclusion, the study stated:

> *If any Options were to be considered further, it is recommended that these two [shorter bypass] options are considered as an alternative to a full [four village] bypass. (para. 4.1.9)*

ii. A12 Four Villages Studies

2.2.18 Following the Stage 1 consultation by SZC Co. in November 2012, at which mitigation options to address the Farnham bend were first proposed by SZC Co., SCC commissioned AECOM to undertake two studies:

- A12 Four Villages – Sizewell C Traffic Impacts (2013)[6]; and
- A12 Four Villages Study (2014)[7].

A12 Four Villages – Sizewell C Traffic Impacts (2013)

2.2.19 The 'A12 Four Villages – Sizewell C Traffic Impacts' study set out the analysis of current (as of 2013) and forecast traffic conditions, with and without Sizewell C. The report included a high-level update of the 2006 Study with respect to traffic, journey times, accidents, and air quality, and the case for a bypass to relieve the pressure on the A12 as a result of the construction of Sizewell C.

2.2.20 In terms of baseline traffic conditions (i.e. without Sizewell C), the study concluded that, following a review of 2013 traffic conditions, the priority for interventions on the A12 (through the four villages of Farnham, Marlesford, Little Glemham and Stratford St Andrew) was slightly reduced compared to the findings from earlier studies, as traffic levels had not grown to the magnitude previously forecast. However, the report noted that the impact of the Sizewell C traffic required mitigation through the four villages, and that such mitigation could therefore be considered as 'associated development' and included for consideration in the application for development consent.

A12 Four Villages Study (2014)

2.2.21 In 2014 SCC published the 'A12 Four Villages Study', a feasibility / route options study exploring the options for the delivery of a four village bypass by staged improvements. This was due to concerns that the scale of investment required for the provision of a continuous, four-village bypass may not be achievable and therefore a partnership approach to funding and staged delivery may be necessary.

2.2.22 Five shorter bypass route options were assessed as both single and dual carriageway options. The study provided a summary of environmental assessments of the possible routes and produced estimated costs for construction of the improvements.

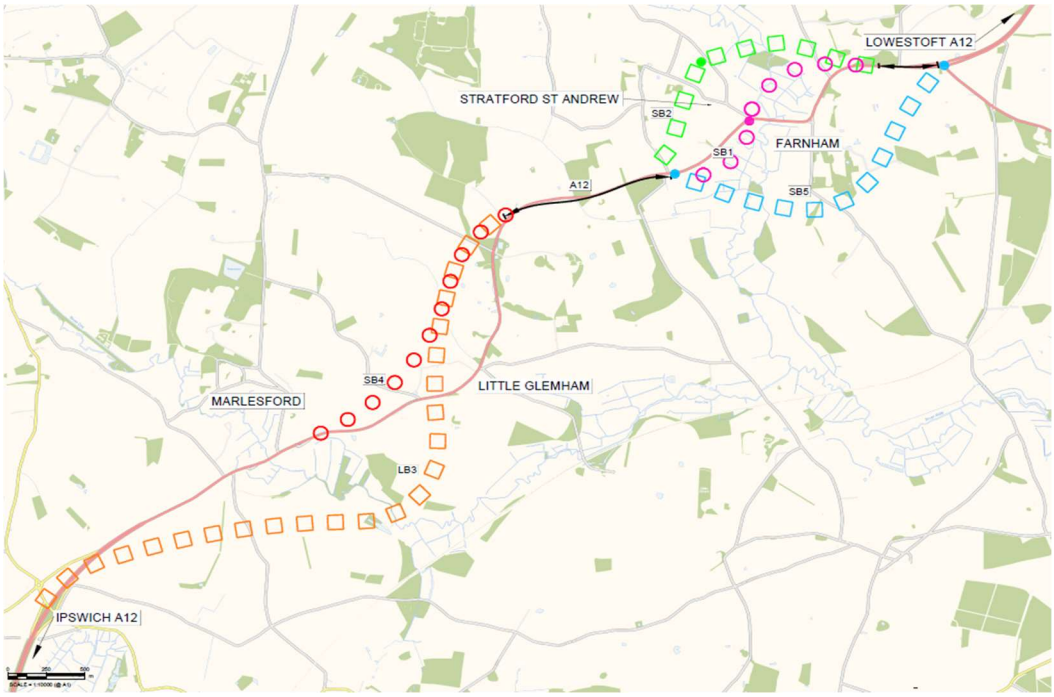
2.2.23 The study reviewed three route options in the vicinity of Stratford St Andrew and Farnham, as shown in **Plate 2.2**. Route SB1 (pink route) would pass between the villages, SB2 (green route) would bypass both villages passing to the north / west, and SB5 (blue route) would bypass both villages to the south / east. Of the three Stratford St Andrew/Farnham options, SB5 (blue

[6] AECOM (on behalf of SCC). (2013). A12 Four Villages – Sizewell C Traffic Impacts
[7] AECOM (on behalf of SCC). (2014). A12 Four Villages Study

route) is the most similar to the proposed two village bypass and was considered as both a dual-carriageway and single carriageway bypass.

2.2.24 The study also considered two separate bypasses of Little Glemham referred to as LB3 (orange route) and SB4 (red route); LB3 would also bypass Marlesford.

Plate 2.2: A12 Four Villages Study 2014 – route options



2.2.25 Unlike the 1995 public inquiry and the 2006 study, a bypass of all four villages was not included. The study stated at paragraph 8.1 (page 269):

> *A staged approach for the implementation of an improvement scheme for the length of A12 between Wickham Market bypass and the junction with A1094 Friday Street – termination point for this study – would be the most suitable solution. Currently the section of A12 between Marlesford and Little Glemham has a layout with comparatively acceptable road widths and geometry. The most difficult section with the worst geometric layout is that between Stratford St Andrew and a point north of Farnham.*

2.2.26 The remainder of the study focussed on the "most difficult" area between Stratford St Andrew and the north of Farnham (as quoted above), with further assessment of the construction costs, traffic and transport

implications, and environmental impacts of each option used to select the preferred routes for any bypass.

2.2.27 Two schemes were selected as preliminary preferred routes: SB1 (Pink Route) and SB5 (Blue Route), *"assuming either would be progressed as a single carriageway road"* (which would have reduced environmental impacts). Two scenarios were considered for SB1: the full bypass and the northern section only (SB1 North), which would essentially be a one village bypass of Farnham.

2.2.28 Following further environmental comparison of SB1, SB1 North and SB5, the study concluded at para 10.7 (page 329):

> *SB5 has a lesser impact on both Noise and Air Quality factors compared to both Pink SB1 and SB1 North options.*
>
> *Both SB1 North and SB1 have a road corridor effect on numerous properties in Stratford St Andrew and Farnham, however SB5 will have a minor effect on approximately seven properties.*
>
> *In terms of driver amenity all three routes have approximately the same benefits, however in terms of accident saving SB5 has a higher number.*
>
> *All of the route options would have effects causing habitat loss of small amounts of woodland and hedgerows and small amounts of agricultural land. With regards to flood risk SB5 would need less compensation area than the other two schemes.*
>
> *From the foregoing it is clear that on Environmental grounds the provision of Route SB1 or SB1 North would have a far greater adverse impact on local settlements than the provision of Route SB5.*

iii. Suffolk's Energy Gateway (SEGWay), led by SCC

2.2.29 The A12 Suffolk's Energy Gateway scheme (hereafter referred to as SEGWay) comprised an improvement to the A12 between the B1078 at Wickham Market and the A1094, east of Farnham. Both an Outline Business Case[8] and a Strategic Case[9] were submitted to the Department

[8] Jacobs (2017) A12 Suffolk Energy Gateway, Outline Business Case
[9] Jacobs (2017) A12 Suffolk Energy Gateway, Strategic Case

for Transport (DfT) in December 2017 but the DfT rejected the bid for funding.

2.2.30 The A12 SEGWay Strategic Case (December 2017) stated on page 69 that the single carriageway section of the A12 between Wickham Market and Saxmundham is sub-standard and most in need of critical improvement, highlighting "*the narrow, single carriageway section of the A12 …, particularly at the 'Farnham bend', where two HGVs cannot pass safely.*"

2.2.31 It also noted that the existing A12 results in community severance, limiting local residents' access to services and social networks, and impacts on the air quality management area (AQMA) in Stratford St. Andrew. The SEGWay Strategic Case noted that these issues would be exacerbated as a result of growth in housing, employment, Sizewell C construction and the tourist industry.

2.2.32 The SEGWay Strategic Case elaborated on the difficulty of HGVs negotiating the Farnham bend, stating on page 44:

> *Specific sections of this route are particularly unsuited to HGVs and articulated vehicular traffic. At the 'Farnham bend'…, the A12 bends sharply and HGVs often struggle to pass each other, requiring advance reactive signage to warn drivers of oncoming large vehicles. This location, and the narrow carriageway section preceding the bend from the south, has a significant reputation as a pinch-point on the A12 route. In some cases, police have had to stop traffic in order to assist large vehicles to negotiate the bend, such as materials for the onshore or offshore wind industry. A selection of photographs taken when turbine components [an abnormal indivisible load (AIL)] were delivered to a site in Kessingland in 2011, are shown at the following website link: http://www.dailymail.co.uk/news/article-1373915/Gently-does-Residents-look-giant-wind-turbine-hauled-round-tight-bend.html [see **Plate 2.3**].*

Plate 2.3: An AIL being transported through the Farnham bend[10]



2.2.33 The Strategic Case acknowledged the impact of the Farnham bend on traffic associated with the Sizewell C Project. It stated that the majority of HGV traffic associated with Sizewell C will travel through the village of Farnham, including the 'Farnham bend', notably increasing the likelihood of HGVs meeting at the bend and causing traffic disruption.

2.2.34 The report expressed serious concerns about safety during the 10-year construction period of the Sizewell C Project on this section of the A12, stating:

> *There are houses on either side of the narrow A12 carriageway, with little footway space to act as a safety margin in the event of a vehicle collision, or a vehicle mounting the footway. This clearly also has pedestrian safety implications. (sub-section 3.2.3)*

2.2.35 The Strategic Case stated that the construction and operation of Sizewell C in a 'do nothing' scenario (i.e. no bypass being provided):

> *"will cause significant impacts on the existing A12 as a result of high numbers of HGV movements negotiating narrow bends and sections of the road with reduced speed limits, reducing average speeds through the single*

[10] Source: Daily Mail article (April 2011): https://www.dailymail.co.uk/news/article-1373915/Gently-does-Residents-look-giant-wind-turbine-hauled-round-tight-bend.html

carriageway section and increasing congestion and journey unreliability.

The identification of the above current and future transport related problems and their underlying causes as well as the magnitude and distribution of the impacts associated with them, clearly establishes the need for significant intervention in the A12 corridor." (Sub-section 4.3)

Alternative options considered

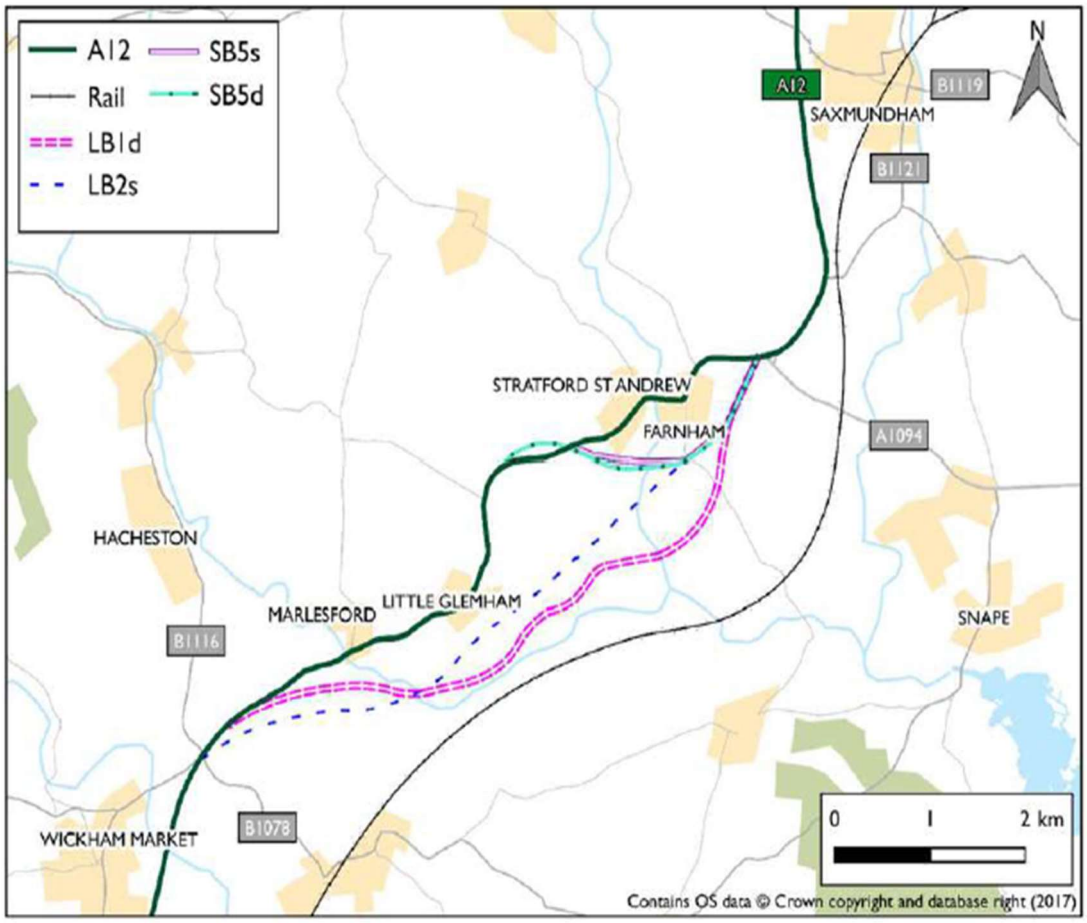
2.2.36 SCC considered several possible SEGWay proposals for a bypass along the A12: including both short and long, single and dual carriageway options. The routes are explained in **Table 2.2** and can be seen in **Plate 2.4**.

Table 2.2: SEGWay shortlisted routes as part of the Strategic Outline Business Case

Route	Length	Location
Option LB1d	6.8km dual carriageway	Route runs from the A12/B1078 Junction to the A12/A1094 Junction to the north of Farnham
Option LB2s	7.5km single carriageway	Route runs from the A12/B1078 Junction to the A12/A1094 Junction to the north of Farnham
Option SB5d	3.5km dual carriageway	Route runs from north of the A12/Button's Road Junction to the A12/A1094 Junction to the north of Farnham and Stratford St Andrew and includes an additional link improvement
Option SB5s	2.6km single carriageway	Route runs from north of the A12/Button's Road Junction to the A12/A1094 Junction to the north of Farnham and Stratford St Andrew

Source: Figure 6-1 of A12 SEGWay Strategic Case (December 2017)

Plate 2.4: SEGWay alignment of shortlisted options



Source: Figure 6-2 of A12 SEGWay Strategic Case (December 2017)

2.2.37 Following a Benefit Cost Ratio (BCR) exercise, SCC identified the two longest routes (LB1d and LB2s) as being the best value for money and consulted on these two options between September-October 2017. The dual carriageway option (LB1d) was subsequently put forward as the preferred route.

2.2.38 The SEGway Strategic Case was submitted to the Department for Transport (DfT) in December 2017.

2.2.39 However, the DfT rejected the SEGway project in 2019, stating that:

> *We are concerned that the proposal does not provide sufficient value for money, that the level of co-investment by industry stakeholders or the Council is low and by the scheme's adverse impact on the local landscape.*

> *You may wish to develop a revised proposal for a large local major scheme, which would be for Transport for the East to consider including in their advice to the Department later this year about potential Major Road Network and Large Local Major road schemes. The Department would expect a larger financial contribution in any revised proposal from the Council and industry stakeholders, possibly from EDF who are developing the near-by Sizewell C facility which will lead to increased traffic in the area. There may also be alternative options that you want to consider to improve value for money, such as a smaller two-village bypass.* (DfT decision letter to SCC, 9 May 2019)

2.2.40 Route SB5s on Plate 2.4 is a single-carriageway bypass of Farnham and Stratford St Andrew, on a similar alignment to route SB5 (blue route) from the 2014 Study and the proposed two village bypass submitted in the DCO.

2.3 Community attitudes towards a bypass of the Farnham bend and consultation feedback

2.3.1 The need for the bypass of the Farnham bend and the justification for the alignment selected is set out within the following DCO application documents:

- The site specific two village bypass Planning Statement and Site Selection Report (Book 8, Document 8.4);
- Alternatives Chapter in the Environmental Statement (Book 6, Volume 5, Chapter 3);
- Transport Assessment (Book 8, Document 8.5); and
- Consultation Report (Book 5, Document 5.1).

2.3.2 Throughout the consultation stages undertaken by SZC Co. from 2012 to 2020, there has been significant support for the bypassing of the Farnham bend to overcome the construction impacts of Sizewell C on the local community. Full details are set out in the Consultation Report (Doc Ref 5.1) [APP-068] but a summary is provided below.

a) Stage 1 consultation (Nov 2012 – Feb 2013)

2.3.3 Three options were proposed at Stage 1, those being a bypass of Farnham village and interventions on the bend itself (road widening and HGV traffic

controls). The majority of respondents (56%) thought a bypass was appropriate with 57% and 62% stating that road widening and HGV controls, respectively, were inappropriate. One resident stated:

> *Farnham is already a dangerous section of the A12. Any road-widening within the village is likely to increase the speed of traffic. It will be much safer to bypass the village completely.*

2.3.4 At the Stage 1 consultation Suffolk Coastal District Council (now part of East Suffolk Council) and SCC submitted a joint response in which they acknowledged that mitigation would be required along the A12, and considered that a four-village bypass would be necessary. They commented that the benefits of the development should be balanced against the impacts on the environment, communities and the transport network.

2.3.5 Farnham with Stratford St Andrew Parish Council did not comment at Stage 1.

b) Stage 2 consultation (Nov 2016 – Feb 2017)

2.3.6 Four options were included at Stage 2, consisting of a 'no change' scenario, road widening of the bend (involving the demolition of a listed building), a one village bypass of Farnham, and a two village bypass of Farnham and Stratford St Andrew.

2.3.7 The consultation document also set out at paragraph 11.8.1 that SZC Co. considered that:

> *"a Four Village Bypass would be a disproportionate intervention to mitigate the effects of Sizewell C traffic and therefore it could not be included within its application for development consent for the Sizewell C Project". The consultation document explained at paragraph 11.4.7 that "an application for development consent should not include proposals that are not to be funded and delivered as part of the application. For instance, it would be inappropriate for EDF Energy to include a Four Village Bypass in its application for development consent if that bypass was promoted for a purpose unrelated to the new power station and if there was uncertainty over its deliverability by others."*

2.3.8 The most popular option amongst respondents was the two village bypass (43%). One resident stated:

> *A bypass of the Farnham bend is absolutely VITAL!!*
> *Options 1&2 cannot seriously be considered, the village*

would be completely cut in half as it would become impossible to cross the road with any further increase in traffic.

2.3.9 In their joint response to Stage 2, Suffolk Coastal District Council and SCC made it clear that a two village bypass is preferrable compared to both a do nothing scenario and the other mitigation options. Paragraph 298 of the Councils' response stated:

> *With regard to the options put forward by EDF Energy, in summary the Councils believe that options 1 ("no change"), 2 (Farnham bend road widening) and 3 (Farnham bypass – a one village bypass) are unacceptable, and that option 4 (Stratford St Andrew and Farnham Bypass) would be the minimum mitigation.*

2.3.10 The Councils stated that Option 4 (Stratford St Andrew and Farnham Bypass) was their preferred option and that the preliminary work indicated a major decrease in noise levels in Farnham with a reduction in Stratford St Andrew. At paragraph 325 the Councils also stated:

> *With regard to air quality, preliminary work indicates that Option 4 would lead to traffic being moved away from most receptors and that it would lead to the greatest benefit in terms of air quality in comparison to the other options and would lead to a large improvement in Stratford St Andrew and Farnham.*

2.3.11 They also considered that Option 4 would be ecologically less sensitive compared to Option 3 (Farnham bypass – one village bypass). Paragraph 329 of the response stated:

> *While the two village bypass is more extensive than the one village bypass, having a much larger total footprint, the ecological sensitivity of the receiving land is, for the most part, less than that of the one village bypass route.*

2.3.12 The Councils also considered that the two village bypass could accommodate effective landscape mitigation compared to the one village bypass option (Option 3). Paragraph 333 states:

> *However, the two village bypass can accommodate effective landscape mitigation. This is because it is, along the majority of the route, within larger scale landscape of arable fields, woodland blocks and belts, rather than the intimate landscape of the floodplain.*

Therefore, unlike that for the one village bypass option, mitigation planting would not significantly diminish or be at odds with the existing key characteristics of the receiving landscape.

2.3.13 Farnham with Stratford St Andrew Parish Council expressed concern that the increases in road traffic on the A12 passing through the villages would exacerbate high levels of nitrous dioxide in Stratford St Andrew and commented that impacts of traffic through the villages should be reduced.

2.3.14 In its response, the Parish Council stated that a public meeting was held on 8 December 2016 and a questionnaire was handed out on the four different options for improvements to the A12 put forward by EDF. An overwhelming majority of respondents (77%) to the questionnaire said they preferred Option 4 - Stratford St Andrew and Farnham bypass (a two-village bypass).

2.3.15 The Parish Council expressed support for the two-village bypass because of reduction in traffic flow, subsequent improvements in air quality, safety, noise and property damage and improved access. However, they acknowledged the disadvantages to some residents including ecological impact on Foxborrow Wood, severance of rights of way, noise, vibration and air quality, reduction in passing trade for businesses, and impact on Farnham Hall and Mollett's Farm. They requested inclusion in discussions about route alignment and suggested that it should run to the east of Foxborrow Wood and noise and visual mitigation should be provided.

2.3.16 The Parish Council has continued to promote their alternative alignment since Stage 2, and it is considered in greater detail later in this Response Paper.

c) Stage 3 consultation (Jan – Mar 2019)

2.3.17 At Stage 3, SZC Co. presented the two village bypass as the sole bypass option to mitigate the impact of construction on the local community. Suffolk Coastal District Council and SCC continued to support the two village bypass as a minimum, stating:

The Councils welcome this proposal as we had requested the two-villages bypass as minimum mitigation in Stage 2.

2.3.18 The Councils did make suggestions about the transport proposals, including the consideration of a four-village bypass and the possibility of changing the route of the two-village bypass to minimise impact on Foxburrow Wood and heritage.

2.3.19 Farnham with Stratford St Andrew Parish Council also supported the two-village bypass but again put forward an alternative alignment, which routed the two village bypass (travelling from west to east) to the south of Pond Barn Cottages before curving northwards, passing between Foxburrow Wood and Palant's Grove Ancient Woodlands, and meeting the proposed Friday Street roundabout to the north. The Parish Council's alternative alignment differed from the Stage 3 proposal (and the subsequent alignments for Stage 4 and the DCO application) which passed Foxburrow Wood on its west side.

2.3.20 The Parish Council suggested the following alterations to the two-village bypass:

- the Stratford St. Andrew roundabout should be moved further west to include Tinder Brook and Chapel Lane;
- the routing should run east of Foxburrow Wood;
- the speed limit should be maximum 50mph on the new bypass;
- provision of substantial noise, dust, emission and light pollution mitigation;
- opposition to the raised sections of the proposed bypass 2m above ground level near property;
- the provision of cuttings in light of the benefits, which they highlighted;
- footpaths and rights of way should be maintained, improved or diverted and that additional provisions be made for vulnerable groups;
- design so as to minimise light spill and preserve 'dark skies'; and

2.3.21 The Parish Council also expressed concern that Friday Street Farm Shop and Café would be negatively affected.

2.3.22 The Parish Council note in Section 8 of its response that many of these issues listed above equally apply to any potential four-village bypass.

d) Stage 4 consultation (July – Sept 2019)

2.3.23 The two village bypass was proposed again at Stage 4 with changes to the site boundary in connection with updated information regarding drainage and flooding. SCC and Suffolk Coastal District Council continued to support the two village bypass, stating at para 293:

The Councils welcome that the two-village bypass is accepted by EDF Energy as required mitigation for all three transport strategies.

2.3.24 However, the Councils expressed concern about deeper cutting and non-motorised users of the bridge near Farnham Hall as well as deeper cutting at Foxborrow Wood.

2.3.25 Farnham with Stratford St Andrew Parish Council continued to support the eastern alternative alignment, despite concerns about its impact on farming. They also questioned that the woodland between Foxburrow Wood and Palant's Grove was 'Ancient Woodland'.

e) Safety concerns expressed by Suffolk Police in response to DCO application

2.3.26 As part of continued engagement, Suffolk Police prepared a report in September 2020 titled 'Suffolk Constabulary SZC Roads Policing and AIL Impact Assessment' to provide Suffolk Constabulary's current view of the likely community safety and other policing impacts of the proposed Sizewell C project.

2.3.27 The Constabulary's report raises clear concerns with the increase in HGVs and AILs at Farnham. It states at page 21:

Some routes, for example the bend at Farnham and sections of the B1122, present challenges for vehicles over 2.9m wide as the roads mean that such AILs straddle the centre on the carriageway, therefore encroaching into the opposing lane. This presents a clear risk of collision, or in order to avoid that danger, leaving the carriageway to the nearside and damaging the verge. This is often referred to as 'over running' and in itself presents a danger to traffic at a later stage when it can be attributed to the cause of collisions/loss of control. The routes to access the main works site at SZC will change when the off-site highway mitigation is delivered, including the Sizewell Link Road and the Two Villages bypass. Access to the off-site works for the complementary facilities and the new highway works would typically be from A12.

2.3.28 The difficulty and risk of larger vehicles, particularly AILs, negotiating the bend safely is highlighted by the Constabulary.

f) Consultation on proposed changes to the DCO application submission (Nov – Dec 2020)

2.3.29 Changes were proposed to deliver improvements to the Sizewell C project and to reduce some impacts, partly by seeking to reduce the number of HGVs by maximising the use of rail and sea transport. The proposed changes to the two village bypass itself were minor, with some extensions to the Order Limits to accommodate visibility splays and revised public right of way diversion options around Walk Barn Farm. The principle of the two village bypass remained unchanged.

g) Conclusion

2.3.30 Overall, it is evident that there is significant community and stakeholder concern regarding the impacts on amenity from traffic in villages on the A12, particularly at Farnham, including a strong view that the bend at Farnham, and the village as a whole, must be bypassed. Out of the mitigation options consulted upon for the narrow bend at Farnham, the two village bypass attracted the most support from key stakeholders.

2.4 Impacts of using the A12 through Farnham and Stratford St Andrews as a main construction route

2.4.1 Having reviewed the previous studies of options for alleviating the impact of traffic on the A12, and the feedback from the Sizewell C consultation, it is evident that the A12 at Farnham as existing is unsuitable for supporting the Sizewell C construction traffic, and there is strong public and stakeholder support for the principle of a bypass. That support comes against the background of considerable accumulated learning of the need for and effects of different options. Therefore, the two village bypass is proposed so that Sizewell C construction traffic can bypass the village, avoid the bend, thereby reducing traffic flows, congestion, delays and environmental impacts on the A12 through Farnham and Stratford St. Andrew, whilst increasing safety for motorists and pedestrians. The two village bypass would also route traffic away from the Stratford St. Andrew Air Quality Management Area (AQMA).

2.4.2 The ES, the ES Addendum, the TA and the TA Addendum set out in detail the effects of the Sizewell C construction traffic on the Farnham bend and on the two villages in the Early Years prior to the opening of the two village bypass. The Early Years assessments relate to the effects in 2023, when there would be up to 300 HGV deliveries per day (600 two-way movements) travelling from the wider highway network to the main development site. At Peak Construction (2028), the TA Addendum assumed 250 HGV deliveries

(500 movements) per day on a typical day and 350 HGV deliveries (700 movements) per day on the busiest day[11].

2.4.3 Therefore, the Early Years assessments, before the two village bypass would come into operation, give an indication of what the likely effects would be if the two village bypass was not delivered for the Peak Construction years.

2.4.4 The Early Years assessments note the following effects:

- Increase in traffic flow and journey times on the A12[12], with a substantial increase in heavy goods vehicle movements.
- Increase in potential collisions.
- Residents in Farnham and Stratford St Andrew would be exposed to minor adverse environmental effects from increased road traffic, notably in terms of:
  - Severance[13][14];
  - Pedestrian delay[15][16];
  - Amenity[17][18]; and
  - Fear and intimidation[19][20].

2.4.5 These adverse effects should not be sustained for longer than it takes to deliver the two village bypass. It would be unacceptable for these effects to be imposed on the residents of Stratford St Andrew and Farnham along the existing A12 for the whole 10-12 year construction programme unless there was no alternative.

2.4.6 The introduction of a bypass of the two villages would reduce traffic flows by 99% during Peak Construction[21] through Stratford St Andrew and Farnham at the peak network hour 17:00-18:00, and by 98% at the peak

[11] Transport Assessment Addendum (Doc Ref 8.5(A)Ad) [AS-266]
[12] Tables 8.5, 8.6, 8.11 and 8.12 of the Transport Assessment (Doc Ref. 8.5) [APP-602]
[13] Table 1.1. Volume 2 Chapter 10 Appendix 10C of the ES (Doc Ref: 6.3) [APP-199]
[14] Paragraph 2.5.17 Volume 1 Chapter 2 of the ES Addendum (Doc Ref 6.14) [AS-181]
[15] Table 1.8 Volume 2 Chapter 10 Appendix 10C of the ES (Doc Ref: 6.3) [APP-199]
[16] Table 2.12 Volume 1 Chapter 2 of the ES Addendum (Doc Ref 6.14) [AS-181]
[17] Table 1.12 Volume 2 Chapter 10 Appendix 10C of the ES (Doc Ref: 6.3) [APP-199]
[18] Paragraph 2.5.30 Volume 1 Chapter 2 of the ES Addendum (Doc Ref 6.14) [AS-181]
[19] Table 1.24 Volume 2 Chapter 10 Appendix 10C of the ES (Doc Ref: 6.3) [APP-199]
[20] Paragraph 2.5.36 Volume 1 Chapter 2 of the ES Addendum (Doc Ref 6.14) [AS-181]
[21] Transport Assessment Addendum, Table 8.7 (Doc Ref 8.5(A)Ad) [AS-266]

network hour 08:00-09:00. The existing carriageway would remain open for local traffic but signposting and the timesaving advantages of the bypass would take all but very local through traffic out of the villages. This would significantly reduce the likelihood of two HGVs passing in opposite directions meeting at the Farnham bend and transform the environment and amenity of the villages.

2.4.7 As a result of the implementation of the two village bypass, the reduction in traffic flows through Farnham and Stratford St Andrew would resultin a **major beneficial effect** on severance, which would be **significant**[22] [23].

2.4.8 There would also be a **major beneficial effect,** which would be **significant**[24][25], on amenity over the course of a day as a result of the reduction in HDVs, which would be significant, improving the amenity of pedestrians, cyclists and equestrians within the villages of Farnham and Stratford St Andrew.

2.4.9 In terms of fear and intimidation, by removing the majority of traffic from the two villages and onto the two village bypass, the impact on fear and intimidation at the Farnham bend would be **minor beneficial**[26]. This would compare with the **minor adverse effects** on fear and intimidation in the event that no bypass is provided[27].

2.4.10 The ES considers the effects on noise and vibration at Peak Construction (2028) with the two village bypass in place. The ES states that there would be **significant beneficial effects** for properties close to the A12 in Stratford St Andrew and Farnham which would be bypassed by the new road[28].

2.4.11 It is important to acknowledge that the ES states that there would also be **significant adverse effects** for some properties which would be located close to the new bypass. However, most of these are **short term** effects[29].

2.4.12 The NPS EN-1 requires the avoidance of significant adverse effects on health and quality of life from noise. This occurs when SOAEL is exceeded. The ES[30] confirms that during 2028 Peak Construction, 2028 Typical Day and 2034 Operation, the SOAEL is only exceeded (prior to mitigation) at Pond Barn Cottages. The SOAEL is not exceeded at Farnham Hall. As

[22] Paragraph 10.6.75 of Volume 2 Chapter 10 of the ES (Doc Ref 6.3) [APP-198]
[23] Volume 1 Chapter 2 of the ES Addendum, Table 2.25 (Doc Ref 6.14) [AS-181]
[24] Paragraph 10.6.102 of Volume 2 Chapter 10 of the ES (Doc Ref 6.3) [APP-198]
[25] Volume 1 Chapter 2 of the ES Addendum, Table 2.26 (Doc Ref 6.14) [APP-181]
[26] Table 1.26 of Volume 2 Appendix 10C of the ES (Doc Ref 6.3) [APP-198].
[27] Paragraph 10.6.111 of Volume 2 Chapter 10 of the ES (Doc Ref 6.3) [APP-198]
[28] Paragraph 4.6.27, Volume 5, Chapter 4 of the ES (Doc Ref 6.6) [APP-415]
[29] Paragraph 4.6.27 and 4.6.28, Volume 5, Chapter 4 of the ES (Doc Ref 6.6) [APP-415]
[30] Paragraphs 4.6.32 and 4.6.33, and Table 4.24, of Volume 5 Chapter 4 of the ES [APP-415]

set out in these ES paragraphs, where exceedances of the SOAEL are confirmed, the provisions set out in the Noise Mitigation Scheme will apply and exceedances of the SOAEL will be avoided.

2.4.13 Overall, the reduction in traffic flows on the existing A12 through Farnham and Stratford St Andrew clearly has a number of benefits, not only for the communities of the two villages but for all those travelling through the area, be it by road, bicycle, equestrian or on foot.

2.4.14 This clear advantage cannot be achieved in any other way. The smaller scale interventions considered during the various stages of the Sizewell C public consultation (i.e. road widening, traffic controls) to improve safety and movements through Farnham would not reduce daily HGV movements on the existing A12 or address the disbenefits of using the road as the principal means of serving the Sizewell C site.

2.4.15 Similarly, the one village bypass would have been effective in bypassing the Farnham bend but it would have exacerbated the existing severance issues between the closely linked villages of Stratford St Andrew and Farnham. The one village bypass would have all A12 and Sizewell C construction traffic being routed between the two villages, resulting in separation and significant severance[31].

2.4.16 SZC Co. recognise that the two village bypass will itself result in environmental impacts, which are detailed in the ES and ES Addendum submitted with the DCO application, but the significant reduction in vehicular movements through the two villages would be transformative and reverse concerns over highway safety and congestion, environment and amenity through the villages and the narrow bend in particular, creating the opportunity for a vastly enhanced quality of life in the villages that would be a lasting legacy of the Sizewell C Project.

3 WHY THE TWO VILLAGE BYPASS ROUTE IS AN APPROPRIATE ROUTE

3.1.1 The two village bypass was first presented at the Sizewell C Stage 2 consultation. The alignment was originally designed and suggested by SCC following the A12 Four Villages Study 2014, in which SB5 (blue route) emerged as the preferred route for a single-carriageway two village bypass, and was then adopted by SZC Co. for public consultation.

3.1.2 The alignment of the two village bypass has remained similar to that originally proposed at Stage 2 but it has evolved over time to reduce the

[31] Book 8, Planning Statement, Appendix 8.4A, para. 6.4.37.

environmental impacts of the scheme in response to careful consideration of environmental constraints and consultation with the local communities and key stakeholders. SZC Co. moved the alignment of the bypass slightly further south between stage 2 and stage 3 to avoid impacts on Nuttery Belt and Pond Wood.

3.1.3 As detailed in section 2 of this Summary Paper, there is a long history of proposals for a bypass on the A12, with the Farnham bend being a particular concern for traffic flows. As these proposals developed between 1987 to the SEGWay options in 2017, the options have included:

- a two village bypass of Stratford St Andrew and Farnham (1987 Roads Programme);
- bypasses of all four villages (1995 Public Inquiry, SCC 2006 study and SEGWay proposals 2017); and
- the delivery of a bypass by staged improvements (SCC 2014 study and SEGWay options 2017).

3.1.4 The staged improvement options demonstrate that the provision of a two village bypass of Farnham and Stratford St Andrew would not prevent the addition of a further bypass of Little Glemham (and Marlesford) in the future. The historic proposals culminated in the DfT concluding that a shorter two village bypass should be considered as an option (see paragraph 2.2.40).

3.1.5 The proposed route alignment of the two village bypass is to pass to the west of Foxburrow Wood Ancient Woodland, and east of the Farnham Hall properties. At that point, it would be in cutting approximately 4.5m deep to reduce the environmental impacts on the residents of these properties. There would also be embankments on either side of the cutting providing access to the proposed footbridge crossing over the two village bypass.

3.1.6 Farnham with Stratford St Andrew Parish Council has put forward an alternative alignment for the two village bypass (found at **Appendix A,** from Stage 3 consultation response) which would be further from the Farnham Hall properties, passing to the east of Foxburrow Wood Ancient Woodland. The Parish Council's alternative alignment has not been designed in detail and, for instance, is not compliant with geometric standards. To address this at a high level SZC Co. has prepared a geometric standards compliant schematic alignment version of the Parish Council's alternative to help understand the potential impact more closely (referred to as the revised alternative Parish Council alignment). The revised alternative Parish Council alignment can be found at **Appendix B**).

3.1.7 The Parish Council's alternative alignment and its relationship to Foxburrow Wood Ancient Woodland is similar to that previously considered in the historic studies of bypass options. Alternative 14 considered in the 1995 Public Inquiry into the Highways Agency's preferred option of a four village bypass followed a similar alignment to the Parish Council's alternative alignment, passing at its northern end to the east of Foxburrow Wood, rather than to its west. The Inspector recommended that this alignment be rejected when compared to the Highways Agency's preferred alignment (which passed to the west of Foxburrow Wood). The Inspector's Report summarises the Highway's Agency's concerns as follows:

> *In landscape terms, alt.14 would be considerably more damaging that the [Highways Agency's preferred scheme] as it was less sympathetic to the topography. … As it ran across the higher ground towards the A1094, alt.14 would cut across a small dry valley which currently gave relief to the flat higher ground south of Friday Street. It fitted significantly less well into the land form [than the Highways Agency's preferred scheme].* (para. 7.14.16)

> *[Alternative 14] would cut a corner off Foxburrow Wood and then run through a 46m stretch of Palant's Grove. This woodland formed an attractive landscape feature and was of high ecological quality. It would sever Foxburrow Wood and Palant's Grove, which were of considerable age and high value, and were listed jointly on the Ancient Woodland inventory.* (para. 7.14.17)

> *Alternative 14 would have a greater land take and lead to increased agricultural severance. This effect would be particularly severe at Friday Street Farm, where it is important for the business that the pick-your-own crops were accessible from the Farm Shop and parking area.* (para. 7.14.18)

> *It would be less safe than the [Highways Agency's preferred scheme], and was some 200m longer and operationally less attractive. The NPV was much reduced and would be marginal (£0.276m) at low growth. There would have to be substantial benefits to overcome these disadvantages, but in overall environmental terms [Alternative] 14 was worse than the proposed route. It should be rejected.* (para. 7.14.19)

3.1.8 Having considered the representations, both for and against Alternative 14, the Inspector concluded that:

> *In summary, alt.14 would give a significant reduction in noise in the Farnham Hall area, but a few properties elsewhere would suffer a higher level of noise than with the published scheme, and this would be at levels higher than those likely at Farnham Hall. … Ecologically, I think that alt.14 has some advantages, but the damage to Palant's Grove makes it the less satisfactory route from this aspect.* (para. 10.7.37)
>
> *So far these considerations are finely balanced, in my view, but I come down on the side of the Agency's route because of the significant agricultural severance effects of alt.14, and my concern at its poorer economic return. …I conclude that alternative route 14 should be rejected.* (para. 10.7.38)
>
> *I have also concluded that [Alternative] 14 (route to east of Foxburrow Wood) is not acceptable, and therefore the line of the Highways Agency's [preferred] scheme is the only route left. … I think the impacts on [Farnham Hall Farm House] are far outweighed by the removal of the substantial impacts … for very many others. In my view, it is in the general public interest that a bypass should be provided, and that the line of the route should follow the one in the published [Highways Agency] scheme.* (para. 10.7.44)

3.1.9 Following the conclusions of the 1995 Public Inquiry, the alternative alignment to the east of Foxburrow Wood was not pursued as an alternative route in any of the subsequent Four Village Bypass studies or the SEGway proposals by SCC.

3.1.10 As detailed in the two village bypass Alternatives chapter of the ES, SZC Co. considered that little had changed from the Inspector's assessment in 1995 that would now make the Parish Council's alternative alignment a more attractive option, particularly for road users. Whilst the alternative alignment would likely reduce noise and vibration impacts on the Farnham Hall properties, it would present a number of disadvantages which would outweigh the benefit to the Farnham Hall properties, as set out below.

3.1.11 In order to pass further to the east, the Parish Council's alternative alignment would be considerably longer, diverting traffic well into the countryside, rather than providing a realistic bypass of the villages. It would

be circa 2.9km in length, approximately 0.5km longer than the proposed two village bypass in the DCO application.

3.1.12 This extra length of the Parish Council's alignment would negate the time benefit of the bypass. SZC Co. has used a strategic model to calculate the journey time on the existing A12 at Peak Construction (2028) through Farnham and Stratford St Andrew without the bypass. The journey time is estimated at 1 minute 50 seconds, but this estimate does not take into account potential delays at Farnham Bend, and therefore the journey time is likely to be greater. This journey time has been measured from the same points on the A12 as where the proposed bypasses (both the two village bypass and the Parish Council alignment) would leave and re-join the A12. The journey times for the DCO proposed bypass is estimated at 1 minute 48 seconds; whilst the journey time for the revised alternative Parish Council alignment is estimated at 2 minutes 8 seconds

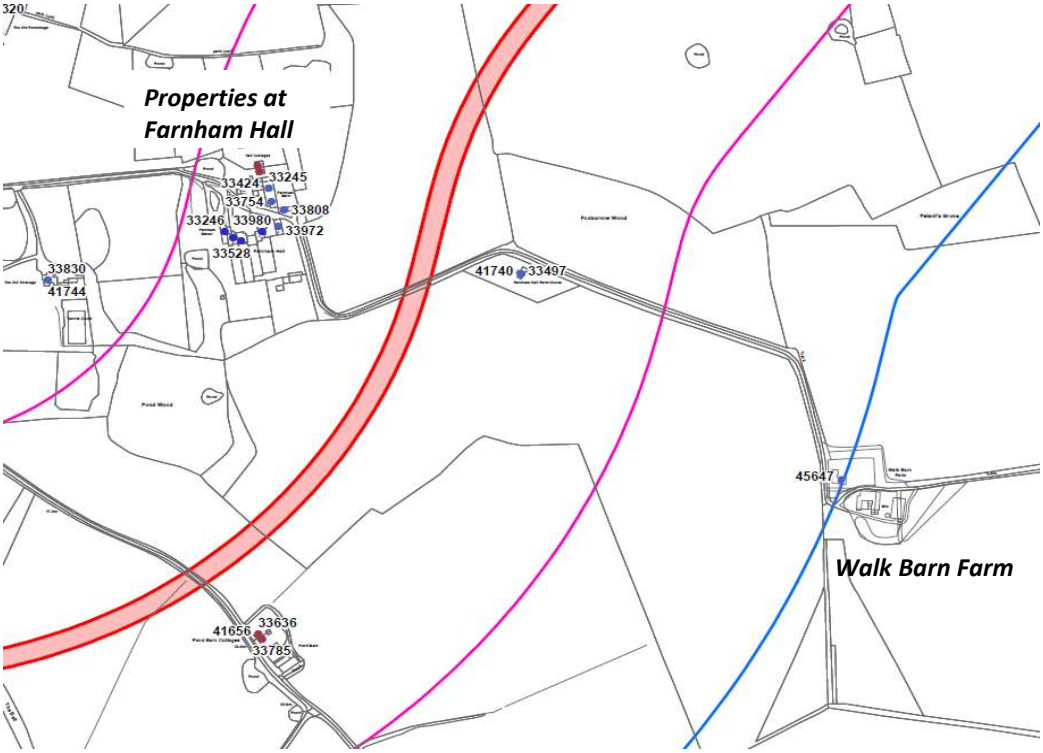
3.1.13 The two village bypass journey time is marginally faster than staying on the A12 through Farnham and Stratford St Andrew, assuming that there is no congestion at Farnham Bend. However, the bypass is clearly needed due to the safety and potential congestion concerns at Farnham Bend, as explained in Section 2 of this Summary Paper. The Parish Council alignment journey time is longer when compared to the existing A12 and the proposed two village bypass, and could not be expected to be acceptable to the majority of drivers for a longer diversion which would take a less efficient route. Whilst Sizewell C construction traffic would be instructed to use the bypass and avoid the two villages, Sizewell C traffic represents only approximately 7% of A12 traffic (based on Location AB – Marlesford, which is just to the south of Farnham – Table 8.6 of the Transport Assessment Addendum [AS-266]) and the majority of other vehicles using the A12 would be less likely to divert onto a bypass which offers no significant benefit in journey time or distance.

3.1.14 As a result of its greater length the Parish Council's alternative would be significantly less successful in its primary purpose – to bypass the two villages. It would not be an effective alternative for traffic passing through the two villages. The Parish Council alignment would therefore not provide the significant reduction in traffic flows that would be a legacy benefit for these local communities.

3.1.15 Whilst the Parish Council's alternative alignment would be further from the Farnham Hall properties, it would be significantly closer to Walk Barn Farm. **Plate 3.1** below shows the two village bypass alignment in proximity to Farnham Hall and Walk Barn Farm, as proposed in the DCO, and **Plate 3.2** shows the revised alternative Parish Council alignment (DMRB compliant

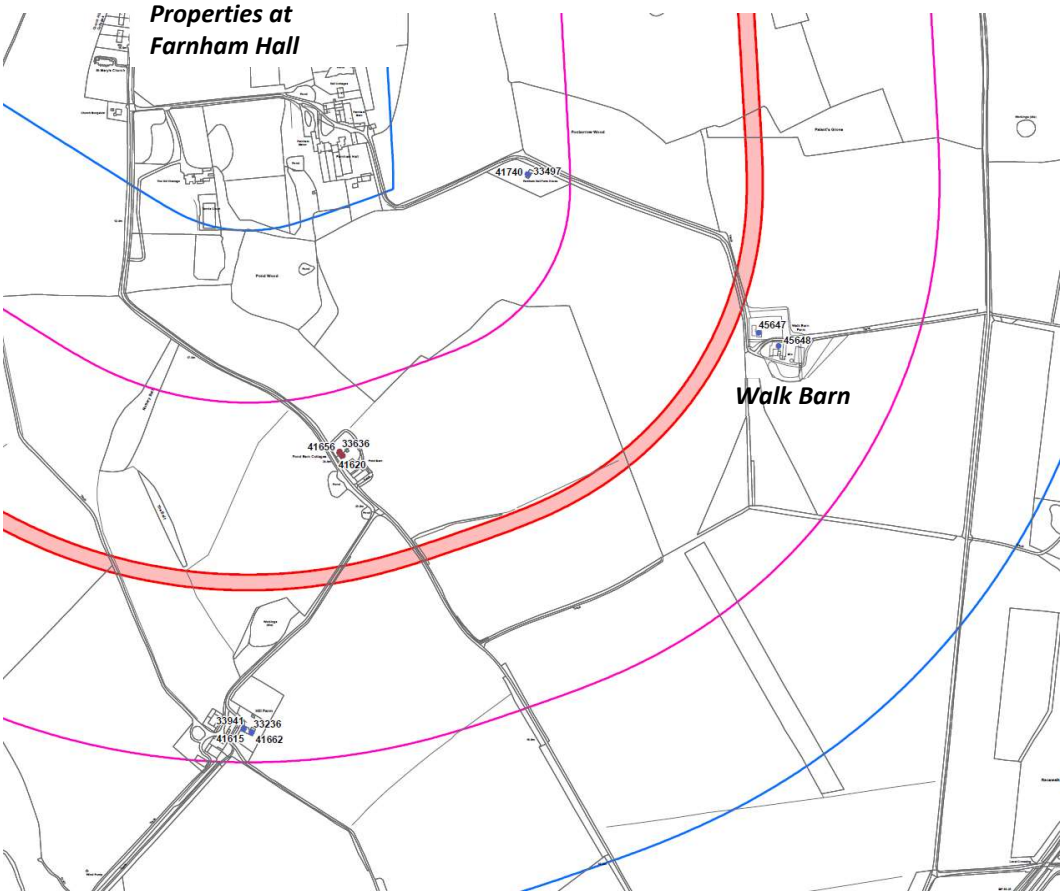
version). Full versions of these plans can be found at **Appendix C** and **Appendix D** respectively.

Plate 3.1: Two village bypass alignment (red line in drawing) with property locations – section near Farnham Hall and Walk Barn Farm



3.1.16 The two village bypass alignment (as proposed in the DCO) (and as shown in **Plate 3.1**) is approximately 83 metres from Farnham Hall Farm House (to the east of the bypass) and 135 metres from the nearest property at Farnham Hall (to the west of the bypass). **Plate 3.2** demonstrates that the Parish Council alignment would be significantly closer than this to Walk Barn Farm. The Parish Council alignment is 21.6 metres from Walk Barn Farm. In short, the proposed two village bypass has been routed as far away from residential properties as possible, whilst avoiding the environmentally important woodland and gardens.

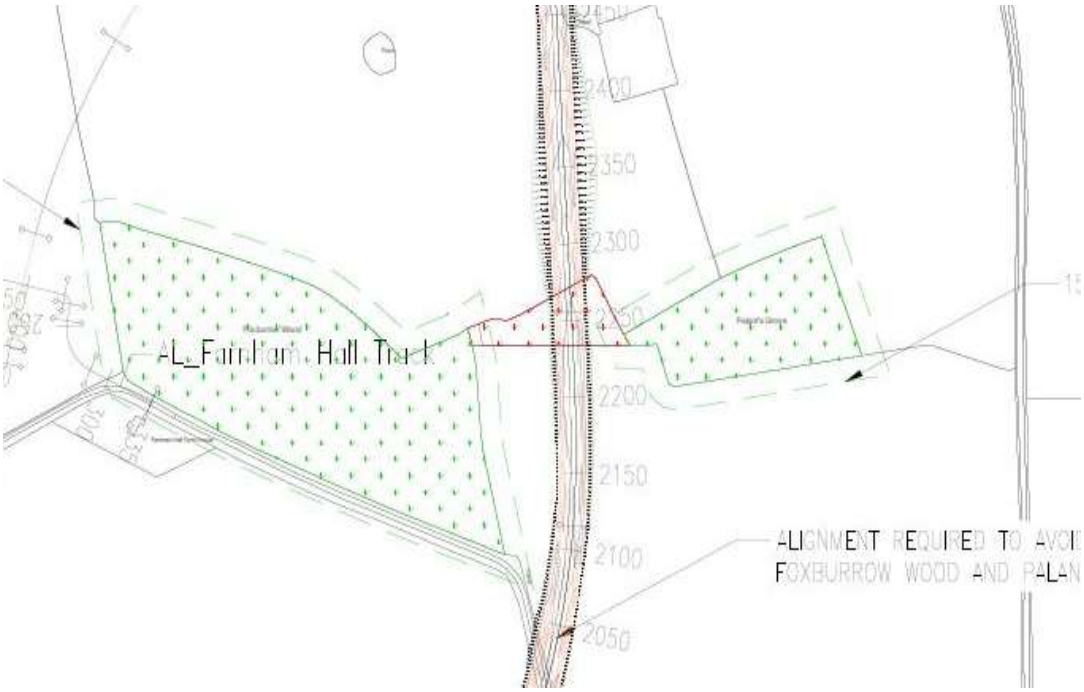
Plate 3.2: Revised alternative Parish Council alignment (red line in drawing) with property locations – section near Farnham Hall and Walk Barn Farm



3.1.17 Furthermore, additional land would be required to facilitate construction of the alternative alignment and to create a new access to serve Walk Barn Farm to the east of the property.

3.1.18 The Parish Council's alternative alignment would also result in the irreversible ecological severance of a County Wildlife Site. In order to pass further to the east from Farnham Hall and connect back to the A12 at the proposed A1094 / Friday Street roundabout to the north, the Parish Council's alternative alignment would pass between Foxburrow Wood Ancient Woodland and Palant's Grove Ancient Woodland, requiring the removal of the central neck of Palant's Grove (see **Plate 3.3**).

Plate 3.3: Parish Council's alternative alignment path through the woodland (woodland shown in red hatch)



3.1.19 This central section of woodland was declassified as Ancient Woodland following the submission of the DCO application but both Foxburrow Wood and the eastern section of Palant's Grove remain designated Ancient Woodland. All of the woodland is a non-statutory designated County Wildlife Site.

3.1.20 Whilst it is no longer Ancient Woodland itself, the removal of the central neck of Palant's Grove would sever the existing and important ecological connectivity of the established Ancient Woodlands on either side, resulting in avoidable harm to the biodiversity of the County Wildlife Site. In addition to the road itself, the Parish Council alignment would require a corridor approximately 14m to 20m wide on both sides of the road alignment (assuming no earthworks are required) including to accommodate haul routes, drainage, PRoW changes (specifically E-243/006/0) and a fence either side of the haul route. This corridor would be wider if the earthworks are required.

3.1.21 These corridors, which are needed to facilitate the safe construction of the alignment, would impact on the 15m buffer to Foxborrow Wood and Palant's Grove Ancient Woodland. These corridors, and the road itself, would result in a permanent loss of 1,834sqm of the County Wildlife Site.

3.1.22 The Parish Council's alternative alignment would pass closer to Friday Street Farm to the west, requiring a larger land take and having a greater

impact on agricultural severance. A comparison of the proposed two village bypass alignment in the DCO, and the Parish Council's alternative alignment, in this location is shown in **Plate 3.4** and **Plate 3.5** below respectively. For reference, Friday Street Farm is located in the eastern area of the plans. Full versions of these plans can be found at **Appendix C** and **Appendix D** respectively.

3.1.23 Comparing **Plate 3.4** and **Plate 3.5**, it is clear that the Parish Council's alternative alignment would be immediately adjacent to the pick-your-own fruit polytunnels to the south of the farm, and would sever a greater extent of the fields to the west of the car park from the farm. The views of the 'pick-your-own' fields from the Farm Shop and Café, where fresh produce is grown, are important to the Farm's commerciality. The proposed two village bypass alignment in the DCO would be further from the fruit polytunnels and retain more of the fields to the west within access of the farm complex, without needing to cross the bypass.

Plate 3.4: Two village bypass alignment (red line in drawing) with property locations – section near Friday Street Farm

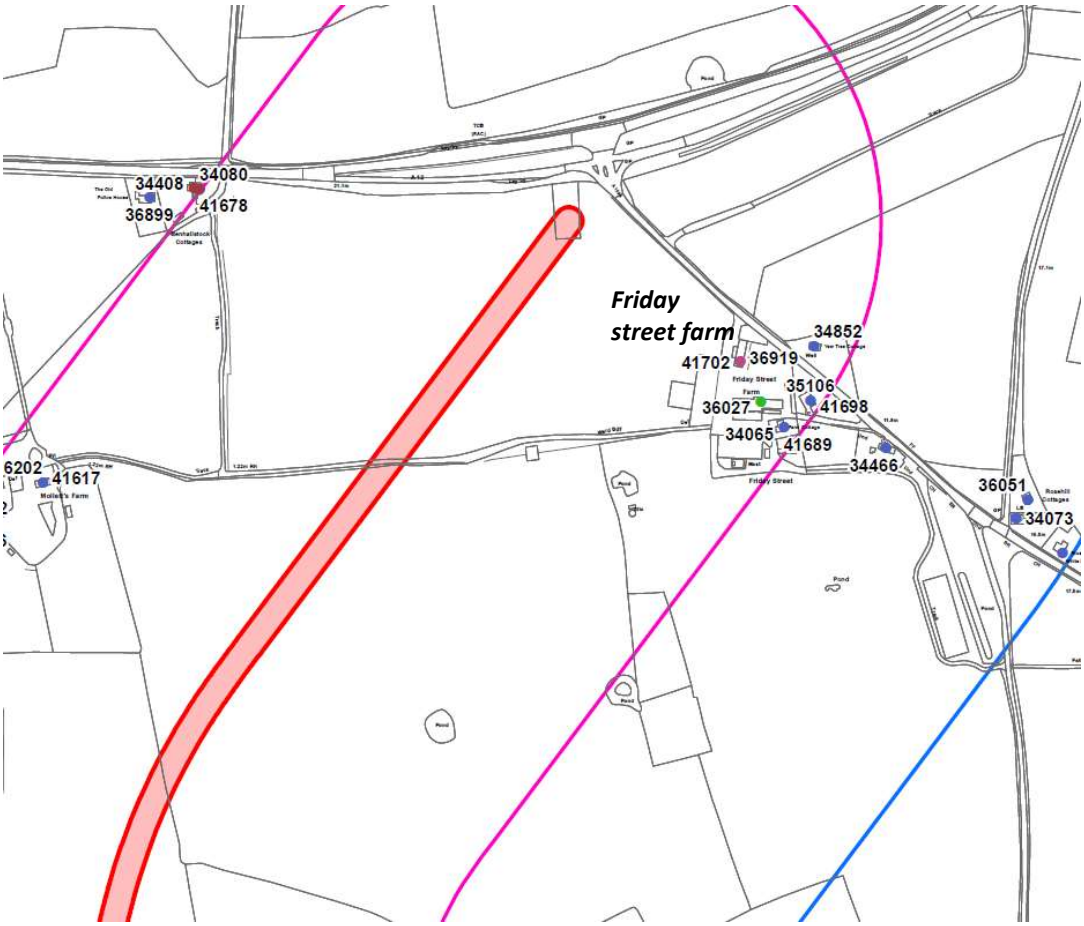
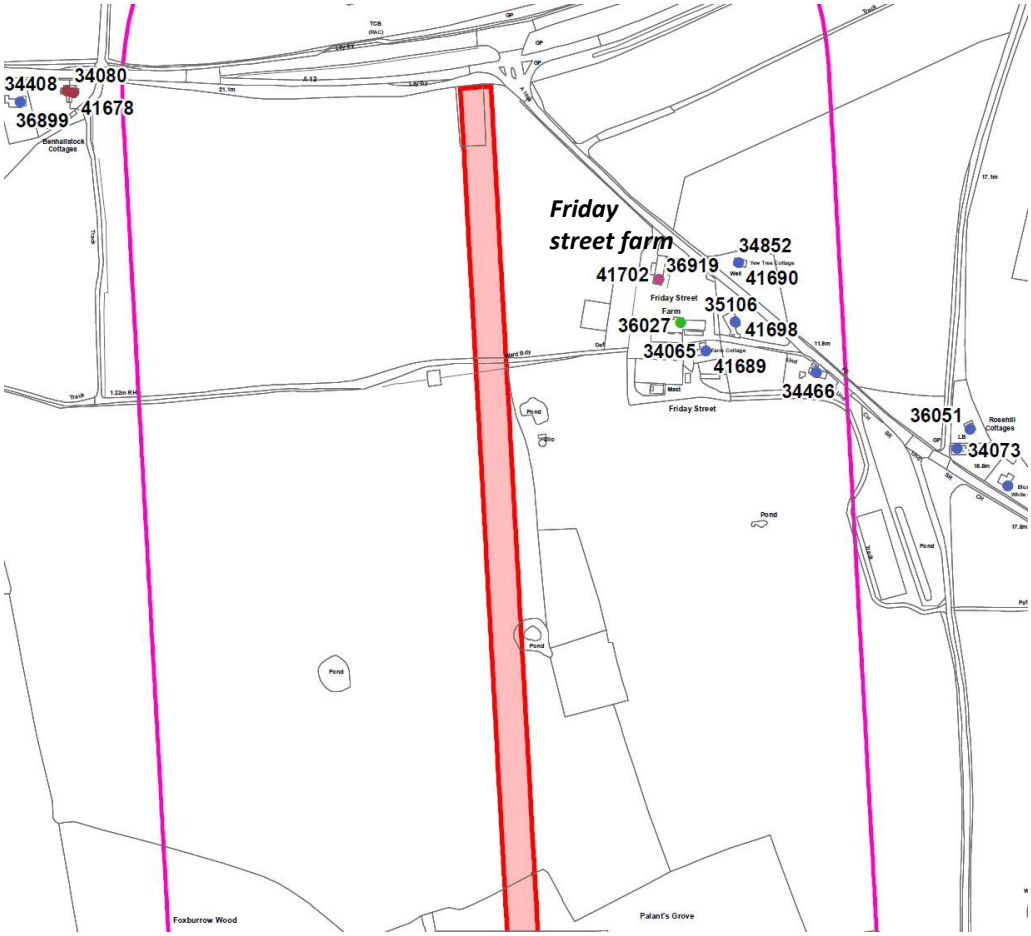


Plate 3.5: Revised alternative Parish Council alignment (red line in drawing) with property locations – section near Friday Street Farm



3.1.24 Consequently, whilst the alternative alignment put forward by the Parish Council would reduce the potential impacts on the Farnham Hall properties, it would have greater impacts on the wider area involving a long diversion into the countryside and a greater agricultural land-take, the loss of ecological connectivity within a CWS, and severance impacts on Friday Street Farm to the detriment of a local business. As a result of its greater length the Parish Council's alternative would be significantly less successful in its primary purpose – encouraging vehicles to bypass the two villages.

3.1.25 Furthermore, land allocated for the 80,000m^3 committed reservoir development at Glemham Estate Reservoir, Land North of Hill Farm Road, Farnham, IP17 1LU (planning reference DC/18/0322/FUL) would be marginally impacted by the alternative alignment due to a slight encroachment along its southern boundary.

3.1.26 In summary, the proposed two village bypass in the DCO application is considered to be the most effective option in overcoming the safety and congestion issues related to the narrow bend at Farnham, whilst also diverting traffic (existing traffic and construction traffic associated with the Sizewell C Project) around Farnham and Stratford St Andrew, thereby transforming the amenity of the villages.

4 CONCLUSIONS

4.1.1 The need for an intervention to address the long-recognised congestion and safety issues of the Farnham bend is well established, and the preference for a bypass to facilitate this has been well documented through the previous proposals for the A12 and through the public consultation for Sizewell C.

4.1.2 Routing of the Sizewell C construction traffic on the existing A12 in the Peak Construction years would be undesirable due to the unsuitability of the Farnham bend for accommodating the increased traffic flows and the amenity impacts on the villages of Stratford St Andrew and Farnham

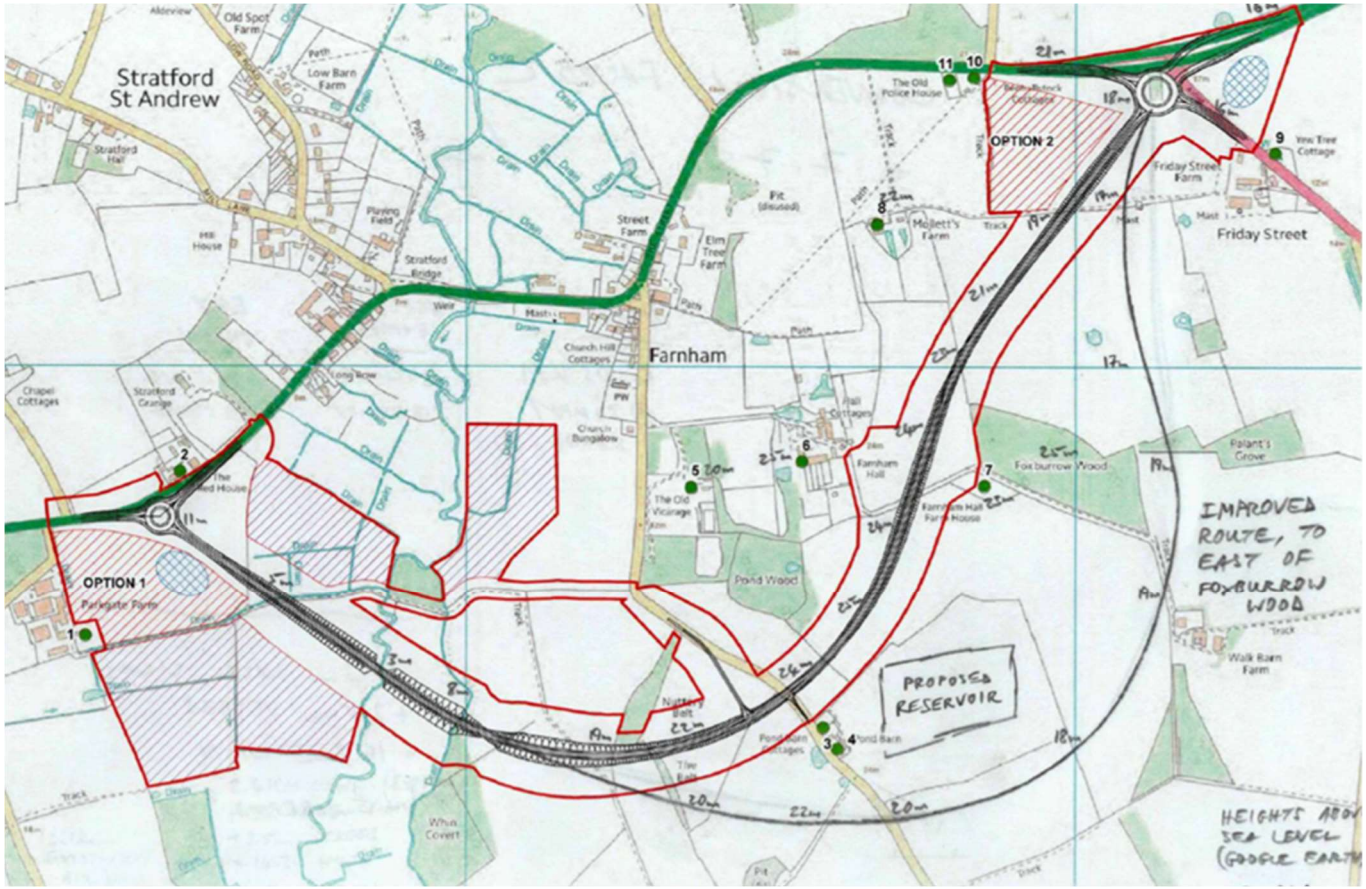
4.1.3 Its construction will bring significant benefits to the communities of Stratford St Andrew and Farnham, whilst creating long term legacy benefits. A one village bypass of Farnham or smaller scale interventions at the bend would not reduce daily HGV movements through the two villages nor help to remove the existing severance and safety concerns.

4.1.4 The proposed two village bypass would remove approximately 99% of all traffic from the existing A12, which would remain open as a local route serving residents of Stratford St Andrew and Farnham and proving a safer alternative for cyclists, equestrians and pedestrians.

4.1.5 The proposed route of the two village bypass would be an effective alternative to using the existing A12 and has been designed so that its environmental effects are acceptable.

APPENDIX A: FARNHAM WITH STRATFORD ST ANDREW PARISH COUNCIL ALIGNMENT

The below alignment (shown in a thin black line to the east of the two village bypass route) was submitted by Farnham with Stratford St Andrew Parish Council in its response to the Stage 3 Consultation (response dated 27 March 2019)


Stratford St Andrew
Farnham
Friday Street
OPTION 1
OPTION 2
PROPOSED RESERVOIR
IMPROVED ROUTE, TO EAST OF FOXBURROW WOOD
HEIGHTS ABOVE SEA LEVEL (GOOGLE EARTH)

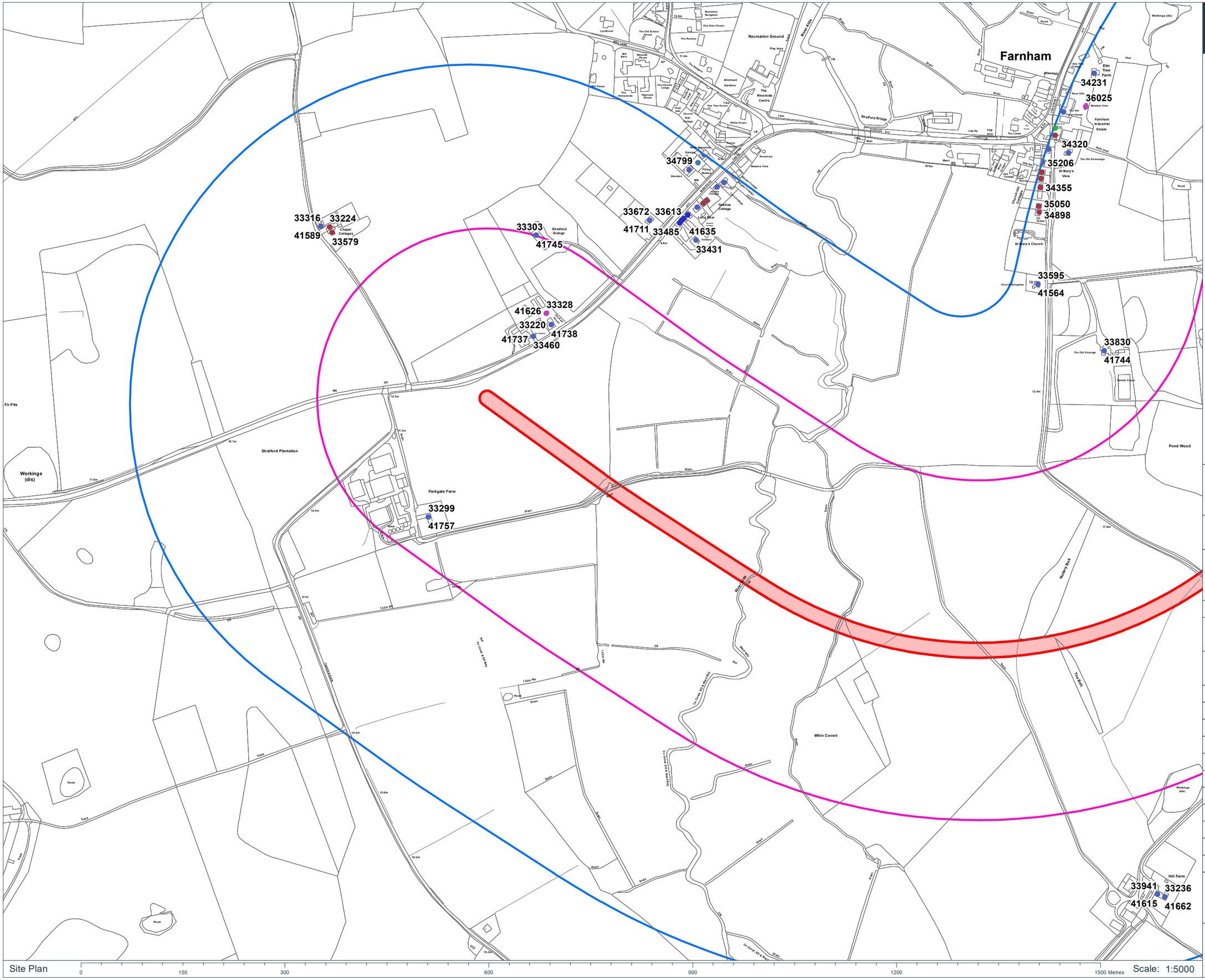
APPENDIX B: GEOMETRIC STANDARDS COMPLIANT VERSION OF FARNHAM WITH STRATFORD ST ANDREW PARISH COUNCIL ALIGNMENT

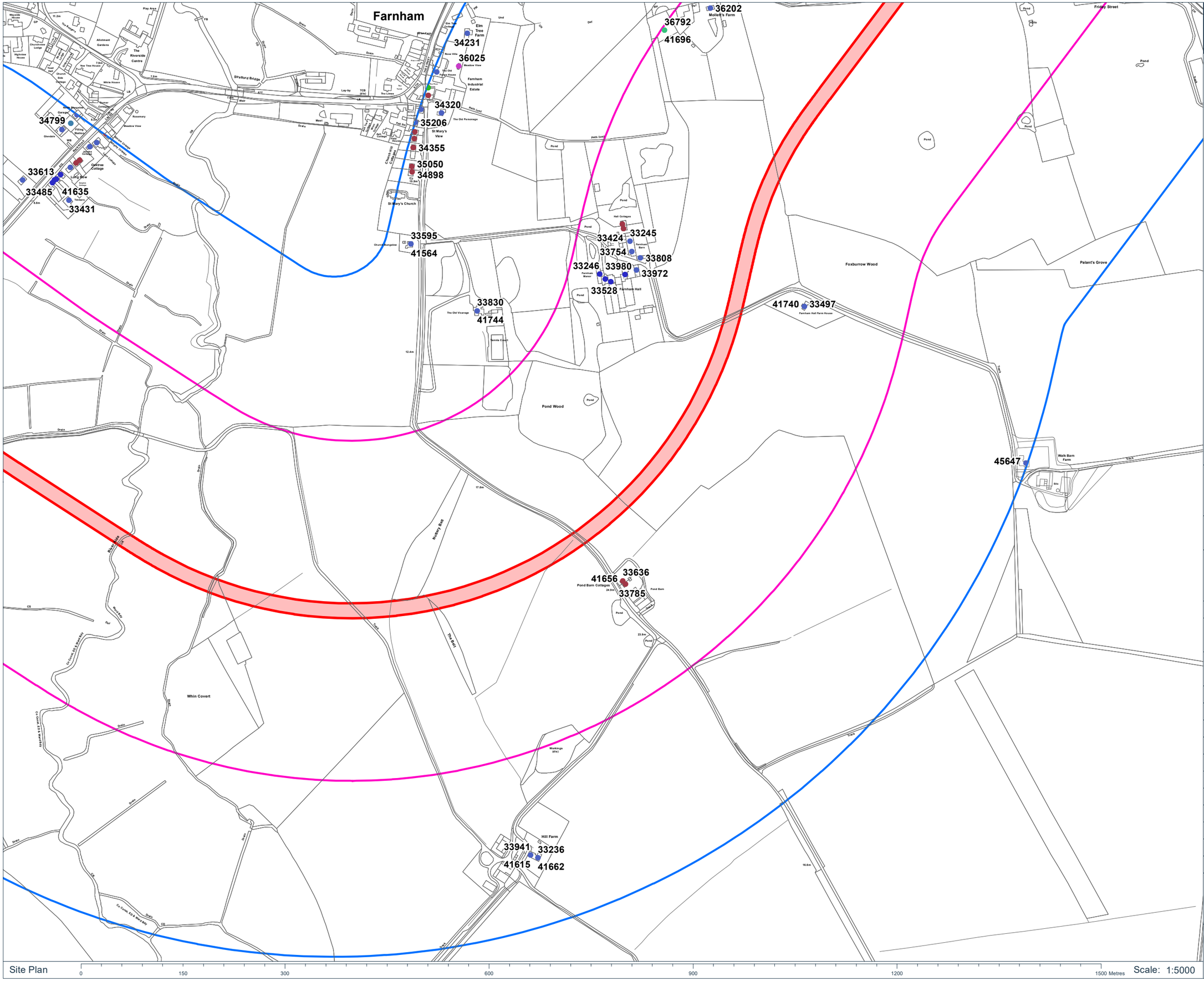
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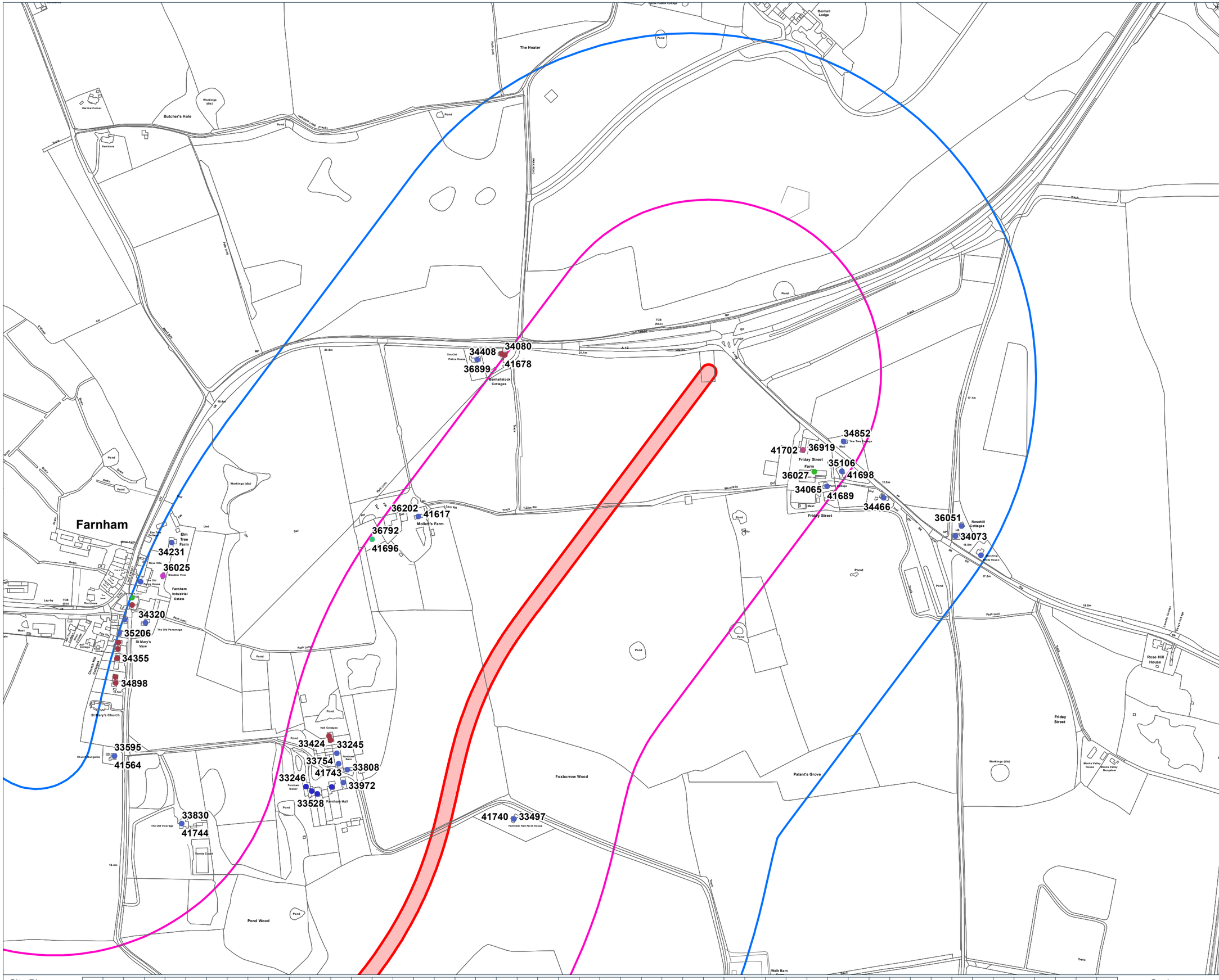


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APPENDIX C: TWO VILLAGE BYPASS ALIGNMENT WITH PROPERTY LOCATIONS


Farnham
33316
33224
41589
33579
33303
41745
33672
33613
41711
33485
41635
33431
34799
34231
36025
34320
35206
34355
35050
34898
33595
41564
33830
41744
41626
33328
33220
41737
41738
33460
33299
41757
33941
33236
41615
41662
Stratford Plantation
Parkgate Farm
Whin Covert
Pond Wood
Fir Pits
Workings (dis)
Recreation Ground
Stratford Bridge
Site 1
Site 2
Site 3
Site 4
Site 5
Site 6
Site 7
Site 8
Site 9
Site 10
Site 11
Site 12
Site 13
Site 14
Site 15
Site 16
Site 17
Site 18
Site 19
Site 20
Site


Farnham
Stratford Bridge
Elm Tree Farm
Farnham Industrial Estate
The Old Parsonage
St Mary's View
St Mary's Church
Church Bungalow
The Old Vicarage
Tennis Court
Farnham Hall
Farnham Manor
Farnham Barn
Farnham Hall Farm Houses
Hall Cottages
Molletts Farm
Foxburrow Wood
Palant's Grove
Friday Street
Walk Barn Farm
Pond Wood
Whin Covert
Hill Farm
Pond Barn Cottages
Pond Barn
Workings (dis)
Nursery Boat
The Boat
Black Boat
Long Barn
Cektroo Cottage
Glendale
Rosemary
Meadow View
Meadow Cottage
Fishing Station
Chalk Cottage
Church Site
Church Lodge
Highview House
Abbotsmede House
Abbotsmede Lodge
The Riverside Centre
Allotment Gardens
Play Area
New Tree House
White House
Farnham Cottage
Rose Villa
Rose Villa Cottages
Meadow View
The Limes
Lay-by
Path (unfenced)
Church Site Cottages
Ash Cottage
Ash Tree Cottage
Mast
Pond
Drain
Track
Ditch
Dyke
Ford
Bridleway
Footpath
Ca Crowd, 63.6 wide
Ca Crowd, 63.6 wide
Ca Crowd, 63.6 wide



Site Plan

0 150 300 600 900 1200 1500 Metres

Scale: 1:5000

Drawing Location: C:\Users\lulis.mendes\Dalcour Maclaren\SZC Local Property Consultancy Service - Geomatics\01 DM Plans\20210511_191934_PLN_INFO_475.1_TWB_Opt1.mxd

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Key:

- Two Vilage Bypass Proposed Road Alignment
- Buffer Zone - 250m
- Buffer Zone - 500m
- CL02 - Holiday / Campsite
- CR07 -Restaurant / Cafeteria
- CR08 - Shop / Showroom
- RD01 - Caravan
- RD02 - Detached
- RD03 -Semi-Detached
- RD04 - Terraced

Notes:

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936

Interest:
N/A

Location:
Saxmundham, IP17 1LB

Coords: 636,992 260,286

Scheme Name:
SZC Local Property Consultancy Service

Drawing Name:
Information Plan

Drawing No: 191934_PLN_INFO_475.3_A

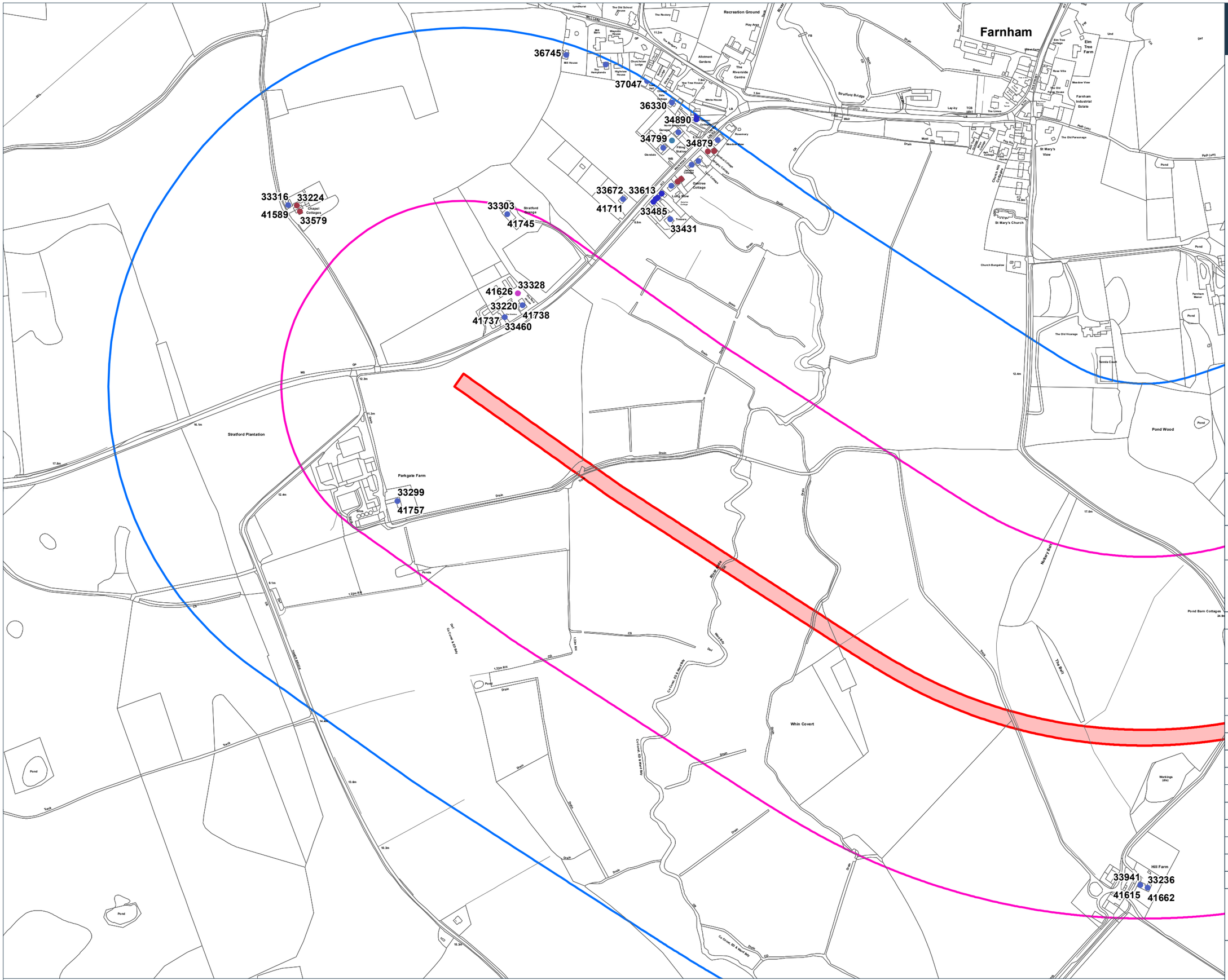
Rev	Date	Description
-	12.05.2021	First Issue
A	27.01.2021	Buffer the Road Alignment

Drawn:	JP
Approved:	JCD
Sheet No:	3 of 3
Sheet Size:	A3

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EDF EDF ENERGY

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APPENDIX D: PARISH COUNCIL ALTERNATIVE ALIGNMENT WITH PROPERTY LOCATIONS



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Key:

- Site Boundary - Two Vilage Bypass Alternative Road Alignment
- Buffer Zone - 250m
- Buffer Zone - 500m
- CR05 - Petrol Filling Station
- RD01 - Caravan
- RD02 - Detached
- RD03 -Semi-Detached
- RD04 - Terraced

Notes:

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936

Interest: N/A

Location: Saxmundham, IP17 1LB

Coords: 635,687 259,570

Scheme Name: SZC Local Property Consultancy Service

Drawing Name: Information Plan

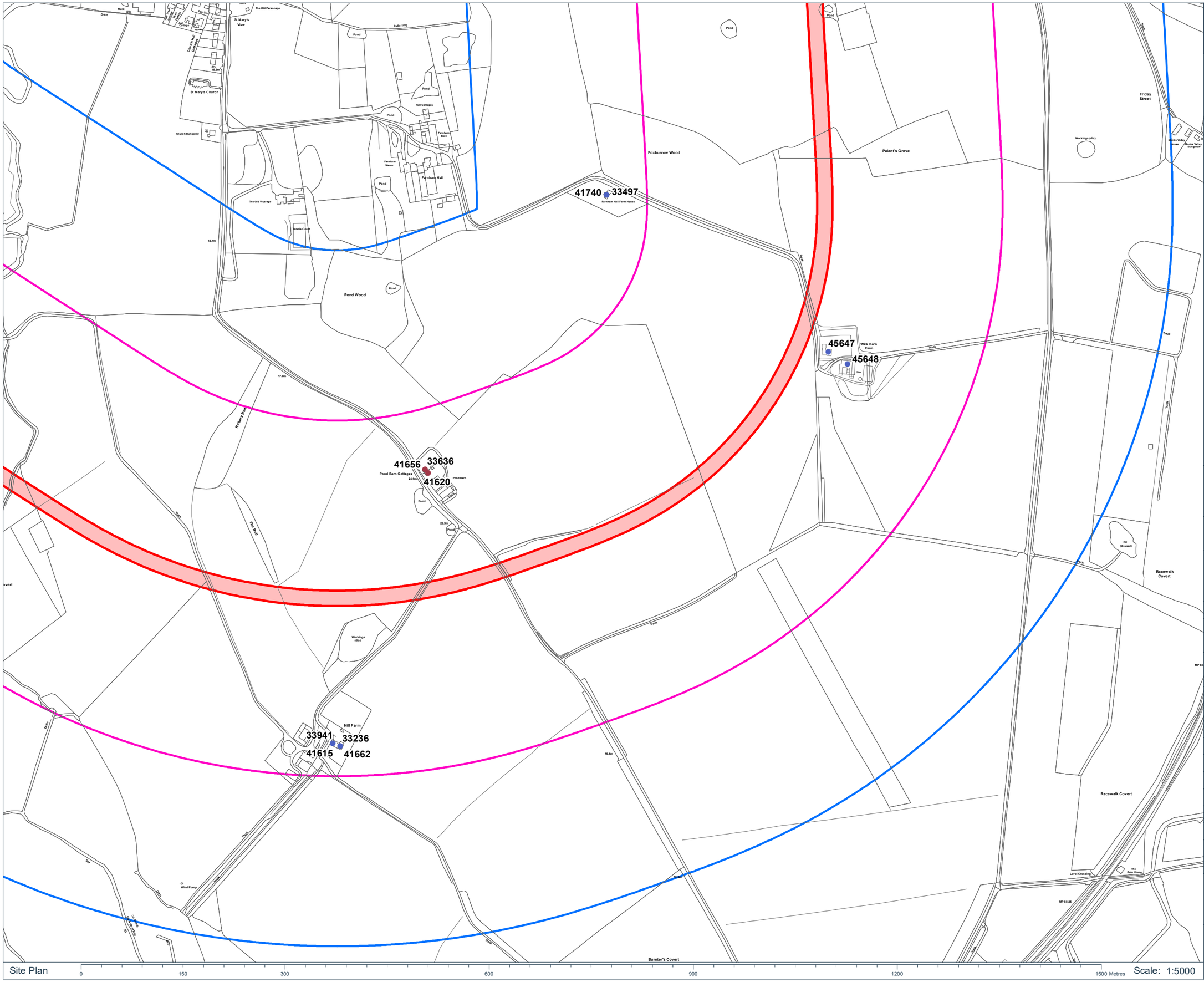
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Rev	Date	Description
-	12.05.2021	First Issue

Drawn:	JP
Approved:	JCD
Sheet No:	1 of 3
Sheet Size:	A3

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Key:

- Site Boundary - Two Vilage Bypass Alternative Road Alignment
- Buffer Zone - 250m
- Buffer Zone - 500m
- RD02 - Detached
- RD03 -Semi-Detached

Notes:

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936

Interest:
N/A

Location:
Saxmundham, IP17 1LB

Coords: 636,845 259,384

Scheme Name:
SZC Local Property Consultancy Service

Drawing Name:
Information Plan

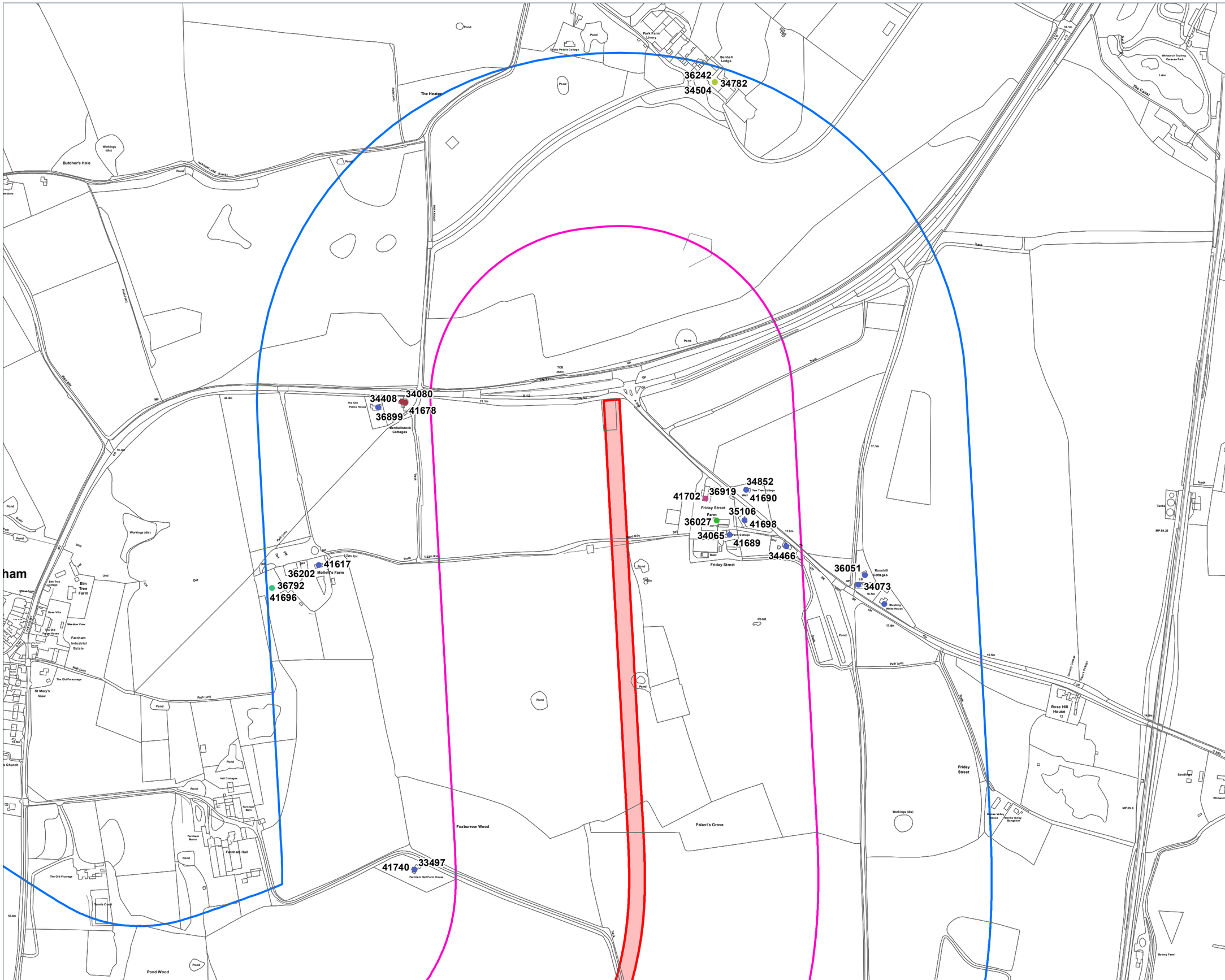
Drawing No: 191934_PLN_INFO_474.2

Rev	Date	Description
-	12.05.2021	First Issue

Drawn:	JP
Approved:	JCD
Sheet No:	2 of 3
Sheet Size:	A3

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DALCOUR MACLAREN

Key:

- Site Boundary - Two Vilage Bypass Alternative Road Alignment
- Buffer Zone - 250m
- Buffer Zone - 500m
- CL02 - Holiday / Campsite
- CR07 -Restaurant / Cafeteria
- CR08 - Shop / Showroom
- RD02 - Detached
- RD03 -Semi-Detached
- RD06 - Self Contained Flat (Includes Maisonette / Apartment)

Notes:

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936

Interest: N/A

Location: Saxmundham, IP17 1LB

Coords: 637,139 260,351

Scheme Name: SZC Local Property Consultancy Service

Drawing Name: Information Plan

Drawing No: 191934_PLN_INFO_474.3

Rev	Date	Description
-	12.05.2021	First Issue

Drawn:	JP
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EDF ENERGY

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APPENDIX 5D SIZEWELL LINK ROAD - PRINCIPLE AND ROUTE SELECTION RESPONSE PAPER

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1 INTRODUCTION

1.1.1 Most Sizewell C construction traffic is expected to travel along the A12 and, in the absence of an alternative, would reach the main development site via the B1122, through Middleton Moor and Theberton. The B1122 was used as the main route for the construction of both Sizewell B and the Galloper wind farm. Through consultation with the local communities and other key stakeholders, concerns have been raised regarding the suitability of using the B1122 for construction traffic and the impacts that using the B1122 would have on the local communities along the route.

1.1.2 The purpose of a Sizewell link road is therefore to reduce the amount of traffic on the B1122 through Middleton Moor and Theberton in the short term during the peak construction phase of the Sizewell C Project and to provide a suitable long term quality connection between the A12 and Sizewell.

1.1.3 The proposed Sizewell link road would comprise a new, permanent, 6.8 kilometre (km) single carriageway road, which begins at the A12 south of Yoxford, bypasses Middleton Moor and Theberton before joining the B1122 south of Browns Plantation, which is to the west of the Sizewell C main development site. To reach the main development site, the HGVs would then travel along the B1122 to the main site access roundabout on the B1122, which is positioned just north of the existing Eastbridge Road / B1122 junction. However, the secondary site entrance on the B1122, on the northern side of Lover's Lane, would continue to be used by some HGVs from the Land east of Eastlands Industrial Estate (LEEIE) and would remain available to be used as an alternative access in the event of an event or incident disrupting the use of the main site access roundabout.

1.1.4 Once open to traffic, the SLR would be used by the general public as well as construction workers arriving by car, park and ride buses from both the northern and southern park and ride sites, and goods vehicles (both light and heavy) delivering freight to the Sizewell C main development site.

1.1.5 In arriving at the principle of a Sizewell link road and selecting the alignment proposed within the DCO application, the following options were considered through the process of formulating and consulting on the emerging SZC proposals.

Table 1.1: Options and Sizewell link road routes considered by SZC Co.

Options and Sizewell link road routes considered by SZC Co.
• 'Do minimum' scenario (i.e. with Yoxford roundabout and the Other Highway Improvements in place but no Sizewell link road).
• Stage 2: speed limit reductions on various sections of the B1122
• Stage 2: an improvement of the B1122 to the west of the junction with Mill Street;
• Stage 2: options for enhancing pedestrian environment in Theberton
• Stage 2: an improvement to the alignment of B1122 between Theberton and the Sizewell C site entrance.
• Stage 3 Route W (north and south)
• Stage 3 Route X
• Stage 3 Route Y (north and south)
• Stage 3 Route Z (north and south) (Route Z South being the alignment of the proposed Sizewell link road)
• Stage 3 Theberton Bypass
• Stage 4 Theberton Bypass
• Stage 4 Sizewell link road (based on Route Z South as at Stage 3 but with design refinements)
• Stage 4 temporary Sizewell link road
• DCO Application Submission May 2020 (based on Route Z South at Stage 4 but with design refinements)

Options and Sizewell link road routes considered by SZC Co.
• DCO Application Change Submission January 2021(based on Route Z South as submitted in the May 2020 submission but with design refinements).

1.1.6 A plan illustrating the routes considered can be found in Appendix 1.

1.1.7 The need for the Sizewell link road and the justification for the route selected is set out within the following DCO application documents:

- the Planning Statement (Book 8, Document 8.4, paragraphs 6.7.27 – 6.7.34 and 9.1.38 – 9.1.44)
- the Site Selection Report which is appended to the Planning Statement (Book 8, Document 8.4, Appendix 8.4A, Chapter 7)
- the Alternatives Chapter in the Environmental Statement (Book 6, Volume 6, Chapter 3, Section 3.2)
- the Transport Assessment (Book 8, Document 8.5, in particular, pages 15, 20, paragraphs 4.5.13, 8.7.18, 8.7.30, section 8.8, paragraphs 10.2.49-57 and 14.3.4.)
- the Transport Assessment Addendum (Book 8, Document 8.5, in particular, pages 142, 157 and 160)
- the Consultation Report (Book 5, Document 5.1, Sections 4.8, 6.7, 7.7, and 8.9 and the Issues Tables at Annex A, C, E and G)

1.1.8 This paper brings together the case to explain why the Sizewell link road is necessary, why an acceptable route has been selected and why other routes were not chosen.

1.1.9 This document is structured as follows:

- **Section 2** - Principle of the Sizewell link road, including:
  - The existing B1122

- Consultation feedback
- The environmental and amenity disadvantages of not having a Sizewell link road and therefore using the B1122 for SZC construction traffic
- Benefits of the Sizewell link road
- Conclusion regarding why the Sizewell link road is necessary
- The legacy of the Sizewell link road
- Why the need for the Sizewell link road remains following the proposed changes to the DCO in January 2021

- **Section 3** - Sizewell link road route selection, including:
  - Overview of how Routes X, Y, W and Z were selected
  - Why Route X is considered unsuitable
  - Why Route Y (N and S) are considered unsuitable
  - Why Route W (N and S) are considered unsuitable
  - Why Route Z North is considered unsuitable
  - Benefits of Route Z South
- **Section 4** – Conclusion setting out the principle of the Sizewell link road, how the route was selected and why an acceptable route has been selected.

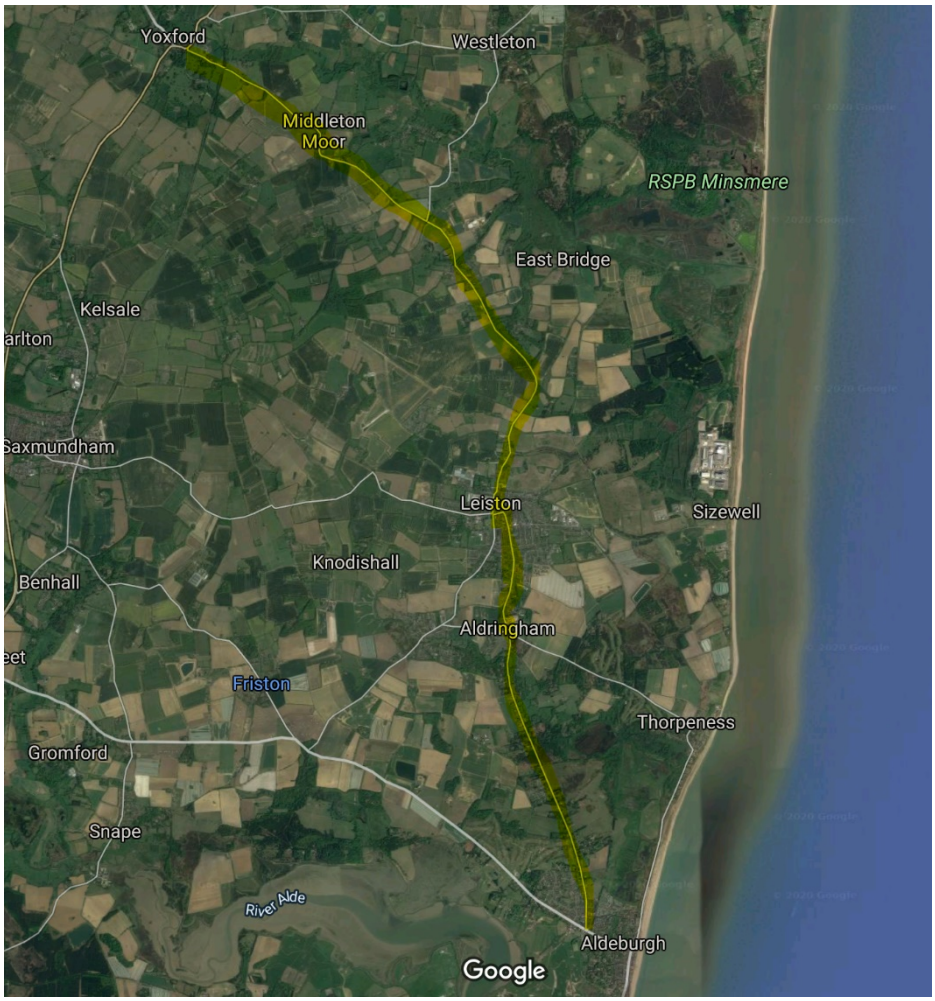
2 PRINCIPLE OF THE SIZEWELL LINK ROAD

a) The B1122

The existing character of the B1122

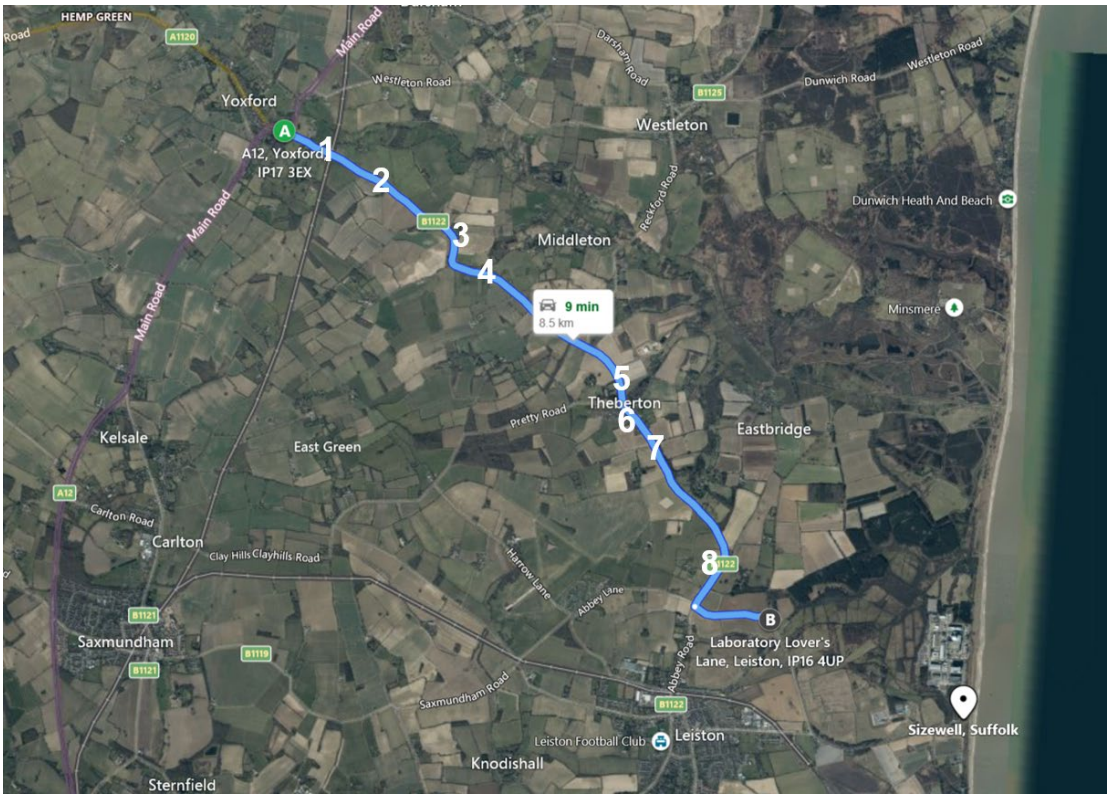
2.1.1 The B1122 is an existing rural B-road, approximately 15 kilometre (km) long, running between Yoxford and Aldeburgh, as shown in Figure 1, highlighted in yellow.

Figure 1: The location of the B1122



2.1.2 Most Sizewell C construction traffic is expected to travel along the A12 and, in the absence of an alternative, would reach the main development site via the B1122, through Middleton Moor and Theberton (as shown in Figure 2). The distance from the A12 to the main site is approximately 8.5km.

Figure 2: Stretch of the B1122 to the main site



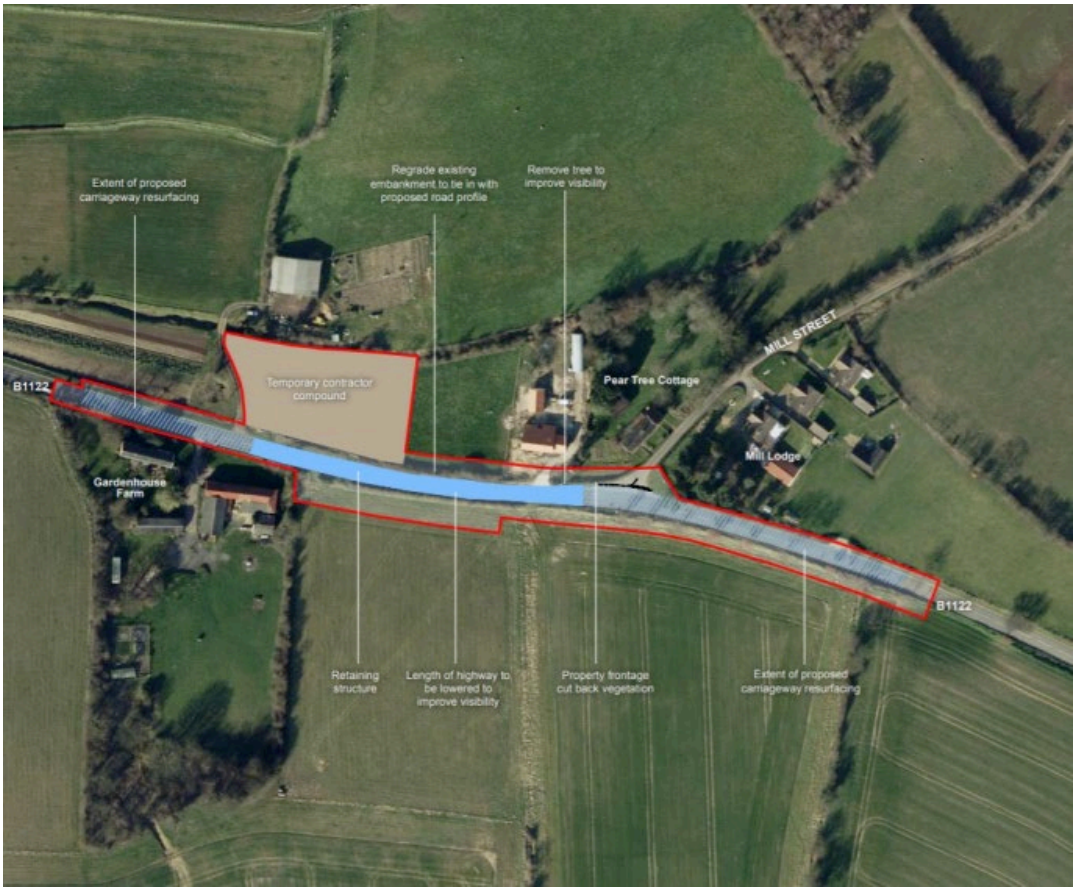
2.1.3 The B1122 connects the A12 in Yoxford to Leiston via Middleton Moor and Theberton. The B1122 between Yoxford and Leiston is a single carriageway road, approximately 6m in width. Therefore, the B1122 is not wide enough in places to safely accommodate two HGVs wider than 3m coming from opposite directions. This issue is amplified where sections on the B1122 have embankments on one or both sides of the road, making movements of HGVs or wider loads more difficult.

2.1.4 There are no continuous footways or cycleways along the B1122 apart from where it passes through the village of Theberton, where there are footways of approximately 1.2m in width. Outside of the main settlements along the corridor, the B1122 is principally unlit, like most rural roads. The current speed limit on the B1122 between the A12 at Yoxford and the proposed access road to Sizewell C varies along the road between 30 miles per hour (mph), 40mph and the national speed limit of 60mph for cars and 50mph for buses and goods vehicles. Images showing the character of the road can be found in **Appendix 2**. The location of these images relate to the numbers on Figure 2 above.

2.1.5 The absence of any cycle lanes, coupled with the narrowness of the road makes it intimidating for cyclists.

2.1.6 The existing horizontal and vertical alignment of the B1122 is not consistent along its length. For example, immediately east of Onner's Lane and Moat Road (see image 7 of **Appendix 2**) changes in alignment provide poor forward visibility for a section of the road with the national speed limit. The visibility would remain poor, even if speed limits were reduced to 40mph on the stretch of this section of the B1122. There is also poor visibility further along the B1122 for vehicles emerging from Mill Street (see image 4 of **Appendix 2**). This stretch of the B1122 is shown in the Figure 3 below. This Figure has been taken from the Stage 2 consultation document, when improvements to the B1122 were consulted upon rather than a link road.

Figure 3: Stretch of the B1122 to the west of the junction with Mill Street



2.1.7 Between Yoxford and Theberton there are 21 statutory listed buildings (see **Appendix 3**), one conservation area (Yoxford Conservation Area) (see Figure 4) and 146 residential properties (see **Appendix 4**) that lie immediately adjacent to either the B1122 or the section of the A12 that passes through Yoxford. The settlements of Yoxford and Theberton are generally arranged close to the roadway. Plans showing the location of these properties are provided in **Appendix 4**.

Figure 4: Yoxford Conservation Area Boundary



2.1.8 There are 10 PRoWs that interact with the B1122 on the section that would be bypassed. These PRoWs are Nos. 1, 10, 17, 20, 21 (as identified on SCCs PRoW map for Yoxford (map number 584 – accessed here)), 4, 15, 16, 23, 7 (SCCs PRoW map for Theberton (map number 515 – accessed here).

The historic need for an alternative road to the B1122

2.1.9 The need for an alternative road other than the B1122 to access the Sizewell site has been recognised for a number of years. The suitability of the B1122 was an issue at the Sizewell B inquiry in 1983-85. after which the Secretary of State (SoS) for Energy granted consent for the power station in 1987. With regard to the suitability of the B1122, as summarised by the SoS, the Inspector judged that:

> *"The main detriment [for the construction impacts on the locality] would be the huge increase in traffic, much of it in the form of heavy goods vehicles on local roads during construction, especially on the B1122. He further concluded the prescribed route for Sizewell B construction traffic, the B1122, is not, and when improved will still not be, a satisfactory route for large numbers of heavy goods vehicles over a period of seven years of more" (para 8.8).*

2.1.10 The decision letter continued (paragraph 8.10):

> *"I note the Inspector's conclusions that there is no ready alternative to the B1122 and that **the severe drawbacks** to the use of the B1122 for Sizewell B construction traffic are not sufficient to justify a delay to the start of the construction work for two to three years. I urge the County Council in consultation with the CEGB to make every effort to identify an alternative route and to start upon a study as soon as possible." (emphasis added)*

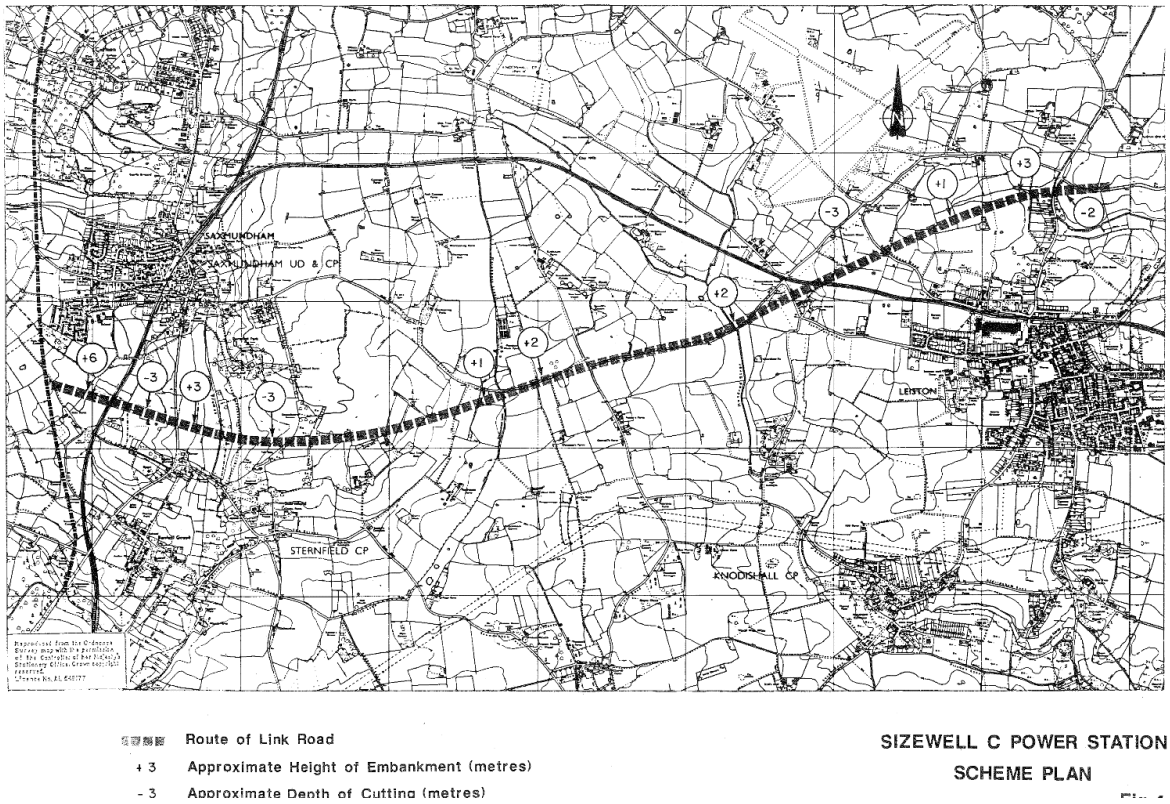
2.1.11 Following the recommendation in the Inspector's report and the SoS decision letter, a study was undertaken by Travers Cocker and Partners in 1987 on behalf of Central Electricity Generating Board (CEGB) to identify a new route between the A12 and Sizewell. Six routes were put forward for consultation in October 1987 which included one option for improving the existing B1122 and providing bypasses to Middleton Moor and Theberton (Do Minimum) and five new routes (A, B, C, D1 and D2) (source: 1989 CEGB Environmental

Statement, para 7.1). The consultation exercise identified route D2 as the preferred option (see Figure 5 below), although the D2 route was slightly modified after consultation to move the alignment further south.

2.1.12 A further consultation exercise was conducted by CEGB the following year in July 1988. The reason for this additional consultation was because, following the commencement of construction of the Sizewell B power station, CEGB announced proposals to construct an additional power station, also referred to as Sizewell C and referred to hereafter as 'CEGB Sizewell C' to avoid confusion with SZC Co.'s Sizewell C Project. At this point in time, if CEGB Sizewell C was built, there would have been an overlap between the construction programmes for Sizewell B and CEGB Sizewell C. Therefore, in order to reduce the environmental disturbance which would arise from construction traffic associated with both projects, SCC and CEGB commissioned studies to assess the impacts on the road network.

2.1.13 The consultation considered options, including a modified D2 route, improvements to the B1119 Saxmundham to Leiston Road and the provision of bypasses to Middleton Moor and Theberton. Again, D2 was identified as the preferred option.

Figure 5: D2 Route proposed in the 1989 CEGB Environmental Statement



2.1.14 Following the consultation, Travers Cocker and Partners, on behalf of CEGB, prepared an Environmental Statement on the link road in May 1989 for the proposed CEGB Sizewell C titled "Sizewell C Power Station – A12 – Sizewell Link Road – Environmental Statement".

2.1.15 The Statement stated (at para 5.1) that D2 would result in a journey time saving for those travelling from the south. However, the Statement also identified that the D2 route would not be likely to be used by the workforce travelling to Sizewell from the north of the area. Paragraph 5.2 stated:

> *"The effect of the link road on total traffic flows on the B1122 is negligible as north bound (sic] traffic will not be attracted to the new road. However, the preponderance of commercial vehicles approaching the site from the south will reduce the Sizewell commercial traffic using the B1122*

by 70% with the resulting benefits to residents of Middleton Moor and Theberton"

2.1.16 There was no mechanism in the Sizewell B consent to require the provision of a new road. The provision of a link road was only being considered in the context of a potential additional power station – but proposals for CEGB Sizewell C did not progress.

2.1.17 On 9 November 2009, the Government published the draft National Policy Statement for Nuclear Power Generation, which identified Sizewell as one of 10 nuclear sites which could accommodate future reactors in England and Wales. Following this, SZC Co. began to develop plans for Sizewell C and put forward proposals for the Sizewell site in at Stage 1 public consultation in November 2012.

2.1.18 As part of the work for Sizewell C, work to identify a route for a potential bypass of the B1122 re-commenced. SCC commissioned AECOM to prepare a report in December 2014 to provide a high level assessment of options for providing relief to communities along the B1122.

2.1.19 The AECOM report (December 2014) made clear that the villages of Theberton and Middleton Moor would suffer if a bypass was not built, stating at page 29:

"…it is indicated that if the bypasses were not built the restrictions within the villages would impact greatly on the journey times of vehicles travelling to and from Sizewell C as well as the residents within Theberton and Middleton Moor. The villages would suffer due to the amount of HGVs passing through their centres on a daily basis during and after Sizewell C's construction."

2.1.20 Page 254 of the AECOM report also stressed the need for a bypass:

"If the bypasses were not constructed, the number of HGVs on the existing B1122 both during and after the Sizewell C construction period would be unacceptable."

2.1.21 The AECOM report reviewed the historic options for B1122 'local' bypasses (Middleton Moor and Theberton bypasses) and re-examined the D2 route proposal. As noted at page 4 of the AECOM report, the D2 route was reviewed as it was considered to be:

> *"….the most direct route to the site of the proposed Sizewell C power station, located between the A12 in the west to the north of Leiston in the east. The route has been designed as an alternative to the existing road, the B1119 which cuts through the town of Saxmundham"*

2.1.22 This suggests that the D2 route was designed as an alternative to the existing road, the B1119 , where as the Sizewell link road is proposed to relieve the B1122.

2.1.23 The AECOM study concluded that further work would need to be undertaken for the assessment and design of a suitable bypass scheme, however, the study stated on page 219 that:

> *"the more favoured options are largely the bypass options of B1122 rather than the D2 route"*

2.1.24 The AECOM 2014 study noted that the D2 route had a number of disadvantages compared with the more local bypass options (Middleton Moor and Theberton), namely: large effects on biodiversity, moderate effects on landscape character, adverse effects on visual amenity, negative impacts upon heritage in the area, impacts upon the water environment, large community impacts and high construction costs. The conclusion of the AECOM 2014 report largely reflects the raising of standards of environmental protection since route D2 was proposed in the 1980s.

2.1.25 Aecom were concerned that the D2 route was proposed to be located in an open greenfield landscape and would have more adverse impacts on biodiversity than other options (page 28 of the AECOM study). Page 133 of the AECOM study stated:

> *"**Route D2 is the only route that is unlikely to be adequately mitigated** for due to the fragmentation of large stretches of connected greenfield habitat and the isolation of Buckles Wood which is on the AWI (emphasis added)"*

Community attitudes towards use of B1122 and safety concerns of B1122

2.1.26 SCC commissioned a further study from consultants Accent to research community attitudes to impacts of increased traffic associated with the construction of the Sizewell C power station. The study was commissioned

to inform SCC in its discussions with SZC Co. on the best means of addressing impacts from increased traffic.

2.1.27 The Accent study consisted of four stages: a literature review, an initial consultation survey with 267 participants, 20 depth interviews, and a stated preference survey with 105 participants.

2.1.28 Accent published its report in May 2016, and found significant community concern at the prospect of Sizewell C construction traffic using local roads, particularly the B1122. At page 67 of the report it was stated that:

"There was a widely-held belief among this group of residents [residents with homes on the affected roads] *that the sheer volume of traffic was too large for the roads along the proposed route, especially the B1122, to handle. Mitigation measures along the proposed route were perceived to be inadequate and/or not feasible."*

2.1.29 Accent recorded (on page 63) that 67% of participants were concerned that they would not be able to get in or out of their driveway or on to the B1122/A1120/A12 due to the increase in traffic. The report also stated that 70% of respondents anticipated that they would become dissatisfied living where they were because of the construction traffic.

2.1.30 Technical work and research to identify solutions was taken up by SZC Co. as part of the SZC consultation process (through consultation Stages 1 – 4 and the November 2020 consultation). The consultation stages, and how the need for a bypass of the B1122 was strongly expressed during Consultation Stages, are summarised in the section below (section ii). That section also summarises the safety concerns that have been expressed by Suffolk Police on the use of the B1122 as a main route to the construction site.

b) Consultation feedback

2.1.31 Respondents to all the stages of the SZC consultation have made it clear that local communities and the public authorities do not consider the B1122 to be suitable as a main route for SZC construction traffic. This feedback is summarised below.

Stage 1

2.1.32 The Stage 1 SZC consultation was held between November 2012 and February 2013. The Stage 1 consultation did not propose specific mitigation measures for the B1122, however, the consultation document did recognise that there was potential for the SZC construction traffic to cause negative noise and amenity impacts to properties near the B1122 and in the village of Theberton. The consultation document noted that any specific proposals would be subject to further consultation. Paragraphs 6.4.33 and 6.4.34 of the Stage 1 Consultation Document stated:

> *"We also recognise that, in percentage terms, the impact of Sizewell C traffic would be much greater on the B1122 than on the A12, or indeed almost any other local road. We recognise the potential for this traffic to cause negative noise and amenity impacts to a relatively small number of properties near the B1122 and in the village of Theberton.*
>
> *We will consult with the residents of these properties and the villagers of Theberton to discuss the form of mitigation which might be most appropriate to their circumstances and the impacts of Sizewell C. Any specific proposals in this area would be subject to further consultation."*

2.1.33 A total of 1,298 responses were received, of which 507 commented on the question relating to potential impacts the construction would have on the local road network (Table 4.2 of Consultation Report, DCO Application Document Ref 5.1). The question stated:

"Do you have any further comments about the potential impact of Sizewell C related traffic on the local road network?"

2.1.34 Of the 507 responses to the question, 104 responses commented specifically on the B1122 and raised concerns relating to the potential impact the increase in traffic would have on residents. Respondents also raised safety concerns and noted how the B1122 was not designed to carry HGVs and that regular and possibly significant highway maintenance could be required.

2.1.35 A number of statutory consultees also raised concerns regarding the B1122. Suffolk Coastal District Council and Suffolk County Council (the Councils) submitted a joint response to Stage 1. In the response, the Councils raised

concerns about potential traffic impacts on the B1122 and the impacts on surrounding communities and asked for SZC Co. to consider road schemes as a form of mitigation. Paragraph 8 of the response stated:

> *"The Councils recognise that there will be serious impacts on the B1122 and consider that further information is necessary on the traffic volumes likely on that road and through Yoxford and the mitigation necessary to deal with any impacts on the communities or environment. This may include road schemes considered for previous Sizewell projects."*

2.1.36 Yoxford Parish Council and Middleton-cum-Fordley Parish Council both stated that the B1122 is not fit for purpose of carrying SZC construction traffic.

Stage 2

2.1.37 The Stage 2 consultation was held between November 2016 and February 2017. The Stage 2 consultation brought forward mitigation options in response to the feedback received from stakeholders and consulted on the following mitigation for the B1122:

- An improvement to the junction of the B1122 with the A12 at Yoxford - either a roundabout or a signalised junction.
- Speed limit reductions on various sections of the B1122.
- An improved alignment of the B1122 to the west of the junction with Mill Street for visibility purposes.
- Options for enhancing the pedestrian environment in Theberton, through the creation of a new footpath near Pump Cottages and extending the footpath near Ivy Cottages.
- An improvement to the alignment of the B1122 between Theberton and the main development site entrance to improve forward visibility.

2.1.38 A total of 1,059 responses were received for the Stage 2 consultation, of which, over half of the responses (597 responses) commented on the question relating to B1122 road improvements (Table 6.3 of the Consultation Report, DCO Application Document Ref 5.1). From this level of engagement,

it was clear that the impact on local roads, and the B1122 in particular, were of significant importance to the respondents.

2.1.39 Concerns focused on how the proposed options for improvement did not go far enough, and that residents would still be impacted by the increase in traffic. One resident stated:

> *"The increase of traffic of both HGVs and buses transporting personnel to and from the site will considerably disrupt the lives of residents of Yoxford, Middleton Moor and Theberton".*

2.1.40 Another resident voice concerns regarding the B1122 and stated:

> *"A far better option would be to build a new dedicated road running directly between the A12 and the Sizewell site. This would reduce the impact on local communities, improve the efficiency of deliveries by road to the Sizewell site, provide a second evacuation and emergency access route, and would be a useful asset for the area when the construction was completed."*

2.1.41 As with Stage 1, respondents also noted that the B1122 road structure would not be able to sustain the loads imposed by Sizewell C heavy goods vehicle (HGV) construction traffic and that regular and possibly significant highway maintenance could be required. This maintenance might necessitate overnight working to reduce disruption, major traffic management measures (to maintain a safe working environment) or even temporary closure of the B1122. Such measures could impact on B1122 communities and, as alternative routes for HGVs to the Sizewell C construction site would be needed during such maintenance, other communities in the area would also be impacted (Site Selection Report, DCO Application Document Ref 8.4, paragraph 7.4.3).

2.1.42 In particular, Suffolk Coastal District Council and Suffolk County Council urged SZC Co. to look for alternatives to the B1122. Paragraph 13 of the Stage 2 Joint Response (February 2017) stated:

> *"We recognise that the B1122 has a relatively light traffic load for being a 'B' road, but it is the significant change in traffic volume and composition that gives rise to the extent of concerns, particularly for the residents of Yoxford,*

> *Middleton and Theberton. By contrast, the Stage 2 proposals from EDF Energy make very modest changes to the road, consisting of speed limits, pedestrian facilities and some road alignment. The Councils consider that, for the B1122 to work as the main access route to the site, significant further measures need to be undertaken to mitigate the impact on communities.* ***EDF Energy is urged to look at alternatives****, including those put forward in AECOM report" (emphasis added)*

2.1.43 Concerns relating to potential traffic impacts on the B1122 were also expressed by other organisations including Suffolk Fire and Rescue Service, East of England Ambulance Service, the Suffolk Constabulary, Sizewell Parish Liaison Group, and by the following town and parish councils:

- Darsham Parish Council;
- Leiston-cum-Sizewell Town Council
- Middleton-cum-Fordley Parish Council
- Woodbridge Town Council
- Yoxford Parish Council
- Westleton Parish Council
- Wenhaston with Mells Hamlet Parish Council
- Waldringfield Parish Council
- Theberton and Eastbridge Parish Council
- Swefling Parish Council
- Saxmundham Town Council
- Kelsale-cum-Carlton Parish Council
- Blythburgh, Blucamp and Hinton Parish Council

2.1.44 Theberton and Eastbridge Action Group on Sizewell (TEAGS) stated at page 16 of their consultation response that they do not consider that minor changes to the B1122 would address the issue:

> *"Minor changes to the B1122, such as speed limits, badly planned crossings and straightening small areas of bends amount to no real change and fail to address the real issue that the B1122 is totally unsuitable for the massive increase in construction and related traffic."*

2.1.45 These concerns were also expressed by Yoxford Parish Council, who called for a relief road. It stated on page 2 of its response that:

> *"The B1122 is not suitable for the amount and size of construction traffic required for the proposed construction (approximately the size for Sizewell A & B combined). We ask that EDF consider other options like the D2 relief road that was proposed for Sizewell B".*

2.1.46 Middleton-cum-Fordley Parish Council also raised concerns about the use of the B1122. In page 3 of its response the Parish Council state:

> *"As for the B1122, it will be regularly disrupted by timetabled level crossing closures….traffic breakdowns and accidents causing temporary hold-ups, slow moving agricultural equipment and delays due to parked vehicles or unloading…. There is a very real likelihood of the B1122 itself not being structurally capable of withstanding the profound constant pounding from the additional traffic"*

2.1.47 Middleton-cum-Fordley Parish Council also stated that:

"A new direct route to the site from the A12 (such as the D2, originally envisaged for Sizewell B) would obviate all the foregoing issues"

2.1.48 Overall, at Stage 2, it was clear that respondents to the consultation remained concerned about the proposal to use the B1122, and the potential impacts this could have on residents of Yoxford, Middleton Moor and Theberton. In short, respondents felt the mitigation proposals did not go far enough.

Stage 3

2.1.49 Following Stage 2, further options for the B1122 evolved into proposals for the Sizewell link road or an alternative Theberton bypass, dependent on the proposed freight management strategy of the project (a road-led freight transport strategy or rail-led freight transport strategy, respectively).

2.1.50 The Stage 3 consultation was held between 4 January 2019 and 29 March 2019. At Stage 3, SZC Co. presented the following Sizewell link road routes under a road-led freight transport strategy:

- Route X
- Route Y (Y south and Y north)
- Route W (W south and W north)
- Route Z (Z south and Z north)

2.1.51 The "Volume 1 – Development Proposals" consultation document included a map of the above routes at Figure 10.1 on Page 312.

2.1.52 At the Stage 3 consultation SZC Co. also presented the Theberton Bypass under the rail-led freight transport strategy as an alternative to the Sizewell link road (proposed in the road-led freight transport strategy).

2.1.53 The Theberton bypass proposals broadly comprised the eastern end of the Sizewell link road only.

2.1.54 The "Volume 1 – Development Proposals" consultation document set out why SZC Co. considered Route Z south to be the preferred route for the Sizewell link road and why SZC Co. considered the other routes to be unsuitable. Section 10.6 of the "Volume 1 – Development Proposals" consultation document also responded to Stage 2 consultation responses which had asked SZC Co. to explore Route D2. In responding to the suggestion of Route D2, SZC Co. referred back to the findings of the 2014 AECOM report, which sets out the disadvantages of Route D2 (summarised at para 3.1.24-3.1.25 of this Paper).

2.1.55 In response to the Stage 3 consultation, Suffolk Coastal District Council and Suffolk County Council (the Councils) supported the principle of the Sizewell link road to reduce impacts on the B1122, albeit the Councils did request

further information on the environmental assessments that led to the other options for the link road being considered unsuitable. Paragraph 763 of the joint response (March 2019) stated:

> *"The Councils consider the provision of a relief road for the B1122 is welcome".*

2.1.56 In the joint response, Suffolk County Council, as the Local Highway Authority, specifically requested that SZC Co. provide assessment information on the Sizewell link road options and specifically revisit Route W.

2.1.57 In the same response, Suffolk Coastal District Council stated (at paragraph 781):

"In summary, it is Suffolk Coastal District Council's opinion that the reduction in use of the former B1122 by HGV and other vehicles resulting from the new Sizewell Link Road taking the majority of the traffic will be a legacy benefit to local communities."

2.1.58 Whilst the Councils also stated that they supported the Theberton Bypass under the rail-led freight strategy, as it would provide relief to the B1122, the Councils stated on page 150 that further justification is required to:

> *"…..evidence that full Sizewell Link Road is not required for the construction period in the rail-led strategy"*

2.1.59 Yoxford Parish Council welcomed that SZC Co. had recognised that the B1122 was not suitable for all SZC construction traffic. The Parish Council stated at paragraph 5.1 of its response that:

> *"The Parish Council welcome that in stage 3 EDF recognise the lack of suitability of the B1122 and the need for a relief road from the A12 to the site".*

Stage 4

2.1.60 The Stage 4 consultation was held between 18 July and 27 September 2019. Both rail and road-led freight management strategies were still being considered in Stage 4, and both the Sizewell link road and Theberton bypass were still being considered. However, an additional freight management strategy was proposed; the integrated strategy. The integrated strategy

proposals included the use of Sizewell link road rather than the Theberton bypass.

2.1.61 The integrated strategy was developed following further engagement between SZC Co. and Network Rail. In Network Rail's Stage 3 consultation response, it stated that it had identified a number of risks to implementing the full infrastructure required for the rail-led strategy that could potentially impact on the programme for delivery of rail upgrades on the East Suffolk line. As these rail works would be crucial for the safe and effective operation of freight delivery to site under the rail-led strategy, any delay in their completion would have an impact on the delivery of the rest of the Project.

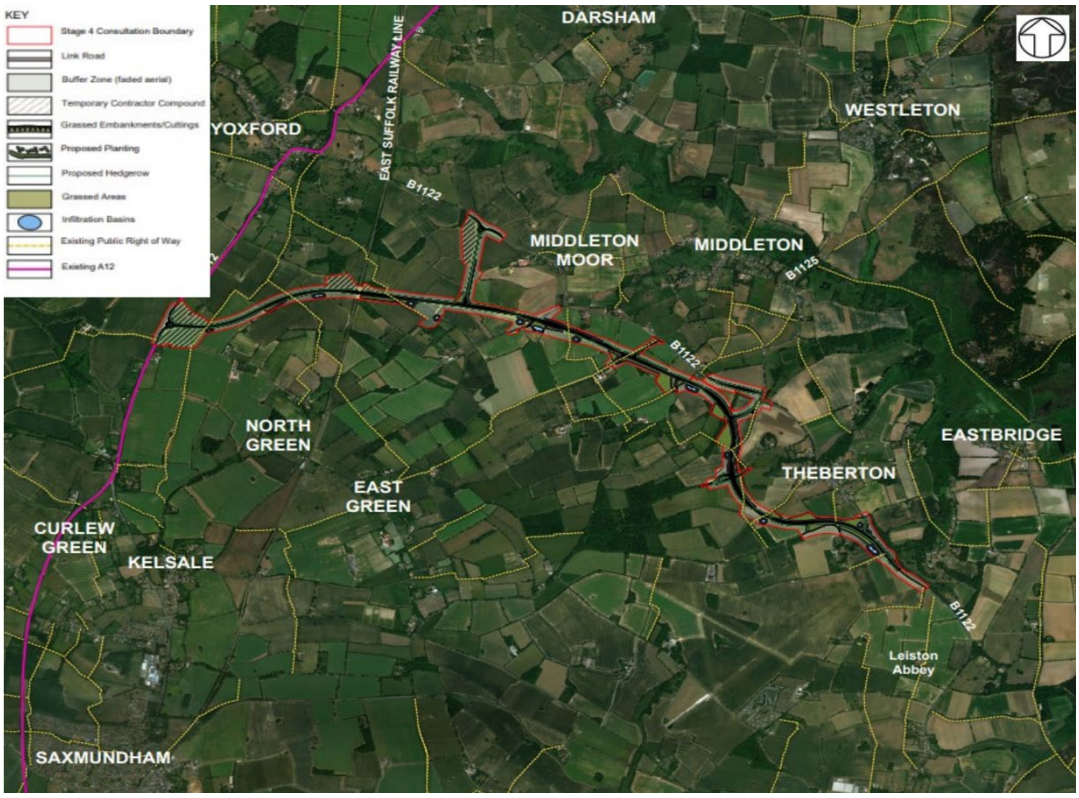
2.1.62 These concerns led SZC Co. and Network Rail to explore alternative ways to use rail to deliver freight to site while reducing the risk of programme delays to the Project. Network Rail identified a gap in the passenger timetable that would allow for an additional train path along the rail network during the day without impacting the existing passenger service. Historically this train path was used by Sizewell A to transport nuclear fuel to and from the operational power station. As Sizewell A has entered the decommissioning phase it no longer requires use of this path.

2.1.63 SZC Co. therefore proposed a third strategy at the Stage 4 consultation: the integrated strategy. This sought to maximise the use of rail by committing to those rail works which could be carried out by SZC Co., or where there was sufficient programme certainty.

2.1.64 The consultation proposals for the Sizewell link road at Stage 4 included red line changes as a result of design development and also questioned whether all or part of the Sizewell link road should be temporary only. However, respondents still made it clear in their responses that the B1122 was unsuitable for SZC construction traffic.

2.1.65 A plan showing the proposed Sizewell link road at Stage 4 is provided at **Appendix 5.** The indicative Sizewell link road overview plan presented at the Stage 4 consultation is shown below in Figure 6.

Figure 6: Indicative Sizewell link road overview plan at Stage 4 consultation



2.1.66 The Councils (Suffolk County Council working jointly with East Suffolk Council, formerly Suffolk Coastal and Waveney Districts), continued to welcome the need for relief to the entire B1122, rather than just at Theberton. They stated at paragraph 233 that:

> *"The Councils welcome the inclusion of mitigation to relieve the impacts of construction traffic using the B1122, and welcome that EDF Energy accept that, also for the integrated strategy, the numbers of HGVs justify mitigation along the entire length of the B1122 and the A12 through Yoxford rather than just at Theberton".*

2.1.67 Suffolk County Council requested further discussions with SZC Co. on the retention or removal of parts of the Sizewell Link Road. However, East Suffolk Council noted at paragraph 267 of the joint response that they see the link road as a legacy benefit:

> *"ESC do not support removal of a Sizewell Link Road post-construction and consider the reduction in use of the former B1122 by HGV and other vehicles resulting from a new Sizewell Link Road to be a legacy benefit to local communities, as will a Sizewell Link Road offering a HGV route to Sizewell A, B and C".*

2.1.68 Following completion of Stage 4 consultation and review of the technical capability and consultation responses, the integrated freight management strategy was progressed for the application for Development Consent and the Sizewell link road was proposed rather than the Theberton Bypass. The Planning Statement provides detail of why the integrated strategy was selected (Doc Ref. 8.4) [APP-590].

Suffolk Police responses to DCO application

2.1.69 The DCO application was submitted to the Planning Inspectorate in May 2020. As part of continued engagement, Suffolk Police prepared a report in September 2020 titled 'Suffolk Constabulary SZC Roads Policing and AIL Impact Assessment' to provide Suffolk Constabulary's current view of the likely community safety and other policing impacts of the proposed Sizewell C (SZC) new nuclear power station development. The report cited concerns that the significant increase in traffic on the B1122 could lead to an increase in road traffic collisions, which it noted causes considerable resource demand on police services. Page 15 of the report stated:

> *"Increases in traffic result in greater numbers of interactions between road users which in turn increases the likelihood of collisions; especially on single carriageway and country roads…. RTCs [Road Traffic Collisions] cause considerable resource demand on police services. For example, where police attendance is needed in order to deal with an RTC it usually involves two or more officers depending upon the severity of the incident, the number of vehicles involved and other aggravating factors. Dependent upon the severity of the RTC and those factors within, roads can remain closed for anything up to 24 hours; resulting in severe disruption to the road network and creates a significant impact on police resource."*

2.1.70 The report also noted on page 23 that:

> *"due to the width of the lanes on the B1122, any vehicle wider than 3m, e.g. a HGV, would need a police escort as the road is not wide enough to accommodate two vehicles over this width meeting travelling in opposite directions."*

2.1.71 The report went on to state that this would cause a considerable resourcing demand on existing police resources and it stated on page 23 that:

> *"such demand on existing police resources cannot be managed"*

2.1.72 Suffolk Constabulary have also prepared a further, more detailed report, also titled 'Suffolk Constabulary SZC Roads Policing and AIL Impact Assessment' (1 Dec 2020). In this report, the Suffolk Constabulary again commented on the unsuitability of the B1122 for AILs. Para 6.3 stated:

> *"the A12 and B1122 have resulted in sections of narrow roads through villages and hamlets, with tight corners and few passing places along long stretches of the route".*

2.1.73 Para 6.9 further stated:

> *"The B1122 is not wide enough in places safely to accommodate an AIL and HGV coming from opposite directions and may struggle to accommodate two HGVs on opposite lanes. This issue is amplified where sections on the B1122 are on embankments on one or both sides of the road, making evasive movements of HGVs or AILs more dangerous."*

2.1.74 The report also stated that the narrowness of the road could bring about poor driver discipline. Para 5.4 stated:

> *"Given the restricted widths in some sections of the A12 and B1122, it is the Constabulary's opinion that the frequent numbers of large AILs on those corridors could induce significant driver delays and frustration and bring about poor driver discipline".*

2.1.75 Overall, it is clear that using the B1122 as the main route for the entire Sizewell C construction would be extremely difficult and there are clear safety and resourcing concerns noted by Suffolk Police, including in relation to AILs.

The narrowness of the B1122 in places, and the safety fears, mean that the B1122 would not be sufficiently resilient to cope with the construction traffic.

November 2020 consultation

2.1.76 SZC Co. held a further consultation between 18 November 2020 and 18 December 2020, following the Relevant Representations stage of the Sizewell C application. The purpose of the consultation was to consult on proposed changes to the project that SZC. Co. had identified following continued engagement with the local authorities, environmental organisations, local stakeholder groups and the public. The proposed changes are summarised in the consultation document (here), but in short, the changes proposed to deliver improvements to the Sizewell C project and to reduce some impacts, partly by seeking to reduce the number of HGVs by maximising the use of rail and sea transport.

2.1.77 The proposed changes to the Sizewell link road itself were minor. Page 23 of the consultation document noted that the only proposed changes to the Sizewell link road were the 'Extension to and reduction of the Order Limits for works on the Sizewell link road'. The limits were proposed to be changed as a result of minor design changes and because it had been established that additional land may be necessary to provide increased visibility at junctions. The consultation document also noted that there may be a need for additional areas of land within the Order Limits to accommodate additional basins and potential routes to discharge surface water flows to local watercourses. The principle of the link road, however, remined unchanged.

2.1.78 Following the consultation, SZC Co. submitted an application for changes to the DCO application on 13 January 2021.

Consultation conclusion

2.1.79 Overall, it is evident that there has been concerted and consistent community concern to avoid using the B1122 as a main route for HGVs for the Sizewell C construction. The weight of the local community and stakeholder concern regarding the use of the B1122 were important considerations for SZC Co. in deciding to propose a new road to relieve the B1122 of the additional traffic volumes associated with Sizewell C construction.

c) The transport, environmental and amenity disadvantages of using the B1122

2.1.80 The Environmental Statement (ES), the Environmental Statement Addendum (ESA), the Transport Assessment and the Transport Assessment Addendum set out the effects of the SZC construction traffic on the B1122 and on local communities during the Early Years prior to the opening of the SLR. The Early Years assessments relate to the effects in 2023, when there would be up to 300 HGV deliveries per day (600 two-way movements). At Peak Construction (2028), there were assumed in the submitted DCO (May 2020) to be 325 HGV deliveries per day (650 HGV movements) on a typical day and 500 HGV deliveries per day (1000 HGV movements) on the busiest day. All of these HGVs, from both the A12 north and A12 south, would be using the B1122 until the Sizewell link road was open to traffic.

2.1.81 Therefore, the Early Years assessments, before the Sizewell link road would come into operation, give an indication of what the likely effects would be if the Sizewell link road was not delivered for the Peak Construction years

2.1.82 The ES Addendum (Book 6, Volume 1 Chapter 6) explains that the 2021 DCO changes would be apparent at Peak Construction (rather than in the early years), and therefore, the Early Years effects reported in the ES on amenity and noise, as summarised below, remain unchanged.

2.1.83 During the Early Years, SZC Co. predict short-term **major adverse effects** on pedestrian amenity on the B1122 from construction traffic (Book 6, Volume 2, Chapter 10, para 10.7.5). The increase in traffic on the B1122 during the early years of construction would adversely affect walkers where Footpaths E-396/017/0, E396/023/0, E-396/015/0, E-515/004/0, E515/007/0, E-515/012/0, E-515/013/0, E-515/016/0 end at or near the B1122 and where E-584/020/0 ends at the B1122 junction with the A12 and where Footpath E-584/021/0 ends at the A12 (Book 6, Vol 6, Chapter 8, paragraphs 8.6.32, 8.6.39, 8.6.47, 8.6.53, 8.6.65).

2.1.84 SZC Co. also predict **major adverse effects** on cycle amenity on the B1122 during Early Years from construction traffic (Book 6, Volume 2, Chapter 10, para 10.7.5).

2.1.85 SZC Co. predict that there will be **moderate adverse** noise effects along sections of the B1122 as a result of Sizewell C Project construction traffic in the Early Years before the Sizewell link road is in place (Book 6, Volume 2, Chapter 11, para 11.6.92).

2.1.86 These adverse effects are only acceptable if there is no alternative, and should not be sustained for longer than it takes to deliver the Sizewell link road. It would be unacceptable for these effects to be imposed on the communities along the B1122 for the whole 10-12 year construction programme when an alternative can be provided.

2.1.87 Following the DCO application submission, SZC Co. undertook additional assessment and appraisal work on the Sizewell link road to further understand the effects on the B1122 and on local communities if there was no Sizewell link road in place at **Peak Construction (2028)**, and to further understand the benefits a Sizewell link road would provide.

2.1.88 As part of this work, SZC Co. has calculated likely traffic flows (24-hr AAWT format) in various locations (during 2028 Peak Construction) for the following scenarios:

- if the Sizewell link road is in place, as proposed in the DCO application; and
- if the Sizewell link road was not provided.

2.1.89 A relevant selection of traffic flows, which have been produced by SZC Co, is provided in Table 2.1. It demonstrates that if the Sizewell C Project took place without a Sizewell link road in place there would be significantly greater amounts of traffic through the B1122 communities and Yoxford during peak construction (2028), with the main expected differences, in comparison with the link road in place, being:

- 1,755 HGVs/buses on the B1122 at Theberton (Location 10) during 2028 Peak Construction (busiest day) (24-hr AAWT) without the Sizewell link road in place. There would be 0 HGVs/buses with the Sizewell link road in place;
- 1,710 HGVs/buses on the B1122 at Middleton Moor (Location 74) during 2028 Peak Construction (busiest day) (24-hr AAWT) without the Sizewell link road in place. There would be 4 HGVs/buses with the Sizewell link road in place

Table 2.1: Comparison of 24-hr AAWT traffic flows between 2023 Reference Case, 2023 Early Years and 2028 Peak Construction (2028 Peak Construction includes 3 scenarios - SLR in place, without the 2VBP or SLR in place and only the eastern section of the SLR in place)

Location	24 hour AAWT Flows with no 2VBP or SLR in place						2028 Peak Construction (busiest day, including existing flows) with SLR in place	
	2023 Reference Case (future year without Sizewell C)		2023 Early Years Construction including existing flows		2028 Peak Construction including existing flows			
	HGVs/ Buses	Total vehs.	HGVs/ Buses	Total vehs.	HGVs/ Buses	Total vehs	HGVs/ Buses	Total vehs
10 (B1122 through Theberton)	216	6037	816	7671	1755	8556	0	541
10A (Theberton Bypass)	0	0	0	0	0	0	1758	8852
13b (B1122, east of A12)	177	4150	801	5261	1714	6220	500	4603
13c (A12, between A1120 and B1122)	850	15675	1465	17042	2013	18187	841	16287
13e (A12, south of A1120)	721	12137	1337	13238	1878	13974	704	11973
22a (A12, north of A1094)	637	15748	1390	17152	1794	18195	1781	18111
22b (A1094, east of A12)	183	8539	303	9223	187	8995	183	9013
41 (B1125 through Middleton)	42	2127	42	2656	42	2538	42	2854
57 (Sizewell link road– east of A12)	0	0	0	0	0	0	1287	2633
59 (A12 –, north of B1121)	713	12079	1470	13373	1878	13809	1870	14210
63 (Theberton bypass,	0	0	0	0	0	0	1781	6859

west of B1125)								
64 (B1122, north of SZC access)	216	6037	816	7671	1755	8556	1760	9099
65 (Middleton Moor Link)	0	0	0	0	0	0	498	4373
66 (B1122, west of B1125)	165	3496	765	4589	1706	5575	0	122
74 (B1122, Middleton Moor)	177	4150	777	5237	1714	6220	4	372

2.1.90 Table 2.1 also shows the increases in traffic flows from the 2023 Reference Case (future year without Sizewell C) to Early Years to Peak Construction. Table 2.1 shows from the 2023 Reference Case (future year without Sizewell C) to Early Years that a 278% increase in HGVs/Buses is predicted at Theberton (Location 10) if there is no Sizewell link road in place.

2.1.91 When comparing the 2023 Reference Case (future year without Sizewell C) to Peak Construction at Theberton (Location 10) (assuming no SLR) the predicted increases in traffic flow are even greater. In this scenario, a 713% increase in HGVs/Buses is predicted at Theberton (Location 10) if there is no Sizewell link road in place.

2.1.92 However, in a future scenario with the Sizewell link road in place, total traffic flows on the B1122 through Theberton (Location 10) would be reduced by 91% compared to the 2023 Reference Case (future year without Sizewell C) to Peak Construction.

2.1.93 It is clear that the Sizewell link road would play an essential and effective role in reducing traffic flows on the B1122 communities, as well as Yoxford.

2.1.94 If the Sizewell link road was not delivered residents in Yoxford and along the B1122 in Middleton Moor and Theberton would experience significant increases in noise (see Section V. of this Chapter). The amenity of residents, pedestrians and cyclists in these communities would be significantly negatively impacted should the Sizewell link road not be delivered. These effects are summarised in Table 2.2 below.

2.1.95 SZC Co. has also looked at smaller scale interventions to see whether these could mitigate the transport impacts. These interventions were set out at paragraph 11.10.14 of the Stage 2 Consultation Document, and include speed limit reductions on various sections of the B1122, junction improvements, and the enhancement of the pedestrian environment. However, Section 11.10 b) in the Stage 2 consultation document also sets out the transport analysis and traffic modelling undertaken at the time for highway improvements along the B1122. At Stage 2, it was predicted that there would be an increase in two way daily vehicle traffic flows of around 2,050 vehicles resulting from SZC and 7,600 movements at peak construction (para 11.10.5). The document stated at paragraph 11.10.11 that:

> *"On the busiest day during the construction phase, HGV movements for Sizewell C could be up to a maximum of 900 movements."*

2.1.96 The Stage 2 consultation document went on to say at para 11.10.12 that:

> *"the additional HGV and other traffic movements are likely to lead to major new adverse noise and amenity impacts for residents living very close or adjacent to the B1122. Impacts are likely to be particularly significant during noise sensitive hours, given low existing traffic flows at these times of day."*

2.1.97 The smaller scale interventions, may have improved the carriageway as a route and would have brought some small scale benefits to amenity but they would not have reduced these daily HGV movements on the B1122.

d) Benefits of the Sizewell link road

2.1.98 This section is based upon the environmental effects reported in the May 2020 DCO submission. Sections v and vi discuss the January 2021 update to the DCO, and discusses the change in effects reported in Table 2.2 from the updated January 2021 transport figures.

2.1.99 The Sizewell link road aims to reduce the amount of SZC construction traffic that would use the B1122, and in turn, avoid the impacts noted above. Table 2.2 provides a comparison of effects on the B1122 and local communities (Yoxford, Theberton and Middleton Moor) with and without a Sizewell link road. As previously noted, SZC Co. has assessed the environmental effects

in the ES during the Early Years as a result of Sizewell C Project construction traffic on the B1122. The Early Years assessments relate to the effects in 2023, when there would be up to 300 HGV deliveries per day (600 two-way movements). At Peak Construction (2028), there were assumed in the submitted DCO to be 325 HGV deliveries per day (650 HGV movements) on a typical day and 500 HGV deliveries per day (1000 HGV movements) on the busiest day.

Table 2.2: Comparison of effects on the B1122 and local communities (Yoxford, Theberton and Middleton Moor) with and without a Sizewell link road.

Impact	Effects on the B1122 and local communities without a Sizewell link road	Effects on the B1122 and local communities with a Sizewell link road
Traffic flows	Increase in traffic flow (cars, LGV, HGV and bus traffic) along B1122. See Table 2.1 of this report for detailed breakdown of traffic flows at different locations around the B1122. For example, Table 2.1 shows from the 2023 Reference Case (future year without Sizewell C) to Early Years a 278% increase in HGVs/Buses is predicted at Theberton (Location 10) if there is no Sizewell link road in place.	Significant reduction in traffic flow (cars, LGV, HGV and bus traffic) along B1122 compared to if there was no Sizewell link road. See Table 2.1 for a detailed breakdown of the traffic flows at different locations around the B1122. For example, Table 2.1 confirms that there would be a betterment as a result of the Sizewell link road. In relation to total traffic flows on the B1122 through Theberton, with the Sizewell link road in place, total traffic flows on the B1122 through Theberton (Location 10) would be reduced by 91% compared to the 2023 Reference Case (future year without Sizewell C) to Peak Construction.

Impact	Effects on the B1122 and local communities without a Sizewell link road	Effects on the B1122 and local communities with a Sizewell link road
Journey times	**Appendix 6** of this document which provides tables comparing journey times on key routes with and the Sizewell link road during the Early Years, Peak Construction and during Operation. During Early Years, when the Sizewell link road is not in place, there is an increase in journey times on the B1122. Journey time analysis shows that the increase in times would be by less than 1% and therefore unlikely to be noticeable on a day to day basis. This increase Is considered to be minor adverse and would be not significant (para 10.6.52 of Vol 2 Chapter 10 of ES) [APP-198]. However, journey times would increase further again in peak construction with no Sizewell link road.	During the 08:00–09:00 and 17:00–18:00 peak hours of Peak Construction, and indeed the other modelled hours, there are likely to be reductions in journey time on the B1122 as a result of the proposed Sizewell link road during the peak construction phase (paragraph 8.8.11 of the Transport Assessment, Book 8, Document 8.5) [APP-602]. The location of these routes is shown in Figures 1 and 2 in **Appendix 6** of this document. For example, on route 14 (northbound) there would likely be a 11% reduction in journey time during 08.00-09.00 during Peak Construction by using the Sizewell link road rather than the B1122. As at peak construction, there are likely to be reductions in journey time on routes 4, 13, and 14 as a result of the proposed Sizewell link road during the operational phase (paragraph 8.8.14 of the Transport Assessment, Book 8, Document 8.5) [APP-602]. For example, on route 14 (northbound) there would

Impact	Effects on the B1122 and local communities without a Sizewell link road	Effects on the B1122 and local communities with a Sizewell link road
		likely be a 9% reduction in journey time during 08.00-09.00 during the Operation phase by using the Sizewell link road rather than the B1122.
Number of properties adjacent to the route to be used by SZC construction traffic (between the A12 and the main construction site).	There are 146 properties immediately adjacent to the B1122 or the section of the A12 that passes through Yoxford (these are listed and shown on plans in **Appendix 4**). These properties will be impacted by the increase in traffic along the B1122 in the early years, and subsequently should the Sizewell link road not be delivered.	With the Sizewell link road in place 120 properties would no longer be immediately adjacent to a road being used for SZC traffic. (Although there are 146 properties immediately adjacent to the B1122, not all these will see SZC construction traffic removed from their locale when the Sizewell link road is delivered. This is because 8 of the 146 properties are within 50m of the Sizewell link road boundary. There are also 18 properties located on the B1122 between the A12 and Middleton Moor Link Road, which traffic from the north would use to join the Sizewell link road. However, as noted above, 120 properties would no longer be immediately adjacent to the route used by SZC construction traffic, which is a benefit (see the properties in

Impact	Effects on the B1122 and local communities without a Sizewell link road	Effects on the B1122 and local communities with a Sizewell link road
		bold in the table in **Appendix 4**)).
Noise	There will be some adverse effects and some **significant adverse effects** from road traffic noise level changes on the B1122 during Early Years when there is no Sizewell link road in place (Book 6, Volume 6, Chapter 4, para 4.6.11) [APP-451]	**Significant beneficial effects** in relation to road traffic noise for properties which would be bypassed by the new road, such as those on the B1122 in Middleton Moor and Theberton (Book 6, Volume 6, Chapter 4, para 4.6.29) [APP-451]. In 2028, there would be **significant adverse effects** with regard to road traffic noise for some properties close to the new road in the short term. However, in 2034, when construction traffic is no longer present, there would be either a **negligible effect or a beneficial effect** as a result of the new road for the majority of receptors. However, at Fordley Hall, Trust Farm, Theberton Grange, Oak House and Hawthorn Cottages there would remain a significant adverse effect in the long term (Book 6, Volume 6, Chapter 4, para 4.6.29 and 4.5.30) [APP-451].

Impact	Effects on the B1122 and local communities without a Sizewell link road	Effects on the B1122 and local communities with a Sizewell link road
Pedestrian amenity	Without a Sizewell link road, there would be a significant increase in HDVs along the B1122. During the Early Years SZC Co. predict major adverse effects on pedestrian amenity on the B1122, particularly in Theberton, from construction traffic (Book 6, Volume 2, Chapter 10, para 10.7.5) [APP-198]. The increase in traffic on the B1122 during the early years of construction would adversely affect walkers where Footpaths E-396/017/0, E396/023/0, E-396/015/0, E-515/004/0, E515/007/0, E-515/012/0, E-515/013/0, E-515/016/0 end at or near the B1122 and where E-584/020/0 ends at the B1122 junction with the A12 and where Footpath E-584/021/0 ends at the A12 (Book 6, Vol 6, Chapter 8, paragraphs 8.6.32, 8.6.39, 8.6.47, 8.6.53, 8.6.65) [APP-451].	The Sizewell link road would provide a significant reduction in traffic along the B1122 corridor, which would provide a beneficial effect on amenity. During the representative hour (07:00-08:00) there would be a minor beneficial effect on amenity as a result of the reduction in HDVs but a **major beneficial effect on amenity** as a result of the reduction in total traffic on the links in the representative hour of 07:00-08:00. There would also be a major beneficial effect on amenity over the course of a day, which would be significant (Book 6, Volume 2, Chapter 10, para 10.6.103) [APP-198]. SZC Co. predict that with the Sizewell link road in place, pedestrian amenity effects in Theberton would improve from major adverse and significant to **major beneficial** as the Sizewell link road will substantially reduce traffic flows through Theberton (traffic flows on the B1122 through Theberton would be reduced by 91% (24hr busiest AAWT total traffic)) (this is stated in Book

Impact	Effects on the B1122 and local communities without a Sizewell link road	Effects on the B1122 and local communities with a Sizewell link road
		6, Volume 2, Chapter 10, para 10.7.7 and Table 10.18) [APP-198].
Cycling amenity	Without a Sizewell link road, there would be an increase in HDVs along the B1122. SZC Co. predict **major adverse effects** on cycle amenity on the B1122 during Early Years from construction traffic (Book 6, Volume 2, Chapter 10, para 10.7.5) [APP-198].	The B1122 would have low levels of traffic and would provide an attractive cycle route and pedestrian environment within the settlements of Theberton and Middleton Moor. It is considered that the effect on cycling amenity along Sizewell link road during peak construction **would be not significant** (Book 6, Volume 2, Chapter 10, para 10.6.98) [APP-198].
Health and wellbeing	**Significant adverse** effects on health and wellbeing at the majority of receptors along the section of the B1122 from Middleton Moor due to the increase of construction traffic within the villages (Section 8.3 (d) of the AECOM Report (2021) **Appendix 11**)	**Significant beneficial effects** on health and wellbeing at the majority of receptors along the section of the B1122 from Middleton Moor to Theberton due to the reduction of traffic within the villages, with the majority of vehicles expected to use the new Sizewell link road instead (Book 6, Volume 2, Chapter 28, para 28.6.77). [APP-198]
Severance	It is considered that the effect of the Sizewell C Project during the Early Years on severance would	As a result of the implementation of the Sizewell link road, traffic flows along the B1122 would

Impact	Effects on the B1122 and local communities without a Sizewell link road	Effects on the B1122 and local communities with a Sizewell link road
	be **not significant** (Book 6, Volume 2, Chapter 10, para 10.6.18) [APP-198].	reduce significantly, resulting in a **moderate to major beneficial effect** on severance during peak construction, which would be significant (Book 6, Volume 2, Chapter 10, para 10.6.76) [APP-198].
Quality and resilience of road infrastructure to support SZC construction	B1122 has poor forward visibility, limited road width causing difficulties for vehicles wider than 3 metres and would likely require regular, possible significant maintenance (which may necessitate road closures which could result in delays of deliveries to the main construction site).	The Sizewell link road has been designed, and would be constructed, to DMRB standards that would give a significantly better horizontal and vertical alignment, road surface, junctions, drainage, signage, and lighting than the existing B1122 (paragraph 10.2.57 of the Transport Assessment, Book 8, Document 8.5) [APP-602].
Legacy benefit	No legacy benefit.	Permanent reduction in traffic for communities along the B1122 (para 8.7.18 of the Transport Assessment, Book 8, Document 8.5)[APP-602]. SZC Co. anticipates that the existing B1122 would be downgraded by SCC to an unclassified road once the Sizewell link road is operational. It would connect to the Sizewell link road via a new roundabout west of Middleton Moor. As the majority of traffic would

Impact	Effects on the B1122 and local communities without a Sizewell link road	Effects on the B1122 and local communities with a Sizewell link road
		reassign to use the Sizewell link road, the existing B1122 would experience much lower traffic volumes and could become more popular among cyclists and would help improve cyclist connectivity in the area (Para 3.5.42 of the Transport Assessment, Book 8, Document 8.5) [APP-602].

2.1.100 SZC Co. recognise that the Sizewell link road will have some impacts on properties close to the new road in the short term and these are set out in detail within the Environmental Statement (Doc Ref. Book 6) and the Environmental Statement Addendum (Doc Ref. Book 6.14). At Peak Construction (2028) on a typical day there would be short term significant major adverse effects (at 12 out of 43 receptors) on noise for some properties close to the new Sizewell link road. However, by 2034, when construction traffic is no longer present, there would be either a negligible effect or a beneficial effect as a result of the Sizewell link road for the majority of receptors, with only one receptor recording significant major adverse noise effects on a typical day.

2.1.101 The Sizewell link road would require footpaths to be permanently diverted and there would be some significant adverse effects in the short term on the landscape (at receptor groups 1, 3, 4, 5, 7), however, once mitigation planting has become established, there would be no significant adverse effects at receptors 3,4 and 7.

2.1.102 The opening of the SLR would bring long term benefits to all of the communities along the B1122 – benefits which far outweigh the impacts that would occur if the Sizewell link road was not built.

e) The Sizewell link road following accepted changes to the DCO application (January 2021) – increased freight train and marine movements.

2.1.103 As previously noted, SZC Co. submitted changes to the DCO in January 2021. Following the consultation that took place in November to December 2020, SZC Co. proposed a number of changes to the DCO, including a change to the operational assumptions in the Application to allow for an increase in the frequency of freight train movements during the construction of Sizewell C, the enhancement of the permanent beach landing facility and also the construction of a new, temporary beach landing facility. The Examining Authority accepted these changes in April 2021.

2.1.104 The changes reduce the number of HGV movements on the Sizewell link road by 150 vehicles on the typical day (from 650 movements to 500 movements), and by 300 vehicles on busiest days (from 1,000 movements to 700 movements) (para 14.3.7 of the Transport Assessment Addendum) [AS-266]. An ES Addendum and TA Addendum have been submitted which assess the changes in effects that would result from a reduction in HGV movements as a result of the proposed changes to rail and marine capacity.

2.1.105 The reduction in movements will also have environmental benefits and these are described in detail at Volume 1 of the ES Addendum. In summary, with regard to noise, the changes in traffic flows are beneficial, with reduced effects at a number of receptors (para 6.3.31 of the ES Addendum Vol 1 Chapter 6) [AS-185]. With air quality, there is predicted to be a minimal change as a result of potential reduction in HGV movements, and overall, the effect would be not significant (para 6.4.22 of the ES Addendum, Vol 1 Chapter 6) [AS-185]. For health and wellbeing, the reduced HGV movements will improve effects, however, they do not "materially change the health and wellbeing effects reported" in the ES (ES Addendum (Vol 1 Chapter 2, para 2.23.44) [AS-181]. There would be no changes in effects on severance, amenity, pedestrian delay or fear and intimidation during the peak construction typical day and busiest day at the Sizewell link road, when comparing the assessments in the submitted DCO (ES Addendum Vol 1 Chapter 6, para 6.7.23) [AS-185].

2.1.106 This reduction in HGV movements is expected to have an overall beneficial effect on journey times, however, as noted in para 8.4.4 of the Transport Assessment Addendum "*Overall the differences in traffic flows and journey times forecast by the refined models are small, and there is no material*

change to the assessment of traffic flow changes reported in Chapter 8 of the Transport Assessment". **Appendix 7** of this document provides tables comparing journey times on key routes with and the Sizewell link road during the Early Years, Peak Construction and during Operation using the January 2021 DCO traffic flows.).

2.1.107 Overall, the ES Addendum identifies no material changes to the assessment reported in Table 2.2 above.

2.1.108 Therefore, and importantly, whilst the proposed reduction in HGV movements brings some positive environmental benefits, the need and the case for the Sizewell Link Road is unaffected.

f) Additional environmental appraisal work undertaken post January 2021 DCO changes

2.1.109 Following the submission of the DCO changes, SZC Co. has undertaken further environmental assessment work at Peak Construction (2028) to further understand the effects on the B1122 and on local communities (Yoxford, Theberton and Middleton Moor) at Peak Construction if there was no Sizewell link road in place. This environmental assessment work is explained in the AECOM Sizewell link road option development and summary work undertaken post-submission of the DCO report (2021) (referred to hereinafter as the 'AECOM 2021 Report') found at **Appendix 11**. To be clear, Table 2.2 above summarises the effects during Early Years (2023) from the ES, but this further work focuses on the comparison of effects with and without a Sizewell link road at Peak Construction (2028). This additional environmental assessment work is explained in Section 8 of the AECOM 2021 Report (**Appendix 11**), but is summarised below.

2.1.110 Using the traffic flows for Peak Construction (2028) from the TA Addendum, and the traffic flows for Peak Construction (2028) if the Sizewell link road was not provided, this additional work has assessed the effects on noise, severance, air quality, amenity and fear and intimidation.

Noise

2.1.111 The Sizewell link road is predicted to significantly reduce traffic noise levels along the B1122. During a typical day (500 movements) in Peak Construction, a reduction of 15.4dB (daytime) is predicted at Middleton Moor and a reduction of 14.9dB (daytime) is predicted at Theberton, when

compared with a no SLR Peak Construction Scenario. As noted in the AECOM 2021 Report (**Appendix 11**), it is concluded that the Sizewell link road is likely to provide a **material and significant benefit** in terms of traffic noise for the communities along the majority of the B1122, by taking both existing and SZC construction traffic away from the road.

2.1.112 In comparison, if the Sizewell link road is not constructed, traffic noise will increase along the length of the B1122. During a typical day in Peak Construction, an increase of 4.4dB (daytime) is predicted at Middleton Moor and an increase of 3.5dB (daytime) is predicted at Theberton. This increase would be regarded as a **moderate adverse** effect that would be **significant** (Section 8, AECOM 2021 Report).

2.1.113 The net effect of not constructing the Sizewell link road would be to cause **significant adverse** noise effects on the receptors along the B1122, instead of the **significant beneficial effects** that would be expected if the road is built, as proposed (Section 8, AECOM 2021 Report).

Amenity

2.1.114 The increase in HDV flows at Peak Construction associated with construction of Sizewell C would have **major adverse** effects (on a typical day (500 movements) and on the busiest day (700 movements)) on amenity along the B1122 if the Sizewell link road was not built. These **major adverse** effects are expected along large sections of the B1122, including on the section of the B1122 to the east of Yoxford rounabout, through Theberton and through Middleton Moor. In comparison, if the Sizewell link road is built, **significant beneficial effects** on amenity are predicated (Section 8, AECOM 2021 Report).

Severance

2.1.115 The 'No SLR' assessments, as set out in Section 8 of the AECOM 2021 Report (**Appendix 11**) show that whilst there is a **minor adverse effect** on the B1122 in terms of severance, the impact is **not significant**.

Health and Wellbeing

2.1.116 If the Sizewell link road was not provided, **significant adverse effects** on health and wellbeing at the majority of receptors along the section of the

B1122 from Middleton Moor are anticipated due to the increase of construction traffic within the villages, and there would be no legacy benefit from the permanent diversion of traffic from within communities (no longer affording improved noise, road safety and reduced community severance) (Section 8, AECOM 2021 Report).

Air Quality

2.1.117 The increase in construction traffic at Peak Construction associated with construction of Sizewell C would increase NO2 concentrations on the B1122 near Theberton if there was no Sizewell link road in place. However, this increase would not result in a significant effect on NO2 concentrations. With the Sizewell link road in place at Peak Construction, NO2 concentrations around Theberton would reduce. The link road does increase NO2 concentrations on the B1122 to the east of Yoxford. However, this increase does not result in a significant effect on NO2 concentrations (Section 8, AECOM 2021 Report).

a) Conclusion on the principle of the Sizewell link road

2.1.118 During construction of Sizewell C, and without the Sizewell link road, most construction traffic (including LGV and cars) would travel along the A12 and reach the main development site via the B1122, through Theberton and Middleton Moor. The B1122 would also be the designated route for HGV traffic. There would be a series of significant adverse effects to these communities unless an alternative route is provided.

2.1.119 SZC Co. responded to clear feedback from stakeholders expressed historically and through four rounds of consultation by promoting the Sizewell link road. The benefits of a link road, and how a link road is necessary to mitigate potential impacts during the construction of Sizewell C, have been summarised in the text and tables above. In short, the delivery of the Sizewell link road would bring compelling benefits in terms of reducing noise, severance, and amenity impacts on communities along the B1122. The Sizewell link road would prevent the communities from experiencing long term significant increases in traffic flows, noise pollution and significant decreases in pedestrian and cycling amenity over a prolonged period.

2.1.120 This clear balance of advantage cannot be achieved in any other way. Smaller scale interventions (e.g. speed limit reductions, pedestrian enhancements) to improve the B1122 would not reduce daily HGV

movements on the B1122 or address the fundamental disbenefits of using the road as the principal means of serving the Sizewell C site for the duration of the construction period.

2.1.121 The Sizewell link road will provide a legacy benefit for these communities. SZC Co. anticipates that the existing B1122 would be downgraded by SCC to an unclassified road once the Sizewell link road is operational. As the majority of B1122 traffic would reassign to use the Sizewell link road, the B1122 would experience much lower traffic volumes and would become more attractive among walkers, horse riders and cyclists, helping significantly to improve cycling connectivity in the immediate area.

2.1.122 Overall, the Sizewell link road is necessary to mitigate potential impacts during the construction of Sizewell C and therefore forms a necessary part of the Sizewell C Project.

h) The Sizewell link road as a permanent feature

2.1.123 The removal of the Sizewell link road following the construction phase of Sizewell C was considered prior to the submission of the DCO application. The Stage 4 consultation included potential proposals to remove the Sizewell link road following the construction phase. Some respondents were supportive of returning the land to its original state. Others formed the majority and opposed restoration.

2.1.124 In the Councils' joint response to the Stage 4 consultation, SCC noted at para 240 that:

> *"as the Local Highway Authority recognises the legacy benefit of the Theberton bypass element of the Sizewell Link Road as well as the element of the Sizewell Link Road that allows traffic to bypass Yoxford, which would provide a potential alternative route for HGVs and greater network resilience. SCC considers that the remainder of the route has significantly less legacy benefit apart from possibly during Sizewell B and C Outages, while still representing a significant additional maintenance liability for SCC. However, if the existing B1122 were to be downgraded to make it a less attractive route for vehicle trips and a more attractive route for cyclists and pedestrians, this would mean that the new Sizewell Link Road would no longer*

provide a parallel function and could act as the sole through route for Leiston and Sizewell."

2.1.125 ESC raised concerns about the potential environmental impact of the removal of the road. ESC raised specific concern regarding the removal of the SuDS that serve the Sizewell link road, which could have a negative impact on the biodiversity that would have established in the SuDS from the time they were constructed. ESC also raised concerns how the removal of the Sizewell link road would increase the duration of the construction phase of SZC. ESC state at para 241 that:

> *"At Stage 3, ESC raised concerns with potential adverse environmental impacts of removal of a Sizewell Link Road post the construction phase. ESC retains this view and would not support proposals to remove a Sizewell Link Road post construction. ESC considers a separate HGV route to serve the existing A and B stations as well as the new C station to be a positive legacy of the development."*

2.1.126 As a response to the Stage 4 consultation, a decision was made to propose the Sizewell link road as a permanent facility, rather than temporary. It was considered by SZC Co. that it would be preferable to avoid further disruption to local residents and the environment by removing the road and to leave it as a lasting legacy of the Sizewell C project. The quality of the link road also makes it more appropriate as the long term principal access to Sizewell A, B and C.

2.1.127 The removal and reinstatement phase would take approximately 24 months. The Stage 4 Consultation Report states at paragraph 6.3.25 that:

> *"With the exception of noise and vibration effects, the likely effects during this phase are predicted to be no worse than those presented in the construction phase in the Stage 3 PEI (refer to Volume 2A, Chapter 5 of the Stage 3 Main Consultation Document). During the breaking of surfaced areas and removal of the road and associated infrastructure, there is the potential for significant adverse noise and vibration effects on nearby residential properties, as well as on the amenity of users of PRoWs (amenity and recreation) and the setting of Theberton Hall (terrestrial historic environment). Whilst the potential for significant*

> *effects on soils and agriculture was identified in the Stage 3 PEI for the construction phase, the removal and reinstatement phase is unlikely to be significant as it would not result in the loss of further agricultural land and would instead reinstate it to former use."*

2.1.128 Retaining the Sizewell link road offers permanent benefits, particularly in relation to the Theberton element of the bypass, including sustained improvements in noise and air quality in the village. The Councils summarised these benefits in their joint response to the Stage 4 consultation. Paragraph 246 of the Councils' response states:

> *"The Councils consider the Theberton Bypass as a legacy benefit of the development, by removing through traffic from the village, with likely associated benefits on noise and air quality and greater network resilience, and strongly believe it should be retained following construction."*

2.1.129 ESC also recognises the legacy benefit in retaining the Sizewell link road in the context of the Sizewell A, B and C, but also in relation to other projects, such as the Greater Gabbard and Galloper offshore windfarms. In the Joint Local Impact Report (dated May 2021 [EN010012]), ESC states at para 16.93 that:

> *"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"*

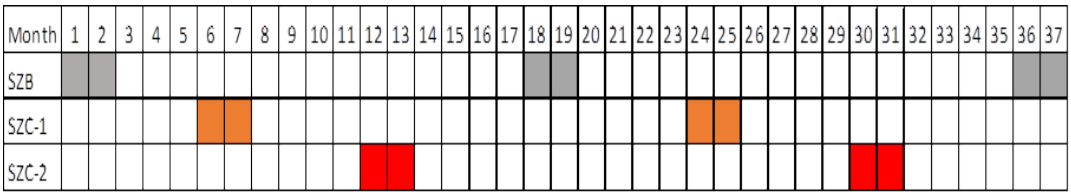
2.1.130 Retaining the Sizewell link road also will be particularly beneficial when statutory outages occur in the operational stage of the power plant. Statutory outages are explained in more detail in Vol 2 Chapter 4 of ES, which states that during the 60-year operational life, each UK EPR™ reactor unit would undergo refuelling and maintenance shutdowns (otherwise known as 'outages') at approximately 18-month intervals per unit. The length of these outages would vary according to the maintenance and inspections required,

but would typically be up to two months in duration and may require 24-hour working.

2.1.131 During statutory outages at both SZC and SZB, significant amounts of construction workers will need to attend the nuclear power plants to carry out essential maintenance. It is estimated that during the maintenance and refuelling outages for just SZC, approximately 1,000 additional staff would be required to work on site at any one time, with the number depending upon the extent of the maintenance planned for the outage (Vol 2 Chapter 4 of ES, para 4.11.3). The Sizewell link road will mean that these additional workers, and any necessary equipment/machinery, can avoid using the B1122, and will not have to travel through the villages of Yoxford, Theberton and Middleton Moor.

2.1.132 To help illustrate, Figure 7 shows a schedule of outages for the 3 units once all in operation. There will typically be a 3-4 month gap between each outage (each Unit will have an 18 month gap between planned outages).

Figure 7: Illustration of schedule of proposed outages for all 3 Units



2.1.133 There can also be forced/un-planned outages. These are unpredictable by their very nature and it is not possible to anticipate when they will arise, resulting in potentially concurrent outages. Concurrent outages could also occur if a planned outage overuns, or if a station's operating cycle changes.

2.1.134 The DCO application therefore proposes to leave the road in place and for it to be adopted by the Highways Authority on terms to be resolved as part of the DCO application. SZC Co. anticipates that the existing B1122 would be downgraded by SCC to an unclassified road once the Sizewell link road is operational. As the majority of B1122 traffic would reassign to use the Sizewell link road, the B1122 will experience much lower traffic volumes and achieve more of the character of a quiet rural lane.

3 SIZEWELL LINK ROAD ROUTE SELECTION

3.1.1 In considering appropriate locations for the link road, the Transport Assessment (Doc Ref. 8.5) [APP-602] predicts that, without a Sizewell link road in place, most construction traffic would have to travel along the A12 and reach the main development site via the B1122, through Theberton and Middleton Moor.

3.1.2 This reflects the historical situation during the construction of Sizewell B, where the Secretary of State for Energy, in his letter dated March 1987, acknowledged "*severe drawbacks*" to the use of the B1122 but that, without the construction of a new road (which had not been proposed), there was no alternative route for construction traffic other than using the B1122. It is also relevant that the Sizewell B construction programme was understood to be 8 years compared with 10-12 years for SZC and that the scale of the construction project was significantly smaller.

3.1.3 That concern does not arise at SZC. By providing a link road in the vicinity of these communities, substantial relief is guaranteed to the B1122 communities.

3.1.4 In order to achieve the greatest benefit in terms of alleviating traffic impacts associated with construction of Sizewell C, the location of the link road needs to be positioned such that it achieves the following objectives, as set out in the Planning Statement (Book 8.4 Appendix 8.4A Site Selection Report, page 149), i.e. that it:

- relieves the B1122 from the anticipated construction traffic associated with the main development site, and consequently reduces traffic passing through Theberton and Middleton Moor;
- reduces traffic flow through Yoxford by removing the need for traffic from the south to access the B1122 from the A12 at Yoxford;
- is as short as is practical, whilst observing environmental constraints, in order to minimise impacts and reduce journey times compared with the use of the B1122, and in order for the link road to be an attractive option for motorists to use; and
- is positioned such that the road could accommodate construction workers arriving by car, park and ride buses from both the proposed

northern and southern park and ride sites, and all heavy goods vehicles (as well as some light goods vehicles) delivering freight to the construction site.

3.1.5 The history of proposals for a link road is set out earlier in this document. During the course of that history various alternative route options were considered. In summary, as a result of the Sizewell B Public Inquiry, following a recommendation in the Inspector's report, a study was undertaken to identify a new route between the A12 and Sizewell. Six routes were put forward for Public Consultation during October 1987, which included one option for improving the existing B1122 and providing bypasses to Middleton Moor and Theberton and also five new routes (A, B, C, D1 and D2). The consultation exercise identified route D2 as the preferred option (see Figure 5). However, the route was not progressed as the construction of Sizewell B had commenced.

3.1.6 Following the announcement that the Central Electricity Generating Board (CEGB) were considering a possible C station at Sizewell, CEGB held a further consultation exercise in July 1988. The options under consideration included a slightly modified D2 route following previous feedback in 1987 and also bypasses along the B1122.

3.1.7 As set out earlier, AECOM prepared a report in December 2014, commissioned by SCC, to provide a high level assessment on options for providing relief to communities along the B1122 and with a view to identifying any "showstoppers" for the delivery of improvements, in addition to the cost for constructing the improvement, benefits to journey times for the development traffic and the environmental impact of the improvements.

3.1.8 The 2014 AECOM study built upon historic options for B1122 'local' bypasses (Middleton Moor and Theberton bypasses) and looked at the D2 route proposal. Whilst the AECOM study concluded that further work would need to be undertaken for the assessment and design of a suitable bypass scheme, the study did note on page 219 that:

> *"the more favoured options are largely the bypass options of B1122 rather than the D2 route that is proposed to be located on open greenfield sites".*

3.1.9 The conclusion of the AECOM 2014 report largely reflects the raising of standards of environmental protection since route D2 was proposed in the 1980s.

3.1.10 In 2016, in considering the route of the Sizewell link road, the routes previously presented (for Sizewell B and the then potential C station) were reviewed by WSP, and an internal SZC Co. working group reviewed the routes on the ground using public footpaths and roads.

3.1.11 Using this information and considering the objectives of the Sizewell link road (as set out above) WSP produced a plan of three potential route corridors coloured yellow, red and green in August 2016. These routes are shown in Figure 8 below. For clarity, the southern route in Figure 8 was called Green, the middle route was called Red and the northern one was called Yellow.

Figure 8: WSP Sizewell link road route options, dated August 2016



3.1.12 To establish which route would be the most suitable, the routes were assessed against the following issues:

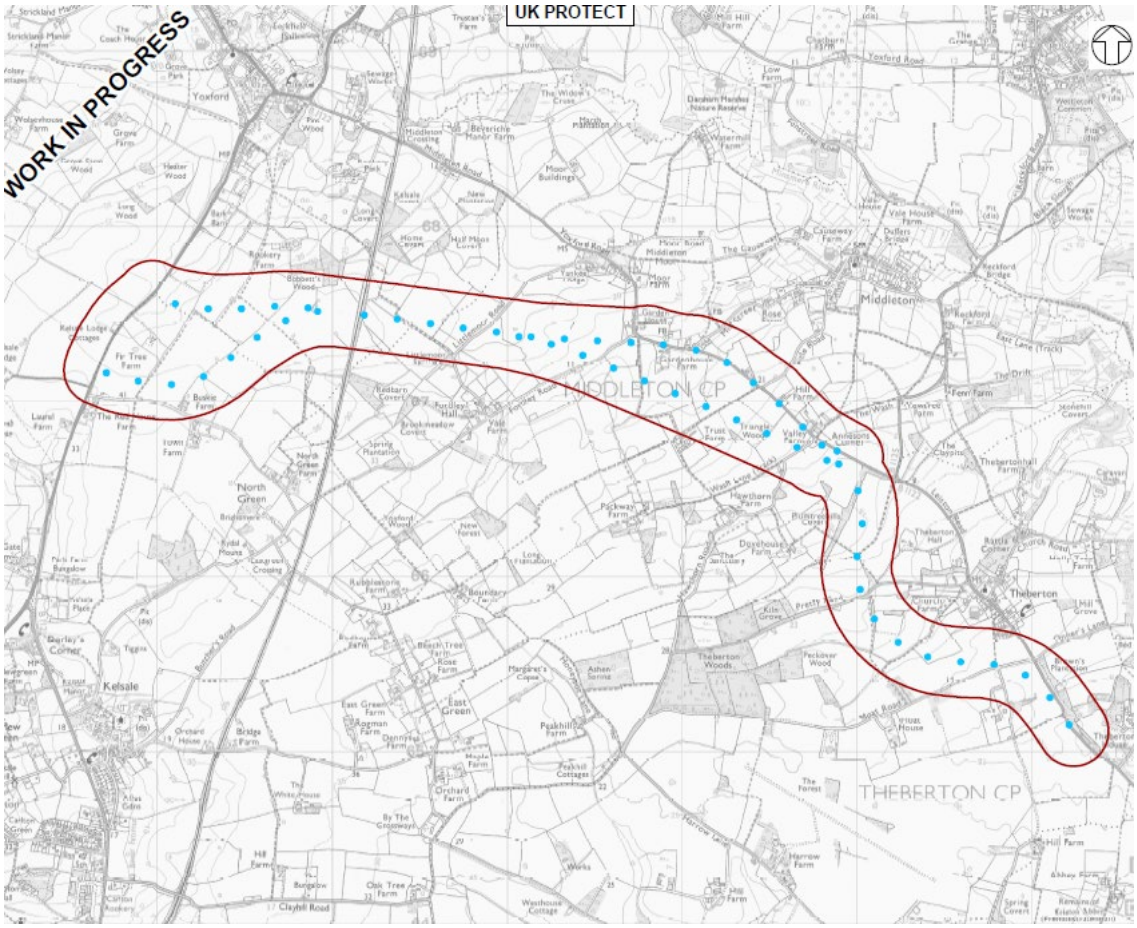
- Key environmental constraints of each route

- Construction costs
- Implementation timescales
- Land ownership issues
- Legacy benefits
- Proposed expenditure versus budget
- Consenting issues in light of national policy

3.1.13 Following the above these routes had been refined and also renamed by November 2016. The Green route became W, the Red Route became X, and the Yellow route became Y. This is shown in Figure 10.

3.1.14 In September 2016, an additional route option was considered by SZC CO. This additional route is shown in Figure 9 below.

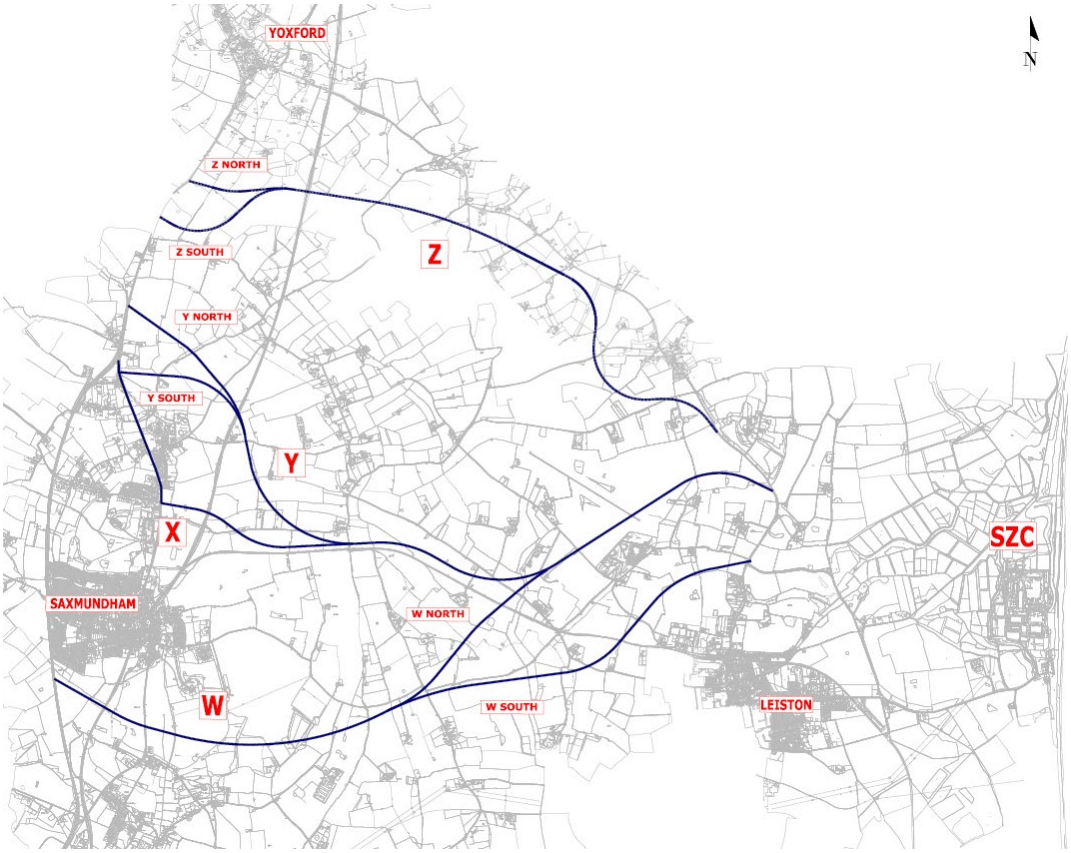
Figure 9: WSP Sizewell link road alternative option (and buffer), dated 7 October 2016



3.1.15 Following the assessment, four routes and alignments (north, south) were considered, as shown in Figure 10 and noted below.

- Route X
- Route Y (Y south and Y north)
- Route W (W south and W north)
- Route Z (Z south and Z north)

Figure 10: WSP Sizewell link road route options, dated November 2016



Route X

3.1.16 Route X starts on the B1121 in Saxmundham, north of Clayhills Road and opposite Carlton Road. The route crosses firstly the River Fromus, and then the East Suffolk line on new bridges. It then turns south to cross Clayhills Road, running parallel and just north of the Saxmundham to Leiston branch line past Knodishall Crossing, Kelsale Covert and Westhouse Cottage. It turns north from the railway near Westhouse Crossing, crossing a watercourse and then heads north-east, following the alignment of the former RAF Leiston runway to the north-west of the Cakes and Ale caravan park. North of Hill Farm, the route would turn east to join the B1122 at the proposed new roundabout forming the main construction site entrance.

Route Y North and South

3.1.17 Route Y north starts on the A12 between Park Gate Farm and Laurel Farm and continues to the south-east, bridging over Tiggin's Lane, and then meets Butcher's Road before following the same route as Route X and Route W north.

3.1.18 Route Y south starts at Dorley's Corner just south of Kelsale Place and continues east, just north of Tiggins Lane, and then south to cross Butcher's Road also at grade at the same point as Route Y north.

Route W North and South

3.1.19 Route W South starts at the A12, just south of Park Farm Covert, then crosses over the East Suffolk line via a new bridge of approximately 15 – 20 metres (m) span to meet the B1121 at grade with a new roundabout. Travelling east, it crosses the River Fromus on a new bridge, and then passes just south of Bloomfield's Covert. It continues east, running just south of and parallel to the B1119 Saxmundham Road before crossing a watercourse near Woodfield Pit. It runs south of Leiston House Farm, and crosses Saxmundham Road between the farm and Highbury Cottages. Turning north, it crosses the Saxmundham to Leiston branch line at a new level crossing and continues north, just to the east of Buckle's Wood. It crosses Buckleswood Road at grade and follows broadly the same alignment as the proposed green rail route until it reaches Abbey Road where Abbey Lane and Lover's Lane meet the B1122.

3.1.20 Route W north is a hybrid route as it utilises the western section of the Route W south alignment and the eastern section of Route X. The section of road joining the two routes runs north of Clouting's Farm, north of Osierground Covert, but south of Westhouse Farm before crossing the Saxmundham to Leiston branch line at a level crossing and a watercourse, before joining Route X.

Route Z north and south

3.1.21 Route Z north starts from the A12 north of Kelsale Lodge Cottages and runs east to cross the East Suffolk line on a new overbridge south-east of Bobbett's Wood. From the railway bridge, there would be a single Route Z alignment (common to the North and South options above). The route would head east, crossing Littlemoor Road and Fordley Road. The route would continue to the south of Gardenhouse Farm, broadly parallel to the B1122

past Valley Farm near Anneson's Corner. It would then pass through Plumtreehills Covert, crossing Pretty Road and continuing to the south-west of Theberton. After crossing Moat Road, the route would join the B1122 alongside Brown's Plantation.

3.1.22 Route Z south starts from the A12 just north of Town Farm Lane then turns north past Buskie Farm and cross the East Suffolk line in the same location as Route Z north.

Summary of assessment of routes prior to the DCO submission

3.1.23 Prior to the Stage 3 consultation, SZC Co. undertook a high-level environmental appraisal of the above four proposed routes (and their variations), summarising the potential effects on PRoWs, local road character, heritage assets, landscape designations, landscape character and views, and residential amenity. The findings were presented at the Stage 3 consultation within Section 10.4 of Volume 1 - Development Proposals.

3.1.24 The information was submitted in the Alternatives Chapter of the ES (Chapter 3, Volume 6, Book 6), which explains why routes have been discounted, for example, due to likely significant adverse effects on landscape character or potential for heritage assets to be affected adversely (paragraph 3.2.41). Table 3.1 of the same document compares the different routes considered against impacts on PRoW, roads and railways, heritage assets, landscape designations, landscape character and residential amenity.

3.1.25 As a result of the assessments, SZC Co. selected Option Route Z (South) as the preferred option. At the Stage 3 consultation, all routes were still shown, but the consultation documents explained why Route Z (South) was selected as the preferred option and why the other routes were not preferable.

3.1.26 Following the completion of Stage 3 consultation, SZC Co. reviewed the comments and undertook further analysis of the alternative routes to ensure the most appropriate alignment was proposed.

3.1.27 In April 2019 AECOM was commissioned by SZC Co. to carry out a peer review of the assessment work undertaken by SZC Co. to assess the identified options for the Sizewell Link Road (SLR) and the rationale in selecting a preferred option. The peer review can be found at **Appendix 12**.

3.1.28 AECOM was asked to undertake an independent selection process to provide an independent opinion of the preferred option for the SLR.

3.1.29 AECOM undertook the review through a desk-based review of existing published information, a site visit to provide context and site-specific information and the professional experience and judgement of the peer reviewer.

3.1.30 AECOM assessed each route against the following criteria:

- Relief to Communities
- Scale of Cost
- Minimising Route Mileage
- Legacy Benefit
- Engineering Impact
- Transport Policy
- Transport Environmental and Safety Topics
- Other Environmental Topics

3.1.31 This independent assessment concluded that Route Option Z scored the best against the assessment criteria and AECOM recommended the route as the preferred option from the four route options assessed.

3.1.32 In the independent assessment, Option Z was ranked the highest in terms of relief to communities, minimising route mileage, transport policy and in transport environmental and safety topics (these latter topics include pedestrian amenity, accidents and safety, driver delay, pedestrian delay and fear and intimidation).

3.1.33 In addition to the above independent assessment by AECOM, SZC CO. also commissioned LDA Design Consulting (LDA Design) to undertake an independent appraisal but focussing only on environmental considerations, titled “LDA Design (2019). Sizewell C Link Road – Environmental Appraisal” (**Appendix 8**).

3.1.34 The purpose of the LDA Design Environmental Appraisal was to present an independent appraisal of all four routes, to ‘health check’ the recommendations, and identify any key or additional environmental

considerations. It has analysed each of the four proposed routes (and their variations), summarising the potential effects on public rights of way; local road character; heritage assets; landscape designations; landscape character and views; and residential amenity.

3.1.35 The LDA Design independent assessment concluded that the preferred option would be Route Z (South). In reaching this conclusion, the independent assessment notes that Route Z minimises negative effects on local residents and minimises negative effects on the local network. The assessment notes that an advantage of Route Z (South) is that it utilises the existing topography where possible.

3.1.36 From the above assessments by SZC Co., and from the independent assessments by AECOM and LDA Design, Route Z South, as shown in Figure 11 below, was selected as the route for the Sizewell link road that forms part of the DCO submission.

Figure 11: Illustrative Masterplan of Sizewell link road



3.1.37 The illustrative masterplan of the Sizewell link road can be viewed in more detail at Figures 2.1 – 2.11 of Volume 6 Chapter 2 of the ES.

Further assessment of routes

3.1.38 Following the DCO application submission, SZC Co. considered that it would be beneficial to undertake further assessment and appraisal work on the Sizewell link road options to ensure that the chosen route was the most appropriate route.

3.1.39 This further appraisal work includes an AECOM 2021 Report 2021 can be found at **Appendix 11**. The AECOM 2021 Report builds upon the work undertaken during the pre-application process and ES submitted with the application for development consent, supplemented with further information from publicly available datasets, feedback from consultation and survey

information (where relevant). AECOM have also conducted further desktop analysis to strengthen the assessment of the environmental impacts of each route (covering noise and vibration, air quality, landscape and visual amenity, socio-economics, biodiversity, amenity and recreation (including impacts on PRoW and severance), soils and agriculture, geology and land quality, groundwater and surface water). The AECOM 2021 Report (**Appendix 11**) includes more detailed information in the environmental comparison tables (compared to what is already provided in the DCO application).

3.1.40 Additional work has also been undertaken to assess the impacts of the route options on committed developments and policy allocations. WSP and the Land Team within SZC Co. have also undertaken assessments to understand the land take requirements of Route W North compared with the Sizewell link road, and to assess the number of land interests that would be impacted. The findings of this further work are set out in a report from Ardent titled "Land Assembly and Compulsory Purchase – Route W North Summary Note" (dated October 2020) (**Appendix 9**). These findings have also been fed into the AECOM 2021 Report (**Appendix 11**) noted above. In addition, further transport work has also been undertaken. WSP has provided a traffic comparison of Route W compared to the chosen SLR route. This work focused on Route W as SCC requested at Stage 3 that "*EDF Energy revisit the southern route (route W) as a potential superior alternative route to the proposed northern route (route Z), with regards to transport benefits, legacy potential and scheme impacts*." This additional WSP work is set out in the document titled "Sizewell C Visum Traffic Model. Technical Note: Comparison of Route W North" dated 1 October 2020 **(Appendix 10).**

3.1.41 The following paragraphs summarise the findings of these various *assessments* and appraisals. The section concludes by setting out why Route Z South is considered the most appropriate route to assist in accommodating the anticipated construction traffic associated with the main development site.

a) Why Route X is considered unsuitable

3.1.42 Route X would utilise the existing B1121 to take traffic off the A12 and would start on the B1121 in Saxmundham, north of Clayhills Road and opposite Carlton Road. However, the overall effect of increased traffic, particularly HGVs on the B1121 north of Carlton Road, is likely to have a significant effect on the amenity of local residents along the B1121 north of Saxmundham due to visual impacts (LDA Design Environmental Appraisal, page 10) (**Appendix**

8), increases in noise and decreases in air quality (albeit the increase in traffic is unlikely to result in emissions that would exceed the annual mean air quality strategy objective) (AECOM 2021 Report Appendix D) (**Appendix 11**).

3.1.43 This route would potentially lead to congestion and safety concerns, particularly near Kelsale Primary School, which is located on Carlton Road, just to the west of the B1121, and bus stops just to the north. Pedestrians, including school children, are likely to be crossing the B1121 in this area (paragraph 8.4.38, AECOM 2021 Report) (**Appendix 11**). At the Stage 3 consultation the Councils accepted that Route X would have had significant impacts on residential areas in north of Saxmundham and in Kelsale and that this was not a viable option (paragraph 770 of the SCC and ESC Joint Response to the Stage 3 Consultation, March 2019). Furthermore, the route would also pass adjacent to a site that has planning permission for the erection of 44 new dwellings (approved on 30 August 2019) [LPA ref: DC/18/2621/FUL].

3.1.44 The route would also require substantial engineering works (comprising earthworks and bridge structures) to cross the East Suffolk line at a height to achieve sufficient clearance, which would significantly affect the local landscape character (LDA Design Environmental Appraisal, page 10) (**Appendix 8**). Page 6 of the appraisal states:

> *"substantial engineering works would be required in this area to facilitate the transportation of HGVs over the existing railway line. As a consequence, it would be likely that there would be significant adverse effects to the landscape character of this area in accommodating this change to the baseline environment."*

3.1.45 Although engineering works would be required for Route Z South (the Sizewell link road) as well, these would be less adverse than Route X due to the greater sensitivity of the landscape immediately around Saxmundham. Page 8 of the LDA appraisal states:

> *"The railway line is well screened from the surrounding landscape being located in cutting and surrounded by established vegetation"*

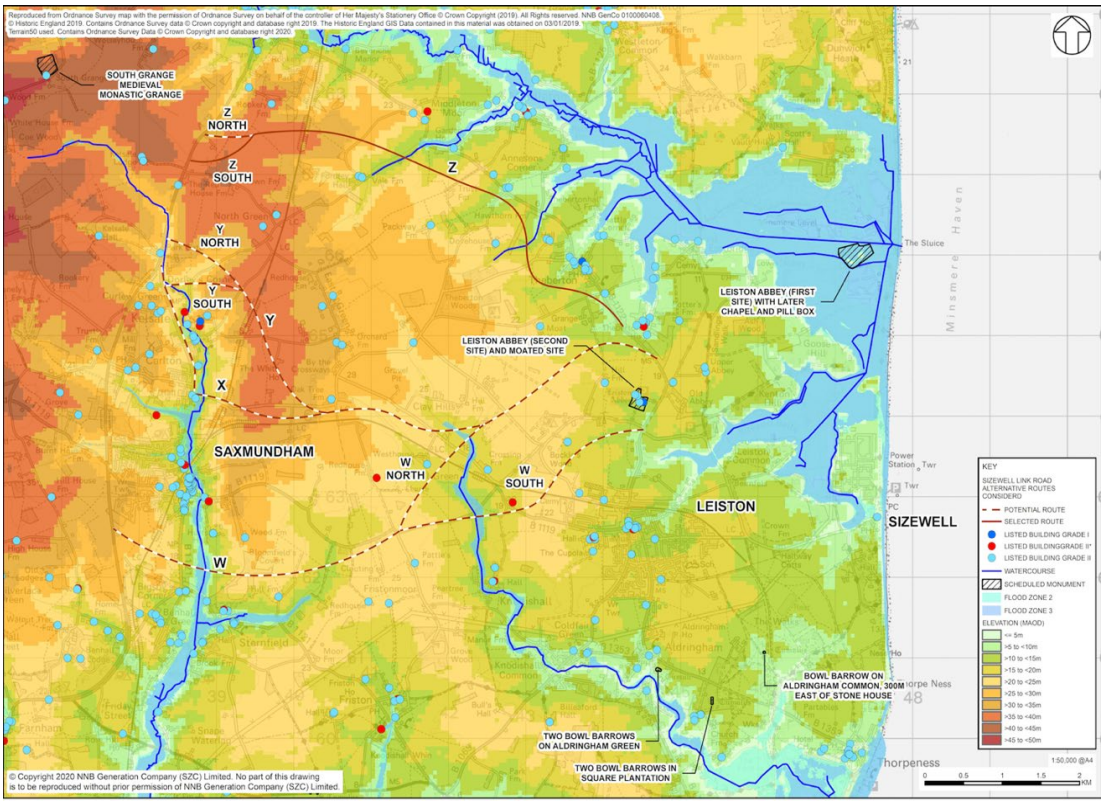
3.1.46 As the railway line is in a deeper cutting where Route Z would cross, this reduces the embankment height needed to cross the railway line, and

therefore the route would not require the same degree of substantial engineering works that Route X would require.

3.1.47 Furthermore, whilst there would be no Sizewell C HGV or buses travelling through Saxmundham with Route X, the effect of Sizewell C car and LGV traffic using this route would be likely to have adverse effects on the setting of a number of historic assets (Grade II and Grade II*) within Kelsale, Carlton, Saxmundham and isolated assets along the route including Grade II Oak Tree Farmhouse. The route also passes to the north of Leiston Abbey (Scheduled Monument). Due to its location close to the main development site, impacts on Leiston Abbey from the construction and operation of a road have the potential to combine and result in a greater effect on this asset. If works required alteration of the junction with Clay Hills with the B1121, this may also result in direct impacts on Grade II listed buildings Carlton Cross and Carlton Rookery (Options Appraisal Report, 2021, Appendix D) (**Appendix 11**).

3.1.48 In addition to the crossings of roads and the East Suffolk line, the route would also need to cross the Rivers Fromus and Hundred and their floodplains (Flood Zone 3), as well as a small number of tributaries. AECOM have prepared the below Figure 12 for the Options Appraisal Report (2021) to demonstrate how Route X, and the other route options, interact with the environmental context, including flood zones, topography, and listed buildings. A larger version of Figure 12 can be found in the AECOM 2021 Report at Plate 8-3 (**Appendix 11**).

Figure 12: Sizewell link road potential routes and alignments



3.1.49 The crossing over the Hundred River is likely to require a large bridge structure and earthworks to span the river and ensure clearance beneath the bridge (Options Appraisal Report, 2021, Appendix D) (**Appendix 11**). Routes W (North and South) and Y (North and South) would also need to cross both the River Fromus and Hundred Rivers whereas Route Z would not need to.

b) Why Route Y (N and S) are considered unsuitable

3.1.50 For Route Y, the proposed junction with the A12 would be located near existing settlements and both north and south routes would pass close to a number of noise sensitive receptors, including Westhouse Cottage, Hill Farm and Harrow Farm. There is potential for significant effects on local residential amenity on residential properties near the junction with the A12 at Dorley's Corner. This includes significant adverse effects for local residents at Bridge Farm and Orchard House, who also have the potential to be significantly affected by required engineering works in their vicinity (Options Appraisal Report, 2021, Appendix D) (**Appendix 11**).

3.1.51 At the Stage 3 consultation, the Councils accepted that Route Y would have had significant impacts on residential areas in north of Saxmundham and in Kelsale. The LDA Design Environmental Appraisal states on page 6 that:

"The proposed route could potentially have an effect on residential amenity on properties along the B1121 within the vicinity of Saxmundham from the increase traffic volume. Similarly, there would be some effect upon properties nearby the route as it travels north of the Sizewell Railway Line"

3.1.52 The likely effects on landscape character to the north of Kelsale would be potentially significant, due to the complex combination of existing landscape features in the area and the degree of change that would have been required to accommodate the route in the area north of Kelsale (LDA Design Environmental Appraisal, page 10). Both route alignments would require at least two substantial watercourse crossings of the River Fromus and Hundred River (Flood Zone 3) as well as other tributaries, and a crossing of the East Suffolk line; these structures would be prominent in the landscape as they would need to be on high embankments to allow sufficient clearance. These structures have the potential to impact on both the quality and morphology of surface water flows as well as increase the risk of flooding to nearby receptors. Overall, Route Y would have a greater effect on landscape character in the vicinity of the A12 than Route Z.

3.1.53 With Route Y (North and South), there is the potential for adverse effects on the setting of Oak Tree Farmhouse (Grade II). (Options Appraisal Report, 2021, Appendix D (**Appendix 11**).

3.1.54 The route shares a common alignment with routes X and the eastern section of route W North as it passes to the north of Leiston Abbey (Scheduled Monument). Due to its location close to the main development site, impacts on Leiston Abbey from the construction and operation of a road have the potential to combine and result in a greater effect on this asset. (Options Appraisal Report, 2020, Appendix D (**Appendix 11**).

3.1.55 Route Y North is the second longest route (approximately 8km) and would result in a large agricultural land take. (Route W North is the longest (approximately 8.2km), Route Z North is the shortest (approximately 6.3km), and the chosen Sizewell link road (Route Z South) is approximately 6.8km) (Options Appraisal Report, 2020, Appendix D (**Appendix 11).**

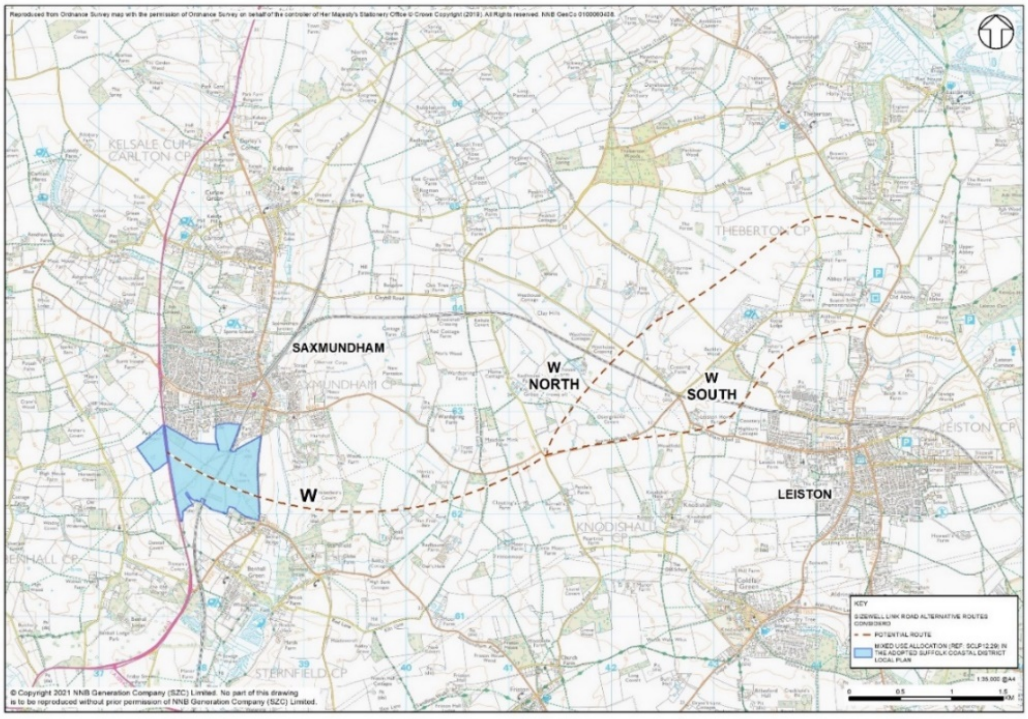
c) Why Route W (N and S) are considered unsuitable

3.1.56 Route W (South) is no longer feasible because it follows the same alignment as the proposed green rail route, from where the route crosses the Saxmundham to Leiston branch line. The green rail route is required as part of the integrated freight management strategy to transport larger quantities of freight by rail.

3.1.57 Route W (South) would also intersect the site boundary for an outline planning application for up to 187 dwellings to include car parking, open space provision with associated infrastructure and access at Land north of B1119 Saxmundham Road, west of Leiston (LPA ref: DC/16/1961/OUT). It would appear that this development is progressing as reserved matters have been approved (LPA ref: 19/1883/ARM) and applications have been submitted to discharge conditions. Furthermore, a non-material amendment was submitted on 16 March 2021 (LPA ref: 19/1883/ARM) to change the approved bricks of the dwelling houses. The alignment of Route W (South) would affect the ability to bring this development forward as it intersects the site boundary and the new road could have an environmental impact and a severance effect on the proposed properties.

3.1.58 Route W would pass through the centre of SCLP12.29, a mixed use allocation (including approximately 800 dwellings) for South Saxmundham Garden Neighbourhood, one of two proposed in the Suffolk Coastal District Local Plan (see Figure 13 below). In this location, Route W has a similar alignment to Route D2, and therefore Route D2 would also pass through the centre of the proposed Garden Neighbourhood. The allocation comprises approximately 66.6ha of land for a mixed use development, comprising primary school provision (identified as a need for the Saxmundham area as the limited capacity in existing schools is increasingly acting as a barrier to the future development of Saxmundham and the surrounding communities), community facilities, employment land and open space alongside a variety of residential development (approximately 800 dwellings). A new road through this development area would have the potential to impact the ability to develop the allocated site for future residents. There are no consented developments on this allocation, however an EIA Screening Request was submitted in 2017 for a proposed residential development, land for a new primary school, open space and country park.

Figure 13: Route W bisecting the mixed use allocation (ref: SCLP12.29 – show shaded in blue) in the adopted Suffolk Coastal District Local Plan



3.1.59 Route W (North) would require a crossing of both the East Suffolk line (on a bridge structure) and the Saxmundham to Leiston branch line (on a level crossing) as well as at least two substantial watercourse crossings of the River Fromus and Hundred River (Flood Zone 3) as well as other tributaries.

3.1.60 The crossings of the two rivers will likely require large span bridge structures and earthworks to ensure clearance beneath the bridge. These would be prominent structures and would be visible in the surrounding landscape. This is not considered suitable as these embankments would introduce prominent infrastructure into the landscape (Options Appraisal Report, 2021, Appendix D (**Appendix 11**). In comparison, Route Z would not require these prominent structures as it does not cross either of these watercourses.

3.1.61 Route W (north and south) pass near to a number of existing heritage assets including Hurts Hall and Leiston Abbey. There is potential for the significance of several heritage assets to be affected adversely due to changes in their

setting resulting from the route's alignment (paragraph 5.1.10, AECOM 2021 Report, 2021) (**Appendix 11**). Furthermore, due to the location of where Route W north, Route X and Routes Y north and south connect to Abbey Road, close to the main development site, impacts from the construction and operation of a road on the setting of Leiston Abbey have the potential to combine and result in a greater effect on this asset. Comparatively, Route Z connects to Abbey Road further north, and is the furthest of the route options from Leiston Abbey, and therefore is less likely to result in combined effects on this asset (AECOM 2021 Report, 2021, Appendix D) (**Appendix 11**).

3.1.62 Route W (North) is the longest route of all of the options (8.2km) and would require the greatest amount of agricultural land and result in a largest area of habitat loss. To deliver Route W North, SZC Co. estimate that 122.8ha of land would be required permanently, and an additional 57 ha would be required temporarily. In comparison, the proposed Sizewell link road requires approximately 84.4ha of land permanently and an additional 21ha temporarily. Route W south is approximately 7.5km in length. Table 3.1, taken from the Ardent report "Land Assembly and Compulsory Purchase – Route W North Summary Note" (dated October 2020), provides an overview of the Land Take from Route W North and the Sizewell link road respectively.

Table 3.1: Overview of land take – Route W North and Sizewell link road

	Route W North	Sizewell link road
Permanent Land Area	122.8ha	84.4ha
Temporary Land Area	57.0ha	21.0ha

3.1.63 SCC however requested at Stage 3 that SZC Co. revisit Route W as a potential preferable alternative route to the proposed northern route (route Z). SCC suggested that they would expect the route 'W North' to attract through-traffic away from the village of Tunstall on the B1069 and potentially provide air quality benefits through reduced HGV vehicle emissions because of reducing the travel distance between the A12 south and Sizewell C.

3.1.64 The objective of the Sizewell link road is not to relieve villages of existing through traffic problems, but rather to mitigate potential impacts caused from the construction associated with Sizewell C. Traffic modelling undertaken by

WSP predicts that construction traffic associated with Sizewell C would not cause impacts that would require mitigation at Tunstall, but would cause impacts that would require mitigation at Yoxford, Theberton and Middleton Moor. Therefore, the purpose of the Sizewell link road is to alleviate the villages of Yoxford, Theberton and Middleton Moor from the construction associated with Sizewell C.

3.1.65 WSP have undertaken a traffic comparison between the proposed Sizewell link road and Route W North (Route W South would not be feasible due to the proposed SZC rail proposals) to compare the effects at Yoxford, Theberton and Middleton Moor. This can be found at **Appendix 10**.

3.1.66 This modelling assessment expects that on the busiest day there would be 150 daily two-way SZC HDV movements to/from the north on the A12 through Yoxford if Route W North was constructed (or 105 HDV flows based on the revised HGV movements in the TA Addendum), as HDVs would need to travel through Yoxford (on the A12) to reach the more southern alignment of Route W north. There would be no HDV flows through Yoxford if the Sizewell link road was constructed as these movements would use the B1122 and Middleton Moor Link to join the link road.

3.1.67 Therefore, Route W North, and the other more southern alignments of Route X and Y, would not provide as much traffic relief to Yoxford compared to the Sizewell link road, as the more southerly alignments would result in additional SZC HDV traffic through Yoxford.

3.1.68 The Sizewell link road is proposed to be open to the public and SZC Co. predict that most traffic currently using the B1122 would transfer to the proposed Sizewell link road, reducing existing traffic flows through the villages of Middleton Moor and Theberton. In comparison, the traffic modelling shows that existing B1122 traffic would not reroute via a 'W North' alignment, due to its relative remoteness from the B1122. The issue of traffic volumes on the B1122 through Yoxford, Theberton and Middleton Moor were particular issues raised during the early consultation stages and these issues would not be resolved with the 'W North' alignment.

3.1.69 SZC Co. has also undertaken a high-level referencing exercise to provide a comparison of the number of land interests that would be affected for both Route W North and the Sizewell link road. Table 3.2, taken from the Ardent report "Land Assembly and Compulsory Purchase – Route W North Summary Note" (dated October 2020), provides an overview of the findings.

Table 3.2: Overview of land interests – Route W North and Sizewell link road

	Route W North	Sizewell link road
No. of Land Holdings	17	18
Tenants/Occupiers	16 *(estimate assumed)*	17
Cat 2 Parties (excludes where freeholder has Cat 2 interest on surrounding land titles)*	26	21
Total Number of Interests	59	56

3.1.70 The assessment predicts that Route W North would intersect more land interests than the Sizewell link road and would have a greater land take as a whole. However, a full land referencing exercise would need to be undertaken and landowners would need to be contacted to verify and confirm this information.

3.1.71 SZC Co. also notes that Route W North is likely to be of a greater complexity compared to the Sizewell link road. As noted at page 12 of the LDA appraisal, Route W North would need to intersect six roads compared to Route Z which would intersect five roads. Furthermore, Route W North would need to cross two railway lines, the East Suffolk Line and also the Sizewell branch line. Route W North crosses the Sizewell branch line to the east of Westhouse cottages. Whereas, Route Z is located further north, and therefore does not need to cross the Sizewell branch line and only crosses the East Suffolk Line.

a) Why Route Z North is considered less suitable than Route Z South

3.1.72 Route Z North and Route Z South follow a similar alignment, apart from Route Z South connects to the A12 further south than Route Z North. They have

similar effects apart from this local variance, with only marginal differences. Route Z North is considered less suitable than Route Z South because Route Z North does not utilise the existing topography of the area as well and therefore there would have a greater landscape and visual impact compared to Route Z South.

3.1.73 As set out in the LDA Design Environmental Appraisal, Route Z (South) utilises the existing topography where possible. Route Z (South) connects to the A12 just north of The Red House Farm where the existing landform is flatter and the proposed route is able to follow existing contours south of Fir Tree Farm.

3.1.74 Furthermore, Route Z South is on a low embankment for most of the stretch between the A12 and the East Suffolk railway line, whilst Route Z (North) would require a greater change in level over a shorter distance, which would potentially result in further earthworks being required with a greater landscape and visual effect compared to Route Z (South).

3.1.75 Route Z North is also considered less suitable than Route Z South because it intersects more PRoWs (AECOM, Options Appraisal Report, 2021, Appendix D (**Appendix 11**). Route Z North intersects PRoW E-344/014/0 twice, while Route Z South intersects the same PRoW once.

e) Benefits of Route Z South

3.1.76 Route Z South (the proposed Sizewell link road route) is the most appropriate route to assist in accommodating the anticipated construction traffic associated with the main development site. Route Z south has many advantages over the other routes that have been considered unsuitable for the reasons summarised above.

3.1.77 Route Z South is the most effective route in alleviating traffic effects on residents at Theberton, Middleton Moor and Yoxford. By replicating most closely the B1122, Route Z is best placed to intercept traffic from both the north (via the Middleton Moor Link) and south (at a new A12 roundabout north of Town Farm Lane) that would otherwise use the B1122. As a result, it would also minimise noise, amenity and air quality issues associated with the construction traffic for SZC on these communities. The Sizewell link road will connect with the A12 away from existing settlements and, of the 146 residential properties that lie adjacent to the B1122 between Yoxford and Theberton, 120 properties (see Appendix 4) would no longer be immediately

adjacent to a designated route being used for SZC construction traffic. Therefore, Route Z minimises effects on local communities.

3.1.78 Route Z would avoid Sizewell C traffic passing through any settlements. In comparison, Route X would require Sizewell C traffic to pass through the Kelsale and Carlton where the increase in traffic associated with construction of Sizewell C would have the potential to impact on the amenity of residents along the route, as well as children attending Kelsale Primary School.

3.1.79 The route would also avoid the need for any HGVs to travel on the A12 through Yoxford during peak construction of the main development site, which is not possible with other route options. As Route Z is located further north, it enables part of the B1122 and the Middleton Moor Link to be used to reach the Sizewell link road. More southerly alignments would require HGVs from the north to travel either through Yoxford on the A12 to join the new route, or to use the B1122 though Middleton Moor and Theberton, reducing the benefit of constructing the new road.

3.1.80 Route Z also has been assessed as having the least impact on landscape and visual amenity for a number of reasons. Firstly, the route is shorter than Route W north and Routes Y north and south and therefore has a smaller footprint (Route Z south is approximately 6.8km in length). As a result, the impact of Route Z on the loss of agricultural land and loss of habitat is less than other routes. Whilst Route X is also a short route (approximately 6.6km in length), it is not suitable for the reasons set out above.

3.1.81 Route Z South maximises the use of existing topography where possible and consequently limits the route's impact on longer distance views due to the screening effect of vegetation in the surrounding landscape (LDA Design Environmental Appraisal, page 10) (**Appendix 8**). To the east of the East Suffolk railway line, the existing topography and landscape restricts views to only short and medium range from roads, public footpaths and communities. It is likely that there would be significant effects in the immediate context of the route, but these would be of no more than local consequence and would reduce beyond the vicinity due to the screening effect of vegetation in the surrounding landscape.

3.1.82 Route Z only requires one railway crossing. This is a crossing of the East Suffolk line, which would require a bridge structure. The LDA Design Environmental Appraisal states on page 8 that the:

> *"The railway line is well screened from the surrounding landscape being located in cutting and surrounded by established vegetation ..."*

and that

> *"there would be significant effects in the immediate context of the route, but these would reduce beyond its vicinity due to the screening effect of vegetation in the surrounding landscape."*

3.1.83 Furthermore, the watercourse crossings required for Route Z are fewer. Route Z would not require substantial crossings of the River Fromus and Hundred River. The simpler railway and water crossings also mean that this route should pose the least risk in terms of delivery.

3.1.84 The majority of the route is located within Flood Zone 1, with only small areas located in Flood Zone 2.

3.1.85 In comparison, for Routes W (north and south), Route X and Route Y (north and south), whilst the majority of the routes would be within Flood Zone 1, there would be sections of the road within flood zones 2 and 3 (where the routes would cross the River Fromus and Hundred River), and at risk of flooding.

3.1.86 A further advantage of Route Z is that it does not prejudice any Local Plan allocations that are being promoted, unlike Route W.

4 CONCLUSIONS

4.1.1 The proposal for a Sizewell link road emerged because there has long been significant local community and stakeholder concern regarding the use of the B1122 as the main route for Sizewell construction traffic. Concerns are particularly focused around the potential impacts the additional construction and worker traffic could have on the communities in Theberton, Middleton Moor and Yoxford. SZC Co. has identified significant benefits for these communities in diverting traffic from the B1122.

4.1.2 This document confirms that a Sizewell link road is necessary to mitigate impacts that would otherwise arise during the construction of Sizewell C on the communities of Theberton, Middleton Moor and Yoxford. A link road forms an important part of the Sizewell C Project. The importance of such a

road has long been recognised, including by the Secretary of State in very clear terms in respect of SZB and CEGB SZC. The Sizewell link road will have some unavoidable adverse effects (indeed adverse effects would arise from any route option), but SZC Co. consider that the benefits of the link road significantly outweigh such effects. There are compelling benefits in terms of reducing noise, severance, and amenity impacts on communities along the B1122 and indeed achieving betterment in these respects over the present situation. There is also the profound benefit of facilitating the delivery of the Sizewell C Project, which is nationally important infrastructure.

4.1.3 A number of different route options were considered as part of an appraisal process to identify the preferred route for the Sizewell link road. This process concluded that Route Z South was the most appropriate route. Independent peer reviews were also commissioned by SZC Co. to consider the route options for the Sizewell link road, and these reviews also concluded that Route Z South was the most appropriate route.

4.1.4 The Sizewell link road is proposed to be a permanent road, rather than temporary. It was considered by SZC Co. that it would be preferable to avoid further disruption to local residents and the environment by removing the road, as this would extend the construction period of SZC. A permanent road will also leave an important legacy, as noted by the Councils in their Stage 4 consultation response, in that the road will remove traffic through the villages of Theberton, Middleton Moor and Yoxford, and will offer associated benefits on noise and air quality. There would be significant improvements on the B1122 in environmental and character terms. The Sizewell link road would also provide greater network resilience and a suitable long term access road to Sizewell A, B and C, for which access for significant numbers of workers, equipment and materials will still be required during operation and regular outages.

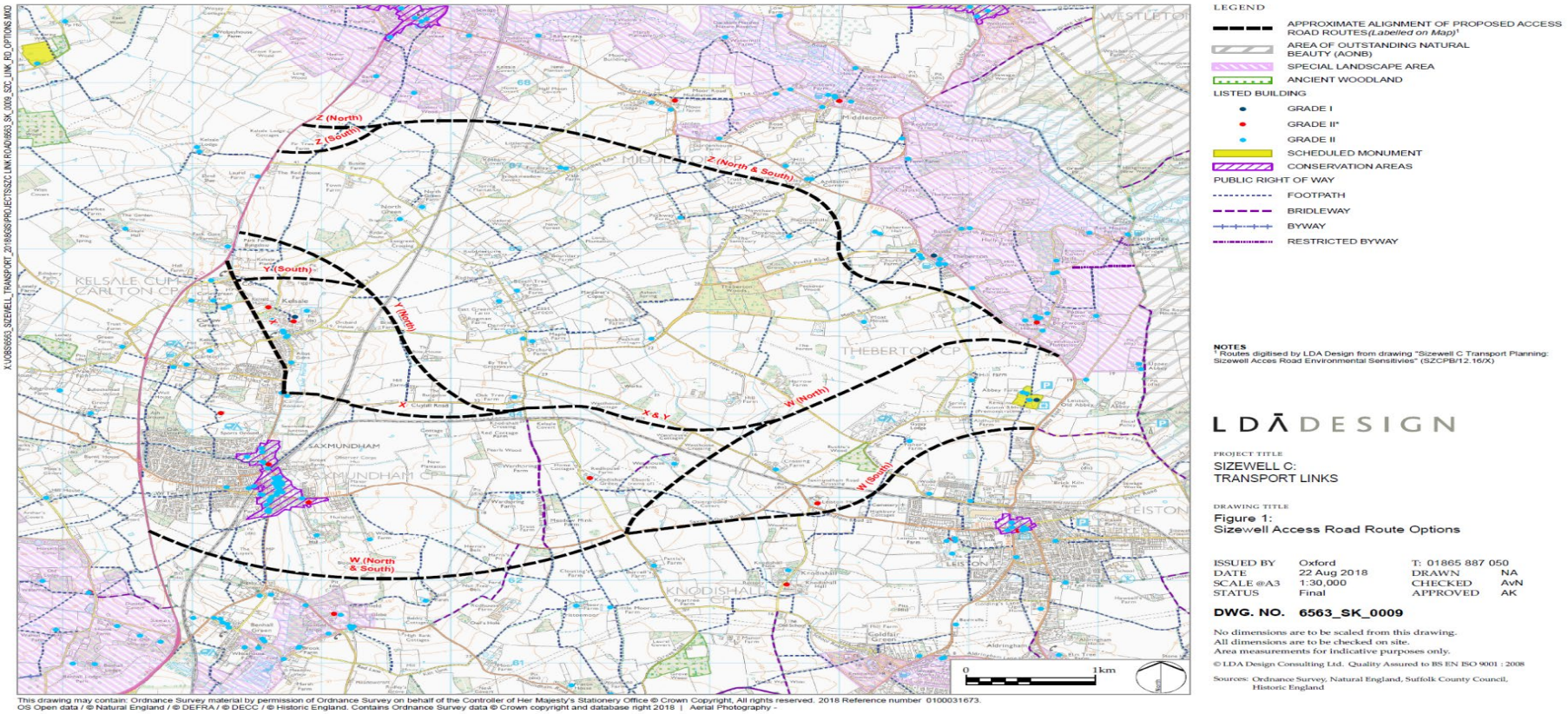
4.1.5 Since the submission of the DCO, a further options appraisal, and further assessments (as set out in the AECOM 2021 Report at **Appendix 11**), have been carried out on the Sizewell route options (Routes W, X, Y and Z) to test the robustness of the previous conclusion that the chosen route was the most suitable route.

4.1.6 This additional work, as summarised within this document, confirms SZC. Co's view that Route Z South is the most appropriate route and alignment for the Sizewell link road. It is clear that Route Z South **minimises** the effects on local residents, which is the main objective of the Sizewell link road.

Furthermore, Route Z South has less impact on landscape and visual amenity than the alternatives, involves the least land take and avoids conflict with any Local Plan allocations.

4.1.7 Route Z would not require substantial crossings of the River Fromus and Hundred River and is located primarily in Flood Zone 1. Due to its less complex engineering and construction, the route should offer the least risk in terms of delivery, which is itself important due to the need to provide relief to the B1122 communities and to provide an appropriate quality of access to the SZC construction site.

APPENDIX 1


X:\UD\6563_SIZEWELL_TRANSPORT_2018\6563\PROJECTS\SZC LINK ROAD\6563_SK_0009_SZC_LINK_RD_OPTIONS.MXD
Z (North)
Z (South)
Z (North & South)
Y (South)
Y (North)
X
X & Y
W (North)
W (South)
W (North & South)
SAXMUNDHAM
KELSALE CUM CARLTON CP
THEBERTON CP
KNODISHALL
LEISTON
0
1km
LEGEND
APPROXIMATE ALIGNMENT OF PROPOSED ACCESS ROAD ROUTES (Labelled on Map)[1]
AREA OF OUTSTANDING NATURAL BEAUTY (AONB)
SPECIAL LANDSCAPE AREA
ANCIENT WOODLAND
LISTED BUILDING
GRADE I
GRADE II*
GRADE II
SCHEDULED MONUMENT
CONSERVATION AREAS
PUBLIC RIGHT OF WAY
FOOTPATH
BRIDLEWAY
BYWAY
RESTRICTED BYWAY
NOTES
[1] Routes digitised by LDA Design from drawing "Sizewell C Transport Planning: Sizewell Acces Road Environmental Sensitivies" (SZCPB/12.16/X)
LDA DESIGN
PROJECT TITLE
SIZEWELL C:
TRANSPORT LINKS
DRAWING TITLE
Figure 1:
Sizewell Access Road Route Options
ISSUED BY Oxford
DATE 22 Aug 2018
SCALE @A3 1:30,000
STATUS Final
T: 01865 887 050
DRAWN NA
CHECKED AvN
APPROVED AK
DWG. NO. 6563_SK_0009
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site.
Area measurements for indicative purposes only.
© LDA Design Consulting Ltd. Quality Assured to BS EN ISO 9001 : 2008
Sources: Ordnance Survey, Natural England, Suffolk County Council, Historic England
This drawing may contain: Ordnance Survey material by permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown Copyright, All rights reserved. 2018 Reference number 0100031673.
OS Open data / © Natural England / © DEFRA / © DECC / © Historic England. Contains Ordnance Survey data © Crown copyright and database right 2018 | Aerial Photography -

APPENDIX 2

Image ref: (see Figure 2 for location of images)	Image
1	

Image ref: (see Figure 2 for location of images)	Image
2	

Image ref: (see Figure 2 for location of images)	Image
3	

Image ref: (see Figure 2 for location of images)	Image
4 (visibility from Mills lane looking left (east) onto B1122)	

Image ref: (see Figure 2 for location of images)	Image
5	

Image ref: (see Figure 2 for location of images)	Image
6	

Image ref: (see Figure 2 for location of images)	Image
7 (visibility from Onners Lane looking left onto B1122 (south east))	

Image ref: (see Figure 2 for location of images)	Image
8	

APPENDIX 3

Statutory listed buildings between Yoxford and Theberton			
Name	**Grade**	**Historic England list entry no.**	**Settlement**
Old School Cottages	Grade II	1030626	Yoxford
The Limes	Grade II	1030625	Yoxford
Satis House	Grade II	1200636	Yoxford
White Lodge and the White House	Grade II	1377237	Yoxford
Rookery Cottages	Grade II	1200791	Yoxford
The Cottage (Occupied by Mr McLean)	Grade II	1283443	Middleton Moore
Moor Farmhouse	Grade II*	1199307	Middleton Moore
Thatched House	Grade II	1030645	Middleton Moore
Pine Tree Cottage	Grade II	1199326	Middleton Moore
Hill Farmhouse	Grade II	1030643	Middleton Moore
Valley Farmhouse Annesons Corner	Grade II	1283470	Middleton Moore
Farm Buildings 30 Metres East of Valley Farmhouse, Annesons Corner	Grade II	1377245	Middleton Moore
The Old Rectory	Grade II	1227758	Theberton
Old Manor House	Grade II	1228384	Theberton
Barn 30 metres south east of Old Manor House	Grade II	1228270	Theberton
Church of St Peter	Grade I	1227756	Theberton

Statutory listed buildings between Yoxford and Theberton			
Theberton War Memorial	Grade II	1469928	Theberton
Thatched House The Cottage	Grade II	1228180	Theberton
The Lion Public House	Grade II	1287533	Theberton
Stable Block 10 metres to south of the Lion Public House	Grade II	1227759	Theberton
Flint House	Grade II	1287282	Theberton

APPENDIX 4

List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
1 - Lodge Cottage Main Road, Kelsale, Saxmundham IP17 2R	638749	267407
2 - Fir Tree Farm Main Road, Kelsale, Saxmundham IP17 2Rh	638968	267344
3 - Fielding House Main Road, Yoxford, Saxmundham IP17 3Hh	639260	267986
4 - Bark Barn Main Road, Yoxford, Saxmundham IP17 3HF	639423	268079
5 - 1, Rookery Farm Cottage Main Road, Yoxford, Saxmundham IP17 3HF	639713	267886
6 - 2, Rookery Farm Cottage Main Road, Yoxford, Saxmundham IP17 3HF	639713	267876
7 - Homeland Main Road, Yoxford, Saxmundham IP17 3HE	639387	268204
8 - The Old Mill Main Road, Yoxford, Saxmundham IP17 3HE	639535	268253
9 - The Old Mill House Main Road, Yoxford, Saxmundham IP17 3HE	639501	268280
10 - 5, Mill Cottage Main Road, Yoxford, Saxmundham IP17 3HE	639431	268327
11 - 3-4, Mill Cottage Main Road, Yoxford, Saxmundham IP17 3HE	639432	268333
12 - 2, Mill Cottage Main Road, Yoxford, Saxmundham IP17 3HE	639445	268364

List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
13 - 1, Mill Cottage Main Road, Yoxford, Saxmundham IP17 3HE	639446	268367
14 - Bankside Main Road, Yoxford, Saxmundham IP17 3HE	639445	268363
15 - The Nook Main Road, Yoxford, Saxmundham IP17 3HE	639457	268378
16 - Unregistered Property, Main Road, Yoxford, Saxmundham IP17 3HE	639473	268389
17 - Kingsway Main Road, Yoxford, Saxmundham IP17 3HE	639482	268401
18 - Hedgehogs Bungalow Main Road, Yoxford, Saxmundham IP17 3HE	639478	268421
19 - 18 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639494	268434
20 - 16 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639497	268446
21 - 14 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639499	268455
22 - 12 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639502	268461
23 - 10 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639503	268465
24 - 2 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639501	268488
25 - Victoria Cottage Main Road, Yoxford, Saxmundham IP17 3HE	639516	268529

List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
26 - The Old School Main Road, Yoxford, Saxmundham IP17 3HE	639513	268546
27 - 1, Old School Cottage Brook Street, Yoxford, Saxmundham IP17 3HD	639525	268553
28 - 2, Old School Cottage Brook Street, Yoxford, Saxmundham IP17 3HD	639529	268549
29 - 3, Old School Cottage Brook Street, Yoxford, Saxmundham IP17 3HD	639535	268546
30 - Sunflower House Brook Street, Yoxford, Saxmundham IP17 3HB	639584	268558
31 - Grey Cottage Brook Street, Yoxford, Saxmundham IP17 3HB	639581	268631
32 - Brook Cottage Brook Street, Yoxford, Saxmundham IP17 3HB	639599	268615
33 - Brook House Brook Street, Yoxford, Saxmundham IP17 3HB	639589	268647
34 - Brambles Brook Street, Yoxford, Saxmundham IP17 3HB	639596	268657
35 - Prospect House Brook Street, Yoxford, Saxmundham IP17 3HB	639569	268676
36 - Unregistered Property, Brook Street, Yoxford, Saxmundham IP17 3HB	639603	268667
37 - Unregistered Property, Brook Street, Yoxford, Saxmundham IP17 3HB	639606	268673
38 - Rookery Cottage Brook Street, Yoxford, Saxmundham IP17 3HA	639579	268695

List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
39 - Sycamore Cottage Brook Street, Yoxford, Saxmundham IP17 3HA	639584	268701
40 - 1, The Evergreens Brook Street, Yoxford, Saxmundham IP17 3HA	639592	268710
41 - 2, The Evergreens Brook Street, Yoxford, Saxmundham IP17 3HA	639597	268718
42 - 2, Silverdene Cottage Brook Street, Yoxford, Saxmundham IP17 3HA	639613	268685
43 - 1, Silverdene Cottage Brook Street, Yoxford, Saxmundham IP17 3HA	639616	268690
44 - The Cottage Brook Street, Yoxford, Saxmundham IP17 3EZ	639624	268701
45 - Brewers Cottage Brook Street, Yoxford, Saxmundham IP17 3EZ	639630	268718
46 - Shirley Cottage Brook Street, Yoxford, Saxmundham IP17 3EZ	639643	268716
47 - Willow Cottage, 4 Brook Street, Yoxford, Saxmundham IP17 3EZ	639652	268714
48 - Thatched Cottage, Yoxford, Saxmundham IP17 3EY	639646	268778
49 - Dickory Cottage, Yoxford, Saxmundham IP17 3EY	639640	268765
50 - Bank House, Yoxford, Saxmundham IP17 3EY	639664	268772
51 - Pinns Cottage Brook Street, Yoxford, Saxmundham IP17 3EZ	639685	268708
52 - Southern, Yoxford, Saxmundham IP17 3EX	639684	268747

List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
53 - Rosewood, Yoxford, Saxmundham IP17 3EX	639690	268745
54 - Wormley Bury, Yoxford, Saxmundham IP17 3EX	639699	268746
55 - Tinkers, Yoxford, Saxmundham IP17 3EX	639705	268745
56 - Holly House, Yoxford, Saxmundham IP17 3EX	639721	268741
57 - 2 Woodland Cottages, Yoxford, Saxmundham IP17 3EX	639770	268770
58 - The Limes, Yoxford, Saxmundham IP17 3EX	639716	268780
59 - 1 Woodland Cottages, Yoxford, Saxmundham IP17 3EX	639755	268772
60 - Medway, Yoxford, Saxmundham IP17 3EX	639732	268742
61 - White House Cottage, Yoxford, Saxmundham IP17 3EX	639739	268737
62 - White House, Yoxford, Saxmundham IP17 3EX	639764	268739
63 - White Lodge, Yoxford, Saxmundham IP17 3EX	639777	268740
64 - Sans Souci, Yoxford, Saxmundham IP17 3EX	639793	268719
65 - Pinns Piece, Yoxford, Saxmundham IP17 3EX	*639822*	*268696*
66 - Rookery Lodge Middleton Road, Yoxford, Saxmundham IP17 3LE	*639854*	*268694*
67 - 1, Rookery Cottages Middleton Road, Yoxford, Saxmundham IP17 3LG	*640139*	*268569*
68 - 2, Rookery Cottages Middleton Road, Yoxford, Saxmundham IP17 3LG	*640135*	*268561*
69 - Unregistered Property, Middleton Road, Yoxford, Saxmundham IP17 3LG	*640055*	*268598*

List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
70 - Sunny Patch Middleton Road, Yoxford, Saxmundham IP17 3LF	*640129*	*268630*
71 - The Old Barn Middleton Road, Yoxford, Saxmundham IP17 3LG	*640156*	*268603*
72 - 1 Hopton Yard, Middleton Road, Yoxford, Saxmundham IP17 3LG	*640183*	*268600*
73 - 2 Hopton Yard, Middleton Road, Yoxford, Saxmundham IP17 3LG	*640196*	*268599*
74 - 3 Hopton Yard Middleton Road, Yoxford, Saxmundham IP17 3LG	*640210*	*268594*
75 - 4 Hopton Yard, Middleton Road, Yoxford, Saxmundham IP17 3LG	*640199*	*268575*
76 - Honeycroft Middleton Road, Yoxford, Saxmundham IP17 3LG	*640333*	*268531*
77 - 1 Middleton Road, Yoxford, Saxmundham IP17 3LH	*640621*	*268336*
78 - 2 Middleton Road, Yoxford, Saxmundham IP17 3LH	*640626*	*268330*
79 - 3 Middleton Road, Yoxford, Saxmundham IP17 3LH	*640640*	*268323*
80 - 4 Middleton Road, Yoxford, Saxmundham IP17 3LH	*640646*	*268314*
81 - 2, Beveriche Manor Cottages Middleton Road, Yoxford, Saxmundham IP17 3	*Lj 640683*	*268290*
82 - 1, Beveriche Manor Cottages Middleton Road, Yoxford, Saxmundham IP17 3	*Lj 640688*	*268300*

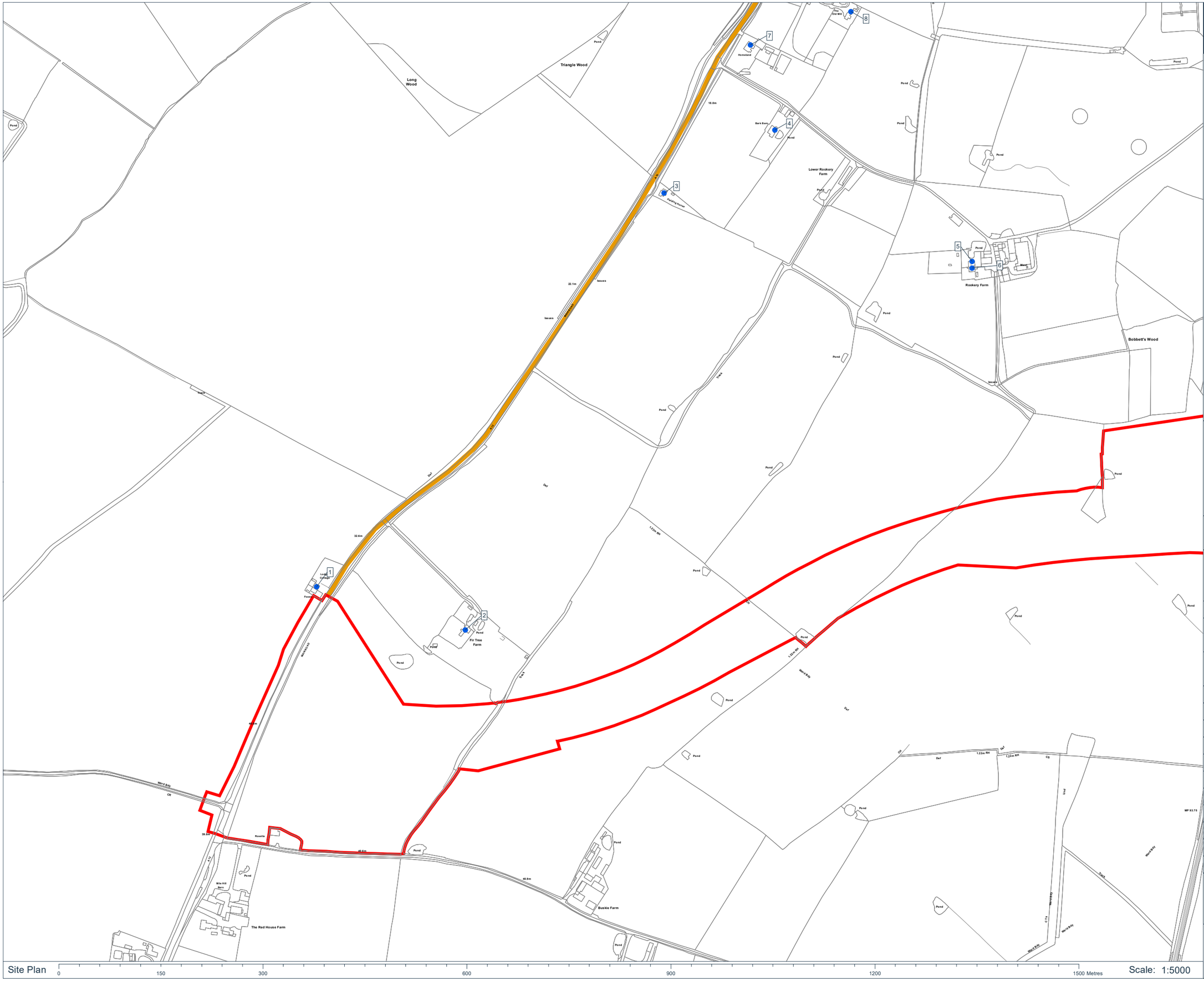
List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
83 - Tollgate Middleton Moor, Middleton, Saxmundham IP17 3LN	641405	267830
84 - Red Lodge Barn Middleton Moor, Middleton, Saxmundham IP17 3LN	641488	267767
85 - The Cottage Middleton Moor, Middleton, Saxmundham IP17 3LN	641547	267765
86 - Suncot Middleton Moor, Middleton, Saxmundham IP17 3LN	641588	267785
87 - West View Middleton Moor, Middleton, Saxmundham IP17 3LN	641596	267780
88 - 2 Middleton Moor, Middleton, Saxmundham IP17 3LN	641606	267778
89 - 1 Middleton Moor, Middleton, Saxmundham IP17 3LN	641613	267774
90 - Duthie Cottage Middleton Moor, Middleton, Saxmundham IP17 3LN	641618	267772
91 - Unregistered Property, Middleton Moor, Middleton, Saxmundham IP17 3LN	641624	267768
92 - The Willows Middleton Moor, Middleton, Saxmundham IP17 3LN	641623	267744
93 - The White House Middleton Moor, Middleton, Saxmundham IP17 3LN	641649	267732
94 - Willow Cottage Middleton Moor, Middleton, Saxmundham IP17 3LN	641664	267725
95 - Moor Farm Middleton Moor, Middleton, Saxmundham IP17 3LN	641729	267784

List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
96 - Mallards Middleton Moor, Middleton, Saxmundham IP17 3LN	641747	267702
97 - Thatched House Middleton Moor, Middleton, Saxmundham IP17 3LN	641695	267680
98 - Crossroads Cottage, Middleton, Saxmundham IP17 3LR	641682	267434
99 - Garden House, Middleton, Saxmundham IP17 3LR	641742	267418
100 - Garden House Farm, Middleton, Saxmundham IP17 3Lu	641874	267319
101 - Pine Tree Cottage, Middleton, Saxmundham IP17 3Lu	642067	267327
102 - Unregistered Property, Leiston Road, Middleton, Saxmundham IP17 3LY	642350	267189
103 - Hill Cottage Leiston Road, Middleton, Saxmundham IP17 3LY	642366	267164
104 - Rose Cottage Leiston Road, Middleton, Saxmundham IP17 3LY	642403	267132
105 - Roseate Leiston Road, Middleton, Saxmundham IP17 3LY	642412	267125
106 - Hill Farm Leiston Road, Middleton, Saxmundham IP17 3NA	642581	267002
107 - Valley View Cottage Leiston Road, Middleton, Saxmundham IP17 3NA	642809	266921
108 - Valley Farm House Leiston Road, Middleton, Saxmundham IP17 3NA	642749	266837

List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
109 - Annisons Cottage Annesons Corner, Middleton, Saxmundham IP17 3NB	642724	266766
110 - 1, Coronation Cottages Annesons Corner, Middleton, Saxmundham IP17 3	NB642765	266765
111 - 2, Coronation Cottages Annesons Corner, Middleton, Saxmundham IP17 3	NB642768	266761
112 - 5, Pump Cottages Main Road, Theberton, Leiston IP16 4RA	643593	266104
113 - 4, Pump Cottages Main Road, Theberton, Leiston IP16 4RA	643595	266098
114 - 3, Pump Cottages Main Road, Theberton, Leiston IP16 4RA	643595	266092
115 - 2, Pump Cottages Main Road, Theberton, Leiston IP16 4RA	643596	266085
116 - 1, Pump Cottages Main Road, Theberton, Leiston IP16 4RA	643598	266078
117 - The Old Manor Pretty Road, Theberton, Leiston IP16 4Ry	643621	265921
118 - 3, Ivy Cottage Main Road, Theberton, Leiston IP16 4RX	643666	265954
119 - 2, Ivy Cottage Main Road, Theberton, Leiston IP16 4RX	643670	265949
120 - 1, Ivy Cottage Main Road, Theberton, Leiston IP16 4RX	643675	265944
121 - Unnamed Property, Leiston Road, Theberton, Leiston	643670	265898

List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
122 - Weyhill Main Road, Theberton, Leiston IP16 4RX	643688	265881
123 - Hillside Main Road, Theberton, Leiston IP16 4RX	643706	265866
124 - Crosstrees Main Road, Theberton, Leiston IP16 4RX	643720	265854
125 - The Bungalow Main Road, Theberton, Leiston IP16 4RX	643739	265838
126 - The Cottage, Theberton, Leiston IP16 4Ru	643779	265869
127 - The Coach House, Theberton, Leiston IP16 4Ru	643748	265824
128 - 1, The Lion Inn Leiston Road, Theberton, Leiston IP16 4Ru	643749	265788
129 - Yew Tree House, Theberton, Leiston IP16 4Ru	643787	265850
130 - Forge Cottage, Theberton, Leiston IP16 4Ru	643788	265840
131 - Old Forge, Theberton, Leiston IP16 4Ru	643795	265831
132 - Woodside, Theberton, Leiston IP16 4Ru	643757	265772
133 - Coober Pedy, Theberton, Leiston IP16 4Ru	643788	265794
134 - Sunny Hill, Theberton, Leiston IP16 4Ru	643794	265778
135 - Flint Cottage, Theberton, Leiston IP16 4Ru	643815	265812
136 - Alde House, Theberton, Leiston IP16 4Ru	643827	265799
137 - Unregistered Property, Theberton, Leiston IP16 4Ru	643806	265759
138 - Walnut Cottage, Theberton, Leiston IP16 4Ru	643830	265756
139 - The Granary Main Road, Theberton, Leiston IP16 4RX	643883	265802

List of properties adjacent to B1122 or the section of the A12 that passes through Yoxford	X	Y
Note: Properties in **bold** are within 50m to the SLR alignment in the DCO – 8 properties. Properties in italics are located on the B1122 between the A12 and the proposed Middleton Moor Link Road – 18 properties		
140 - Glebe House Main Road, Theberton, Leiston IP16 4RX	643878	265774
141 - Bards House, Theberton, Leiston IP16 4Ru	643897	265764
142 - Mill Reach, Theberton, Leiston IP16 4Ru	643918	265750
143 - Mill Cottage, Theberton, Leiston IP16 4Ru	643900	265710
144 - 1 Doughty Wylie Crescent, Theberton, Leiston IP16 4Rt	643850	265716
145 - 15 Doughty Wylie Crescent, Theberton, Leiston IP16 4RT	643881	265676
146 - 16 Doughty Wylie Crescent, Theberton, Leiston IP16 4RT	643883	265668



Site Plan

0 150 300 600 900 1200 1500 Metres

Scale: 1:5000

Drawing Location: C:\Users\luis.mendes\Dalcour Maclaren\SZC Local Property Consultancy Service - Geomatics\01 DM Plans\20200924_191934_PLN_INFO_392.5_PROPS_SLR.mxd

DALCOUR MACLAREN

Key:

- Sizewell Link Road
- A12
- Addresses

Notes:

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936

Interest:
N/A

Location:
A12, Saxmundham, IP17 1LE

Coords: 639,171 267,562

Scheme Name:
SZC Local Property Consultancy Service

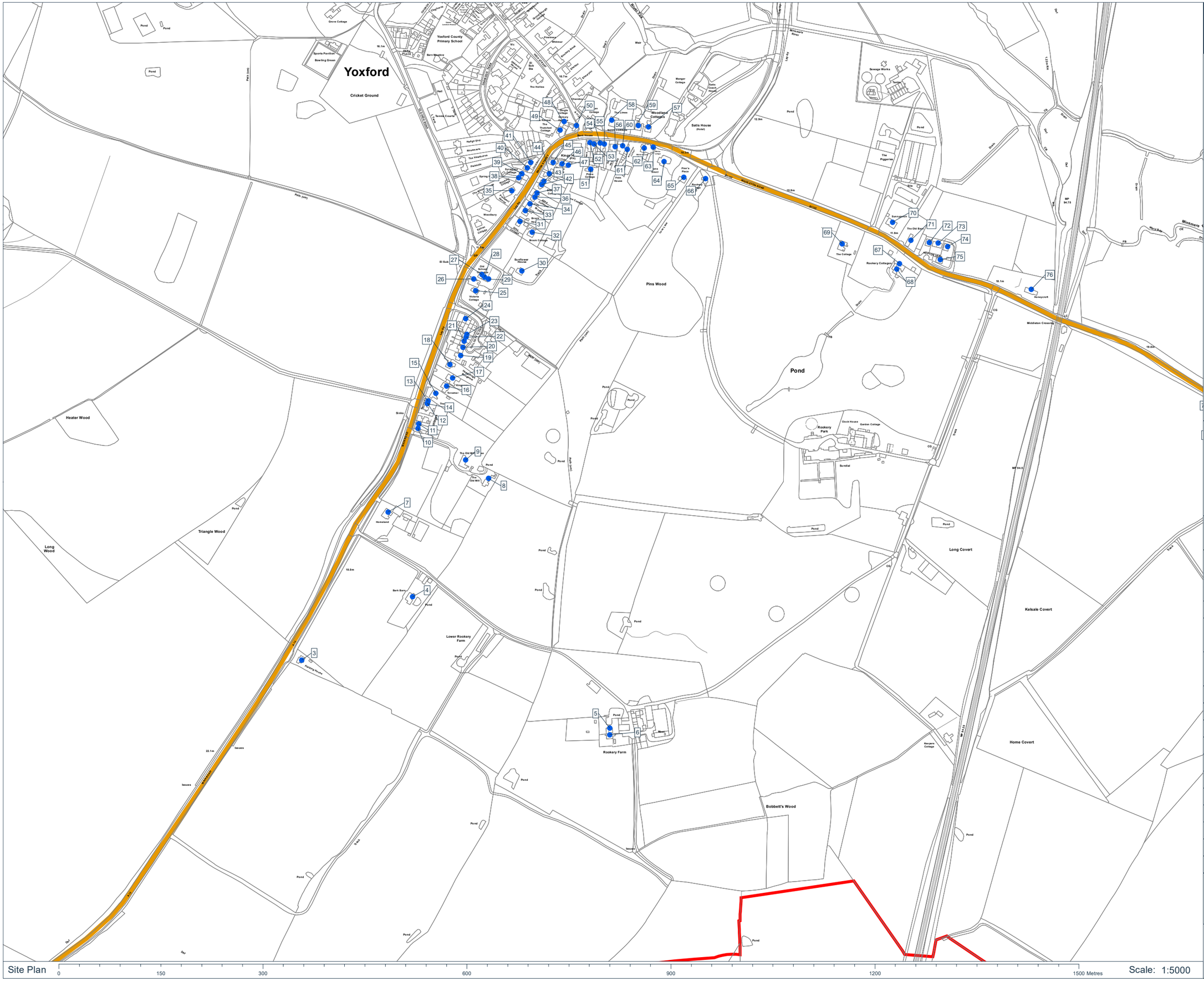
Drawing Name:
Information Plan

Drawing No: 191934_PLN_INFO_392.5_A

Rev	Date	Description
-	30.09.2020	First Issue
A	05.10.2020	Converting Labels

Drawn:	LM
Approved:	AT
Sheet No:	5 of 10
Sheet Size:	A3

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Site Plan

0 150 300 600 900 1200 1500 Metres

Scale: 1:5000

Drawing Location: C:\Users\luis.mendes\Dalcour Maclaren\SZC Local Property Consultancy Service - Geomatics\01 DM Plans\20200924_191934_PLN_INFO_392.5_PROPS_SLR.mxd

DALCOUR MACLAREN

Key:

- Sizewell Link Road
- A12
- Addresses

Notes:

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936

Interest:
N/A

Location:
A12, Saxmundham, IP17 1LE

Coords: 639,703 268,248

Scheme Name:
SZC Local Property Consultancy Service

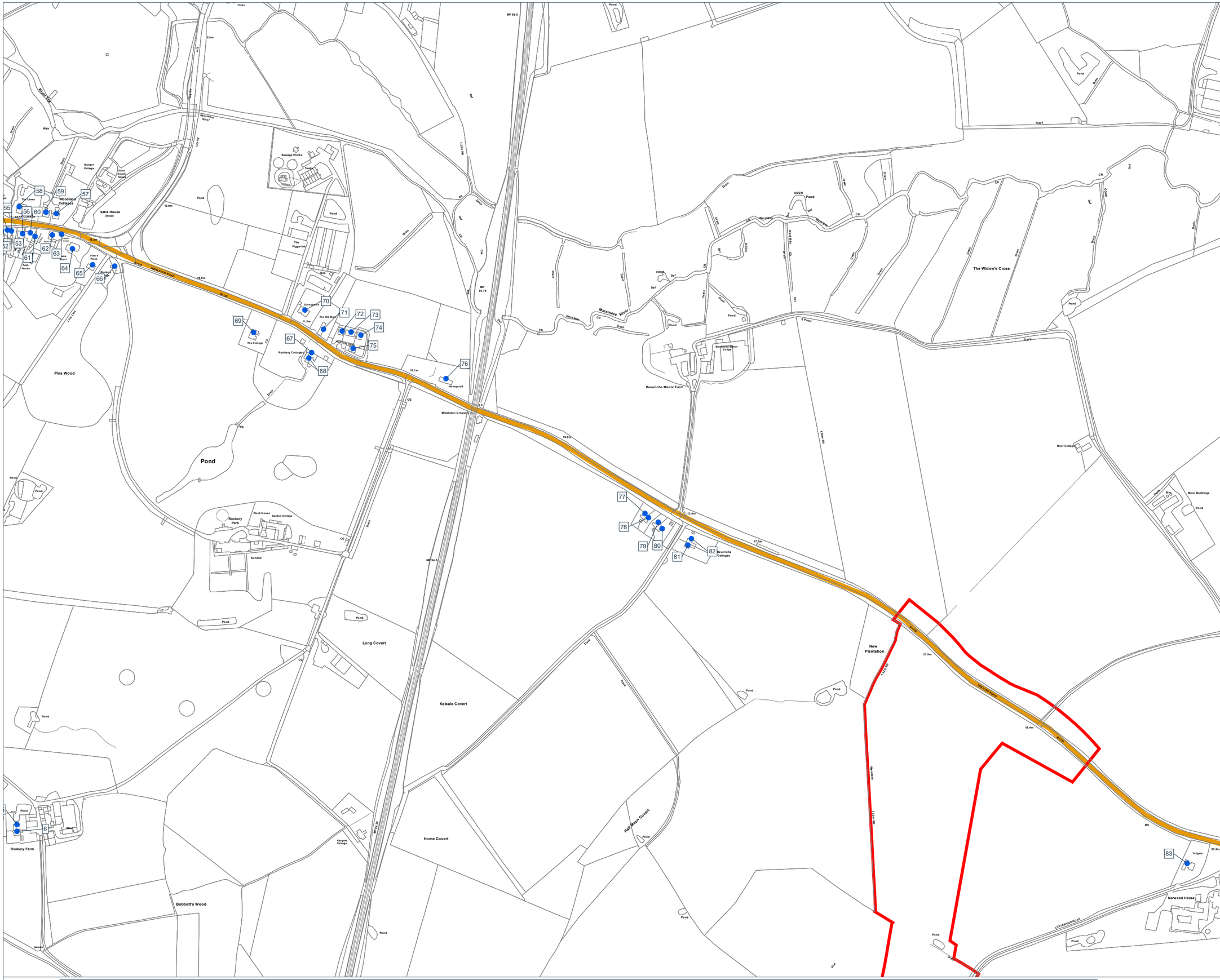
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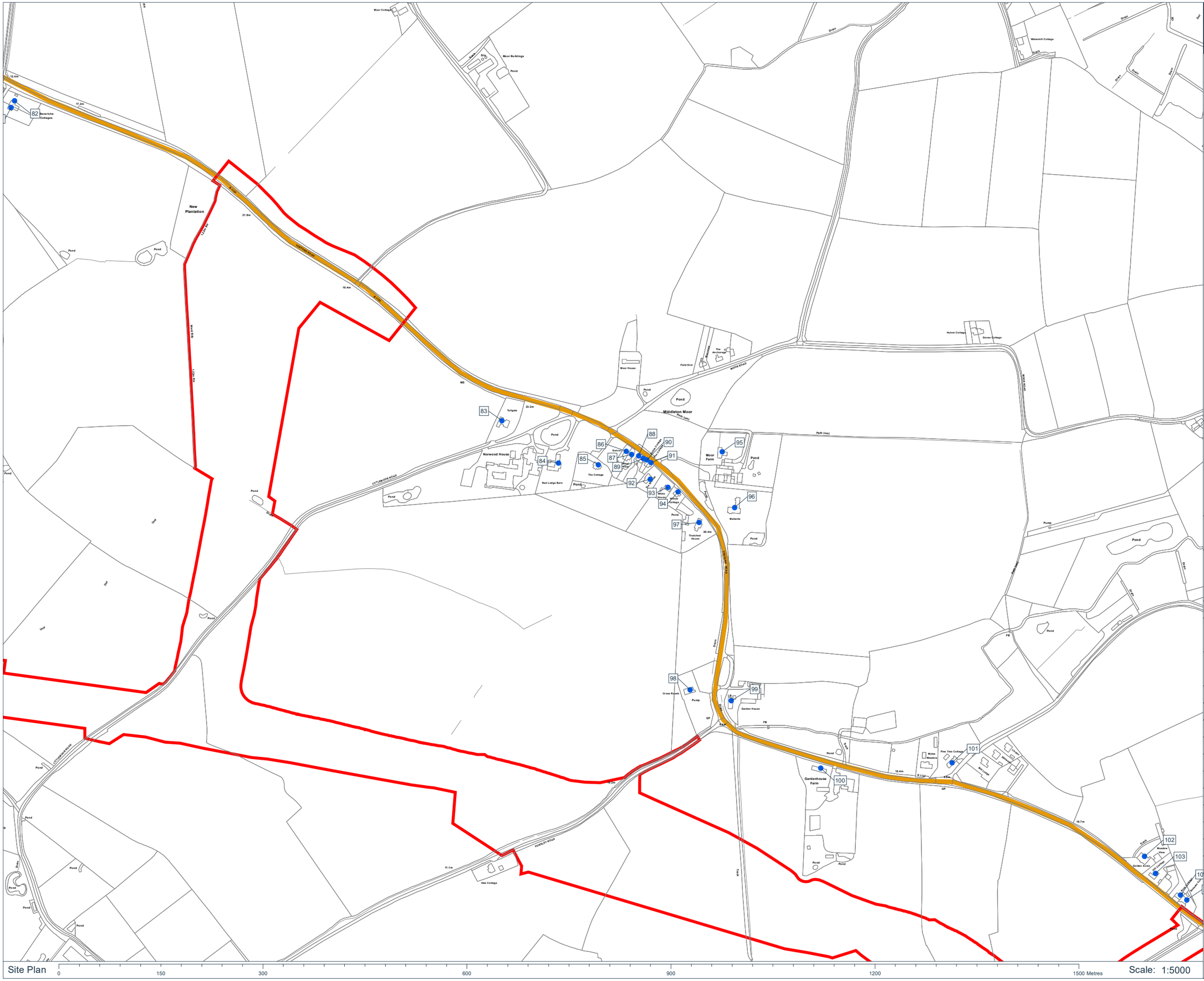
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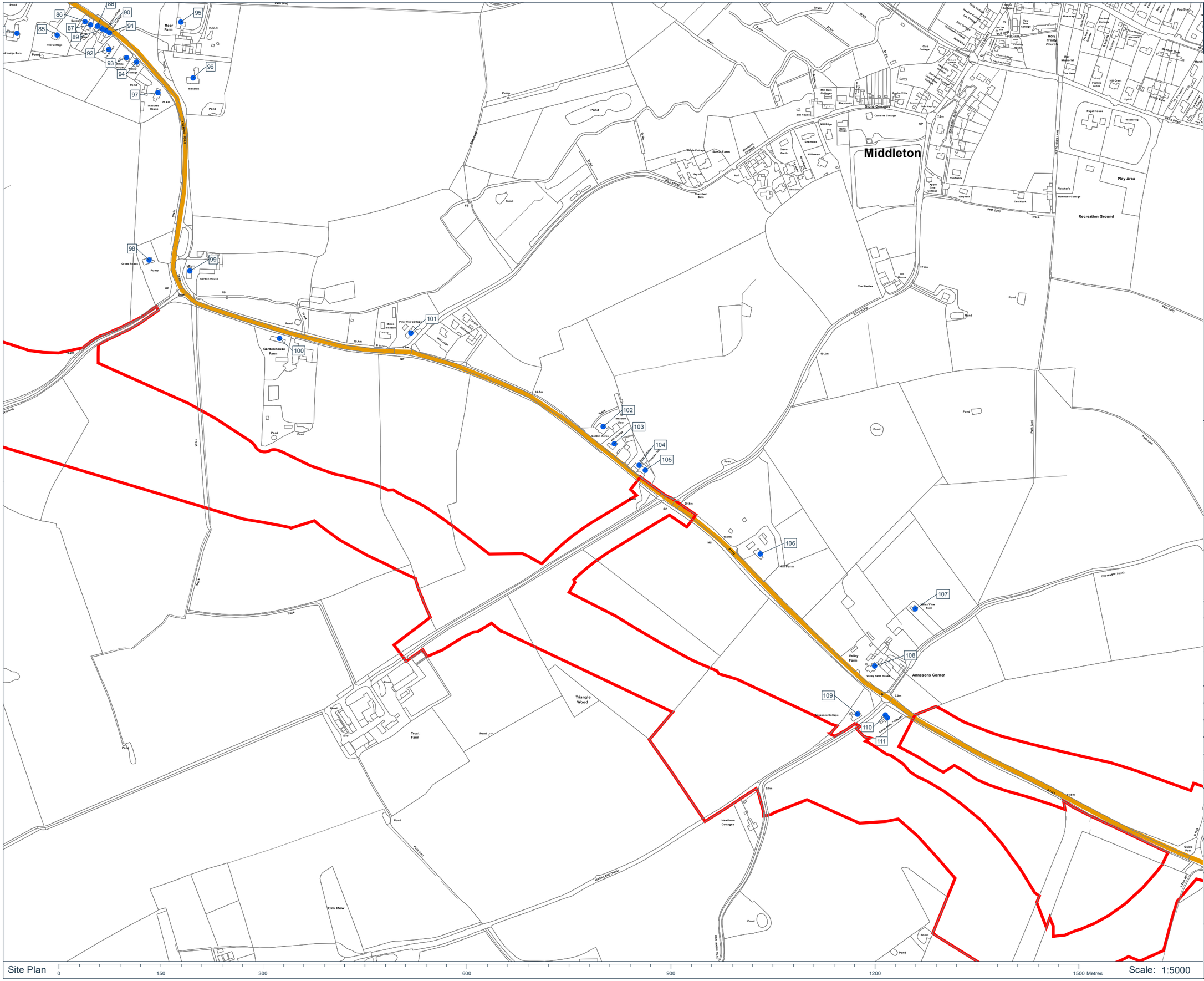
Rev	Date	Description
-	30.09.2020	First Issue
A	05.10.2020	Converting Labels

Drawn:	LM
Approved:	AT
Sheet No:	6 of 10
Sheet Size:	A3

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Site Plan
0
150
300
600
900
1200
1500 Metres
Scale: 1:5000
A12
Sizewell Link Road
Minsmere River
Middleton Crossroads
Pins Wood
Pond
Rookery Park
Long Covert
Kelsale Covert
Home Covert
Half Moon Covert
Bobbett's Wood
Rookery Farm
Boverichs Manor Farm
The Widow's Cruse
New Plantation
Saxmundham
Leiston
Yoxford
Middleton Moor
Sizewell Gap
Sandlings Golf Course
Sizewell Nuclear Power Station
Sizewell Village
Sizewell Hall
Sizewell Gap Caravan Park
Sizewell Gap Beach
Sizewell Gap Car Park
Sizewell Gap Coastguard Station
Sizewell Gap Lifeboat Station
Sizewell Gap Public Toilets
Sizewell Gap Public Footpath
Sizewell Gap Public Bridleway
Sizewell Gap Public Byway
Sizewell Gap Public Restricted Byway
Sizewell Gap Public Road
Sizewell Gap Public Track
Sizewell Gap Public Unclassified Road
Sizewell Gap Public Unclassified Track
Sizewell Gap Public Unclassified Footpath
Sizewell Gap Public Unclassified Bridleway
Sizewell Gap Public Unclassified Byway
Sizewell Gap Public Unclassified Restricted Byway


Site Plan
0
150
300
600
900
1200
1500 Metres
Scale: 1:5000
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Sizewell Link Road
A12
Addresses
Middleton Moor
Norwood House
Moor Farm
Gardenhouse Farm
Cross Roads
Pump
Garden House
Pond
Thatched House
Mallards
Vale Cottage
Red Lodge Barn
The Cottage
Moor Buildings
Moor Cottage
Beverliche Cottages
New Plantation
Watermill Cottage
Dove Cottage
Pow Tree Cottage
Golden Acres
Meadow View
Middleton Moor Road
Middleton Road
Ashley Road
Little Moor Road
Path (dis)
Path (res)
Drain
Ditch
Hedge
Fence
Track
Verge
Gate
Pump
Tollgate
Field End
The Anchorage
Moor House
Holver Cottage
Meadow View
Willow Cottage
Wolves Meadow
Lower Meadow
Mill Cottage
Golden Acres
Meadow View
Sunset
Rose Cottage
The Bungalow
Willow Cottage
White Woods
Pond
Path
Hedge
Fence
Track
Verge
Gate
Pump
Tollgate
Field End
The Anchorage
Moor House
Holver Cottage
Dove



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Key:

- Sizewell Link Road
- A12
- Addresses

Notes:

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936

Interest:
N/A

Location:
A12, Saxmundham, IP17 1LE

Coords: 642,350 267,108

Scheme Name:
SZC Local Property Consultancy Service

Drawing Name:
Information Plan

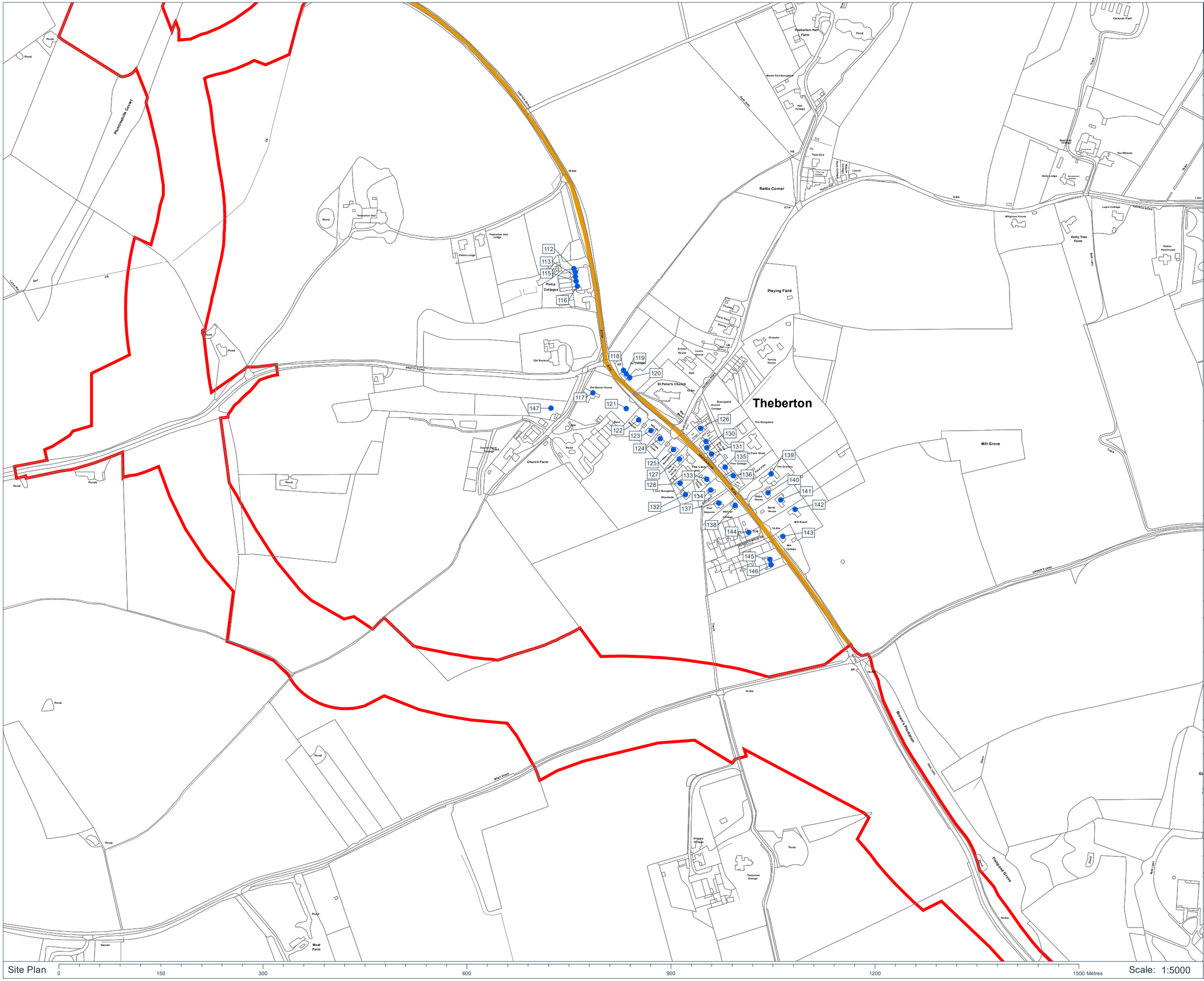
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Site Plan 0 150 300 600 900 1200 1500 Metres Scale: 1:5000

DALCOUR MACLAREN

Key:

- Sizewell Link Road
- A12
- Addresses

Notes:

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936

Interest:
N/A

Location:
A12, Saxmundham, IP17 1LE

Coords: 643,636 265,790

Scheme Name:
SZC Local Property Consultancy Service

Drawing Name:
Information Plan

Drawing No: 191934_PLN_INFO_392.10_A

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Title Number	Property Description	X	Y
SK147675	1 - Lodge Cottage Main Road, Kelsale, Saxmundham IP17 2Rh	638749	267407
SK322376	2 - Fir Tree Farm Main Road, Kelsale, Saxmundham IP17 2Rh	638968	267344
SK271979	3 - Fielding House Main Road, Yoxford, Saxmundham IP17 3Hh	639260	267986
SK126167	4 - Bark Barn Main Road, Yoxford, Saxmundham IP17 3HF	639423	268079
SK154697	5 - 1, Rookery Farm Cottage Main Road, Yoxford, Saxmundham IP17 3HF	639713	267886
	6 - 2, Rookery Farm Cottage Main Road, Yoxford, Saxmundham IP17 3HF	639713	267876
SK377424	7 - Homeland Main Road, Yoxford, Saxmundham IP17 3HE	639387	268204
SK238489	8 - The Old Mill Main Road, Yoxford, Saxmundham IP17 3HE	639535	268253
SK126977	9 - The Old Mill House Main Road, Yoxford, Saxmundham IP17 3HE	639501	268280
SK128507	10 - 5, Mill Cottage Main Road, Yoxford, Saxmundham IP17 3HE	639431	268327
SK359344	11 - 3-4, Mill Cottage Main Road, Yoxford, Saxmundham IP17 3HE	639432	268333
SK171557	12 - 2, Mill Cottage Main Road, Yoxford, Saxmundham IP17 3HE	639445	268364
SK356085	13 - 1, Mill Cottage Main Road, Yoxford, Saxmundham IP17 3HE	639446	268367
SK228967	14 - Bankside Main Road, Yoxford, Saxmundham IP17 3HE	639445	268363
SK286361	15 - The Nook Main Road, Yoxford, Saxmundham IP17 3HE	639457	268378
	16 - Unregistered Property, Main Road, Yoxford, Saxmundham IP17 3HE	639473	268389
SK332722	17 - Kingsway Main Road, Yoxford, Saxmundham IP17 3HE	639482	268401
SK155630	18 - Hedgehogs Bungalow Main Road, Yoxford, Saxmundham IP17 3HE	639478	268421
SK296827	19 - 18 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639494	268434
SK318235	20 - 16 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639497	268446
SK282561	21 - 14 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639499	268455
SK283133	22 - 12 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639502	268461
SK285127	23 - 10 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639503	268465
SK283381	24 - 2 Cullcott Close, Yoxford, Saxmundham IP17 3GZ	639501	268488
SK251775	25 - Victoria Cottage Main Road, Yoxford, Saxmundham IP17 3HE	639516	268529
SK251772	26 - The Old School Main Road, Yoxford, Saxmundham IP17 3HE	639513	268546
SK251777	27 - 1, Old School Cottage Brook Street, Yoxford, Saxmundham IP17 3HD	639525	268553
	28 - 2, Old School Cottage Brook Street, Yoxford, Saxmundham IP17 3HD	639529	268549
	29 - 3, Old School Cottage Brook Street, Yoxford, Saxmundham IP17 3HD	639535	268546
SK254338	30 - Sunflower House Brook Street, Yoxford, Saxmundham IP17 3HB	639584	268558
SK357236	31 - Grey Cottage Brook Street, Yoxford, Saxmundham IP17 3HB	639581	268631
SK235814	32 - Brook Cottage Brook Street, Yoxford, Saxmundham IP17 3HB	639599	268615
SK341844	33 - Brook House Brook Street, Yoxford, Saxmundham IP17 3HB	639589	268647
SK347263	34 - Brambles Brook Street, Yoxford, Saxmundham IP17 3HB	639596	268657
SK105984	35 - Prospect House Brook Street, Yoxford, Saxmundham IP17 3HB	639569	268676
	36 - Unregistered Property, Brook Street, Yoxford, Saxmundham IP17 3HB	639603	268667
	37 - Unregistered Property, Brook Street, Yoxford, Saxmundham IP17 3HB	639606	268673
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SK216598	39 - Sycamore Cottage Brook Street, Yoxford, Saxmundham IP17 3HA	639584	268701
SK304211	40 - 1, The Evergreens Brook Street, Yoxford, Saxmundham IP17 3HA	639592	268710
SK304219	41 - 2, The Evergreens Brook Street, Yoxford, Saxmundham IP17 3HA	639597	268718
SK109154	42 - 2, Silverdene Cottage Brook Street, Yoxford, Saxmundham IP17 3HA	639613	268685
SK196080	43 - 1, Silverdene Cottage Brook Street, Yoxford, Saxmundham IP17 3HA	639616	268690
SK201390	44 - The Cottage Brook Street, Yoxford, Saxmundham IP17 3EZ	639624	268701
SK129205	45 - Brewers Cottage Brook Street, Yoxford, Saxmundham IP17 3EZ	639630	268718
SK181892	46 - Shirley Cottage Brook Street, Yoxford, Saxmundham IP17 3EZ	639643	268716
SK201116	47 - Willow Cottage, 4 Brook Street, Yoxford, Saxmundham IP17 3EZ	639652	268714
SK205383	48 - Thatched Cottage, Yoxford, Saxmundham IP17 3EY	639646	268778
	49 - Dickory Cottage, Yoxford, Saxmundham IP17 3EY	639640	268765
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SK249056	51 - Pinns Cottage Brook Street, Yoxford, Saxmundham IP17 3EZ	639685	268708
SK255097	52 - Southern, Yoxford, Saxmundham IP17 3EX	639684	268747
SK257740	53 - Rosewood, Yoxford, Saxmundham IP17 3EX	639690	268745
SK259410	54 - Wormley Bury, Yoxford, Saxmundham IP17 3EX	639699	268746
SK256074	55 - Tinkers, Yoxford, Saxmundham IP17 3EX	639705	268745
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SK295962	57 - 2 Woodland Cottages, Yoxford, Saxmundham IP17 3EX	639770	268770
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SK216726	60 - Medway, Yoxford, Saxmundham IP17 3EX	639732	268742
SK155484	61 - White House Cottage, Yoxford, Saxmundham IP17 3EX	639739	268737
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SK288799	63 - White Lodge, Yoxford, Saxmundham IP17 3EX	639777	268740
SK169835	64 - Sans Souci, Yoxford, Saxmundham IP17 3EX	639793	268719
SK302307	65 - Pinns Piece, Yoxford, Saxmundham IP17 3EX	639822	268696
SK315062	66 - Rookery Lodge Middleton Road, Yoxford, Saxmundham IP17 3LE	639854	268694
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SK380094	75 - 4 Hopton Yard, Middleton Road, Yoxford, Saxmundham IP17 3LG	640199	268575
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SK247169	95 - Moor Farm Middleton Moor, Middleton, Saxmundham IP17 3LN	641729	267784
SK157917	96 - Mallards Middleton Moor, Middleton, Saxmundham IP17 3LN	641747	267702
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SK391672	98 - Crossroads Cottage, Middleton, Saxmundham IP17 3LR	641682	267434
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	102 - Unregistered Property, Leiston Road, Middleton, Saxmundham IP17 3LY	642350	267189
SK106730	103 - Hill Cottage Leiston Road, Middleton, Saxmundham IP17 3LY	642366	267164
SK190150	104 - Rose Cottage Leiston Road, Middleton, Saxmundham IP17 3LY	642403	267132
SK315280	105 - Roseate Leiston Road, Middleton, Saxmundham IP17 3LY	642412	267125
SK278254	106 - Hill Farm Leiston Road, Middleton, Saxmundham IP17 3NA	642581	267002
SK314188	107 - Valley View Cottage Leiston Road, Middleton, Saxmundham IP17 3NA	642809	266921
SK279136	108 - Valley Farm House Leiston Road, Middleton, Saxmundham IP17 3NA	642749	266837
SK158619	109 - Annisons Cottage Annesons Corner, Middleton, Saxmundham IP17 3NB	642724	266766
SK298542	110 - 1, Coronation Cottages Annesons Corner, Middleton, Saxmundham IP17 3NB	642765	266765
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SK247647	112 - 5, Pump Cottages Main Road, Theberton, Leiston IP16 4RA	643593	266104
SK254267	113 - 4, Pump Cottages Main Road, Theberton, Leiston IP16 4RA	643595	266098
SK251662	114 - 3, Pump Cottages Main Road, Theberton, Leiston IP16 4RA	643595	266092
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SK249738	116 - 1, Pump Cottages Main Road, Theberton, Leiston IP16 4RA	643598	266078
SK359197	117 - The Old Manor Pretty Road, Theberton, Leiston IP16 4Ry	643621	265921
SK120469	118 - 3, Ivy Cottage Main Road, Theberton, Leiston IP16 4RX	643666	265954
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SK270888	129 - Yew Tree House, Theberton, Leiston IP16 4Ru	643787	265850
SK386776	130 - Forge Cottage, Theberton, Leiston IP16 4Ru	643788	265840
SK255931	131 - Old Forge, Theberton, Leiston IP16 4Ru	643795	265831
SK355245	132 - Woodside, Theberton, Leiston IP16 4Ru	643757	265772
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SK160395	136 - Alde House, Theberton, Leiston IP16 4Ru	643827	265799
	137 - Unregistered Property, Theberton, Leiston IP16 4Ru	643806	265759
SK121073	138 - Walnut Cottage, Theberton, Leiston IP16 4Ru	643830	265756
SK230944	139 - The Granary Main Road, Theberton, Leiston IP16 4RX	643883	265802
SK235863	140 - Glebe House Main Road, Theberton, Leiston IP16 4RX	643878	265774
SK232881	141 - Bards House, Theberton, Leiston IP16 4Ru	643897	265764
SK172123	142 - Mill Reach, Theberton, Leiston IP16 4Ru	643918	265750
SK334021	143 - Mill Cottage, Theberton, Leiston IP16 4Ru	643900	265710
SK103432	144 - 1 Doughty Wylie Crescent, Theberton, Leiston IP16 4Rt	643850	265716
SK103501	145 - 15 Doughty Wylie Crescent, Theberton, Leiston IP16 4Rt	643881	265676
SK123412	146 - 16 Doughty Wylie Crescent, Theberton, Leiston IP16 4Rt	643883	265668

Site Plan

0 150 300 600 900 1200 1500 Metres

Scale: 1:5000

DALCOUR MACLAREN

Key:

Notes:

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936

Interest:
N/A

Location:
N/A

Coords: 639,703 268,248

Scheme Name:
SZC Local Property Consultancy Service

Drawing Name:
Information Plan

Drawing No: 191934_PLN_INFO_392.11

Rev	Date	Description
-	30.09.2020	First Issue

Drawn:	LM
Approved:	AT
Sheet No:	1 of 1
Sheet Size:	A3

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APPENDIX 5

The proposed Sizewell link road at the Stage 4 consultation



APPENDIX 6 (MAY 2020 DCO SUBMISSION)

Table showing journey times for routes 4, 13 and 14 during Early Years (extracted from Table 8.11 of the Transport Assessment, Doc Ref 8.5).

Route	Direction	Average Journey Time (mm:ss)		Difference from Reference Case	
		2015 Base Year	2023 Reference Case	Seconds	%
				2023 Early Years	
2023 Early Years – journey times 08:00-09:00 hours					
4	EB	42:08	42:14	-5	0%
	WB	42:05	42:23	-8	0%
13	NB	30:22	31:27	9	0%
	SB	32:45	35:07	16	1%
14	NB	12:11	12:11	-8	-1%
	SB	12:01	12:01	-5	-1%
2023 Early Years – journey times 17:00–18:00 hours					
4	EB	42:07	42:13	-6	0%
	WB	41:46	41:53	1	0%
13	NB	31:32	32:02	24	1%
	SB	30:18	32:29	74	4%
14	NB	12:12	12:12	-1	0%
	SB	11:56	11:57	-6	-1%

Table showing reduction in journey times for routes 4, 13, and 14 during peak construction (extracted from Tables 8.13 and 8.14 of the Transport Assessment, Doc Ref 8.5).

Route	Direction	Average Journey Time (mm:ss)		Difference from Reference Case			
		2015 Base Year	2028 Reference Case	Seconds	%	Seconds	%
				2028 Peak Construction (Typical day)		2028 Peak Construction (Busiest Day)	
2028 Peak Construction – journey times 08:00-09:00 hours							
4	EB	42:08	42:15	-63	-2%	-59	-2%
	WB	42:05	42:22	-78	-3%	-77	-3%
13	NB	30:22	31:19	-144	-8%	-125	-7%
	SB	32:45	34:22	-195	-9%	-192	-9%
14	NB	12:11	12:11	-77	-11%	-77	-11%
	SB	12:01	12:01	-64	-9%	-60	-8%
2028 Peak Construction – journey times 17:00-18:00 hours							
4	EB	42:07	42:18	-68	-3%	-68 -	-3%
	WB	41:46	41:58	-72	-3%	-71	-3%
13	NB	31:32	33:51	-191	-9%	-183	-9%
	SB	30:18	32:19	-171 -	-9%	-164	-8%
14	NB	12:12	12:13	-70	-10%	-69	-9%
	SB	11:56	11:57	-68	-9%	-68	-9%

Table showing reduction in journey times for routes 4, 13, and 14 during 2034 Operation (extracted from Table 8.15 and Table 8.16 of the Transport Assessment, Doc Ref 8.5).

Route	Direction	Average Journey Time (mm:ss)		Difference from Reference Case	
		2015 Base Year	2034 Reference Case	Seconds	%
				2034 Operational Traffic	
2034 operational traffic – journey times 08:00-09:00 hours					
4	EB	42:08	42:29	-64	-3%
	WB	42:05	42:34	-66	-3%
13	NB	30:22	31:26	-193	-10%
	SB	32:45	36:00	-229	-11%
14	NB	12:11	12:11	-68	-9%
	SB	12:01	12:02	-65	-9%
2034 operational traffic – journey times 17:00-18:00 hours					
4	EB	42:07	42:22	-77	-3%
	WB	41:46	42:11	-79	-3%
13	NB	31:32	34:15	-196	-10%
	SB	30:18	33:14	-208	-10%
14	NB	12:12	12:15	-74	-10%
	SB	11:56	11:58	-77	-11%

Figure 1: Route 4 is shown in orange (Plate 8.4 in the Transport Assessment)

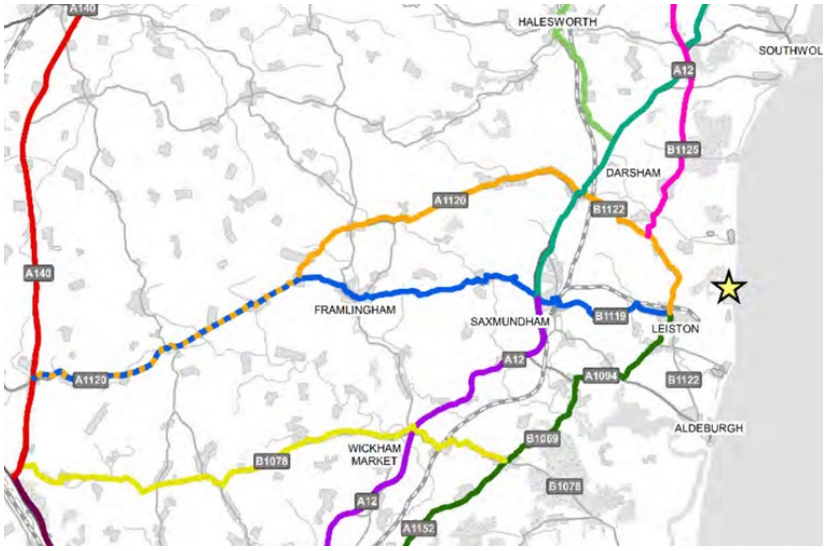


Figure 2: Routes 13 (red) and 14 (purple) (Plate 8.5 in the Transport Assessment)



Note that in the early years the traffic would follow the routes shown in the images above but in the 2028 peak construction and 2034 operational

scenarios routes 2, 12 and 13 follow the two village bypass and routes 4, 13 and 14 follow the Sizewell link road

APPENDIX 7 (JANUARY 2021 PROPOSED CHANGES TO THE DCO SUBMISSION)

Table showing journey times for routes 4, A3 and A4 during Early Years (extracted from Table 8.10 and Table 8.11 of the Transport Assessment Addendum).

Route	Direction	Average Journey Time (mm:ss)		Difference from Reference Case	
		2015 Base Year	2023 Reference Case	Seconds	%
				2023 Early Years	
2023 Early Years – journey times 08:00-09:00 hours					
4	EB	39:00	39:05	-4	0%
	WB	38:57	39:04	-10	0%
A3	NB	30:25	30:57	43	2%
	SB	33:08	34:30	12	1%
A4	NB	12:11	12:11	-8	-1%
	SB	12:01	12:01	-4	-1%
2023 Early Years – journey times 17:00–18:00 hours					
4	EB	38:49	39:04	-5	0%
	WB	38:38	38:46	-1	0%
A3	NB	32:09	33:45	39	2%
	SB	30:09	30:43	62	3%
A4	NB	12:12	12:12	-1	0%
	SB	11:56	11:57	-6	-1%

Table showing reduction in journey times for routes 4, A3, and A4 during peak construction (extracted from Tables 8.12 and 8.13 of the Transport Assessment Addendum).

Route	Direction	Average Journey Time (mm:ss)		Difference from Reference Case			
		2015 Base Year	2028 Reference Case	Seconds	%	Seconds	%
				2028 Peak Construction (Typical day)		2028 Peak Construction (Busiest Day)	
2028 Peak Construction – journey times 08:00-09:00 hours							
4	EB	39:00	39:06	-63	-3%	-59	-3%
	WB	38:57	39:11	-79	-3%	-76	-3%
A3	NB	30:25	31:25	-141	-7%	-1256	-7%
	SB	33:08	35:00	-180	-9%	-181	-9%
A4	NB	12:11	12:11	-78	-11%	-77	-11%
	SB	12:01	12:01	-64	-9%	-60	-8%
2028 Peak Construction – journey times 17:00-18:00 hours							
4	EB	38:59	39:09	-69	-3%	-68 -	-3%
	WB	38:38	38:50	-72	-3%	-72	-3%
A3	NB	32:09	34:50	-182	-9%	-173	-8%
	SB	30:09	31:03	-127	-7%	-110	-6%
A4	NB	12:12	12:13	-71	-10%	-71	-10%
	SB	11:56	11:57	-69	-10%	-68	-9%

Table showing reduction in journey times for routes 4, A3, and A4 during 2034 Operation (extracted from Table 8.14 and Table 8.15 of the Transport Assessment Addendum).

Route	Direction	Average Journey Time (mm:ss)		Difference from Reference Case	
		2015 Base Year	2034 Reference Case	Seconds	%
				2034 Operational Traffic	
2034 operational traffic – journey times 08:00-09:00 hours					
4	EB	39:00	39:12	-68	-3%
	WB	38:57	39:21	-70	-3%
A3	NB	30:25	31:26	-150	-8%
	SB	33:08	35:38	-228	-11%
A4	NB	12:11	12:11	-68	-9%
	SB	12:01	12:02	-67	-9%
2034 operational traffic – journey times 17:00-18:00 hours					
4	EB	38:59	39:11	-75	-3%
	WB	38:38	39:01	-82	-4%
A3	NB	32:09	35:30	-202	-10%
	SB	30:09	33:38	-203	-10%
A4	NB	12:12	12:13	-76	-10%
	SB	11:56	11:57	-75	-10%

Figure 1: Route 4 is shown in orange (Plate 8.4 in the Transport Assessment Addendum)

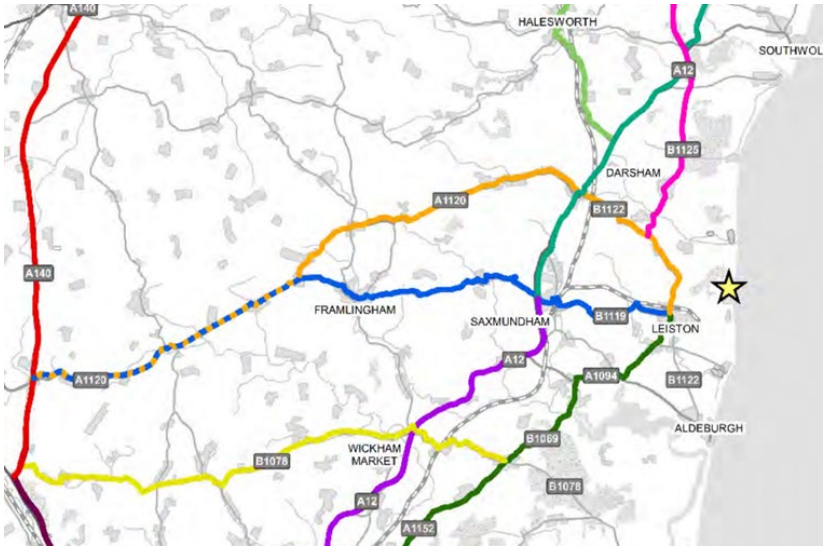


Figure 2: A3 (red) and A4 (purple) (Plate 8.5 in the Transport Assessment Addendum)



Note that in the Early Years the traffic would follow the routes shown in the images above but in the 2028 peak construction and 2034 operational

scenarios routes 2, 12 follow the two village bypass and routes 4, A3 and A4 follow the Sizewell link road.

APPENDIX 8 LDA DESIGN (2019) SIZEWELL LINK ROAD - ENVIRONMENTAL APPRAISAL

Sizewell C Link Road – Environmental Appraisal

1.0 Executive Summary

LDA Design Consulting (LDA Design) has been appointed by EDF Energy to undertake a high-level environmental appraisal of the highway schemes proposed by EDF Energy to support a Road-Max Freight Management strategy. The strategy seeks to reduce the potential environmental effects that are likely to occur from the routing of HGVs to the Main Site on the existing road network via the construction of a separate Sizewell C Access road between the A12 and the B1122.

Four highway routes (Options W, X, Y and Z) were considered by EDF Energy and a decision paper was presented to the Sizewell C Project Board in December 2016 (Ref. SZCPB/12.16/X). The decision paper included a high-level comparison of all the route options and a recommendation to develop Route Z as the preferred option.

The purpose of this report is to present an independent appraisal of all four routes, to 'health check' the recommendations of the original decision paper and identify any key or additional environmental considerations. It has analysed each of the four proposed routes (and their variations), summarising the potential effects on public rights of way; local road character; heritage assets; landscape designations; landscape character and views; and residential amenity.

All four highway routes were subject to desk-based analysis and site visit (undertaken on 19 June 2018) to determine the environmental effects of each option. An additional site visit will be required to undertake further analysis of specific issues highlighted in this report, subject to approval by EDF Energy.

In considering the relative benefits and constraints of each route, the suitability of individual routes is determined by a number of clearly identifiable issues in relation to the environmental considerations listed above. A full summary of the environmental factors considerations is outlined in the report, concluding that the preferred option would be **Route Z (South)**, in support of EDF Energy's recommendations.

2.0 Introduction

LDA Design Consulting (LDA Design) has been appointed by EDF Energy to undertake a high-level environmental appraisal of the highway schemes proposed by EDF Energy to support a Road-Max Freight Management strategy. The strategy seeks to reduce the potential environmental effects that are likely to occur from the routing of HGVs to the Main Site on the existing road network via the construction of a separate Sizewell C Access road between the A12 and the B1122.

Four potential routes (Options W, X, Y and Z) were considered by EDF Energy and a decision paper was presented to the Sizewell C Project Board in December 2016 (Ref. SZCPB/12.16/X). The decision paper included a high-level comparison of all the route options and a recommendation to develop Route Z as the preferred option.

The purpose of this report is to present an independent appraisal of all four routes, to 'health check' the recommendations of the original decision paper and identify any key or additional environmental considerations.

The appraisal has been based upon a desk-based analysis and a site visit undertaken on June 19th 2018. An additional site visit will be required to undertake further analysis of specific issues highlighted in this report, subject to approval by EDF Energy.

2.1. Scope of Appraisal

This appraisal addresses a number of environmental factors in its consideration of the proposed highway options, highlighting where significant effects would be anticipated. It builds upon the work already undertaken by EDF Energy to identify the degree of environmental sensitives along each route, as illustrated by drawing ref. SZCPB/12.16/X which is appended to this report. (**Appendix 1**)

Environmental considerations include the following:

- Effects on Public Rights of Way (PROW) network;
- Effects on local road character;
- Effects on heritage assets;
- Effects on landscape designations;
- Effects on landscape character and views;
- Effects on residential amenity.

It is important to note that all potential environmental factors were appraised, but only those potentially effected by the highway routes are presented in this report. This specifically applies to the sections that consider heritage assets. The desk-based study indicated that there are no Registered Parks and Gardens in the vicinity of the four proposed highway routes, and therefore no further details are included.

The Suffolk Coast & Heath AONB was also considered as part of the desk-based analysis at the outset of the appraisal. As shown on **Figure 1**, all of the possible highway routes lie outside of the AONB, but may be considered as part of its setting. However, it is anticipated that should any of the routes be implemented, there would be no significant adverse effects that would arise as a consequence. Therefore, this report does not consider the AONB further.

For the purposes of the report, residential amenity has been considered against the following criteria – significant effects of residential amenity would arise should the proposed development cause the residence to become *"so unpleasant, overwhelming and oppressive that this would become an unattractive place to live"* (known as the Lavender Test) and *"would not feature in the planning balance, irrespective of how many dwellings were so affected"*.

3.0 Summary of Route Options & Environmental Considerations

The routes considered are summarised and analysed below, with all routes shown on **Figure 1** (appended).

3.1. Route W (North & South)

Route W North and **South** are the longest route options at approximately 8.1km (**North**) and 7.5km (**South**). Both variations of **Route W** connect to the A12 south of Saxmundham, bridging over the East Suffolk railway line before cutting across agricultural fields south of Hurts Hall. The route continues in an easterly direction until the junction of the Saxmundham Road (B1119) and Grove Road, where the route splits into two options. **Route W (South)** branches to the south along Saxmundham Road (B1119) and then through agricultural fields to the north of Leiston, crossing the East Suffolk railway line before re-joining the B1122 in the vicinity of Lovers Lane. This part of the route will follow the same alignment as the 'Green Rail Route'. Alternatively, **Route W (North)** will branch in a north-easterly direction from the junction of Saxmundham Road and Grove Road, bridge over the East Suffolk railway line and travel across fields to the north of Leiston Abbey, before connecting to the B1122.

3.1.1. Effects on Public Right of Way network

Route W would bisect 12 PROWs along **Route W (North)** and 14 PROWs along **Route W (South)**. Pedestrian and / or bridleway crossings will be required to ensure there is no severance to existing PROWs.

3.1.2. Effects on Local Road character

The proposed route is likely to require the reconfiguration of the local road network in 6 locations along **Route W (North)** and **Route W (South).** Both routes will cross the East Suffolk Railway line twice, requiring substantial engineering works.

3.1.3. Effects on Heritage Assets

Route W (North & South) passes in relatively close proximity to several Listed Buildings and the Scheduled Monument at Leiston Abbey. There is potential for the significance of several heritage assets to be affected adversely due to changes in their setting resulting from the route, and in particular Hurts Hall (Grade II), Wood Farm (Grade II), Leiston House Farm (Grade II*), Fishers Farm (Grade II) and the Scheduled Monument and collection of Listed Buildings at Leiston Abbey (Grades II and I). The proposed route alignment is unlikely to significantly affect Saxmundham Conservation Area. A detailed assessment of the heritage assets along this route would provide a better understanding of the significance of effects on heritage assets and the potential to mitigate effects.

3.1.4. Effects on Landscape Designations

Route W (North & South) passes in close proximity to land designated as a 'Special Landscape Area' to the north-east of Benhall Green and east of the B1122 east of Theberton House. It is unlikely that there would be any significant effect upon this designation, although the final route design may need to include a mitigation strategy to minimise any potential effects.

No other landscape designations have been identified along **Route W.**

3.1.5. Effects on Landscape Character and Views

Route W (North & South) traverses a landscape typically characterised by a series of small to large-scale arable and pasture fields, intersected by a network of B-roads and PROWs with occasional villages and numerous dispersed hamlets and farmsteads. Blocks of ancient semi-natural woodland are scattered throughout the area, made up of oak, ash, field maple, hornbeam and small-leaved lime. The alignment of **Route W (South)** will intersect one area of Ancient Woodland. Hedgerow

trees are ubiquitous and in many places this landscape can feel well-wooded. The comprehensive network of winding lanes and tall hedges also provides a sense of intimacy, although the wider plateau landform means that in some locations long and open views are available.

Fieldwork indicated that the landscape character is typical of the landscape character area descriptions described in the 'Suffolk Landscape Character Assessment (2011)[1]'. No characteristics have been identified that would be considered of a greater value than a locally appreciated landscape.

Observations made in the field broadly support EDF Energy's *Environmental Sensitives* plan (**Appendix 1)**. The site visit indicated that the most sensitive areas of landscape were located to the western and eastern sections of the route, whereas the central area is judged to be less sensitive.

The western section of the route comprises the landscape between the A12 and Hill Farm. Here, the topography of the landscape is formed by a series of narrow valleys that are well-vegetated. This creates a sense of intimacy that would be disrupted by the necessary engineering works that would be required to facilitate a highway through this area, which could result in significant adverse effects.

The central section of the route comprises the landscape between Hill Farm and the Saxmundham Road Crossing. Here, the landscape combines a series of large- to medium-scale fields that tie into a wider agricultural landscape, with vegetation appearing to be less prevalent. As a result, open views are more readily available across the relatively level topography. Saxmundham Road and Grove Road contribute to a sense of development, providing a key link between Saxmundham and Leiston. The presence of the railway also adds to this perception. Effects in this area would be less significant given the nature of the proposed highway being similar in nature to the existing characteristics although proposed engineering works would have some influence.

The eastern section of the route comprises the landscape between Saxmundham Road Crossing and the B1122. Here the landscape combines small- to large-scale fields that form part of the rural – urban transition around Leiston. Whilst the landscape retains some agricultural characteristics, there is a degree of influence exerted by the nearby built development visible within available views. Saxmundham Road also contributes to a sense of development. Effects in this area would be relatively sensitive to change, although in some locations less so due to the existing developed context.

3.1.6. **Effects on Residential Amenity**

The proposed route could potentially have an effect on residential amenity at the following locations:

- Properties at Leiston Home Farm, Saxmundham Road;
- Properties to the north of Leiston, along the B1122; and
- At the connection to the B1122.

At these locations, the proposed route will pass near to residential properties to an extent that may have an effect on the amenity of residents. Along these sections of the route, the final design will need to provide adequate mitigation strategy to minimise any potential adverse effects.

3.2. Route X

Route X is approximately 6.6km in length. It connects to the A12 north of Saxmundham near the village of Kelsale. For the first 2km, the route follows the existing road network (B1121) in a southerly direction, through the village of Kelsale and crossing the East Suffolk railway line via

[1] Suffolk County Council (2011) *'Suffolk Landscape Character Assessment'*. http://www.suffolklandscape.org.uk/default.aspx

Clayhill Road. From this point the route diverts off the existing road network through fields north of the Sizewell Branch railway line before merging with **Route W (North)**, which is described above.

3.2.1. Effects on Public Right of Way network

Route X bisects 4 PROWs. Pedestrian crossings will be required to ensure there is no severance to existing PROWs.

3.2.2. Effects on Local Road character

The proposed route is likely to require reconfiguration of the local road network in 5 locations along **Route X**. The route will cross over the East Suffolk Railway line at the existing bridge on Clayhill Road which is likely to require substantial improvement works to ensure it is suitable for HGV passage.

It is also important to note that use of the existing road network will have a significant effect on traffic volume and flow in the local area. The nature of the turn between Clay Hills and the B1121 will potentially cause adverse effects and will require further detailed assessment.

3.2.3. Effects on Heritage Assets

Route X would pass in close proximity to 7 Grade II Listed Buildings and 1 Grade II* Listed Buildings. It is judged that as the proposed route follows an existing B road, there is limited potential to significantly effect the significance of Listed Buildings in close proximity. However, potential significant effects may result from increased traffic and HGV activity on Listed Buildings immediately adjacent to the route at the junction of the B1121 and Clayhill Road. Furthermore, significant effects may arise from any highway works and tree removal. A detailed assessment of the heritage assets along this route would provide a better understanding of the significance of effects on heritage assets and the potential to mitigate effects.

3.2.4. Effects on Landscape Designations

No landscape designations have been identified within the vicinity of **Route X**.

3.2.5. Effect on Landscape Character and Views

East of Saxmundham, the landscape character in the vicinity of **Route X** is typified by a series of small- to medium-scale arable and pasture fields. Vegetation is generally characterised by scattered woodland blocks and mature hedgerows found along the roads and fields. Hedgerow trees contribute to a sense of a well-wooded and intimate landscape, although some open views are available.

Fieldwork indicated that the landscape character is typical of the landscape character area descriptions described in the 'Suffolk Landscape Character Assessment (2011)[2]'. No characteristics have been identified that would be considered of a greater value than a locally appreciated landscape.

Observations made in the field broadly support EDF Energy's *Environmental Sensitives* plan (**Appendix 1**). The site visit indicated that the most sensitive areas of landscape were located to the western and eastern sections of the route, whereas the central area is likely to be less sensitive.

The western section of the route comprises the landscape between the A12 and Knodishall Crossing. As the route departs the eastern side of Saxmundham, it passes over a small elevated landform upon which the railway cuts into. The area is generally well-vegetated on the lower slopes of the elevated landform, which contributes to a sense of intimacy. In contrast, upon the crown of the landform, more open views to the east are available across the flatter adjoining landscape. It is

[2] Suffolk County Council (2011) *'Suffolk Landscape Character Assessment'*. http://www.suffolklandscape.org.uk/default.aspx

likely that substantial engineering works would be required in this area to facilitate the transportation of HGVs over the existing railway line. As a consequence, it would be likely that there would be significant adverse effects to the landscape character of this area in accommodating this change to the baseline environment.

The central section of the route comprises the landscape between Knodishall Crossing and Harrow Lane. Here, the landscape combines a series of large- to medium-scale fields that tie into a wider agricultural landscape, with vegetation appearing to be less prevalent. As a result, open views are more readily available across the relatively level topography. Effects in this area would be less significant given the nature of the proposed highway being similar in nature to the existing characteristics that comprise the existing road network and East Suffolk Railway Line.

The eastern section of the route comprises the landscape between Harrow Lane and the B1122. Here, the route follows the same alignment as **Route W (North)**. The landscape in this area forms part of a rural – urban transition around Leiston. Whilst the landscape retains some agricultural characteristics, there is a degree of influence exerted by the nearby built development visible within available views. Effects in this area would be relatively sensitive to change, although it is in some locations less so due to the existing developed context.

3.2.6. Effects on Residential Amenity

The proposed route could potentially have an effect on residential amenity on properties along the B1121 within the vicinity of Saxmundham from the increase traffic volume. Similarly, there would be some effect upon properties nearby the route as it travels north of the Sizewell Railway Line.

3.3. Route Y (North & South)

Route Y (North and South) are variations of **Route X** and provide different options for connecting to the A12 north of Saxmundham and Kelsale. **Route Y (North)** departs the A12 north of Park Farm Bungalow and cuts through agricultural fields in a south-easterly direction. The route crosses a number of existing roads and the East Suffolk railway line before joining the proposed route of **Route X** and **W (North)** in the vicinity of Oak Tree Farm. In total, it is approximately 8km in length.

Route Y (South) leaves the A12 north of Saxmundham, travelling southwards along the B1121 for a short distance (approx. 200m) before heading east across agricultural fields to follow the same route as **Route Y (North)**. In total, it is approximately 7.8km in length.

3.3.1. Effects on Public Right of Way network

Route Y would bisect 5 PROWs along **Route Y (North)** and 5 PROWs along **Route Y (South)**. Pedestrian and / or bridleway crossings will be required to ensure there is no severance to existing PROWs.

3.3.2. Effects on Local Road character

Route Y is likely to require the reconfiguration of the local road network in 8 locations along both **Route Y (North)** and **Route Y (South).** Where **Route Y (North & South)** crosses the East Suffolk Railway line, it will be beneficial to pass under the existing railway line in order to protect the amenity of nearby properties (Bridge Farm and Orchard House), subject to feasibility of engineering works.

3.3.3. Effects on Heritage Assets

No significant effects are anticipated on Listed Buildings as a result of **Route Y (North & South)**.

3.3.4. Effects on Landscape Designations

No landscape designations are identified within the vicinity of **Route Y (North & South)**.

3.3.5. Effects on Landscape Character and Views

Route Y traverses a landscape typically characterised by a series of small- to large-scale arable and pasture fields, intersected by a B-Road, PROWs and East Suffolk Railway and Sizewell Branch Railway lines. Numerous hamlets and farmsteads are dispersed within the wider landscape, with Saxmundham located to the south-west of the route.

Woodland blocks are less frequent within the vicinity of the route than is characteristic of the wider character area, although the network of winding lanes and fields with tall hedges and individual tress make the landscape feel well-vegetated and provides a sense of intimacy.

In general, the landscape is characteristics of the wider landscape character area descriptions described in the prevailing 'Suffolk Landscape Character Assessment (2011)[3]'. No characteristics have been identified that will be considered of a greater value than a locally appreciated landscape.

Observations made in the field broadly support EDF Energy's *Environmental Sensitives* plan (**Appendix 1).** The site visit indicated that the most sensitive areas of landscape were located to the western and eastern sections of the route, whereas the central area is likely to be less sensitive.

The western section of the route comprises the landscape between the A12 and Knodishall Crossing, traversing the landscape to the east of Saxmundham. As the route departs the A12, the route passes over a marginally elevated landform that crosses a number of local roads and the railway line. The area is generally well-vegetated, although there are some views across the larger-scale fields. This section of the route travels through a complex area of landscape that comprise a number of difference features. It is judged that there would be some significant adverse effects to the landscape character given the degree of change that would be required to accommodate the route through the existing baseline features.

Both the central and eastern sections of the route (i.e. east of Knodishall) follow the same alignments as **Route X**. Details of the potential effects on the central and eastern sections are described in Section 3.2.5.

3.3.6. Effects on Residential Amenity

The proposed route would potentially have an effect on residential amenity on properties at Bridge Farm and Orchard House where it crosses the East Suffolk Railway Line. Initial designs proposals indicate that there might be an opportunity to pass under the existing railway line (subject to National Rail's agreement), and therefore effects might arise as a result of the engineering works required.

3.4. Route Z (North & South)

Route Z connects with the A12 approximately half way between Saxmundham and Yoxford, where it is surrounded by open agricultural land. Two options for connecting to the A12 are proposed at this location (**Route Z South and North). Route Z (South)** connects to the A12 just north of The Red House Farm where the existing landform is gentler and the proposed route is able to follow existing contours south of Fir Tree Farm. **Route Z (North)** connects to the A12 slightly further north, providing a more direct route to the proposed crossing of the East Suffolk railway line. Apart from this minor variation both routes follows the same alignment, crossing the East Suffolk railway line at the same location and cutting through agricultural fields in a south-easterly direction parallel to the B1121. To the north-west of Theberton, the route will bypass that village and reconnect to the B1122 near Brown's Plantation. **Route Z (South)** is approximately 6.8km in length and **Route Z (North)** is approximately 6.4km.

[3] Suffolk County Council (2011) *'Suffolk Landscape Character Assessment'*. http://www.suffolklandscape.org.uk/default.aspx

3.4.1. Effect on Public Right of Way network

Route Z (North) would bisect 12 PROWs and **Route Z (South)** would bisect 11 PROWs. Pedestrian crossings will be required to ensure there is no severance to existing PROWs.

3.4.2. Effect on Local Road Character

Route Z will affect the local road and railway networks and is likely to require the reconfiguration of the local road network in 5 locations along **Route Z (North & South)**. Both routes will cross the East Suffolk Railway line at the same point, requiring substantial engineering works.

3.4.3. Effect on Heritage Assets

Route Z (North & South) passes in relatively close proximity to several Listed Buildings. There is potential for the significance of several heritage assets to be affected adversely due to changes in their setting resulting from the route, and in particular at Theberton Hall and within the village of Theberton. It is judged that effects on Listed Buildings at Theberton Hall will be relatively limited by the established vegetation around the perimeter of the gardens and along the B1122. A detailed assessment of the heritage assets along this route would provide a better understanding of the significance of effects on heritage assets and the potential to mitigate effects.

3.4.4. Effect on Landscape Designations

Route Z (North & South) passes near to an area of 'Special Landscape Area' that is located to the north of Bobbett's Wood. It is unlikely that there will be a significant adverse effect upon this designation, although the final route design may need to include a mitigation strategy to minimise any potential effects.

No other landscape designations have been identified along **Route Z.**

3.4.5. Effect on Landscape Character and Views

Route Z (North & South) traverses a landscape typically characterised by a series of small to large-scale arable and pasture fields, intersected by a network of B-roads and Public Rights of Way with occasional villages and numerous dispersed hamlets and farmsteads. Woodland blocks are scattered throughout the area, made up of oak, ash, field maple, hornbeam and small-leaved lime. A combination of winding local roads with tall hedges and abundant trees, which connect nearby woodland blocks, provides a sense of a well-wooded landscape within the context of the proposed route. Some open views are available from marginally elevated landform, but these are generally limited.

In general, the landscape character is typical of the landscape character area descriptions described in the 'Suffolk Landscape Character Assessment (2011)[4]". No characteristics have been identified that would be considered of a greater value than a locally appreciated landscape.

The western section of the route comprises the landscape between the A12 and Fordley Road. As the route leaves the A12, it traverses an area of medium- to large-scale arable fields that are generally well-vegetated along their boundaries. The landform is relatively level, making available some open views through breaks in the vegetation, although these are limited. The railway line is well screened from the surrounding landscape being located in cutting and surrounded by established vegetation, although its infrastructure is visible in places. It is likely that there would be significant effects in the immediate context of the route, but these would reduce beyond its vicinity due to the screening effect of vegetation in the surrounding landscape.

The central section of the route comprises the landscape between Fordley Road and Hawthorn Road. Here, the landscape comprises small- to medium-scale arable fields that lie across a series of

[4] Suffolk County Council (2011) *'Suffolk Landscape Character Assessment'*. http://www.suffolklandscape.org.uk/default.aspx

narrow valleys. Whilst this area is well-vegetated, some open views are available from elevated landform and where there are breaks in the vegetation. The combination of landform and vegetation creates a sense of intimacy that would be disrupted by the necessary engineering works that would be required to facilitate a highway through this area, which could result in significant adverse effects.

The eastern section of the route comprises the landscape between Hawthorn Road and the B1122. Here, the route traverses a series of medium- to large-scale arable fields that gently undulate across the landscape. Vegetation is prevalent, with some substantial tree belts and established field boundaries. This restricts longer-range views. Visibility of Theberton is available as the route passes the settlement. Effects in this area would be relatively sensitive to change, although less so in some locations due to the existing developed context.

3.4.6. **Effect on Residential Amenity**

The proposed route is likely to effect on residential amenity at the following locations:

- To the south of Fir Tree Farm and north of Buskie Farm; and
- To the south of Valley Farm and Annesons Cottages.

At these locations, the proposed route would pass nearby residential properties to an extent that there would potentially cause significant adverse effects to the amenity of residents. Along these sections of the route, the final design will need to provide adequate mitigation strategy to minimise any potential adverse effects.

4.0 Conclusion

This appraisal has analysed each of the four proposed routes (and their variations), summarising the potential effects on public rights of way; local road character; heritage assets; landscape designations; landscape character and views; and residential amenity.

The landscape between the A12 and the B1122 is typically characterised by small- to large-scale arable and pasture fields, with scattered woodland blocks and mature hedgerows found along roads and fields. The enclosed nature of the landscape has an intimate character, which generally limits the opportunity for open views across the countryside although views are available in places. This character has the potential to benefit any proposed road scheme, ensuring it is well screened by existing and proposed vegetation, resulting in a minimal effect on the overall landscape character and views. All of the proposed highways schemes will still require appropriate landscape design, including boundary planting and woodland blocks to ensure the scheme is well integrated and screened where visibility would be available.

To varying degrees, all of highways options will have an effect on the existing infrastructure, including local roads and PROW routes. Adequate provision of junctions, crossing points and bridges will need to be provided to ensure continuity of routes and the avoidance of severance. In general, we would envisage that at grade crossings would be sufficient for pedestrian crossings of the proposed highway, with appropriate consideration to road safety including offsets to junctions and appropriate gradients at embankments.

In considering the relative benefits and constraints of each route, the suitability of individual routes is determined by a number of clearly identifiable issues. These are summarised below and in **Table 1**:

Route W is located to the south of Saxmundham where effects on local residents would be minimised from the nearby village. The proposed alignment provides appropriate consideration to the PROW network and local road character, but it is likely that the necessary engineering works to traverse the landform would have a significant adverse effect on the existing landscape character. The route also passes near to a number of existing heritage assets including Hurts Hall and Leiston

Abbey. There is potential for the significance of several heritage assets to be affected adversely due to changes in their setting resulting from the route's alignment, and as such, this route is not considered suitable.

Route X relies on utilising the existing B1121 to take traffic off the A12 and across the East Suffolk railway line. It is likely to have the greatest effect on the existing road network and substantial engineering works are envisaged to upgrade the existing railway crossing on Clayhill Road, which would affect the local landscape character. The overall effect of increased traffic on the road network has the potential to have a significant effect on the amenity of local residents and some Listed Buildings in Saxmundham. As such, this route is not considered suitable.

Route Y is positioned to the north of Saxmundham and Kelsale and is likely to have a reduced effect on the existing local road network when compared to **Route X**. However, the proposed junction with the A12 is still located in close proximity to existing settlements and greater offset would be preferred. The complexity of crossing the local road and PROW networks; and the effects on landscape character to the north of Kelsale would be considered to be potentially significant. The amenity of local residents at Bridge Farm and Orchard house, also has the potential to be significantly affected by required engineering works in their vicinity. As such, this route is not considered suitable.

Route Z connects with the A12 away from existing settlements where the effects on local residents will be minimised. Whilst the proposed alignment provides appropriate consideration to Theberton Hall and the Listed Buildings within Theberton village, there is potential for the significance of several heritage assets to be affected adversely due to changes in their setting resulting from the route albeit to a limited extent. Elsewhere the route is generally positioned away from existing properties with minimal effect, although at Annesons Cottages and Valley Farm there is a potential to cause significant effects on the amenity of residents. Effects on the existing road network are also likely to be minimal, although a number of PROW would be bisected and adequate provisions would need to be provided. Option **Route Z (South)** utilises the existing topography where possible and is preferred.

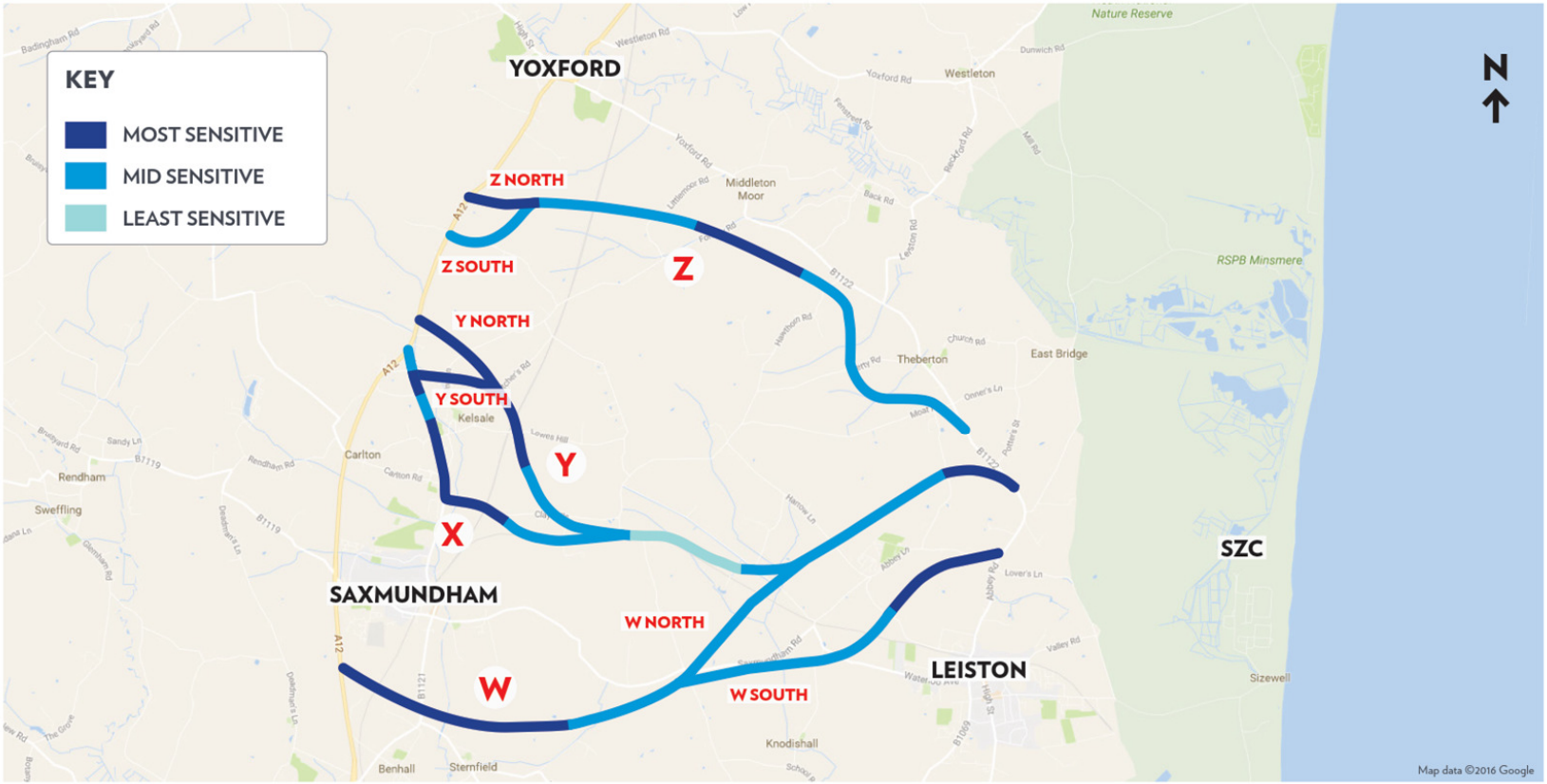
Table 1: Summary of Key Environmental Factors and Potential Effects

Route	Key Environmental Factors					
	PROW	Roads & Railway	Heritage Assets	Landscape Designation	Landscape Character	Residential Amenity
W (North) *8170m*	12	6 roads 2 railways	Potential effects on the setting of a number of historic assets (*Grade I, II and II*∗) along each route. Key assets to consider include Hurts Hall and Leiston Abbey	Passes in close proximity to the north of 1 SLA	No landscape characteristics have been identified that would be considered to be of a greater value than will be locally appreciated.	3 residential areas: • To the south of Hurts Hall; • To the west of Leiston; and • At the connection to the B1122.
W (South) *7478m*	14	6 roads 2 railways				
X *6632m*	4	5 roads 1 railway * * *Crossing of railway would require substantial engineering works.*	Potential effects on the setting of a number of historic assets (*Grade II and Grade II*∗) within the extent of Saxmundham	N/A		Within the extent of Saxmundham
Y (North) *8041m*	5	8 roads 1 railway	Potential effects on the setting of Oak Tree Farmhouse *(Grade II)*	N/A		Residential properties at Bridge Farm and Orchard House
Y (South) *7786m*	5	8 roads 1 railway				
Z (North) *6390m*	12	5 roads 1 railway	Potential effects on the setting of a number of historic assets *(Grade II)* along each route. Key assets to considers include Dovehouse Farmhouse, Theberton Hall and The Gates / Walls at Theberton Hall	Passes in close proximity to the south of 1 SLA		2 residential areas: • To the south of Fir tree Farm and north of Buskie Farm; • To the south of Valley Farm and Annesons Cottages
Z (South) *6816m*	11	5 roads 1 railway				

Nb. *SLA* *"Special Landscape Area"*
N/A *"Not Applicable"*

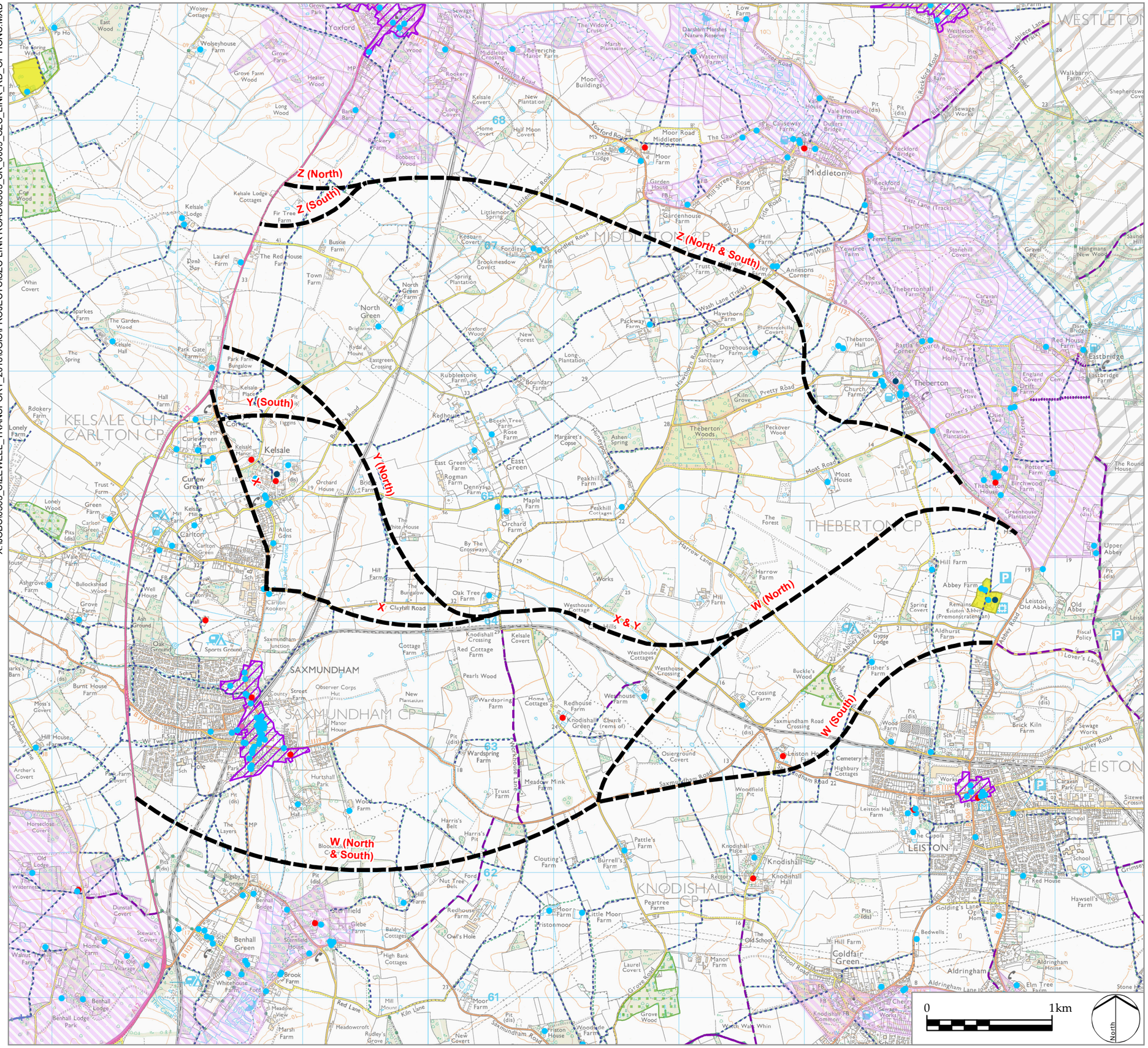
Appendix 1. EDF Energy's Environmental Sensitives (SZCPB/12.16/X)

4 Route Options – Environmental Sensitivities



Appendix 2. Figure 1: Sizewell Access Road Route Options

X:\JOBS\6563_SIZEWELL_TRANSPORT_2018\8GIS\PROJECTS\SZC LINK ROAD\6563_SK_0009_SZC_LINK_RD_OPTIONS.MXD



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LEGEND

- APPROXIMATE ALIGNMENT OF PROPOSED ACCESS ROAD ROUTES(*Labelled on Map*)[1]
- AREA OF OUTSTANDING NATURAL BEAUTY (AONB)
- SPECIAL LANDSCAPE AREA
- ANCIENT WOODLAND

LISTED BUILDING

- GRADE I
- GRADE II*
- GRADE II
- SCHEDULED MONUMENT
- CONSERVATION AREAS

PUBLIC RIGHT OF WAY

- FOOTPATH
- BRIDLEWAY
- BYWAY
- RESTRICTED BYWAY

NOTES
[1] Routes digitised by LDA Design from drawing "Sizewell C Transport Planning: Sizewell Acces Road Environmental Sensitivies" (SZCPB/12.16/X)

LDĀDESIGN

PROJECT TITLE

SIZEWELL C:
TRANSPORT LINKS

DRAWING TITLE

Figure 1:
Sizewell Access Road Route Options

ISSUED BY	Oxford	T: 01865 887 050	
DATE	22 Aug 2018	DRAWN	NA
SCALE @A3	1:30,000	CHECKED	AvN
STATUS	Final	APPROVED	AK

DWG. NO. 6563_SK_0009

No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site.
Area measurements for indicative purposes only.

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Sources: Ordnance Survey, Natural England, Suffolk County Council, Historic England

APPENDIX 9 LAND ASSEMBLY AND COMPULSORY PURCHASE - ROUTE W NORTH SUMMARY NOTE

Route W North Summary Note

This summary note sets out initial findings of a high-level referencing exercise carried out to estimate number of land interests and others factors of using an alternative link road to Sizewell C's proposed Main Development Site, Route W North. It should be noted that no contact has been made with any land interests to either verify the information or seek further information on additional interests.

1.0 Approximate Land Take

The Sizewell Link Road as applied for in the DCO application is approximately 6.8km in length whilst the Route W North is approximately 8.1km, therefore it is likely a greater amount of permanent land take would be required to facilitate this route. This would result in extra land cost.

Route W North intersects 6 local roads and would require 2 railway crossings along its route, whilst the Sizewell Link Road (Route Z south) intersects 5 local roads and would require 1 railway crossing. Therefore from an engineering perspective, the Route W North is likely to be of a greater complexity.

Table 1: Overview of Land Take: Route W North and Sizewell Link Road

	Route W North*	Sizewell Link Road**
Permanent Land Area	122.8ha	84.4ha
Temporary Land Area	57.0ha	21.0ha

** values sourced from initial design assessments undertaken by WSP*
***values correct to the RLB submitted as part of the DCO application*

Table 1 shows the estimated permanent and temporary land take required to facilitate construction of the Sizewell Link Road and Route W North schemes. A greater amount of permanent land take is required to facilitate Route W North, for several reasons, including but not limited to the length of the road, more railway crossings (2 vs 1) and more intersections of local roads (6 vs 5). Temporary areas are also likely to be higher with construction compounds required at each roundabout and two further compounds at the two railway crossings/bridges. Land take requirements for Route W North are estimated based on the current Sizewell Link Road scheme (approximate 150m wide corridor)

with full design work not undertaken, so would be subject to variance if the scheme was progressed and more detailed design is undertaken.

2.0 Number of Interests

The Route W North road alignment polygon has been submitted to land registry in order to provide a polygon plus service and to obtain all title documents. Polygons have been overlaid to create Land Ownership plans for the scheme. There are 25 registered titles intersected by the proposed final alignment with additional unregistered areas made up of local authority adopted highways (Suffolk County Council) and 2 areas of operational railway, East Suffolk Main Line and Saxmundham to Leiston Branch Line (Network Rail). There are 17 landowners/Land Holdings once those with multiple interests are combined, e.g. titles owned by the same owner or within the same family. There are also 2 main areas of unregistered agricultural land, believed to form part of the Haste and Readhead areas of ownership. We have assumed that a similar proportion of registered titles to the Sizewell Link Road would have tenants/occupiers on the land for the purpose of estimating number of interests. This number cannot be accurately identified without a full land referencing exercise being undertaken and contact being made with the landowners to verify and confirm details.

Table 2: Overview of Land Interests – Route W North to Sizewell Link Road Comparison

	Route W North	Sizewell Link Road
No. of Land Holdings	17	18
Tenants/Occupiers	16 *(estimate assumed)*	17
Cat 2 Parties (excludes where freeholder has Cat 2 interest on surrounding land titles)*	26	21
Total Number of Interests	59	56

** A person is within Category 2 if the applicant, after making diligent inquiry knows that the person- (a) is interested in the land, (b) has power- (i) to sell or convey the land or (ii) to release the land; see section 57 (2) of the Planning Act 2008*

Category 2 parties include those with rights resulting from deeds, transfers, conveyances, restrictions and registered charges on land within the proposed order limits. This could also include access rights not listed on a land registry title, subsequently identified from landowner contact/engagement.

2.1 Pigeon Capital Management 1 Limited & Hopkins Homes Limited

A limitation to the proposed Route W North is a unilateral notice of land registered to William Notcutt Estates Limited within title SK336019 to Hopkins Homes Limited (Plots 40, 50). The full document is not available to download/view at Land Registry, however online research has shown a planning application of land south of Saxmundham where Route W North would directly pass through.

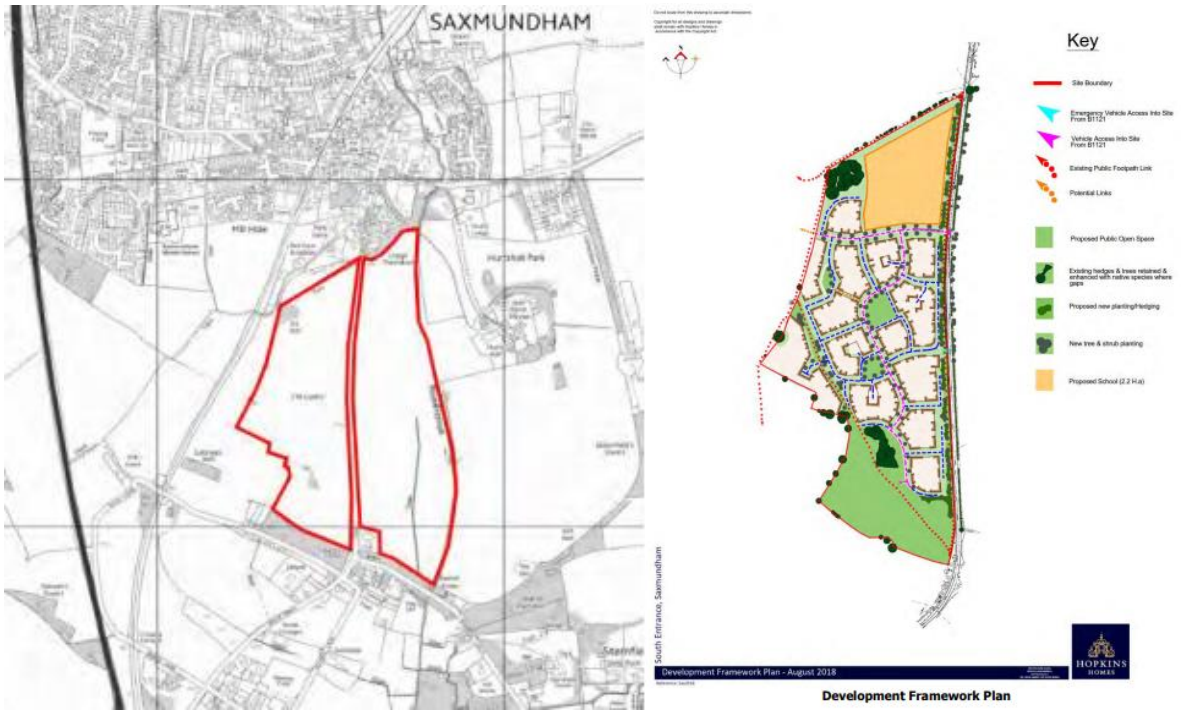


Figure 1 Hopkins Homes Option Area & Site Masterplan

Furthermore, Pigeon Capital Management 1 Limited (Pigeon) have restrictions on disposition on 4 land titles (SK17365, SK17366, SK17515 & SK369229) registered to Sir Peter Ghislain Batho and Richard Ghislain Batho (Land Owner Plots 10, 20, 25, 35). Pigeon focus on Land Promotion and Property Investment and are actively promoting several land parcels within these titles as part of the South Saxmundham Garden Neighbourhood proposal under Policy SCLP12.28: Strategy for Saxmundham under the Suffolk Coastal Local Plan Final Draft (January 2019).

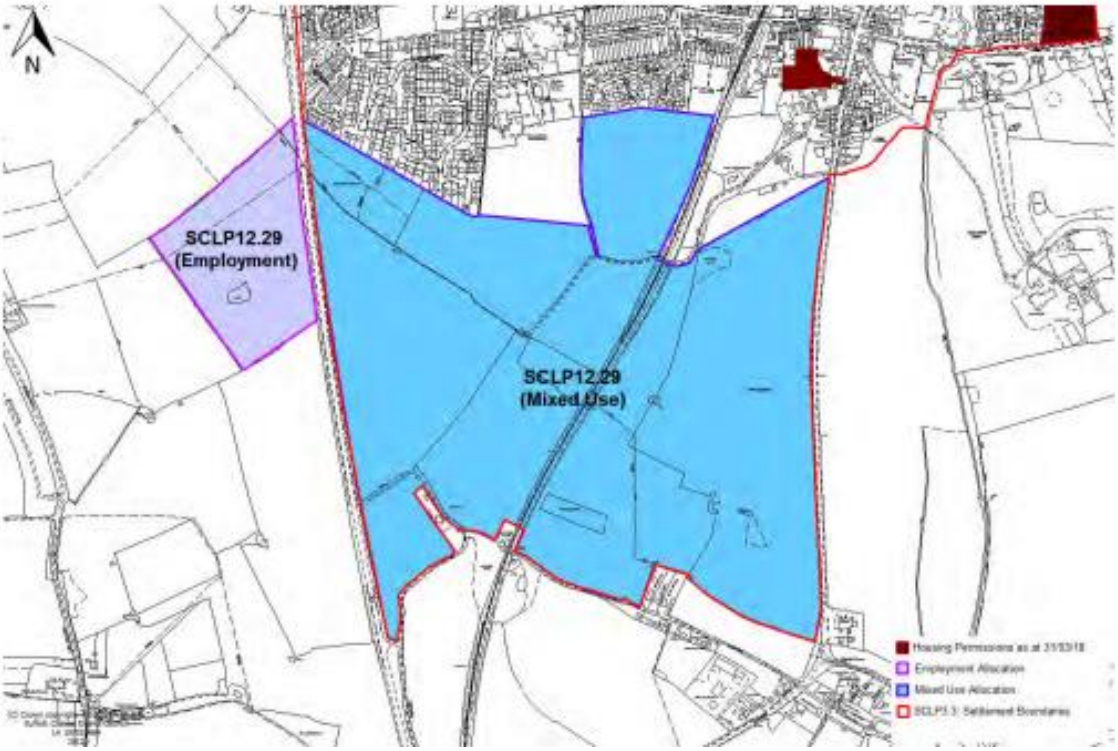


Figure 2 South Saxmundham Garden Neighbourhood Local Plan Area

The proposed alignment of Route W North would intersect both of the areas shown above. This would have a significant effect on both the land value for the scheme and also the likely opposition to this route from the developer and landowner.

A full list of all interests identified by this exercise are shown in the attached spreadsheet schedule.

3.0 Special Category or Crown Land

3.1 Special Category Land

From initial investigations using online resources, it appears that no Special Category Land will be intersected by the alignment of Route W North. A more detailed review can be undertaken by Suffolk County Council's Commons Registration team, however this would involve providing a PDF plan of the route to them and engaging the team. Something we would advise against at this stage.

3.2 Crown Land

There are potential Crown Rights on land at the eastern end of Route W North where the road alignment runs through what was formally Royal Air Force Leiston. The site has now predominantly returned to agricultural use other than the adjacent Cakes & Ales Caravan Park Site (outside the RLB).

The Land Plots potentially impacted by these rights are 130, 140, 145, 155 and 165, within 3 Land Holdings – Readhead, Sudmeyer and Snowden, and were granted to 'The Right Honourable Alfred Ernest Marples M.P. Her Majesty's Postmaster-General' in 1959 by 'Her Majesty's Secretary of State for Air' (now 'Ministry of Defence'). Regulations under this department would now fall to the 'Secretary of State for Digital, Culture, Media and Sport'. Follow up contact would be necessary to confirm whether these rights are still able to be exercised or enforced.

Interests owned by the Crown, or The Crown Estate (TCE) cannot be acquired compulsorily, and therefore should expressly be excluded from acquisition without agreement. Accordingly, we recommend engaging with them at an early stage.

The Sizewell Link Road scheme was found to have no Crown rights/interests from the land referencing and title investigations undertaken.

Table 3: Crown Interests

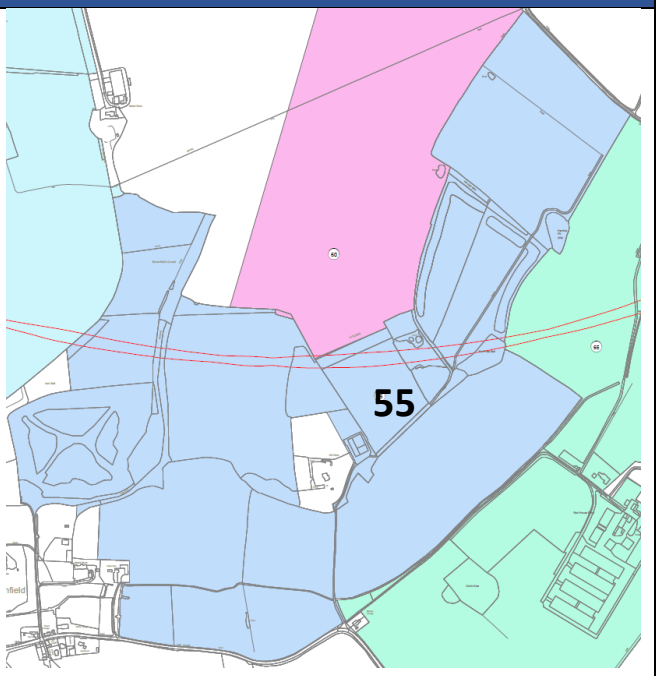
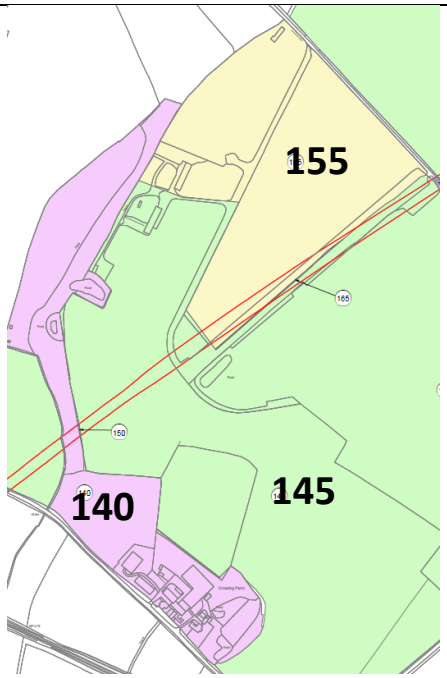
	Route W North	Sizewell Link Road
No. of Titles with potential Crown Interest	3	0

4.0 Severance Effects

4.1 Route W North

Our initial high-level assessments have found many land plots severed by the road alignment would have sufficient access points to maintain access post-construction. There are some examples where severance would in effect leave some plots of land without any means of access, as noted below in Table 4.

Table 4: Severance Effects

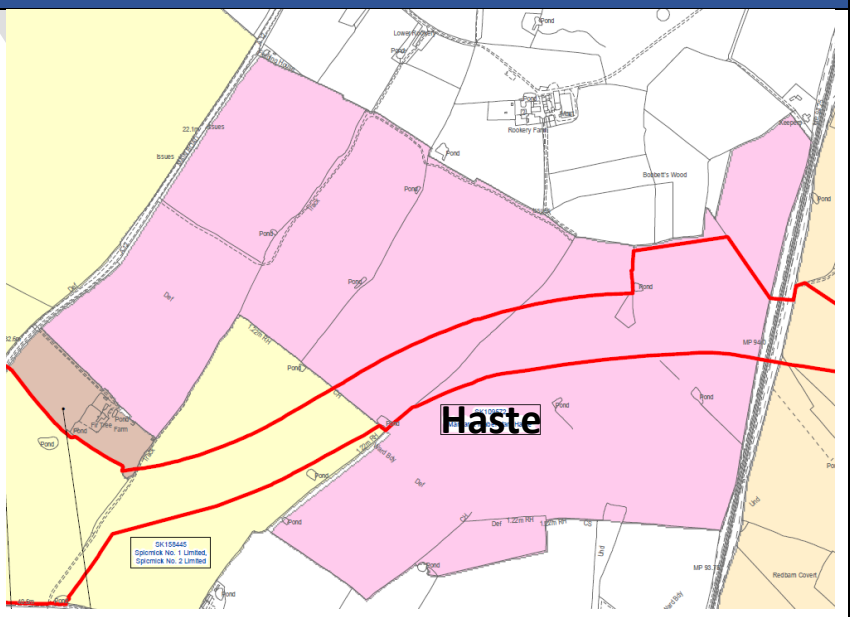
Plot	Comments	Plot Figure
55 (A W Bacon Will Trust)	The road alignment of Route W North splits this land holding (coloured blue) into 3 parts, one of which is an area of woodland (Bloomfield's Covert) and reservoir which will be severed and left with no means of access. Furthermore, there appears to be no field access at the northern boundary of this plot on the Saxmundham Road, B1119 so provision of a new access point would be required.	
140 & 145 (Snowden and Readhead respectively)	These plots are both split in two. Title analysis has confirmed Plot 145 (coloured green) benefits from rights of access through Plot 155 (coloured yellow) so access to the northern boundary would remain, however Plot 140 (coloured purple) would appear to be severed with no alternative access.	

A full assessment of potential severance effects would only be possible once discussions have been undertaken with all land interests to gain a greater understanding of the exact nature of farming operations, which parts of land are tenanted and where predominant access points are considered to be.

4.2 Sizewell Link Road

Initial high-level assessments of the Sizewell Link Road scheme during the initial referencing stages found similar cases of potential severance affecting several land holdings. Ongoing landowner engagement identified one landowner where no access to the remaining land would be possible post-construction. This is indicated in Table 5.

Table 5: Severance Effects

Landowner	Comments	Plot Figure
Margaret Isabel Mary Haste	This land holding (coloured pink) is split in two by the proposed link road, with the southern half of the land severed with no alternative access. An accommodation track has been designed into the scheme to maintain access post-construction.	

As this scheme has progressed, ongoing landowner engagement ahead of the DCO application has identified where alternative access has needed to be put in place and informed the project team of how the land is used. For example, in the 'Haste' land (shown above), where an accommodation

track has been put in to maintain access after construction of the Sizewell Link Road, this information was only possible through engagement and understanding of farming operations.

APPENDIX 10 SIZEWELL C VISUM TRAFFIC MODEL

TECHNICAL NOTE: COMPARISON OF ROUTE

SIZEWELL C VISUM TRAFFIC MODEL

TECHNICAL NOTE: COMPARISON OF ROUTE "W NORTH" ALIGNMENT WITH SIZEWELL LINK ROAD ALIGNMENT PROPOSED IN DCO

Quality management		Project number	50400326-50B	Report number		File reference	
Version	Date	Author	Signed	Checked	Signed	Authorised	Signed
First issue	01 October 2020	Sally Powell		Nick Cottman		Nick Cottman	

1.0 INTRODUCTION

1.1. Sizewell Co.'s proposals for Sizewell C (SZC) include a 'Sizewell link road', which would connect the A12 via a new three-arm roundabout junction south of Yoxford with the B1122 near the entrance to the Sizewell C main development site.

1.2. Once completed the Sizewell link road will carry much of the construction-related traffic including all SZC Heavy Goods Vehicles (HGVs), and SZC buses, but will also be open to general traffic. The proposed alignment of the Sizewell link road is designed to meet a number of objectives:

- Maximise mitigation of Sizewell C traffic (and therefore environmental) impacts at Theberton, Middleton Moor and, where possible, Yoxford;
- Provide a new east-west road, for general traffic as well as Sizewell-related vehicles, which reduces traffic on the B1122 making it more attractive for cyclists;
- Improve safety and reduce traffic queues at the Yoxford level crossing by taking Sizewell C construction traffic across the East Suffolk railway line via a new road-over-rail bridge rather than the existing level crossing;
- Provide resilience in the form of a new stretch of road along which Sizewell C construction vehicles could be temporarily held in the event of traffic disruption, without causing delays to traffic on the existing highway network.

1.3. The preferred route for the Sizewell link road, which was consulted on at Consultation Stages 3 and 4, joins the A12 to the south of Yoxford and bypasses the villages of Theberton and Middleton Moor, as shown in Figure 1. The Sizewell link road alignment submitted with the DCO application was selected after considering other potential routes Traffic from the north would use the new Middleton Moor link, proposed as part of the Sizewell link road, and avoid travelling on the A12 past Yoxford.

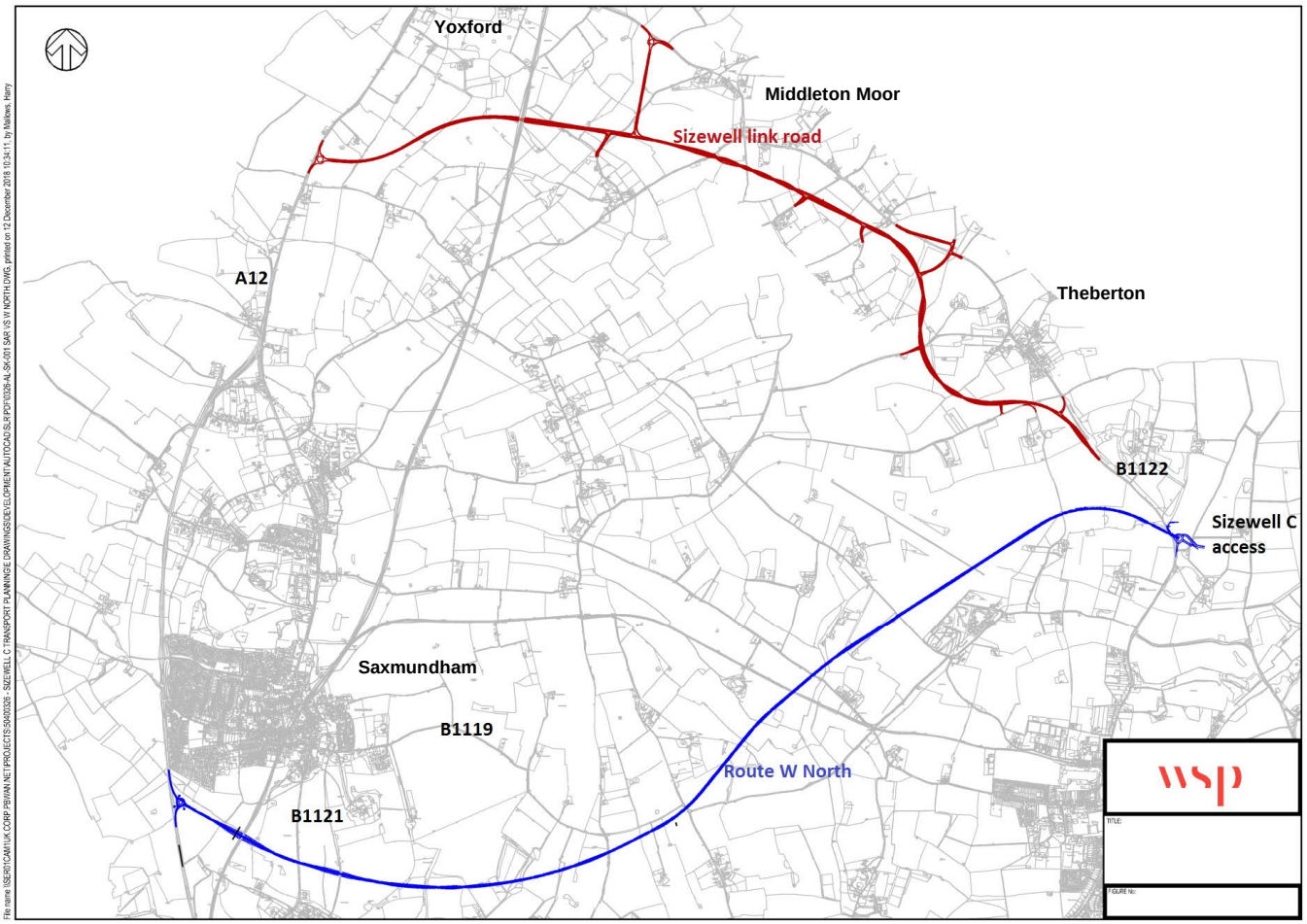
1.4. One of the original routes considered was 'W North' which follows a more southerly alignment, crossing the B1121 and joining the A12 to the south of Saxmundham, as shown in Figure 1. It is similar to the 'D2 route' considered at the planning stage of Sizewell B in the 1980s.

1.5. Whilst Suffolk County Council (SCC) recognise the benefits of Sizewell Co.'s DCO route, they have requested further justification for why the Sizewell link road alignment is preferable to route 'W North'. SCC have requested that a comparison be made between the traffic effects of the two routes. SCC have intimated that they would expect the route 'W North' to attract through-traffic away from the village of Tunstall on the B1069 and potentially provide air quality benefits through reduced HGV vehicle emissions because of reducing the travel distance between the A12 south and Sizewell C.

1.6. The VISUM model developed for the assessment of Sizewell C traffic impacts for the DCO submission, has been updated with refined development assumptions to prepare the Transport Assessment addendum and Environmental Statement (expected to be submitted to the Planning Inspectorate in November 2020). The

updated model was used to compare journey distance and travel time, under the integrated freight strategy with 'busiest day' HGV volumes, with the proposed Sizewell link road alignment and the route 'W North' alignment. This document compares the journey time and distances on the Sizewell link road (SLR) and route 'W North' for SZC HGVs and buses, which are assumed to follow fixed routes. It does not provide any comment on the wider engineering and environmental impacts associated with the construction of the 'W North' route.

Figure 1 – Proposed Sizewell link road and Route 'W North'



2.0 TRAFFIC ASSESSMENT OF ROUTE 'W NORTH'

2.1. With the proposed Sizewell link road alignment, all Sizewell-related HGVs and buses would travel to the Sizewell C main development site via the A12 and the link road. Those from the north would use the A12/B1122 junction and the Middleton Moor link, thus avoiding Yoxford. With the 'W North' alignment, it has been assumed for this assessment that Sizewell C buses from the north (Darsham park and ride, and Lowestoft direct buses) would travel along the B1122, since this would be quicker than using a new link road via the 'W North' alignment.

2.2. Table 1 presents the daily two-way volumes of SZC HDVs (HGVs and buses) during peak construction, in key locations affected by the comparative alignments.

Table 1 – Peak construction daily two-way SZC HDV flows at key locations

Location	Sizewell link road	Route W north	Difference
Sizewell C HGVs			
A12 south of Yoxford	0	150	150
B1122 through Theberton/Middleton Moor	0	0	0
Sizewell link road / Route W North, west of B1122	1,000	1,000	0
Sizewell C Buses			
A12 south of Yoxford	0	0	0
B1122 through Theberton/Middleton Moor	0	224	224
Sizewell link road / Route W North, west of B1122	520	296	-224
Total Sizewell C HDVs			
A12 south of Yoxford	0	150	150
B1122 through Theberton/Middleton Moor	0	224	224
Sizewell link road / Route W North, west of B1122	1,520	1,296	-224

2.3. SZC HGVs would be on the highway network between the hours of 6am and 11pm, whilst SZC buses would run through the day and night (more frequently during shift changeover times).

2.4. Table 2 presents a comparison of the VISUM modelled journey times and distances from the A12 / 'W North' junction in the south to the main development site, and from the A12 / B1122 junction in the north to the main development site, via each of the two routes in the network AM and PM peak hours during peak construction. With the 'W North' alignment HDVs from the south would have a shorter distance to travel to the Sizewell C main development site, saving 4.4km in distance and around three minutes travel time over the Sizewell link road alignment; however HDVs from the north would travel an extra 7.9km if they used the 'W North' route, adding more than five minutes to their journey.

Table 2 – Peak construction journey time and distance comparison

Route	8-9am			5-6pm		
	SLR	W North	Difference	SLR	W North	Difference
Average Journey Time (mm:ss)						
From A12 / W North (S) to main development site	09:20	06:25	-2:55	09:23	06:25	-2:58
From A12 / B1122 (N) to main development site	06:09	11:37	5:28	06:12	11:37	5:26
Distance (km)						
From A12 / W North (S) to main development site	12.79	8.37	-4.42	Same as 8-9am		
From A12 / B1122 (N) to main development site	7.56	15.47	7.91	Same as 8-9am		
From A12 / B1122 (N) to main development site (via B1122)	6.72	6.72	-	Same as 8-9am		

2.5. Table 3 shows the number of SZC HGVs and buses per day during peak construction under the integrated freight strategy 'busiest day' scenario. Combined with the distances shown in Table 2, results in vehicle kilometres for SZC HDVs, between the A12 / B1122 junction in the north and the main development site, and between the A12 / 'W North' junction in the south and the main development site.

Table 3 – Peak construction SZC HDV vehicle kilometres (from A12 to main development site)

SZC HDV route	Number of vehicles per day	Veh KMs (between A12 and Main Development Site)		
		SLR	W North	Difference
HGVs from A12 south (85%)	850	10,872	7,115	-3,757
HGVs from A12 north (15%)	150	1,134	2,321	1,187
Total HGVs	1,000	12,006	9,435	-2,571
Buses from A12 south	296	3,786	2,478	-1,308
Buses from A12 north *	224	1,694	1,505	-189

** travelling via B1122 in 'W North' option*

2.6. Route 'W North' would provide benefits over the proposed Sizewell link road alignment in terms of reducing overall Sizewell C HDV vehicle kilometres, since it is expected the majority of HGVs would come from the A12 south which therefore would benefit from the shorter distance to the main development site via the 'W North' alignment.

2.7. However, it is clear from Table 1 that the route 'W North' would not provide as much traffic relief to Yoxford, Middleton Moor or Theberton, which was one of the key objectives of the proposed link road. The issue of traffic volumes through Theberton and Middleton Moor were particular issues raised during the early consultation stages which would not be resolved with the 'W North' alignment. Furthermore, with the 'W North' alignment it would be reasonable to route the SZC buses from the north (Darsham park and ride, and Lowestoft direct buses) along the B1122, since this would be quicker than using the 'W north' link road, which would further increase traffic impacts at Theberton.

2.8. This technical note focuses on Sizewell-related HDVs, however the proposed Sizewell link road would also be open to general traffic and so it would carry much of the Sizewell-related car and LGV traffic as well. In addition it is expected that general traffic currently using the B1122 would transfer to the proposed Sizewell link road, reducing existing traffic flows through the villages of Middleton Moor and Theberton. In comparison, it is unlikely that existing B1122 traffic would reroute via a 'W North' alignment, due to its relative remoteness from the B1122, thus providing a smaller benefit to these villages.

3.0 SUMMARY

3.1. The analysis presented in this technical note demonstrates that from a traffic perspective, the proposed Sizewell link road achieves several objectives that were set out when considering route options:

- Removes most of the Sizewell C traffic from Theberton;
- Removes most of the Sizewell C traffic from Middleton Moor; and
- Removes all Sizewell-related HGVs and buses from Yoxford, Theberton and Middleton Moor.

3.2. The route 'W North' alignment achieves none of these objectives. Whilst route 'W North' would benefit those Sizewell C HGVs and buses travelling to/from the A12 south, circa 150 HGVs per day from the north would travel on the A12 past Yoxford, and over 200 buses per day would travel on the B1122 through Middleton Moor and Theberton. This would have an impact on noise through these villages as buses would continue to operate through the night-time.

3.3. Sizewell Co. considers that the proposed Sizewell link road, which was presented at Stages 3 and 4 as part of the integrated freight strategy, provides the most appropriate and achievable alignment according to the scheme objectives.

APPENDIX 11 SIZEWELL LINK ROAD OPTION DEVELOPMENT AND SUMMARY WORK UNDERTAKEN POST-SUBMISSION OF THE DCO REPORT (2021)

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1 INTRODUCTION

1.1 Background

1.1.1 The Sizewell power station complex is situated on the Suffolk coast, north-east of Ipswich and south of Lowestoft. Sizewell A nuclear power station is currently being decommissioned. Sizewell B power station, located to the north of Sizewell A, is expected to operate until 2035, with the potential for an extension of its lifetime for 20 years, to 2055.

1.1.2 SZC Co. is proposing to build a new nuclear power station at Sizewell in East Suffolk, known as Sizewell C. It would be located on the Suffolk coast, approximately halfway between Felixstowe and Lowestoft; to the north-east of the town of Leiston. The power station, together with the proposed associated developments, is referred to as the Sizewell C Project.

1.1.3 The proposed Sizewell C nuclear power station would comprise two UK EPR™ units, with an expected net electrical output of approximately 1,670 megawatts per unit, giving a total site capacity of approximately 3,340MW. Once operational, Sizewell C would be able to generate enough electricity to supply approximately six million homes in the United Kingdom.

1.1.4 In addition to the key operational elements of the UK EPR™ units, the Sizewell C Project comprises other permanent and temporary development to support the construction and operation of the Sizewell C nuclear power station.

1.1.5 During the construction of Sizewell C there would be significant movement of freight and people to support the construction programme. It is currently estimated that the construction workforce would peak at around 7,900 people and large volumes of material would require transportation to and from the main development site.

1.1.6 The A12 between Ipswich and Lowestoft would be the main route corridor for Sizewell C construction traffic on the highway network. From the A12 the existing Sizewell site can be reached either via the B1122 (travelling through Theberton and then on to Lover's Lane), the B1119 through Saxmundham and then Leiston or via the A1094 and then the B1069 through Leiston. Of these routes, the B1122 was the approved Heavy Goods Vehicle (HGV) route during the construction of Sizewell B and was anticipated to be the main approved route to and from the Sizewell C site, and avoids vehicles having to travel through Leiston, Saxmundham and most other local towns and villages.

1.1.7 Early traffic modelling undertaken for the Sizewell C Project assumed that majority of HGV road traffic would be coming from the south on the A12; where 85% of HGV traffic would route from the south via the A14 and then A12, with the remainder coming from the north on the A12 (Ref. 1). Whilst current traffic flows on the B1122 are relatively modest and much lower than on the A12, and unlikely to cause any capacity or congestion problems on most of the B1122, it was identified that additional traffic associated with Sizewell C could potentially result in adverse noise and amenity effects on properties located adjacent to the B1122 and within Theberton.

1.1.8 SZC Co. therefore considered the potential forms of mitigation that would be appropriate to reduce the impacts of Sizewell C on residents along the B1122 and within Theberton.

1.1.9 As part of the design development process, a series of options for the Sizewell C Project have been considered to reduce the impacts of construction traffic on the highway network. This process comprises a multi-stage option appraisal which begun with the development of smaller improvements along the B1122, which developed into the provision of a new link road from the A12 to B1122, the preferred option to minimise traffic-related noise and amenity impacts associated with the Sizewell C Project. A summary of the alternatives considered during the design development process is provided in **Volume 6, Chapter 3** of the **Environmental Statement** (**ES**) (Doc Ref. 6.7) [APP-450]) and **Site Selection report** (**Appendix 8.4A** of the **Planning Statement**) (Doc Ref. 8.4) [APP-591] submitted with the application for development consent.

1.1.10 The purpose of this report is to:

- provide a description of the options considered throughout the design development process to mitigate traffic-related impacts associated with the construction of the Sizewell C project;
- summarise the feedback received through consultation on the various options considered to mitigate these impacts;
- summarise the appraisal process which led to the selection of the Sizewell link road as the preferred option for the project; and
- present further work undertaken following the submission of the DCO application including Additional Information and change request application submitted in January 2021, and to demonstrate that the Sizewell link road is necessary, that the route selected is acceptable and that it is preferable compared to the other options considered during the pre-application and design development process.

1.2 Overview of the appraisal process prior to DCO submission

1.2.1 The Infrastructure Planning (Environmental Impact Assessment (EIA)) Regulations 2017 (hereafter referred to as the "EIA Regulations") (Ref. 2) requires developers to consider and provide a description of the reasonable alternatives studied, relevant to the proposed project, as part of the design development process. The regulations stipulate that the main reasons for the option chosen, with regard to the effects of the development on the environment, should be described.

1.2.2 Throughout the pre-application process, SZC Co. has sought to develop the design of proposals for the Sizewell C project through an iterative design development process, informed through extensive consultation with statutory consultees and the public, formally commencing in 2012.

1.2.3 A description of the main alternatives considered in relation to the proposed Sizewell link road was presented within **Volume 6, Chapter 3** of the **ES** (Doc Ref. 6.7) [APP-450]) and **Site Selection report** (**Appendix 8.4A** of the **Planning Statement**) (Doc Ref. 8.4) [APP-591], both of which were submitted with the application for development consent.

1.2.4 As part of the appraisal process, SZC Co. considered a number of options and sought to explain and test its emerging thinking for the Sizewell C Project with stakeholders, and listened to and learned from the feedback received through the consultation process.

1.2.5 In the development of options, SZC Co. followed these key principles:

- There must be a clear rationale for any option and it must be based on a presentation of opportunities and challenges associated with the construction and/or operation of the Sizewell C Project, in compliance with the relevant policies of the National Planning Statement (NPS) EN-1 and EN-6 (Ref. 3 and 4);
- There must be consideration of genuine, discrete options with a range of proposals and configurations, including consideration of the potential engineering constraints and environmental impacts, in compliance with the EIA Regulations; and
- The options appraisal process should feed in where appropriate to the consultation taking place as part of the DCO application process.

1.2.6 **Plate 1-1** illustrates the process that was followed to develop the proposals for the Sizewell link road prior to submission of the DCO application.

1.2.7 The below provides a summary of the key design stages undertaken prior to submission of the DCO application:

a) Stage 1 consultation

- At Stage 1 consultation, it was recognised that there was potential for the Sizewell C construction traffic to cause negative noise and amenity impacts to properties near the B1122 and in the village of Theberton. However, mitigation along the B1122 between Yoxford and Theberton was not proposed at this stage of consultation (Ref. 1, Ref. 5, Ref. 6).

- Within the responses to Stage 1 consultation, concerns were raised regarding impacts on the amenity of residents in properties along the B1122 and Theberton (as summarised in the **Consultation Report** (Doc Ref. 5.1 [APP-068] submitted with the application for development consent).

b) Stage 2 consultation

- Options for addressing concerns raised regarding impacts on the amenity of residents in properties along the B1122 and Theberton were presented at Stage 2 consultation and included in the material published by SZC Co to support consultation (Ref. 7). These included minor road improvements such as speed limit reductions, pedestrian enhancements and improvements to the alignment of the B1122.

c) Stage 3 consultation

- In response to Stage 2 consultation feedback, SZC Co. considered the options for a new road, as part of a 'road-led' freight management strategy. SZC Co. considered four routes (and associated sub-routes) and presented the preferred option at Stage 3 consultation, with details published in Stage 3, Volume 1: Development Proposals consultation document (Ref. 8).

- In parallel to the work being undertaken for the 'road-led' strategy, SZC Co. reviewed route options for a new road under a 'rail-led' strategy to reduce amenity impacts for residents at Theberton (for 'rail-led' strategy). Similarly, the preferred option was presented at Stage 3 consultation.

- The proposals presented at Stage 3 were accompanied by preliminary environmental information, provided in Stage 3, Volume 2A: Preliminary

Environmental Information consultation document (Ref. 9), to enable consultees to understand the likely environmental effects of the proposed Sizewell link road.

d) Stage 4 consultation

- For Consultation Stage 4, SZC Co did not present any new route alignments, however, an alternative freight management strategy was proposed – an 'integrated strategy'. As part of the integrated strategy Sizewell link road was proposed, as for the Road-led strategy. Details were provided in the Stage 4 Consultation Document (Ref. 10)

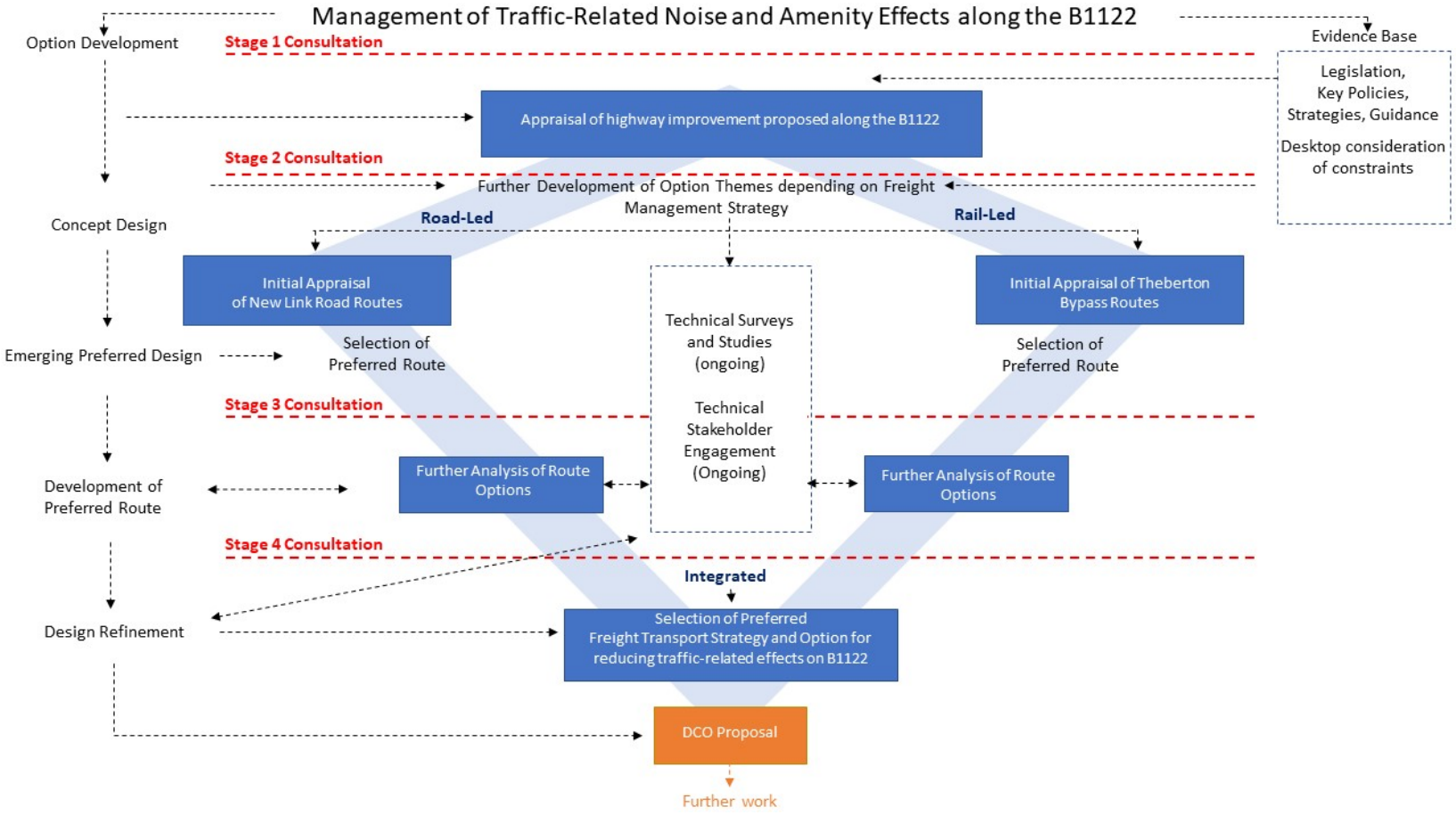
e) Preparation of the DCO application

- Following the conclusion of Stage 4 consultation, the integrated strategy was selected as the preferred freight management strategy. Although the integrated strategy would include a greater use of rail than the road-led strategy, it would still require a large number of freight to be transported via road. Early noise analysis undertaken on behalf of SZC Co. showed that even with fewer HGV movements proposed under the road-led strategy, it is still likely there would be times where there would be significant impacts on Middleton Moor. As such, the Sizewell link road was proposed to mitigate these impacts in the application for development consent.

- The alignment of the Sizewell link road included in the proposals submitted for development consent remained the same as presented in Stages 3 and 4 consultation, however there were a number of updates to the design to help avoid or reduce adverse environmental effects.

1.2.8 Further information regarding the appraisal process undertaken prior to submission of the DCO submission can be found in Chapters 3—7 of this report.

Plate 1.1: Overview of the process for developing the proposed Sizewell link road during the Pre-Application Phases



1.3 Overview of appraisal process undertaken post DCO submission

1.3.1 **Chapter 8** of this report summarises the work undertaken since the DCO submission, and builds upon the work undertaken during the pre-application process and ES and relevant documents submitted with the application for development consent, providing further rationale for the options selected through the various design stages.

1.3.2 **Chapter 8** of this report:

- Summarises the Additional Information and proposed changes to the Sizewell link road design following the submission of the DCO submitted with the change request application submitted in January 2021 and accepted by the Planning Inspectorate in April 2021;
- Provides a comparison of the likely traffic-related impacts with and without (a 'Do Minimum' scenario) the Sizewell link road; and
- Presents a summary of the options considered by SZC Co. for mitigating traffic-related impacts on the B1122 communities associated with the construction of Sizewell C Project on the basis of a 'red, amber, green' (RAG) evaluation system, therefore providing a holistic overview of the rationale for the selection of the preferred option.

1.4 Structure of this report

1.4.1 This report is structured as follows:

- **Chapter 2** provides a description of the area and summarises historic proposals to manage impacts on the B1122;
- **Chapters 3** – **6** provide a summary of the options considered at each consultation stage, including reference to consultation feedback received during each pre-application stage;
- **Chapter 7** explains the updates made to the design of the Sizewell link road following Stage 4 consultation and as a result of the environmental impact assessment process; and
- **Chapter 8** provides the additional work undertaken post submission of the DCO application to confirm that the principle of the Sizewell link road is acceptable, that an acceptable route has been selected and that it is preferable to the other options considered.

2 ENVIRONMENTAL CONTEXT AND HISTORIC PROPOSALS

2.1 Environmental context

2.1.1 The A12 between Ipswich and Lowestoft is a major road within Suffolk, and is one of the main routes to the Sizewell Power Station complex. From the A12 the existing Sizewell Power Station complex can be reached either via the B1122 (travelling through Theberton and then on to Lover's Lane), the B1119 through Saxmundham and then Leiston or via the A1094 and then the B1069 through Leiston.

2.1.2 Settlements along these routes include the towns of Saxmundham and Leiston, and the villages of Yoxford, Theberton, Middleton Moor, Kelsale and Carlton. There are also numerous isolated properties along the routes.

2.1.3 The East Suffolk line runs between Ipswich and Lowestoft, passing through Saxmundham. To the north of Saxmundham, a branch line diverges from the East Suffolk Line in an easterly direction, passing to the north of Leiston.

2.1.4 There are a number of designated heritage assets within the area, which are generally concentrated within the settlements. Leiston Abbey, a Scheduled Monument is located to the north of Leiston, and south-east of Theberton.

2.1.5 There are no statutory designated ecological sites within the area, however, an ancient woodland (Buckles Wood) is located to the north-west of Leiston. The nearest European sites to the area are the Minsmere to Walberswick Heaths and Marshes Special Area of Conservation (SACP, Minsmere-Walberswick Special Protection Area (SPA) and Ramsar, Sandlings SPA, and Dews SAC.

2.2 Historic Proposals

2.2.1 In 1981 an application for the construction of Sizewell B was made by the Central Electricity Generating Board (CEGB). The application was subjected to a Public Inquiry which was held between January 1983 to March 1985, after which the Secretary of State (SoS) for Energy granted consent for the power station was granted in 1987.

2.2.2 With regards to the application, as summarised by the SoS, the Inspector judged that '*the main detriment* [for the construction impacts on the locality] *would be the huge increase in traffic, much of it in the form of heavy goods vehicles on local roads during construction, especially on the B1122. He further concluded the prescribed route for Sizewell B construction traffic, the*

B1122, is not, and when improved will still not be, a satisfactory route for large numbers of heavy goods vehicles over a period of seven years of more'.

2.2.3 However, the Inspector noted that 'there is no ready alternative to the B1122 and that the severe drawbacks to use the B1122 for Sizewell B construction traffic are not sufficient to justify a delay to the start of construction work for two to three years' (Ref. 12).

2.2.4 The SoS recommended that Suffolk County Council in consultation with CEGB should undertake a study to identify an alternative route to minimise the disturbance to local residents. This study was undertaken by Travers Cocker and Partners in 1987 on behalf of CEGB (Ref. 13).

2.2.5 The Trevor Cocker and Partners study investigated several options, including a Do Nothing scenario, a bypass of Middleton Moor and Theberton (which considered both a north and south alignment of Theberton and represented the Do Minimum) and a 'D2' route (Ref. 13). Whilst the Do Minimum approach in this study provided bypasses of Middleton Moor and Theberton, the proposals required the on-line realignment of long sections of the B1122 between the two bypasses of the villages on a relatively similar alignment. The study also included consideration four other routes (A, B, C, D1) (Ref. 14).

2.2.6 The study concluded that the D2 route was the preferred option and issued this recommendation to SCC and CEGB; the primary reasons being the:

- Relief to all frontages along the B1122 from Sizewell HGV construction traffic;
- Providing access to Sizewell for the workforce from the south;
- Relief other areas including Benhall and Leiston;
- The Do Minimum options (a bypass of Middleton Moor and a bypass of Theberton) in comparison would provide no relief to the remainder of the B1122, as though realignment of the B1122 would be required, it would remain on a broadly similar alignment as the existing road.

2.2.7 However the study noted that the D2 option would provide little traffic relief to the villages of Theberton and Middleton Moor following completion of construction. In addition, there would be moderate delays on the B1119 during construction of power station.

2.2.8 The appraisal of the Do Minimum bypasses considered both a north and south bypass of Theberton. Whilst the southern route would require a longer bypass, it would allow an overtaking section and would avoid severance

impacts at Rattla Corner which would be severed from the main community with the northern alignment.

2.2.9 The Supplementary Report (Ref. 13) however did not provide any detailed analysis of the route options A, B, C and D1, focusing on the D2 route and the smaller bypasses.

2.2.10 In view of the relative construction programmes for the construction of Sizewell B, the D2 link road was not promoted by SCC.

2.2.11 In the late 1980's, during construction of the Sizewell B power station, CEGB proposed to construct an additional power station, also referred to as Sizewell C and referred to hereafter as 'CEGB Sizewell C' to avoid confusion with SZC Co.'s Sizewell C Project. As set out in the ES for a Sizewell link road published in 1989 (Ref. 14), it was identified that there would be an overlap between when Sizewell B was being constructed and the proposed construction programme for CEGB Sizewell C, it was considered that there would be a significant overlap of construction road traffic during the transportation of construction materials and equipment to the site.

2.2.12 The designated commercial vehicle route for construction of Sizewell B was the B1122 from the A12 at Yoxford, passing through Middleton Moor, Theberton and onto Leiston. This route would also be a route for the workforce, as well as a potential route for the movement of construction materials and equipment for CEGB Sizewell C. Other routes along the existing highway which were considered included: joining the B1119 from the A12 at Saxmundham towards Leiston; or leaving the A12 via the A1094 at Farnham, traveling through Snape Watering before joining the B1069 and passing through Knodishall and then through Leiston.

2.2.13 In order to reduce the environmental disturbance which would arise from construction traffic associated with both projects, SCC and CEGB commissioned Trevor Cocker and Partners to undertake a further study in 1989 to assess the impacts on the road network.

2.2.14 This study included consideration of a variety of options, including a new link road between the A12 and the construction site (again referred to as 'D2' (as shown in Plate 3-1, which was slightly modified from the 1987 study) which would begin on the A12 south of Saxmundham in an easterly direction to join the B1122 near Lover's Lane, as well as a route which would utilise parts of the existing B1122 but would bypass Middleton Moor and Theberton.

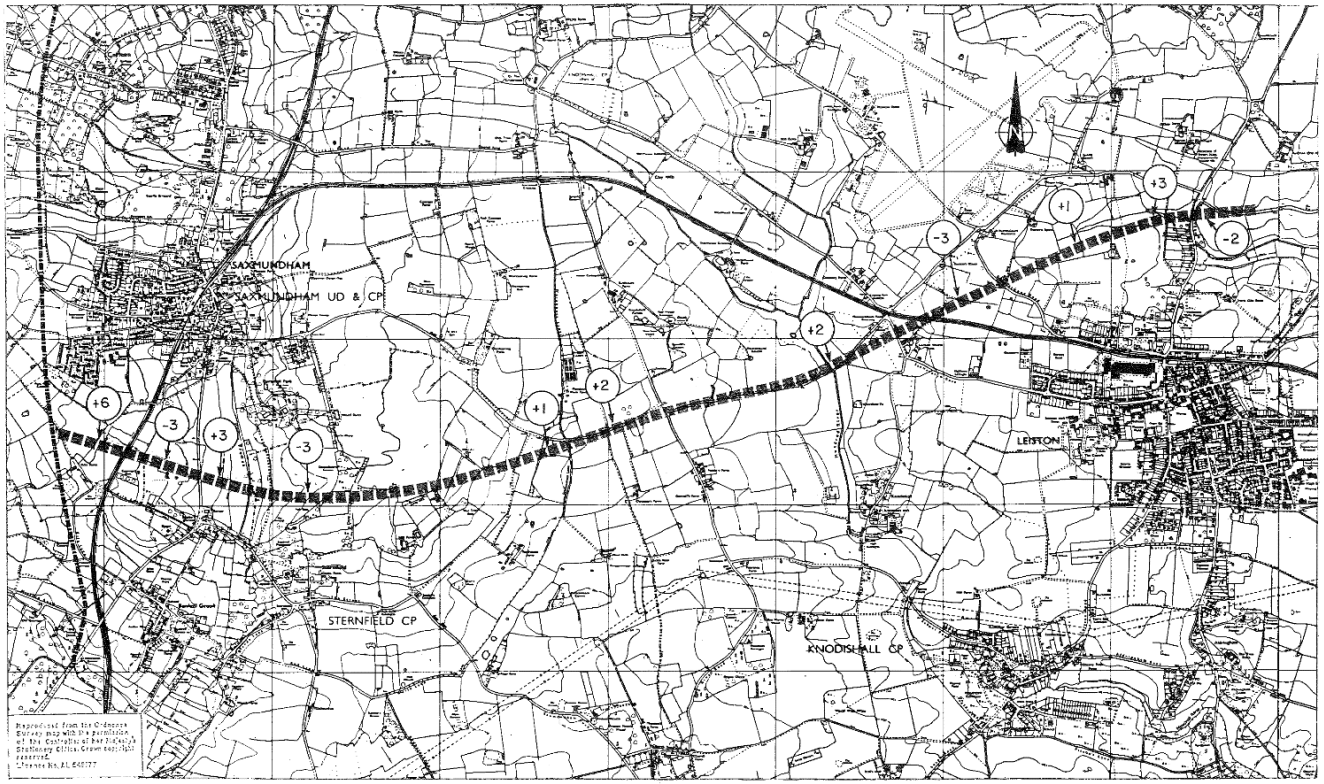
2.2.15 The appraisal identified that D2 would result in a journey time saving, as the majority of HGV traffic would original from the south (Ref. 1 and Ref. 14). This was considered to result in long term benefits to the area, increasing

'economic encouragement' to the town of Leiston. It would also provide relief to Benhall, Leiston and the A1094/B1069. However, the appraisal also identified that the D2 route would likely not be used by the workforce travelling to Sizewell from the north of the area.

2.2.16 Therefore, whilst route D2 reduces the number of properties which will be affected by Sizewell HGVs, the traffic levels on the B1122 were not expected to decrease substantially, and residents on the B1122 would likely experience disturbance and severance, albeit with reductions in HGVs (Ref. 13 and Ref. 14). Route D2 would also impact upon Buckles Wood (an Ancient Woodland) and the Fromus Valley landscape.

2.2.17 The provision of a link road was conditional upon construction of additional power stations at Sizewell (Ref. 14). However, as additional power stations were not constructed, a link road was not progressed.

Plate 2.1: D2 Route proposed in the 1989 CEGB Environmental Statement (Ref. 14)



Route of Link Road
+ 3 Approximate Height of Embankment (metres)
- 3 Approximate Depth of Cutting (metres)

SIZEWELL C POWER STATION
SCHEME PLAN
Fig.4

3 STAGE 1 CONSULTATION

3.1 Need for measures on the B1122 and option development

3.1.1 An initial transport strategy was prepared and presented at Stage 1 Consultation (referred to as the Stage 1 Transport Strategy) as part of the pre-application consultation process (Ref. 6). The Stage 1 Transport Strategy predicted that the B1122 would be the main route for Sizewell C construction traffic travelling via the highway to the development site.

3.1.2 The Stage 1 Transport Strategy identified that the *'current traffic flows on the B1122 are relatively modest and much lower than on the A12*' (Ref. 6). As such it was considered that Sizewell C traffic was not likely to cause any capacity or congestion problems on most of the B1122, though the junction of the A12 with the B1122 at Yoxford would require improvement. However, it was recognised that the proportional impact of Sizewell C traffic would be much greater on the B1122 than on the A12, or indeed other local roads, and has the potential adverse noise and amenity effects to a relatively small number of properties located adjacent to the B1122 and to the residents of Theberton.

3.1.3 At Stage 1 consultation, there were no proposals to mitigate potential noise and amenity effects along the B1122. However, SZC Co. sought views on the proposals for the Sizewell C project and committed to undertaking consultation with stakeholders to discuss the various forms of mitigation which could be provided.

3.1.4 In terms of consultation feedback, a total of 1,298 responses were received, of which, 507 commented on the question relating to potential impacts the construction would have on the local road network (Table 4.2 of Consultation Report). Of the 507 responses to this question, 104 responses commented specifically on the B1122 and raised concerns relating to the potential impact the increase in traffic would have on residents. Respondents also raised safety concerns, and noted how the B1122 was not designed to carry HGVs and that regular and possibly significant highway maintenance could be required.

3.1.5 A number of statutory consultees also raised concerns regarding the B1122. Suffolk Coastal District Council and Suffolk County Council (the Councils) submitted a joint response to Stage 1. In the response, the Councils raised concerns about potential traffic impacts on the B1122 and the impacts on

surrounding communities and asked for EDF to consider road schemes as a form of mitigation. Paragraph 8 of the response (Ref. 15) stated:

> *"the Councils recognise that there will be serious impacts on the B1122 and considers that further information is necessary on the traffic volumes likely on that road and through Yoxford and the mitigation necessary to deal with any impacts on the communities or environment. This may include road schemes considered for previous Sizewell projects"*

3.1.6 Yoxford Parish Council and Middleton-cum-Fordley Parish Council both noted that the B1122 is not fit for purpose. Yoxford Parish Council also stated that a roundabout for the junction with the B1122 and A12 would not be the best option, as this would slow traffic down and have a knock-on effect on the A1120 junction and Yoxford high street.

4 STAGE 2 CONSULTATION

4.1 Overview

4.1.1 Following the conclusion of Stage 1 consultation, SZC Co. undertook further development of the Sizewell C Project proposals and provided estimates of the scale of additional traffic anticipated on the B1122 at peak construction (as summarised in the Stage 2 Consultation Document (Ref. 7)).

4.1.2 The traffic modelling undertaken estimated that the future weekday all-vehicle daily traffic flows on the section of the B1122 between the junction with the A12 at Yoxford and the proposed Sizewell C construction site are estimated to range between around 3,750 and 5,550 vehicle movements per day, of which 5% of flows comprise HGV and bus movements (approximately 240 daily movements). It was estimated that Sizewell C traffic, during peak construction, would add approximately a further 1,250 vehicle movements at the western end of B1122 at Yoxford and a further 2,050 vehicle movements east of B1125, leading to a total of between 5,000 and around 7,600 vehicle movements per day. This represented an increase of around 37% at Theberton and 33% on the B1122 at Yoxford. The anticipated HGV and bus flows with Sizewell C traffic would increase to 1090 on a typical day at Theberton (Ref. 7).

4.1.3 SZC Co. identified a number of measures that could be implemented to mitigate the impacts of Sizewell C construction traffic on residents along the B1122 and road users, based on the estimated scale of additional traffic on

the B1122 at peak construction (Ref. 7), which were presented at Stage 2 consultation.

- speed limit reductions on various sections of the B1122
- an improvement of the B1122 to the west of the junction with Mill Street;
- enhancements to the pedestrian environment in Theberton; and
- an improvement to the alignment of B1122 between Theberton and the Sizewell C site entrance.

4.1.4 Further detail is provided in Table 4-1 below.

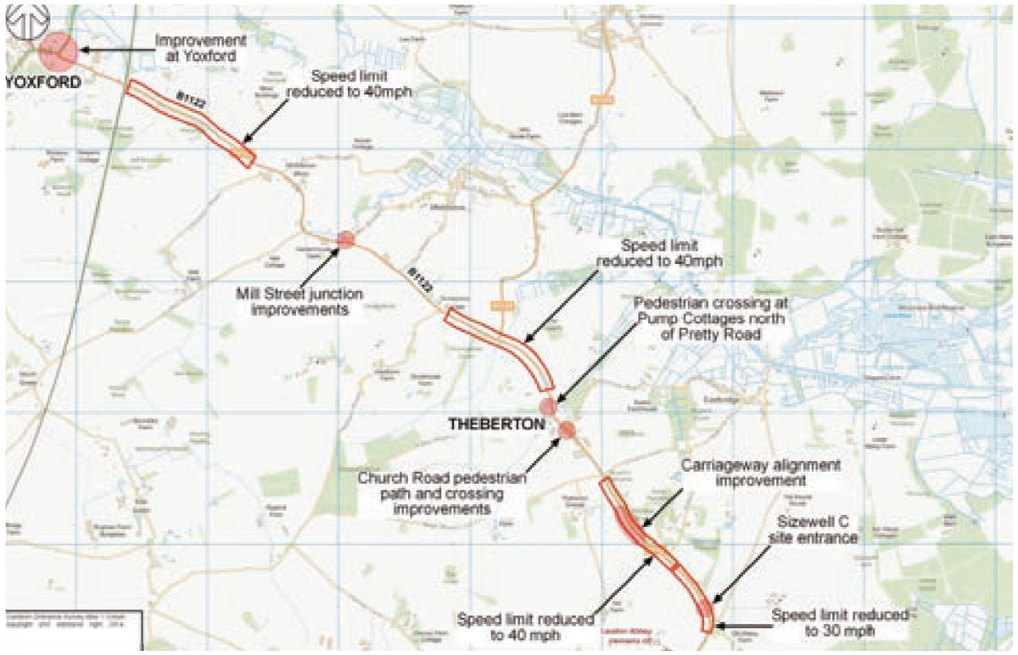
Speed limit reductions on various sections of the B1122

The current speed limit on the B1122 between the A12 at Yoxford and the proposed access road to Sizewell C varies along the road between 30 miles per hour (mph), 40mph and 60mph zones.

SZC co. would seek to reduce the speed limit of 60mph, which currently applies between the level crossing over the East Suffolk Line and Middleton Moor, Middleton Moor and Theberton, and between Theberton and the construction site entrance.

This would be reduced to a maximum of 40mph on the stretch between Middleton Moor and Theberton and a maximum of 30mph between Theberton and the construction site entrance.

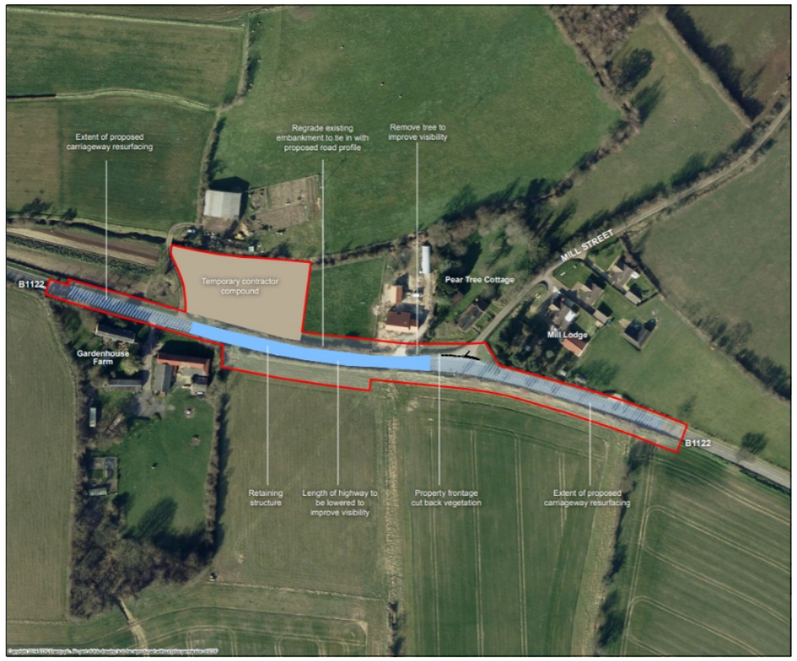
This improvement would require the support and sponsorship of SCC as the highway authority.



West of the junction with Mill Street

B1122 drivers have difficulty seeing traffic at the Mill Street junction and traffic leaving Mill Street is not able to see B1122 traffic approaching from the west until it is near the junction.

This improvement would reduce the road level west of the junction with Mill Street and improve the visibility for traffic on the B1122 and traffic exiting Mill Street.



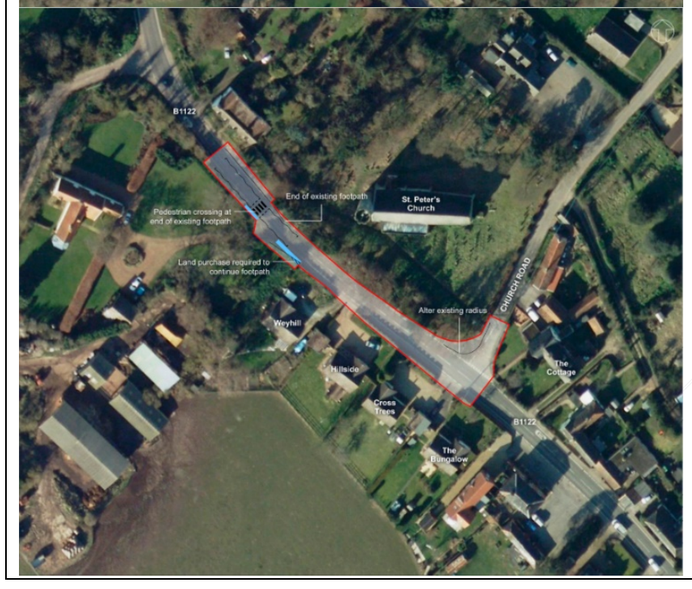
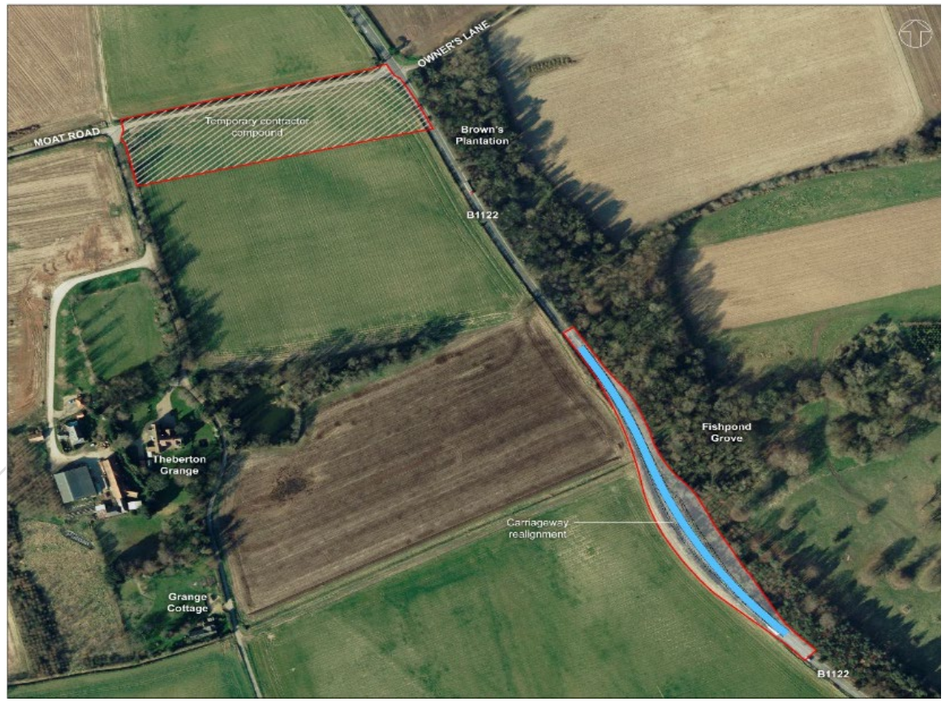
Pedestrian enhancements in Theberton	Alignment of the B1122 between Theberton and the Sizewell C construction site entrance
  Pump Cottages are located just to the north of the main section of the village. Whilst there is a short section of existing footway on the western side of the B1122 at this location, there is no connection to pavements or footways within the main village of Theberton. This option would create a new pedestrian crossing south of Pump Cottages and also a footpath on the eastern side of the B1122 to connect to the existing footway outside Ivy Cottages. In order to extend the existing footpath near Ivy Cottages and to connect with existing footpaths further south within Theberton, the design of a new pedestrian crossing and extension to the footpath near the Church of St Peter, Theberton, have been considered. SZC co. proposes a new pedestrian crossing on the B1122 at the point where the road meets the existing footpath through the addition of a short new section of footpath on the western side of the B1122	 The existing horizontal and vertical alignment of the B1122 immediately east of the Onner's Lane/ Moat Road provides poor forward visibility for 60mph. This improvement would realign the B1122 at this location to improve forward visibility for motorists.

Table 4.1: Summary of the Improvements considered at Stage 2 Consultation

4.2 Responses to Stage 2 consultation

4.2.1 This section summarises the responses received by SZC Co. in relation to the four improvements proposed during Stage 2 consultation. This information was presented within **ES Volume 6, Chapter 3** (Doc Ref. 6.7) [APP-450], as well as in the **Site Selection Report**, appended to the **Planning Statement** (Doc Ref. 8.4) [APP-591] and the **Consultation Report** (Doc. Ref 5.4) [APP-068], which were submitted with the application for development consent.

4.2.2 A total of 1,059 responses were received for the Stage 2 consultation, of which, over half of the responses (597 responses) commented on the question relating to B1122 road improvements (Table 6.3 of the **Consultation Report** [APP-068]). From the level of engagement, it was clear that the impact on local roads, and the B1122 in particular, were of significant importance to the respondents.

4.2.3 Concerns focused on how the proposed improvements did not go far enough, and that residents would still be impacted by the increase in traffic. One resident stated:

"the increase of traffic of traffic of both HGV's and buses transporting personnel to and from the site will considerably disrupt the lives of residents of Yoxford, Middleton Moor and Theberton"

4.2.4 Another resident voice concerns regarding the B1122 and stated:

> *"A far better option would be to build a new dedicated road running directly between the A12 and the Sizewell site. This would reduce the impact on local communities, improve the efficiency of deliveries by road to the Sizewell site, provide a second evacuation and emergency access route, and would be a useful asset for the area when the construction was completed."*

4.2.5 Other concerns raised by respondents included:

- The nature of the B1122 which was quoted as being *too narrow* and *twisty*, and has many residences situated along it. This nature of the road was considered by respondents as being an inappropriate evacuation route, especially when being used as the main artery for construction traffic.

- That it was considered to be unsuitable for use by construction traffic as well as emergency vehicles, school buses, agricultural vehicles and tourist coaches.
- Its location through historic villages, past Leiston Abbey, several listed properties and a retirement home.
- That the road was considered not wide enough for two HGVs to pass each other without encroaching on the pavement, or causing wing mirror strikes on pedestrians.
- That the infrastructure of the road itself was already failing and would be severely damaged by HGVs. To maintain the road significant highway maintenance could be required. This maintenance might necessitate overnight working to reduce disruption, major traffic management measures (to maintain a safe working environment) or even temporary closure of the B1122

4.2.6 In particular, Suffolk Coastal District Council and Suffolk County Council urged SZC Co. to look for alternatives to the B1122. Paragraph 10 (bullet 7) of the Stage 2 Joint Response (February 2017 (Ref. 16)) stated:

> *"We recognise that the B1122 has a relatively light traffic load for being a 'B' road, but it is the significant change in traffic volume and composition that gives rise to the extent of concerns, particularly for the residents of Yoxford, Middleton and Theberton. By contrast, the Stage 2 proposals from EDF Energy make very modest changes to the road, consisting of speed limits, pedestrian facilities and some road alignment. The Councils consider that, for the B1122 to work as the main access route to the site, significant further measures need to be undertaken to mitigate the impact on communities. EDF Energy is urged to look at alternatives.., including those put forward in AECOM report [Ref. 17]…"*

4.2.7 Concerns relating to potential traffic impacts on the B1122 were also expressed by other organisations including Suffolk Fire and Rescue Service, East of England Ambulance Service, the Suffolk Constabulary, Sizewell Parish Liaison Group, and by the following town and parish councils:

- Darsham Parish Council;
- Leiston-cum-Sizewell Town Council

- Middleton-cum-Fordley Parish Council
- Woodbridge Town Council
- Yoxford Parish Council
- Westleton Parish Council
- Wenhaston with Mells Hamlet Parish Council
- Waldringfield Parish Council
- Theberton and Eastbridge Parish Council
- Swefling Parish Council
- Saxmundham Town Council
- Kelsale-cum-Carlton Parish Council
- Blythburgh, Blucamp and Hinton Parish Council

4.2.8 Theberton and Eastbridge Action Group on Sizewell (TEAGS) stated that it does not consider that minor changes to the B1122 would address the issue:

> *"Minor changes to the B1122, such as speed limits, badly planned crossings and straightening small areas of bends amount to no real change and fail to address the real issue that the B1122 is totally unsuitable for the massive increase in construction and related traffic."*

4.2.9 These concerns were also expressed by Yoxford Parish Council, who called for a relief road. It stated in its response that:

> *"The B1122 is not suitable for the amount and size of construction traffic required for the proposed construction (approximately the size for Sizewell A & B combined). We ask that EDF consider other options like the D2 relief road that was proposed for Sizewell B".*

4.2.10 Overall, at Stage 2, it was clear that respondents to the consultation remained concerned about the proposal to use the B1122, and the potential impacts this could have on residents of Yoxford, Middleton Moor and

Theberton. In short, respondents felt the mitigation proposals did not go far enough.

4.2.11 SCC had also commissioned a further study from consultants Accent to research community attitudes to impacts of increased traffic associated with the construction of the Sizewell C power station. The study was commissioned to inform SCC in its discussions with SZC Co. on the best means of addressing impacts from increased traffic. The Accent study consisted of four stages: a literature review, an initial consultation survey with 267 participants, 20 depth interviews, and a stated preference survey with 105 participants (Ref. 18).

4.2.12 Accent published its report in May 2016, and found there were significant concerns regarding the impact on local communities due to the increase in traffic volumes in particular of HGVs and buses along the B1122. This report stressed the concerns of local residents about the increase in traffic volume, speed, and proportion of HGVs, and the related impacts of noise, vibration, accident risk, and extra time added to car / bus journeys.

5 STAGE 3 CONSULTATION

5.1 Sizewell link road (in the Road-led Strategy)

a) Stage 3 proposals for the Sizewell link road

5.1.1 As summarised in **Chapter 4**, in response to Stage 2 consultation feedback received from the parish councils at Yoxford, Theberton and Middleton-cum-Fordley, together with the Theberton and Eastbridge Action Group on Sizewell, and the public, showed respondents were strongly opposed to using the B1122 as the main route for construction traffic (further detail is provided in Consultation Report (Doc Ref. 5.4) [APP-068], submitted with the application for development consent). As part of this feedback, a number of respondents proposed that SZC Co. review “route D2”, proposed by SCC and CEGB in the 1980’s (see **Section 3.2** for further information) should be provided as part of proposals.

5.1.2 SZC Co. reviewed this feedback and continued to develop proposals to address the concerns raised in relation to the use of the B1122 as the approved HGV route for Sizewell C construction traffic and to address concerns about traffic impacts on the B1122. Decisions made by SZC Co.

and work undertaken that informed the design development process included:

- Continued consideration by SZC Co. of the road-led and rail-led freight movement strategies. Both strategies would require the movement of freight by both road and rail, however with the road-led option up to 30% of materials would be moved by rail, and the remaining 70% by road (construction materials by weight). The rail-led strategy in comparison would allow for 55% of materials to be moved by rail and 45% by road.

- An independent review of the 'D2' route considered by SCC and CEBG in the late 1980s was prepared by consultants on behalf of SCC in 2014 against smaller bypasses of Middleton Moor and Theberton (Sizewell C, Route D2 and B1122 Study–December 2014) which was referred to in SCC and SCDC joint response (Ref.17)). This study concluded in respect of the "D2" scheme: "*The main advantages of this route include improving the air quality and noise levels within Middleton Moor and Theberton by reducing traffic in the two villages*."

- Traffic modelling undertaken, prior to Stage 3 consultation, by SZC Co. demonstrated that future flows by the time of Sizewell C peak construction (but without Sizewell C-related traffic) are predicted to rise to between Yoxford and the Sizewell C main development site around 4,600 and 6,800 vehicle movements per day. During the construction of Sizewell C, on a typical day, the average number of HGVs during peak construction would be 750 movements (375 movements each way) in a road-led strategy. During the busiest day, this would be 1500 movements (750 movements each way). This would lead to an increase in the daily traffic volumes on the B1122 to 10,300 vehicles at Theberton during peak construction (all traffic including HGV, LGV and buses). Further details are provided in the Stage 3 Development Proposals document (Ref. 8).

5.1.3 Noise analysis undertaken by SZC Co. showed that under both strategies, the noise impacts from these increased traffic volumes in Theberton would, at times, be significant and summarised in the Stage 3 Development Proposals document (Ref. 8)). Whilst the traffic modelling demonstrated that the B1122 is not close to its traffic carrying capacity, SZC Co. has recognised that the environmental impacts from, in particular, noise, vibration and severance from the Sizewell C traffic would require mitigation under both a road and rail-led strategy (as set out in Stage 3 Development Proposals document (Ref. 8)).

5.1.4 In addition, regular and possibly significant highway maintenance would likely be required, and may have necessitated overnight working to reduce

disruption, major traffic management measures (to maintain a safe working environment) or even temporary closure of the B1122. Such measures could impact on B1122 communities and, as alternative routes for HGV to the Sizewell C construction site would be needed during such maintenance, other communities in the area (as set out in the **Selection Report**, appended to the **Planning Statement** (Doc Ref. 8.4) [APP-591] which was submitted with the application for development consent).

5.1.5 In light of the feedback received in response to Stage 2 consultation and the work highlighted above, SZC Co. proposed to construct a new road from the A12 (the main route corridor between Ipswich and Lowestoft for Sizewell C construction traffic on the highway network) to the main development site to relieve the B1122 of the additional traffic volumes associated with Sizewell C construction and address traffic impacts on the B1122 under the road-led strategy.

5.1.6 Under a rail-led strategy, an average of up to 225 Heavy Goods Vehicle (HGV) trips in each direction per day would need to access the main development site during the peak construction period. Sizewell C and general traffic flows on the B1122 through Middleton Moor total 6,250 vehicles per day, and there would be fewer HGV (representing 7% of the total flow) than under the road-led traffic flow (equates to 11% of the total flow). Therefore, a new road from the A12 to the main development site was not proposed under the rail-led, with a shorter bypass around Theberton proposed instead. Further details are provided in **Section 5.2**.

5.1.7 In order to achieve the most benefit of alleviating traffic impacts associated with construction of Sizewell C, SZC Co. would instruct park and ride buses and goods vehicles to use this new link road reach the main development site. However, it was considered that an important factor in encouraging the use of the Sizewell link road is that drivers generally choose routes to their destination which minimise their journey time. Therefore, it is important that the route of any new link road from the A12 should be as short as is practical, whilst observing environmental constraints, thereby reducing journey times compared with use of the B1122.

5.1.8 Before selecting the preferred route for the new road, SZC Co. developed four main routes (three of which had a north and south alternative alignment) following a review of previous work undertaken within an area south of Saxmundham to the south of Yoxford to identify potential routes, including the work considered by SCC and CEGB in the late 1980s and taking into account the local topography and environmental constraints. These four

options are illustrated on **Plate 5-1** and described as follows, and summarised at Stage 3 consultation:

- **Route W** – a north and south alignment was considered. Route W north was approximately 8.2 km in length, whereas Route W south was approximately 7.5 km in length.

  - Route W south was similar to the Route D2, which was previously proposed for the construction of Sizewell B in the 1980s. The route would start at the A12, just south of Park Farm Covert, then would have climbed, crossing over the East Suffolk line via a new bridge of approximately 15 – 20 metres (m) span to meet the B1121 at grade with a new roundabout. Travelling east, it would cross the River Fromus on a new bridge, and then pass south of Bloomfield's Covert. It would continue east, running just south of and parallel to the B1119 Saxmundham Road before crossing a watercourse near Woodfield Pit. It would then run south of Leiston House Farm, and crossed Saxmundham Road between the farm and Highbury Cottages. Turning north, it would require a crossing of the Saxmundham to Leiston branch line at a new level crossing. It would then continue north, and just to the east of Buckle's Wood. It would cross Buckleswood Road at grade and then continue north-east until it reached Abbey Road where Abbey Lane and Lover's Lane meet the B1122.

    Route W south is broadly the same alignment as the D2 route proposed during the construction of Sizewell B in the late 1980s. The differences between the alignments are a different curvature from where the route departs the A12 to Grove Road due to updated design standards since the development of the D2 route. The alignment also differs where the routes cross the Saxmundham to Leiston branch line, where Route W south crossing is perpendicular to the railway rather than skewed as shown on the D2 route, also to reflect updated design standards and minimise the length of the crossing.

  - Route W north was a hybrid route as it would have utilised the western section of the Route W south alignment and the eastern section of Route X (discussed below). The section of road joining the two routes would have run north of Clouting's Farm, north of Osierground Covert, but south of Westhouse Farm before crossing the Saxmundham to Leiston branch line at a level crossing and a watercourse, before joining Route X.

- **Route X** - Route X was approximately 6.6km in length. Route X would start on the B1121 in Saxmundham, north of Clayhills Road and

opposite Carlton Road. The route would have risen up to cross firstly the River Fromus, and then the East Suffolk line on new bridges. It would have then turned south to cross Clayhills Road, running parallel and just north of the Saxmundham to Leiston branch line past Knodishall Crossing, Kelsale Covert and Westhouse Cottage. It would turn north from the railway near Westhouse Crossing, crossing a watercourse and then headed north-east, following the alignment of the former RAF Leiston runway to the north-west of the Cakes and Ale caravan park. North of Hill Farm, the route would have turned east to join the B1122 at the proposed new roundabout forming the main construction site entrance.

- **Route Y** - Route Y would run north of Kelsale and consideration was given to two alternative connections to the A12 at the western end. Route Y north was approximately 8.0 km in length, whereas Route Y south was approximately 7.8 km in length.

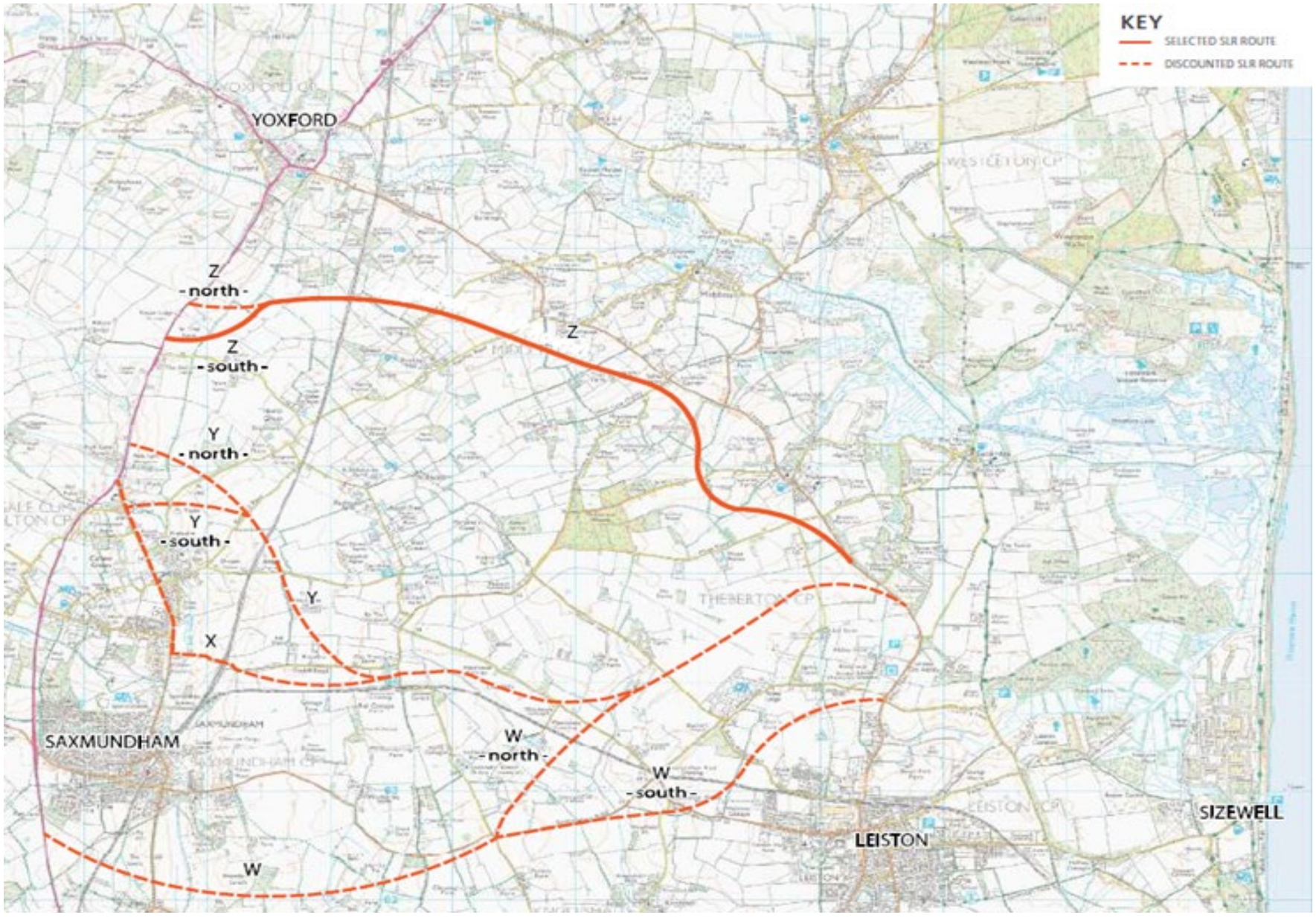
  - Route Y south would have started at Dorley's Corner just south of Kelsale Place. It would have continued east, just north of Tiggins Lane, and then south to cross Butcher's Road at grade;
  - Route Y north would have commenced on the A12 between Park Gate Farm and Laurel Farm. The route would have continued to the south-east, bridging over Tiggin's Lane, and then met Butcher's Road, also at grade, at the same point as Route Y south.
  - South of Butcher's Road, the route would have been common to both alignments. It would have bridged under the East Suffolk line just north of Bridge Farm and continued south to the west of the White House, east of Hill Farm and west of Oak Tree Farm. From Knodishall Crossing east, it would have followed the same alignment as Route X.

- **Route Z** - Route Z had two alternative connections to the A12 at the western end. Route Z north was approximately 6.3km in length, whereas Route Z south was approximately 6.8 km in length.

  - Route Z was the furthest north and is the closest to the B1122. This route also had two potential alignments that were initially considered to tie in to the A12 at its western end. Route Z north would have started from the A12 north of Kelsale Lodge Cottages and run east to cross the East Suffolk line on a new overbridge south-east of Bobbett's Wood. Route Z south would start from the A12 just north of Town Farm Lane then turn north past Buskie Farm and cross the East Suffolk line in the same location as Route Z north.

- From the railway bridge, there would be a single Route Z alignment (common to the north and south alignments). The route would head east, crossing Littlemoor Road and Fordley Road. The route would continue to the south of Gardenhouse Farm, broadly parallel to the B1122 past Valley Farm near Anneson's Corner. It would then pass through Plumtreehills Covert, crossing Pretty Road and continue to the south-west of Theberton. After crossing Moat Road, the route would join the B1122 alongside Brown's Plantation.

Plate 5.1: Location of Sizewell link road routes considered.



5.1.9 SZC Co. undertook a high-level environmental appraisal of the four proposed routes (and their variations), summarising the potential effects on PRoWs, local road character, heritage assets, landscape designations, landscape character and views, and residential amenity, and presented this at Stage 3 consultation (Ref. 8). This is reproduced and presented in **Table 5-1**.

Table 5.1: High level appraisal of the benefits and constraints of Routes W (north and south), X, Y (north and south) and Z (north and south)

Route	Key Environmental Factors					
	PRoW	Roads and Railway	Heritage Assets	Landscape Designation	Landscape Character	Residential Amenity
W (north) 8170m	12	6 roads 2 railways	Potential effects on the setting of a number of historic assets (Grade I, II and II*) along each route. Key assets to consider include Hurts Hall and Leiston Abbey.	Passes in close proximity to the north of 1 SLA.	No landscape characteristics have been identified that would be considered to be of a greater value than would be locally appreciated.	3 residential areas: • to the south of Hurts Hall; • to the west of Leiston; and • at the connection to the B1122.
W (south) 7478m	14	6 roads 2 railways				
X 6632m	4	roads 1 railway* * Crossing of railway would require substantial engineering works.	Potential effects on the setting of a number of historic assets (Grade II and Grade II*) with the extent of Saxmundham.	n/a	No landscape characteristics have been identified that would be considered to be of a greater value than would be locally appreciated.	Within the extent of Saxmundham.
Y (north) 8041m	5	8 roads 1 railway	Potential effects on the setting of Oak Tree Farmhouse (Grade II).	n/a	No landscape characteristics have been identified that would be considered to be of a greater value than would be locally appreciated.	Residential properties at Bridge Farm and Orchard House.
Y (south) 7786m	5	8 roads 1 railway				

Route	Key Environmental Factors					
	PRoW	Roads and Railway	Heritage Assets	Landscape Designation	Landscape Character	Residential Amenity
Z (north) 6390m	12	5 roads 1 railway	Potential effects on the setting of a number of historic assets (Grade II) along each route. Key assets to consider include Dovehouse Farmhouse, Theberton Hall and The Gates / Walls at Theberton Hall.	Passes in close proximity to the south of 1 SLA.	No landscape characteristics have been identified that would be considered to be of a greater value than would be locally appreciated.	2 residential areas: • to the south of Fir tree Farm and north of Buskie Farm; and • to the south of Valley Farm and Annesons Cottages.

5.1.10 Route W is located to the south of Saxmundham. The proposed alignment provides appropriate consideration to the PRoW network and local road character, but it is likely that the necessary engineering works to traverse the landform would have a significant adverse effect on the existing open landscape character. The route also passes near to a number of existing heritage assets including Hurts Hall and Leiston Abbey. There is potential for the significance of several heritage assets to be affected adversely due to changes in their setting resulting from the route's alignment.

5.1.11 Route X utilises the existing B1121 to take traffic off the A12. It is likely to have the greatest effect on the existing road network where it shares the B1121 through Kelsale and Carlton. It would also require engineering works to cross the East Suffolk railway line, and the road from the east of the railway that would traverse the landform would have a significant adverse effect on the existing open landscape character which would affect the local landscape character. The overall effect of increased traffic on the road network has the potential to have a significant effect on the amenity of local residents within Kelsale and Carlton and some listed buildings in Saxmundham.

5.1.12 Route Y is positioned to the north of Saxmundham and Kelsale, and is likely to have a reduced effect on the existing local road network when compared to Route X as it would use a shorter section of the B1121 in the southern alignment, and would avoid using it completely for the northern alignment.

However, the proposed junction with the A12 is still located near existing settlements and has the potential to impact on the amenity of residents. The complexity of crossing the local road and PRoW networks and the effects on landscape character to the north of Kelsale would be potentially significant.

5.1.13 Route Z connects with the A12 away from existing settlements and thus amenity effects on local residents would be minimised in comparison to Routes X and Y. Whilst the proposed alignment gives consideration to Theberton Hall and the listed buildings within Theberton village, there is potential for the significance of several heritage assets to be affected adversely due to changes in their setting resulting from the route albeit to a limited extent. Elsewhere, the route is generally positioned away from existing properties with minimal effect, although at Annesons Cottages and Valley Farm there is a potential to cause effects on the amenity of residents. Effects on the existing road network are likely to be minimal, although several PRoWs would be bisected and adequate provisions would need to be provided.

5.1.14 SZC Co. selected Option Route Z (South) as the preferred option, as stated in Stage 3 consultation documents.

ii) Responses to Stage 3 consultation regarding the Sizewell link road

5.1.15 SCC and ESC welcomed the provision of a relief road for the B1122 at the Stage 3 consultation, though they requested that the proposed route is supported by further evidence. The Council's did however accept that Route X and Y would have had significant impacts on residential areas in Kelsale and the north of Saxmundham (Ref. 17). The Councils requested further highways analysis, consideration of other environmental matters (such as landscape and visual, heritage, surface water and flood risk and ecological assessments) and consideration of any impacts on allocations within the District Council's Local Plan.

5.1.16 SCC as the Local Highway Authority requested that SZC Co. revisit the southern route (Route W) as a potential alternative route to the proposed northern route (Route Z), with regards to transport benefits, legacy potential and scheme impacts.

5.1.17 The Sizewell link road was supported by other respondents, however several respondents, including parish councils along the B1122, suggested the route was too close the existing road and should be located further to the south.

Other comments raised concerns about access to, and egress from the new road.

iii) 2019 Peer Review

5.1.18 Following the completion of Stage 3 consultation, SZC Co. reviewed the comments and undertook further analysis of the alternative routes to ensure the most appropriate alignment was proposed. A peer review of the Sizewell link road was submitted to SCC in April 2019 (provided within Appendix 12 to the Sizewell link road - Principle and Route Selection Response Paper) which reviewed the selection process and provided an opinion of the preferred option for the link road. The findings were:

- Route Option W: The most southerly of the four route options and well placed to intercept the predicted origin of HGV traffic (85% from the south). The connection point with the A12 has sufficient space and visibility to accommodate a high capacity junction. Significant engineering works would be required to climb up to cross the East Suffolk railway line. Once over the railway and the B1121, the topography falls gently to the east allowing long range views of the alignment from roads, public footpaths and communities. Generally, there are no communities along the B1119 that benefit from being bypassed other than Saxmundham itself. The highly engineered, DMRB compliant road would be out of character with the area that is characterised by country lanes that follow field boundaries.

- Route Option X: Leaves the A12 Saxmundham bypass at an existing priority junction onto the B1121 and draws traffic into Kelsale and Carlton; the junction may need upgrading. The route runs parallel to the C class Clayhills Road and would need to cross the East Suffolk railway line on a bridge structure. The topography is flat and enclosed by tree belts between the railway crossing and Oak Tree Farm allowing only short and medium range views of the alignment from roads, public footpaths and communities. Once past Oak Tree Farm, the topography falls gently to the east allowing long range views of the alignment from roads, public footpaths and communities. The highly engineered, DMRB compliant road would be out of character with the area that is characterised by country lanes that follow field boundaries.

- Route Option Y: The connection point with the A12 is constrained and forward visibility standards along the A12 may be difficult to achieve. The topography falls away quickly from the A12 and, in combination with tree belts restricts views to only short and medium range from

roads, public footpaths and communities. Past Oak Tree Farm, it adopts the alignment of Route Option X where the topography falls gently to the east allowing long range views of the alignment from roads, public footpaths and communities. The highly engineered, DMRB compliant road would be out of character with the area that is characterised by country lanes that follow field boundaries.

- Route Z: The most northerly of the routes and, on the face of it, not well placed to intercept the predicted origin of HGV traffic (with the majority coming from the south). However, both connection points are adequate to form new junctions. The topography is relatively flat between the A12 and the railway which results in long distance views from some roads, public footpaths and communities. The railway is in a cutting where it is crossed. Once over the railway, the topography undulates which, in combination with tree belts, restricts views to only short and medium range from roads, public footpaths and communities. This option is the most related to the communities along the B1122 that it seeks to relieve and therefore has a logic that the other routes do not have. An effective bypass of both Middleton Moor and Theberton is achieved to address the environmental issues identified but there are impacts caused to some isolated properties. The highly engineered, DMRB compliant road would be out of character with the area immediately west and east of the railway which is characterised by an open landscape and country lanes that follow field boundaries.

5.1.19 The independent assessment found that Route Z scored the best against the assessment criteria and recommended this route as the preferred option.

5.2 Theberton Bypass (in the Rail led strategy)

i) Stage 3 proposals for the Theberton Bypass

5.2.1 Following Stage 2 consultation SZC Co. was considering either a road-led and rail-led strategy for the delivery of freight to the Sizewell C site.

5.2.2 Both the road and rail led strategies included the movement of freight by both road and rail, with the road-led option allowing for up to 30% of materials to be moved by rail, and the remaining 70% by road (construction materials by weight). The rail-led then allowed for 55% by rail and 45% by road.

5.2.3 Traffic modelling undertaken by SZC Co. demonstrated that future flows by the time of Sizewell C peak construction (but without Sizewell C-related traffic) are predicted to rise to between Yoxford and the Sizewell C main development site around 4,600 and 6,800 vehicle movements per day (as set out in Stage 3 Development Proposals document (Ref. 8)). Under a rail-

led strategy, an average of up to 225 HGV trips in each direction per day would need to access the main development site during the peak construction period. In addition, the B1122 would also be used by construction workers arriving by car, Light Goods Vehicles (LGVs) from the north and park and ride buses from both the northern and southern park and ride sites. This would lead to an increase in the daily traffic volumes on the B1122 to 9,150 vehicles at Theberton during peak construction (all traffic including HGV, LGV and buses). Sizewell C and general traffic flows on the B1122 through Middleton Moor total 6,250 vehicles per day, and there would be fewer HGV (representing 7% of the total flow) than under the road-led traffic flow (equates to 11% of the total flow).

5.2.4 Whilst traffic flows on the highway network would be lower under a rail-led strategy, SZC Co. has recognised that the environmental impacts from, in particular, noise, vibration and severance from the Sizewell C traffic on the B1122 would require mitigation for residents within Theberton under both a road and rail-led strategy. However, the flows on the B1122 through Middleton Moor would be lower than in the road-led strategy and the noise analysis show, presented at Stage 3 consultation, showed that the resultant noise impacts are likely to be not significant at the lower total traffic and HGV volumes in the rail-led strategy.

5.2.5 Therefore, in response to Stage 2 feedback, SZC Co proposed to construct a bypass of Theberton under a rail-led strategy to relieve the B1122 through Theberton of the additional traffic volumes associated with Sizewell C construction. To provide traffic relief to the village of Theberton any bypass would need to start between Middleton Moor and Theberton, and end on the B1122 east of Theberton, close to the main construction site entrance.

5.2.6 An independent review of smaller bypasses of Middleton Moor and Theberton was prepared by consultants on behalf of SCC in 2014 (Sizewell C, Route D2 and B1122 Study–December 2014) (Ref.17)). As part of this study, SCC presented to two options for a bypass of Theberton.

- Option 1: Theberton East – a bypass to the east of Theberton.

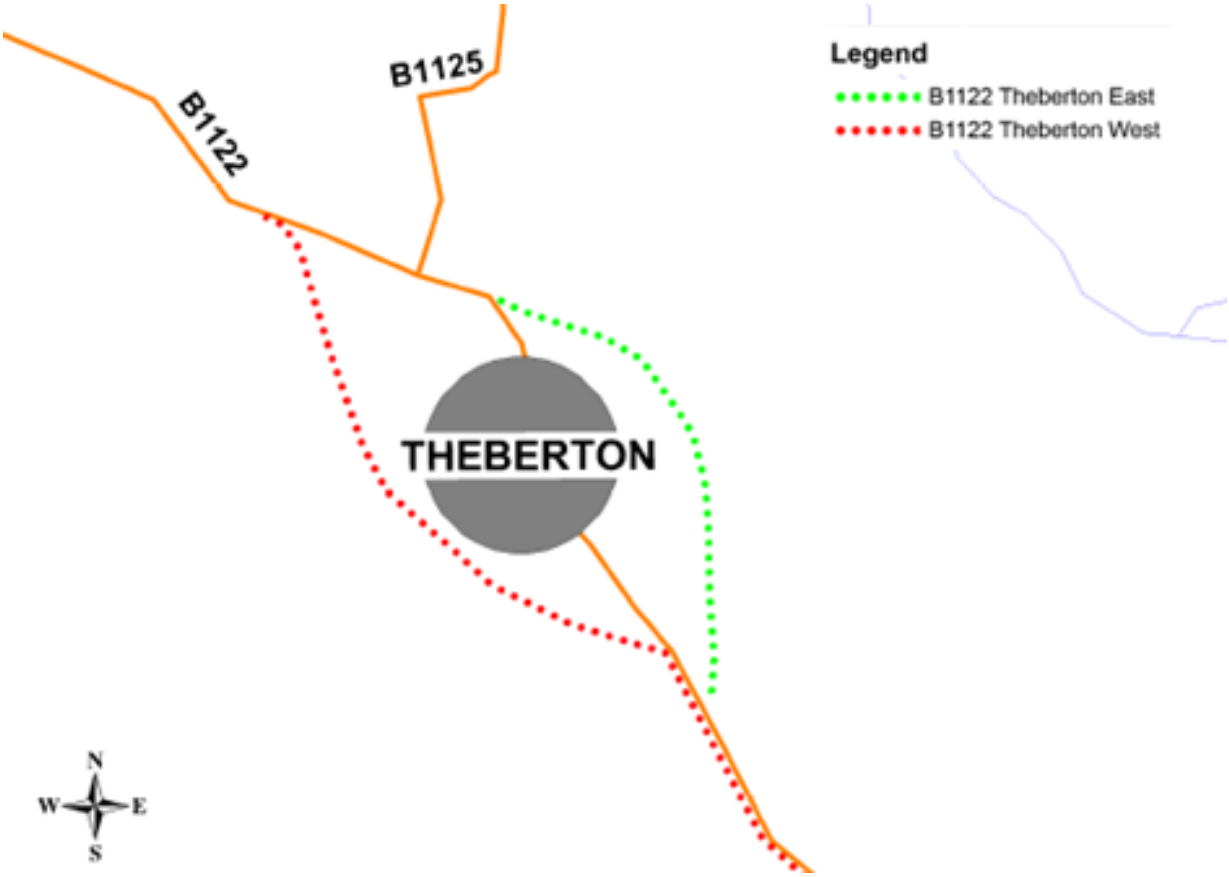
  This option is a single carriageway bypass that would pass to the east of Theberton. The route is approximately 2.6km. The bypass would leave the existing B1122 to the north of Theberton, to the south of Leiston Road, passing east of Theberton and rejoining the B1122 at the junction with Onner's Lane. Then the road follows the existing course of the B1122 south of Theberton, from the junction with Onner's Lane and Moat Road, southwards until the point where the road curves to the south-west at Old Abbey. The route continues along a similar line as the current

B1122 with levelling of the existing line and some alignment improvements where necessary. The final section of the scheme is common to both Theberton West and Theberton East and will be referred to as the B1122 Road improvement.

- Option 2: Theberton West – a bypass to the west of Theberton.

  This option is a single carriageway bypass that would pass to the west of Theberton. The bypass would be approximately 3.1km.The route would leave the existing road, B1122, to the north of Theberton, north of Leiston Road and south of Hawthorn Road, passing west of Theberton, crossing Pretty Road and rejoining the B1122 at Moat Road. Then the road follows the existing course of the B1122 south of Theberton, from the junction with Onner's Lane and Moat Road, southwards until the point where the road curves to the south-west at Old Abbey Staggered junctions are proposed where Pretty Road joins the Theberton West Route

Plate 5.2: Location of Theberton bypass routes considered by SCC (Ref.13)



5.2.7 SZC Co. reviewed the options developed by SCC and selected the bypass to the west as their preferred option to present at Stage 3 in the rail-led strategy.

ii) Responses to Stage 3 consultation regarding the Theberton bypass

5.2.8 Comments about the proposed Theberton bypass were similar to those concerning the Sizewell link road. Some respondents felt that the proposed bypass would still result in congestion, noise, vibration damage, air pollution and risk of accidents on residents and visitors.

5.2.9 In addition, it was also commented that a bypass would cause damage to the landscape, cut off access to Pretty Road and that the combination of these impacts would deter visitors, affecting the viability of local businesses.

Additionally, respondents also expressed concern about the impact of the bypass on heritage assets, including Theberton Hall.

6 STAGE 4 CONSULTATION

6.1 The Integrated Freight Strategy

6.1.1 During Stage 3 consultation two freight delivery options for the Sizewell C Project: a rail-led and road-led option were consulted upon. Both options included the movement of freight by both road and rail.

6.1.2 In the rail-led strategy, SZC Co. proposed the construction of a Theberton bypass instead of a series of small-scale improvements in the village. The bypass would relieve the village of all Sizewell C traffic and existing through-traffic. This would ensure that the traffic and environmental impacts in Theberton would be reduced. The rail-led strategy would also include the use of the construction of a rail extension which would branch off the existing Saxmundham to Leiston line into the main construction area on a temporary basis, and would necessitate the construction of a 'passing loop' (a section of double track) on the East Suffolk line between Ipswich and Saxmundham. Additional signalling works and upgrades to 45 level crossings would be required between Ipswich and Saxmundham to enable trains to be dispatched more efficiently along this section of line.

6.1.3 In the road-led strategy, where the traffic impacts are higher as more freight is carried by road, the Sizewell link road is proposed. The route would connect to the A12 north of Saxmundham and ends close to the main site access on the B1122. It would relieve Theberton and Middleton Moor of through-traffic. It also relieves Yoxford of Sizewell C traffic travelling to and from the south.

6.1.4 Since the start of the Stage 3 consultation, SZC Co. has worked closely with Network Rail. This included further assessments of the estimated programme and cost of the additional rail infrastructure and works required for the rail-led strategy. In their Stage 3 consultation response, Network Rail stated that they had identified a number of risks to implementing the full infrastructure required for the rail-led strategy that could potentially impact on the programme for delivery of rail upgrades on the East Suffolk line. As these rail works are crucial for the safe and effective operation of freight delivery to site under the rail-led strategy, any delay in their completion would have an impact on the delivery of the rest of the Project. These concerns led SZC Co. and Network Rail to explore alternative ways to use rail to deliver freight to site while reducing the risk of programme delays to the Project. Network Rail identified a gap in the passenger timetable that would allow for an additional train path along the rail network during the day without impacting the existing

passenger service. Historically this train path was used by Sizewell A to transport nuclear fuel to and from the operational power station. As Sizewell A has entered the decommissioning phase it no longer requires use of this path.

6.1.5 SZC Co. therefore proposed a third strategy at the Stage 4 consultation: the Integrated Strategy. This sought to maximise the use of rail by committing to those rail works which could be carried out by SZC Co., or where there was sufficient programme certainty. This strategy would include the provision of both the Sizewell link road and the green rail route, as well as upgrades to the Saxmundham to Leiston branch line. Further details are presented in the Stage 4 Consultation Document (Ref. 10) and presented in the **Consultation Report** (Doc Ref. 5.1) [APP-068], submitted with the application for development consent.

6.1.6 The traffic modelling was updated between Stages 3 and 4. At Stage 3 the traffic modelling assumed that the "busiest day" for HGV construction traffic would require twice the number of HGVs required on a "typical day". However, learning from Hinkley Point C has shown that the construction of Sizewell C could reliably be delivered with fewer HGVs on the busiest day under all strategies. The modelling was therefore updated based on the assumption that the busiest day would require only around 1.5 times the number of HGVs required on a typical day. The anticipated traffic flows for Sizewell C traffic would be lower than in a road-led strategy at Stage 3. This reduce the busiest day HGV from 1500 two-way HGV movements (750 HGVs in each direction) (considered in Options appraisal 2) to 1,000 two-way HGV movements (500 HGVs in each direction).

6.2 Responses to the Stage 4 Consultation regarding the Sizewell link road

6.2.1 The Stage 4 consultation focussed on red line changes as a result of design development and consideration of whether all or part of the Sizewell link road (option z) should be temporary only, as well as presenting a third freight management strategy (the integrated strategy). However, respondents still made it clear in their responses that the B1122 is unsuitable for SZC construction traffic.

6.2.2 The Councils (Suffolk County Council were at this point now working jointly with East Suffolk Council, formerly Suffolk Coastal and Waveney Districts),

continued to welcome the need for mitigation on the B1122. They stated at paragraph 233 that:

6.2.3 "the Councils welcome the inclusion of mitigation to relieve the impacts of construction traffic using the B1122, and welcome that EDF Energy accept that, also for the integrated strategy, the numbers of HGVs justify mitigation along the entire length of the B1122 and the A12 through Yoxford rather than just at Theberton"

6.2.4 Suffolk County Council requested further discussions with SZC Co. on the retention or removal of parts of the Sizewell Link Road. However, East Suffolk Council noted at paragraph 267 of the joint response that they see the link road as a legacy benefit:

> *"ESC do not support removal of a Sizewell Link Road post-construction and consider the reduction in use of the former B1122 by HGV and other vehicles resulting from a new Sizewell Link Road to be a legacy benefit to local communities, as will a Sizewell Link Road offering a HGV route to Sizewell A, B and C".*

6.2.5 Following completion of Stage 4 consultation and review of the technical capability and consultation responses, the integrated freight management strategy was progressed for the application for Development Consent. The Sizewell link road was therefore proposed rather than the Theberton Bypass.

7 DESIGN DEVELOPMENT AND PREPARATION OF THE ES FOR THE DCO APPLICATION SUBMISSION

7.1.1 Whilst Route Z south was SZC Co's preferred alignment for the Sizewell link road, it is recognised that its construction and operation has the potential to result in significant adverse effects without further mitigation.

7.1.2 **Table 7-1** below summarises mitigation embedded within the design of the Sizewell link road to minimise effects on noise sensitive receptors, ecology, landscape and visual amenity, historic environment, users of PRoW, agricultural land and holdings, groundwater, surface water, and flood risk. The design of the development proposed in the application for development consent is provided in **ES Volume 6, Chapter 2** and associated figures.

Table 7.1: Embedded mitigation

Impact	Mitigation
Changes in noise levels experienced at noise sensitive receptors	The site boundary has been designed to maximise the separation distance of construction works and the proposed development from noise sensitive receptors where reasonably practicable. The location of the roundabout and road link from the route of the proposed Sizewell link road to the B1122 (Yoxford Road) was sited to increase the distance to Middleton Moor
Loss of habitat and disturbance of protected species	Existing woodlands, scrub and hedgerows will be retained where possible. The extent of land take required for the construction and operation of the proposed development has been reduced where practicable. The site boundary for the Sizewell link road proposals submitted with the application for development consent was reduced by 22.5ha compared to Stage 4 proposals (as set out in Ref. 10). This in turn reduced the area of habitat to be lost. Where habitat loss is unavoidable, compensatory planting will be provided along the route (shown on **Figures 2.1** to **2.7** within **ES Volume 6, Chapter 2**). In addition, planting will be designed to enhance connectivity where practicable. This will include planting for bat-hop overs and provision of new ponds which

Impact	Mitigation
	would provide replacement habitat for great crested newts. Where the road crosses watercourses, the design includes the use of larger portal culverts which would straddle the watercourse and minimise the impact on the watercourse banks. The larger culverts would also provide ecological connectivity beneath the route. The Sizewell link road would be mostly unlit; however, lighting would be provided at the A12 roundabout and the junctions with the B1125 and the B1122 to the west and east of Theberton respectively, and would be designed to minimise light spill where possible.
Views of construction works and the new road and associated infrastructure within the landscape	New planting to screen and contain the proposed highway from adjoining properties and PRoWs but also to ensure the scheme is anchored into the existing landscape. Planting will also be provided around basins. The Sizewell link road would be mostly unlit; however, lighting would be provided at the A12 roundabout and the junctions with the B1125 and the B1122 to the west and east of Theberton respectively, and would be designed to minimise light spill where possible.
Connectivity and use of PRoW	No public rights of way will be closed during construction or operation. To ensure this, temporary and/or permanent diversions of PRoW will be provided to ensure connectivity across the proposed development. A non-vehicular bridge would provide a route for pedestrians, cyclists, equestrians and livestock between Theberton, Church Farm, the grazing land west of the new road and the countryside beyond.
Historic Environment	The grade II Listed Gate and Gate Piers at junction of Leiston Road and Onner's Lane (LB 1287303), though within the site boundary, will be retained in its entirety. Woodland planting is proposed at a number of locations along the route in the vicinity of heritage assets including Dovehouse Farmhouse and Theberton Hall. This planting will help to minimise visibility of the road and integrate it and associated infrastructure into the surrounding landscape.

Impact	Mitigation
	The Sizewell link road would be mostly unlit; however, lighting would be provided at the A12 roundabout and the junctions with the B1125 and the B1122 to the west and east of Theberton respectively, and would be designed to minimise light spill where possible.
Loss of agricultural land	The extent of land take required for the construction and operation of the proposed development has been reduced where practicable. This has reduced the area by 22.5 ha since the design presented at Stage 4 consultation, and reduces the areas required from land holdings
Severance of land holdings	Accommodation access tracks and private means of access have been refined or added to reduce severance impacts.
Geology and Land quality	Commitment to best practice measures where possible during all construction works.
Changes to water flow and quality where the route crosses watercourses.	Where the road crosses watercourses, the design includes the use of larger portal culverts which would straddle the watercourse, which would minimise the impact on the watercourse banks and improving afflux in the event of a flood event

8 ADDITIONAL WORK UNDERTAKEN POST DCO SUBMISSION.

8.1 Overview

8.1.1 This chapter describes the work undertaken following the DCO application submission and includes information relating to:

- Additional Information and Proposed changes to the Sizewell link road, proposed as part of the Change Application request submitted in January 2021, and accepted by the Planning Inspectorate April 2021.
- Principle of the Sizewell link road, comprising a review of traffic and traffic related environmental impacts of the Sizewell C Project with and without the Sizewell link road.

- Sizewell link road option selection, comprising a further review of the options considered throughout pre-application consultation, against specific criteria developed set out in **section 8.3**.

8.2 Additional Information and Proposed Changes Post DCO Submission

8.2.1 Since the submission of the Application, SZC Co. has continued to engage with the local authorities, environmental organisations, local stakeholder groups and the public with regard to the Application. This process has identified potential opportunities for changing the Application to further minimise impacts on the local area and environment in many cases, whilst reflecting the further design detail that has come forward in preparation for the implementation of the Sizewell C Project. This cumulated in the submission of a request for changes to the Application, submitted to the Planning Inspectorate in January 2021.

8.2.2 This included forecast reductions to the HGV movements on the proposed Sizewell link road, once operational, during peak construction of the Sizewell C Project, associated with Change 1 (potential to increase in the frequency of freight train movements to facilitate bulk material imports by rail) and Change 2 (an enhancement of the permanent beach landing facility and construction of a new, temporary beach landing facility).

8.2.3 Other changes included a change to the Sizewell link road site which comprises an extension to the site boundary (and thereby an extension of the Order Limits) for additional land as well as minor changes to the public right of way proposals (part of Change 12) (with further detail provided in **Volume 1, Chapter 6** of the **ES Addendum**) [AS-185]. These changes were proposed to accommodate updates to drainage design assumptions, highway works and in response to topographic survey information. Change 12 also includes a reduction of the site boundary at specific locations where the land has been identified as no longer being required. There are also minor revisions to the Public Rights of Way (PRoW) proposals.

8.2.4 SZC Co. also prepared Additional Information. This information did not constitute a change to the Order Limits and parameters assessed within the Application, and included information such as updated construction assumptions, corrections of traffic noise levels, refinements to the strategic traffic model and updates to the assessments as relevant.

8.2.5 The changes were accepted by the Planning Inspectorate in April 2021.

8.2.6 A summary of the changes to effects as a result of the Additional Information and Proposed Changes is summarised in the following sections. Refer to **ES**

Addendum Volume 1 Chapters 2 and **6** for further detail (Doc Ref. 6.14) [AS-181 and AS-185].

a) Traffic

8.2.7 The transport environmental assessment was been updated to account for the Additional Information on the refined strategic traffic model, micro-simulation of journey times, a new 'typical-day' scenario during peak construction and sensitivity testing. Minor changes were identified to the effects on severance, pedestrian delay, fear and intimidation, amenity, driver and passenger delay, accidents and road safety. Whilst there were some changes to the conclusions of the assessment presented within **Volume 2, Chapter 10** of the **ES** (Doc Ref. 6.3) [APP-198] were identified, there were no changes to the conclusions of the assessment relevant to the Sizewell link road.

8.2.8 The reduction in HGV numbers as a result of the increased rail (Change 1) and vessel movements by sea (Change 2) would reduce the significant effect on the amenity of B1122 and various sections of the A12 to not significant (once the Sizewell link road is operational).

b) Air Quality

8.2.9 The air quality modelling was updated as part of the Additional Information to account for new information published by Defra and updated traffic estimates. The updated modelling identified changes to the magnitude of effect for some receptors. However, the updated modelling did not change the overall effect being not significant, compared to **Volume 6, Chapter 5** of the **ES** (Doc Ref. 6.7) [APP-454].

8.2.10 The reduction of HGV numbers as a result of Changes 1 and 2 would not alter the magnitude of change for all scenarios, with the exception of the representative receptor location at Fir Tree Farm (YX9 on **Volume 6, Figure 5.1** of the **ES** (Doc Ref. 6.7) [APP-456]) which had a slight improvement during the busiest day 2028.

c) Noise and vibration

8.2.11 Corrections and updated to the noise traffic modelling submitted as Additional Information would result in the following changes to the

assessment presented in the **ES Volume 6, Chapter 4** (Doc Ref. 6.7) [APP-451]:

- a new significant adverse effect at south of Theberton Grange (38) and Town Farm (35) during 2028 typical day scenario;
- a new significant beneficial effect at Valley Farm (10), Annesons Cottage (11), Coronation Cottages (21) and Annesons Corner (22) during 2028 typical and busiest night and at Hill Farm (9) during the 2028 busiest night scenario. In addition, Annesons Corner (22) and Annesons Cottage (11) would experience a significant beneficial effect during the 2034 typical day scenario;
- a removal of significant adverse effect at Town Farm (35) during the 2028 typical day scenario, Fir Tree Farm (1) during the 2028 typical and busiest night scenarios, Doughty Wylie Crescent (16) at the 2028 busiest night scenario; and
- a reduction from significant beneficial effect to not significant beneficial effect at Annesons Corner (22) during 2028 busiest day.

8.2.12 The reduction of HGV numbers as a result of Changes 1 and 2 would change in significance as a result of the change in HGV numbers as a result of Changes 1 and 2, where Annesons Corner (22) had a significant beneficial effect (previously it was a non-significant benefit), and at two receptors where significant adverse effects become not significant adverse effects (Town Farm (35) and Buskie Farm (2)). The effect categories are predicted to reduce at eight further receptors, although without changing the significance of those effects.

8.2.13 Although the effect categories are not predicted to change at other receptors, all of the changes in traffic noise are either beneficial, i.e. a smaller increase in traffic noise or a greater reduction in traffic noise, or there is expected to be no change, relative to the outcomes that result from the updated assessment.

8.3 Principle of the Sizewell link road

8.3.1 Any infrastructure proposed in the application for development consent needs to be necessary for the construction and/or operation of the nuclear power station development.

8.3.2 The Sizewell link road would introduce a new, permanent, 6.8 km single carriage way road into the landscape. To ensure the proposals for the Sizewell link road included within the application are necessary and

proportionate to mitigate the impacts of the Sizewell C Project, SZC Co. has reviewed the traffic flows and traffic related impacts through the villages of Theberton and Middleton Moor.

8.3.3 This section outlines the likely effects during Peak Construction for the Sizewell C Project (2028) for the following scenarios:

- if the Sizewell link road was not provided (a Do Minimum scenario); and
- if the Sizewell link road was in place, as proposed in the DCO application updated by the change request in January 2021.

8.3.4 The likely traffic-related effects on sensitive receptors for both of these scenarios has been determined using the criteria used in the **ES** submitted with the DCO application which are described in detail in **ES Volume 1, Chapter 6** and associated appendices (Doc Ref. 6.2) [APP-177 and APP-171].

a) Air Quality

8.3.5 To understand the likely differences between the scenarios with and without the Sizewell link road in place, a sensitivity test of the NO_2 transport emissions was undertaken, using the refined traffic representative estimates of the 24-hour Annual Average Daily Traffic (AADT)[1] (provided in **Appendix A** of this report) and the methodology and criteria set out in **ES Volume 1, Appendix 6H** (Doc Ref. 6.2) [APP-171] submitted with the application for development consent, with minor updates to reflect the latest guidance and tools.

8.3.6 NO_2 concentrations were determined in for the representative locations set out in **Plate 8-1.** A summary of the differences in NO_2 values is provided in **Table 8-1** below, relevant to Sizewell link road, with further detail provided in Appendix A.

[1] This sensitivity test considered the refined traffic representative estimates of the 24-hour Annual Average Daily Traffic (AADT) presented as Additional Information in the January 2021 ES Addendum, however, it did not include the reduced HGV flows for the updated freight management strategy as a result of Changes 1 and 2 proposed in the change request application.

Plate 8.1: Locations of representative receptors

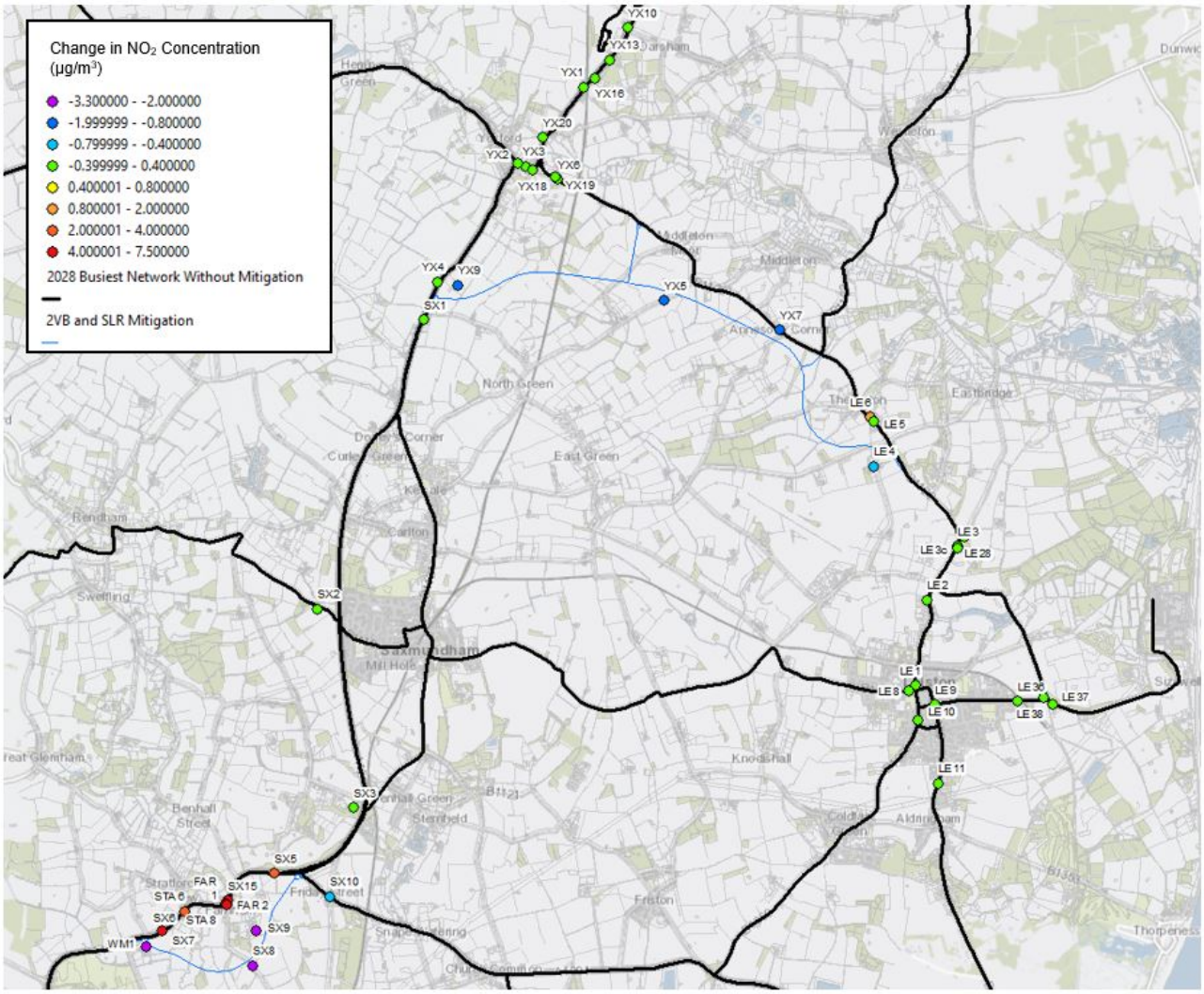


Table 8.1: Extract of comparison of 2028 Busiest without Sizewell link road Scenario to 2028 Busiest with Sizewell link road Scenario.

Receptor name	Location	X(m)	Y(m)	2028 Busiest with Sizewell link road (µg/m^3)	2028 Busiest without Sizewell link road (µg/m^3)	Change (µg/m^3)
YX7	Annesons Corner, B1122	642741	266831	7.2	6.0	-1.2
YX1	Darsham, A12	640454	269672	9.5	9.4	-0.1
YX10	Darsham, A12	640969	270363	7.9	7.9	-0.1
YX13	Darsham, A12	640754	269988	8.1	8.0	-0.1
YX16	Darsham, A12	640581	269776	7.3	7.2	-0.1
SX1	Saxmundham, A12	638587	266949	7.2	6.9	-0.3
SX3	Saxmundham, A12	637759	261247	6.1	6.0	-0.1
SX2	Saxmundham, B1119	637341	263571	6.0	5.9	<0.1
SX10	Saxmundham, Friday Street	637488	260212	8.0	7.6	-0.4
LE4	Sizewell Link Road	643840	265241	5.8	5.3	-0.6
YX5	Sizewell Link Road	641390	267176	6.6	5.2	-1.4
YX9	Sizewell Link Road	638975	267358	6.4	5.5	-0.9
LE6	Theberton, B1122	643798	265819	6.0	7.1	1.1
LE5	Theberton, B1122	643831	265758	6.1	6.3	0.3
YX4	Yoxford, A12	638748	267398	7.2	6.9	-0.3
YX20	Yoxford, A12	639976	269080	7.5	7.4	-0.1
YX6	Yoxford, B1122	640148	268596	6.8	7.2	0.4
YX19	Yoxford, B1122	640119	268628	6.2	6.3	0.1
YX3	Yoxford, Centre	639772	268744	9.2	9.6	0.4
YX2	Yoxford, Centre	639688	268783	7.8	8.0	0.1
YX18	Yoxford, Centre	639857	268695	6.5	6.5	<0.1

8.3.7 The increase in construction traffic associated with construction of Sizewell C would not result in a significant effect on NO_2 concentrations along the B1122 (in the Do Minimum Scenario) with or without the Sizewell link road in place.

8.3.8 Whilst no significant effects on NO_2 concentrations are anticipated, in either the with or without the Sizewell link road scenario, the provision of the Sizewell link road would reduce NO_2 concentrations along the B1122 through

Theberton. However there would be increases in NO_2 elsewhere including the B1122 east of Yoxford.

8.3.9 This sensitivity test was undertaken prior to the acceptance of the proposed changes to the application in April 2021, which would result in a reduction to the HGV movements once operational during peak construction of the Sizewell C Project. However, as there would be no change to significant effects on NO_2 concentrations at the higher HGV levels (before Change 1 and Change 2 are considered), the conclusions are unlikely to alter and therefore has not been re-assessed with the lower HGV levels.

b) Traffic

8.3.10 SZC Co. undertook additional assessment work to further understand the effects on the B1122 and on local communities if there was no Sizewell link road in place at Peak Construction (2028) of the Sizewell C Project, particularly in light of the proposed changes to the DCO application submitted in January 2021.

8.3.11 Traffic flows at various locations along the highway network, shown in **Plate 8.2**, were determined for both the with and without Sizewell link road scenarios and included consideration following based on the preferred Freight Management Strategy:

- 2028 Busiest Day (700 two way HGVs); and
- 2028 Typical Day (500 two-way HGVs).

8.3.12 These flows assume an increase in train movements (Change 1) and an increase in vessel movements by sea (Change 2), without the Scottish Power Renewables cumulative schemes. This allows us to understand the likely effects of the Sizewell C peak construction traffic using the B1122 (or the Sizewell link road), with the accepted changes considered (i.e. reduced HGV movements compared to the original DCO proposals submitted in May 2020).

8.3.13 The traffic flows (an extract is provided below in **Table 8.2** with the links shown on **Plate 8.2**) demonstrate that if the Sizewell C Project took place without a Sizewell link road in place there would be greater amounts of traffic through the B1122 communities and Yoxford during peak construction (2028), with the main expected differences, in comparison with the link road in place, being:

- 1,755 additional HGVs/buses and 6,261 additional cars/LGVs on the B1122 at Theberton (Location 10) during 2028 Peak Construction (busiest day) (24-hr AAWT) without the Sizewell link road in place;

- 1,710 additional HGVs/buses and 4,138 additional cars/LGVs on the B1122 at Middleton Moor (Location 74) during 2028 Peak Construction (busiest day) (24-hr AAWT) without the Sizewell link road in place.

Table 8.2: 24 Average Annual Daily Traffic Flows with and without the Sizewell linkr road during 2028 Peak Construction

Location	24 hour AADT Flows					
	2028 Reference Case		2028 Peak Construction (busiest day, including existing flows) without the Sizewell link road in place		2028 Peak Construction (busiest day, including existing flows) with SLR in place	
	HGVs/ Buses	Cars/LGVs	HGVs/ Buses	Cars/LGVs	HGVs/ Buses	Cars/LGVs
10 (B1122 through Theberton)	218	5969	1755	6802	0	541
10A (Theberton Bypass)			0	0	1758	7094
13b (B1122, east of A12)	177	4111	1714	4506	500	4103
13c (A12, between A1120 and B1122)	862	15465	2013	16175	841	15446
13e (A12, south of A1120)	725	11918	1878	12096	704	11269
22a (A12, north of A1094)	639	16025	1794	16401	1781	16330
22b (A1094, east of A12)	187	8713	187	8809	183	8830
41 (B1125 through Middleton)	42	2143	42	2496	42	2813
57 (Sizewell link road– east of A12)			0	0	1287	1345
59 (A12 –, north of B1121)	725	11852	1878	11931	1870	12340
63 (Theberton bypass, west of B1125)			0	0	1781	5078
64 (B1122, north of SZC access)	218	5969	1755	6802	1760	7339

Location	24 hour AADT Flows					
	2028 Reference Case		2028 Peak Construction (busiest day, including existing flows) without the Sizewell link road in place		2028 Peak Construction (busiest day, including existing flows) with SLR in place	
	HGVs/ Buses	Cars/LGVs	HGVs/ Buses	Cars/LGVs	HGVs/ Buses	Cars/LGVs
65 (Middleton Moor Link)			0	0	498	3875
66 (B1122, west of B1125)	169	3419	1706	3869	0	122
74 (B1122, Middleton Moor)	177	4111	1714	4506	4	368

8.3.14 An assessment of the likely effects arising from the anticipated traffic flows, was undertaken using the criteria presented in the ES submitted with the DCO application (**ES Volume 1, Appendix 6F**) [APP-171].

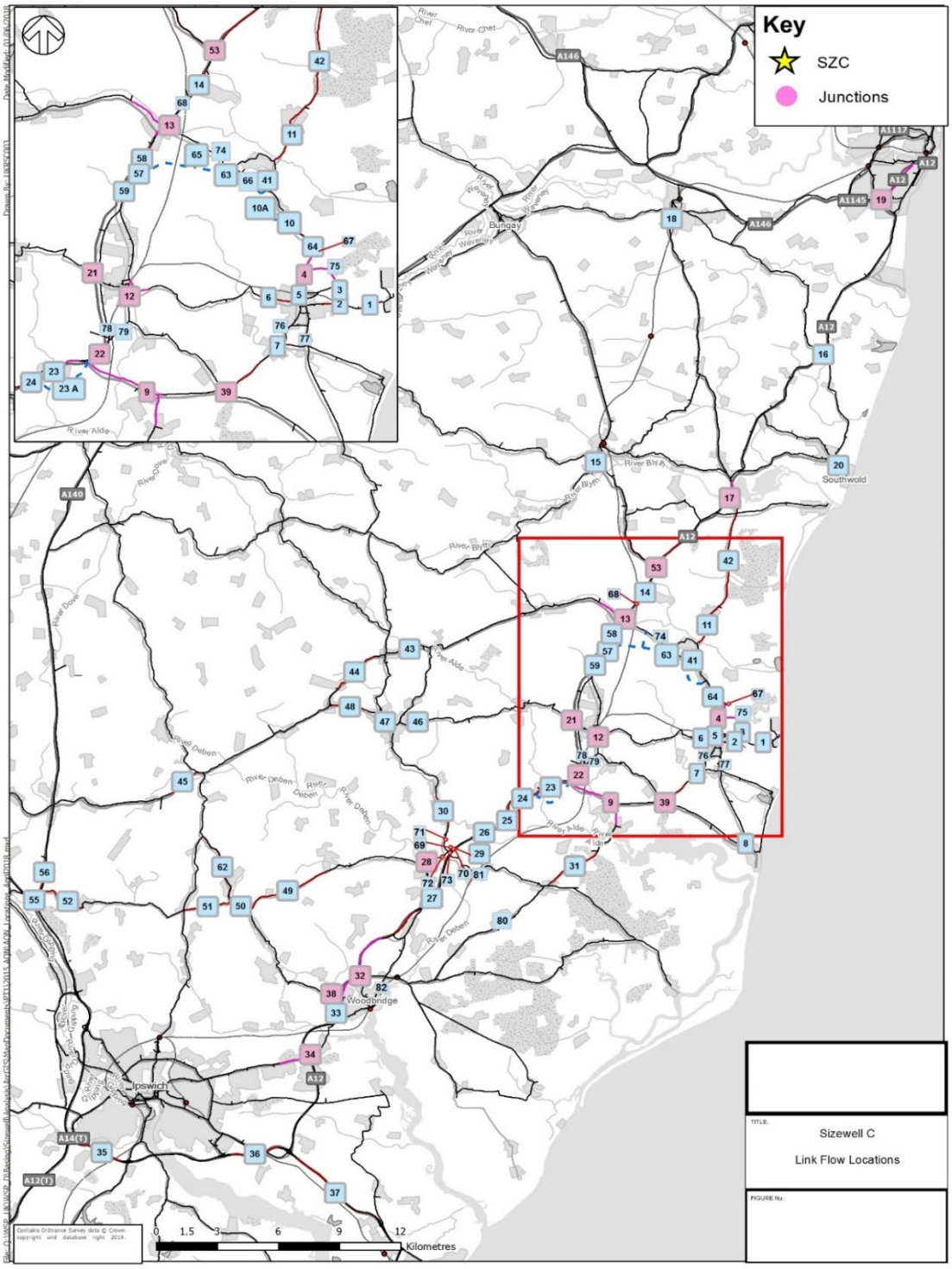
8.3.15 The links assessed included shown on **Plate 8.2**:

- Link 64 – B1122 north of Sizewell C main development site access
- Link 10 – B1122 through Theberton
- Link 66 – B1122 west of B1125
- Link 74 – B1122 Middleton Moor
- Link 13b – B1122 east of Yoxford roundabout
- Link 13c – A12 Yoxford south of B1122
- Link 13e – A12 south of Yoxford

8.3.16 The assessment summarised below focuses on the potential transport impacts of:

- severance;
- pedestrian delay;
- amenity; and
- fear and intimidation.

Plate 8.2: Link Locations



i) DCO proposals with the Sizewell link road in place

8.3.17 The assessment of transport effects along existing road links presented in **Volume 1, Chapter 2** of the **ES Addendum** [AS-181] was based on the change in total traffic and heavy duty vehicles (HDV) flows along each of the road links considered.

8.3.18 As reported in **Volume 1, Chapter 2** of the **ES Addendum** [AS-181], the provision of the Sizewell link road is predicted to reduce traffic flows along the B1122 west of the Middleton Moor link. The reductions in road traffic flows, especially heavy duty vehicles (HDVs, buses and HGVs), would have a major beneficial impact severance and amenity on links through Middleton Moor and Theberton.

8.3.19 On the basis of the assessments, it is concluded that the Sizewell link road is likely to provide a material and significant benefit for the communities along the B1122, by taking both general traffic and Sizewell C construction traffic away from the road during the peak construction phase.

i) No Sizewell Link Road

8.3.20 A further assessment has been undertaken to consider a scenario where the Sizewell link road is not constructed (referred to as 'No SLR'), and Sizewell C construction traffic continues to use existing roads, including the B1122, during the peak construction phase. The 'No SLR' assessment is provided in **Appendix B** of this report.

8.3.21 The 'No SLR' assessment scenarios that have been considered are the typical (500 HGV) and busiest (700 HGV) days in 2028, for the preferred Freight Management Strategy with four trains per day as well as a temporary and enhanced beach landing facility for the import of bulk materials and abnormal indivisible loads (AILs) to the main development site, respectively. Buses from the park and ride facilities would also route along the B1122 in the 'No SLR' scenario as well as some cars and light goods vehicles (LGVs).

8.3.22 The preferred Freight Management Strategy is expected to generate the fewest HGVs for the Sizewell C Project, giving the potential for the smallest transport impacts along the B1122 were the SLR not to be constructed. Where the assessment for this scenario shows adverse effects, it is highly likely that other combinations of road, rail and sea transport would give rise to greater impacts, as the number of HGVs would be higher.

8.3.23 The 'No SLR' assessments show that whilst there is an adverse effect on the links as described above, the impact is **not significant** for severance, pedestrian delay and fear and intimidation. In addition, the effect on amenity

in the 'No SLR' assessment, based on the increase in total traffic, would also be **not significant**. See Appendix B for further information.

8.3.24 However, there are significant adverse effects for **amenity** when considering the increase in HDVs. There is a **significant effect** on five of the seven links for both the 24hr AAWT HDV flows and representative hour HDV flows. **Tables 8.3, 8.4, 8.5 and 8.6** below summarise the amenity assessment for the increase in HDV flows.

Table 8.3: 2028 Amenity AAWT HDV - Typical Day (500 HGVs) – No SLR

Link	Link Name	2028 Ref Case (HDVs)	2028 Ref + Sizewell C (HDVs)	% change	Magnitude	Sensitivity	Impact Significance
64	B1122 north of SZC access	218	1,255	476%	High	Medium	**Major adverse**
10	B1122 through Theberton	218	1,255	476%	High	Medium	**Major adverse**
66	B1122 west of B1125	169	1,206	614%	High	Medium	**Major adverse**
74	B1122 (Middleton Moor)	177	1,214	586%	High	Medium	**Major adverse**
13b	B1122 east of Yoxford roundabout	177	1,214	586%	High	Low	**Moderate adverse**
13c	A12 Yoxford south of B1122	862	1,587	84%	Very low	Low	Negligible
13e	A12 south of Yoxford	725	1,452	100%	Low	Medium	Minor adverse

Table 8.4: 2028 Amenity AAWT HDV- Busiest Day (700 HGVs) – No SLR

Link	Link Name	2028 Ref case (HDVs)	2028 Ref + Sizewell C (HDVs)	% change	Magnitude	Sensitivity	Impact Significance
64	B1122 north of SZC access	218	1,455	567%	High	Medium	**Major adverse**
10	B1122 through Theberton	218	1,455	567%	High	Medium	**Major adverse**
66	B1122 west of B1125	169	1,406	732%	High	Medium	**Major adverse**
74	B1122 (Middleton Moor)	177	1,414	699%	High	Medium	**Major adverse**
13b	B1122 east of Yoxford roundabout	177	1,414	699%	High	Low	**Moderate adverse**
13c	A12 Yoxford south of B1122	862	1,758	104%	Low	Low	Minor adverse
13e	A12 south of Yoxford	725	1,623	124%	Low	Medium	Minor adverse

Table 8.5: 2028 Amenity Representative Hour HDV- Typical Day (500 HGVs) – No SLR

Link	Link Name	2028 Ref case (HDVs)	2028 Ref + Sizewell C (HDVs)	% change	Magnitude	Sensitivity	Impact Significance
64	B1122 north of SZC access	11	81	635%	High	Medium	**Major adverse**
10	B1122 through Theberton	11	81	635%	High	Medium	**Major adverse**
66	B1122 west of B1125	12	82	582%	High	Medium	**Major adverse**
74	B1122 (Middleton Moor)	12	82	582%	High	Medium	**Major adverse**
13b	B1122 east of Yoxford roundabout	12	82	582%	High	Low	**Moderate adverse**
13c	A12 Yoxford south of B1122	76	124	64%	Very low	Low	Negligible
13e	A12 south of Yoxford	63	111	77%	Very low	Medium	Minor adverse

Table 8.6: 2028 Amenity Representative Hour HDV- Busiest Day (700 HGVs) – No SLR

Link	Link Name	2028 Ref case (HDVs)	2028 ref + Sizewell C (HDVs)	% change	Magnitude	Sensitivity	Impact Significance
64	B1122 north of SZC access	11	94	758%	High	Medium	**Major adverse**
10	B1122 through Theberton	11	94	758%	High	Medium	**Major adverse**
66	B1122 west of B1125	12	95	695%	High	Medium	**Major adverse**
74	B1122 (Middleton Moor)	12	95	695%	High	Medium	**Major adverse**
13b	B1122 east of Yoxford roundabout	12	95	695%	High	Low	**Moderate adverse**
13c	A12 Yoxford south of B1122	76	136	79%	Very low	Low	Negligible
13e	A12 south of Yoxford	63	123	95%	Very low	Medium	Minor adverse

8.3.25 It can be seen from the tables above that, should the Sizewell link road not be constructed, HDV traffic flows are predicted to have a **significant adverse effect** on amenity along the B1122. The effect through Yoxford would be negligible to minor adverse and would be **not significant**.

8.3.26 The net effect of not constructing the Sizewell link road would be to cause both **non- significant** and **significant adverse** effects on the B1122, instead of the significant beneficial effects that would be expected if the road is built, as proposed.

c) Noise

8.3.27 Using the traffic data described in **Section 8.3 b)**, SZC Co. undertook additional assessment work to further understand the likely effects of road traffic noise on receptors along the B1122 if there was no Sizewell link road in place at Peak Construction (2028) of the Sizewell C Project.

8.3.28 This section sets out the potential road traffic noise effects that might arise should the Sizewell link road not be built. This study primarily considers the properties along the B1122, as these would be expected to be the most impacted by the absence of the Sizewell link road, although the wider implications are also considered

8.3.29 Since the Sizewell link road would not be present in the early years, and since there would be no SZC construction traffic in 2034 once the power station is complete, this assessment considers the peak construction traffic in 2028. The typical and busiest day scenarios in 2028 are both considered.

i) DCO proposals with the Sizewell link road in place

8.3.30 The assessment of road traffic noise along existing roads presented in **Volume 2, Chapter 11** of the **ES** (Doc Ref 6.3) [APP-202] was based on the change in noise level along each of the road links considered. The changes were based on what is termed the 'basic noise level' in the 'Calculation of Road Traffic Noise' (CRTN) (Ref. 24), which is the UK calculation method for road traffic noise.

8.3.31 The basic noise level is the noise level 10m from the side of a road, before it is adjusted to account for the geometrical relationship between a particular receptor and the road, using the formulae in CRTN.

8.3.32 Considering the changes in road traffic noise levels using basic noise levels is the approach set out paragraph 3.17 of the Design Manual for Roads and Bridges LA111 [Ref. 25] for construction traffic. This is the method

implemented in **Volume 2, Chapter 11** of the **ES** (Doc Ref 6.3) [APP-202], where the road traffic noise effects were due to construction traffic.

8.3.33 The changes in basic noise level along each road link relate directly to the expected in change in traffic flow along that road link only; noise from other roads in the area that might contribute to the overall traffic noise levels at a particular receptor are not taken into account when using the basic noise level method.

8.3.34 This was acknowledged in paragraph 11.6.91 of **Volume 2, Chapter 11** of the **ES** (Doc Ref 6.3) [APP-202], which stated:

> *'Where presented in these tables, the results should be regarded as indicative only and a more detailed analysis of the beneficial (and adverse) changes in level is contained in **Volume 4, Chapter 4** and **Volume 5, Chapter 4**, where the effects of the proposed new roads schemes are considered.*

8.3.35 It is noted that paragraph 11.6.91 referred to Volume 4, Chapter 4, instead of the correct Volume 6, Chapter 4.

8.3.36 The reason that the assessments set out in the two roads chapters were considered to be more detailed is that those assessments were based on full road traffic noise calculations at specific receptors. The road traffic noise levels were calculated at each identified receptor, using the full implementation of CRTN to account for the relationship between the receptor and the surrounding road network, and included noise from all roads that contribute to the overall noise level at each receptor.

8.3.37 The overlap between the two assessment methods only occurred for the two 2028 scenarios, i.e. the typical and busiest days. The two roads assessments did not consider 2023, since neither road would be in place at that time, and the assessment of construction traffic in **Volume 2, Chapter 11** of the **ES** (Doc Ref 6.3) [APP-202] did not consider 2034 since there would be no construction traffic once the project is complete.

8.3.38 This assessment focuses on the more detailed calculations based on the full implementation of CRTN, although the wider implications are considered, where relevant.

8.3.39 The most up-to-date assessment outcomes set out in the DCO for the B1122 are contained in **Volume 3, Appendix 6.3.C** of the **ES Addendum** (Doc Ref 6.14) [AS-249]. These changes in road traffic noise take account of the corrections to the road traffic noise model, the refinements to the strategic

traffic model, and the reduction in HGV numbers as a result of the updated 'Freight Management Strategy' (Doc Ref 8.18) [AS-280].

8.3.40 There were 13 representative receptor groups[2] along the B1122 set out in **Volume 3, Appendix 6.3.C** of the **ES Addendum** (Doc Ref 6.14) [AS-249], which were:

- Receptor 5: Cross Roads.
- Receptor 6: Garden House Farm.
- Receptor 7: Mill Street.
- Receptor 8: Yoxford Road.
- Receptor 9: Hill Farm.
- Receptor 10: Valley Farm.
- Receptor 11: Annesons Cottage.
- Receptor 21: Coronation Cottages.
- Receptor 22: Annesons Corner.
- Receptor 25: B1122 East of Yoxford.
- Receptor 26: B1122 Rail crossing.
- Receptor 27: B1122 Middleton Moor.
- Receptor 28: B1122 Theberton.

8.3.41 The locations of these receptors / receptor groups are shown in **Volume 6, Figure 4.1** of the **ES** (Doc Ref 6.7) [APP-453]. As was stated in **paragraph 4.3.9** in **Volume 6, Chapter 4** of the **ES** (Doc Ref 6.7) [APP-451], the

[2] Each receptor group comprises one or more dwellings

assessed receptors, some of which are listed above, represent either a single receptor, or the most-affected receptor in a group of receptors.

8.3.42 The predicted changes in road traffic noise along the B1122 with the Sizewell link road operational at each of the identified receptors / receptor groups for a typical day in 2028 are shown in **Table 8.7**.

Table 8.7: Change in road traffic noise on B1122, 2028 typical day, dB

Ref	Receptor	Daytime	Night-time
5	Cross Roads	-3.9	-6.6
6	Garden House Farm	-10.5	-7.3
7	Mill Street	-9.1	-7.6
8	Yoxford Road	-13.6	-7.1
9	Hill Farm	-4.5	-6.0
10	Valley Farm	-5.6	-5.6
11	Annesons Cottage	-1.5	-4.2
21	Coronation Cottages	-7.4	-5.4
22	Annesons Corner	-3.7	-5.5
25	B1122 East of Yoxford	+1.5	+2.5
26	B1122 Rail crossing	+1.2	+2.8
27	B1122 Middleton Moor	-15.4	-8.2
28	B1122 Theberton	-14.9	-8.3

8.3.43 The changes in road traffic noise along the B1122 at each of the same receptors, or receptor groups, for the busiest day in 2028 are shown in **Table 8.8**.

Table 8.8: Change in road traffic noise on B1122, 2028 busiest day, dB

Ref	Receptor	Daytime	Night-time
5	Cross Roads	-3.6	-6.6
6	Garden House Farm	-10.0	-7.3
7	Mill Street	-8.8	-7.6
8	Yoxford Road	-13.3	-7.1
9	Hill Farm	-4.1	-6.0
10	Valley Farm	-5.2	-5.6
11	Annesons Cottage	-1.1	-4.2
21	Coronation Cottages	-7.0	-5.4
22	Annesons Corner	-3.4	-5.5
25	B1122 East of Yoxford	+1.6	+2.6
26	B1122 Rail crossing	+0.2	+2.5
27	B1122 Middleton Moor	-15.2	-8.2
28	B1122 Theberton	-14.7	-8.2

8.3.44 It can be seen from **Tables 8.3** and **8.4** that with the exception of the westernmost receptors (Receptors 25 and 26), the Sizewell link road is predicted to reduce traffic noise levels along the B1122. The reductions in road traffic noise are generally significant, being in the region of 4 to 10dB. There are outliers to this range, with up to three receptors predicted to benefit by less than 4dB for some periods, and up to four receptors benefiting by more than 10dB for some periods.

8.3.45 The part of the B1122 adjacent to the receptors at its westernmost end is expected to be used by traffic accessing the Sizewell link road from the north. The traffic noise levels at these locations is therefore expected to increase in both 2028 scenarios.

8.3.46 It is noted that in the long-term, once the construction works are complete, the Sizewell link road is expected to provide a small reduction even for these receptors at the western end of the B1122. The daytime and night-time traffic noise predictions for 2034 shown in **Tables 6.3.B.5** and **6.3.B.6** in **Volume 3, Appendix 6.3.B** in the **ES Addendum** (Doc Ref 6.14) [AS-249] show reductions in traffic noise levels at Receptors 25 and 26 of up to 0.8dB. it can be concluded that the increase in road traffic noise in 2028 is likely to be due to construction traffic accessing Sizewell link road.

8.3.47 On the basis of these outcomes, it is concluded that the Sizewell link road is likely to provide a material and significant benefit for the communities along the majority of the B1122, by taking both existing and SZC construction traffic away from the road.

8.3.48 The wider effects of the Sizewell link road were also considered in **Volume 6, Chapter 4** of the **ES** (Doc Ref 6.7) [APP-451] and were updated in **Volume 1, Chapter 6.3** of the **ES Addendum** (Doc Ref 6.14) [AS-185].

8.3.49 Beyond the receptors along the B1122, the assessment showed that 18 no. receptors, or groups of receptors, were predicted to have significant adverse effects on a typical or busiest day in 2028. These receptors were generally located along the route of the Sizewell link road.

ii) No Sizewell Link Road

8.3.50 Further road traffic noise calculations have been undertaken to consider a scenario where the Sizewell link road is not constructed, and Sizewell C construction traffic uses existing roads instead, primarily the B1122.

8.3.51 The scenarios that have been considered are the typical and busiest days in 2028, within an increase in train movements (Change 1) and an increase in vessel movements by sea (Change 2), i.e. the DCO as amended in January 2021.

8.3.52 This scenario is expected to generate the fewest HGVs for the SZC project, giving the potential for the smallest traffic noise impacts along the B1122. Where road traffic noise calculations for this scenario show adverse effects, it is highly likely that other combinations of road, rail and sea transport would give rise to greater impacts, as the number of HGVs would be higher.

8.3.53 The changes in road traffic noise at each of the same receptors, or receptor groups, along the B1122 for a typical day in 2028 are shown in **Table 8.9** for the scenario where the Sizewell link road is not built.

Table 8.9: Change in road traffic noise on B1122, 2028 typical day – no Sizewell link road

Ref	Receptor	Daytime	Night-time
5	Cross Roads	+4.4	+3.8
6	Garden House Farm	+4.4	+4.4
7	Mill Street	+4.6	+4.1
8	Yoxford Road	+4.3	+4.5
9	Hill Farm	+4.4	+3.6
10	Valley Farm	+4.3	+3.8
11	Annesons Cottage	+4.2	+3.5
21	Coronation Cottages	+4.3	+4.1
22	Annesons Corner	+4.2	+3.5
25	B1122 East of Yoxford	+4.5	+4.0
26	B1122 Rail crossing	+4.0	+4.8
27	B1122 Middleton Moor	+4.4	+4.8
28	B1122 Theberton	+3.5	+3.7

8.3.54 The changes in road traffic noise at each of the receptors, or receptor groups, for the busiest day in 2028 are shown in **Table 8.10** for the scenario where the Sizewell link road is not built.

Table 8.10: Change in road traffic noise on B1122, 2028 busiest day – no Sizewell link road

Ref	Receptor	Daytime	Night-time
5	Cross Roads	+5.0	+3.9
6	Garden House Farm	+5.0	+4.5
7	Mill Street	+5.1	+4.2

Ref	Receptor	Daytime	Night-time
8	Yoxford Road	+4.8	+4.6
9	Hill Farm	+4.9	+3.7
10	Valley Farm	+4.9	+3.9
11	Annesons Cottage	+4.7	+3.6
21	Coronation Cottages	+4.9	+4.2
22	Annesons Corner	+4.8	+3.6
25	B1122 East of Yoxford	+5.1	+4.0
26	B1122 Rail crossing	+4.5	+4.9
27	B1122 Middleton Moor	+4.9	+5.0
28	B1122 Theberton	+4.0	+3.9

8.3.55 It can be seen from **Tables 8.9** and **8.10** that, should the Sizewell link road not be constructed, the traffic noise at receptors along the length of the B1122 are predicted to increase by approximately 3 to 5dB.

8.3.56 Increases in road traffic noise of 3 to 5dB would be regarded as moderate adverse effects, when the medium sensitivity of the receptors is taken into account. These effects would be considered a significant.

8.3.57 The net effect of not constructing the Sizewell link road would be to cause significant adverse noise effects on the receptors along the B1122, instead of the significant beneficial effects that would be expected if the road is built, as proposed.

8.3.58 Beyond the B1122, the 18 no. receptors that were expected to have significant adverse effects as a result of the Sizewell link road, are still expected to have significant adverse effects, but the magnitude of those effects will be considerably smaller. The greatest increase in road traffic noise is expected to be an increase of +5.1dB, which is expected to occur on both a typical and busiest day, rather than a maximum increase of 15 to 16dB that was expected with the Sizewell link road.

d) Health and Wellbeing

8.3.59 **Volume 2, Chapter 28** of the **ES** [APP-346] identified significant beneficial effects on health and wellbeing at the majority of receptors along the section of the B1122 from Middleton Moor to Theberton once the Sizewell link road is operational, due to the reduction of traffic within the villages, with the majority of vehicles expected to use the new Sizewell link road instead.

8.3.60 If the Sizewell link road was not provided, significant adverse effects on health and wellbeing at the majority of receptors along the section of the B1122 from Middleton Moor are anticipated due to the increase of construction traffic within the villages, and there would be no legacy benefit from the permanent diversion of traffic from within communities (no longer affording improved noise, road safety and reduced community severance).

e) Conclusions

8.3.61 The above assessments demonstrate that without the Sizewell link road in place, there would be significant adverse effects on pedestrian amenity, a greater number of residential properties along the B1122 would experience significant adverse noise impacts, and there would be likely significant adverse effects on health and wellbeing at the majority of receptors along the section of the B1122 from Middleton Moor.

8.4 Sizewell link road review of option development and route selection

a) Overview

8.4.1 This section of the report builds upon the work undertaken during the pre-application process and ES submitted with the application for development consent, updated by the ES Addendum, and supplemented with further information from publicly available datasets, feedback from consultation and survey information (where relevant) and work undertaken since the DCO was submitted, and presents a summary of the options considered in Stages 2 and 3 of the pre-application consultation on the basis of a ‘red, amber, green’ (RAG) evaluation system.

8.4.2 The aim is to provide a holistic overview of the reasoning for the selection of the preferred option and provide a clear rationale for the option selected based on the opportunities and environmental constraints associated with the construction and operation of the Sizewell link road.

i) Appraisal Methodology

8.4.3 The purpose of this section is to present the options considered during the pre-application process, on the basis of an evaluation system, so that a clear overview of the reasoning for the selection of the preferred option is presented.

8.4.4 To do this, a RAG evaluation system has been applied. The RAG status has been informed by the environmental appraisals previously undertaken and presented in the pre-application consultation documents (Ref. 7, 8 and 9) and summarised in **Volume 6, Chapter 3** of the **Environmental Statement** (**ES**) (Doc Ref. 6.7) [APP-450]) and **Site Selection report** (**Appendix 8.4A** of the **Planning Statement**), submitted with the application for development consent, to identify the likely impacts associated with each option. The conclusions of these assessments have been used to inform the RAG appraisal presented in the remainder of this report.

8.4.5 However, the RAG appraisal has been extended to also indicate the advantages and disadvantages of the options from the perspective of project requirements, planning, constructability and operational functionality, in order to provide a balanced view of all considerations made for the selection of the preferred option.

8.4.6 The RAG appraisal comprises the following steps:

- objectives against which the options were tested have been defined (refer to **Section 8.3 a) i)** below);
- each option considered during the pre-application consultation stages has been scored against the objectives using the RAG criteria, with explanation for the scoring provided within **Appendices C** and **D** of this document, and
- a summary table which sets out the results of the RAG appraisal for each option determined based on professional judgement.

ii) Criteria Development

8.4.7 In order to evaluate the options considered, criteria has been developed based upon the Sizewell C Project Vision and Design Objectives of the project, set out in the pre-application consultation stages.

Sizewell C Project Vision

8.4.8 In order to guide the development of the Sizewell C Project, SZC Co. has adopted its own Vision for the Project and a set of objectives for its design and delivery (as set out in the Stage 2 Consultation Document (Ref. 7) and Stage 3 Development Proposals Document (Ref. 8)):

> *"EDF Energy [SZC Co.] intends to deliver a nuclear power station at Sizewell C that will make a major contribution to the nation's low-carbon energy needs. The development, operation and ultimate decommissioning of the power station will be undertaken in a manner consistent with the highest standards of safety, reliability and sustainability.*
>
> *EDF Energy [SZC Co.]will strive to ensure that the inherent benefits of its investment in Sizewell C are captured in a way which makes the most of its practical contributions to the local and regional economy.*
>
> *In recognition of the environmental sensitivity of the location, EDF Energy [SZC Co.]. will ensure that the power station is designed and delivered in such a way as to limit any adverse effects on the environment and on local communities as far as is reasonably practical. Any significant adverse effects of the construction, operation or decommissioning of the power station shall be mitigated where practical and appropriate in a way which is environmentally responsible and sensitive both to the needs of the community and to the strategies of the relevant authorities"*

8.4.9 The Sizewell C Project Vision helped to define the design objectives and criteria used to determine the preferred option.

Design Objectives

8.4.10 Achieving sustainable development involves optimising social, economic and environmental outcomes. SZC Co. wishes to deliver the Project in a manner that enables its objectives under all three categories to be accomplished.

8.4.11 SZC Co.'s main objectives for the design and delivery of the Project have bee, as set out in the Stage 2 Consultation Document (Ref. 7)):

- safety: safety during construction and operation is SZC Co's overriding objective;

- design and environment: Sizewell C will be designed and implemented to high environmental standards, taking full account of the sensitivity of its location;
- social and economic effects: SZC Co. will ensure that the Project limits any significant local adverse economic or social effects; and
- delivery: SZC Co. will maintain the commercial viability and practical deliverability of the Project.

8.4.12 To ensure these objectives are at the forefront of this RAG options appraisal process, the options have been assessed against the criteria presented in **Table 8-5** developed for the RAG appraisal presented in this report.

Table 8.11: Design Objectives

Type	Ref.	Objective	Criteria
Strategic	St1	To meet the regulatory requirements for safe and secure access to the Sizewell C nuclear power station.	Is the option likely to increase transport impacts on the wider network?
	St2		Is the option complaint with highway design and safety standards?
	St3	To be in broad conformity with local and national policy and be capable of being consented and secured through the DCO process.	Is the option compliant with local and national policy? Is the option capable of being consented?
Engineering	Eng1	To meet the requirement of providing early access for construction and provide durability for the lifetime of the Sizewell C power station.	Does the option meet the construction and operational needs of Sizewell C, including the provision of early access for construction?
Economic	E1	To avoid adverse economic effects on the local environment.	What are the potential economic benefits to the regional and local economies as a result of the option.

Type	Ref.	Objective	Criteria
Social	So1	To avoid adverse social effects on the local environment.	Will the option create sustainable communities by maintaining, and where possible, improve the quality of life and minimise effects on existing (and future) local communities? Will the option require the loss of any existing property (or committed development) or recreational resource?
Environment	Env1	To avoid adverse effects on the environment in relation to: noise and vibration; air quality; landscape and visual amenity; biodiversity, amenity and recreation resources; historic environment; soils and agriculture; geology and land quality; groundwater, surface water and flood risk.	What are the environmental impacts of the option? Where practicable, what mitigation could be applied to actively mitigate and manage any potential environmental effects?
Delivery	D1	To maintain commercial viability and ensure deliverability of the Project.	Is the option technically and commercially viable for the Project?

RAG Scoring Criteria

8.4.13 As set out in **Table 8-4**, an evaluation system with seven levels of distinction of 'red amber green' (RAG) has been applied to score the options against the design objectives. Each option will be compared against a 'base case', referred to as the 'Comparator Scheme', where it will be determined whether the option would be an improvement, present a worsening or be neutral compared to the base case, based on professional judgement.

8.4.14 In addition, a 'currently unworkable' level has also been defined, where the potential impact is deemed greater than a major adverse scoring and cannot be mitigated given current constraints, for example where a permitted development would now prevent the road proposal being delivered.

Table 8.12: Appraisal Levels

Appraisal Level	Scoring	
Major Improvement to Comparator Scheme	+++	+3
Moderate Improvement to Comparator Scheme	++	+2
Minor Improvement to Comparator Scheme	+	+1
Negligible or Neutral to Comparator Scheme	0	0
Minor Worsening to Comparator Scheme	-	-1
Moderate Worsening to Comparator Scheme	--	-2
Major Worsening to Comparator Scheme	---	-3
Currently Unworkable		Option unworkable

iii) Key Information Sources

8.4.15 The development of options and the subsequent appraisals have been informed through desk study and consultation feedback, site visits and surveys as summarised in the ES submitted with the application for development consent. In addition, the following studies and assessments have also been referred to as relevant:

- Historical Documents
  - Letter from the Secretary of State for Energy, dated 1987 in relation to the application for Sizewell B (Ref. 12)
  - Trevor Crocker & Partners (1987) A12 – Sizewell Link Road Supplementary Report (Ref. 13)
  - Central Electricity Generating Board (1989) A12 – Sizewell Link Road Environmental Statement (Ref. 14
- Sizewell C Stage 1 Consultation
  - Consultation Document (Ref. 1)

  - Environmental Report Supporting Document (Ref. 2)
  - Transport Strategy Supporting Document (Ref. 6)
- Sizewell C Stage 2 Consultation
  - Consultation Document (Ref. 7)
- Sizewell C Stage 3 Consultation
  - Volume 1 – Development Proposals (Ref. 8)
  - Volume 2A – Preliminary Environmental Information (Ref. 9)
- Sizewell C Stage 4 Consultation
  - Consultation Document (Ref. 10)
- Internal Studies undertaken on behalf of SZC Co.
  - LDA Design (2019). Sizewell C Link Road – Environmental Appraisal (provided within Appendix 8 to the Sizewell link road - Principle and Route Selection Response Paper)
  - WSP (2019). Sizewell C Visum Traffic Model. Technical Note: Comparison of Route W North Alignment with Sizewell Link Road. This note was updated in October 2020. (provided within Appendix 10 to the Sizewell link road - Principle and Route Selection Response Paper)
  - Sizewell C Proposed Nuclear Development – Peer Review of Option Selection for Sizewell Link Road (provided within Appendix 12 to the Sizewell link road - Principle and Route Selection Response Paper)
  - Land Assembly and Compulsory Purchase summary note of Route Option W vs Sizewell link road (provided within Appendix 9 to the Sizewell link road - Principle and Route Selection Response Paper)
- External Studies:
  - AECOM (on behalf of SCC) (2014). Sizewell C, Route D2 and B1122 Study (Ref. 17)
  - Accent (on behalf of SCC) (2016). Sizewell C Impact Assessment (Ref. 18)
- External Applications / document sources
  - East Suffolk Council, Suffolk Coastal Local Plan (Ref. 22)

- Defra Multi-Agency Geographic Information for the Countryside (MAGIC) website

b) Findings of appraisal work completed post DCO submission

i) Post DCO submission review of Improvements presented in the Stage 2 proposals

8.4.16 In order to present a holistic review of the improvements considered, an appraisal of the Stage 2 proposals has been undertaken post submission of the DCO application, the aim of which is to validate the option selection process undertaken by SZC Co., which led to the decision to proceed with the proposals for a new link road in Stage 3.

8.4.17 This appraisal builds upon the work prepared during the pre-application process, and supplemented with information obtained for the **ES** (submitted with the application for development consent), and information obtained from a desk-top review of publicly available records, as well as the work studies summarised in **Section 8.3** above. As part of this process, each of the proposals set out in **Section 4** were appraised against the objectives, described in **Section 8.3 b).**

8.4.18 The following assumptions and limitations apply to this appraisal:

- A do nothing approach represents the base case. This represents a no change to the existing road layout and no interventions. This option was not presented at Stage 2 but allows for a comparison to be made against the likely conditions to be experienced with and without mitigation in place, and for all options be considered equally.
- The appraisal is based on the information SZC Co. Stage 2 Consultation Report (published by SZC Co. in 2016) and supplemented with information obtained to support the ES and from a desk-top review of publicly available information including Defra MAGIC website. Where data is not available reasonable assumptions have been made on a precautionary basis.
- Each of the improvement proposals had the potential to be brought forward.
- The designs were developed for the purposes of comparison and were not intended to represent a final design.

8.4.19 **Table 8-5** presents a summary of the appraisal for each improvement proposal, compared to the base case of a 'do nothing' approach (where the road layout of the B1122 remains the same as the existing layout). Further details and the rationale for the overall appraisal level are provided in Appendix C of this report.

8.4.20 **Table 8-5**, with further rationale provided in Appendix C, shows that the increase in traffic flows on the B1122 associated with the construction of Sizewell C, has the potential to impact on the amenity of residents within Middleton Moor and Theberton, as well as isolated properties along the road.

8.4.21 However, it was demonstrated that overall the proposed amendments in Stage 2 would lead to some improvements in safety, where there would be minor to moderate improvements compared to a do nothing approach, in relation to:

- pedestrian amenity in Theberton, where amendments are proposed to pedestrian infrastructure,
- reduced noise levels, from the reduction in traffic speeds.

8.4.22 Overall, as demonstrated in **Table 8-5**, the amendments would be unlikely to significantly improve the traffic-related impacts on amenity within Middleton Moor and Theberton compared to a do nothing approach, as the road would still be the primary route for construction traffic associated with the Sizewell C. In addition, the Mill Street and alignment improvement proposals would lead to some minor worsening associated with additional land requirements for the junction alterations, where land is required in close proximity to a designated historical asset (at Mill Street) and woodland (Fishpond Grove, Brown's Plantation) leading to habitat loss and impacts upon the landscape character (alignment improvement).

8.4.23 As the proposals considered would be unlikely to improve the traffic related impacts within Middleton Moor and Theberton, and other residences along the B1122, this supports the need case for further intervention on the B1122.

Table 8.13: Post DCO submission Options Appraisal of the Stage 2 proposals Summary Table

Criteria	Topic	Rating compared to Basecase 'Do Nothing'			
		Improvement 1	Improvement 2	Improvement 3	Improvement 4
		Speed limit reductions	Improvement of the B1122 to the west of the junction with Mill Street	Pedestrian enhancements in Theberton	Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
St1: Is the improvement likely to increase transport impacts on the wider network.		0	0/-	0	0/-
St2: Is the improvement complaint with highway design and safety standards?		+	+	+	+
St:3 Is the improvement compliant with local and national policy? Is the improvement capable of being consented?		0	0	0	0
Eng1: Does the improvement meet the construction and operational needs of Sizewell C, including the provision of early access for construction?		0	+	0	+
E1 What are the potential economic benefits to the regional and local economies as a result of the improvement?		0	0	0	0
So1: Will the improvement create sustainable communities by maintaining, and where possible, improve the quality of life and minimise effects on existing (and future) local communities? Will the improvement require the loss of any existing property (or committed development) or recreational resource?		0	--	+	0
Env1: What are the environmental impacts of the improvement? Where practicable, what mitigation could be applied to actively mitigate and manage any potential environmental effects?	Noise and vibration	0	-	0	0
	Air Quality	0	0	0	0
	Landscape and visual amenity	0	0	+	-
	Ecology and biodiversity	0	0	0	-
	Amenity and recreation	+	-	++	-
	Historic environment	+	--	0	0
	Soils and agriculture	0	-	0	0
	Geology and land quality	0	0	0	0
	Groundwater and surface waters	0	0	0	0

Criteria	Topic	Rating compared to Basecase 'Do Nothing'			
		Improvement 1	**Improvement 2**	**Improvement 3**	**Improvement 4**
		Speed limit reductions	**Improvement of the B1122 to the west of the junction with Mill Street**	**Pedestrian enhancements in Theberton**	**Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance**
Is the improvement technically and commercially viable for the Project?		-	0	0	0
Total ranking		2	-6	5	-2

ii) Post DCO submission review of Options considered prior to Stage 3 consultation

8.4.24 In order to present a holistic review of the options, an options appraisal of the routes considered for the selection of the Sizewell link road alignment, has been undertaken post submission of the DCO application; the aim of which is to validate the option selection process undertaken by SZC Co.

8.4.25 This appraisal builds upon the work prepared during the pre-application process, and supplemented with information obtained for the ES (submitted with the application for development consent), and information obtained from a desk-top review of publicly available records. As part of this process, each of the options set out in **Section 5 a),** comprising route options W (north and south), X, Y (north and south) and Z (north and south) were appraised against the objectives described in **Section 8.3 b).**

8.4.26 **Plate 8-3** presents the options and the surrounding environmental context.

8.4.27 The following assumptions and limitations apply to this appraisal:

- The appraisal is based on the information SZC Co. Stage 3 Consultation Report (published by SZC Co. in 2019), information presented in subsequent peer review of the options and supplemented with information obtained to support the ES and from a desk-top review of publicly available information including Defra MAGIC website, ESC Local Plan, Environment Agency Flood Mapping. Where data is not available reasonable assumptions have been made on a precautionary basis, with relevant detail included in Appendix D.
- These routes have been developed for the purposes of comparison and are not intended to represent the final design. The details of likely road, rail and watercourse crossings have not been developed, assumptions have been made based on available information set out above.
- Assumptions on the potential mitigation required have been made for the appraisal where appropriate.
- Each route is considered equally and in a consistent manner.

8.4.28 **Table 8-6** presents a summary of the appraisal for each route option compared to the base case of a 'do nothing' approach, with further commentary provided below. As each of the options are compared to a base case of 'do nothing', the options would result in impacts not identified in the base case; for example, all of the options would require land take in comparison to the base case, however some options would require a greater

area than another. Therefore, where appropriate, the determination of the rating has been weighted to reflect a comparison between the options as well.

8.4.29 Further details are provided in Appendix D of this document, which provides a rationale for the overall rating for each option.

Plate 8.3: Environmental Context surrounding Route Options W (north and south), X, Y (north and south) and Z (north and south)

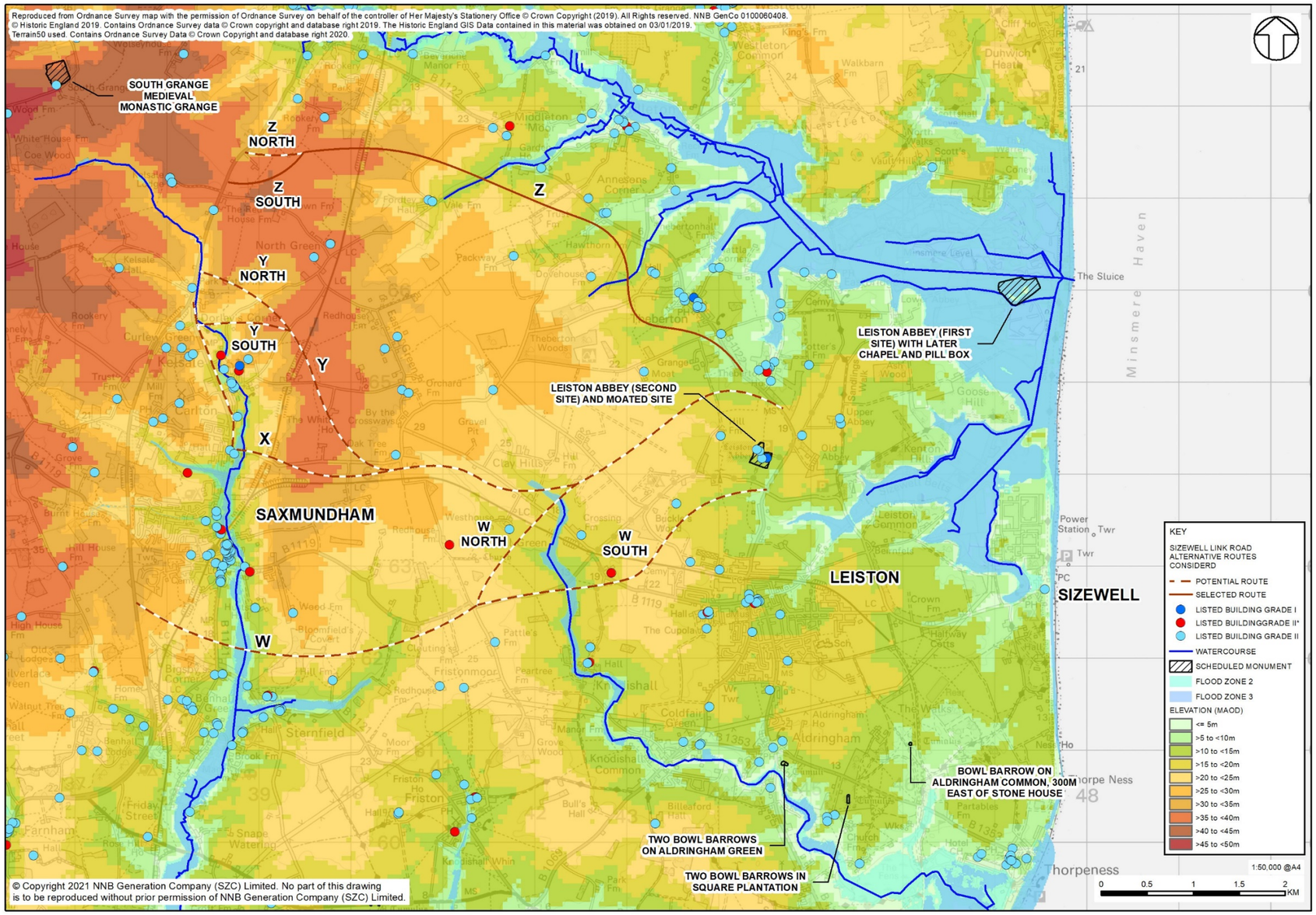


Table 8.14: Post DCO Submission Options Appraisal, Alternative Alignments for The Sizewell Link Road Environmental Appraisal Summary Table

Criteria	Topic	Rating compared to Basecase 'Do Nothing'						
		Route W		Option X	Route Y		Route Z	
		North	South		North	South	North	South
St1: Is the option likely to increase transport impacts on the wider network.		++		-	-	-	++	++
St2: Is the option complaint with highway design and safety standards?		++		+	+	+	++	++
St:3 Is the option compliant with local and national policy? Is the option capable of being consented?		--	-	--	++	++	++	++
Eng1: Does the option meet the construction and operational needs of Sizewell C, including the provision of early access for construction?		--		--	--	--	-	-
E1 What are the potential economic benefits to the regional and local economies as a result of the option.		++		++	++	++	++	++
So1: Will the option create sustainable communities by maintaining, and where possible, improve the quality of life and minimise effects on existing (and future) local communities? Will the option require the loss of any existing property (or committed development) or recreational resource?		--		--	-	0	+	+
Env1: What are the environmental impacts of the option? Where practicable, what mitigation could be applied to actively mitigate and manage any potential environmental effects?	Noise and vibration	--		--	++	+	++	++
	Air Quality	-		-	0	0	0	0
	Landscape and visual amenity	--		--	--	--	-	-
	Ecology and biodiversity	--		-	--	--	-	-
	Amenity and recreation	--		-	-	-	--	--
	Historic environment	-		-	-	-	0	0
	Soils and agriculture	--		-	--	--	-	-
	Geology and land quality	-		-	-	-	-	-
	Groundwater and surface waters	--		--	--	--	-	-
Is the option technically and commercially viable for the Project?		--		--	--	--	-	-

Criteria	Topic	Rating compared to Basecase 'Do Nothing'						
		Route W		Option X	Route Y		Route Z	
		North	South		North	South	North	South
Total ranking		-17	Unworkable	-19	-11	-11	1	1

8.4.30 Each of the options were compared to a base case of 'do nothing'. As identified following Stage 2 consultation, and further detailed in Appendix D of this document, a do nothing approach would result in traffic-related noise and amenity impacts on residents within the villages of Theberton and Middleton Moor. In addition, whilst the capacity on the B1122 is considered sufficient for use by construction traffic associated with Sizewell C, there would be an increase in risk of accidents, and amenity related impacts amongst the communities due to the increase in traffic volumes, particularly HGVs and buses, which would be greater than without Sizewell C construction traffic. In addition, the concerns of local residents about the increase in traffic volume, speed, and proportion of HGVs, and the related impacts of noise, vibration, accident risk, and extra time added to car / bus journeys along the B1122 were identified in the SCC commissioned study by Accent in 2016.

8.4.31 All the route options would reduce the traffic-related noise and amenity impacts on residents within the villages of Theberton and Middleton Moor but some routes are more effective than others such as Route Z compared to Route W due to the proximity of the route to these communities. However, due to the large-scale construction works and land requirements associated with the construction of a new road, this has inevitably meant that the anticipated impacts from the construction of a new road, would lead to impacts not apparent in the base case.

Route W

8.4.32 Route W (north and south) would require engineering and earthworks across an open landscape and would have significant effects on its character. Both options would require a crossing of both the East Suffolk line and Saxmundham to Leiston branch line as well as at least two substantial watercourse crossings of the River Fromus and Hundred River as well as other tributaries; this would require prominent structures which would be visible in the landscape. The watercourse crossings also have the potential to impact on both the quality and morphology of surface water flows as well as increase the risk of flooding to nearby receptors. Route W north and south would be partially located within areas of high flood risk.

8.4.33 Both routes have the potential for several heritage assets to be adversely affected by the alignments, including Leiston Abbey (a Scheduled Monument).

8.4.34 Route W north is the longest route of all of the options (8.2km), and would require the greatest amount of agricultural land and result in large areas of habitat loss; Route W south was approximately 7.5km in length. Route W

south would intersect an area of Ancient Woodland Buckle's Wood) located to the west of Leiston.

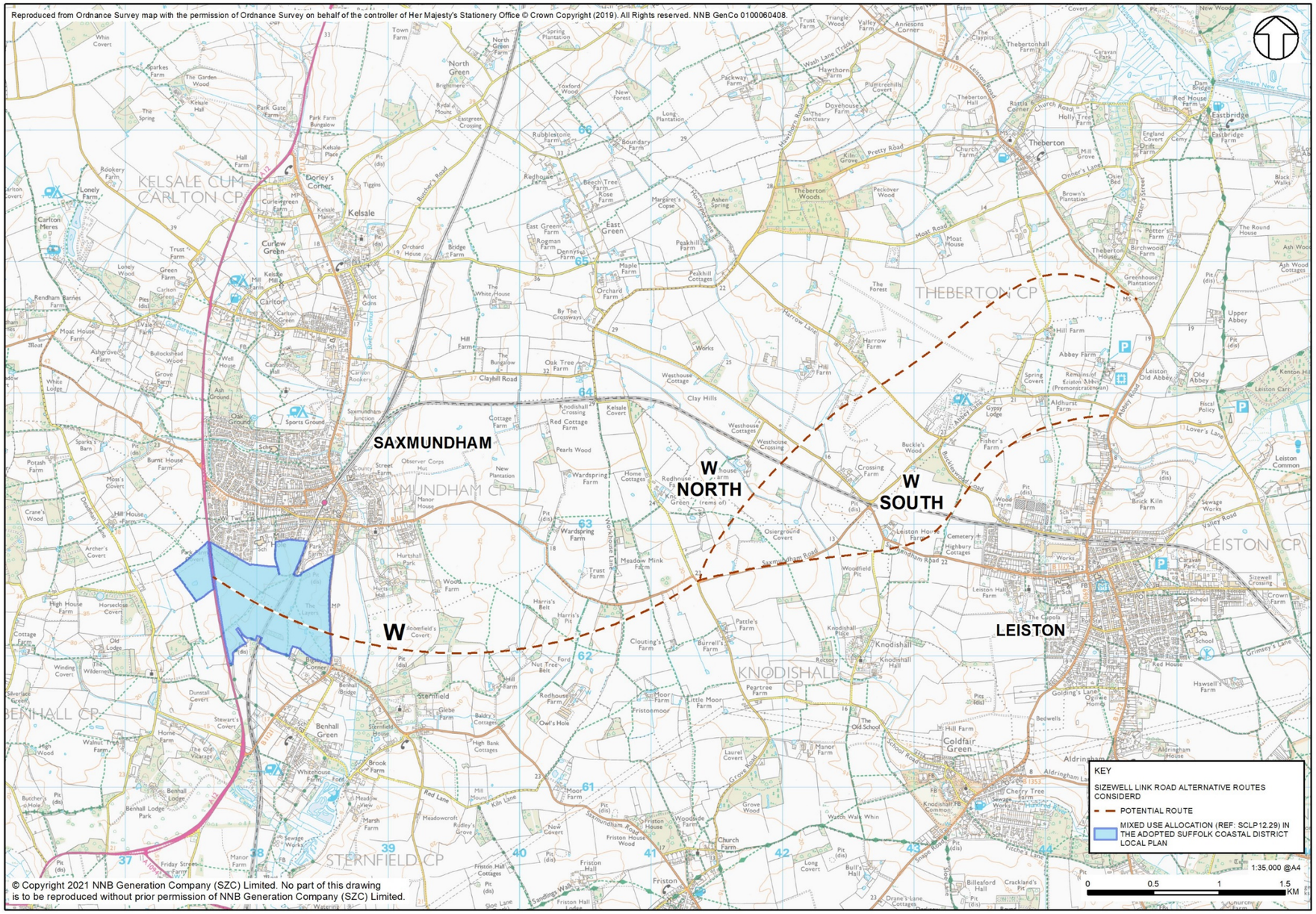
8.4.35 Whilst both alignments options would avoid impacts from Sizewell C construction traffic on the communities within Middleton, Middleton Moor and Theberton, as traffic would use an alternative route, both the north and south alignments of Route W would pass through the centre of SCLP12.29, a mixed use allocation for South Saxmundham Garden Neighbourhood, one of two proposed in the adopted Suffolk Coastal District Local Plan (September 2020) (Ref. 19). Though development has yet to be brought forward, the allocation, the extent of which is shown on Plate 8.4, comprises approximately 66.6ha of land for an mixed use development, comprising primary school provision (identified as a need for the Saxmundham area as the limited capacity in existing schools is increasingly acting as a barrier to the future development of Saxmundham and the surrounding communities), community facilities, employment land and open space alongside a variety of residential development (approximately 800 dwellings). A new road through this development area would have the potential to impact the ability to develop allocated site or future residents. Whilst there are no consented developments on this allocation, an EIA Screening Request was submitted in 2017 for a proposed residential development, land for a new primary school, open space and country park. The south alignment would however intersect the site boundary for an outline planning application for up to 187 dwellings to include car parking, open space provision with associated infrastructure and access at Land north of B1119 Saxmundham Road, west of Leiston (LPA ref: DC/16/1961/OUT). It would appear that this development is progressing as reserved matters have been approved and applications have been submitted to discharge conditions. This alignment may impact the ability to bring this development forward (or developments of similar size); and the new road could have an environmental impact on the proposed properties.

8.4.36 Both alignments, due to the length of the routes, required earthworks and structures, would be more expensive than the other options and have the potential to impact on the programme and deliverability of the Sizewell C project.

8.4.37 At the time the options were developed for the route of the Sizewell link road prior to Stage 3, the proposals did not include the provision of both a Sizewell link road and the green rail route as they were part of different freight management strategies. With the selection of the integrated strategy as the preferred freight management strategy, Route W south would no longer be workable as it follows the same alignment as the green rail route (required under the integrated strategy, but not under the road-led strategy) from where it crosses the Saxmundham to Leiston branch line. The detailed appraisal

provided in Appendix D provides an appraisal of the route, however, it is unlikely to be feasible considering the environmental constraints in the area.

Plate 8.4: Location of mixed use allocation SCLP12.29



Route X

8.4.38 Route X would utilise the existing B1121 to take traffic off the A12, using the existing B1121/A12 junction just north of Kelsale. Similar to Route W, Route X would avoid impacts from Sizewell C construction traffic on the communities within Middleton, Middleton Moor and Theberton, as traffic would use an alternative route. However, it is likely that this option would have a significant effect on the existing road network compared to the other routes, as Sizewell C construction traffic would use the B1121 through Kelsale and Carlton, and this traffic would likely have an impact on the amenity of residents in properties between Carlton Road and the B1121 junction with Bridge Street and Rosemary Lane. Kelsale Primary School is located on Carlton Road just west of the B1121 and there are bus stops just to the north. Pedestrians, including school children, are likely to be crossing the B1121 in this area.

8.4.39 Route X would require a crossing of the East Suffolk line as well as at least two substantial watercourse crossings of the River Fromus and Hundred River as well as other tributaries; this would require prominent structures which would be visible in the landscape and within views. The watercourse crossings also have the potential to impact on both the quality and morphology of surface water flows as well as increase the risk of flooding to nearby receptors. Route X would be partially located within areas of high flood risk.

8.4.40 Whilst there would be no Sizewell C HGV or buses through Saxmundham, the Sizewell C car and LGV traffic using this route could impact the setting of listed buildings in Saxmundham; including seven Grade II Listed Buildings and 1 Grade II* Listed Building. The alignment also passes through the following allocations

- SSP37: Historic Parks and Gardens (south of Clayhills Road);
- SSP25: Carlton Park, Main Road, Kelsale -Employment Allocation
- SSP10 – Land south of Ambleside, Main Road, Kelsale cum Carlton – Housing Allocation.
- SCLP11.8: Historic Parks & Gardens (south of Clayhills Road); and
- SCLP12.37 Carlton Park, Main Road, Kelsale cum Carlton Employment allocation.

8.4.41 In addition, the route would pass adjacent to a planning application for the erection of 44 no. new dwellings with associated new access road, approved

on 30 August 2019 (DC/18/2621/FUL), although it would not directly impact this development.

Route Y

8.4.42 Whilst both alignments options would avoid impacts from Sizewell C construction traffic on the communities within Middleton Moor and Theberton, as traffic would use an alternative route, the proposed junction with the A12 in the Route Y south alignment was located near existing settlements and there was potential for significant effects on local residential amenity on residential properties at Dorley's Corner.

8.4.43 Both routes would have effects on Landscape Character to the north of Kelsale, due to the complex combination of existing landscape features in the area and the degree of change that would have been required to accommodate the route in the area north of Kelsale.

8.4.44 Both alignments would require at least two substantial watercourse crossings of the River Fromus and Hundred River as well as other tributaries; these structures which would be prominent in the landscape and have the potential to impact on both the quality and morphology of surface water flows as well as increase the risk of flooding to nearby receptors. Routes Y North and South would be partially located within areas of high flood risk.

8.4.45 Route Y north and Y south would be approximately 8km and 7.8km in length respectively, and would require agricultural land comparable to Option W north, as well as result in large areas of habitat loss.

Route Z

8.4.46 Route Z, for both the north and south alignments, would be less than 7km in length affecting a smaller area than Routes W and Y (all variations). Whilst the route would be the most northerly of the options considered, traffic travelling from the south would have to travel further north, the existing A12 Saxmundham bypass would be able to accommodate the volume of traffic without capacity or amenity concerns.

8.4.47 Both alignments (north and south) would connect with the A12 away from existing settlements where the effects on local residents would be minimised. Construction traffic associated with Sizewell C would avoid passing through Theberton and Middleton Moor, by using an alternative route.

8.4.48 Similar to Routes W, X and Y, Route Z (north and south) would also require a crossing of the East Suffolk line which would require a bridge structure however the East Suffolk line is in cutting at this location which minimises the need for a higher embankment to maintain clearance required beneath for

rail traffic. In addition, the watercourse crossings required for Route Z would be much smaller compared to Routes W, X and Y which require a crossing of both the Hundred River and River Fromus, as Route Z would only cross smaller watercourses.

8.4.49 Route Z would likely affect the setting of some Grade II heritage assets (Dovehouse Farmhouse, Theberton Hall and The Gates / Walls at Theberton Hall).

8.4.50 To the east of the East Suffolk line, the enclosed topography and landscape restricts views to only short and medium range from roads, public footpaths and communities, reducing effects beyond its immediate vicinity. However, there would be localised amenity impacts at properties along the routes, such as at Annesons Cottages and Valley Farm.

iii) Conclusions

8.4.51 Overall, Route Z south remains SZC Co.'s preferred route for the following reasons:

- Routes Z north and south would only require crossings of smaller watercourses and the majority of the route would be located in areas of low flood risk. Comparatively Route W north, Route X and Routes Y north and south would still require substantial crossings of the River Fromus and Hundred River, and would be partially located within areas of high flood risk.

- Route Z would avoid Sizewell C traffic passing through any larger settlements, in comparison Route X would require Sizewell C traffic to pass through the Kelsale and Carlton. The increase in traffic associated with construction of Sizewell C has the potential to impact on the amenity of residents along the route, as well as children attending Kelsale Primary School.

- Route Z, both north and south alignments, are shorter than Route W north and south, and Routes Y north and south, and would thus require smaller areas of land from agricultural use and loss of habitat in comparison.

- Route Z north and south does not pass through any allocated sites or committed developments, whereas Route W north and south would intersect a mixed-use allocation for South Saxmundham Garden Neighbourhood (SCLP12.29) and the construction and operation of the road on this alignment could therefore impact the ability to develop this

allocated site. Route W south also intersects a committed development near Leiston.

- Due to the location of where Route W north, Route X and Routes Y north and south connect to Abbey Road, close to the main development site, impacts from the construction and operation of a road on the setting of Leiston Abbey have the potential to combine and result in a greater effect on this asset. Comparatively, Route Z connects to Abbey Road further north.

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APPENDIX A: AIR QUALITY SUPPORTING INFORMATION

A.1. Traffic Flows used in the Air Quality with and without Sizewell link road

Link:	Location:	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
10	B1122 through Theberton	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am		7	350	0	19	54	394
7am - 8am		18	496	0	48	102	552
8am - 9am		23	429	0	43	128	462
3pm - 4pm		26	461	0	46	114	527
4pm - 5pm		19	530	0	42	127	580
5pm - 6pm		9	406	0	38	96	475
6pm - 7pm		5	409	0	29	78	482
18-hr AAWT		214	5825	0	525	1214	6593
24-hr AAWT		218	5969	0	541	1218	6802
24-hr AADT		206	5573	0	498	1013	6242

		Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
10A	Theberton Bypass	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am		0	0	56	429	0	0
7am - 8am		0	0	106	562	0	0
8am - 9am		0	0	129	455	0	0
3pm - 4pm		0	0	117	546	0	0
4pm - 5pm		0	0	126	594	0	0
5pm - 6pm		0	0	95	515	0	0
6pm - 7pm		0	0	76	533	0	0
18-hr AAWT		0	0	1678	6862	0	0
24-hr AAWT		0	0	1758	7094	0	0
24-hr AADT		0	0	1449	6486	0	0

		Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
13b	B1122	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour

6am - 7am	6	240	25	247	56	257
7am - 8am	15	335	35	337	102	359
8am - 9am	18	295	39	279	122	310
3pm - 4pm	17	303	32	308	107	336
4pm - 5pm	20	340	31	346	126	366
5pm - 6pm	6	307	23	293	92	340
6pm - 7pm	6	309	23	306	79	344
18-hr AAWT	173	4011	466	3988	1371	4379
24-hr AAWT	177	4111	500	4103	1407	4506
24-hr AADT	167	3837	420	3781	1159	4153

13c A12 (middle)

	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am	52	455	51	503	83	529
7am - 8am	79	995	78	1013	143	1054
8am - 9am	92	1134	89	1086	171	1146
3pm - 4pm	63	1310	62	1291	133	1349
4pm - 5pm	64	1382	61	1354	146	1401
5pm - 6pm	36	1318	36	1294	102	1365
6pm - 7pm	31	985	30	1015	84	1068
18-hr AAWT	844	15140	824	15074	1688	15782
24-hr AAWT	862	15465	841	15446	1706	16175
24-hr AADT	813	14561	791	14434	1491	15109

13e A12 (S)

	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am	42	368	41	374	73	404
7am - 8am	65	731	63	711	129	757
8am - 9am	77	879	74	813	156	877
3pm - 4pm	65	975	64	908	135	976
4pm - 5pm	45	1078	43	985	128	1047
5pm - 6pm	33	1021	33	957	99	1036
6pm - 7pm	24	752	23	734	77	791
18-hr AAWT	710	11672	690	11014	1556	11820

24-hr AAWT	725	11918	704	11269	1571	12096
24-hr AADT	684	11233	662	10579	1364	11349

22a

A12 (N)	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am	38	433	70	449	71	451
7am - 8am	59	1028	125	1039	126	1049
8am - 9am	74	1208	152	1220	153	1221
3pm - 4pm	50	1357	124	1393	122	1399
4pm - 5pm	50	1441	129	1428	132	1438
5pm - 6pm	28	1321	92	1349	91	1357
6pm - 7pm	20	1011	73	1052	73	1053
18-hr AAWT	626	15696	1725	15967	1737	16037
24-hr AAWT	639	16025	1781	16330	1794	16401
24-hr AADT	603	15106	1520	15308	1532	15374

22b

A1094	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am	8	333	8	340	8	340
7am - 8am	29	634	28	634	29	627
8am - 9am	28	613	27	618	28	618
3pm - 4pm	12	695	12	697	12	697
4pm - 5pm	7	786	7	800	7	793
5pm - 6pm	4	661	4	669	4	669
6pm - 7pm	3	637	3	657	3	658
18-hr AAWT	183	8519	179	8623	183	8602
24-hr AAWT	187	8713	183	8830	187	8809
24-hr AADT	176	8176	171	8266	175	8246

41

B1125 through Middleton	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour

6am - 7am	0	119	0	138	0	136
7am - 8am	2	180	2	214	2	202
8am - 9am	4	138	4	175	4	152
3pm - 4pm	6	187	6	246	6	218
4pm - 5pm	9	204	9	251	9	226
5pm - 6pm	0	140	0	206	0	170
6pm - 7pm	0	124	0	181	0	156
18-hr AAWT	41	2093	41	2727	41	2417
24-hr AAWT	42	2143	42	2813	42	2496
24-hr AADT	39	2005	39	2588	39	2289

57

Sizewell Link Road (east of A12)	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am	0	0	35	73	0	0
7am - 8am	0	0	72	72	0	0
8am - 9am	0	0	94	83	0	0
3pm - 4pm	0	0	89	109	0	0
4pm - 5pm	0	0	97	98	0	0
5pm - 6pm	0	0	71	129	0	0
6pm - 7pm	0	0	57	116	0	0
18-hr AAWT	0	0	1241	1291	0	0
24-hr AAWT	0	0	1287	1345	0	0
24-hr AADT	0	0	1057	1217	0	0

59

A12 (south of SLR)	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am	42	362	73	430	74	388
7am - 8am	64	726	129	773	130	742
8am - 9am	78	875	157	885	156	872
3pm - 4pm	65	970	136	989	136	964
4pm - 5pm	45	1075	127	1058	127	1041
5pm - 6pm	33	1016	99	1061	98	1024
6pm - 7pm	24	744	75	827	77	773
18-hr AAWT	710	11608	1811	12045	1819	11666

24-hr AAWT	725	11852	1870	12340	1878	11931
24-hr AADT	684	11171	1604	11551	1612	11208

63

Theberton Bypass (west of B1125)	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am	0	0	58	311	0	0
7am - 8am	0	0	108	385	0	0
8am - 9am	0	0	130	334	0	0
3pm - 4pm	0	0	118	387	0	0
4pm - 5pm	0	0	128	417	0	0
5pm - 6pm	0	0	95	386	0	0
6pm - 7pm	0	0	79	395	0	0
18-hr AAWT	0	0	1700	4917	0	0
24-hr AAWT	0	0	1781	5078	0	0
24-hr AADT	0	0	1470	4650	0	0

64

B1122 north of SZC access	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am	7	350	56	441	54	394
7am - 8am	18	496	104	592	102	552
8am - 9am	23	429	129	480	128	462
3pm - 4pm	26	461	117	566	114	527
4pm - 5pm	19	530	125	610	127	580
5pm - 6pm	9	406	96	525	96	475
6pm - 7pm	5	409	78	541	78	482
18-hr AAWT	214	5825	1680	7099	1674	6593
24-hr AAWT	218	5969	1760	7339	1755	6802
24-hr AADT	206	5573	1451	6705	1446	6242

65

Middleton Moor Link	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour

6am - 7am	0	0	23	242	0	0
7am - 8am	0	0	36	320	0	0
8am - 9am	0	0	38	261	0	0
3pm - 4pm	0	0	32	290	0	0
4pm - 5pm	0	0	31	331	0	0
5pm - 6pm	0	0	23	270	0	0
6pm - 7pm	0	0	22	291	0	0
18-hr AAWT	0	0	464	3765	0	0
24-hr AAWT	0	0	498	3875	0	0
24-hr AADT	0	0	418	3567	0	0

66 B1122 west of B1125

	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am	6	223	0	7	54	247
7am - 8am	15	293	0	9	101	322
8am - 9am	18	242	0	10	123	260
3pm - 4pm	16	253	0	14	106	288
4pm - 5pm	18	288	0	5	124	316
5pm - 6pm	6	236	0	8	92	273
6pm - 7pm	6	256	0	6	79	294
18-hr AAWT	166	3333	0	115	1166	3751
24-hr AAWT	169	3419	0	122	1169	3869
24-hr AADT	160	3184	0	107	967	3545

74 B1122 (Middleton Moor)

	Ref Case 2028		2028 Peak Construction (Busiest Day)		2028 Do Minimum	
	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour	HDVs per hour	Cars/LGVs per hour
6am - 7am	6	240	0	7	54	257
7am - 8am	15	335	0	24	102	359
8am - 9am	18	295	0	27	123	310
3pm - 4pm	17	303	0	31	107	336
4pm - 5pm	20	340	2	27	126	366
5pm - 6pm	6	307	0	35	93	340
6pm - 7pm	6	309	0	28	78	344
18-hr AAWT	173	4011	4	360	1173	4379

24-hr AAWT	177	4111	4	368	1177	4506
24-hr AADT	167	3837	4	346	974	4153

A.2. Air Quality

Table B-6 presents annual mean NO_2 for the 2028 Busiest with Mitigation Scenario and the 2028 Reference Case Scenario.

Table B-0.1: Predicted NO_2 Concentrations for Wider Network in 2028 with two village bypass and Sizewell link road mitigation relative to 2028RC

Receptor name	Location	X(m)	Y(m)	2028 RC (µg/m³)	2028 Busiest with Mitigation (µg/m³)	Change (µg/m³)	Effect Descriptor
YX7	Annesons Corner, B1122	642741	266831	5.7	7.2	+1.5	Negligible
SW3	BlythBurgh, A12	645196	275227	8.4	8.9	+0.5	Negligible
SW2	BlythBurgh, A12	645305	275347	7.5	7.8	+0.3	Negligible
YX1	Darsham, A12	640454	269672	9.1	9.5	+0.3	Negligible
YX10	Darsham, A12	640969	270363	7.6	7.9	+0.4	Negligible
YX13	Darsham, A12	640754	269988	7.8	8.1	+0.3	Negligible
YX16	Darsham, A12	640581	269776	7.1	7.3	+0.2	Negligible
SX15	Farnham, A12	636301	260164	13.2	6.3	-6.9	Moderate Beneficial
FAR 1	Farnham, A12	636273	260134	10.7	6.3	-4.5	Moderate Beneficial
FAR 2	Farnham, A12	636275	260119	10.5	6.3	-4.3	Moderate Beneficial
LE3	Leiston, Abbey Road	644819	264305	6.1	6.9	+0.7	Negligible
LE28	Leiston, Abbey Road	644895	264410	5.4	6.8	+1.4	Negligible
LE3c	Leiston, Abbey Road	644815	264284	5.9	6.5	+0.6	Negligible
LE2	Leiston, Abbey Road	644462	263679	5.7	6.1	+0.4	Negligible
LE9	Leiston, Centre	644547	262459	10.8	11.7	+0.9	Negligible
LE10	Leiston, Centre	644356	262274	9.1	9.9	+0.8	Negligible
LE11	Leiston, Centre	644587	261534	6.8	7.2	+0.4	Negligible
LE1	Leiston, Centre	644324	262677	8.5	10.0	+1.5	Negligible
LE8	Leiston, Centre	644251	262616	7.3	7.6	+0.3	Negligible
LE36	Leiston, Centre	645519	262495	6.3	7.2	+0.9	Negligible
LE37	Leiston, Centre	645923	262456	6.3	7.8	+1.5	Negligible
LE38	Leiston, Centre	645823	262535	6.4	8.0	+1.6	Negligible
LW8	Lowestoft, Centre	654703	292926	20.4	20.4	<0.1	Negligible
WM2	Marlesford, A12	632809	257792	11.8	12.3	+0.5	Negligible
BK1	Martlesham Heath	624666	245317	12.8	12.9	<0.1	Negligible
BK6	Nacton	622868	240973	8.3	8.3	<0.1	Negligible
SX1	Saxmundham, A12	638587	266949	6.9	7.2	+0.3	Negligible
SX3	Saxmundham, A12	637759	261247	5.9	6.1	+0.1	Negligible

Receptor name	Location	X(m)	Y(m)	2028 RC (µg/m³)	2028 Busiest with Mitigation (µg/m³)	Change (µg/m³)	Effect Descriptor
SX5	Saxmundham, A12	636834	260484	9.1	6.7	-2.4	Minor Beneficial
SX2	Saxmundham, B1119	637341	263571	5.9	6.0	+0.1	Negligible
SX10	Saxmundham, Friday Street	637488	260212	7.6	8.0	+0.4	Negligible
LE4	Sizewell Link Road	643840	265241	5.2	5.8	+0.6	Negligible
YX5	Sizewell Link Road	641390	267176	5.2	6.6	+1.4	Negligible
YX9	Sizewell Link Road	638975	267358	5.5	6.4	+0.9	Negligible
SX7	Stratford St Andrew, A12	635534	259812	12.1	7.0	-5.2	Moderate Beneficial
STA 6	Stratford St Andrew, A12	635795	260041	9.5	6.0	-3.4	Minor Beneficial
LE6	Theberton, B1122	643798	265819	6.6	6.0	-0.6	Negligible
LE5	Theberton, B1122	643831	265758	6.1	6.1	<0.1	Negligible
WM1	Two Village Bypass	635340	259622	5.9	8.8	+2.9	Minor Adverse
SX8	Two Village Bypass	636581	259405	5.3	8.6	+3.3	Minor Adverse
SX9	Two Village Bypass	636630	259811	5.4	8.2	+2.8	Minor Adverse
YX4	Yoxford, A12	638748	267398	6.8	7.2	+0.4	Negligible
YX20	Yoxford, A12	639976	269080	7.2	7.5	+0.2	Negligible
YX6	Yoxford, B1122	640148	268596	6.5	6.8	+0.3	Negligible
YX19	Yoxford, B1122	640119	268628	5.9	6.2	+0.2	Negligible
YX3	Yoxford, Centre	639772	268744	9.1	9.2	+0.1	Negligible
YX2	Yoxford, Centre	639688	268783	7.7	7.8	+0.2	Negligible
YX18	Yoxford, Centre	639857	268695	6.5	6.5	<0.1	Negligible

Table B-7 presents annual mean NO2 for the 2028 Busiest without Mitigation Scenario and the 2028 Reference Case Scenario. All locations presented are predicted to experience a Negligible effect without mitigation measures.

Table B-0.2: Predicted NO_2 Concentrations for Wider Network in 2028 without two village bypass and Sizewell link road mitigation relative to 2028RC

Receptor name	Location	X(m)	Y(m)	2028 RC (µg/m³)	2028 Busiest without Mitigation (µg/m³)	Change (µg/m³)	Effect Descriptor
YX7	Annesons Corner, B1122	642741	266831	5.7	6.0	+0.3	Negligible
SW3	BlythBurgh, A12	645196	275227	8.4	8.9	+0.5	Negligible
SW2	BlythBurgh, A12	645305	275347	7.5	7.8	+0.3	Negligible

Receptor name	Location	X(m)	Y(m)	2028 RC (µg/m³)	2028 Busiest without Mitigation (µg/m³)	Change (µg/m³)	Effect Descriptor
YX1	Darsham, A12	640454	269672	9.1	9.4	+0.2	Negligible
YX10	Darsham, A12	640969	270363	7.6	7.9	+0.3	Negligible
YX13	Darsham, A12	640754	269988	7.8	8.0	+0.2	Negligible
YX16	Darsham, A12	640581	269776	7.1	7.2	+0.1	Negligible
SX15	Farnham, A12	636301	260164	13.2	13.7	+0.6	Negligible
FAR 1	Farnham, A12	636273	260134	10.7	11.1	+0.4	Negligible
FAR 2	Farnham, A12	636275	260119	10.5	10.9	+0.4	Negligible
LE3	Leiston, Abbey Road	644819	264305	6.1	6.8	+0.7	Negligible
LE28	Leiston, Abbey Road	644895	264410	5.4	6.8	+1.4	Negligible
LE3c	Leiston, Abbey Road	644815	264284	5.9	6.5	+0.6	Negligible
LE2	Leiston, Abbey Road	644462	263679	5.7	6.1	+0.3	Negligible
LE9	Leiston, Centre	644547	262459	10.8	11.7	+0.8	Negligible
LE10	Leiston, Centre	644356	262274	9.1	9.9	+0.8	Negligible
LE11	Leiston, Centre	644587	261534	6.8	7.2	+0.4	Negligible
LE1	Leiston, Centre	644324	262677	8.5	10.0	+1.4	Negligible
LE8	Leiston, Centre	644251	262616	7.3	7.6	+0.3	Negligible
LE36	Leiston, Centre	645519	262495	6.3	7.2	+0.9	Negligible
LE37	Leiston, Centre	645923	262456	6.3	7.8	+1.5	Negligible
LE38	Leiston, Centre	645823	262535	6.4	7.9	+1.5	Negligible
LW8	Lowestoft, Centre	654703	292926	20.4	20.4	<0.1	Negligible
WM2	Marlesford, A12	632809	257792	11.8	12.3	+0.5	Negligible
BK1	Martlesham Heath	624666	245317	12.8	12.9	<0.1	Negligible
BK6	Nacton	622868	240973	8.3	8.3	<0.1	Negligible
SX1	Saxmundham, A12	638587	266949	6.9	6.9	+0.1	Negligible
SX3	Saxmundham, A12	637759	261247	5.9	6.0	<0.1	Negligible
SX5	Saxmundham, A12	636834	260484	9.1	9.4	+0.3	Negligible
SX2	Saxmundham, B1119	637341	263571	5.9	5.9	<0.1	Negligible
SX10	Saxmundham, Friday Street	637488	260212	7.6	7.6	<0.1	Negligible
LE4	Sizewell Link Road	643840	265241	5.2	5.3	<0.1	Negligible
YX5	Sizewell Link Road	641390	267176	5.2	5.2	<0.1	Negligible
YX9	Sizewell Link Road	638975	267358	5.5	5.5	<0.1	Negligible
SX7	Stratford St Andrew, A12	635534	259812	12.1	12.7	+0.5	Negligible
STA 6	Stratford St Andrew, A12	635795	260041	9.5	9.8	+0.3	Negligible
LE6	Theberton, B1122	643798	265819	6.6	7.1	+0.4	Negligible
LE5	Theberton, B1122	643831	265758	6.1	6.3	+0.3	Negligible

Receptor name	Location	X(m)	Y(m)	2028 RC (µg/m³)	2028 Busiest without Mitigation (µg/m³)	Change (µg/m³)	Effect Descriptor
WM1	Two Village Bypass	635340	259622	5.9	6.0	<0.1	Negligible
SX8	Two Village Bypass	636581	259405	5.3	5.3	<0.1	Negligible
SX9	Two Village Bypass	636630	259811	5.4	5.4	<0.1	Negligible
YX4	Yoxford, A12	638748	267398	6.8	6.9	+0.1	Negligible
YX20	Yoxford, A12	639976	269080	7.2	7.4	+0.1	Negligible
YX6	Yoxford, B1122	640148	268596	6.5	7.2	+0.7	Negligible
YX19	Yoxford, B1122	640119	268628	5.9	6.3	+0.4	Negligible
YX3	Yoxford, Centre	639772	268744	9.1	9.6	+0.5	Negligible
YX2	Yoxford, Centre	639688	268783	7.7	8.0	+0.3	Negligible
YX18	Yoxford, Centre	639857	268695	6.5	6.5	<0.1	Negligible

APPENDIX B: TRAFFIC EFFECT TABLES

B.1. 2028 Severance 24hr

Table B-1 Severance (24hour AAWT) Total Traffic - Typical Day (500 HGVs)

Link	Link Name	2028 Ref Case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	6187	8054	1867	30%	Low	Medium	Minor adverse
10	B1122 through Theberton	6187	8054	1867	30%	Low	Medium	Minor adverse
66	B1122 west of B1125	3588	5075	1487	41%	Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	4288	5726	1438	34%	Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	4288	5726	1438	34%	Low	Low	Minor adverse
13c	A12, Yoxford south of B1122	16327	17815	1488	9%	Very Low	Low	Negligible
13e	A12 south of Yoxford	12643	13622	979	8%	Very Low	Medium	Minor adverse

Table B-2 Severance (24hour AAWT) Total Traffic - Busiest Day (700 HGVs)

Link	Link Name	2028 ref case (total traffic)	2028 ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	6187	8256	2069	33%	Low	Medium	Minor adverse
10	B1122 through Theberton	6187	8256	2069	33%	Low	Medium	Minor adverse
66	B1122 west of B1125	3588	5275	1687	47%	Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	4288	5920	1632	38%	Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	4288	5920	1632	38%	Low	Low	Minor adverse
13c	A12, Yoxford south of B1122	16327	17932	1605	10%	Very Low	Low	Negligible
13e	A12 south of Yoxford	12643	13719	1076	9%	Very Low	Medium	Minor adverse

B.2. 2028 Severance Rep Hr

Table B-3 Severance (24hour AAWT) Total Traffic - Typical Day (500 HGVs)

Link	Link Name	2028 Ref Case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	513	639	126	25%	Very Low	Medium	Minor adverse
10	B1122 through Theberton	513	639	126	25%	Very Low	Medium	Minor adverse
66	B1122 west of B1125	300	399	99	33%	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	342	436	94	27%	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	342	436	94	27%	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	1048	1158	110	11%	Very Low	Low	Negligible
13e	A12 south of Yoxford	825	902	77	9%	Very Low	Medium	Minor adverse

Table B-4 Severance (Representative Hour) Total Traffic - Busiest Day (700 HGVs)

Link	Link Name	2028 Ref Case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	513	652	139	27%	Very Low	Medium	Minor adverse
10	B1122 through Theberton	513	652	139	27%	Very Low	Medium	Minor adverse
66	B1122 west of B1125	300	412	112	37%	Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	342	449	107	31%	Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	342	449	107	31%	Low	Low	Minor adverse
13c	A12, Yoxford south of B1122	1048	1167	119	11%	Very Low	Low	Negligible
13e	A12 south of Yoxford	825	911	86	10%	Very Low	Medium	Minor adverse

B.3. 2028 Ped Delay 24 hr

Table B-5 Pedestrian Delay (24hr AAWT) Total Traffic - Typical Day (500 HGVs)

Link	Link Name	2028 Ref Case	2028 Ref Case (Ave Hr)	Mean Pedestrian Delay (Sec)	2028 Ref + Sizewell C	2028 Ref + Sizewell C (Ave Hr)	Mean Pedestrian Delay (Sec)	Mean Pedestrians Delay Change (Seconds)	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	6187	258	1.56	8054	336	1.77	0.21	Very Low	Medium	Minor adverse
10	B1122 through Theberton	6187	258	1.56	8054	336	1.77	0.21	Very Low	Medium	Minor adverse
66	B1122 west of B1125	3588	150	1.36	5075	211	1.46	0.10	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	4288	179	1.40	5726	239	1.52	0.11	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	4288	179	1.40	5726	239	1.52	0.11	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	16327	680	3.36	17815	742	3.76	0.40	Very Low	Low	Negligible
13e	A12 south of Yoxford	12643	527	2.52	13622	568	2.72	0.20	Very Low	Medium	Minor adverse

Table B-6 Pedestrian Delay (24hr AAWT) Total Traffic - Busiest Day (700 HGVs)

Link	Link Name	2028 Ref Case	2028 Ref Case (Ave Hr)	Mean Pedestrian Delay (Sec)	2028 Ref + Sizewell C	2028 Ref + Sizewell C (Ave Hr)	Mean Pedestrian Delay (Sec)	Mean Pedestrians Delay Change (Seconds)	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	6187	258	1.56	8256	344	1.80	0.24	Very Low	Medium	Minor adverse
10	B1122 through Theberton	6187	258	1.56	8256	344	1.80	0.24	Very Low	Medium	Minor adverse
66	B1122 west of B1125	3588	150	1.36	5275	220	1.48	0.12	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	4288	179	1.40	5920	247	1.54	0.13	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	4288	179	1.40	5920	247	1.54	0.13	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	16327	680	3.36	17932	747	3.79	0.43	Very Low	Low	Negligible
13e	A12 south of Yoxford	12643	527	2.52	13719	572	2.74	0.22	Very Low	Medium	Minor adverse

B.4. 2028 Ped Delay Rep Hr

Table B-7 Pedestrian Delay (Representative Hour) Total Traffic - Typical Day (500 HGVs)

Link	Link Name	2028 Ref Case	2028 Ref Case (Ave Hr)	Mean Pedestrian Delay (Sec)	2028 Ref + Sizewell C	2028 Ref + Sizewell C (Ave Hr)	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	513	2.45	639	3.11	0.66	Very Low	Medium	Minor adverse
10	B1122 through Theberton	513	2.45	639	3.11	0.66	Very Low	Medium	Minor adverse
66	B1122 west of B1125	300	1.67	399	1.98	0.31	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	342	1.79	436	2.12	0.33	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	342	1.79	436	2.12	0.33	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	1048	6.25	1158	7.35	1.11	Very Low	Low	Negligible
13e	A12 south of Yoxford	825	4.35	902	4.96	0.61	Very Low	Medium	Minor adverse

Table B-8 Pedestrian Delay (Representative Hour) Total Traffic - Busiest Day (700 HGVs)

Link	Link Name	2028 Ref Case	2028 Ref Case (Ave Hr)	Mean Pedestrian Delay (Sec)	2028 Ref + Sizewell C	2028 Ref + Sizewell C (Ave Hr)	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	513	2.45	652	3.19	0.74	Very Low	Medium	Minor adverse
10	B1122 through Theberton	513	2.45	652	3.19	0.74	Very Low	Medium	Minor adverse
66	B1122 west of B1125	300	1.67	412	2.03	0.36	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	342	1.79	449	2.18	0.39	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	342	1.79	449	2.18	0.39	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	1048	6.25	1167	7.44	1.20	Very Low	Low	Negligible
13e	A12 south of Yoxford	825	4.35	911	5.03	0.68	Very Low	Medium	Minor adverse

B.5. 2028 Amenity 24 hr

Table B-9 Amenity (24hr AAWT) Total Traffic - Typical Day (500 HGVs)

Link	Link Name	2028 Ref case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	6187	8054	1867	30.2%	Very Low	Medium	Minor adverse
10	B1122 through Theberton	6187	8054	1867	30.2%	Very Low	Medium	Minor adverse
66	B1122 west of B1125	3588	5075	1487	41.4%	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	4288	5726	1438	33.5%	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	4288	5726	1438	33.5%	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	16327	17815	1488	9.1%	Very Low	Low	Negligible
13e	A12 south of Yoxford	12643	13622	979	7.7%	Very Low	Medium	Minor adverse

Table B-10 Amenity (24hr AAWT) Total Traffic - Busiest Day (700 HGVs)

Link	Link Name	2028 Ref case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	6187	8256	2069	33.4%	Very Low	Medium	Minor adverse
10	B1122 through Theberton	6187	8256	2069	33.4%	Very Low	Medium	Minor adverse
66	B1122 west of B1125	3588	5275	1687	47.0%	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	4288	5920	1632	38.1%	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	4288	5920	1632	38.1%	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	16327	17932	1605	9.8%	Very Low	Low	Negligible
13e	A12 south of Yoxford	12643	13719	1076	8.5%	Very Low	Medium	Minor adverse

Table B-11 Amenity (24hr AAWT) HDVs - Typical Day (500 HGVs)

Link	Link Name	2028 Ref case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	218	1255	1037	475.5%	High	Medium	**Major adverse**
10	B1122 through Theberton	218	1255	1037	475.5%	High	Medium	**Major adverse**
66	B1122 west of B1125	169	1206	1037	613.5%	High	Medium	**Major adverse**
74	B1122 (Middleton Moor)	177	1214	1037	585.6%	High	Medium	**Major adverse**
13b	B1122 east of Yoxford roundabout	177	1214	1037	585.6%	High	Low	**Moderate adverse**
13c	A12, Yoxford south of B1122	862	1587	725	84.1%	Very Low	Low	Negligible
13e	A12 south of Yoxford	725	1452	727	100.3%	Low	Medium	Minor adverse

Table B-12 Amenity (24hr AAWT) HDVs - Busiest Day (700 HGVs)

Link	Link Name	2028 Ref case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	218	1455	1237	567.3%	High	Medium	**Major adverse**
10	B1122 through Theberton	218	1455	1237	567.3%	High	Medium	**Major adverse**
66	B1122 west of B1125	169	1406	1237	731.9%	High	Medium	**Major adverse**
74	B1122 (Middleton Moor)	177	1414	1237	698.6%	High	Medium	**Major adverse**
13b	B1122 east of Yoxford roundabout	177	1414	1237	698.6%	High	Low	**Moderate adverse**
13c	A12, Yoxford south of B1122	862	1758	896	103.9%	Low	Low	Minor adverse
13e	A12 south of Yoxford	725	1623	898	123.8%	Low	Medium	Minor adverse

B.6. 2028 Amenity Rep Hr

Table B-13 Amenity (24hr AAWT) HDVs - Busiest Day (700 HGVs)

Link	Link Name	2028 Ref case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	513	639	126	24.5%	Very Low	Medium	Minor adverse
10	B1122 through Theberton	513	639	126	24.5%	Very Low	Medium	Minor adverse

Link	Link Name	2028 Ref case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
66	B1122 west of B1125	300	399	99	32.9%	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	342	436	94	27.4%	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	342	436	94	27.4%	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	1048	1158	110	10.5%	Very Low	Low	Negligible
13e	A12 south of Yoxford	825	902	77	9.4%	Very Low	Medium	Minor adverse

Table B-14 Amenity (Representative Hour) Total Traffic - Busiest Day (700 HGVs)

Link	Link Name	2028 Ref case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	513	652	139	27%	Very Low	Medium	Minor adverse
10	B1122 through Theberton	513	652	139	27%	Very Low	Medium	Minor adverse
66	B1122 west of B1125	300	412	112	37%	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	342	449	107	31%	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	342	449	107	31%	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	1048	1167	119	11%	Very Low	Low	Negligible
13e	A12 south of Yoxford	825	911	86	10%	Very Low	Medium	Minor adverse

Table B-15 Amenity (Representative Hour) HDVs - Typical Day (500 HGVs)

Link	Link Name	2028 Ref case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	11	81	70	635.0%	High	Medium	**Major adverse**
10	B1122 through Theberton	11	81	70	635.0%	High	Medium	**Major adverse**
66	B1122 west of B1125	12	82	70	582.1%	High	Medium	**Major adverse**
74	B1122 (Middleton Moor)	12	82	70	582.1%	High	Medium	**Major adverse**
13b	B1122 east of Yoxford roundabout	12	82	70	582.1%	High	Low	**Moderate adverse**
13c	A12, Yoxford south of B1122	76	124	48	63.7%	Very Low	Low	Negligible
13e	A12 south of Yoxford	63	111	48	76.9%	Very Low	Medium	Minor adverse

Table B-16 Amenity (Representative Hour) HDVs - Busiest Day (700 HGVs)

Link	Link Name	2028 Ref case	2028 Ref + Sizewell C	Increase in vehicles	% change	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	11	94	83	758.1%	High	Medium	**Major adverse**
10	B1122 through Theberton	11	94	83	758.1%	High	Medium	**Major adverse**
66	B1122 west of B1125	12	95	83	694.9%	High	Medium	**Major adverse**
74	B1122 (Middleton Moor)	12	95	83	694.9%	High	Medium	**Major adverse**
13b	B1122 east of Yoxford roundabout	12	95	83	694.9%	High	Low	**Moderate adverse**
13c	A12, Yoxford south of B1122	76	136	60	78.8%	Very Low	Low	Negligible
13e	A12 south of Yoxford	63	123	60	95.0%	Very Low	Medium	Minor adverse

B.7. 2028 Fear Intimidation 18hr

Table B-17 Fear and Intimidation (18hr AAWT) Total Traffic - Typical Day (500 HGVs)

Link	Link Name	2028 Ref Case	Average veh per hour	Magnitude	Sensitivity	Effect Significance	2028 Ref + Sizewell C	Average veh per hour	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	6039	336	Very Low	Medium	Minor adverse	7765	431	Very Low	Medium	Minor adverse
10	B1122 through Theberton	6039	336	Very Low	Medium	Minor adverse	7765	431	Very Low	Medium	Minor adverse
66	B1122 west of B1125	3499	194	Very Low	Medium	Minor adverse	4877	271	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	4184	232	Very Low	Medium	Minor adverse	5519	307	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	4184	232	Very Low	Low	Negligible	5519	307	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	15985	888	Low	Low	Minor adverse	17360	964	Low	Low	Minor adverse
13e	A12 south of Yoxford	12382	688	Low	Medium	Minor adverse	13286	738	Low	Medium	Minor adverse

Table B-18 Fear and Intimidation (18hr AAWT) Total Traffic - Busiest Day (700 HGVs)

Link	Link Name	2028 Ref Case	Average veh per hour	Magnitude	Sensitivity	Effect Significance	2028 Ref + Sizewell C	Average veh per hour	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	6039	336	Very Low	Medium	Minor adverse	7967	443	Very Low	Medium	Minor adverse
10	B1122 through Theberton	6039	336	Very Low	Medium	Minor adverse	7967	443	Very Low	Medium	Minor adverse
66	B1122 west of B1125	3499	194	Very Low	Medium	Minor adverse	5077	282	Very Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	4184	232	Very Low	Medium	Minor adverse	5713	317	Very Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	4184	232	Very Low	Low	Negligible	5713	317	Very Low	Low	Negligible
13c	A12, Yoxford south of B1122	15985	888	Low	Low	Minor adverse	17478	971	Low	Low	Minor adverse
13e	A12 south of Yoxford	12382	688	Low	Medium	Minor adverse	13384	744	Low	Medium	Minor adverse

Table B-19 Fear and Intimidation (18hr AAWT) HDVs - Typical Day (500 HGVs)

Link	Link Name	2028 Ref Case	Magnitude	Sensitivity	Effect Significance	2028 Ref + Sizewell C	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	214	Very Low	Medium	Minor adverse	1174	Low	Medium	Minor adverse
10	B1122 through Theberton	214	Very Low	Medium	Minor adverse	1174	Low	Medium	Minor adverse
66	B1122 west of B1125	166	Very Low	Medium	Minor adverse	1126	Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	173	Very Low	Medium	Minor adverse	1134	Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	173	Very Low	Low	Negligible	1134	Low	Low	Minor adverse
13c	A12, Yoxford south of B1122	844	Very Low	Low	Negligible	1526	Low	Low	Minor adverse
13e	A12 south of Yoxford	710	Very Low	Medium	Minor adverse	1394	Low	Medium	Minor adverse

Table B-20 Fear and Intimidation (18hr AAWT) HDVs - Busiest Day (700 HGVs)

Link	Link Name	2028 Ref Case	Magnitude	Sensitivity	Effect Significance	2028 Ref + Sizewell C	Magnitude	Sensitivity	Effect Significance
64	B1122 north of SZC access	214	Very Low	Medium	Minor adverse	1374	Low	Medium	Minor adverse
10	B1122 through Theberton	214	Very Low	Medium	Minor adverse	1374	Low	Medium	Minor adverse
66	B1122 west of B1125	166	Very Low	Medium	Minor adverse	1326	Low	Medium	Minor adverse
74	B1122 (Middleton Moor)	173	Very Low	Medium	Minor adverse	1334	Low	Medium	Minor adverse
13b	B1122 east of Yoxford roundabout	173	Very Low	Low	Negligible	1334	Low	Low	Minor adverse
13c	A12, Yoxford south of B1122	844	Very Low	Low	Negligible	1696	Low	Low	Minor adverse
13e	A12 south of Yoxford	710	Very Low	Medium	Minor adverse	1564	Low	Medium	Minor adverse

APPENDIX C: POST DCO SUBMISSION OPTIONS APPRAISAL OF THE STAGE 2 PROPOSALS ENVIRONMENTAL APPRAISAL TABLE

Table C-1 Post DCO Submission Options Appraisal of the Stage 2 Proposals Environmental Appraisal Table

Criteria	Topic	Do Nothing (the 'base case')	Option 1 Speed limit reductions	Option 2 Improvement of the B1122 to the west of the junction with Mill Street	Option 3 Pedestrian enhancements in Theberton	Option 4 Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
St1: Is the option likely to increase transport impacts on the wider network.		Traffic modelling of Sizewell C peak construction is predicted to rise to between around 5,000 and 7,700 vehicle movements daily (24hr Annual Average Daily Traffic (AADT)) on the B1122 to the B1125. This represents an increase of up to 35% along the B1122 near Theberton and 32% on the B1122 at Yoxford. Sizewell C construction traffic on the B1122 would comprise a significantly higher proportion of larger vehicles than is currently the case; increasing from approximately 170 and 214 18hr AAWT at Yoxford and Theberton respectively to approximately 1200 to 1700 18hr AAWT at the peak year of construction (2028). Use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes, which could impact traffic elsewhere in the area.	Changes in speed limits would not require any direct works to the B1122, except for the provision of signage. However, similar to a do-nothing scenario, the use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes, which could impact traffic elsewhere in the area. When the road is used for Sizewell C construction traffic, the change in speed limit has the potential to increase journey times and may lead to users following other routes. However, it is considered that the roads in the area are not at capacity and changing the speed limit is unlikely to be worse than a do nothing scenario (base case).	The works to reconfigure the B1122 at this section would need to be constructed on-line. This would likely require temporary road closures whilst construction works are ongoing, with traffic diverted elsewhere. This could lead to localised and short-term traffic impacts on surrounding roads during construction and thus represents a slight worsening compared to the base case of 'do nothing' on a temporary basis. In addition, similar to a do-nothing scenario, the use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes, which could impact traffic elsewhere in the area.	This option would require limited construction works along the B1122 through Theberton and would promote safe crossing points within the village. It is unlikely to increase traffic impacts on the wider network. However, similar to a do-nothing scenario, the use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes, which could impact traffic elsewhere in the area. No worsening or improvement compared to the base case.	The works to reconfigure the B1122 between Theberton and the Sizewell C construction site entrance would need to be made on-line. This would likely require temporary road closures whilst construction works are ongoing, with traffic diverted elsewhere. This could lead to localised and short-term traffic impacts on surrounding roads and thus represents a slight worsening compared to the base case of 'do nothing' on a temporary basis. In addition, similar to a do-nothing scenario, the use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes, which could impact traffic elsewhere in the area.
		[redacted]	0	0/- (-0.5)	0	0/- (-0.5)
St2: Is the option complaint with highway design and safety standards?		Accident records along the stretch of the B1122 between the A12 and B1125 varies, with less accidents occurring at the western end between Yoxford and Middleton Moor;	A reduction to a maximum of 40mph would help to improve safety arising from vehicle movements along stretches of the	This option would improve forward visibility for traffic on the B1122 and help traffic exiting Mill Street compared to a do nothing scenario, and thus be a minor	This option would change to the pedestrian infrastructure and would improve the safety of pedestrians within the village of Theberton and thus be a minor	This option would improve forward visibility for traffic and therefore safety at the junction of Onner's Lane and Moat Road, and thus be a minor improvement over the do nothing scenario.

Criteria	Topic	Do Nothing (the 'base case')	Option 1 Speed limit reductions	Option 2 Improvement of the B1122 to the west of the junction with Mill Street	Option 3 Pedestrian enhancements in Theberton	Option 4 Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
		however, half of the accidents over the recent five year period to the east of Middleton Moor were related to reckless driving, driver impairment and excessive speed (see Doc Ref. 8.5) and may also be linked to the B and C road standards of the existing road. A large increase in traffic flow is likely to increase the accident rate but with the implementation of a Construction Traffic Management Plan (CTMP) (Doc Ref. 8.7), construction related traffic will be required to adhere to the SZC Co. driver rules, which will set out what the responsibilities are for drivers of construction traffic related to the Sizewell C Project, and help to minimise risk. Pedestrians in settlements walking adjacent to the highway would experience the effects of a large increase in traffic levels, particularly buses and HGV's, which includes a reduction in pedestrian amenity.	B1122 compared to a do nothing scenario. Half of the accidents over the recent five year period to the east of Middleton Moor were related to reckless driving, driver impairment and excessive speed (see Doc Ref. 8.5) and may also be linked to the B and C road standards of the existing road. The implementation of speed limit reductions may aid in the reduction in collisions along this section. In addition, the implementation of a Construction Traffic Management Plan (CTMP) (Doc Ref. 8.7), construction related traffic will be required to adhere to the SZC Co. driver rules, which will set out what the responsibilities are for drivers of construction traffic related to the Sizewell C Project. However, this option would not change traffic flows on the B1122 and the increase in the number of vehicle movements due to the construction of Sizewell C, nor the overall design and forward visibility on the existing road.	improvement over the do nothing scenario. However, this option would not change traffic flows on the B1122 and the increase in the number of vehicle movements due to the construction of Sizewell C.	improvement over the do nothing scenario. However, this option would not alter the design of the highway itself and flows would remain similar to the do nothing option; there would be little benefit along the remainder of the B1122.	However, this option would have little benefit along the remainder of the B1122.
			+ (+1)	+ (+1)	+ (+1)	+ (+1)
St3: Is the option compliant with local and national policy?		NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development.	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development.	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Whilst the option would improve safety of the junctions, it would	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Whilst the option would improve safety of the junctions and pedestrians	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Whilst the option would improve safety of the junction, it would not mitigate

Criteria	Topic	Do Nothing (the 'base case')	Option 1 Speed limit reductions	Option 2 Improvement of the B1122 to the west of the junction with Mill Street	Option 3 Pedestrian enhancements in Theberton	Option 4 Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
		A do nothing approach would not mitigate any potential safety concerns, nor noise and amenity impacts on residents along the B1122.	Reducing the speed limit along stretches of the B1122 would likely may offer some reduction in noise impacts compared to a 'do nothing' scenario, however, noise impacts would remain proportionally higher than existing traffic flows along the B1122, and the speed limit changes are unlikely to be sufficient to mitigate impacts on residents.	not mitigate any noise and amenity impacts on nearby residents.	within the village, it would not mitigate any noise impacts on nearby noise sensitive receptors.	any noise and amenity impacts on nearby residents.
		[redacted]	0	0	0	0
Eng1: Does the option meet the construction and operational needs of Sizewell C, including the provision of early access for construction?		The transport assessment (see Doc Ref. 8.5), Volume 2, Chapter 10 of the ES submitted with the application for development consent (Doc Ref. 6.2) and traffic flows presented in section 8.2 of this report identified that the current flows on the B1122 are relatively modest and much lower than on the A12. As such it was considered that Sizewell C traffic was not likely to cause any capacity or congestion problems on most of the B1122. However, accident record data demonstrated that half of the accidents over the recent five year period to the east of Middleton Moor were related to reckless driving, driver impairment and excessive speed (see Doc Ref. 8.5) and may also be linked to the B and C road standards of the existing road. A large increase in traffic flow is likely to increase the accident rate. With the implementation of a	This option would not change to the capacity of the road nor would it result in congestion problems, and therefore not likely to impact the construction and operational needs of the project. However, the implementation of speed limit reductions may aid in the reduction in collisions along the B1122. In addition, the implementation of a Construction Traffic Management Plan (CTMP) (Doc Ref. 8.7), construction related traffic will be required to adhere to the SZC Co. driver rules, which will set out what the responsibilities are for drivers of construction traffic related to the Sizewell C Project. However, as the design of the road would be unchanged, there is the potential for an increase in collisions where the standard of road links is lower. This could cause delays to the site. Reductions in speed limit cannot be delivered or enforced by SZC Co. on its own and would require the support and sponsorship of SCC as the highway authority. Use of the B1122 for construction	The works to reconfigure the B1122 at this section would need to be made on-line. This would likely require temporary road closures whilst construction works are ongoing, with traffic diverted elsewhere. Use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes. However, this option would improve forward visibility at the junction compared to a do nothing scenario, and thus be a minor improvement over the do nothing scenario. There would be no overall change to the capacity of the road nor would it result in congestion problems, and therefore not likely to impact the construction and operational needs of the project.	This option would alter pedestrian access at Theberton compared to a do nothing scenario. Use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes. There would be no overall change to the capacity of the road nor would it result in congestion problems, and therefore not likely to impact the construction and operational needs of the project. Overall, the option is unlikely to alter the ability to meet the construction and operation needs of the project in comparison to the do nothing approach.	The works to reconfigure the B1122 at this section would need to be made on-line. This would likely require temporary road closures whilst construction works are ongoing, with traffic diverted elsewhere. However, this option would improve forward visibility at the junction compared to a do nothing scenario, and thus be a minor improvement over the do nothing scenario. Use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes. There would be no overall change to the capacity of the road nor would it result in congestion problems, and therefore not likely to impact the construction and operational needs of the project.

Criteria	Topic	Do Nothing (the 'base case')	Option 1 Speed limit reductions	Option 2 Improvement of the B1122 to the west of the junction with Mill Street	Option 3 Pedestrian enhancements in Theberton	Option 4 Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
		Construction Traffic Management Plan (CTMP) (Doc Ref. 8.7), construction related traffic will be required to adhere to the SZC Co. driver rules, which will set out what the responsibilities are for drivers of construction traffic related to the Sizewell C Project could help to minimise the risk. However, as the design of the road would be unchanged, there is the potential for an increase in collisions where the standard of road links is lower. This could cause delays to the site. In addition, the use of the B1122 for construction traffic associated with Sizewell C is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes.	traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes. On this basis, as it is possible it cannot be enforced, it would be relatively neutral to the base case.			
			0	+ (+1)	0	+ (+1)
E1: What are the potential economic benefits to the regional and local economies as a result of the option		The B1122 passes through Yoxford, Middleton Moor and Theberton. Middleton is located to the north-east of Middleton Moor. In addition to residential dwellings within the villages, and isolated properties along the B1122, there are a number of commercial properties including B&Bs, Public Houses, shops, cafes. Traffic associated with the construction of Sizewell C would pass along the B1122	There is unlikely to be any overall economic change to the regional or local area compared to a do nothing scenario.		This option would improve pedestrian access in and around Theberton and improve safety within the village. However, there is unlikely to be any overall change to the regional or local area compared to a do nothing scenario.	There is unlikely to be any overall economic change to the regional or local area compared to a do nothing scenario.

Criteria	Topic	Do Nothing (the 'base case')	Option 1 Speed limit reductions	Option 2 Improvement of the B1122 to the west of the junction with Mill Street	Option 3 Pedestrian enhancements in Theberton	Option 4 Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
		and would be unlikely to stop within these communities.				
		[redacted]	0	0	0	0
So1: Will the option create sustainable communities by maintaining, and where possible, improve the quality of life and minimise effects on existing (and future) local communities? Will the option require the loss of any existing property (or committed development)?		Sizewell C traffic would result in an increase of up to 35% along the B1122 near Theberton and 32% on the B1122 at Yoxford. The increase in traffic has the potential to result in significant adverse noise and amenity effects to a small number of properties located adjacent to the B1122 and to the residents of Theberton and Middleton Moor The increase in traffic has the potential to result in minor adverse severance effects; though the increase in total traffic is unlikely to be significant (see section 8 of this report).	This option would not change traffic flows on the B1122. However, it would help to reduce the noise arising from vehicle movements along this stretch compared to a do nothing scenario. However, the number of traffic movements would remain the same as the do nothing scenario which has the potential to result to result in severance effects within the community.	Access to several properties off B1122, north of the junction with Mill Street would be impacted during construction as areas of curtilage of these properties are likely to be required for the improvement. Access would need to be maintained throughout construction of the improvement.	This option would improve pedestrian access in and around Theberton. However, the number of traffic movements would remain the same as the do nothing scenario which has the potential to result to result in severance effects within Theberton.	This option would improve the forward visibility. However, the number of traffic movements would remain the same as the do nothing scenario which has the potential to result to result in severance effects within the villages. In addition, the speed at which vehicles travel would remain the same as the do nothing scenario and therefore potential noise impacts on number of residents within the villages would remain.
		[redacted]	0	-- (-2)	+ (+1)	0
Env1: What are the environmental impacts of the option? Where practicable, what mitigation could be applied to actively mitigate and manage any	Noise and vibration	Sizewell C traffic would result in an increase of up to 35% along the B1122 near Theberton and 32% on the B1122 at Yoxford. Noise modelling undertaken and summarised in **Section 8.3** of this report, demonstrates that the increase in traffic would likely result in significant adverse noise effects to on properties located adjacent to the B1122	A reduction to a maximum of 40mph on the stretch between Middleton Moor and Theberton would likely offer some reduction in noise impacts compared to a 'do nothing' scenario. Further modelling would be required to determine if this would avoid noise effects on noise sensitive receptors, however, noise impacts would remain proportionally higher than existing traffic flows along the B1122, and the speed limit changes are unlikely to be	Construction of this improvement, including earthworks and the construction of the temporary contractor compound, are likely to impact nearby noise sensitive receptors along the B1122 and Mill Street, close to the junction. This would be a worsening compared to a do-nothing scenario. This option would improve the forward visibility on to the B1122 at Mill Street Junction. However, the change would not alter the traffic flows or speed at which they travel, and would not reduce noise	Minor construction works required to construct the improvements which may have noise impacts on nearby noise sensitive receptors. However, impacts would be very short in duration. This option would improve pedestrian access in and around Theberton. However, the change would not alter the traffic flows or speed at which they travel, and would not reduce noise levels	Nearest noise sensitive receptor is Theberton Grange, approximately 300m to the west and less likely to experience significant noise impacts. This option would improve the forward visibility. However, the change would not alter the traffic flows or speed at which they travel, and would not reduce noise levels experienced by noise sensitive receptors.

Criteria	Topic	Do Nothing (the 'base case')	Option 1 Speed limit reductions	Option 2 Improvement of the B1122 to the west of the junction with Mill Street	Option 3 Pedestrian enhancements in Theberton	Option 4 Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
potential environmental effects?		and to the residents of Theberton and Middleton Moor.	sufficient to mitigate impacts on residents.	levels experienced by noise sensitive receptors.	experienced by noise sensitive receptors.	
		[redacted]	0	- (-1)	0	0
	Air Quality	Sizewell C traffic would result in an increase of up to 35% along the B1122 near Theberton and 32% on the B1122 at Yoxford. The increase in vehicles would likely increase emissions, and this could lead to a decrease in air quality. However, as summarised in **Section 8.3**, NO_2 concentrations in the area are well below the UK Air Quality Strategy (AQS) target values and the change as a result of the Sizewell C construction traffic will not be significant.	This option would not change traffic flows on the B1122. A change in speed limit may alter the emissions to air from vehicles but it is unlikely that there would be a large change compared to a do nothing scenario.	Dust likely to arise from construction works to improve forward visibility at the junction, however, this would be localised and would be mitigated through best practise measures. This option would not change traffic flows on the B1122. No overall change compared to a do nothing scenario.	Dust likely to arise from construction works to improve pedestrian access at the junction, however, this would be localised and would be mitigated through best practise measures. This option would not change traffic flows on the B1122. No overall change compared to a do nothing scenario.	Dust likely to arise from construction works to improve forward visibility at the junction, however, this would be localised and would be mitigated through best practise measures. This option would not change traffic flows on the B1122. No overall change compared to a do nothing scenario.
		[redacted]	0	0	0	0
	Landscape and visual amenity	A do-nothing approach would not introduce any new structures or features into the landscape. However, the increase in traffic (particularly HGVs) as a result of Sizewell C may alter the visual amenity of residents and users of roads and PRoW as well as detract from the quality of the landscape.	Sizewell C construction traffic would still require the use of the B1122 (as with all the options) and may alter the visual amenity of residents and users of roads and PRoW as well as detract from the quality of the landscape. Whilst the appraisal is based on a comparison of do nothing on the B1122, works elsewhere as part of the project are required. A reduction to 30mph between Theberton and the construction site entrance would reduce the extent of land needed to meet visibility requirements at this	Construction works to improve forward visibility likely to require some vegetation clearance which could increase views of construction activity for users of the road or nearby PRoW. In addition, as with the other options considered, Sizewell C construction traffic would still require the use of the B1122 and may alter the visual amenity of residents and users of roads and PRoW as well as detract from the quality of the landscape. However, the works would be minimal and unlikely to materially change the landscape character compared to a do-nothing scenario.	Once operational, this option would improve the pedestrian connectivity within the village of Theberton and improve the visual amenity of users. The improvement, in-combination with existing footpaths, would create a pedestrian footpath connection along the length of the village, removing the need to walk in the road at any stage. However, as with the other options considered, Sizewell C construction traffic would still require the use of the B1122 and	Construction works to improve forward visibility likely to require some vegetation clearance from Fishpond grove, south of Brown's Plantation, (a mature woodland belt) which could increase views of construction activity for users of the road or nearby PRoW. In addition, as with the other options considered, Sizewell C construction traffic would still require the use of the B1122 and may alter the visual amenity of residents and users of roads and

Criteria	Topic	Do Nothing (the 'base case')	Option 1 Speed limit reductions	Option 2 Improvement of the B1122 to the west of the junction with Mill Street	Option 3 Pedestrian enhancements in Theberton	Option 4 Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
			location. This would have a reduced impact on landscape through reduced loss of trees lining the road, however the improvement is likely to be minimal.		may alter the visual amenity of residents and users of roads and PRoW as well as detract from the quality of the landscape. Overall, this would lead to local improvements within the village compared to a do-nothing scenario.	PRoW as well as detract from the quality of the landscape.
		[redacted]	0	0	+ (+1)	- (-1)
	Ecology and Biodiversity	A do-nothing approach would not alter the existing road layout and there would be no direct impacts on ecology. The increase in traffic associated with Sizewell C may however lead to indirect and minor impacts on some designated sites including the roadside nature reserve located to the east of the Yoxford roundabout, although the effect is likely to be not significant.	A reduction to 30mph between Theberton and the construction site entrance would also reduce the extent of land needed to meet visibility requirements at this location required for the main development site entrance works compared to a do nothing scenario. This would result in have a reduced impact on ecology compared to a do nothing approach for traffic related effects on the B1122, due to the reduced loss of trees lining the road required at the main development site entrance, however the improvement is likely to be minimal overall.	Construction works to improve forward visibility would likely to require some vegetation clearance which could contain habitat of value and supports protected species. However, the area of land required is small and there would be no landtake from any statutory designated sites.	No or very limited land take required from within the village of Theberton. No overall change compared to a do-nothing scenario.	Construction works to improve forward visibility likely to require some vegetation clearance from Fishpond grove, south of Brown's Plantation (a mature woodland belt). This habitat could support protected species. However, there would be no landtake from any statutory designated sites.
		[redacted]	0	0	0	- (-1)
	Amenity and recreation	Sizewell C traffic would result in an increase of up to 35% along the B1122 near Theberton and 32% on the B1122 at Yoxford. The increase in traffic and potential adverse noise effects may impact users of PRoW connecting to the B1122 and within Theberton.	There would be no changes to the PRoW as a result of this option, however, a reduction to a maximum of 40mph on the stretch between Middleton Moor and Theberton would help to improve safety of users where the PRoW connect to the main road, and the amenity of users through a reduction in noise arising from	Whilst there would not be direct impacts on the footpaths, users of PRoW E-396/009/0 and E-396/011/0 may experience visual and noise impacts during construction. This option would improve the forward visibility on to the B1122 at Mill Street Junction. However, the change would not alter the traffic flows or speed at which they travel and would not reduce noise	The improvement, in-combination with existing footpaths, would create a pedestrian footpath connection along the length of the village, removing the need to walk in the road at any stage. This would lead to safety and user amenity improvements compared to a do-nothing scenario.	Potential impacts on PRoW E-515/012/0 and E-515/011/0 which connect to the road; temporary diversions may be required during construction. In addition, users may experience visual and noise impacts during construction. This option would improve the forward visibility. However, the

Criteria	Topic	Do Nothing (the 'base case')	Option 1 Speed limit reductions	Option 2 Improvement of the B1122 to the west of the junction with Mill Street	Option 3 Pedestrian enhancements in Theberton	Option 4 Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
		The increase in traffic has the potential to lead to severance impacts for PRoW connecting to the B1122.	vehicle movements along this stretch. However, the number of traffic movements would remain the same as the do-nothing scenario and the increase in traffic volumes could still lead to severance impacts for PRoW connecting to the B1122.	levels experienced by noise sensitive receptors.		change would not alter the traffic flows or speed at which they travel and would not reduce noise levels experienced by noise sensitive receptors.
			+ (+1)	- (-1)	++ (+2)	- (-1)
	Historic environment	Sizewell C traffic would result in an increase of up to 35% along the B1122 near Theberton and 32% on the B1122 at Yoxford. This traffic would pass a number of designated assets along the B1122 and within Theberton. Noise impacts associated with an increase in traffic could harm the setting of heritage assets along the route.	A reduction to a maximum of 40mph on the stretch between Middleton Moor and Theberton would help to reduce the noise arising from vehicle movements along this stretch compared to a do nothing scenario.	Pine Tree Cottage (Grade II listed) (LB 1199326) is located directly adjacent to the junction of the B1122 and Mill Street. There would be no direct impact to the building, but southern areas of the curtilage may be required for the improvement. Noise and visual impacts of construction works may also lead to impacts on the setting of the asset. During operation, this option would improve the forward visibility on to the B1122 at Mill Street Junction. However, the change would not alter the traffic flows or speed at which they travel compared to the do nothing approach.	Once operational, this option would improve the pedestrian connectivity within the village of Theberton and improve the visual amenity of users. However, the improvements would not alter the traffic flows or speed at which they travel. No overall change compared to a do nothing scenario.	No designated heritage assets are located closely to the site. Therefore, no overall change compared to a do nothing scenario.
			+ (+1)	-- (-2)	0	0
	Soils and agriculture	The increase in Sizewell C traffic along the B1122 would have a minimal impact on soils and agriculture.	A reduction to 30mph between Theberton and the construction site entrance would also reduce the extent of land needed to meet visibility requirements at this location. However, this land is not used for agriculture and therefore there would be no worsening or	Construction would include a temporary construction compound as well as some permanent landtake for improvements to forward visibility. This includes a small area of agricultural land. This is considered to be a minor worsening compared to the baseline.	No or limited land required from agricultural use. No overall change compared to a do-nothing scenario.	Construction works to improve forward visibility likely to require some vegetation clearance from Fishpond grove, south of Brown's Plantation (a mature woodland belt). This land is not used for agriculture and therefore there would be no worsening or

Criteria	Topic	Do Nothing (the 'base case')	Option 1 Speed limit reductions	Option 2 Improvement of the B1122 to the west of the junction with Mill Street	Option 3 Pedestrian enhancements in Theberton	Option 4 Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
			improvement compared to the base case.			improvement compared to the base case.
		[redacted]		- (-1)	0	0
	Geology and land quality	No physical works proposed to the highways. The increase in traffic during construction of Sizewell C could increase risk of spillages of contaminants along the highway.	No physical works proposed to the highways. Similarly, an increase in traffic during construction of Sizewell C could increase risk of spillages of contaminants along the highway. Overall, it is considered that there would be no worsening or improvement compared to the base case.	Minor works to highway. The works would be completed in accordance with current best practice. Potential geology and land quality impacts during the construction and operation phases would be managed through tertiary mitigation methods, included in a CoCP. Overall, it is considered that there would be no worsening or improvement compared to the base case.	Minor works to create pedestrian infrastructure. The works would be completed in accordance with current best practice. Potential geology and land quality impacts during the construction and operation phases would be managed through tertiary mitigation methods, included in a CoCP. Overall, it is considered that there would be no worsening or improvement compared to the base case.	Minor works to highway. The works would be completed in accordance with current best practice. Potential geology and land quality impacts during the construction and operation phases would be managed through primary and tertiary mitigation methods. Overall, it is considered that there would be no worsening or improvement compared to the base case.
		[redacted]	0	0	0	0
	Groundwater and surface waters	No physical works proposed to the highways. Increase in traffic during construction of Sizewell C could increase risk of spillages of contaminants along the highway which could reach surface waters or groundwaters.	No physical works proposed to the highways. Similarly, an increase in traffic during construction of Sizewell C could increase risk of spillages of contaminants along the highway. Overall, it is considered that there would be no worsening or improvement compared to the base case.	Minor works to highway. The works would be completed in accordance with current best practice. Potential impacts during the construction and operation phases would be managed through primary and tertiary mitigation methods. Overall, it is considered that there would be no worsening or improvement compared to the base case.	Minor works to create pedestrian infrastructure. The works would be completed in accordance with current best practice. Potential geology and land quality impacts during the construction and operation phases would be managed through primary and tertiary mitigation methods. Overall, it is considered that there would be no worsening or improvement compared to the base case.	Minor works to highway. The works would be completed in accordance with current best practice. Potential impacts during the construction and operation phases would be managed through primary and tertiary mitigation methods. Overall, it is considered that there would be no worsening or improvement compared to the base case.
		[redacted]	0	0	0	0
D1: Is the option technically and commercially viable for the Project?		The use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for	Reductions in speed limit cannot be delivered or enforced by SZC Co.; it would require the support and sponsorship of SCC as the highway authority.	The works proposed are relatively minor and unlikely to be high in cost. Similar to a do-nothing scenario, the use of the B1122 for construction traffic is likely to require long term maintenance and may	The works proposed are relatively minor and unlikely to be high in cost. In addition, similar to a do-nothing scenario, the use of the B1122 for construction traffic is likely to require long term	The works proposed are relatively minor and unlikely to be high in cost. In addition, similar to a do-nothing scenario, the use of the B1122 for construction traffic is likely to require long term

Criteria	Topic	Do Nothing (the 'base case')	Option 1 Speed limit reductions	Option 2 Improvement of the B1122 to the west of the junction with Mill Street	Option 3 Pedestrian enhancements in Theberton	Option 4 Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance
		vehicles to use alternative routes.	In addition, similar to a do-nothing scenario, the use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes.	require localised closures and for vehicles to use alternative routes.	maintenance and may require localised closures and for vehicles to use alternative routes.	maintenance and may require localised closures and for vehicles to use alternative routes.
		[redacted]	- (-1)	0	0	0

APPENDIX D: POST DCO SUBMISSION OPTIONS APPRAISAL, ALTERNATIVE ALIGNMENTS FOR THE SIZEWELL LINK ROAD ENVIRONMENTAL APPRAISAL TABLE

Table D-1 Post DCO Submission Options Appraisal, Alternative Alignments for the Sizewell Link Road Environmental Appraisal Table

Criteria	Topic	Base case	Route W		Route X	Route Y		Route Z	
		Do nothing	North	South		North	South	North	South
St1: Is the option likely to increase transport impacts on the wider network.		Traffic modelling of Sizewell C peak construction, as set out in Section 8.2 of this document, would increase predicted to rise to between around 5,000 and 7,700 vehicle movements daily (24hr AADT) on the B1122 to the B1125. This represents an increase of up to 35% along the B1122 near Theberton and 32% on the B1122 at Yoxford. During the construction of Sizewell C, on a typical day, the average number of HGVs during peak construction would be 750 movements (375 movements each way). During the busiest day, this would be 1500 movements (750 movements each way). This would lead to an increase the daily traffic volumes on the B1122 to up to 7,700 vehicles at Theberton during peak construction (ADDT, all traffic including HGV, LGV and buses). Whilst the use of the B1122 is unlikely to result in increased traffic impacts on the wider network, the proportion of larger vehicles (i.e. HGVs, buses) would be significantly larger than without the construction of Sizewell C which could lead to an increase in severance, fear and intimidation. The use of the B1122 for construction traffic is likely to	Route W would provide an alternative route for Sizewell C construction traffic compared to the base case. Route W is the most southerly of the options considered, with the connection from the A12 located to south of Saxmundham. Route W is therefore best placed of the options considered to intercept the Sizewell C HGVs from the south, where a larger proportion of the traffic would originate from. Though similar to the base case of do nothing, as there would be no alternative route near the B1122 (compared to Route Z) for Sizewell C traffic originating from the north would need to pass through Yoxford, which could increase traffic impacts at the junction with the A12 (when compared to Route Z). In addition, both W alignments (north and south, as would Route Z) would connect with the A12 away from Kelsale and Carlton (compared to Routes X and Y (north and south alignment) and thus the traffic effects within the Kelsale and Carlton would be avoided. The majority of both the north and south alignment could be constructed off-line which would minimise the disruption to the wider highway network. However, both route alignments would require the reconfiguration of the local road network in at least six locations. This includes the B1121, at a location to the south of Saxmundham and the B1119 which could be disruptive to the highway network (as referenced in the SCC 2014 study 'Sizewell C, Route 2 and B1122 Study' (Ref. 17)). Temporary diversions and traffic		Route X would provide an alternative route for Sizewell C construction traffic compared to the base case. Route X would utilise the existing B1121, connecting from the A12 near Kelsale and Carlton. However, the use of the B1121 for Sizewell C construction traffic would have a large increase of traffic within Kelsale and Carlton, particularly in larger vehicles such as HGVs, buses. This has the potential to lead to congestion and safety concerns, particularly near Kelsale Primary School which is located on Carlton Road, just to the west of the B1121, and bus stops just to the north. Pedestrians, including school children, are likely to be crossing the B1121 in this area. Similar to Route W (both alignments), there would be no alternative route near the B1122 (compared to Route Z) for Sizewell C traffic originating from the north would need to pass through Yoxford, which could increase traffic impacts at the junction with the A12 (compared to Route Z).	Route Y would provide an alternative route for Sizewell C construction traffic compared to the Basecase. Similar to Route W (both alignments) and Route X, there would be no alternative route near the B1122 (compared to Route Z) for Sizewell C traffic originating from the north would need to pass through Yoxford, which could increase traffic impacts at the junction with the A12 (compared to Route Z). The majority of both the north and south alignment could be constructed off-line which would minimise the disruption to the wider highway network However both route alignments would require the reconfiguration of the local road network in 8 locations. Temporary diversions would be required during construction, this could lead to an increase in traffic elsewhere. There is also the potential for traffic impacts arising from changes to existing roads and potential tie-ins on the wider traffic network; if this option is progressed the routes would need to be designed to minimise impacts, where practicable. Both alignments would require a crossing of the East Suffolk line. The East Suffolk line is in a shallow cutting at this location; if the crossing of the East Suffolk line is via an overbridge, the height of the embankment required to ensure sufficient headroom for the railway may require large earthworks to connect Butcher's Road to new road.		Route Z would provide an alternative route for Sizewell C construction traffic compared to the Basecase, however, it would be the closest of the options considered and is he most northern route . Route Z would deliver more than a 90% reduction in traffic flow through Middleton Moor and Theberton compared to the base case (i.e. do nothing approach). Traffic travelling from the south (which comprises a greater proportion) would have to travel further north (compared to Route W). However, the existing A12 Saxmundham bypass would be able to accommodate the volume of traffic without capacity issues. Both alignments (north and south) would connect with the A12 away from existing settlements (compared to Routes X and Y (north and south alignment) and thus the traffic effects within the Kelsale and Carlton would be avoided. In addition to providing an alternative route for Sizewell C traffic to avoid Theberton and Middleton Moor, a link from the existing B1122 to this route could be provided which would avoid the need for any HGVs to travel on the A12 through Yoxford during peak construction of the main development site. The other options considered are more southerly, and would still require HGVs from the north to travel either through Yoxford on the A12, or to use the B1122 though Middleton Moor and Theberton, reducing the benefit of constructing the new road. Both route variations would require the reconfiguration of the local road network in 5 locations. Temporary diversions would be required during construction, this could lead to an increase in traffic elsewhere.	

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
		require long term maintenance and may require localised closures. During these times, this would likely require Sizewell C traffic to use alternative routes, and could lead to temporary traffic impacts elsewhere in the area. At this time, the extent of maintenance required, and potential alternative routes are not known.	management measures would be required during construction. However, this would be temporary. There is also the potential for traffic impacts arising from permanent changes to existing roads and potential tie-ins on the wider traffic network; if this option is progressed the routes would need to be designed to minimise impacts, where practicable. Both routes would cross the East Suffolk line as well as the Saxmundham to Leiston branch line. Of the options being considered (i.e. Routes X, Y and Z), Route W (both alignments) is the only one that requires a crossing of the Saxmundham to Leiston branch line. Temporary closures of both railway lines may be required to construct the crossings, though only the East Suffolk line is in user for passenger and freight services. The branch line would be in use for freight, associated with the construction of Sizewell C, and therefore there are potential programme constraints on when the crossing would be constructed. Following the selection of the Integrated Strategy, Route W South is not workable with the as the alignment is the same as the proposed green rail route.		Route X would require the reconfiguration of local road network in at least 5 locations. Temporary diversions would be required during construction, this could lead to an increase in traffic elsewhere. There is also the potential for traffic impacts arising from changes to existing roads and potential tie-ins on the wider traffic network; if this option is progressed the route would need to be designed to minimise impacts, where practicable. The route would also require one crossing of the East Suffolk line. Whilst, it may be possible to use the existing railway crossing, it is likely that additional reinforcement or a new crossing would be required to ensure it is safe to use for Sizewell C HGV traffic. Temporary closures of the railway line may be required during construction.	If the crossing is via an underpass, due to level differences this could have substantial constraints on ability to connect to the road.		There is also the potential for traffic impacts arising from changes to existing roads and potential tie-ins on the wider traffic network; if this option is progressed the routes would need to be designed to minimise impacts, where practicable. Both routes would require a crossing of the East Suffolk line. A temporary closure of the railway line may be required to construct the crossing.	
							Route Y south would utilise a short section of the B1121, diverging from the road south of Kelsale Place. With the junction off the B1121, being close to the junction of the A12 and the B1121, there is the potential for congestion and increased risk of accidents. An improvement of the junction is likely to be required to allow vehicles to turn easily.		
			++ (+2)		- (-1)	- (-1)	- (-1)	++ (+2)	++ (+2)
St2: Is the option complaint with highway design and safety standards?	Accident records along the stretch of the B1122 between the A12 and B1125 varies, with less accidents occurring at the western end between Yoxford and Middleton Moor; however, half of the accidents over the	All options would be designed in accordance with DMRB standards and required safety standards. All routes would require a crossing of the railway which would therefore be required to meet relevant Network Rail standards.							
			Detailed design would include providing adequate pedestrian facilities and a review of any necessary junction improvements to accommodate Sizewell C construction		Detailed design would include providing adequate pedestrian facilities and a review of any necessary junction	Detailed design would include providing adequate pedestrian facilities.		Detailed design would include providing adequate pedestrian facilities.	

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
		recent five year period to the east of Middleton Moor were related to reckless driving, driver impairment and excessive speed (see Doc Ref. 8.5) and may also be linked to the B and C road standards of the existing road. A large increase in traffic flow is likely to increase the accident rate but with the implementation of a Construction Traffic Management Plan (CTMP) (Doc Ref. 8.7), construction related traffic will be required to adhere to the SZC Co. driver rules, which will set out what the responsibilities are for drivers of construction traffic related to the Sizewell C Project, and help to minimise risk. Pedestrians in settlements walking adjacent to the highway would experience the effects of a large increase in traffic levels, particularly buses and HGV's, which includes a reduction in pedestrian amenity.	traffic. Pedestrian activity along the route is not expected but PROW crossings of the route are required. Following the selection of the Integrated Strategy, Route W South is not workable with the as the alignment is the same as the proposed green rail route.		improvements to accommodate Sizewell C construction traffic (for example at Clay Hills). Pedestrian activity along footways is expected within Kelsale and Carlton and PROW crossings of the route would be required; it is anticipated that traffic management measures would be required to minimise risk of collisions.	Pedestrian activity along the route is not expected but PROW crossings of the route are required. Both routes would require a crossing of the East Suffolk Railway line. For Route Y (both alignments), the East Suffolk line is in shallow cutting; the height of the embankment required to ensure sufficient headroom for the railway may require earthworks to connect Butcher's Road to new road. Similarly, if crossing is via an underpass, this could have substantial constraints on ability to connect to the road (concluded in the Peer Review Paper provided within Appendix 12 to the Sizewell link road - Principle and Route Selection Response Paper).		Pedestrian activity along the route is not expected but PROW crossings of the route are required.	
			++ (+2)		+ (+1)	+ (+1)	+ (+1)	++ (+2)	++ (+2)
St3: Is the option compliant with local and national policy?		NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. A do nothing approach would not provide any mitigation for impacts arising from	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Whilst both route alignments would avoid impacts from the project in the communities within Middleton Moor and Theberton, both the north and south alignments of Route W have the potential to impact future residents of committed		NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Whilst Route X would avoid impacts from the project in the communities within Middleton Moor and	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Adequate demand management and mitigation is proposed to avoid transport related impacts on the communities within Theberton and Middleton Moor. However, any adverse significant effects arising from the construction or operation of either route should be avoided where practicable through design or appropriate management measures. Route Y would be positioned to the north of Saxmundham and Kelsale and would reduce effect on the existing			Route Z would be effective at reducing traffic volumes (and therefore traffic-related environmental effects such as noise and air

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
		increased traffic, particularly noise and amenity impacts on residents along the B1122. Noise modelling, as summarised in **Section 8.3** of this report, demonstrated that the increase in traffic associated with the construction of Sizewell C would increase noise levels within the villages of Theberton and Middleton Moor, which would, at times, be significant. As shown in Section 8 of this report, the effect of increased HGV associated with the construction of Sizewell C would have significant effects on amenity, and health and wellbeing of the communities at Middleton Moor and Theberton.	development, or impact the development of future allocated sites. Both route variants would pass through the centre of SCLP12.29, a mixed use allocation for South Saxmundham Garden Neighbourhood, proposed in the adopted Suffolk Coastal District Local Plan (September 2020) (Ref. 22). The allocation comprises approximately 66.6ha of land for an mixed use development, comprising primary school provision (identified as a need for the Saxmundham area as the limited capacity in existing schools is increasingly acting as a barrier to the future development of Saxmundham and the surrounding communities), community facilities, employment land and open space alongside a variety of residential development (approximately 800 dwellings). The provision of a new road through this allocation may impact the development of this allocation, whereby any development would need to be designed around a new road to avoid impacts on future users/occupants. Though no development application has been brought forward, there has been a request for a screening opinion in 2017 (**DC/17/2269/EIA**) at the Land West of South Entrance, Saxmundham. The request was for proposed residential development, land for a new primary school, open space and country park. As with the allocation, the western part of this route would pass directly through the site.		Theberton, Route X would likely introduce new impacts on the residents within the Kelsale and Carlton. In addition, the route also has the potential to impact future residents of committed development or ability to develop allocated sites. Route X would pass through Kelsale on existing roads at its western end, passing the following allocations: • SSP37: Historic Parks and Gardens (south of Clayhills Road); • SSP25: Carlton Park, Main Road, Kelsale - Employment Allocation • SSP10 – Land south of Ambleside, Main Road, Kelsale cum Carlton – Housing Allocation. • SCLP11.8: Historic Parks & Gardens (south of Clayhills Road); • SCLP12.37 Carlton Park, Main Road, Kelsale cum Carlton Employment allocation; In addition, full planning permission was granted in 2019 at a site located 'Land Off Main Road, Kelsale Cum Carlton' for the erection of 44no. new dwellings with associated new access road. Route	local road network compared to the base case as it would be well placed to intercept traffic from the south, using the existing Saxmundham bypass, and from the north. However, it could cause other impacts on the transport infrastructure, as the connection point with the A12 would be constrained as visibility standards on the A12 may be difficult to achieve. The proposed junction with Route Y and the A12 is located near existing settlements, and the assessments noted that there is potential for significant effects on local residential amenity on residential properties near the junction with the A12 at Dorley's Corner. This includes significant adverse effects for local residents at Bridge Farm and Orchard House, who also has the potential to be significantly affected by required engineering works in their vicinity.	quality) along the B1122 through Middleton Moor and Theberton. The route would avoid the need for any HGVs to travel on the A12 through Yoxford during peak construction of the main development site, as Sizewell C HGV traffic from the south would join the new road just north of Town Farm Lane and those from the north would use the B1122 east of Yoxford, and join the new road west of Middleton Moor. More southerly alignments would have required HGVs from the north to travel either through Yoxford on the A12 to join the new route, or to use the B1122 though Middleton Moor and Theberton, reducing the benefit of constructing the new road. Route Z would connect with the A12 away from existing settlements where the effects on local residents will be minimised.
			The eastern end of the route would be close to the Leiston neighbourhood	Routh W south would enter into the Leiston neighbourhood plan area at the					

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
			plan area but not enter into it.	eastern end of the route. Route W south would also intersect a site which has approved outline planning permission (**DC/16/1961/OUT)** for up to 187 dwellings to include car parking, open space provision with associated infrastructure and access at Land north of B1119 Saxmundham Road, west of Leiston. This route may impact the ability to bring this development forward; and the new road could have an environmental impact on the proposed properties. A Reserved Matters application (DC/19/1883/ARM) and discharge of condition applications have been submitted an approved (in 2019 and 2020). Route W South would pass through land where homes are currently	X would run adjacent to the site at the section to the west where it passes through Kelsale. Whilst it is unlikely that Route X would encroach onto the site but there could be an impact on the proposed access to site and an environmental impact on the proposed properties.				

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
				consented to be delivered. The recent discharge of condition applications (July 2020) show that it is likely this development will come forward). However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.					
			-- (-2)		-- (-2)	++ (+2)	++ (+2)	++ (+2)	++ (+2)
Eng1: Does the option meet the construction and operational needs of Sizewell C, including the provision of early access for construction?		The assessment identified that the current flows on the B1122 are relatively modest and much lower than on the A12 (as set out in row St1). As such it was considered that Sizewell C traffic was not likely to cause any capacity or congestion problems on most of the B1122. However, the use of the B1122 for construction traffic is likely to require long term maintenance and may require localised closures and for vehicles to use alternative routes. This could lead to some delays in deliveries to the main development site, that would need to be managed through appropriate management measures, developed in	Route W (both variants) would meet the operational needs of the Project and could also encourage traffic from other routes to use the new route instead, such as the A1094. However, there are potential constraints on meeting the early access for construction needs for the Project. It is noted that this option would require two crossings of railways; the Saxmundham to Leiston branch line and the East Suffolk line. This could have programme implications, particularly if the crossing requires closure of the East Suffolk line or delays freight deliveries to Sizewell Halt along the branch line. In addition to the crossings of roads and railways, the route (both alignments) would also need to cross the River Fromus and Hundred River, as well as a small number of tributaries. Details of these crossings and likely engineering works to cross		Route X would meet the operational needs of the Project. However, there are potential constraints on meeting the early access for construction needs for the Project. It is noted that this option would require a crossing of the East Suffolk line; whilst there is the potential for this to use the existing cross, reinforcement is likely required, and this could have programme implications, particularly if works require closure of the East Suffolk line. In addition to the crossings of roads and the East Suffolk line, the route would also need to cross the River Fromus and Hundred River, as well as	Route Y (both variants) would meet the operational needs of the Project. However, there are potential constraints on meeting the early access for construction needs for the Project It is noted that this option would require a crossing of the East Suffolk line; this could also have cost and programme implications, particularly if the crossing requires closure of the East Suffolk line. The East Suffolk line is in shallow cutting – the height of the embankment required to ensure sufficient headroom for the railway may require earthworks to connect Butcher's Road to new road. If this crossing is an underpass (as preferred to reduce effects on amenity of Bridge Farm and Orchard House) this would require substantial engineering works and thus could have		Route Z (both variants) would meet the operational needs of the Project. However, there are potential constraints on meeting the early access for construction needs for the Project This option would require a crossing of the East Suffolk line; this could have programme implications, particularly if the crossing requires closure of the East Suffolk line. The route would cross a number of smaller tributaries. Site visits have shown these watercourses as generally being dry and could be culverted below the route to maintain flow path. Route Z would not require a crossing of either the River Fromus or Hundred River (compared to Routes W, X and Y). Route Z north was approximately 6.3km in length, whereas Route Z south was approximately 6.8 km in length; these routes are 1.9 and 1.4km shorter than Route W north (the longest route) respectively.	

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
		consultation with relevant consultees.	the rivers and associate floodplain have not been developed, however based on the design evolution, stakeholder engagement and work undertaken by SZC Co. to develop the proposals for two village bypass which crosses the River Alde, the crossings are likely to require large span bridge structures and earthworks to cross over the river and ensure clearance beneath the bridge. The SCC 2014 study 'Sizewell C, Route 2 and B1122 Study' (Ref. 17) also noted the constraints of the river crossings. Route W North and South are 8.2 km and 7.5km respectively; Route W North is the longest of the routes considered. Both the length of the routes and structures required could impact programme and level of engineering required and risk to the early provision of access to the main development site. However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.	a small number of tributaries. Details of these crossings and likely engineering works to cross the rivers and associate floodplain have not been developed. As this route option utilises existing highway at its western end, it may be able to utilise an existing crossing of the River Fromus, however additional reinforcement may be required to accommodate the increase in HGV and traffic volumes associated with the construction of Sizewell C. In addition, the crossing over the Hundred River, based on the design evolution, stakeholder engagement and work undertaken by SZC Co. to develop the proposals for two village bypass which crosses the River Alde, is likely to require large bridge structure and earthworks to span the river and ensure clearance beneath the bridge.	implications on programme implications. In addition to the crossings of roads and the East Suffolk line, the route would also need to cross the River Fromus and Hundred River, as well as a small number of tributaries. Details of these crossings and likely engineering works are not yet known, however based on the design evolution, stakeholder engagement and work undertaken by SZC Co. to develop the proposals for two village bypass which crosses the River Alde, the crossings are likely to require large bridge structures and earthworks to span the river and ensure clearance beneath the bridge. Route Y North and South are 8.0 km and 7.8km respectively; Route Y North is the second longest of the routes considered. Both the length of the routes and structures required could impact programme and level of engineering required and risk to the early provision of access to the main development site.		As Route Z is shorter than Routes W and Y, and would not require crossings of the River Fromus and Hundred River, both alignments are likely to have a lesser impact on the ability to meet programme constraints and allow for the provision of early access for construction compared to the other options.	
			-- (-2)		-- (-2)	-- (-2)	-- (-2)	- (-1)	- (-1)
E1: What are the potential economic benefits to the regional and local economies as a result of the option		This option is the least likely to generate socio-economic benefits due to there being no physical interventions.	All routes options would require a large work force, which have the potential to increase business and spending in the local area. However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.						
			++ (+2)		++ (+2)				

Criteria	Topic	Base case	Route W		Route X	Route Y		Route Z	
		Do nothing	North	South		North	South	North	South
So1: Will the option create sustainable communities by maintaining, and where possible, improve the quality of life and minimise effects on existing (and future) local communities? Will the option require the loss of any existing property (or committed development)?		The existing road layout is within capacity limits. However, during construction of Sizewell C, on a typical day, the average number of HGVs during peak construction would be 750 movements (375 movements each way). During the busiest day, this would be 1500 movements (750 movements each way) Whilst the use of the B1122 is unlikely to result in increased traffic impacts on the wider network, the proportion of larger vehicles (i.e. HGVs, buses) would be significantly larger than without the construction of Sizewell C which could lead to an increase in severance, fear and intimidation, as well as amenity impacts which in certain locations could be significant	A legacy benefit would be related to safety and the reduction in accident risk on B1122 and the route could be a new signed route to Leiston. Whilst both route options would avoid impacts from the project in the communities within Middleton Moor and Theberton, the alignments presented in both variants of Route W have the potential to impact future residents of committed development or impact on the development of an allocated site located to the south of Saxmundham (see row St3). Sizewell C traffic originating from the north would need to pass through Yoxford, which could increase traffic impacts at the junction with the A12 (compared to Route Z), and impact on the amenity of residents.	Route W South would pass to the north of Leiston, and the construction and operation of the road would have the potential to impact on the amenity of residents, particularly along Abbey Road where the route connects to the road. Residents may also experience effects arising from the construction of the main development site, leading to combined	Whilst Route X would avoid impacts from the project in the communities within Middleton Moor and Theberton, Route X would introduce new impacts on the residents within the Kelsale and Carlton arising from the increase in traffic within Kelsale and Carlton and impact on a number of isolated properties along the route. The increase in traffic has the potential to impact on the amenity of workers and families attending Kelsale Primary School, located on Carlton Road just west of the B1121, and users of bus stops to the north. Pedestrians, including school children, are likely to be crossing the B1121 in this area and the increase traffic could lead to a sense of severance, fear and intimidation crossing the road. Sizewell C traffic originating from the north would need to pass through Yoxford, which could increase traffic impacts at the junction with the A12 (compared to Route Z), and impact on the amenity of residents In addition, the route also has the potential to impact future residents of committed development. A legacy benefit would be related to safety and the	Both route options would avoid impacts from the project in the communities within Middleton Moor and Theberton Would result in impact on a number of isolated properties, although Route Y south would likely result in impacts on a larger number as the route passes through the northern Edge of Kelsale. Sizewell C traffic originating from the north would need to pass through Yoxford, which could increase traffic impacts at the junction with the A12 (compared to Route Z), and impact on the amenity of residents A legacy benefit would be related to safety and the reduction in accident risk on B1122 and the route could be a new signed route to Leiston.		This option is the most related to the communities along the B1122 that it seeks to relieve. It would provide effective relief of Yoxford, Middleton Moor and Theberton in terms of noise and amenity impacts, however, the route would impact on a number of isolated properties. As the signed route to Sizewell B and C this route would continue to provide relief to Yoxford, Middleton Moor and Theberton during outages.	

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
				construction activities. In addition, an outline planning application for up to 187 dwellings (LPA ref: DC/16/1961/OUT) to include car parking, open space provision with associated infrastructure and access at Land north of B1119 Saxmundham Road, west of Leiston. This development would be affected if this option is selected and may require the demolition of several (future) properties. However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.	reduction in accident risk on B1122.			
			-- (-2)		-- (-2)	- (-1)	0	+ (+1)	+ (+1)
Env1: What are the environ mental impacts of the	Noise and vibration	The proportion of construction traffic associated with Sizewell C on the B1122 would comprise a significantly higher proportion of larger	This option would avoid noise impacts on noise sensitive receptors along the B1122 and within Theberton compared to the basecase and avoid impacts on noise sensitive receptors along the B1122.		This option would avoid noise effects on receptors along the B1122 and within Theberton compared to the basecase, and avoid impacts on noise sensitive	This option would avoid noise effects on receptors along the B1122 and within Theberton compared to the basecase, and avoid impacts on noise sensitive receptors along the B1122. However, both routes would pass close to a number of noise sensitive		This option would remove traffic from within Middleton Moor, Middleton, and Theberton compared to the basecase scenario, and avoid impacts on noise sensitive receptors along the B1122. However, there would be potential noise impacts upon residents at isolated properties	

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
option? Where practicable, what mitigation could be applied to actively mitigate and manage any potential environmental effects?		vehicles than is currently the case. Noise modelling, summarised in **Section 8.3** of this report demonstrated that the increase in traffic associated with the construction of Sizewell C would increase noise levels within the villages of Theberton and Middleton Moor, and would be significant. Significant effects would also likely to be experienced at isolated residences along the B1122.	However, the alignment would pass close to a number of noise sensitive properties along Bigsby's Corner and Benhall Bridge, as well as a number of isolated properties to the south-east of Saxmundham. In addition, there are a number of committed developments or site allocations close to the proposed route alignments. The routes therefore have the potential to result in noise impacts on these existing and future receptors (and those specific to the north or south alignment) during construction of the road and during its operation when it is used for Sizewell C construction traffic. Considering both existing and future receptors along the route, Route W has the potential to affect a larger number of noise sensitive receptors than the base case as well as the other routes (Y (north) and Z (north and south).		receptors along the B1122. However, this route option would likely introduce noise impacts on a number of noise sensitive receptors along the B1121 within Kelsale and Carlton from the increased Sizewell C construction traffic (which would not be impacted in the basecase and the other route options, although Route Y south would impact on a smaller number near the junction of Dorley's Corner) From Kelsale and Carlton, the route passes a number of isolated properties including The Bungalow, Oak Tree Farm, Westhouse Cottage, Hill Farm and Harrow Farm. This has the potential to result in noise impacts on these receptors during construction and during its operation when it is used for Sizewell C construction traffic. Considering the proportion of noise sensitive receptors along Route X, including a school, it is considered that the number of noise sensitive receptors is higher/more sensitive than the basecase.	receptors, including Westhouse Cottage, Hill Farm and Harrow Farm. In addition, works to cross the East Suffolk line would be close to Bridge Farm and Orchard House This route has the potential to result in noise impacts on these receptors (and those specific to the north or south alignment) during construction of the road and during its operation when it is used for Sizewell C construction traffic.		including Annesons Cottages and Valley Farm. This has the potential to result in noise impacts on these receptors (and those specific to the north or south alignment) during construction of the road and during its operation when it is used for Sizewell C construction traffic.	
			Where the route diverges from the south route, it passes a number of isolated properties including Hill Farm and Harrow Farm.	The route would pass to the north of Leiston connecting to Abbey Road, close to Abbey Road cottages. However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.		In addition to the above noise sensitive receptors, the route would also pass close to Kelsale Place Cottage and Park Farm Bungalow and Park Gate Farm. Overall, it is considered that Route Y North has the potential to reduce the number of noise sensitive receptors impacted compared to	In addition to the above noise sensitive receptors, the route would also pass close to noise sensitive receptors within the fringe of Kelsale including Kelsale Place Cottage, and would diverge from the B1121 near Dorley's Corner. Overall, it is considered that Route Y South has the potential to reduce the number of noise sensitive receptors impacted compared to the base case. However, a larger number are	In addition to the above noise sensitive receptors, the route would be close to Kelsale Lodge Cottages, Fir Tree Farm Overall, it is considered that Route Z North has the potential to reduce the number of noise sensitive receptors compared to the base case and Routes W and X.	In addition to the above noise sensitive receptors, the route would be close to he Red House Farm, Buskie Farm and Town Farm. Overall, it is considered that Route Z South has the potential to reduce the number of noise sensitive receptors compared to the base case and Routes W and X.

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
						the base case and Routes W and X.	likely to be impacted compared to the northern alignment due to where the route connects to the A12.		
			-- (-2)		-- (-2)	++ (+2)	+ (+1)	++ (+2)	++ (+2)
	Air Quality	The nearest Air Quality Management Areas (AQMAs) is 9km away from the B1122. The nearest monitoring site (for a pollutant relevant to the assessment) is approximately 3km south of the B1122, on Main Street, Leiston which reported a concentration of 20 micrograms in 2016 (the most recently reported year). This value is below the annual mean air quality strategy objective of 40µg/m^3 (Ref.20). Sizewell C traffic would increase the proportion of traffic on the B1122 as it passes through Theberton and Yoxford. However, the increase in traffic is unlikely to exceed the annual mean air quality strategy objective.	Dust likely to arise from construction works could result in a localised reduction of air quality, however, this would be localised and would be mitigated through best practise measures. During operation, traffic levels associated with Sizewell C traffic would lead to changes in emission levels, which have the potential to have an impact on a number of isolated properties as well as a number of committed developments or site allocations close to the proposed route alignments. Considering both existing and future receptors along the route, Route W has the potential to affect a larger number of noise sensitive receptors than the base case as well as the other routes (Y (north) and Z (north and south). However, the increase in traffic is unlikely to result in emissions that would exceed the annual mean air quality strategy objective. However, Route W South is not workable with the Integrated Strategy		Dust likely to arise from construction works could result in a localised reduction of air quality, however, this would be localised and would be mitigated through best practise measures. During operation, traffic levels associated with Sizewell C traffic would lead to changes in emission levels, which have the potential to have an impact on a number of isolated properties. During operation, traffic levels associated with Sizewell C traffic would lead to changes in emission levels, which could lead to potential air quality effects on residents within Kelsale and Carlton, as well as a number of isolated properties. Considering that Route X would pass through Kelsale and Carlton, and has the potential to affect a larger number of noise sensitive receptors than the base case as well as the other routes (Y (north) and Z (north and south). However, the increase in traffic is unlikely to result	Dust likely to arise from construction works could result in a localised reduction of air quality, however, this would be localised and would be mitigated through best practise measures. During operation, traffic levels associated with Sizewell C traffic would lead to changes in emission levels, which have the potential to have an impact on a number of isolated properties. Whilst a lower number of properties are likely to be impacted than the basecase, on balance, due to works proposed and introduction of new receptors, the increase in traffic is unlikely to result in emissions that would exceed the annual mean air quality strategy objective, therefore considered overall neutral compared to the base case.		Dust likely to arise from construction works could result in a localised reduction of air quality, however, this would be localised and would be mitigated through best practise measures. During operation, traffic levels associated with Sizewell C traffic would lead to changes in emission levels, which have the potential to have an impact on a number of isolated properties. Whilst a lower number of properties are likely to be impacted than the basecase, on balance, due to works proposed and introduction of new receptors, the increase in traffic is unlikely to result in emissions that would exceed the annual mean air quality strategy objective, therefore considered overall neutral compared to the base case..

Criteria	Topic	Base case Do nothing	Route W North	Route W South	Route X	Route Y North	Route Y South	Route Z North	Route Z South
			as the alignment is the same as the proposed green rail route.		in emissions that would exceed the annual mean air quality strategy objective.				
			- (-1)		- (-1)	0	0	0	0
	Landscape and visual amenity	A do nothing approach would not alter the existing road layout. However, the construction of Sizewell C would result in an increase in traffic volumes through at Theberton, Middleton Moor and Yoxford. The increased traffic through the villages may detract from their historic setting.	Both routes traverse a landscape typically characterised by a series of small to largescale arable and pasture fields, intersected by a network of B-roads and PRoWs with occasional villages and dispersed hamlets and farmsteads. In addition to the crossings of roads and PRoW, the route (both alignments) would also need to cross the River Fromus and Hundred River. Details of these crossings and likely engineering works to cross the rivers have not been developed, however crossings are likely to require large span bridge structures and earthworks to cross over the river and ensure clearance beneath the bridge. This would introduce prominent infrastructure into the Fromus Valley landscape. Route W North and South are longer than Routes X and Z (both north and south) at 8.2 km and 7.5km in length respectively and impact on a larger are comparatively. Both routes pass close to land designated as a 'Special Landscape Area' to the north-east of Benhall Green and east of the B1122 east of Theberton House. The proposed route could potentially have visual impacts and impacts on		No landscape designations have been identified within the vicinity of this route. Route X would introduce new visual impacts on the residents within the Kelsale and Carlton arising from the increase in traffic within Kelsale and Carlton and impact on a number of isolated properties including Westhouse Cottage, Hill Farm and Harrow Farm and so could impact on the residential amenity of these properties. Further east the route traverse a landscape typically characterised by a series of small to largescale arable and pasture fields, intersected by a network of roads and occasional PRoWs . In addition to the crossings of roads and PRoW, route X would also need to cross the River Fromus and Hundred River. Details of these crossings and likely engineering works to cross the rivers have not been developed, however	No landscape designations have been identified within the vicinity of this route. Both routes traverse a landscape typically characterised by a series of small to largescale arable and pasture fields, intersected by a network of roads and occasional PRoWs with dispersed hamlets and farmsteads. In addition to the crossings of roads and PRoW, the route (both alignments) would also need to cross the River Fromus and Hundred River. Details of these crossings and likely engineering works to cross the rivers have not been developed, however crossings are likely to require large span bridge structures and earthworks to cross over the river and ensure clearance beneath the bridge. This would introduce prominent infrastructure into the Fromus Valley landscape. Route Y North and South are longer than Routes X and Z (both north and south) at 8km and 7.8km in length respectively and impact on a larger are comparatively. The proposed route could potentially have visual impacts and impacts on residential amenity at a number of isolated properties including Westhouse Cottage, Hill Farm, Harrow Farm, Bridge Farm and Orchard House.		Route Z North and South are approximately 6.3 and 6.8 km respectively in length and would impact upon a smaller area compared to the Routes W and Y. Both Route Z North and South passes near to an area of 'Special Landscape Area' that is located to the north of Bobbett's Wood. If progressed, the final design may need to include a mitigation strategy to minimise any potential effects. The proposed route is likely to have visual impacts and impacts on residential amenity at the following locations: • To the south of Fir Tree Farm and north of Buskie Farm; and • To the south of Valley Farm and Annesons Cottages.	

Criteria	Topic	Base case Do nothing	Route W North	Route W South	Route X	Route Y North	Route Y South	Route Z North	Route Z South
			residential amenity at the following locations: • properties at Leiston Home Farm, Saxmundham Road; • properties to the north of Leiston, along the B1122; and • at the connection to the B1122. At these locations, the proposed route would pass near to residential properties to an extent that it would cause visual impacts and, combined with other impacts, this may have an effect on the amenity of residents. If progressed, the final design would need to include a mitigation strategy to minimise any potential effects.		the crossing of the River Fromus is likely to utilise an existing crossing structure, whereas the crossing of the Hundred River is likely to require large span bridge structures and earthworks to cross over the river and ensure clearance beneath the bridge. This would introduce prominent infrastructure into the Fromus Valley landscape. This option is approximately 6.6 km in length and would impact upon a smaller area compared to the Routes W and Y.				
				The alignment of Route W (South) would intersect one area of Ancient Woodland. However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.	In addition to the properties above, the proposed route would potentially have an effect on residential amenity within Kelsale and Carlton.				
		[redacted]	-- (-2)		-- (-2)	-- (-2)	-- (-2)	- (-1)	- (-1)
	Biodiversity	A do nothing approach would not alter the existing road	No direct impacts on statutory designated sites. An increase in	No direct impacts on statutory designated sites. However, the	No direct impacts on statutory designated sites.	No direct impacts on statutory	No direct impacts on statutory designated sites.	No direct impacts on statutory designated sites.	No direct impacts on statutory designated sites.

Criteria	Topic	Base case	Route W		Route X	Route Y		Route Z	
		Do nothing	North	South		North	South	North	South
		layout and there would be no direct impacts on ecology. The increase in traffic associated with Sizewell C may lead to indirect impacts on some designated sites including a roadside nature reserve to the of Yoxford.	traffic may lead to indirect impacts on some designated sites including a roadside nature reserve to the east of Yoxford. The route passes through predominantly arable land, as well hedgerow and small woodland belts, and could result in habitat fragmentation. The route would also need to cross the River Fromus and Hundred River, as well as a number of small tributaries. This would result in habitat loss and increased fragmentation of the water courses with potential for downstream effects (also noted in the SCC 2014 study 'Sizewell C, Route 2 and B1122 Study' (Ref. 17)). The habitats along the route have the potential to support protected species such as bats, otters, water	alignment of Route W (South) would intersect one area of Ancient Woodland and County Wildlife Site, resulting in loss from this site. In addition, an increase in traffic may lead to indirect impacts on some designated sites including a roadside nature reserve to the east of Yoxford. The route passes through predominantly arable land, as well hedgerow and small woodland belts, and could result in habitat fragmentation. The route would also need to cross the River Fromus and Hundred River, as well as a number of small tributaries. This would result in habitat loss and increased fragmentation of the water courses with potential for downstream effects (also	The route passes through predominantly arable land, as well hedgerow and small woodland belts, and could result in habitat fragmentation. The route would also need to cross the River Fromus and Hundred River, as well as a number of small tributaries. The habitats along the route have the potential to support protected species such as bats, otters, water vole and great crested newts. This option is approximately 6.6 km in length and would fragment the River Fromus and Hundred River corridors; however, some of the route is along built development. This would result in habitat loss and increased fragmentation of the water courses with potential for downstream effects Overall it would result in lower areas of habitat loss compared to the Routes W and Y.	designated sites. The route passes through predominantly arable land, as well hedgerow and small woodland belts, and could result in habitat fragmentation. The route would also need to cross the River Fromus and Hundred River, as well as a number of small tributaries. This would result in habitat loss and increased fragmentation of the water courses with potential for downstream effects. The habitats along the route have the potential to support protected species such as bats, otters, water vole and great crested newts. This option is approximately	The route passes through predominantly arable land, as well hedgerow and small woodland belts, and could result in habitat fragmentation. The route would also need to cross the River Fromus and Hundred River, as well as a number of small tributaries. This would result in habitat loss and increased fragmentation of the water courses with potential for downstream effects The habitats along the route have the potential to support protected species such as bats, otters, water vole and great crested newts This option is approximately 7.8 km in length would fragment the River Fromus and Hundred River corridors and would result in a greater loss of habitat compared to Routes X and Z (north and south).	The route passes through predominantly arable land, as well hedgerow and small woodland belts, and could result in habitat fragmentation. The route would also need to a number of small tributaries. The habitats along the route have the potential to support protected species such as bats, otters, water vole and great crested newts. This option is approximately 6.3 km in length; this is the shortest of all options. Overall it would result in lower areas of habitat loss compared to the Routes W and Y.	The route passes through predominantly arable land, as well hedgerow and small woodland belts, and could result in habitat fragmentation. The route would also need to a number of small tributaries. The habitats along the route have the potential to support protected species such as bats, otters, water vole and great crested newts This option is approximately 6.8 km in length; this option would result in lower areas of habitat loss compared to the Routes W and Y, though slighter larger areas than Routes X and Z north.

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
			vole and great crested newts. As this option is approximately 8.2 km in length, and the longest of the options, would fragment the River Fromus and Hundred River corridors and it is likely to result in a greater loss of habitat than the other options.	noted in the SCC 2014 study 'Sizewell C, Route 2 and B1122 Study' (Ref. 17). The habitats along the route have the potential to support protected species such as bats, otters, water vole and great crested newts. This option is approximately 7.5 km in length, would impact Ancient Woodland, would fragment the River Fromus and Hundred River corridors and would result in a greater loss of habitat compared to Routes X and Z (north and south). However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.		8 km in length, is one of the longer routes, would fragment the River Fromus and Hundred River corridors and would result in a greater loss of habitat compared to Routes X and Z (north and south).			
			--		-	--	--	-	-

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
			(-2)		(-1)	(-2)	(-2)	(-1)	(-1)
	Amenity and recreation	The base case would not have altered the existing road layout and therefore not have any direct impacts on PRoW. However, there is the potential for adverse impacts on the amenity of users due to increase in traffic, and traffic-related effects due to the presence of construction traffic flows from the Sizewell C Project on the B1122	Users would be directly affected by the bypass and likely require temporary diversions and would have direct views into the road corridor and would experience construction related noise and potentially small changes to air quality. At this stage, the length of any diversion is not known. During operation, users of PRoW would likely remain directly affected as they would be permanently diverted and would experience changes to their views and noise levels. At this stage, the length and overall impact of the diversion is not known, and the comparison below is based on the number of receptors impacted.						
			Route W north would cross 12 PRoW; this route would impact a greater number of PRoW compared to Routes X and Y (both north and south alignment).	Route W south would cross the most PRoW compared to the other routes; it would cross 14 PRoW . However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.	Route X would cross 4 PRoW; this is the lowest number of crossings compared to all of the options. As a lower number of PRoW are impacted compared to Routes W and Z; impacts on users of amenity and recreation are considered to be lower overall.	Route Y (both alignments) would cross 5 PRoW; this is one crossing more than Route X, but would impact considerably less than Routes W and Z (both north and south alignments for both routes). As a lower number of PRoW are impacted compared to Routes W and Z; impacts on users of amenity and recreation are considered to be lower overall.		Route Z south would cross 11 PRoW; this route would impact a greater number of PRoW compared to Routes X and Y (both north and south alignment).	Route W north would cross 12 PRoW; this route would impact a greater number of PRoW compared to Routes X and Y (both north and south alignment).
			-- (-2)		- (-1)	- (-1)	- (-1)	-- (-2)	-- (-2)
	Historic environment	A do nothing approach would not alter the existing road layout. However, the construction of Sizewell C would increase traffic through the historic villages of Theberton and Yoxford. The increased traffic through the villages may detract from their historic setting and designated assets within the villages and along the B1122.	There is the potential for adverse effects on the setting of a number of historic assets (Grade I, II and II*) along each route. Key assets to consider include Hurts Hall and Wood Farmhouse (Grade II) and Leiston Abbey (Scheduled Monument). Due to its location close to the main development site and green rail route, impacts from the construction and operation of a road on Leiston Abbey have the potential to combine and result in a greater effect on this asset.		There is the potential for adverse effects on the setting of a number of historic assets (Grade II and Grade II*) within Kelsale, Carlton, Saxmundham and isolated assets along the route including Grade II Oak Tree Farmhouse. The route also passes to the north of Leiston Abbey (Scheduled Monument). Due to its location close to the main development site	There is the potential for adverse effects on the setting of Oak Tree Farmhouse (Grade II). The route also passes to the north of Leiston Abbey (Scheduled Monument). Due to its location close to the main development site, impacts from the construction and operation of a road on Leiston Abbey have the potential to combine and result in a greater effect on this asset.		There is the potential for adverse effects on the setting of a number of historic assets (Grade II). Assets include Dovehouse Farmhouse, Theberton Hall and The Gates / Walls at Theberton Hall. Comparatively (to the other options considered), Route Z is the furthest of the options from Leiston Abbey (Scheduled Monument), and less likely to result in combined effects on this asset.	

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
			In addition to the above assets, Westhouse Farmhouse (Grade II), Buxlow Manor (Grade II*) would be along the route.	In addition to the above assets Fisher's Farmhouse (Grade II) and buildings within the extent of Leiston. However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.	and green rail route, impacts from the construction and operation of a road on Leiston Abbey have the potential to combine and result in a greater effect on this asset. If works require alteration of the junction of Clayhills with the B1121, this may result on direct impacts on Grade II listed buildings Carlton Cross and Carlton Rookery.				
		[redacted]	-- (-2)	[redacted]	-- (-2)	-- (-2)	-- (-2)	- (-1)	- (-1)
	Soils and agriculture	The increase in Sizewell C traffic along the B1122 would have a minimal impact on soils and agriculture.	This option is approximately 8.2 km in length and would pass through predominantly agricultural land. As this is the longest route, it would result in a greater agricultural land. Based on Regional Agricultural Land Classification (ALC) mapping suggests the land would be a mix of Grade 2 and 3. These maps do not distinguish between Grades 3a and 3b, however, there is	This option is approximately 7.5 km in length and would pass through predominantly agricultural land. The area of land required for construction and operation of the road would be greater than Routes X and Z (north and south alignment). Based on Regional Agricultural Land Classification (ALC) mapping suggests the land would be a mix of Grade 2 and 3. These	This option is approximately 6.6 km in length and would pass through predominantly agricultural land east of Kelsale and Carlton. However, some of the route is along built development, and overall would result in lower areas of agricultural land. Based on Regional Agricultural Land Classification (ALC) mapping suggests the land would be a mix of Grade 2 and 3. These maps do not distinguish between Grades 3a and 3b, however, there is the potential for it to be BMV land, which would be considered significant.	This option is approximately 8 km in length and would pass through predominantly agricultural land. As this is the second longest route, it would result in a large agricultural land. Based on Regional Agricultural Land Classification (ALC) mapping suggests the land would be a mix of Grade 2 and 3. These maps do not	This option is approximately 7.8 km in length and would pass through predominantly agricultural land. The area of land required for construction and operation of the road would be greater than Routes X and Z (north and south alignment). Based on Regional Agricultural Land Classification (ALC) mapping suggests the land would be a mix of Grade 2 and 3. These maps do not distinguish between Grades 3a and 3b, however, there is the potential for it to be BMV land,	This option is approximately 6.3 km in length and would pass through predominantly agricultural land. Based on Regional Agricultural Land Classification (ALC) mapping suggests the land would be a mix of Grade 2 and 3. These maps do not distinguish between Grades 3a and 3b, however, there is the potential for it to be BMV land, which would be considered significant.	This option is approximately 6.8 km in length and would pass through predominantly agricultural land. Based on Regional Agricultural Land Classification (ALC) mapping suggests the land would be a mix of Grade 2 and 3. These maps do not distinguish between Grades 3a and 3b, however, there is the potential for it to be BMV land, which would be considered significant.

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
			the potential for it to be BMV land, which would be considered significant.	maps do not distinguish between Grades 3a and 3b, however, there is the potential for it to be BMV land, which would be considered significant. However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.		distinguish between Grades 3a and 3b, however, there is the potential for it to be BMV land, which would be considered significant.	which would be considered significant.		
		[redacted]	--	[redacted]	-	--	--	-	-
		[redacted]	-- (-2)	[redacted]	- (-1)	-- (-2)	-- (-2)	- (-1)	- (-1)
	Geology and land quality	Online improvements would be minor and mostly restricted to the existing highway. The use of the B1122 for construction traffic is likely to require long term maintenance. However, any maintenance works would be managed through tertiary mitigation methods and included in a CoCP.	There are no geological SSSIs or local geological sites impacted by the routes Works to construct the new routes could result in: • physical effects including soil compaction, erosion and ground stability; • effects associated with existing ground contamination; • effects associated with potential new ground contamination issues; and • effects associated with the re-use or disposal of site sourced soils and waste soils. There is potential for Made Ground to be encountered in the areas adjacent to the railway line and existing roads. All route options would pass through agricultural land and close to farms which could have which have the potential to use contaminants of concern. In addition, due to the nature of the site and surrounding area, there is the potential for fly tipping as well as the potential for farmers tips, the contents of which would be unknown. Any maintenance works would be managed through tertiary mitigation methods and included in a CoCP.					
		[redacted]	- (-1)	[redacted]	- (-1)	- (-1)	- (-1)	- (-1)	- (-1)
			The following potential environmental effects may occur on the water environment as a result of the construction and operation of the bypasses.:						

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
	Groundwater and surface waters	The existing B1122 crosses a number of tributaries. The use of the B1122 for construction traffic is likely to require long term maintenance. However, any maintenance works would be managed through tertiary mitigation methods.	• levels and effects of emissions to water from the development; • abstractions of/effects on surface or groundwater resources; • effects of development on drainage or run-off pattern in the area; • changes to groundwater level, watercourses and flow of underground water; • crossings of watercourses; and • effects of pollutants on water quality. All route options are underlain by a Principal Aquifer and, with the exception of Route Z, a Source Protection Zone III.						
			These routes would all require crossings of the River Fromus and the Hundred River, as well as a number of small tributaries. The River Fromus and Hundred River are classified as main rivers and protected under the water framework directive. Whilst the majority of the routes would be within Flood Zone 1, there would be sections of the road within flood zones 2 and 3 (where the routes would cross the River Fromus and Hundred River), and at risk of flooding. The river crossings would likely require construction works within the floodplain associated with two rivers. Construction works in the vicinity of the rivers have the potential to impact surface water receptors. In addition, spills and leaks during operation could also lead to contamination. This could be managed through primary and tertiary mitigation methods. If there are any works or structures within the watercourses, there is also potential construction works could alter the flow regime of the rivers, which could have the potential to increase existing pressures and adversely affect the hydromorphology. At this time, the designs of the watercourse crossings have not been developed. With the exception of Route X where it crosses the River Fromus at an existing location, the design of the river crossings across all of these route options would likely need to be a bridge structure and would need to be developed so that there is no increase in flood risk to properties within Saxmundham and isolated properties along the routes, particularly if any embankment is located within the floodplain. As the watercourses are protected by the WFD, the routes would need to be designed so that there would be no deterioration in the quality of the watercourses or impact its ability to meet target status.				The route would need to cross a number of small tributaries. However, the majority of the route would be located within Flood Zone 1, with only small areas located in Flood Zone 2. Construction works in the vicinity of the rivers have the potential to impact surface water receptors. In addition, spills and leaks during operation could also lead to contamination. This could be managed through primary and tertiary mitigation methods.	
			-- (-2)		-- (-2)	-- (-2)	-- (-2)	- (-1)	- (-1)
D1: Is the option technically and commercially viable for the Project?		The cost of any maintenance are likely to be considerably less than the construction of a new road between 6-9km in length.	Route W was costed in the 2014 Suffolk County Council report at £55m. Although there may be minor variations to the design and alignment now being considered this cost is regarded as suitable for comparison purposes.		No cost estimates have been calculated for this option. However, based on route length compared to Alignment W, a cost estimate of £44m results (set out in the Peer Review report (provided	No cost estimates have been calculated for this option. However, based on route length compared to Alignment W, a cost estimate of £54m results (set out in the Peer Review report (provided within Appendix 12 to the Sizewell link road - Principle and Route Selection Response Paper))		No cost estimates have been calculated for this option. However, based on route length compared to Alignment W, a cost estimate of £46m results (set out in the Peer Review report (provided within Appendix 9 to the Sizewell link road - Principle and Route Selection Response Paper)) though SCC's response raised concerns the cost was not	

Criteria	Topic	Base case Do nothing	Route W		Route X	Route Y		Route Z	
			North	South		North	South	North	South
			However, this costing was based on the route alignment alone and did not account for the costs associated with any structures required for crossings. Route W would require a crossing of the East Suffolk line and a crossing of the Saxmundham to Leiston branch line; this could also have cost and programme implications and would need to be managed through consultation with Network Rail. In addition, the route would also need to cross the River Fromus and Hundred River, as well as a small number of tributaries. Details of these crossings and likely engineering works to cross the rivers and associated floodplain are not known, but are likely to require bridge structures and associated earthworks. This could impact programme and level of engineering required. However, Route W South is not workable with the Integrated Strategy as the alignment is the same as the proposed green rail route.		within Appendix 12 to the Sizewell link road - Principle and Route Selection Response Paper) though SCC's response raised concerns the cost was not fully representative for the reasons set out below). However, this costing was based on the route alignment alone and did not account for the costs associated with any structures required for crossings. Route X would require a crossing of the East Suffolk line; this could also have cost and programme implications, particularly if the crossing requires closure of the East Suffolk line. In addition, the route would also need to cross the River Fromus and Hundred River, as well as a small number of tributaries. Details of these crossings and likely engineering works to cross the rivers and associated floodplain are not yet known, but are likely to require bridge structures and associated earthworks. This could impact programme and level of engineering required.	though SCC's response raised concerns the cost was not fully representative for the reasons set out below). However, this costing was based on the route alignment alone and did not account for the costs associated with any structures required for crossings. Route Y would require a crossing of the East Suffolk line; this could also have cost and programme implications, particularly if the crossing requires closure of the East Suffolk line. In addition, if this crossing is an underpass (to reduce effects on amenity of Bridge Farm and Orchard House), this would require substantial engineering works and thus have cost and programme implications. In addition to the crossings of roads and the East Suffolk line, the route would also need to cross the River Fromus and Hundred River, as well as a small number of tributaries. Details of these crossings and likely engineering works to cross the rivers and associate floodplain are not yet known, but could impact programme and level of engineering required.		fully representative for the reasons set out below). However, this costing was based on the route alignment alone and did not account for the costs associated with any structures required for crossings. Route Z would require a crossing of the East Suffolk line; this could also have cost and programme implications, particularly if the crossing requires closure of the East Suffolk line. The route would cross a number of smaller tributaries. Site visits have shown these watercourses as generally being dry, which could be culverted below the route.
			-- (-2)		-- (-2)	-- (-2)		-- (-2)	

APPENDIX 12 AECOM PEER REVIEW REPORT



AECOM Imagine it. Delivered.

Sizewell C Proposed Nuclear Development

Peer Review of Option Selection for Sizewell Link Road

EDF Energy

April 2019

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1. Introduction

1.1 EDF Energy is proposing to submit an application under the Planning Act 2008 for an order granting development consent for a new Nuclear Power Station comprising two United Kingdom European Pressure Reactors™ (UK EPRs) at Sizewell in Suffolk, known as Sizewell C (hereafter referred to as 'the proposed development'). The proposed development is to be located on land immediately to the north of the existing Sizewell B power station.

1.2 The proposals have recently gone through Stage 3 consultation which ran between 4 January and 29 March 2019. Following this consultation, further engagement with statutory consultees, and finalisation of environmental assessments, EDF Energy intends to submit the application for development in Q1 2020.

1.3 If consented, construction of the power station is expected to take between 9 and 12 years.

1.4 AECOM was commissioned by EDF Energy in April 2019 to carry out a peer review of the assessment work undertaken by EDF Energy to assess the identified options for the Sizewell Link Road (SLR) and the rationale in selecting a preferred option.

1.5 AECOM was asked to undertake an independent selection process to provide an independent opinion of the preferred option for the SLR.

1.6 The remainder of this report is structured as follows:

- Section 2 sets out the methodology that has been adopted to undertake this peer review;
- Section 3 provides a basis for review by setting out the key transport parameters of the proposed development;
- Section 4 briefly outlines the route options that have previously been identified for review by EDF Energy;
- Section 5 presents the AECOM independent assessment and recommendation of a preferred option; and
- Section 6 provides a summary and conclusions.

2. Methodology

2.1 The methodology adopted to undertake this review consisted of a desk based review of existing published information, a site visit to provide context and site specific information and the professional experience and judgement of the reviewer.

2.2 Documents reviewed are as follows:

- Sizewell C Stage 3 Pre-Application Consultation Documentation (EDF: 2019):
  - Volume 1 Chapters 1, 2, 5, 6, 10, 11 and 17;
  - Volume 2 Chapters 5 and 6;
  - Volume 3;
- A12 – Sizewell B Link Road Supplementary Report (Trevor Crocker & Partners: 1987);
- A12 – Sizewell Link Road Environmental Statement (CEGB/Trevor Crocker & Partners: 1989);
- B1122 Junction Improvements Environmental Statement (CEGB/Trevor Crocker & Partners: 1989);
- Sizewell C, Route D2 and B1122 Study – Rev 3 (AECOM: 2015)

2.3 A site visit was undertaken on Thursday 18th and Friday 19th April 2019.

2.4 The site visit was conducted by Peter Firth and comprised:

- Driving the B1122 between Yoxford and Leiston to observe current characteristics and facilities;
- Driving the B1119 between Saxmundham and Leiston to observe current characteristics and facilities;
- Driving the A12 between Yoxford and Saxmundham to observe current characteristics and facilities;
- Observations from the A12 at the points at which the various options for the Sizewell Link Road diverge;
- Observations of preferred route alignment from Littlemoor Road, Frodley Road, Pretty Road and Moat Road and from public footpath E-396/017/0 near Gardenhouse Farm, public footpath E-396/020/0 near Valley Farm and public footpath E-515/004/0 near Church Farm;
- Observations of the Option W route alignment from the B1121 Main Road / Church Road junction at Benhall Green, the B1119 Saxmundham Road just south of Knodishall Green and Buckleswood Road west of Leiston;
- Observations of the Option X/Y route alignments from the B1121 / Clayhills Road junction at Saxmundham, Clay Hills west of its junction with Hawthorne Road and Harrow Lane northwest of the Leiston Airfield Memorial.

2.5 This peer review has been undertaken by Peter Firth. He is a transport specialist with over 30 years of continuous experience in transport planning and consents planning for development. He is particularly experienced in power generation schemes and has experience of various power generation types including nuclear new build where he led the Transport Options Study for the National Policy Statement for Nuclear Power Generation (NPS EN – 6) designated site at Oldbury in South Gloucestershire.

2.6 This peer review relies heavily on the professional judgement of Peter which is based on this knowledge and specific experience gained over this time period and the published material listed above for Sizewell C.

2.7 An assessment methodology has been utilised which identifies criteria common to all options and scores the individual options to determine which is the preferred option. Details are presented below in Section 5.

3. Basis of Review

3.1 The proposed nuclear power station would be located immediately to the north of the existing Sizewell B power station and would comprise two United Kingdom European Pressurised Reactor units with an expected electrical capacity of approximately 3,260MW.

3.2 There are a number of proposed associated development sites and measures to facilitate the construction and operation of the development. In transport terms these are a combination of demand management measures and physical mitigation measures in line with the transport strategy that is being devised for the proposed development.

3.3 To provide context for this review, the associated developments and measures that are being proposed to manage and mitigate transport impacts during the peak of construction, when the vast majority of the impacts occur, are listed below:

- Parking limited to 1,000 spaces at the site;
- Provision of a 2,400 bed accommodation campus at the site;
- Provision of 400 caravan pitches at the site;
- Two park & ride sites; one on the A12 at Darsham for workers travelling from the north and one on the A12 at Wickham Market for workers travelling from the south;
- Direct bus services from Ipswich and Lowestoft;
- Bus pick-up from Saxmundham for workers using the East Suffolk Line;
- Improvement of A12 / B1122 at Yoxford to form a roundabout;
- Provision of Sizewell Link Road (road-led strategy only - Mill Street improvement and Theberton by-pass under rail-led strategy);
- Two-village by-pass of Farnham and Stratford St Andrew;
- Freight management facility incorporating a demand management system off the A14 east of Ipswich;
- HGV movements over longer hours potentially under road-led strategy;
- Isolated highway improvements at seven locations;
- Rail infrastructure improvements at Sizewell Halt and level crossing upgrades;
- Light goods vehicle consolidation centre at Wickham Market.

3.4 Two transport strategies are currently being considered, one road-led and one rail-led. As the Sizewell link road is only proposed as part of the road-led strategy, this review only considers the road-led strategy.

3.5 The peak workforce estimate is for around 5,600 workers on the main development site with a further 500 workers at supporting developments. The main development site workforce profile is estimated to last for between 9 and 12 years with a peak in the workforce approximately half way through construction. The anticipated workforce profile is shown in Figure 1 below and emphasises the peaked nature of the workforce.

3.6 To ensure the assessments of transport effects are robust, EDF Energy have considered what the effects might be if the workforce numbers turned out to be higher - up to 7,900 on the main development site and 600 on associated development sites at peak. Traffic generations associated with these higher workforce numbers form the basis of review in this report.

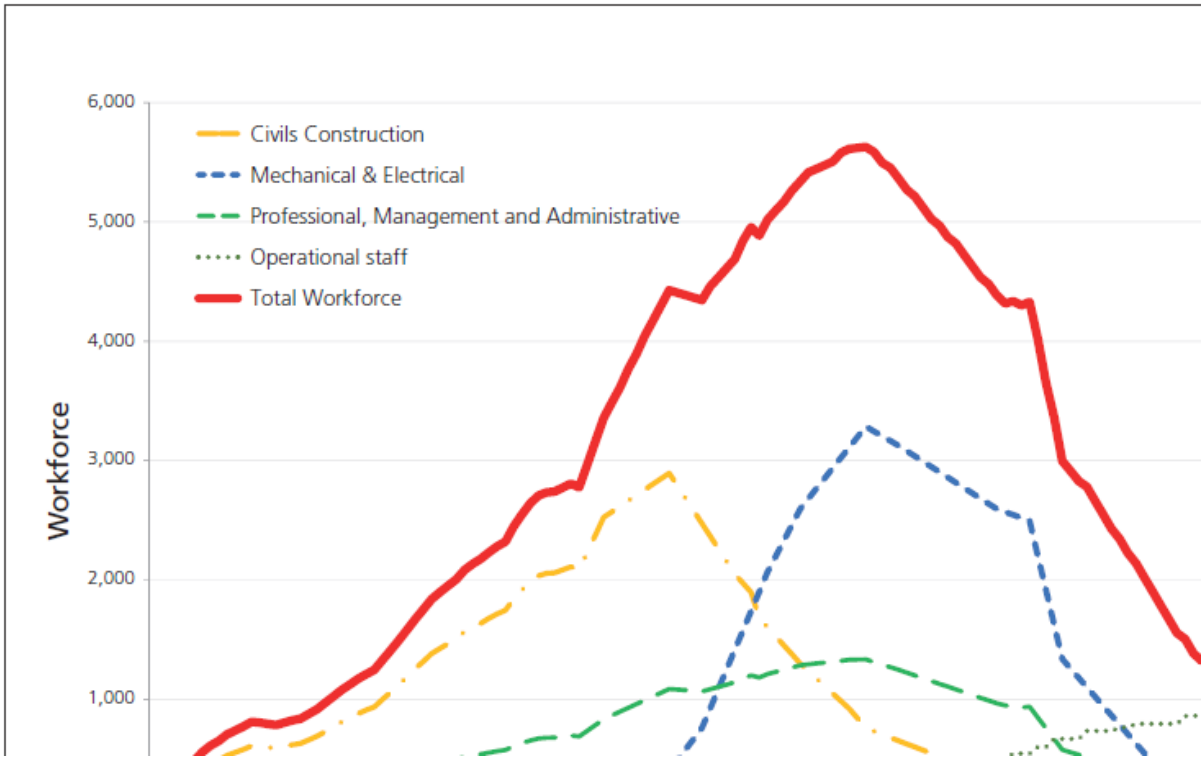
3.7 EDF Energy estimate that there would be an average of 375 HGV deliveries (750 movements) a day under the road-led strategy at peak construction. At many periods in the construction phase average HGV movements would be lower than the peak figures above. The figures are averages for a typical day, which means that on any given day the number of HGV movements could be higher or lower than set out. On infrequent occasions and on the busiest days, the number of HGV movements could be up to twice the average at 750 HGV deliveries (1,500 movements) a day.

3.8 In the early years of construction, before the peak, it is estimated that an HGV volume of 300 HGVs per day (600 movements) would be generated.

3.9 HGV movements would be spread across the day, with a greater proportion of deliveries occurring in the morning. Analysis is based on an assumption of HGV deliveries between the hours of 7am and 8pm, with more arriving in the morning than the afternoon.

3.10 Once operational, there would be a long-term legacy of 900 permanent jobs, as well as a regular short-term workforce of around 1,000 people during refuelling and maintenance outages.

Figure 1 - Workforce profile through the construction programme



Source: See Consultation Summary Document: Stage 3 Pre-Application Consultation: January 2019

3.11 In the early years of construction, neither road or rail mitigation measures would be in place. Therefore all main development site traffic would utilise the existing infrastructure to gain access to the development site.

3.12 A traffic model has been developed by EDF Energy to predict the traffic flows for various mitigation scenarios. The model has been developed in close cooperation with the relevant transport consultees such as Suffolk County Council. AECOM assume that the results of the modelling are representative and take the results at face value to inform this peer review.

3.13 Traffic modelling conducted to assess the traffic effects of the construction phase is based on the latest estimates of the additional traffic that the project would generate during both the early years (2022) and the period of peak construction (2027), when the maximum number of construction workers would be on-site. For robustness, it is also assumed that the maximum number of workers would coincide with the peak number of HGV movements.

3.14 Other key modelling assumptions are as follows:

- Three to nine buses from northern and southern park and ride sites per hour during staff changeover periods, hourly service outside staff changeover periods;
- Half hourly frequency of direct buses from Ipswich and Lowestoft during staff changeover periods plus hourly shuttle bus from Saxmundham railway station;
- Total of 644 direct and park and ride bus movements per day;
- Routing of direct and park and ride bus movements is via A12 / B1122 / Sizewell Link Road;

- 700 LGV movements per day, of which 175 are to and from the postal consolidation facility at Wickham Market;
- Routing of HGV movements is via A12 / B1122 / Sizewell Link Road; and
- Origin of HGVs is 85% from A12 south and 15% from A12 north.

3.15 A number of worst case factors have been incorporated into the modelling such as seasonality uplifts, Sizewell B outage traffic, Sizewell B visitors, Sizewell B and C visitor centre traffic and the weekend effect where workers staying in the accommodation campus will arrive on Monday mornings and leave on Friday afternoons. The result is robust flows for assessment where, in reality, actual Sizewell C flows would be lower.

3.16 Based on the modelling, the forecast early years and peak of construction traffic flows between the A12 and the development site access (along the B1122 / Sizewell Link Road corridor as the modelled designated route) have been presented in the Stage 3 Consultation material.

3.17 Forecast flows for the early years (2024) are as follows:

Table 1. 2024 early years forecast 24 hour traffic flows along the B1122

Location	Modelled Scenario	
	2024 reference case	2024 with Sizewell C
B1122 at Yoxford	4,400	5,300
B1122 at Middleton Moor	4,400	5,250
B1122 at Theberton	6,550	7,700
SLR at Yoxford	n/a	n/a
SLR at Middleton Moor	n/a	n/a
SLR at Theberton	n/a	n/a

Source: Volume 1, Chapter 6, Table 6.13: Stage 3 Pre-Application Consultation: January 2019

Table 2. 2024 early years Sizewell C 24 hour flows along the B1122

Location	Modelled Scenario		
	Cars	Buses	HGV's
B1122 at Yoxford	280	0	620
B1122 at Middleton Moor	250	0	600
B1122 at Theberton	500	0	600
SLR at Yoxford	n/a	n/a	n/a
SLR at Middleton Moor	n/a	n/a	n/a
SLR at Theberton	n/a	n/a	n/a

Source: Volume 1, Chapter 6, Tables 6.13 and 6.15: Stage 3 Pre-Application Consultation: January 2019

3.18 Forecast flows for the peak of construction (2027) for the busiest day are as follows:

Table 3. 2027 peak of construction forecast 24 hour traffic flow along the B1122 / Sizewell Link Road

Location	Modelled Scenario	
	2027 reference case	2027 with Sizewell C
B1122 at Yoxford	4,600	5,300 – 5,600
B1122 at Middleton Moor	4,600	450
B1122 at Theberton	6,800	650
SLR at Yoxford	n/a	2,300
SLR at Middleton Moor	n/a	9,650
SLR at Theberton	n/a	9,650

Source: Volume 1, Chapter 6, Table 6.2: Stage 3 Pre-Application Consultation: January 2019

Table 4. 2027 typical day Sizewell C 24 hour flows along the B1122 / Sizewell Link Road

Location	Modelled Scenario		
	Cars	Buses	HGV's
B1122 at Yoxford	660	230	110
B1122 at Middleton Moor	0	0	0
B1122 at Theberton	100	0	0
SLR at Yoxford	290	220	640
SLR at Middleton Moor	1,550	450	750
SLR at Theberton	1,550	450	750

Source: Volume 1, Chapter 6, Tables 6.2 and 6.4: Stage 3 Pre-Application Consultation: January 2019

Table 5. 2027 busiest day Sizewell C 24 hour flows along the B1122 / Sizewell Link Road

Location	Modelled Scenario		
	Cars	Buses	HGV's
B1122 at Yoxford	540	230	230
B1122 at Middleton Moor	0	0	0
B1122 at Theberton	100	0	0
SLR at Yoxford	?	220	1,280
SLR at Middleton Moor	800	450	1,500
SLR at Theberton	800	450	1,500

Source: Volume 1, Chapter 6, Tables 6.2 and 6.5: Stage 3 Pre-Application Consultation: January 2019

4. Route Options Considered

4.1 The mitigation proposed to address the transport impacts of Sizewell C construction has a long history. The existing B1122 was improved in 1987 in preparation for the construction of Sizewell B. Sizewell B was ultimately built using the B1122 as the designated access route.

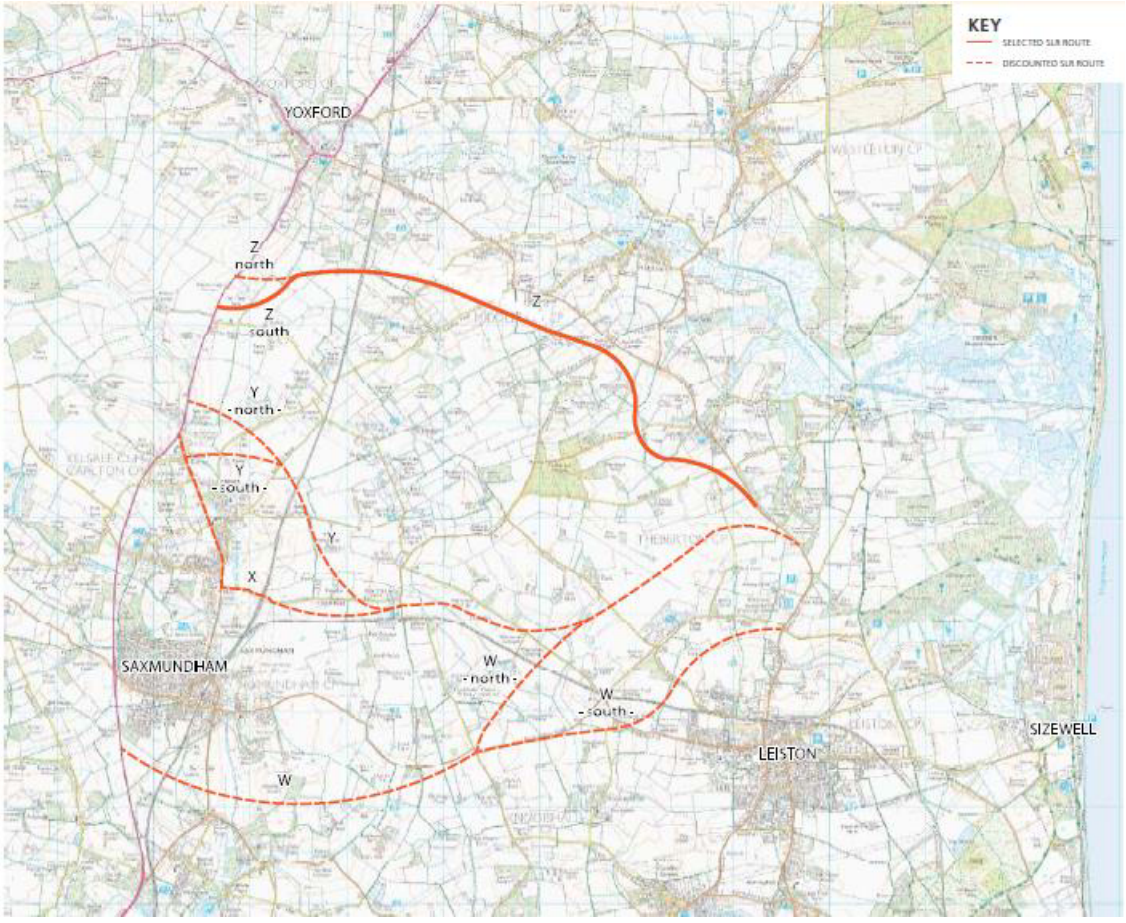
4.2 The announcement of the intention to also construct Sizewell C at that time led to the study of possible link road options between the A12 and Sizewell to accommodate combined B and C construction traffic. Sizewell C did not progress and a link road was not built.

4.3 The options study undertaken at that time on behalf of Suffolk County Council went through two consultation exercises and resulted in the selection of route D2 as the preferred option.

4.4 Set against this history, the consideration of improvements between the A12 and Sizewell has again been raised in connection with the current proposals for Sizewell C. Suffolk County Council commissioned a study in 2013 to investigate options for providing relief to communities along the B1122. This study came to no firm recommendation but did seem to favour improvements along the B1122 rather than the D2 route based on economic and environmental considerations.

4.5 EDF Energy has promoted the B1122 as the preferred route of access to Sizewell C for construction and operation in their Stage 1 and Stage 2 consultations. In response to consultation feedback, EDF Energy have investigated options for a Sizewell Link Road linking the A12 with the proposed Sizewell C site access. The options considered are identified in the following figure.

Figure 2 - Sizewell Link Road Options



4.6 EDF Energy has undertaken a high-level environmental appraisal of the four proposed routes (and their variations) based on the potential effects on PRoWs, local road character, heritage assets, landscape designations, landscape character and views, and residential amenity.

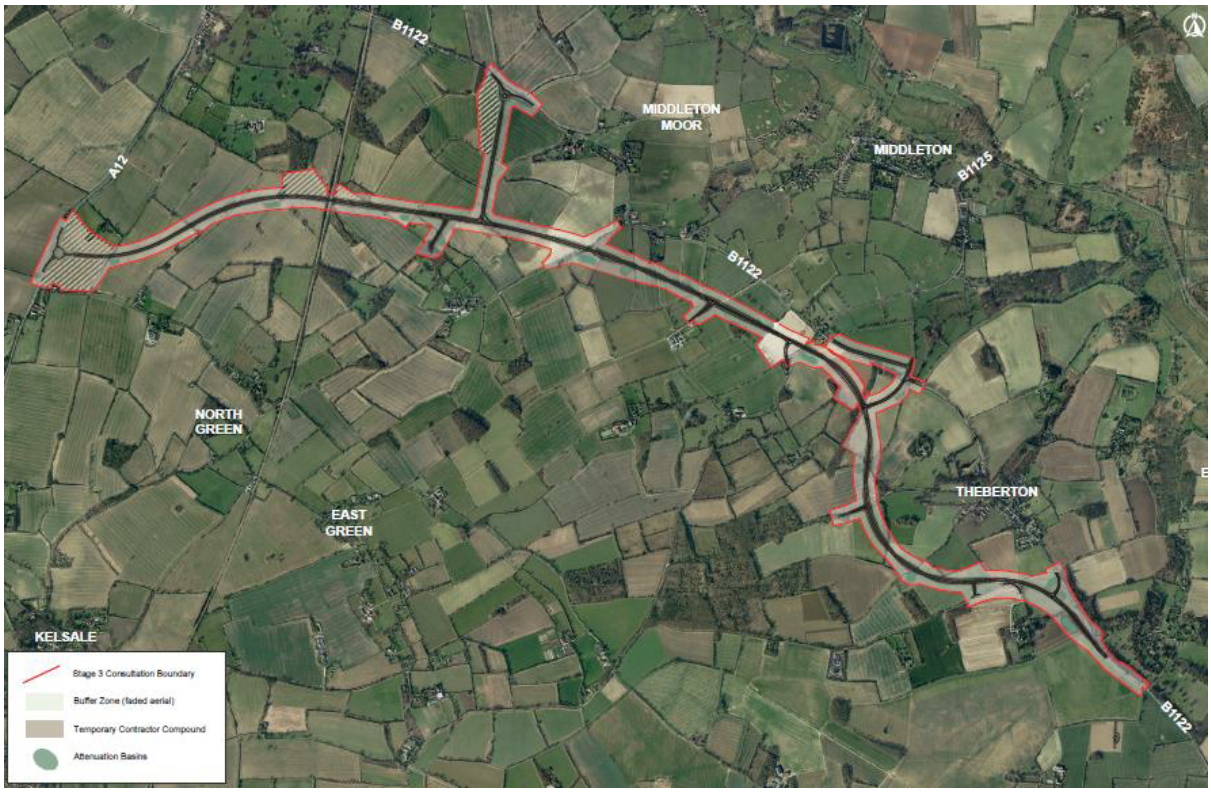
4.7 Route W is equivalent to the D2 route referred to above which was selected as the preferred by-pass route in the 1980's.

4.8 Route Z South is the route alignment that EDF Energy has proposed through Stage 3 consultation to form the Sizewell Link Road.

4.9 The Sizewell Link Road would bypass the B1122 with a new single carriageway road to the south-west. The proposed route would run approximately 6.8 km across predominantly agricultural land to the south-west of the existing B1122. The bypass would be a single carriageway 7.3m wide with 1m hardstrips and 2.5m verges, earthworks where needed and a 5m berm. The side roads would be approximately 6m in width, with the exception of the new connections to the B1125 and to the B1122 west of Middleton Moor, which would be 7.3m wide.

4.10 The alignment of Route Z South to form the Sizewell Link Road is shown in the figure below.

Figure 3 - Preferred Route Z South to form the Sizewell Link Road



5. Assessment of Options

5.1 The purpose of this review is to provide an independent assessment of the previously identified options for the Sizewell Link Road culminating in the recommendation of a preferred option.

5.2 It is important that the selection method is transparent and justified and capable of scrutiny. As set out in the methodology section above, the assessment is based on a desktop review of the information made available, observations made during a site visit as well as the professional judgement of the author.

5.3 The method adopted is to identify what are considered to be the key assessment criteria and to provide a reasoned scoring of each option against these criteria. The criteria, a description for each and a scoring range are set out in the table below.

Table 6. Assessment criteria and scoring range

Criteria	Definition and Description	Scoring Range
Relief to Communities	Does the option effectively provide relief to communities along the existing routes from the A12 to the site.	1 = Ineffective Relief 5 = Effective relief
Scale of Cost	Each option has a cost based on the scope and scale of works involved. This provides a measure of the scale of costs between options.	1 = Lowest Cost 5 = Highest Cost
Minimising Route Mileage	Route mileage is an important sustainability factor. Does the option minimise mileage to achieve environmental benefits.	1 = Longest Route 5 = Shortest Route
Legacy Benefit	Does the option provide a benefit beyond construction related to need.	1 = No Legacy benefit 5 = Legacy Benefit
Engineering Impact	Does the option of a new major highway fit in the landscape and can it be seen. Are construction impacts acceptable.	1 = High Impacts 5 = Low Impacts
Transport Policy	Does the option comply with transport policy which requires that impacts are identified and cost effectively mitigated.	1 = Does Not Comply 5 = Comply
Transport Environmental and Safety Topics	How does the option address driver delay, pedestrian delay, pedestrian amenity, fear & intimidation and accidents & safety.	1 = Not Addressed 5 = Fully Addressed
Other Environmental Topics	How does the option address landscape, heritage, noise, air quality and soils.	1 = Not Addressed 5 = Fully Addressed

Source: AECOM

5.4 The 1 to 5 scoring range is such that, when all individual scores for an option are added, the lowest combined score will be the worst performing option and the highest combined score will be the best performing option and therefore the recommended preferred option based on the ranking undertaken.

5.5 Consideration has been given to weighted scoring on the basis that, for example, achieving the key aims and objectives is more important than being transport policy compliant. However, it is considered that this introduces an added layer of subjectivity so has been rejected.

5.6 The criteria that have been identified against which to assess the options are under four main headings:

- Key Aims & Objectives;
- Policy;
- Environmental and Safety Topics – Transport; and
- Environmental Topics – Other.

5.7 Key aims and objectives cover tangible and measurable issues such as the degree to which the options relieve the transport impacts of development, the legacy benefit of options and the engineering impact of options. One of the biggest issues has to be the impacts associated with a new highway through open countryside and how this can best be developed given the timescales and disruption that will arise during construction. The key aims and objectives are where the real differentiation between options lies.

5.8 Policy is fairly consistent across all options and is more a process of identification of issues and mitigation of effects. There is a question as to how effective the mitigation needs to be but the context here is that

EDF Energy have already declared in the Stage 3 consultation documents that the environmental impacts along the B1122 from, in particular, noise, vibration and severance from the Sizewell C traffic require mitigation under the road-led strategy.

5.9 The potential development of Sizewell C has been known about for over 30 years and various assessments have been undertaken over this period to secure the identification of the site in National Policy Statements EN-1 and EN-6.

5.10 Policy recognises that the transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks, for example through increased congestion. For Sizewell, the construction of B station is within living memory and was successfully achieved via the existing road network. However, the scale and impacts of Sizewell C appear to be larger and environmental legislation is more stringent now.

5.11 Transport environmental effects are well established and assessment methodology is set out in 'Guidelines for the Environmental Assessment of Road Traffic': IEA – 1993. With new build options, it should be possible to design out any impacts and therefore all options will score at a similar level.

5.12 Other environmental impacts have been assessed by EDF Energy as set out in the Stage 3 Consultation documents and the conclusions drawn by this work inform the scoring for each option.

5.13 Each of the routes identified in Section 4 above have been reviewed and the overarching summary is as follows:

- Route Option W:

  The most southerly of the four route options and, on the face of it, the best placed to intercept the predicted origin of HGV traffic (80% from the south). The connection point with the A12 has sufficient space and visibility to accommodate a high capacity junction. Significant engineering works would be required to climb up to cross the East Suffolk railway line. Once over the railway and the B1121, the topography falls gently to the east allowing long range views of the alignment from roads, public footpaths and communities. Generally speaking, there are no communities along the B1119 that benefit from being bypassed other than Saxmundham itself. When compared to the B1122 as the route of access it would provide relief to Yoxford, Middleton Moor and Theberton if declared a designated route for all Sizewell C traffic. Could form a signed access route to Leiston thus providing some relief to Saxmundham. The highly engineered, DMRB compliant road would be out of character with the area that is characterised by country lanes that follow field boundaries.

- Route Option X:

  Leaves the A12 Saxmundham by-pass at an existing priority junction onto the B1121 and draws traffic into Kelsale and Carlton. Junction may need upgrading. Runs parallel to the C class Clay Hills road and will need to cross the East Suffolk railway line on a bridge structure. The topography is flat and enclosed by tree belts between the railway crossing and Oak Tree Farm allowing only short and medium range views of the alignment from roads, public footpaths and communities. Once past Oak Tree Farm, the topography falls gently to the east allowing long range views of the alignment from roads, public footpaths and communities. When compared to the B1122 as the route of access it would provide relief to Yoxford, Middleton Moor and Theberton if declared a designated route for all Sizewell C traffic but it does increase traffic through Kelsale and Carlton and has impacts on a number of isolated farms. The highly engineered, DMRB compliant road would be out of character with the area that is characterised by country lanes that follow field boundaries.

- Route Option Y:

  Geographically, the central option and, on the face of it, well placed to intercept traffic from the north and the south. The connection point with the A12 seems constrained and forward visibility standards along the A12 may be difficult to achieve. The topography falls away quickly from the A12 and, in combination with tree belts restricts views to only short and medium range from roads, public footpaths and communities. Past Oak Tree Farm, it adopts the alignment of Route Option X where the topography falls gently to the east allowing long range views of the alignment from roads, public footpaths and communities. When compared to the B1122 as the route of access it would provide relief to Yoxford, Middleton Moor and Theberton if declared a designated route for all Sizewell C traffic but has impacts on a number of isolated farms. The highly engineered, DMRB

compliant road would be out of character with the area that is characterised by country lanes that follow field boundaries.

- Route Option Z:

  The most northerly of the routes and, on the face of it, not well placed to intercept the predicted origin of HGV traffic (80% from the south). Two proposed connections with the A12, one south and one north of Yoxford would mean no Sizewell HGV traffic needs to pass through Yoxford. Both connection points are adequate to form new junctions. The topography is relatively flat between the A12 and the railway which results in long distance views from some roads, public footpaths and communities. The railway is in a slight cutting where it is crossed. The use of the existing B1122 by vehicles from the north utilises the widest part of the road and crosses the railway at a level crossing. Once over the railway, the topography undulates which, in combination with tree belts, restricts views to only short and medium range from roads, public footpaths and communities. This option is the most related to the communities along the B1122 that it seeks to relieve and therefore has a logic that the other routes do not have. An effective by-pass of both Middleton Moor and Theberton is achieved to address the environmental issues identified but there are impacts caused to some isolated properties. The highly engineered, DMRB compliant road would be out of character with the area immediately west and east of the railway which is characterised by an open landscape and country lanes that follow field boundaries. It is better related around Middleton Moor and Theberton where it acts as an obvious by-pass.

5.14 A detailed assessment and scoring exercise has been undertaken which is provided in Appendix A. This provides a reasoned rationale for how the route option being assessed relates to the criteria being considered and a score from the 1 to 5 scoring range. The scoring is based on the evidence available and professional judgement.

5.15 The results of the assessment score and rank the route options as follows:

Table 7. Scoring and Ranking of Route Options

Route Option	Scoring and Ranking	
	Score Achieved	Ranking
Route Option W	51	3
Route Option X	50	4
Route Option Y	54	2
Route Option Z	62	1 – Preferred Option

Source: AECOM

6. Summary and Conclusions

6.1 AECOM has been commissioned by EDF Energy to undertake a peer review of their work to assess the identified options for the Sizewell Link Road and the rationale in selecting a preferred option.

6.2 The aim of this peer review was to provide an independent second opinion on the selection process.

6.3 A methodology has been devised which is based on a desk based review of existing published information, a site visit to provide context and site specific information and the professional experience and judgement of the peer reviewer.

6.4 An assessment methodology has been utilised which identifies criteria common to all options and scores the individual options to determine which is the preferred option.

6.5 This independent assessment finds that Route Option Z scores the best against the assessment criteria and is recommended as the preferred option from the four route options assessed.

Appendix A - Detailed Assessment and Scoring Exercise

Detailed Assessment and Scoring of Options

Option	Key Aims and Objectives										Policy		Environmental Topics - Transport										Environmental Topics - Other								Scoring	
	Relief to communities		Cost / benefit		Minimising route mileage		Legacy benefit		Engineering impact		Transport Policy		Driver Delay		Pedestrian Delay		Pedestrian Amenity		Fear & Intimidation		Accidents & Safety		Landscape		Heritage		Noise		Air Quality		Total Score	Rank Order
	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score	Comments	Score		
On-Line Improvements	On-line improvements on any of the existing routes between the A12 and the site access would not provide any significant relief of impacts on communities affected.	1	The cost of on-line improvements are likely to be considerably less than off-line improvement schemes and would be able to deliver any capacity improvements. However, they would not address environmental impacts.	5	Measured from a common point both north and south of the link road options and taking account of the split of HGV and bus movements, the B1122 results in 15% more mileage than Alignment Z.	1	The existing road layout is well within capacity limits and therefore any improvements are not required in the future and do not deliver any legacy benefits. There would be some safety benefits.	2	Improvement of the existing highway alignment would be in scale with existing character of the area with minimal land take and visual intrusion.	5	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Not all impacts are mitigated with this option.	2	It should be possible through demand management and junction design to minimise driver delay caused by congestion. The outcome cannot be expected to be as effective as off-line improvements.	4	Changes in the volume and composition of traffic using access routes would result in greater difficulty in crossing the road in settlements. Pedestrians using PROW's may also incur delays.	3	Pedestrian facilities in the existing settlements generally have little separation from the carriageway. Pedestrians would experience the general effects of increased traffic levels.	2	Pedestrians in settlements walking adjacent to the highway would experience the effects of a large increase in traffic levels, particularly buses and HGV's.	2	A review of accidents along the various access roads show a relatively high degree of accidents over the last 5 years. Possibly due to the B and C road standards. A significant increase in traffic flow is very likely to increase the accident rate.	2	On-line improvements would have minimal effect on landscape character.	4	On-line improvements would have minimal effect on existing historic assets.	4	On-line improvements would provide little relief to existing noise receptors.	2	On-line improvements would provide little relief to existing air quality receptors.	2	41	5
Alignment W	Not well related to the communities of Yoxford, Middleton Moor and Theberton which are being relieved. Could result in some relief to Saxmundham as an alternative to B1119.	4	Costed in the 2014 Suffolk County Council report at £55m. Although there may be minor variations to the design and alignment now being considered this cost is regarded as suitable for comparison purposes.	2	Measured from a common point both north and south of the link road options and taking account of the split of HGV and bus movements, Alignment W results in 11% more mileage than Alignment Z.	3	Additional capacity is not needed between the A12 and Sizewell as existing routes are well within capacity. Only legacy benefit would be related to safety and the reduction in accident risk. Could be a new signed route to Leiston.	2	The existing nature of the area is one of long range views and country lanes that respect field boundaries. A new DMRB road with associated engineering cut and fill will be very intrusive.	1	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Adequate demand management and mitigation is proposed.	5	Detailed design of route option would include minimising delay. Traffic demand is well below design criteria and management measures are available to reduce any peaks in demand.	5	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity along the route is not expected but PROW crossings of the route are required.	5	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity along the route is not expected but PROW crossings of the route are required.	5	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity along the route is not expected but PROW crossings of the route are required.	5	Detailed design to DMRB standards would include the required safety standards.	5	Impact on landscape character over most of the route length.	1	Potential effects on the setting of a number of historic assets (Grade I, II and II*) along each route. Key assets to consider include Hurts Hall and Leiston Abbey.	2	Impact on a small number of isolated properties.	3	Impact on a small number of isolated properties.	3	51	3
Alignment X	Not well related to the communities of Yoxford, Middleton Moor and Theberton which are being relieved. Would result in more traffic in Kelsale and Carlton and impact on a number of isolated properties.	4	No cost estimates have been calculated for this option. However, based on route length compared to Alignment W, a cost estimate of £44m results.	3	Measured from a common point both north and south of the link road options and taking account of the split of HGV and bus movements, Alignment X results in 5% more mileage than Alignment Z.	4	Additional capacity is not needed between the A12 and Sizewell. The route would attract additional traffic to Saxmundham. Only legacy benefit would be related to safety and the reduction in accident risk.	1	The existing nature of the area is one of short, medium and long range views and country lanes that respect field boundaries. A new DMRB road with associated engineering cut and fill will be very intrusive.	2	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Adequate demand management and mitigation is proposed.	5	Detailed design of route option would include minimising delay. Traffic demand is well below design criteria and management measures are available to reduce any peaks in demand.	4	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity is expected in Kelsale and Carlton and PROW crossings of the route are required.	4	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity is expected in Kelsale and Carlton and PROW crossings of the route are required.	4	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity is expected in Kelsale and Carlton and PROW crossings of the route are required.	4	Detailed design to DMRB standards would include the required safety standards.	5	Local landscape character	2	Potential effects on the setting of a number of historic assets (Grade II and Grade II*) with the extent of Saxmundham.	4	Potential effects in Kelsale and Carlton.	2	Potential effects in Kelsale and Carlton.	2	50	4
Alignment Y	Not well related to the communities of Yoxford, Middleton Moor and Theberton which are being relieved. Would result in impact on a number of isolated properties.	4	No cost estimates have been calculated for this option. However, based on route length compared to Alignment W, a cost estimate of £54m results.	2	Measured from a common point both north and south of the link options and taking account of the split of HGV and bus movements, Alignment Y results in 20% more mileage than Alignment Z.	2	Additional capacity is not needed between the A12 and Sizewell. However, the route could be a new signed route to Leiston. Potential reduction in accident risk.	2	The existing nature of the area is one of long range views and country lanes that respect field boundaries. A new DMRB road with associated engineering cut and fill will be very intrusive.	2	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Adequate demand management and mitigation is proposed.	5	Detailed design of route option would include minimising delay. Traffic demand is well below design criteria and management measures are available to reduce any peaks in demand.	5	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity along the route is not expected but PROW crossings of the route are required.	5	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity along the route is not expected but PROW crossings of the route are required.	5	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity along the route is not expected but PROW crossings of the route are required.	5	Detailed design to DMRB standards would include the required safety standards.	5	Impact on landscape character north of Kelsale.	2	Potential effects on the setting of Oak Tree Farmhouse (Grade II).	4	Impact on a small number of isolated properties.	3	Impact on a small number of isolated properties.	3	54	2
Alignment Z	This option is the most related to the communities along the B1122 that it seeks to relieve and therefore has a logic that the other routes do not have. Effective relief of Yoxford, Middleton Moor and Theberton but an impact on a number of isolated properties.	5	No cost estimates have been calculated for this option. However, based on route length compared to Alignment W, a cost estimate of £46m results.	3	Measured from a common point both north and south of the link road options and taking account of the split of HGV and bus movements, Alignment Z results in the least route mileage of all options.	5	As the signed route to Sizewell B and C this route would continue to provide relief to Yoxford, Middleton Moor and Theberton during outages.	4	The DMRB compliant road would be out of character with the area immediately west and east of the railway. It is better related around Middleton Moor and Theberton where it acts as an obvious by-pass.	3	NPS-EN1 requires that the detrimental impacts on the surrounding transport infrastructure should be managed and mitigated during all stages of the development. Adequate demand management and mitigation is proposed.	5	Detailed design of route option would include minimising delay. Traffic demand is well below design criteria and management measures are available to reduce any peaks in demand.	5	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity along the route is not expected but PROW crossings of the route are required.	5	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity along the route is not expected but PROW crossings of the route are required.	5	Detailed design of route option would include providing adequate pedestrian facilities. Pedestrian activity along the route is not expected but PROW crossings of the route are required.	5	Detailed design to DMRB standards would include the required safety standards.	5	Impact on landscape character between A12 and immediately east of railway crossing.	3	Potential effects on the setting of a number of historic assets (Grade II). Key assets to consider include Dovehouse Farmhouse, Theberton Hall and The Gates / Walls at Theberton Hall.	3	Potential impacts at Annesons Cottages and Valley Farm.	3	Potential impacts at Annesons Cottages and Valley Farm.	3	62	1 Preferred Route

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APPENDIX 5E POWER EXPORT CONNECTION TECHNICAL RECOMMENDATION REPORT

SZC-SZ0100-AU-GEV-REP-100000
Revision 02

Sizewell C Project

Power Export Connection Technical Recommendation

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EXECUTIVE SUMMARY

The location proposed for the Sizewell C power station (SZC) within an Area of Outstanding Natural Beauty (AONB) requires particular attention to be paid to this nationally designated landscape, which benefits from the highest status of protection in relation to landscape and scenic beauty when applying for a Development Consent Order (DCO). The project strategy for the principal buildings and structures of SZC is to replicate the design from Hinkley Point C (HPC). However, differences in the site layout and its setting require specific consideration to be given to the power export connections between the turbine halls and the National Grid substation. A replication of the concept from HPC, consisting of overhead lines and pylons within the power station site, has the potential to increase the impact on the landscape if implemented at SZC. Therefore, to help ensure a robust planning case for the project, the scope for undergrounding the power export connections has been reviewed in detail.

To undertake this review, the SZC Project has drawn on the collective experience of EDF Group's global power transmission engineering centre in Paris, its fleet of operational nuclear power stations in the UK, and the organisations currently engaged in the construction of HPC.

The first step of the study was to comprehensively identify the potential options for the power export connection. A wide variety of technologies and installation scenarios were investigated, including:

- Underground cables (directly buried, in ducts or in galleries)
- Gas insulated lines (in troughs, above ground or in galleries)
- Overhead lines

The second step was to shortlist options for detailed evaluation, based on the safety and practicality of construction and the technical limitations of each. As a result, three specific options were taken forward for detailed evaluation:

- Underground cables in galleries (cable tunnels)
- Gas insulated lines above ground
- Overhead lines

The evaluation has been guided by safety as the overriding priority for the SZC Project. Issues of constructability and schedule impact were brought out by detailed analysis of potential underground and overhead routes through the SZC site. The impact of selecting a particular option on nuclear safety was assessed, recognising the significant role that the power export connection plays in ensuring power is always available to the plant from National Grid.

National Grid was consulted regarding the option study and appointed their own design consultants to analyse the layout of the substation and the feasibility of connecting the SZC power export circuits. The HPC project team provided support in identifying the impacts of any change from an overhead line solution – the Conventional Island, Security, Design Authority and Technical Client Organisation teams were all engaged. Construction contractor Bylor provided initial advice on gallery constructability and cable suppliers Nexans and NKT were approached to confirm that any identified solutions are proven in practice.

The key findings of the study are:

- The only underground solution that could achieve the required power ratings, meet requirements for inspection and maintenance access, and avoid the buildings and structures required within the SZC site would be to install cables in dedicated galleries. However, detailed investigation has shown that there are no feasible options available to introduce additional galleries within the constraints of the site.
- Construction of an underground gallery solution for Unit 1 would not be feasible. The proximity of Unit 1 to Sizewell B means that constructability and space constraint issues are not surmountable.
- Construction of an underground gallery solution for Unit 2 could be considered but would not be acceptable due to the impacts on safety and construction schedule. It is also considered that the impacts on the environment would be unacceptable. Accommodating the gallery within the site could only be achieved by increasing the size of the main platform to the north, resulting in further loss of the Sizewell Marshes Site of Special Scientific Interest (SSSI). Despite this increase, the construction schedule would be prolonged by a significant period of time as there would still be insufficient space for all the excavations required to construct the gallery without halting or severely disrupting other construction activities. Furthermore, the reduced reliability of a cable connection introduces nuclear safety concerns, contradicting the need to ensure that risk is As Low As Reasonably Practicable (ALARP). Nuclear safety could be degraded compared to HPC, which is not acceptable.
- The use of gas insulated lines was also considered but would not be feasible at SZC due to unacceptable impacts on the operability and security of the site. The proposed operational site is extremely compact, thereby minimising overall land take, so all areas above ground would be occupied by buildings, roads or working areas. A number of potential routes were considered for gas insulated lines at high and low level, but in all cases the supporting structures or the lines themselves would impair either the normal operation of the power station or physical security of the site.
- An overhead line solution would be feasible within the proposed boundaries of the SZC operational site. Flexibility in the height and location of pylons within the site would allow visual impact to be considered and minimised as the detailed design is developed.

Therefore the recommendation of this report is to select an overhead line solution for power export.

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1 INTRODUCTION

1.1 Purpose

The purpose of this document is to summarise the options that have been studied for the power export connection at Sizewell C (SZC) and recommend a preferred option. The feasibility of three main design solutions will be evaluated:

- Underground Cable (UGC) solutions
- Gas Insulated Line (GIL) solutions
- Overhead Line (OHL) solutions.

The findings of this study support the Environmental Impact Assessment and the option selection process described in Appendix A of the Planning Statement, submitted with the SZC Development Consent Order (DCO) application.

1.2 Scope

The power transmission system for each unit at SZC consists of:

- Generator step-up transformers and 400kV switchgear on the power transmission platform adjacent to the turbine hall (known internally as the HJ_HT platform)
- 400kV circuits from the 400kV switchgear building (known internally as the HTE building) on the HJ_HT platform to the National Grid substation (known internally as the HEG building) to export power from the unit
- 400kV circuits from the HEG building back to the HJ_HT platform to provide power to the auxiliary transformer
- 400kV switchgear bays dedicated to SZC within the HEG building
- All associated civil works, protection, instrumentation and control systems.

In the context of this report, the **power export connection** refers specifically to the 400kV circuits from the HTE building adjacent to each turbine hall to the National Grid substation.

1.3 Definitions

Term / Abbreviation	Definition
ALARP	As Low As Reasonably Practicable
AONB	Area of Outstanding Natural Beauty
DCO	Development Consent Order
EDRMS	Electronic Document and Records Management System
GIL	Gas Insulated Line
HD	Identification code for the Emergency diesel generator building
HEG	Identification code for the National Grid substation building

Term / Abbreviation	Definition
HGF, HGG, HGH, HGI, HGS, HGY	Identification codes for specific underground galleries
HHK	Identification code for the Interim spent fuel store
HJ_HT	Identification code for the Power transmission platform
HPC	Hinkley Point C
HTE	Identification code for the 400kV switchgear building
HVB	Identification code for the Auxiliary boiler building
LOMP	Loss of Main Power
LOOP	Loss of Off-site Power
OHL	Overhead Line
Power export connection	400kV circuit from the switchgear building adjacent to the turbine hall to the National Grid substation.
RC0	Reference Configuration 0
SZB	Sizewell B
SZC	Sizewell C
UGC	Underground Cable

2 CONTEXT

2.1 Site context

The nationally designated and highly sensitive nature of the landscape at Sizewell and the visual impact of the proposed power station is an important consideration for the SZC Project. SZC would be situated in an Area of Outstanding Natural Beauty (AONB), which has the highest status of protection in relation to landscape and scenic beauty. The design brief for SZC was agreed with external stakeholders and referenced in the consultation process to take this into account, in accordance with the requirements of planning policy. The design brief includes the following principle:

> "Aim to place power cables underground where this does not present significant safety and programme risks."

Planning policy is clear that exceptional circumstances must exist for development within the AONB. In the context of power export connections, this would require an assessment of the feasibility of undergrounding the cables and the scope for meeting the need in some other way (i.e. are the technical difficulties of undergrounding surmountable and is undergrounding affordable in the context of the project). As a matter of law, an Environmental Statement is also required to consider the main alternatives to the proposed development.

The SZC Project has therefore committed to examine the feasibility of both overhead and underground options for the power export connections prior to applying for a DCO. Ensuring the scheme is supported by the most robust planning case is important to allow expert witnesses to effectively defend the proposals at DCO examination.

2.2 Technical context

While the arrangement and external design of key buildings have been developed specifically for the SZC site, the power station equipment and technical systems would be fully replicated from Hinkley Point C (HPC). From an engineering perspective, this means that the reference configuration for SZC (known as RC0) is a design that is identical to HPC. At HPC, the design of the power export connections includes overhead lines within the operational site.

As the site layout and context at SZC are different to HPC, the principles of the power export connections must be re-examined. Any adaptations to suit the SZC site conditions would be treated as a departure from RC0 and would therefore be the subject of an internal Design Change. The approved adaptation would form part of RC1, which is the reference configuration that will be used to procure contracts ready for construction to commence.

3 OPTION IDENTIFICATION

The potential to underground the power export connections has been examined in detail for SZC, drawing on the collective experience of EDF Group's global power transmission engineering centre, the fleet of operational nuclear power stations in the UK, and contractors currently engaged in the construction of HPC. This section summarises the options that have been identified and presents an initial analysis in order for a shortlist of design options to be taken forward for further evaluation.

Underground solutions to export power from nuclear power stations are occasionally seen in the UK, such as at Sizewell B and Torness (which use underground cables) and Dungeness (which uses gas insulated lines). However, the size of the generators proposed for SZC presents particular technical challenges for the power export connection: The required power rating of circa 1800MW per generator would be almost three times higher than in any previous UK power station experience (typically circa 660MW per generator). Therefore the feasibility of any underground option needs to be considered carefully, in the context of the technical requirements of the plant and the physical constraints of the SZC site.

An underground solution would also represent a significant departure from the reference design of the power station (RC0). In addition to demonstrating the feasibility of designing and building the connection, the likely significant impacts of a departure from the overhead line solution on the safety case and other plant systems would need to be assessed. The following sections explore the key considerations.

3.1 Underground cable solutions

3.1.1 Directly buried cables

The simplest method of installing cables is to directly bury them in the ground. However, it is rarely used within power station sites for the following reasons:

- Protection of the cables: External damage is the main cause of failure of underground cables. Once installed, they are not visible and so are at risk of damage during future works if not protected. Even in a privately owned and controlled area this risk cannot be fully eliminated.
- Safety of people and other installations: Failures of cables can be catastrophic in nature and need to be contained to avoid external consequences. Tests of real short-circuit conditions carried out by EDF show that a directly buried installation does not adequately contain these failures to ensure safety.

Conclusion: The directly buried cable option is not taken forward.

3.1.2 Cables in ducts

The standard method of installing high voltage underground cables is in ducts buried in the ground, due to the enhanced mechanical protection provided by the duct, and the ease with which cables can be removed and replaced following a fault.

A typical cross-section of the ducts that would be required to accommodate an underground cable circuit for one unit is shown in Figure 1. To achieve the required power rating, two cables per electric power phase would be required (i.e. six cables in total). This arrangement requries a corridor at least 4.75m wide between each unit and the National Grid substation. Note that there are two units at SZC, so there would be two such cable corridors required across the site.

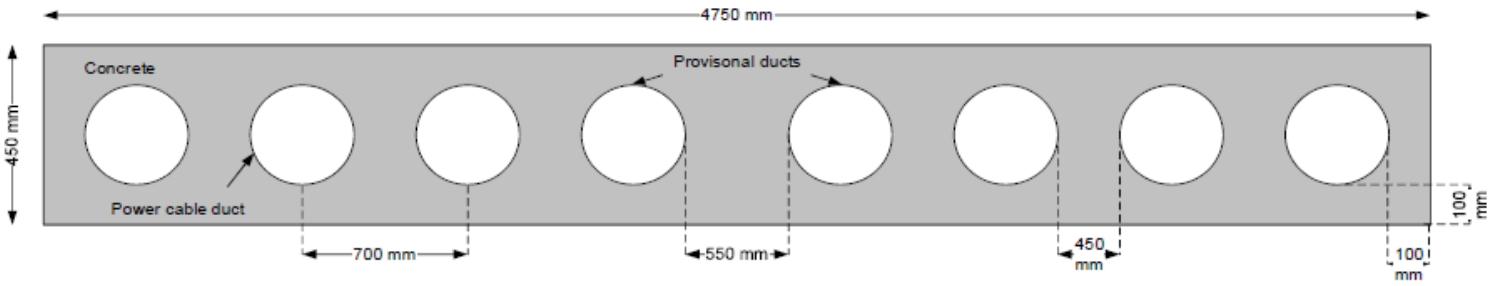


Figure 1: Cross section of cables installed in ducts to serve one unit (six cables in individual ducts are required). As there are two units, two such cross-sections would be required for the SZC site.

Due to the compact nature of the SZC site, and the amount of above-ground and underground infrastructure already planned, there are no feasible options for routing two cable corridors of this width through the site. Potential routes for Unit 1 and Unit 2 were identified on the plan (see Figure 2) but on closer inspection the following problems were apparent:

- The eastern ("sea side") route to Unit 2 (points 9–2–3–4–5–6–10 shown in purple) passes through the sterile zones required between the perimeter security fences, meaning that the ducts need to be buried at least 3m below the surface to avoid security systems and equipment foundations. In addition, any maintenance activities requiring excavation to access these ducts may compromise security of the site due to its location in the sterile zone.
- The western ("land side") route to Unit 2 (points 9–2–1–7–6–10 shown in blue), and the only route to Unit 1, passes through areas between buildings and along site roads. Experience from HPC shows that these areas will be heavily congested with utilities servicing site buildings and other site-wide systems. 400kV ducts need to be level along their entire length to allow the cables to be pulled through the ducts, so would need to be buried at sufficient depth to avoid other services.
- To avoid the large quantity of underground services already required to support the power station, these power cable ducts would need to be buried more than 3m underground, which is deeper than a typical installation of this type. At this depth, the main concern is that the heat generated by the cables in service cannot be adequately dissipated. This can sometimes be mitigated by spacing the cables further apart, which is not possible due to the space constraints already imposed for the cable route, or by increasing the cable size to allow more power to be transferred before the temperature limit of the cable is reached. However, preliminary modelling has shown that the cables required to export power from one unit would overheat even if their size is increased to the maximum available 2500mm^2 cross-section.[1]
- At least one cable joint would be required along each cable route, due to limitations on the maximum length of cable that can be supplied and the number of bends along the route. These joints would require a large reinforced concrete chamber in the ground to allow working space for cable jointing operations and to protect the joints once complete. This requires a surface area of at least 16m x 6m for a group of three cables. As each joint bay can only accommodate three cables, two adjacent bays would be required to joint the six cables serving each unit.

[1] 400kV XLPE-insulated cables larger than this are being developed by some manufacturers, but are not proven in service. No cables larger than 2500mm^2 have been installed in the UK to date, so this is considered to be the size limit.

Therefore it is concluded that the issues of space allocation and cable thermal rating are not technically surmountable for this application.

Conclusion: The option of cables buried in ducts is not taken forward.

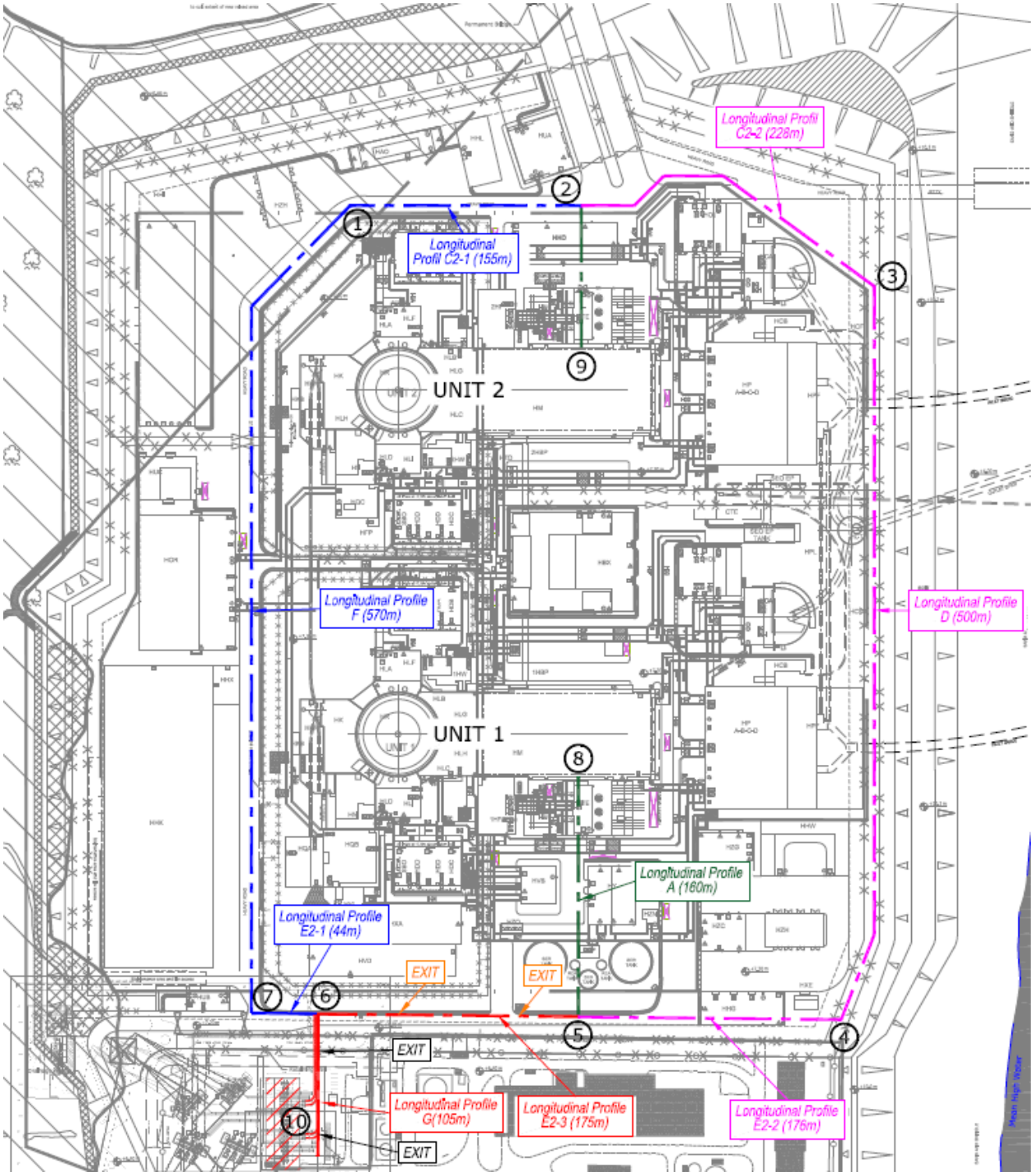


Figure 2: Potential routing options for underground power export solutions.

3.1.3 Cables in galleries

Galleries (underground tunnels) provide an opportunity to install cables deep underground to avoid other services and power station structures. In addition, the cables are be installed in air, which could be naturally or mechanically ventilated, to avoid the overheating problem described previously. The typical arrangement of cables suspended on the walls of a gallery is shown in Figure 3. As there are two units at SZC, there would be two such galleries required across the site.

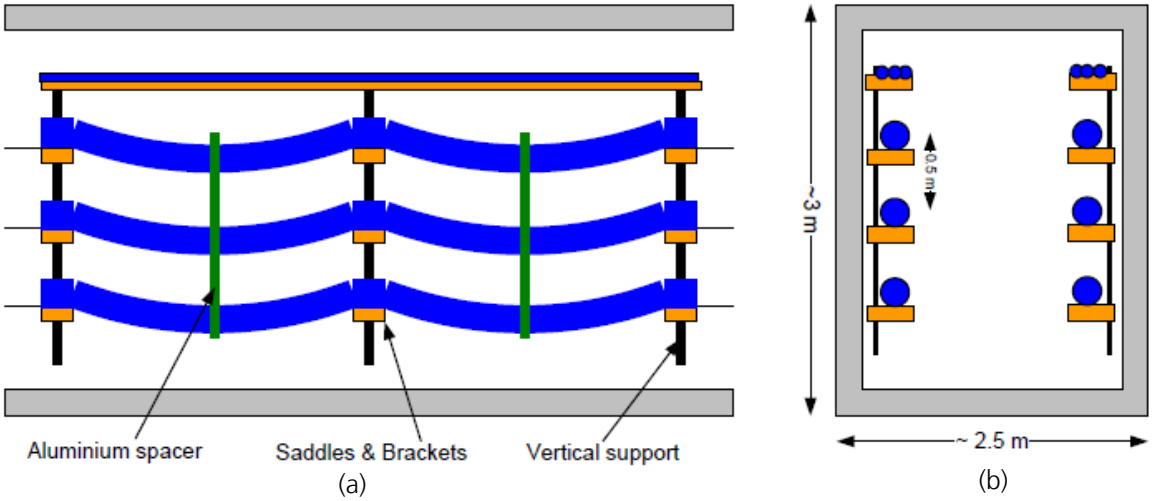


Figure 3: (a) Typical long section of cables installed on the wall of a gallery. (b) Typical cross section of cables for one unit. Two such cross sections would be required for the site.

The other advantage of a gallery installation is that cables are accessible for inspection and maintenance, which is an important consideration given that these connections are essential for the availability of the power station. Torness nuclear power station uses a combination of direct buried cables and cables in ducts for power export, and operational feedback is that the inability to access these for inspection or maintenance causes significant difficulties in practice.

From the perspective of cable protection, thermal rating and maintenance access, installation in a gallery is the only method of underground cable installation considered to be potentially suitable for SZC. The space requirement at surface level is significantly reduced compared to other underground options, although space would need to be reserved along the route for ventilation shafts and emergency exits from the gallery.

Conclusion: The option of underground cables in galleries is shortlisted and carried forward for evaluation.

3.2 Gas insulated line solutions

Gas insulated lines (GIL) are a more compact technology than underground cables and are typically used for short links in compact indoor substations. Each conductor is supported inside a sealed metal tube approximately 0.5m in diameter, filled with an insulating gas. High power ratings can be achieved, meaning three tubes would be required for the power export connection from each unit (one tube per phase).

The insulating gas typically contains sulphur hexafluoride (SF_6), which is a greenhouse gas with a global warming potential of more than 22,000 times that of carbon dioxide (CO_2). Although the release of any gas is reduced by careful handling and storage, experience shows that leaks occur over time due to faults,

degradation of gas seals, vibrations and maintenance operations; typically 1% of the volume of gas is lost to the atmosphere per annum. Modern GIL installations of the welded type are claimed by manufacturers to be "leak proof", which mitigates but does not eliminate the environmental risk. Therefore GIL carries increased environmental risk compared to other types of installation.

Alternatives are under development such as g^3 gas (a gas mixture made up of CO_2, O_2 and Novec™ 4710 fluoronitrile) which could lead to significant improvements in the environmental performance of electrical installations. EDF do not have any operational experience of this gas, its performance in service or its implications on maintenance procedures.

3.2.1 Gas insulated lines in troughs

GIL could be installed in troughs buried just below surface level, providing a more compact installation that does not require joint bays and is not subject to thermal rating issues of cables in ducts.

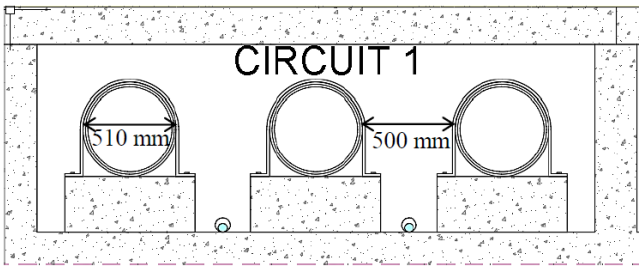


Figure 4: Typical cross section of GIL in a trough for one unit. Two such cross sections would be required for the site.

This type of installation is sometimes seen in substations and other electrical installations. However, there are specific challenges with implementing this at SZC. The proposed operational site is extremely compact, thereby minimising overall land take, so all areas would be occupied by either buildings, roads or hardstandings. This results in the following problems:

- Vehicle movements are not restricted to the internal roads shown on the site plan – vehicle access is required to all buildings, and all hardstanding areas may be used for storage and handling of materials during construction, commissioning and maintenance outages during the lifetime of the power station. This would lead to the requirement for heavy reinforced concrete covers to protect the GIL from machinery and vehicles moving around the site.
- Inspection and maintenance of the GIL would require removal of these covers, each requiring a crane or other mechanical lifting operation due to their weight. This would be extremely time consuming and introduces a substantial safety hazard for the life of the plant. The time taken to access the GIL would be particularly important in the case of a fault, as the plant would be off-line until the repair is completed. This is one reason why this installation method is avoided for other services within the power station site – pipes and cables that are critical to safety or the ability of the plant to generate electricity are routed in galleries, where they can be accessed safely and immediately.
- Notwithstanding these practical issues, there is no available route through the site for a trough to be buried flush with the surface. Corridors alongside site roads exist in a limited number of areas, but this space is occupied by other buried services from the surface down to a depth of two metres, so is unsuitable for trough installation.

- Troughs would be totally unsuitable for crossing the perimeter fence to reach the National Grid substation. In that there would be a deep drainage channel immediately outside the fence that could not be traversed by troughs. Any services that cross the site boundary must be buried at a minimum depth of 2 metres to pass under buried elements of fences and security systems, and potentially even deeper to avoid the drainage channel.

Furthermore, the operational experience from existing nuclear power stations highlights other problems where services are installed in troughs, in particular alongside site roads. Water has been found to leak into the troughs, making maintenance and repair activities difficult and increasing risk of corrosion. Over the life of the plant, the condition of concrete covers has been found to deteriorate and in time confidence is lost in their load bearing capability. In practice this has led to the addition of heavy-duty steel plates over the covers, which further impairs access to the services below, and ultimately to the closure of site roads, which would not be tolerable on a site as compact as SZC.

Therefore, it is concluded that a trough installation would bring unacceptable risks to the safety and operability of the power station.

Conclusion: The option of GIL in troughs is not taken forward.

3.2.2 Gas insulated lines above ground

Where space allows, GIL is sometimes installed on overhead gantries, typically 5-10m above ground level. This has several advantages over an installation in troughs, including improved accessibility for inspection, maintenance and repair. It can also facilitate routing of the circuits across the site where space underground is heavily congested with other services.



Figure 5: Example of an above-ground GIL installation.

The disadvantage of this type of installation is the space required at ground level for the steel structures that support the GIL, and the restrictions this could impose on site operations.

Conclusion: The GIL above ground option is shortlisted and carried forward for evaluation.

3.2.3 Gas insulated lines in galleries

The third method of installing GIL is in an underground gallery. Each unit would require a gallery of similar dimensions to that shown in Figure 3. This affords superior mechanical protection to the GIL compared to troughs, and reduces the amount of space taken up by GIL at surface level.



Figure 6: Example of an opening required to install GIL underground.

As illustrated in Figure 6, large openings would be required to allow straight sections of GIL to be lowered into the gallery for installation and subsequent replacement. The number of bends in the route would be minimised, but an opening would still be needed after every change of direction – approximately three openings for the power export connection from each unit. There is insufficient space for these within the SZC site. For other issues associated with galleries refer to Section 4.1.1.

Conclusion: The option of GIL in galleries is not taken forward.

3.3 Overhead line solutions

The alternative to an underground cable or GIL solution is to transfer power from each unit to the National Grid substation via a short length of OHL within the footprint of the power station site. This is the solution employed at HPC, so the technical and operational principles have already been proven.

Due to the physical layout of the SZC site and the location of the National Grid substation, the exact routing of the OHL would be site-specific. Initial inspection of the site reveals that space is available to install the small number of pylons that would be required to support the OHL circuits.

Conclusion: The overhead line option is shortlisted and carried forward for evaluation.

3.4 Shortlisted design options

From the analysis in this section, three specific options are taken forward for further analysis:

1. Underground cables in galleries.
2. Overhead lines.
3. Gas insulated lines above ground.

4 OPTION EVALUATION

This section provides a more detailed assessment of the shortlisted design options for the power export connection.

4.1 Underground cables in galleries

4.1.1 Gallery construction

The construction of the underground galleries at HPC is one of the major challenges of the civil works programme and carries significant cost and schedule risk. The large number of galleries already included in the power station design, densely routed through the site and crossing each other at different levels, leads to an intricate 3D layout which is very complex to build. Therefore careful consideration needs to be given to any proposal to introduce additional galleries.

It would be necessary to route any additional galleries under or over existing safety-classified galleries in multiple locations. At these locations, a 2-tier or 3-tier underground structure would be formed, requiring a new design that as a whole would be safety classified. Redesign of any safety classified structure requires detailed studies and often has a large ripple effect on other structures, systems and components that is difficult to predict before design work commences. Therefore a fundamental principle of the SZC Project is that safety-classified elements of the power station will be completely replicated from HPC. The addition of new underground safety-classified structures would introduce significant schedule risk to the project.

In addition, introducing new galleries underneath the ones already proposed may require the depth of the main site excavation at SZC to be further increased, or require localised sheet-piled trenches to be dug beyond the lowest part of the excavation that is currently planned. This adds further risk to the construction schedule and could lead to spiralling costs.

4.1.2 Layout options for Unit 1

The options for routing a new power export gallery from Unit 1 to the National Grid substation are extremely limited. The only potential route that has been identified, avoiding the sensitive buildings and underground structures of the nuclear island, is indicated by the line connecting points 8–5–6–10 in Figure 2. This route is approximately 440m long, would require space at surface level for emergency exit shafts at intervals of approximately 80m, and passes through two areas of particular constraint:

Corridor adjacent to Sizewell B

The 175m section between points 5 and 6 in Figure 2 is in the 24m-wide strip of land between the SZC cut off wall and the Sizewell B (SZB) fence. The depth of cover over a gallery in this area must be at least 3m to allow for later construction of the permanent site road and utility networks. As the cut off wall cannot be moved any closer to SZB, any underground construction in this area would need to take place in a trench and would require constant dewatering during construction due to anticipated groundwater levels. Due to the space available, an open cut trenching method would not be achievable, so a trench supported by sheet piles (cofferdam) would be required, as shown indicatively in Figure 7. This presents significant challenges:

- The number of props limits the potential to prefabricate reinforcement cages, so much of the steel fixing would need to be done in situ. The gallery would also need to be constructed and backfilled incrementally from the ground upwards as props are removed. These issues limit the efficiency of construction activities.

- Preliminary analysis from the civil works contractor shows the time required to pile, dewater, excavate, construct and backfill each 50m length of gallery to be 22-24 weeks (see Appendix A).
- The trench and associated working space at ground level would completely occupy the only route on the construction site for buses, delivery vehicles and other site traffic to reach the temporary office in the South East corner of the site and the access ramp into the deep excavation. Access to these areas would be cut off for a period of 12-18 months, which would have an unacceptable impact on construction activities elsewhere on the site. This is most likely to delay the critical path of the project.
- Excavation and dewatering on this scale may not be possible at all in this location, due to the close proximity to SZB posing an unacceptable risk to ground stability in their operational site.

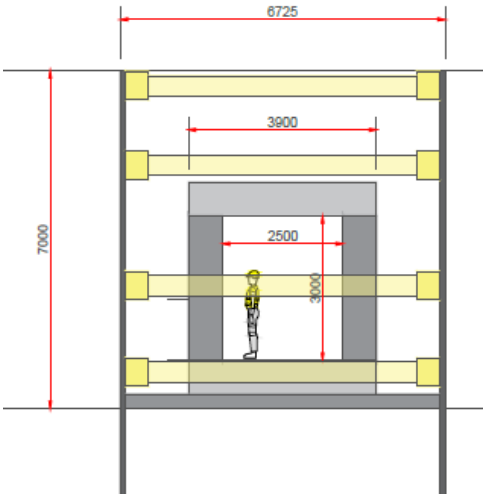


Figure 7: Indicative cross section of a gallery during construction in an excavation supported by sheet piling. The horizontal props would be removed as the gallery is built from the bottom up.

Corridor through deep excavation

The 150m section of the route between points 8 and 5 in Figure 2 crosses two safety-classified galleries (refer to the cross-section in Figure 8):

- HGY is a gallery 3.1m below the surface. As most of the space between the gallery and the surface is taken up by buried networks supporting the site, any new gallery for power export would have to cross underneath HGY at a depth of at least 11.3m.
- HGH/HGI is a gallery 11.8m below the surface. Therefore a new gallery would have to be constructed over the top of this, or underneath it at a depth of approximately 16.7m below the surface.

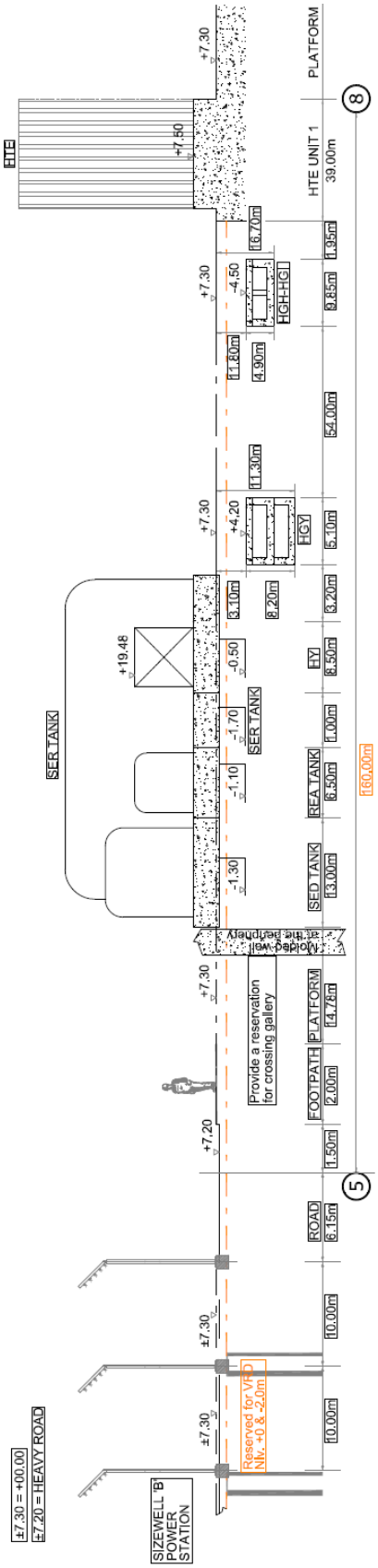


Figure 8: Cross section looking West through the potential route of Unit 1 power export gallery (not to scale)

To route a gallery through this area would require a 10m downward vertical transition from the route corridor adjacent to SZB to a deep section of the route passing under the HGY gallery, followed by another vertical transition towards the surface to avoid the HGH/HGI gallery. The only alternative would be to drop even further, to a depth of approximately 16.7m below surface level in a single vertical transition, so that a horizontal gallery could be routed under both HGY and HGH/HGI. In either case, the opposing 90 degree bends at the top and bottom of the level change would prohibit cable pulling. In addition, there would be significant construction obstacles to a gallery of this depth, which would be lower than the planned depth of the main excavation for SZC.

4.1.3 Layout options for Unit 2

Two potential routes through the site have been identified for a power export gallery from Unit 2:

1. A "sea side" route, indicated between points 9–2–3–4–5–6–10 in Figure 2. This route is approximately 1300m long.
2. A "land side" route, indicated between points 9–2–1–7–6–10 in Figure 2. This route is approximately 1000m long.

For both options, space at surface level would be required for emergency exit shafts at intervals of approximately 80m along the route.

As both routes head away from the HJ_HT platform of Unit 2, they cross a safety classified gallery (HGF/HGG), which is 5.8m below the surface (refer to the cross-section in Figure 9). Therefore it could be possible to construct a new gallery over the top of this and still allow approximately 3m of cover between the surface and the top of the gallery for other services.

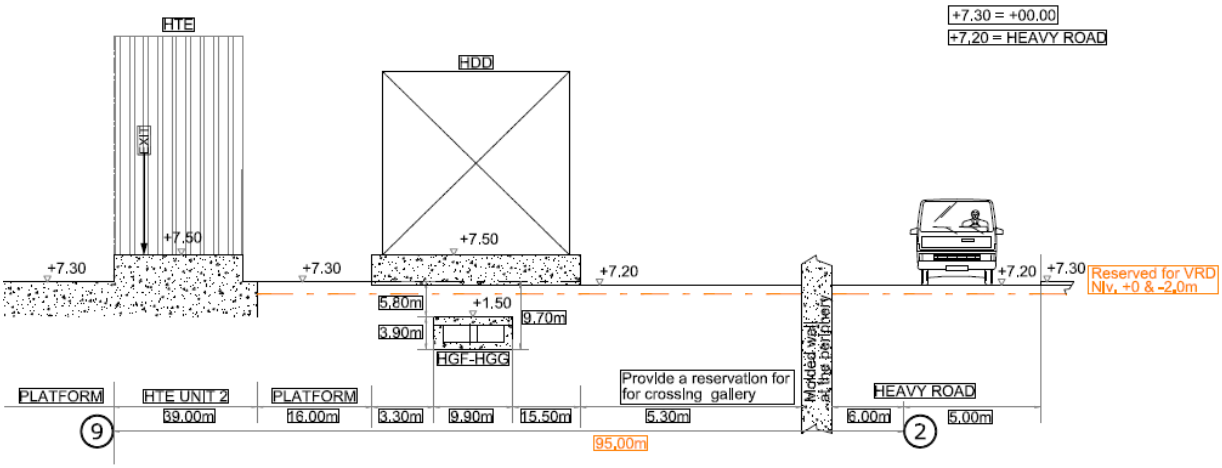


Figure 9: Cross section looking West through the potential route of Unit 2 power export gallery (not to scale)

Sea side route

The sea side route relies on a 500m long section down the east side of the site, outside the proposed line of the cut off wall (i.e. between points 3 and 4 in Figure 2) and below the operational site security fences. The top of the gallery could be designed to be at least 3m deep to allow a clear zone beneath the fences for security infrastructure. However, the emergency exits would not be permitted in the sterile zone between the fences.

Construction of a gallery in this location would also be extremely challenging. Two options could be considered:

1. Using a supported excavation approximately 7m deep and 500m long (similar to Figure 7 but directly adjacent to the outer face of the cut off wall). This would not be possible as this space is required during construction of the power station for access shafts and surface-level infrastructure supporting cooling water tunnelling operations.
2. Moving the line of the cut off wall east by approximately 20m, to accommodate space to construct the additional gallery within the deep excavation. The gallery could only be built after partial backfilling around the heat sink buildings; at HPC there are no galleries between the pumping station and the sea, so the feasibility and construction sequence would need to be analysed in detail. However, to maintain sufficient space for the cooling water tunnelling works would require the site boundary and sea defence to also be moved approximately 20m to the east. This would not be tolerable due to the loss of public amenity space on the beach.

This route would also require construction of a 300m long section of gallery in the corridor between the cut off wall and SZB, which is subject to the same constraints as the Unit 1 gallery route discussed above.

Land side route

The land side route relies on a 155m long section along the north of the site, outside the proposed line of the cut off wall, underneath the heavy road - between points 1 and 2 in Figure 2. The depth of cover in this area must be at least 3m to allow for other services and for construction of the road.

Construction of the gallery in this area poses similar issues to the part of the sea-side route on the east side of the site; either the line of the cut off wall would be moved approximately 20m to the north to include the gallery in the deep excavation, or a major excavation is required in the construction site road on the outside face of the cut off wall. To avoid destabilising the cut off wall, the gallery would have to be set back significantly, which would sterilise a large strip of land in part of the construction site that is crucial for access to the entire main construction area and is already heavily constrained. In reality, the only option here would be to move the cut off wall approximately 20m north, and to extend the power station platform an equivalent distance to the north in order to maintain sufficient working space at surface level. As a consequence the construction site would take additional land from the SSSI to the north of the platform. This is an extremely sensitive strip of SSSI, which is already being reduced to 60m in width by construction of the power station platform. A further reduction of 20m has the potential to severely harm the ecological function of that area.

At the southern end of the route, between points 6 and 10 in Figure 2 it is necessary to penetrate the cut off wall and continue the gallery construction in a trench heading south for approximately 50m to the National Grid substation. This presents significant challenges as described for the corridor adjacent to SZB above. To construct and backfill this 50m length of gallery would take approximately 22-24 weeks (see Appendix A). During this time, access to the main site office and the deep excavation access ramp in the south east corner of the main construction area would be cut off, causing significant interruption to the movement of people and materials around the construction site, as discussed previously for the Unit 1 gallery route. This is likely to delay construction of the project.

4.1.4 Impact on operations and nuclear safety

The power export connection is critical to the availability of the power station, so it must be as reliable as possible. In support of this, additional ancillary equipment would be required in the gallery to protect the cables and provide an early warning of any problems. Security, lighting and fire detection systems would all increase the complexity of the solution and would themselves need to be maintained. This would introduce additional requirements for maintenance work underground, in the vicinity of live 400kV cables.

However the biggest impact on operations arises from the reduced reliability of underground cables compared to overhead lines operating at transmission voltages, with typical failure rates between five and ten times those of overhead lines[2]. In addition, the repair time for an underground cable fault can be over 100 times that of an overhead line fault, due to the time required for cable replacement and jointing operations.

An important role of the power export connection, in addition to transferring power from the turbine-generator to the National Grid, is to provide the main electrical supply to the power station's auxiliary systems. Therefore any reduction in reliability of the power export connection would cause a reduction in reliability of the main external power source, the consequence being a detrimental impact on nuclear safety. The potential impact on the safety case is detailed in Appendix B.

4.1.5 Summary

The potential to provide a power export connection via underground cables in galleries has been explored in detail.

Undergrounding of the connection to Unit 1, or Unit 2 via the "sea side", is not possible due to constructability issues that are not surmountable and the unacceptable impact on operations and safety.

There is limited potential for undergrounding the connection to Unit 2 via the "land side" route, but this would not be acceptable to the SZC Project for the following reasons:

- The design is not ALARP and nuclear safety is likely to be degraded compared to HPC.
- The construction schedule would be prolonged as there is insufficient space to accommodate the required excavations without halting or severely disrupting other construction site activities.
- The permanent loss of SSSI land would be increased due to the enlargement of the power station platform.

[2] International studies show that reliability statistics for UGC transmission circuits (in terms of the number of failures per km per year) vary widely, with failure rates between 3 and 100 times those of OHL transmission circuits. Repair times are also longer for UGC faults, typically 6 to 19 days compared to a few hours for an OHL fault. For a summary of relevant research refer to https://www.ea.govt.nz/assets/dms-assets/4/466318-11-Comparison-Reliability.pdf. Based on a range of statistics, a typical estimate for UGC would be a failure rate of 5 to 10 times and repair time around 100 times that of an equivalent OHL.

4.2 Overhead lines

The HPC project adopted an OHL solution for power export, so the technical design and operational requirements have already been established and form part of the reference configuration for SZC (RC0). Therefore the analysis in this section is limited to the physical layout of the SZC site, which differs from the HPC site, and the implications this may have on the feasibility of an OHL solution. Several scenarios were investigated, which are summarised below.

4.2.1 Layout scenario 1

The first layout scenario considered the use of 65m pylons to lift the conductors from their terminations next to each turbine hall over the emergency diesel generator (HD) buildings. This is the principle employed at HPC.

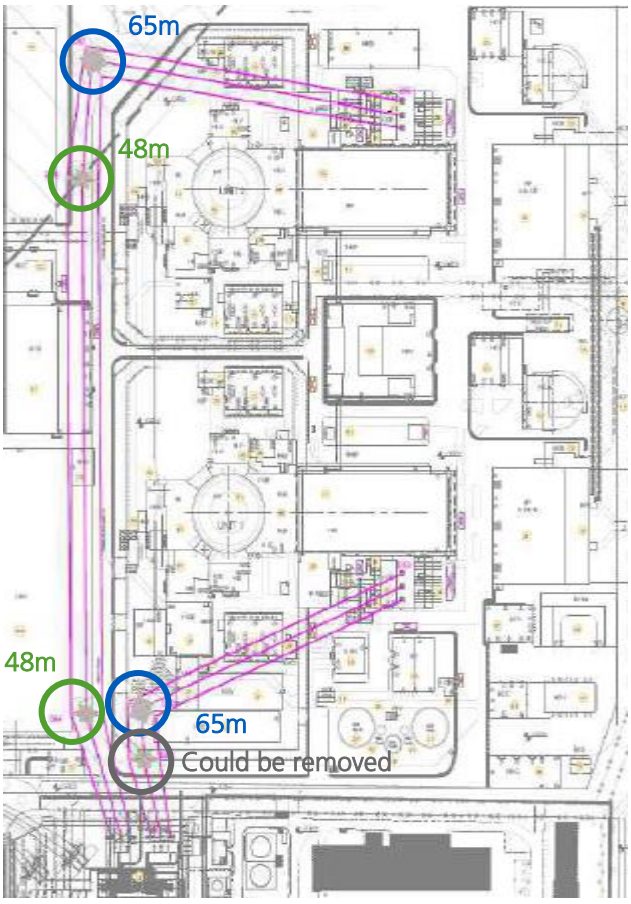


Figure 10: OHL Layout scenario 1 (concept)

To provide a worst-case assumption, five pylons were included in the study of this scenario, in order to anticipate the complex conductor routing required to reach the terminal gantries in the National Grid substation. Subsequent work with National Grid was undertaken to ensure that the layout could accommodate the OHL terminations without the need for the pylon closest to the substation, which would reduce the total number of pylons to four.

The main complexity of this layout is the part of the route that oversails the heavy road running north-south through the west side of site. Erection of scaffolding and installation (stringing) of the conductors

in this area is estimated to take 5 or more days, during which time the road would need to be closed and construction traffic routed through a different part of the site. During scaffolding installation/removal and the cable pulling phase, any work on the roofs of buildings beneath the OHL would also be constrained. Main civil works will have been completed by this time, but the installation of OHL conductors over a live construction site would still be a complex operation. The same challenge exists for HPC and the learning from that project would help to inform the methodology at SZC to keep disruption to a minimum.

An additional consideration was the construction of the Interim Spent Fuel Store (HHK), which is expected to take place after the OHL connection to Unit 2 will be live. The OHL conductors are routed alongside the HHK building above the level of the roof. Initial discussions with the contractor team indicate that it should be possible to construct this building so long as measures are in place to prevent cranes coming into contact with the conductors.



Figure 11: Visualisation of scenario 1, as viewed from Sizewell beach to the north of the site

4.2.2 Layout scenario 2

The second layout is a variation of scenario 1. As above, work with National Grid was undertaken to ensure that the pylon closest to the substation would not be required, which would reduce the total number of pylons to four, but they could all need to be 65m in height.

The conductors over the long section of heavy road are avoided, but instead they pass diagonally over the HHK building. Initial discussions indicated that construction of a building this size would present significantly more risk from a health and safety perspective below a live OHL, so this option is discounted.

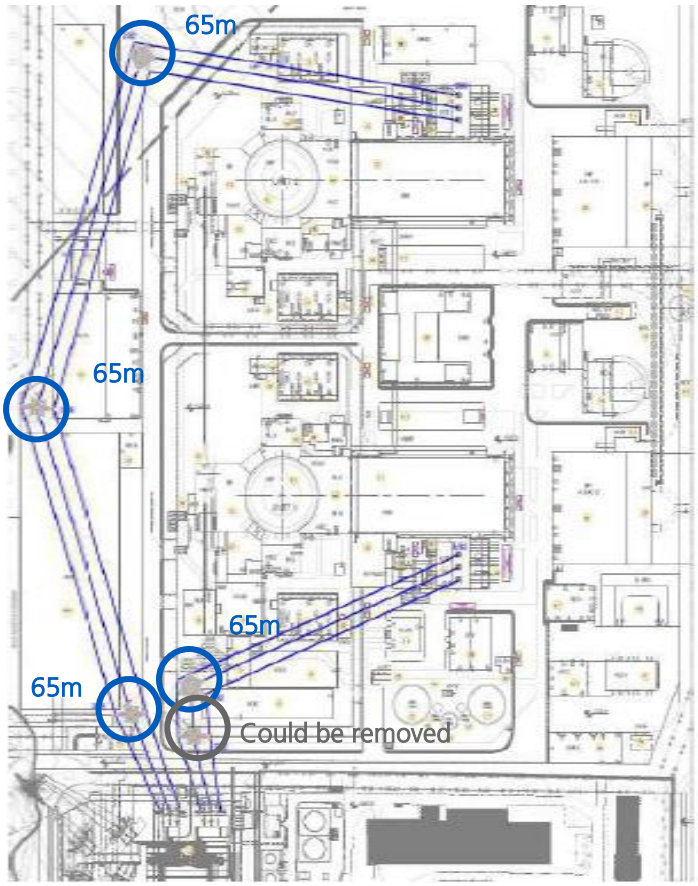


Figure 12: OHL Layout scenario 2 (concept)

4.2.3 Layout scenario 3

This layout is a variation of scenario 1 and explores the possibility of removing one or both of the tallest (65m high) pylons from the design:

- For Unit 1, the 65m high pylon could be reduced to 48m by avoiding the need to route the OHL over the southernmost HD building. This would require the conductors to pass over the auxiliary boiler building (HVB) instead, the feasibility of which would need to be examined in detail.

- For Unit 2, the OHL could be routed around the north side of the northernmost HD building, allowing the 65m pylon at the north end of the site to be reduced to 48m, but requiring an additional 48m pylon as shown in Figure 13.



Figure 13: OHL Layout scenario 3 (concept)



Figure 14: Visualisation of scenario 3, as viewed from Sizewell beach to the north of the site

4.2.4 Impact on operations and nuclear safety

Overhead lines at transmission voltages (e.g. 400kV) are extremely reliable, and are not as vulnerable to weather and external damage as the lower voltage circuits used in distribution networks. Many faults are transient and are self-healing, meaning that the supply is restored immediately; permanent faults that require intervention can be repaired quickly. Therefore the overhead line solution does not have a significant impact on the availability of the power station to operate. There is also no impact on the safety case compared to HPC.

4.2.5 Visual impact of layout scenarios

As layout scenario 2 represents the worst case in terms of visual impact, this was the basis of the concept presented at the SZC Stage 3 consultation. As design studies progressed, confidence was gained in the viability of the alternative scenarios which could reduce the visual impact and two options were presented in the SZC Stage 4 Consultation:

- Option 1 (four pylons) was based on layout scenario 1 above, but with only one pylon for the Unit 1 connection. The objective stated was to reduce the height of all pylons to 48m, with the exception of the northernmost pylon which would need to remain at 65m in height.
- Option 2 (five pylons) was based on layout scenario 3 above. The objective confirmed in the consultation was to reduce the height of all pylons within the SZC site to 48m.

The responses to that consultation showed no conclusive preference between the options. While there was marginally more support for the option with the fewest pylons, most respondents did not express an opinion or were opposed to any OHL solution.

The Joint response of Suffolk County Council and East Suffolk Council to the SZC Stage 4 consultation states that:

> *If undergrounding of the power connections was proven not to be possible, EDF Energy would be expected the reduce the impact of overhead power export connections as much as possible – by reducing number and height of pylons and using alternative less intrusive design. As such, any reduction in height is welcome, but it is unlikely that an additional pylon [as in Scenario 3] would be desirable.*

A preliminary, high level appraisal of the landscape and visual effects of the options presented at the Stage 4 consultation was also undertaken[3]:

> *Of the viewpoints considered in the appraisal, Sizewell beach is closest to the proposed development, and currently comprises views that are not influenced by overhead power lines.*
>
> *It is judged that [Scenario 3] generates greater adverse effects in views from Sizewell beach than [Scenario 1].*
>
> *[Scenario 3] would have resulted in a greater amount of visual 'clutter' extending out from the existing and proposed power station structures into what is an otherwise relatively simple coastal landscape. As such particular consideration should be given to visual receptors in this location, their sensitivity and susceptibility to change.*

[3] For full details refer to Appendix A of the Planning Statement included in the DCO application.

Whilst adverse effects are anticipated on visual receptors along Sizewell beach during construction and operation arising from the power station structures/sea defences, the choice of an option that would reduce the visibility of pylons from Sizewell beach would be preferable.

The difference in pylon heights between [Scenario 1] and [Scenario 3] makes a marginal difference to the effects arising from the remaining viewpoints assessed. On balance reducing the visibility of pylons from Sizewell beach is considered to be more important and so the four-pylon option [Scenario 1] is preferred.

Therefore Scenario 1 would be the preferred option to take forward for further development if an OHL solution cannot be avoided, and formed the basis of the proposal included in the DCO application.

In recognition of the importance of the visual impact of the proposed power station, discussions with stakeholders continued after submission of the DCO application and studies were undertaken to further challenge the height of all pylons within the proposed SZC site. The outcome was that the southernmost pylon, carrying the circuit to Unit 1, could be reduced from 65m to 48m when combined with a minor adjustment to its location. This height reduction was confirmed in the DCO Change Submission in January 2021.

4.2.6 Summary

The potential to provide a power export connection via overhead lines has been explored in detail.

Three scenarios were explored for overhead line routing in order to minimise the visual intrusion of pylons:

- Layout scenario 2 is not feasible as the live conductors would prohibit safe construction of the HHK building.
- Layout scenarios 1 and 3 were shown to be feasible.
- An overhead line solution would not have a significant impact on the construction schedule.
- An overhead line would be an ALARP solution due to the superior reliability of overhead transmission lines.

No clear preference between layout scenarios was evident from the results of the Stage 4 public consultation. A design solution based on Scenario 1 is proposed by the SZC Project due to the reduced impact on the view from Sizewell beach.

4.3 Gas insulated lines above ground

GIL is sometimes seen at existing nuclear power plants in the UK, for example at Dungeness B, and was recently adopted at Taishan to connect two new EPR™ reactors to the Chinese grid. Therefore, the assessment of suitability for SZC focusses on practical issues of construction, operation and maintenance.

4.3.1 Layout constraints

The compact nature of the SZC site makes the introduction of additional infrastructure of this nature at ground level or underground unfeasible. As discussed in section 4.1, increasing the size of the operational platform is not acceptable to the project and solutions must be sought within the currently proposed footprint. There is extremely limited space available between buildings for access/maintenance, buried services, movement of vehicles, storage of materials, safety clearances, security clearances, etc. As a result, all areas within the operational site fence would already be occupied by buildings, roads and hardstandings for the storage and handling of materials during operation and maintenance.

A plan of the site is shown in Figure 15, in which the shading indicates areas where installation of GIL troughs or supporting structures for overhead GIL gantries would be prohibited for the reasons explained below. The potential to traverse these areas at high level and then continue the GIL route in unshaded areas will then be examined.

Nuclear Island area (pink shading)

This is an operational area for vehicles and plant servicing the reactor building, safeguard buildings, emergency diesel generators and associated buildings. It is a high security area, surrounded by dedicated fencing, and due to space constraints on the site is already as small as possible. Unrestricted access is required to all areas within the nuclear island fence for safe operation of the plant, for example to permit:

- Installation and replacement of major items of equipment
- Delivery of nuclear fuel
- Movement and removal of spent fuel and radiological waste
- Delivery of diesel for the emergency generators and other operational chemicals
- Maintenance access to all building facades and entrances.

Security sterile zones (blue shading)

To meet the requirements of the Nuclear Industries Security Regulations 2003, security arrangements are required at every nuclear licensed site to protect nuclear material and other radioactive material. These arrangements include a physical protection system against theft, sabotage or other malicious activity. This system integrates technical and procedural controls to form layers of security that build defence-in-depth and are graded according to the potential consequence of a successful attack.

The operational site perimeter fence is a key aspect of the physical protection system, and as such is surrounded by a designated sterile zone, which covers the area between the site fences and extends to 10m inside the inner fence. The sterile zone must be clear of obstructions above ground and down to 3m below ground level. Further explanation is provided in section 4.3.3 below.

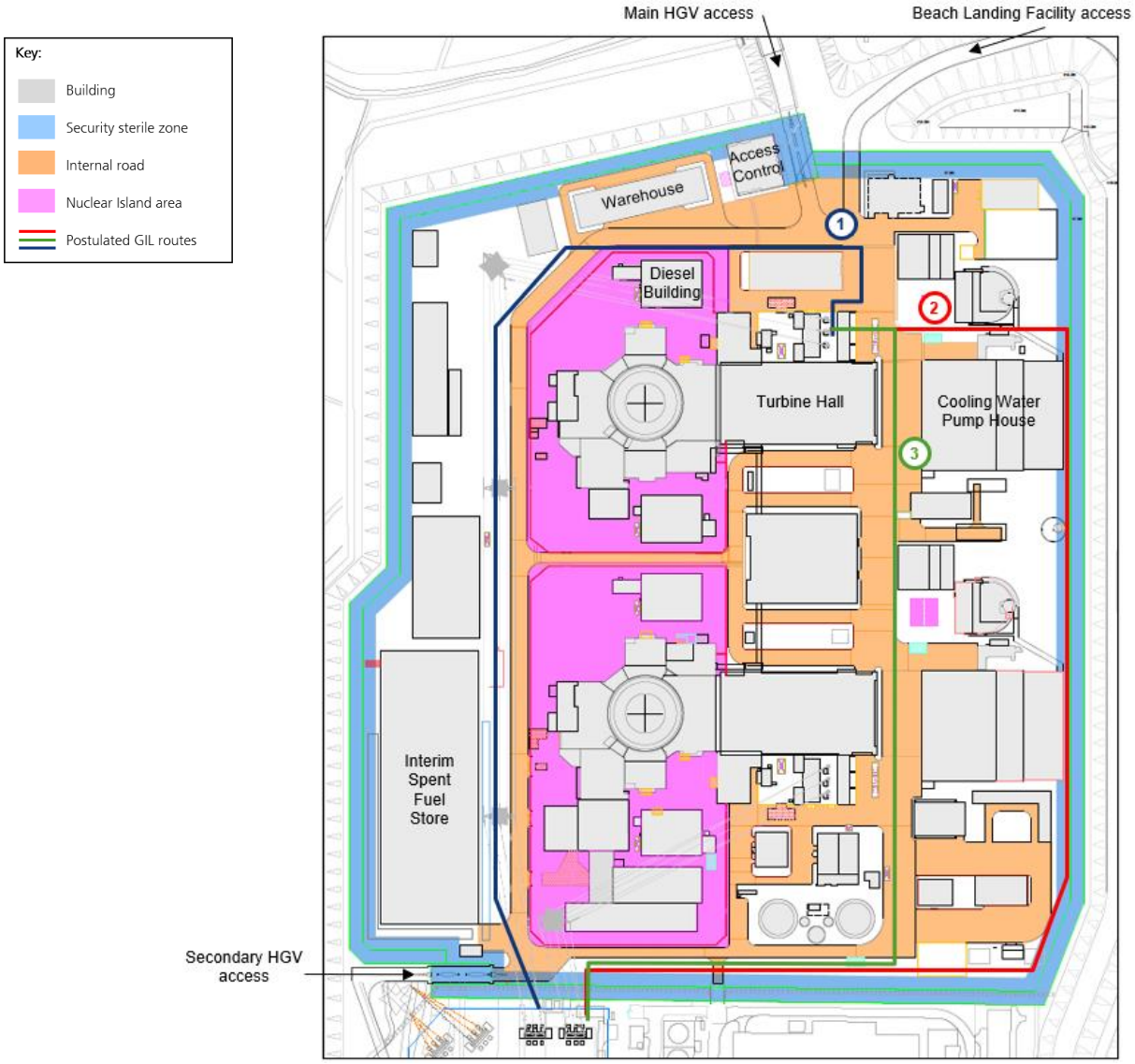


Figure 15: Plan of the proposed SZC site showing postulated routes for GIL connections. Areas where GIL could not be installed (in troughs or above ground) are shaded.

Internal roads (orange shading)

Roads are provided within the site for circulation of operational vehicles, including heavy goods vehicles and abnormal indivisible load transporters. Operation and maintenance of the site requires unimpeded access through all shaded areas, examples including:

- Access to the areas surrounding the power transmission platform for delivery and offloading of replacement power transformers and associated components
- Access for heavy goods vehicles to the cooling water pump house and turbine hall, in particular for removal and replacement of major items of equipment during outages
- Movement of spent fuel casks by specialist transporters between the nuclear island and the interim spent fuel store.

4.3.2 Postulated GIL routes

The plan in Figure 15 indicates three approximate 'corridors' through the site which could be considered for GIL routing:

Blue route

Route 1 uses the corridor on the West side of the site currently occupied by the proposed overhead lines. However, this is the only space available for underground power, data and water services running north-south through the western part of the site, and which are essential to the operation of adjacent site buildings. For reasons explained in section 4.3.3, if GIL was above ground in this area it would need to be installed at high level, requiring substantial foundations. It would not be possible to accommodate either these foundations or a trough installation without cutting off other buried services.

A further constraint is at the north end of the site where it is not possible to route the GIL from this road corridor to the turbine hall. This area is not available for installation of the additional structures as a result of the following:

- Vehicle access is required into all sides of the ancillary buildings adjacent to the route. There is no clear space in which to install the vertical supports required for pipe bridges over the roads, and they are not permitted to pass through the fire/explosion damage zone that surrounds the hydrogen store.
- The sub-surface constraints of the cut-off wall and other galleries are analysed in section 4.1.3. These will preclude the use of galleries to pass under this area.
- The GIL would have to terminate at the location of the monopoles next to the turbine hall. This location is surrounded by roads required for access to the power transformers, turbine hall, pump house, and nearby ancillary buildings. There is no way for an overhead GIL to reach the turbine hall without impeding vehicle access. Due to the layout of the surrounding roads, there is also no feasible way of installing pipe bridges to cross these areas without intermediate supports in the roadway, which would not be acceptable.

Red route

Route 2 uses the corridor down the East side of the site immediately behind the sea defence. This avoids the constraints at the north end of the site and a pipe bridge across the internal road could be envisaged, but a large part of the route clashes with the security sterile zone on the East side of the site. Above ground GIL is not permitted in the sterile zone as it would present an unacceptable obstruction that could compromise the effectiveness of the site's physical protection system. This is described in detail in section 4.3.3 below.

Green route

Route 3 uses the central corridor within the site. It can be seen from the plan that the full width of this corridor is required for the heavy-duty road that provides access to the turbine hall, power transformers, operational service centre, pump house and associated buildings. There is no space in the road to install GIL.

4.3.3 Impact on operation and nuclear safety

Installation of GIL alongside site roads would impose unacceptable restrictions on the safe and efficient operation of the power station. The blue route and green route in particular pass through busy operational

areas and although there appears to be space available alongside site roads, this is not available for the installation of additional structures:

- Clear space is required at ground level along the entirety of the road for vehicles to the buildings and hardstanding areas to the West, which would be impeded by the presence of GIL in this area.
- Clear space overhead is required for delivery, offloading and handling of materials during construction, commissioning and maintenance outages through the operational life of the power station.
- Movement of Abnormal Indivisible Loads such as nuclear fuel transporters require more space to manoeuvre than the roadway indicated on the site plan; their large turning radius means they will need to use the space to the west of the road when turning into the nuclear island areas.

It should be noted that there are no substantial pipe bridges or above ground pipework proposed within the SZC site for these reasons. The density of buildings, limited space at surface level, and the requirement for vehicle access to most buildings means that almost all pipework between buildings is proposed to be in underground galleries. Services in galleries are safer, better protected, easier to access for maintenance, and visually screened from view.

Installation of GIL around the periphery of the site, such as in the red route, requires separate consideration. The SZC operational platform has been reduced in size to minimise overall land take, so the peripheral buildings are already hard up against the security sterile zone, leaving no space for additional equipment or structures between buildings and the fence. Therefore consideration has to be given to installing GIL within this zone:

- Services are not permitted to be buried along the length of the sterile zone unless they are more than 3m deep, which precludes the use of concrete troughs. This exclusion zone is to ensure no interference with the fence and security system column foundations, cables and cabinets. Security systems foundation depth would be at minimum requirement of 1.5m but depending on ground conditions could increase to 2.5m and the footprint could extend fully into the 3m exclusion zone. In addition, there are security lighting columns that run along the entirety of the inner clear zone spaced at 13m intervals and have a substantial foundation to support 8m column with a 3m cantilever arm. Therefore, any buried option would need to top out at least 3m below platform level in the clear or sterile zones. To bury the GIL more than 3m deep would require installation in a gallery, which was explored in Section 4.1 and found not to be constructible due to proximity to the cut off wall and cooling water tunnelling operations.
- Above ground installations in the sterile zone between the two perimeter fences cannot be introduced with the exception of intruder detection equipment and CCTV columns. Any other installation would provide blind spots for the security systems detection and verification capabilities. As the Sterile Zone is only 10m wide there would be no available space for substantial structures.
- The sterile zone inside the inner fence ensures unobstructed access to the fence for response to security incidents. A clear line of sight is required along the entire length of the fence lines, free of structures that could be used as cover by adversaries.
- The sterile zone also protects against the possibility of bridging between the fence and structures inside the site. There would also be the issue of security system foundation requirements as detailed earlier.

GIL technology has been proven to be very reliable in service and therefore there is unlikely to be an impact on the safety case compared to HPC. However, were a fault to occur within a section of GIL during operation, it would take on average 2 weeks to repair (compared to a matter of days for repairing overhead lines). This would lead to a substantial loss of availability of the unit to generate power.

4.3.4 Visual impact of layout scenario

Notwithstanding the practical issues analysed above, the visual impact of a GIL installation cannot be ignored as it would not achieve the same objectives as placing the circuits underground. GIL would be mounted on overhead supports of the sort often seen at oil refineries, chemical plants, etc. Where roads need to be crossed a "pipe bridge" is usually required as shown below.



Figure 16: Example of an overhead GIL installation (left) and typical pipe bridge (right).

Addition of pipe bridges and overhead pipework traversing the site in a convoluted manner would introduce a large amount of functional 'clutter' and would mark a substantial departure from the proposed aesthetic of the site. These steel lattice structures would be at least 10m above platform level. They would appear particularly incongruous as they approach the termination points adjacent to each Turbine Hall.

4.3.5 Summary

The potential to use GIL above ground has been explored in detail. Implementing the GIL above ground will not be acceptable to the SZC Project for the following reasons:

- Space is extremely constrained on the operational site, which has been carefully laid out to minimise land take from the SSSI. All available space within the site has already been allocated for operational purposes and increasing the size of the operational platform is not acceptable to the project.
- The only available routes through the site would have unacceptable impact on operability of the site.
- The only available routes around the periphery of the site would not be acceptable from a security perspective.

These cannot be overcome by localised undergrounding of GIL for the reasons discussed.

5 CONCLUSION

This document summarises the options that have been studied for the power export connection at SZC. The feasibility of a range of design solutions has been evaluated:

- Underground cable solutions (directly buried, in ducts or in galleries)
- Gas insulated line solutions (in troughs, above ground or in galleries)
- Overhead line solutions (three different layout scenarios)

Three design solutions were shortlisted for detailed evaluation:

- Underground cables in galleries
- Overhead lines.
- Gas insulated lines above ground

Additional galleries (underground tunnels) would be required to accommodate underground power export cables. Due to the large number of galleries and underground infrastructure already planned for the SZC site, there are no feasible options available to introduce additional galleries.

Potential routes to Unit 1 were considered, but none were found to be feasible within the constraints of the site. Deep excavation and dewatering would be required in part of the site where these activities are not permissible, due to the close proximity to the existing Sizewell B site and lack of sufficient space for construction activities.

Potential routes to Unit 2 were considered separately, but to create space to construct an additional gallery through the site would significantly delay the construction programme due to the impact on site logistics and would require enlargement of the main platform to the north, leading to further loss of land within the Sizewell Marshes SSSI. Notwithstanding the constructability issues, the selection of an underground cable in place of an overhead line does not present an option where nuclear safety risks are ALARP.

In an effort to avoid these issues, gas insulated lines were considered, which could be installed above ground but potentially at a lower level than overhead lines. However, the compact size of the proposed operational site means that the space would already be fully utilised by buildings, roads, handling areas or security sterile zones. The introduction of additional structures at surface level would have an unacceptable impact on the operability of the site and there are no substantial pipe bridges or above ground pipework proposed within the SZC site for these reasons. The density of buildings, limited space and the requirement for vehicle access to all areas means that almost all pipework between buildings is proposed to be in underground galleries. Services in galleries are safer, better protected, easier to access for maintenance, and visually screened from view.

Therefore, an overhead line solution is recommended. A design solution based on layout scenario 1 is preferred due to the reduced impact on views from Sizewell beach compared to other options; this formed the basis of the proposal included in the DCO application. Subsequent studies confirmed that the southernmost pylon, carrying the circuit to Unit 1, could be reduced from 65m to 48m when combined with a minor adjustment to its location. This height reduction was confirmed in the DCO Change Submission in January 2021.

APPENDIX A ILLUSTRATIVE GALLERY CONSTRUCTION METHODOLOGY

Construction of all galleries currently planned for SZC will take place within the deep excavation bounded by the cut off wall. Construction of a gallery outside this area would be extremely challenging due to the peat, clay and weak crag soils that are known to be close to the surface at the Sizewell site.

To aid assessment of the gallery options examined in this report, the sections below illustrate the possible construction methodologies for a gallery outside the cut off wall, based on feedback from the HPC main civil works contractor.

A.1 Open cut trench

A 7m deep open cut trench could be approximately 28m wide to allow for the side slopes (assuming 1:1.5 slopes). A cross-section is shown in Figure 17.

The space constraints of the site mean this is unlikely to be practicable.

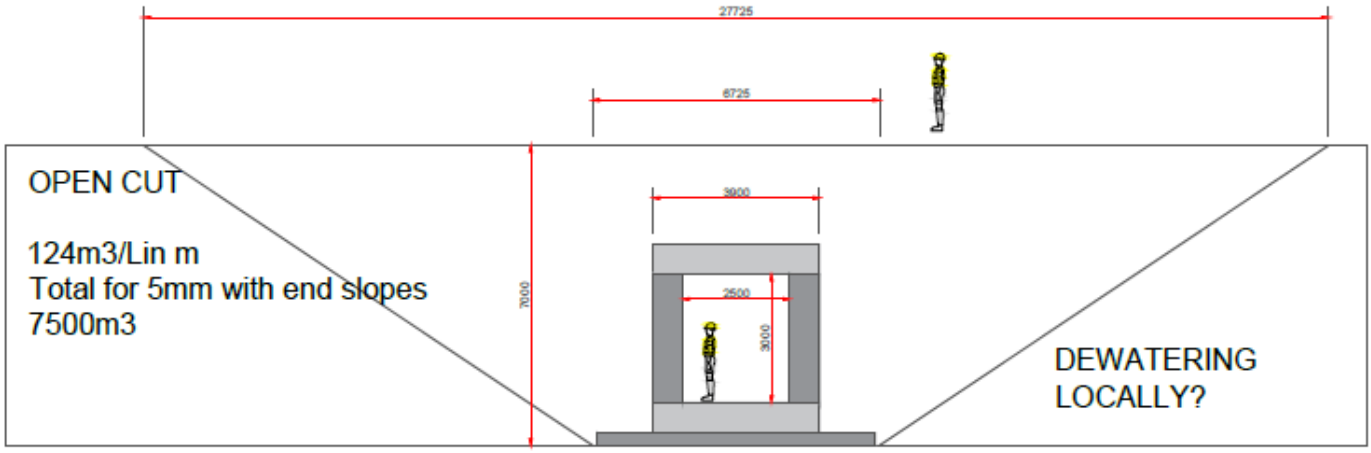


Figure 17: Illustrative cross-section of an open cut trench

A.2 Supported excavation

A 7m deep supported excavation could be restricted to approximately 7m wide through the installation of sheet piles as side support. A cross-section is shown in Figure 18.

An illustrative construction sequence is described below, based on a 50m length of gallery (constructed in 25m sections, as at HPC).

Cofferdam installation:

- 3/4 weeks sheet piling.
- To install a 5 level scheme over a 50m length would require:
    - Around 700m^3 per level for excavation and 14 struts plus waler.

- Allow 2/3 weeks per level – noting it gets harder as dig increases and access limitations.
- Needs a large excavator for reach and probably a small crawler for prop install – needed later for rebar.

- Programme duration approximately 12-14 weeks for the cofferdam and blinding strut at bottom.

Assume in situ fix to gallery sections:

- Volumes – 2 x bases @ 70m^3 Concrete, each base @180kg/m^3 (HGS estimate from HPC) = 12.5t.
- Assume soffit as base.
- Non-seismic reinforcement so 15hrs / tonne (including access limitations) = 190 person-hours, so a week to fix each section.

Assume in situ fix with limited access and shutter limits from propping:

- 10 days for base (including strength gain and backfill).
- 10 days for walls.
- 10 days for soffit.
- Lag from first to second section of 2 weeks.
- All up concrete finished 8 weeks for both sections
- Backfill a further 2 weeks (with the strength gain allowances)

Therefore the total programme duration for a 50m length of gallery would be approximately **22-24 weeks**.

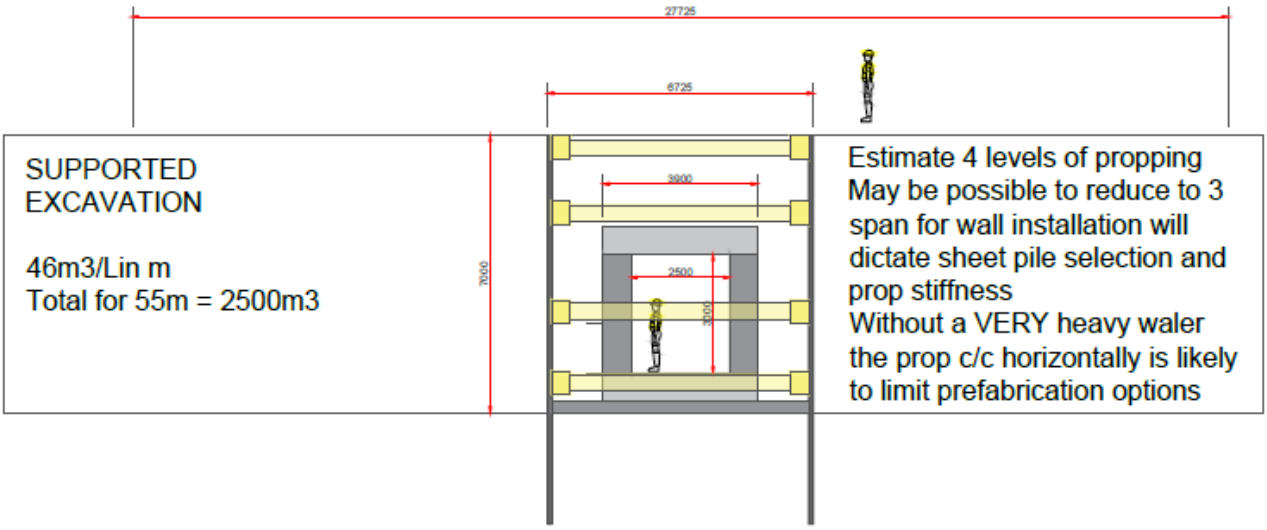


Figure 18: Indicative cross section of a gallery during construction in an excavation supported by sheet piling. The horizontal props would be removed as the gallery is built from the bottom up.

APPENDIX B SAFETY CASE IMPACT OF UNDERGROUND CABLING

A fault in the power export connection would disconnect the plant from its normal external power source. This can lead to a Loss of Main Power (LOMP) event, which triggers shutdown of the plant and a need to switch auxiliary supplies over to a separate backup connection from National Grid. Approximately one per cent of LOMP events are considered to lead to a Loss of Off-site Power (LOOP) event, which is a more serious scenario whereby the plant must rely on its emergency diesel generators to support systems important to nuclear safety.

In the current safety case, LOMP has an initiating event frequency of approximately 10^{-1} per reactor year and could therefore lead to a LOOP with frequency approximately 10^{-3} per reactor year. This is not large enough to influence the overall LOOP frequency, but a 5-10x reduction in reliability of the power export connection would change this position. The frequency of a LOOP initiated by a failure in this circuit could increase to approximately 0.5 or 1.0 x 10^{-2}, which would be significant enough to increase the overall LOOP frequency.

The EPR™ is particularly sensitive to these sorts of fault, which accordingly make a significant contribution to the overall quantitative risk in the Probabilistic Safety Assessment. Any increase in risk of this type of event is a cause for concern and the change is not consistent with the need to ensure that nuclear safety risk is ALARP. The increase in LOOP frequency would have a small but noticeable impact on overall risk. The difficulty to repair faults in underground cables circuits and the long repair times are also a significant cause for concern, as the plant would be relying on backup power sources for an extended period of time. Significant increase in risk of this type of event would not be acceptable.

APPENDIX 6A RESPONSE TO AR.1.12

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TABLES

None provided

PLATES

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None provided

ANNEXES

Annex to Appendix 6A Tables from the recreational evidence base to the HRA revised to show figures if respondents who did not name a displacement location are included.

1 EXA QUESTION AR.1.12

Displacement of Tourists/Visitors

The National Trust [RR-877] and RSPB [RR-1059] indicate that they do not consider the displacement of tourists and visitors from the current pattern of visiting has been undertaken in a way which could be regarded as precautionary, it could therefore underestimate the effects on both the National Trust land at Dunwich, and the RSPB Minsmere site but also elsewhere:

Please respond to this concern.

The National Trust's relevant representation [RR-877] states:

> *'The application does not adequately assess or address changes in recreation and tourism at Dunwich Heath and Beach, including changes in visitor numbers and behaviours. Visitor displacement and visits by construction workforce are underestimated and not precautionary. …..'*

The RSPB's relevant representation [RR-1059] states:

> *'The estimates of potential increases in recreational use of designated sites by both displaced visitors and construction workers appear low'*

2 SZC CO. RESPONSE

2.1.1 The following answer is divided into two main parts. The first demonstrates the precautionary basis for the additional visitor numbers which were assessed in the Shadow HRA. The second part addresses two discrete issues which have been raised by the National Trust.

2.1.2 The third part presents conclusions.

2.1.3 This answer presents revised visitor numbers relating to European Sites which adds a further layer of precaution and which have been assessed in the **Second Addendum to the Shadow HRA** (Doc Ref. 5.10Ad 2).

3 PART ONE – PRECAUTIONARY NATURE OF THE FIGURES USED FOR ADDITIONAL VISITOR NUMBERS IN THE SHADOW HRA

3.1 Overview

3.1.1 A highly precautionary approach was used (i.e. numbers used were considered to be greater than would actually occur) in the assessment of potential increases in visitors to European sites for recreation such as walking and cycling in the Shadow Habitat Regulations Assessment (sHRA). The estimations of numbers of potential additional visits to European sites is described in the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) at Section 3. Table 3.5 of the **Shadow HRA Volume 1 Appendix E Annex A** identifies an estimate of the numbers of people displaced to locations at European sites, and Table 3.9 identifies an estimate of the numbers of construction worker visits to locations at European sites, during the construction phase, based on the calculated method explained there – i.e. based on a literal application of the gross survey results.

3.1.2 The combined figures from Tables 3.5 and 3.9 (i.e. displaced people plus construction workers) are given in Table 2.1 of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]) and the figures quoted in Table 2.1 are used in the assessment of potential effects on Special Protection Areas (SPAs) and Ramsar sites in section 8 of the **Shadow Habitats Regulations Assessment Volume 1: Screening and Appropriate Assessment** [APP-145].

3.1.3 In summary, the reasons why the figures are highly precautionary is as follows. Further information is provided in subsequent sections of this response.

- The numbers of additional displaced users and construction workers to visit European sites due to the construction of Sizewell C assumes that all those visiting locations near but not within European sites (e.g. coastal locations such as Aldeburgh, Dunwich, Sizewell Beach, Thorpeness and Aldeburgh) would all in fact recreate within the nearest European sites. In reality a large proportion of these additional visitors would visit the location but not the nearest European site.

- The actual numbers of displaced users of recreational resources to European sites are likely to be significantly less than the figures used for the following further reasons:

- Evidence has identified that surveys of this kind tend to overstate impacts; a proportion of the people who said that they are likely to displace in response to the **2014 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A** of the **Environmental Statement** (**ES**) [APP-268]) (and are factored into the assessment) are unlikely to actually do so.
- Whilst there is likely to be displacement to designated sites, there is also likely to be some displacement from some European sites such as Dunwich Heath and Minsmere, but figures for displaced users used in the sHRA only allow for potential displacement to European sites and not potential displacement from European sites..
- When respondents to the **2014 Sizewell C Visitor Surveys** were asked the question where else they would go to avoid the construction site they were shown maps of the local area to help them identify locations. 49% of respondents to the 2014 Sizewell C Visitor Surveys live outside the 8km local area including 25% who were holiday makers, and the map might have drawn respondents to name locations local to the main development site rather than locations closer to home or alternative holiday locations.
- Displacement figures used in the sHRA are based on the results of the **2014 Sizewell C Visitor Surveys** when the alternative recreational space and improvements that will be delivered through Sizewell C was not known. If respondents had known of these improvements and, for example, that an alternative new location at Aldhurst Farm would be available, or that the beach at Sizewell would be kept open in all but rare circumstances, some who named locations that they would displace to within or adjacent to European sites may not have done so.

- For construction workers the sHRA assesses impacts based on the maximum workforce (7,900) applied to the full 12 year construction phase. However, the maximum workforce would only last for approximately 2 years of the 12 year construction phase. For the majority of the construction phase workforce numbers would be significantly lower than used in the assessment.

- Figures used for construction workers potentially recreating at European sites are additionally precautionary for a number of further reasons including:

- evidence shows that, other than sport, construction workers are less likely than the general population to take part in recreation and leisure activities outside of the home;
- formal sports facilities are provided for construction workers at Alde Valley School and a gym is provided at the accommodation campus;
- the majority of construction workers will work in shifts, limiting the time when all workers may be looking to undertake recreation activity at the same time;
- accommodation campus and Land to the East of Eastlands Industrial Estate (LEEIE) based construction workers would be living alone and are likely to return home at weekends or between work periods;
- a proportion of construction workers in other non-home based (i.e. private rental or tourist) accommodation would also return home at weekends or between work periods;
- construction workers in private rental or tourist accommodation would be spread over a wide area with many located away from European sites;
- the sHRA assumed that all of the 2,000 workers staying in private rental or tourist accommodation (the maximum number at peak of construction) would be additional to the area, whereas in fact some would replace existing residents and tourists;
- existing residents in private rental accommodation and holiday makers in tourist accommodation are more likely to recreate at European sites than the construction workers who replace them;
- accommodation campus and LEEIE based construction workers would not have dogs and would therefore not undertake regular (e.g. daily) dog walks or create the same disturbance as dog walkers;
- many construction workers in private rental or tourist accommodation would be staying away from their families and not have dogs at their accommodation and would also not undertake regular (e.g. daily) dog walks; and
- existing residents in private rental and tourist accommodation who construction workers are replacing are more likely to have dogs than the construction workers who are replacing them. The

potential for reduction in numbers of dogs, and regular daily dog walks, has not been discounted from the precautionary figures uses in the sHRA.

3.1.4 Some of these factors bear further explanation. This is set out below using the detail of the **2104 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A** of the **ES** [APP-268]), and considering assumptions made in the recreational evidence base to the sHRA.

3.2 Displaced users of recreational resources and additional construction workers were allocated to nearest European sites

3.2.1 In response to the question "*which other areas are you likely to use instead*" in the **2014 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A, Table 14** of the **ES** [APP-268]), 59 different locations were cited. As an example, 15 (out of 151 who said they would be displaced) gave Aldeburgh as their answer. The sHRA assessment then assumes that those 15 would all be displaced to the Alde- Ore Estuary SPA as the nearest European site that may be impacted. The sHRA also assumes, on a precautionary basis, that all construction workers who were estimated to visit Aldeburgh would visit the Alde- Ore Estuary SPA as the nearest European site that may be impacted, whereas the majority may visit the town and beach, but not the European site. The location of Aldeburgh and its main car parks are shown on Figure 007 of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]). The beach car parks south of Aldeburgh (W on Figure 007) are described in Table 5.2 of the **Shadow HRA Volume 1 Appendix E**. The town and car parks are separated from the Alde, Ore and Butley Estuaries SAC and the Alde-Ore Estuary SPA and Ramsar, and these European sites are only accessible by foot via three footpaths which provide options for a circular walk to the northern edge of part of these European sites. Access south along the footpath and beach into the European site is prohibited south of Martello Tower. The sHRA does acknowledge this (paragraph 8.3.64) but the number is nevertheless used (in Table 8.2 of the **Shadow Habitats Regulations Assessment Volume 1: Screening and Appropriate Assessment** [APP-145]) as a calculated impact on the SPA.

3.2.2 The same point applies to locations named by respondents, or estimated to be visited by construction workers, outside or adjacent to the Minsmere-Walberswick- European sites[1] and the Sandlings SPA. Locations outside

[1] Minsmere to Walberswick Heaths and Marshes Special Area of Conservation (SAC), Minsmere–Walberswick Special Protection Area (SPA), Minsmere–Walberswick Ramsar site (collectively referred to as the "Minsmere–Walberswick European sites")

or adjacent to the Minsmere-Walberswick European sites listed in Table 8.10 of (and factored into) the **Shadow Habitats Regulations Assessment Volume 1: Screening and Appropriate Assessment** [APP-145] include (from north to south):

- Southwold (lying north of and separate from the Minsmere-Walberswick- European sites as shown on Figure 004 and described in Table 5.2 (access point reference G) of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]). People would have to walk approximately 1 to 1.5km or further to access these European sites, and would need to cross the River Blythe via a single footbridge, or via a ferry which only operates at certain times of day and at busy times of year such as school holidays[2].

- Walberswick (adjacent to the Minsmere-Walberswick- European sites as shown on Figure 004 and described in Table 5.2 (access point reference H) of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]). There are a number of walking routes into these European sites from Walberswick. However, many visitors may only visit the settlement or its beach, and some will walk north to visit Southwold and not access these European sites.

- Dunwich Beach (adjacent the Minsmere-Walberswick- European sites as shown on Figures 004 and 005, and described in Table 5.2 (access point reference L) of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]). There are paths into these European sites from the main car park, but many people are only likely to visit the village or beach adjacent to the car park, or other facilities such as the café at the car park (outside European sites).

- Eastbridge (south of and separate from the Minsmere-Walberswick-European sites as shown on Figure 005 and described in Table 5.2 (access point reference R) of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]). There is a walking route north into the Minsmere 'outer' areas, or eastwards to Minsmere Sluice providing access to the Minsmere-

[2] https://www.explorewalberswick.co.uk/ferry.php [accessed May 2021]

Walberswick- European sites. However, some visitors may only use footpaths outside these European sites.

- Sizewell Beach (south of and separate from the Minsmere-Walberswick- European sites, and north of and separate from the Sandlings SPA as shown on Figures 005 and 006 of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]). The majority of people who visit the car park at Sizewell Beach walk north or south along the beach and are unlikely to access these European sites.

3.2.3 A popular location adjacent to the (but outside) Sandlings SPA listed in Table 8.31 of (and factored into) the **Shadow Habitats Regulations Assessment Volume 1: Screening and Appropriate Assessment** [APP-145]) is Thorpeness (east of and separate from the Sandlings SPA as shown on Figure 006 and described in Table 5.2 (access point reference T) of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]). As noted in Table 5.2 "*The car park at Thorpeness provides direct access to the beach. It is also possible to walk to parts of Aldringham Walks and Sandlings SPA via two footpaths leading west from the village, and along the Suffolk Coast Path to the north. However, the majority of visitors to Thorpeness are likely to access the beach and facilities within the village rather than walk inland.*"

3.2.4 In reality a large proportion of additional visitors due to Sizewell C would visit the location but not the nearest European site.

3.3 Displaced users of recreational resources - survey results likely to represent a significant over-estimate of visitor displacement

3.3.1 The potential numbers of displaced users of recreational resources (e.g. Public Rights of Way (PRoW), Open Access land, the beach, the Suffolk Coast Path, the future England Coast Path, and Sandlings Walk) who might visit European sites during the construction of Sizewell C was calculated using two approaches, one giving lower and another giving higher estimates in section 3.2 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]). The estimated numbers of displaced people to locations at European sites are given in Table 3.5, and it was the higher estimated numbers shown in columns 6, 7 and 8 which were used to assess effects in the **Shadow Habitats Regulations Assessment Volume 1: Screening and Appropriate Assessment** [APP-145]. The higher estimates provide a precautionary approach and are considered to provide larger numbers than

are expected to occur as described in paragraph 3.2.30 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]).

3.3.2 The numbers of people who could be displaced was based on the results of the **2014 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A** of the **ES** [APP-268]), where 29% (151 of the 514 respondents) said that they would stop using the area around Sizewell C during construction, and 95 named one or more locations that they would displace to (paragraphs 4.1.17 and 4.1.23).

3.3.3 The percentage of people who actually do displace during the construction of Sizewell C is likely to be significantly less than the percentage of respondents who said that they would be displaced in the **2014 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A** of the **ES** [APP-268]) because evidence has identified that perception surveys asking how people would respond to a potential future change are subject to a number of biases which mean the results are unlikely to correspond accurately to actual behaviour and are likely to be lower as explained in paragraphs 3.2.5 to 3.2.12 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]). Paragraphs 3.2.11 and 3.2.12 state that:

> *'Research by Ipsos MORI presented for an online survey on tourism effects in North Yorkshire Moors National Park (Ipsos Public Affairs: North York Moors Visitor Survey, 18.7.14, p.55) identifies that steps can be taken to take past behaviour into account, presenting confidence intervals for responses or applying a factor to discount the magnitude of the effect in reality, at 0.3 when a respondent states they are 'less likely to visit' and 0.75 for 'unlikely to visit in the near future or again.*
>
> *The use of the figures from the survey of potential displacement findings recorded in Section 3.2 to inform the prediction of increases of visitors to European Sites therefore has risks. If the Ipsos MORI method noted above is deployed and the factor of 0.3 were to be applied to the figure that 29% of respondents would be displaced recorded in the 2014 Sizewell C visitor surveys [APP-268] or the 28% recorded in the 2015 Sizewell C RSPB Minsmere visitor surveys [APP-269], the predicted percentage of visitors who are likely to be displaced would be reduced to approximately 9%; this 'lowering' of*

predicted displacement figures would also apply to other visitor categories including dog walkers. However, a precautionary approach has been taken to the SZC HRA potential displacement evidence base, and the recorded figures presented in the 2014 Sizewell C visitor surveys (Volume 2 Appendix 15A (Doc Ref. 6.3) [APP-268]) are used as the basis for estimating the potential increase in recreational pressure at European Sites (i.e. 29% of respondents who would be displaced). Potential displacement percentages have not been factored downwards despite this published evidence, to minimise the risk of underestimating potential effects.'

3.4 Displaced users of recreational resources - no account taken of displacement from European sites

3.4.1 A further reason why the actual displacement figures are precautionary and likely to be significantly less than figures used in the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148] is that they only allow for potential displacement to European sites and not potential displacement from European sites.

3.4.2 The **2014 Sizewell C Visitor Surveys** were undertaken at locations within a 2km zone around the Sizewell main development site, which included locations within or leading to European sites, i.e: at Aldringham Walks within Sandlings SPA; on Bridleway 19 at the entrance to Kenton Hills car park; • within Kenton Hills car park; in the National Trust car park at Dunwich Heath within the Minsmere–Walberswick European sites; on the Eastbridge – Minsmere Sluice footpath which leads directly to the Minsmere–Walberswick European sites; the Suffolk Coast Path junction with Sandlings Walk at the southern edge of the Minsmere–Walberswick European sites; and at Sizewell Beach car park. The survey locations are shown on Figure 01[3] of the **2014 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A** of the **ES** [APP-268]).

3.4.3 Displacement from these areas is not "credited" in the gross numbers of additional people who have been assumed to visit European sites due to the construction of Sizewell C and in the assessment of potential effects.

[3] Figure 01 shows the indicative development site boundaries as they were at 2016, and not the current site boundaries.

3.4.4 A percentage of people may displace from locations within European sites such as Dunwich Heath and Minsmere during the construction phase, and this potential reduction in numbers has not been factored into the estimates of increased visitor use in the sHRA. For example, 23 out of 66 (35%) respondents who completed the questionnaire survey at Dunwich Heath within the Minsmere–Walberswick European sites said that they would stop using the area around Sizewell C (including Dunwich Heath) during the construction phase, but these have not been deducted from the potential visitor numbers to Dunwich Heath in the sHRA. It can be seen from Table 3.1 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) that 12 people (from the 514 respondents who completed questionnaire survey at all survey locations in the **2014 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A, Table 14** of the **ES** [APP-268]) (2.33%) said that they would displace to Dunwich Heath, and this gross figure is the number used to generate the displacement figures used in the precautionary approach in Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148] and Table 2.1 of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]).

3.5 Displaced users of recreational resources - options presented in the survey

3.5.1 A further reason why the displacement figures are precautionary is because, in responding to question 4b)i) asking *'If you would prefer to avoid the paths around the construction site which other areas are you likely to visit instead'* respondents were referred to two maps of the local area as far north as the National Trust car park at Dunwich Heath Coastguard Cottages, as far south as Thorpeness, and 5-6km inland (see Figures 1 and 2 in Appendix A of **2014 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A** of the **ES** [APP-268]), which might have drawn responders to name local locations rather than locations closer to home or alternative holiday locations. This is particularly relevant to the 49% of respondents to the **2014 Sizewell C Visitor Surveys** who live outside the 8km local area including 25% who were holiday makers (see Table 10 in in the **2014 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A** of the **ES** [APP-268]).

3.6 Displaced users of recreational resources - survey undertaken when alternative recreational space and other new and improved access provided by SZC was not known

3.6.1 It is also notable that the calculations were based on the results of the **2014 Sizewell C Visitor Surveys** when the alternative recreational space provided by SZC Co. at Aldhurst Farm (27ha of new Open Access land where dogs are allowed off-lead, a new car park and Public Right of Way (footpath)) and other new and improved access outside European sites which will attract some displaced people and construction workers, which will be delivered through Sizewell C, was not known. If respondents had known that these improvements and alternative locations would be available some who named locations that they would displace to within or adjacent to European sites may not have done so.

3.7 Precautionary estimate of visits from construction workers

3.7.1 The potential numbers of construction workers who might visit European sites and use recreational resources during the construction of Sizewell C was calculated using the approach described in section 3.3 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]. The figures used to inform the assessment of effects are given in Table 3.9 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]. A precautionary approach was followed which is outlined below.

3.7.2 Approximately 5,000 construction workers would be non-home based (NHB) and additional to the area at peak of construction, some of whom could potentially recreate at European sites. The remaining construction workers would be drawn from the existing population and would therefore not be additional users of European sites.

3.7.3 For the purpose of estimating the potential numbers of NHB construction workers who may visit European sites a figure of 10% visiting once a week was used, as described at paragraph 3.3.12 to 3.3.15 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]). The total estimated numbers are shown in Table 3.7, and the numbers with dogs in Table 3.8 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]).

3.7.4 The estimation of numbers of construction workers recreating at European sites was precautionary because it was based on the largest potential numbers of workers at peak of construction (i.e. when construction workers, and consequently numbers potentially visiting European Sites, are likely to be at their highest) to inform the HRA evidence base as a 'worst-case' scenario. It should be noted that these peak numbers will only last for a short time (approximately 2 years of the 12 year construction phase) and, for most of the construction phase, numbers will be lower, and numbers visiting European sites will be lower than factored into the sHRA. This is discussed further below.

3.7.5 The figure of 10% visiting once a week is considered precautionary for the following reasons:

- As described at the second bullet point in paragraph 3.3.10 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) the workforce will be dominated by men aged 20-50, based on the national breakdown of people employed in the construction industry, and the key sport/recreation characteristics for this demographic group are:
  - preference and higher than national average participation in organised/formal sport - main reason is to meet friends;
  - football and gym are overwhelmingly favoured as activities. The provision of formal recreation facilities for construction workers comprising a gym at the accommodation campus and sports facilities including a full-size 3G football pitch and two MUGAs at Alde Valley School adjacent to Leiston Leisure Centre is described in paragraphs 3.4.177 to 3.4.179 and 3.4.221 to 3.4.223 of **Volume 2 Chapter 3** (Description of Construction) of the **ES** [APP-184];
  - work commitments are a significant reason for not undertaking recreation activity; and
  - other than sport, these groups are less likely to take part in recreation and leisure activities outside of the home.
- The majority of construction workers will work in shifts, limiting the time when all workers may be looking to undertake recreation activity (first bullet point in paragraph 3.3.10 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]). Indicative shift patterns are shown in section 1.3 of the **Code of Construction Practice Part B** (Doc Ref. 8.11(B)).

- A proportion of shifts will be during the day with 'time off' during the hours of darkness when recreational resources at European sites are likely to be less attractive to construction workers because they are remote and unlit.

- At peak approximately 3,000 of the 5,000 NHB construction workers would be based in the accommodation campus at the entrance to the construction site, and at the area designated for caravans in the LEEIE. Factors that would minimise their use of European sites compared to the general public living in residential accommodation include:

  - They would be living alone because families would not be allowed to stay at the campus or at the LEEIE (first bullet point in paragraph 3.3.8 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148])) describes this for campus-based workers; families would also not be allowed to stay at the LEEIE caravan site);

  - The majority of these construction workers are likely to return home at weekends / at the end of their working period (first bullet point in paragraph 3.3.8 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148])). It is during these periods that construction workers would be more likely to go for walks or cycle, when they would not be in the Sizewell C area and would therefore not visit the European sites that could be affected during the construction of Sizewell C.

- At peak approximately 2,000 of the 5,000 NHB construction workers are expected to stay in private rented sector (PRS) or tourist accommodation in the area, up to around 60-minutes drive-time from Sizewell C (third bullet point in paragraph 3.3.8 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148])). They will be spread over a wide area, and therefore, if they do undertake informal outdoor recreation, they are likely to do so at locations spread over a wide area including many locations 'close to home' that are not European sites, thus diffusing effects.

- A proportion of the construction workers staying in PRS or tourist accommodation are likely to return to their permanent address at weekends or at the end of their 'on' period, when they are very unlikely to visit European sites in the vicinity of Sizewell C (paragraph 3.4.20

and of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148])).

- A large proportion of the PRS and tourist accommodation assumed to be occupied by Sizewell C construction workers will already exist and has the potential to already accommodate residents or tourists (the fact that there are many tens of thousands more tourists staying in the area at some points of the year compared to others suggests that there is capacity for additional temporary demand). The sHRA assumed that all of the 2,000 workers staying in PRS or tourist accommodation would be additional to the area, whereas in fact some would replace existing people. In addition, existing residents in PRS accommodation and holiday makers in tourist accommodation are more likely to recreate at European sites than the construction workers who replace them, for reasons described above.

3.7.6 It is also the case that the majority of the 5,000 'additional' NHB construction workers at peak would not have dogs as described in paragraphs 3.3.18 to 3.3.20 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]), and would therefore not undertake regular (e.g. daily) dog walks.

- The 3,000 (at peak) workers at the accommodation campus paragraph 3.3.18 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148])) and LEEIE would not be allowed dogs at their accommodation, therefore, dogs would not be a potential source of harm from this source, and these workers would not be undertaking regular (e.g. daily) dog walks.

- 10% of the approximate 2,000 (at peak) construction workers in PRS and tourist accommodation are assumed to have dogs with them for the purpose of the numbers estimated in Table 3.9 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]). This is considered to be a precautionary approach and the actual percentage is likely to be less because (see paragraph 3.3.19 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148])):

  - Limited availability of accommodation that allows dogs.
  - Given the (long) length of shifts and temporary basis of employment tenure, the majority of workers who have access to a dog (i.e. there is one in their main permanent residence away

from Sizewell C) are unlikely to bring them to their temporary Sizewell C accommodation. If their permanent home accommodation is shared with, for example, other family members, many are likely to leave the dog at home where it could have better care and be less disrupted by shift working patterns.

  - Workers may not wish to leave dogs unattended at their PRS or tourist accommodation for long periods while they are at work, and the ability to do so may depend on their ability to locate and employ a dog walker. Thus the availability of dog walkers that workers could employ may also be a further limiting factor.

- Existing residents in PRS and tourist accommodation who construction workers are replacing, as described above, are more likely to have dogs than the construction workers. Existing dog owners in PRS accommodation will be at their main home and therefore have their dogs with them in their PRS accommodation. Many existing tourists who own dogs are likely to have them with them on holiday. Construction workers in PRS and tourist accommodation are less likely to have dogs for reasons described above. The potential for reduction in numbers of dogs, and regular daily dog walks, has not been discounted from the precautionary figures uses in the sHRA.

3.7.7 The numbers of construction workers (with and without dogs) visiting European sites presented in Table 3.9 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148] is therefore considered to be precautionary and actual numbers during the construction phase are likely to be lower.

3.8 Temporal effects

3.8.1 The temporary nature of effects during the construction phase is of particular importance when assessing effects in the 'integrity' of European sites. The concept of the integrity of the site is defined in section 4.6.4 of The European Commission's Guidance on Article 6 of the Habitats Directive 92/43/EEC (Ref 1) ('the EC Guidance') where it states:

> *'As regards the connotation or meaning of 'integrity', this clearly relates to ecological integrity. This can be considered as a quality or condition of being whole or complete. In a dynamic ecological context, it can also be considered as having the sense of resilience and ability to evolve in ways that are favourable to conservation.*

> *The 'integrity of the site' can be usefully defined as the coherent sum of the site's ecological structure, function and ecological processes, across its whole area, which enables it to sustain the habitats, complex of habitats and/or populations of species for which the site is designated.*
>
> *A site can be described as having a high degree of integrity where the inherent potential for meeting site conservation objectives is realised, the capacity for self-repair and self-renewal under dynamic conditions is maintained, and a minimum of external management support is required.*
>
> *When looking at the 'integrity of the site', it is therefore important to take into account a range of factors,* ***including the possibility of effects materialising in the short, medium and long-term****.'* (Bold emphasis added.)

3.8.2 As noted above, the estimation of numbers of construction workers recreating at European sites was precautionary because it was based on the largest potential numbers of workers at peak of construction (i.e. when construction workers, and consequently numbers potentially visiting European Sites, are likely to be at their highest) across the full 12 year construction phase. In reality numbers of construction workers who could potentially visit European sites would be lower than factored into the sHRA for the majority of the construction phase.

3.8.3 The intensity of construction activities would vary throughout the 9-12 year construction phase (construction activities over project phases are described in the **Code of Construction Practice** (Doc Ref. 8.11(B)). Peak construction years (e.g. in 2023 (early years peak) and 2028 (civils peak) described at paragraph 3.3.3 of the **Code of Construction Practice**) would see greater intensity of construction and potentially greater displacement than at other times of the construction phase, when construction activity would generally be less intensive. Also, construction activity would occur in different areas of the main development site at different times, and intensity of construction activity would vary geographically, and the potential for displacement of users of recreational resources from different locations close to the construction site is likely to vary over time accordingly. However, the estimates of displaced people have not been factored downwards in the sHRA to allow for these temporal and geographical variations in construction activity.

3.8.4 In summary, the precautionary approach followed in estimating additional numbers of people at European sites due to the construction of Sizewell C has assumed maximum numbers of construction workers and maximum numbers of displaced people from all areas in close proximity to the main development site, for the whole duration of the construction phase. In reality numbers of additional visits to European sites due to Sizewell C would be lower than factored into the sHRA for the majority, if not all, of the construction phase, thus lessening the possibility of effects on the integrity of the European sites.

4 PART 2 – TWO DISCRETE ISSUES RAISED BY THE NATIONAL TRUST

4.1 Issue 1 – error in assessment of potential displaced visitor numbers to Alde-Ore Estuary Ramsar site, Minsmere to Walberswick Heaths and Marshes Special Area of Conservation and Minsmere-Walberswick Ramsar site

4.1.1 In preparation of response to a question from the National Trust following submission of the DCO it was identified that there was an error in the assessment of potential displaced visitor numbers in the **Shadow Habitats Regulations Assessment Volume 1: Screening and Appropriate Assessment** [APP-145]. This affects the calculation for additional visitor numbers at the following sites:

- Alde-Ore Estuary Ramsar site.
- Minsmere to Walberswick Heaths and Marshes SAC.
- Minsmere-Walberswick Ramsar site.

4.1.2 The National Trust is aware of this and concerned this may reflect an under calculation of displacement.

4.1.3 This is explained further below. In short, SZC Co has re-considered the revised numbers and they do not change the conclusions of the **Shadow Habitats Regulations Assessment Volume 1: Screening and Appropriate Assessment**. The assessment reported in the **Shadow Habitats Regulations Assessment Volume 1: Screening and Appropriate Assessment** for the bird qualifying features of the Alde-Ore Estuary Ramsar site and the Minsmere-Walberswick SPA and Ramsar site and Sandlings SPA were based on the correctly calculated numbers for

change in visitor pressure. Further detail is provided in a second Shadow HRA Report Addendum (Doc Ref. 5.10Ad 2).

4.2 Issue 2 – figures for displaced people do not make an allowance for those people who said they would be displaced but where uncertain where to

4.2.1 The National Trust provided the following comment by email on 4 September 2021:

> *'The figures of the % of survey visitors displaced to the location quoted in Table 3.5 [of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]] are not precautionary. This is because they do not make an allowance for those people who said they would be displaced but were uncertain where to. When the visitors who expressed uncertainty are taken into account we would expect an addition 26,000 visits per annuum [to Dunwich Heath] to occur from displaced visitors. In the absence of clarification of EDFs figures will have to assume the use of this higher figure in our assessment.'*

4.2.2 SZC Co. has identified that the same approach could be applied to the calculations for other displacement locations including RSPB Minsmere.

4.2.3 Paragraph 4.1.23 of the **2014 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A** of the **ES** [APP-268]) explains that of the 151 respondents who said that they would stop using the area around Sizewell C during construction, 95 gave locations as to where they might displace and 56 respondents did not give locations. The overall level of potential displacement of 29% takes account of both those who gave locations and those who did not i.e. 151/514 (total survey respondents).

4.2.4 The calculations underpinning the figures in Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) to estimate the scale of the likely increase in use of the displacement locations, are based on the number of respondents from the total of 95/151 who specified locations they would likely displace to. These respondents specified a total of 40 different locations indicating the pattern of displacement will be diffused across a wide area (see Table 14 and Figures 5A and 5B of the **2014 Sizewell C Visitor Surveys** (**Volume 2 Appendix 15A** of the **ES** [APP-268]). Of those 95, 12 respondents

(12.6%) said they would likely visit Dunwich Heath and 19 respondents (20%), Minsmere.

4.2.5 The calculations underpinning the figures in Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) do not include the 56 respondents who did not give locations. Although a highly precautionary approach was taken in the sHRA, an even more precautionary approach would be to factor those respondents who did not give locations into the displacement estimations, and this exercise has now been undertaken as described below and has been assessed.[4]

4.2.6 If we factor these figures in by assuming that a proportion of the 56 people who did not specify locations, would none the less displace to European sites, we can calculate the effect on extra visits as shown in **Annex to Appendix 6A**. This shows the effects on the figures for the precautionary approach presented in the following tables:

- Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]): Extrapolated visitor numbers for locations given by survey responders as sites to which they would relocate during construction of Sizewell C; and

- Table 2.1 of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]: Estimated additional visits to locations in the study area (two scenarios) as a result of displacement of existing users from the Sizewell area and the construction workforce. The far right table in **Annex to Appendix 6A**shows revised figures against which the sHRA has been re-assessed.

4.2.7 These numbers are calculated for Dunwich Heath and Minsmere below to illustrate how the calculations in the far right revised Table 2.1 in **Annex to Appendix 6A** work.

[4] It is important to note that Question 4 of the **2014 Sizewell C visitor surveys** [APP-268], was divided into a number of parts (a and b i, ii and iii), with two questions relevant to these displacement calculations, as follows:
Q4a: Would you stop using the area around Sizewell C during the construction of the Nuclear Power Station?
Q4b: If you would prefer to avoid the paths around the construction site:
i) Which other areas are you likely to visit instead?
151 respondents said 'yes' to Q4a. 95 of these 151 respondents named one or more locations in response to Q4bi, but 56 of these 151 respondents did not answer Q4bi. It is therefore unknown if the 56 of 151 respondents (37%) who did not give a location would be displaced and recreate elsewhere, or if they would just "*avoid the paths around the construction site"*.

a) For Dunwich Heath

- 12/95 = 12.6% x 56 = 7 additional people who might have specified Dunwich Heath.
- 12 (who did) + 7 (who might) = 19.
- 19/514 = 3.7% i.e.1.37% more than the 2.33% used in Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148].
- 3.7% of 500,000 visits/year to the Sizewell area = approximately 18,500 extra visits per year to Dunwich Heath.
- This then gives a range based on the measured (2.33%) and weighted (3.7%) data of approximately 11,650 – 18,500 extra visits to Dunwich Heath per year due to recreational displacement. If the number of construction workers who might also visit Dunwich Heath set out in Table 3.9 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) are included, the total potential extra visits equate to approximately 11,839 (from Table 2.1 of the **Recreational Disturbance Assessment** (**Shadow HRA Volume 1 Appendix E** [APP-148]) to approximately 18,689 per year = approximately 32 to 51 extra visits per day.
- 18,689 extra annual visits equates to an increase of 10.6% over existing visitor numbers (175,934[5] in Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) which SZC Co. consider is unlikely to occur for reasons explained in this response, and because there is a charge to park for non-National Trust members, and the car park is closed between 6pm and 9am every day precluding evening and early morning visits.

4.2.8 The National Trust comment suggests that the level of extra visits to Dunwich Heath would be approximately 26,000 per year. We do not know the basis of the calculation from which this figure derives. It equates to an increase of 14.8% which is not supported by evidence.

[5] Estimated annual level of use from Table 8 of the **2014 Sizewell C visitor surveys** [APP-268].

b) For Minsmere

4.2.9 19 out of 95 respondents named Minsmere as a potential displacement location but did not specify if it was to the RSPB Minsmere core area around the bird hides, or to the outer areas. A split of 20% to the core area and 80% to the outer area has been assumed in Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148], again on a precautionary basis.

i. Minsmere core area:

- 19 x 20% = 3.8 additional people to RSPB Minsmere core area based on 20% of the 19 respondents.
- 3.8/95 = 4% x 56 = 2.22 additional people who might have specified Minsmere core.
- 3.8 (who it is assumed did) + 2.2 (who might) = 6.
- 6/514 = 1.17% i.e. 0.43% more than 0.74% for Minsmere core in Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148].
- 1.17% of 500,000 visits/year to the Sizewell area = 5,850 extra visits per year to Minsmere core.
- This then gives a range based on the measured (0.74%) and weighted (1.18%) data of approximately 3,700 – 5,850 extra visits to Minsmere core per year due to recreational displacement. If 20% of the numbers of construction workers who might also visit Minsmere set out in Table 3.9 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) (76 no.) are included the total potential extra visits come to approximately 5,926 per year = approximately 16 per day.
- 5,926 extra annual visits equates to an increase of approximately 5.7% over existing visitor numbers (103,844[6] existing annual visitors in Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) which SZC Co. consider is unlikely to occur for reasons explained in this response, and because access from the main car park into the core

[6] RSPB's recorded visitor numbers in 2018 – see Appendix A of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-149].

area (comprising the nature trails and bird hides) is through the visitor centre where there is an entrance charge to non-RSPB members. If it were to occur, however, the RSPB is likely to gain extra revenue through entry ticket sales and sales from the shop and cafe, whilst visitor access including paths, signage and bird hides within the reserve are very well managed minimising the potential for impacts.

i. Minsmere outer areas:

- 19 x 80% = 15.22 additional to RSPB Minsmere outer areas based on 80% of the 19 respondents.
- 15.2/95 = 16% x 56 = 9 additional people who might have specified Minsmere outer areas.
- 15.2 (who it is assumed did) + 9 (who might) = 24.2.
- 24.2/514 = 4.7% i.e. 1.74% more than 2.96% for Minsmere outer in Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148].
- 4.7% of 500,000 visits/year to the Sizewell area = 23,500 extra visits per year to Minsmere outer areas.
- This then gives a range based on the measured (2.96%) and weighted (4.70%) data of approximately 14,800 – 23,500 extra visits to Minsmere core per year due to recreational displacement. If 80% of the numbers of construction workers who might also visit Minsmere set out in Table 3.9 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) (302 no.) are included the total potential extra visits come to approximately 23,802 per year = approximately 65 per day.
- 23,802 extra annual visits equates to an increase of approximately 79.3% over existing estimated visitor numbers (30,000[7] estimate in Table 3.5 of the **Recreational Disturbance Evidence Base** (**Shadow HRA Volume 1 Appendix E Annex A** [APP-148]) which SZC Co. consider is extremely unlikely to occur for reasons explained in this response.

[7] Figure presented and agreed at SZC HRA workshop 5 June 2019, to use as existing baseline number. Not based on surveyed numbers.

4.2.10 The revised figures have been assessed in the Second Addendum to the SHRA (Doc Ref. 5.10Ad 2) in relation to the relevant European Sites. That document concludes that the revised numbers will not lead to an adverse impact on the integrity of: the Alde-Ore Estuary SPA, Minsmere to Walberswick Heaths and Marshes SAC and Minsmere-Walberswick Ramsar site, and Sandlings SPA. That assessment is not repeated here.

5 PART 3 - CONCLUSIONS ON THE PRECAUTIONARY APPROACH

5.1.1 A highly precautionary approach to the numbers of additional visitors at European sites arising from potential displacement of existing visitors and additional constructions workers was used in the **Shadow Habitats Regulations Assessment Volume 1: Screening and Appropriate Assessment** [APP-145], for reasons described above. Numbers who do actually visit European sites during the construction of Sizewell C are likely to be lower than assessed in the sHRA.

5.1.2 The figures used in the **Shadow Habitats Regulations Assessment Volume 1: Screening and Appropriate Assessment** [APP-145] are likely to overstate the number of visitors displaced even though account was not taken of those who said that they would stop using the area around Sizewell C during construction but did not give a location. SZC Co. has reconsidered its assessment by including those that said they would be displaced but did not name a location and has concluded that the assessment set out in the sHRA is unaffected. The reasons for this are essentially as set out in the ornithology or habitat assessments in relation to increased visitor pressure at Sizewell C, assessed in the **Shadow Habitats Regulations Assessment Report** (**Volume 1, Appendix E** [APP-148]). This has been addressed at paragraphs 8.3.5 to 8.3.9 of the **Shadow Habitats Regulations Assessment Addendum** of the **Additional Submission** to PINS in January 2021 [AS-173] and in the second Shadow HRA Addendum (Doc Ref. 5.10Ad 2).

5.1.3 There will be a level of increased visitor numbers due to Sizewell C which is not necessarily harmful and which can be managed. For the Minsmere-Walberswick European sites and the northern part of Sandlings SPA, a number of mitigation measures will be put in place whether or not visitor numbers increase due to the construction of Sizewell C. Effects will be also monitored and, if necessary, further mitigation applied through delivery of the monitoring and mitigation plans currently being discussed with stakeholders for European sites including at Dunwich Heath and Minsmere (see the draft **Monitoring and Mitigation Plan for Minsmere –**

Walberswick European Sites and Sandlings (North) European Site submitted at deadline 2 (Doc Ref. 9.18)) and which will be funded by SZC Co. These will be in addition to the other mitigation measures which are summarised in paragraph 5.2.1 of the **Monitoring and Mitigation Plan for Minsmere – Walberswick European Sites and Sandlings (North) European Site**.

REFERENCES

1. European Commission (2018) Managing Natura 2000 sites The provisions of Article 6 of the Habitats Directive 92/43/EEC https://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_6_nov_2018_en.pdf [Accessed May 2021]

ANNEX TO APPENDIX 6A: TABLES FROM THE RECREATIONAL EVIDENCE BASE TO THE HRA REVISED TO SHOW FIGURES IF RESPONDENTS WHO DID NOT NAME A DISPLACEMENT LOCATION ARE INCLUDED

Annex to Appendix 6A: Tables from the recreational evidence base to the HRA revised to show figures if respondents who did not name a displacement location are included.

Table 3.5: Extrapolated visitor numbers for locations given by survey respondees as sites to which they would relocate during construction of SZC (Recreational Disturbance Evidence Base (Shadow HRA Report Volume 1 Appendix E Annex A [APP-148]))

Table 3.5 as presented in the Recreational Disturbance Evidence Base (Shadow HRA Report Volume 1 Appendix E Annex A [APP-148]

Additional columns to Table 3.5 showing displacement if those who did not give location are inclued

			Most 'realistic' approach			'Precautionary' approach			'Precautionary' approach inc. those who did not give location			
Column No.	1	2	3	4	5	6	7	8	9	10	11	12
Location	% of survey visitors displaced to location	Existing visitor numbers to location	Extra visits / year	Extra visits / day	% extra over existing visits	Extra visits / yr based on 500,000 visits in Sizewell area	Extra visits / day	% extra over existing visits	% of survey visitors displaced tolocation inc. those who did not name a location	Extra visits / yr based on 500,000 visits in Sizewell area	Extra visits / day	% extra over existing visits
Aldeburgh	2.92%	150000	4380	12	2.9	14600	40	9.7	4.64%	23193	63.5	15.5%
Butley	0.19%	10000	19	0.05	0.2	950	2.6	9.5	0.31%	1546	4.2	15.5%
Iken	0.58%	60000	348	1	0.6	2900	7.9	4.8	0.93%	4639	12.7	7.7%
Orford	0.78%	150000	1170	3.2	0.8	3900	10.7	2.6	1.24%	6185	16.9	4.1%
Sailors Path	0.39%	60000	234	0.6	0.4	1950	5.3	3.2	0.62%	3092	8.5	5.2%
Snape	0.97%	150000	1455	4	1	4850	13.3	3.2	1.55%	7731	21.2	5.2%
Aldringham Walks	0.58%	60000	348	1	0.6	2900	7.9	4.8	0.93%	4639	12.7	7.7%
North Warren	0.58%	60000	348	1	0.6	2900	7.9	4.8	0.93%	4639	12.7	7.7%
Rendlesham	0.78%	150000	1170	3.2	0.8	3900	10.7	2.6	1.24%	6185	16.9	4.1%
Sandlings Walk	0.58%	150000	870	2.4	0.6	2900	7.9	1.9	0.93%	4639	12.7	3.1%
Thorpeness	3.89%	60000	2334	6.4	3.9	19450	53.3	32.4	6.18%	30924	84.7	51.5%
Tunstall Forest	1.36%	150000	2040	5.6	1.4	6800	18.6	4.5	2.16%	10823	29.7	7.2%
Dunwich Heath	2.33%	175934	4099.3	11.2	2.3	11650	31.9	6.6	3.71%	18554	50.8	10.5%
Dunwich/Beach	3.11%	150000	4665	12.8	3.1	15550	42.6	10.4	4.95%	24739	67.8	16.5%
Eastbridge	1.56%	38871	606.4	1.7	1.6	7800	21.4	20.1	2.47%	12369	33.9	31.8%
Minsmere Core (i)	0.74%	103,844	768.4	2.1	0.7	3700	10.1	3.6	1.18%	5875	16.1	5.7%
Minsmere Outer (i)	2.96%	30000	888	2.4	3	14800	40.5	49.3	4.70%	23502	64.4	78.3%
Sizewell Beach	1.95%	195557	3813.4	10.4	1.9	9750	26.7	5	3.09%	15462	42.4	7.9%
Southwold	1.75%	150000	2625	7.2	1.8	8750	24	5.8	2.78%	13916	38.1	9.3%
Walberswick	1.17%	150000	1755	4.8	1.2	5850	16	3.9	1.86%	9277	25.4	6.2%
Westleton	1.36%	60000	816	2.2	1.4	6800	18.6	11.3	2.16%	10823	29.7	18.0%
Westwood Marshes	0.19%	60000	114	0.3	0.2	950	2.6	1.6	0.31%	1546	4.2	2.6%

Table 2.1: Estimated additional visits to locations in the study area as a result of displacement of existing users from the Sizewell area and the construction workforce (Recreational Disturbance Assessment (Shadow HRA Report Volume 1 Appendix E [APP-148])

Precautionary approach figures revised to include those who did not give a displacement location.

Based on 500,000 visits to Sizewell area		
Inc. visits / year	Inc. total visits / day	% inc. over existing visits
Alde-Ore Estuary SPA and Ramsar site (ii)		
28,105	77.0	18.7%
1,546	4.2	15.5%
4,639	12.7	7.7%
6,185	16.9	4.1%
3,092	8.5	5.2%
7,731	21.2	5.2%
Sandlings SPA		
5,206	14.3	8.7%
4,639	12.7	7.7%
6,563	18.0	4.4%
4,639	12.7	3.1%
33,758	92.5	56.3%
11,201	30.7	7.5%
Minsmere-Walberswick SPA and Ramsar site; Minsmere to Walberswick Heaths and Marshes SAC		
18,743	51.4	10.7%
25,117	68.8	16.7%
12,369	33.9	31.8%
5,951	16.3	5.7%
23,804	65.2	79.3%
15,462	42.4	7.9%
15,616	42.8	10.4%
9,466	25.9	6.3%
11,012	30.2	18.4%
1,546	4.2	2.6%

Notes

1 The total extra visits noted in these tables may differ slightly from those in the text response to AR.1.12, due to decimal place and associated rounding differences.

2 (i) RSPB Minsmere - 19 respondents named Minsmere as a potential displacement location but did not specify if it was to the RSPB Minsmere core area around the bird hides, or to the outer areas. A split of 20% to the core area and 80% to the outer area has been assumed.

3 (ii) The references to European sites have been updated from Table 2.1 of the Recreational Disturbance Assessment (Shadow HRA Report Volume 1 Appendix E [APP-148]) to fully reflect all designated sites (as assessed in the Shadow HRA Report [APP-145]) that could be accessed from each named location.