



The Sizewell C Project

6.8 Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 3 Alternatives and Design Evolution

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Figures

None provided.

Appendices

None provided.

3 Alternatives and Design Evolution

3.1 Introduction

3.1.1 In accordance with Schedule 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (hereafter referred to as the “EIA Regulations”), this chapter of the **Environmental Statement (ES)** presents a description of the main alternatives considered in relation to the proposed Yoxford roundabout and other highway improvement works (referred to as the ‘proposed development’).

3.1.2 The proposed development would be located across various sites outlined below:

- The junction of the A12 and B1122 (referred to as the ‘Yoxford roundabout’).
- Improvements at the A1094 and B1069 junction south of Knodishall.
- Improvements at the A12 and A144 junction south of Bramfield.
- Improvements at the A12 and B1119 junction at Saxmundham.

3.1.3 Road safety analysis has also identified potential highway safety issues at two sites (the B1078 and B1079 junction east of Easton and Otley College and the A140 and B1078 junction west of Coddendam). Highway safety measures at these sites will be secured by an obligation in the Section 106 Agreement (see the **Draft Heads of Terms, Appendix J** to the **Planning Statement** (Doc. Ref. 8.4).

3.1.4 The site selection and design evolution process for the proposed development has been iterative and informed by consultation with statutory consultees and the public.

3.1.5 This chapter provides details of the supporting studies that have informed the design choices for the proposed development, taking into account the environmental, transport and socio-economic impacts, where relevant. In summary this includes:

- alternative sites considered for the proposed development; and
- alternative designs and design evolution, including sizing, land uses and landscaping.

3.1.6 This chapter should be read in conjunction with **Volume 1, Chapter 5** of the **ES**, the **Transport Assessment** (Doc Ref. 8.5), and the **Planning Statement** (Doc Ref. 8.4), which provides further information on the strategic site selection process for the proposed Yoxford roundabout and other highway improvement works. Further information on the formal Stage 1, Stage 2, Stage 3 and Stage 4 consultations are described in the **Consultation Report** (Doc Ref. 5.1).

3.2 Alternative sites

3.2.1 The A12 between Ipswich and Lowestoft would be the main route corridor for Sizewell C construction traffic on the highway network. Early traffic modelling identified that, whilst the majority of the A12 would not be subject to capacity or congestion concerns, including both its dual carriageway and single carriageway sections, specific areas along the A12 and link roads forming part of the Sizewell C construction traffic route to the main development site may experience potential traffic impacts.

3.2.2 These include the narrow bend at Farnham and the two village bypass (see **Volume 5** of the **ES**), and sections of the B1122 and the Sizewell link road (see **Volume 6** of the **ES**), or where the temporary increase in journeys on the network may lead to issues or constraints at specific junctions (discussed in this volume). The works proposed at points on the highway network are located where they are considered necessary for highway safety and/or highway capacity reasons.

3.2.3 Traffic modelling was used to identify locations on the highway network where improvements may be required. As such, no other alternative sites were considered for the highway improvements. The site selection process for the highway improvement proposals is described in the **Site Selection Report** appended to the **Planning Statement**.

3.3 Alternative designs and design evolution

3.3.1 The proposals for the highway improvements to reduce the impact of construction traffic on the local road network were based on the following principles:

- consideration of the sites' context and environmental constraints;
- an understanding of the operational requirements of the proposed highway improvements during construction of the Sizewell C power station; and

- consideration of the likely environmental effects and consultation feedback.

3.3.2 A summary of the alternative designs and design evolution, and how this was presented through the public consultation process, is provided below.

a) **Stage 1 Consultation**

3.3.3 At the Stage 1 consultation SZC Co. sought views on proposals for junction improvements to alleviate transport impacts associated with the Sizewell C construction traffic. These improvements considered:

- the Farnham bend – the options and their evolution into the Two village bypass through Stages 2, 3 and 4 are set out in the **Site Selection Report** appended to the **Planning Statement** and **Volume 5, Chapter 3** of the **ES**;
- the B1122 – the options for the B1122, which was originally proposed to be the likely heavy goods vehicles (HGVs) route for traffic between the A12 and the Sizewell C construction site, included the junction of the A12 and the B1122 at Yoxford and also the impact on the B1122 through Theberton. The options and design evolution for the Yoxford roundabout are described in this chapter. The remainder of the B1122 improvements and their evolution into the Sizewell link road are set out in the **Site Selection Report** appended to the **Planning Statement** and **Volume 6, Chapter 3** of the **ES**; and
- other road traffic impacts from Sizewell C – these were considered necessary to reduce road traffic impacts on the B1122 and other local roads.

i. **Road traffic impacts on the B1122**

3.3.4 The junction of the A12 with the B1122 east of Yoxford was identified as requiring improvement to increase junction capacity and avoid delays on the B1122 arm of the junction. No option was presented at Stage 1 but it was suggested that a roundabout could be required to improve traffic flows.

ii. **Other road traffic impacts from Sizewell C**

3.3.5 At Stage 1 it was noted junction improvements would be required, and that proposals would be developed on the basis of the size, nature and location of associated development and their expected traffic impacts, and would be brought forward in subsequent design stages.

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- 3.3.6 It was also recognised that, while assessments of increased traffic movements of the Sizewell C Project are important, traffic-related impacts on noise, air quality and wider severance and amenity can be as, if not more, important to local residents.
- 3.3.7 Stage 1, therefore, did not propose specific additional highway works (such as junction improvements) or mitigation measures. However, it noted that SZC Co. would continue to develop proposals through further traffic modelling work used to define traffic-related environmental impacts.

Consultation responses

- 3.3.8 Respondents to the Stage 1 consultation raised concerns about the impacts of increased levels of traffic on the roads, particularly on the B1122 east of Yoxford at peak periods of the day.
- 3.3.9 Some residents also raised concerns at Stage 1 about the condition of the B1122 and issues of emergency access. It was anticipated that agreements with Suffolk County Council (SCC) would be entered into so that the condition of the road would be assessed prior to the start of construction, maintained throughout the Sizewell C construction, and repairs implemented where necessary. With respect to issues of emergency access, it can be noted that, in the event of an incident or accident preventing the free flow of traffic on the B1122, other routes are available for both Sizewell C-related and other traffic.
- 3.3.10 Several respondents to the Stage 1 consultation stated that there are shortcomings in the current provision for pedestrians in Theberton. Some residents called for additional crossings in this area. Proposals on the B1122 at Theberton are discussed further in **Chapter 2 of Volume 6** of the **ES**.
- 3.3.11 Following the Stage 1 consultation, transport assessment work continued to progress with regular liaison with SCC and the Highways Agency (now Highways England).

b) Stage 2 Consultation

- 3.3.12 At Stage 2, a number of highway improvements were presented which could be implemented to help mitigate the impacts of Sizewell C construction traffic on residents and road users. These included options to improve road safety for vehicles and pedestrians, and set out the supporting preliminary environmental information for these options. The proposals falling outside of the main development site comprised the following:
- Improvement to the A12/B1122 Yoxford junction.

- Speed limit reductions on various sections of the B1122, discussed further in **Chapter 2** of **Volume 6** of the **ES**.
- Improvement of the B1122 to the west of the junction with Mill Street, discussed further in **Chapter 2** of **Volume 6** of the **ES**.
- Pedestrian enhancements in Theberton, discussed further in **Chapter 2** of **Volume 6** of the **ES**.
- Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance, discussed further in **Chapter 2** of **Volume 6** of the **ES**.

i. **A12/B1122 Yoxford junction**

3.3.13 A review of existing capacity at the A12 and B1122 junction east of Yoxford, undertaken ahead of the Stage 2 consultation, found that it would likely require improvements in the absence of the Sizewell C Project, and the addition of Sizewell C construction traffic flows would further impact the performance of the junction. At the Stage 2 consultation, two options were presented for improvements to the junction, comprising:

- A12 and B1122 roundabout; and
- A12 and B1122 signalised junction.

3.3.14 Both of the options proposed would increase junction capacity and accommodate Abnormal Indivisible Loads (AILs) to/from the A12, north of the B1122.

ii. **Option A – A12 and B1122 roundabout ('Yoxford roundabout'), provided in Plate 3.1**

3.3.15 The Yoxford roundabout junction presented at Stage 2 was positioned about 100 metres (m) north of the existing A12 and B1122 junction to maximise capacity for the A12 northbound traffic, and to optimise the distances to the A1120 junction and the Satis House Hotel access.

3.3.16 The proposed roundabout location was off-set to the east of the existing A12 to minimise any potential impact on the trees screening Satis House Hotel. It would have also enabled the roundabout to be built off-line to minimise traffic disruption during construction.

3.3.17 To accommodate the AIL movements, part of the central island would be removable. Any scheme would be designed in accordance with the required highway standards, including the design of lighting.

Plate 3.1: Stage 2 – Option A: A12/B1122 roundabout.



3.3.18 Alternative roundabout designs considered for Stage 2 included a roundabout nearer the existing junction location and a roundabout with a segregated left turn lane for the A12 northbound flows. However, both raised capacity and/or safety concerns and were not progressed as options for the Stage 2 consultation.

iii. Option B – A12/B1122 signalised junction, provided in **Plate 3.2**.

3.3.19 The layout of the proposed signalised junction included a separate bypass lane for the AIL vehicles. Pedestrian and cycle crossing facilities were also proposed.

Plate 3.2: Stage 2 – Option B: A12/B1122 signalised junction.



Environmental considerations

- 3.3.20 At the Stage 2 consultation, preliminary environmental information was presented for both options.
- 3.3.21 For both options there would be a minor loss of verge and individual trees to the east of the existing junction. Option B would require the creation of an AIL vehicle bypass lane, and the realignment of the footway and kerb-line, whereas Option A would result in the loss of grassland around the existing sewage treatment works and tree planting along a short section of the A12. However, this section of the A12 road corridor is relatively well enclosed by surrounding woodland and is not readily visible from the edge of Yoxford or nearby roads and footpaths.

- 3.3.22 Option A would result in a minor loss of agricultural land compared to Option B and may result in impacts to an existing pond. Both options demonstrated the potential for disturbance to archaeological remains where there would be groundworks.
- 3.3.23 The roundabout would be likely to give rise to adverse change to the character of the Yoxford Conservation Area during construction, but these effects would be temporary and would lessen on completion of the construction works. The bypass lane with Option B would also present limited perceived change to the character of the Conservation Area. It was also considered that the potential for adverse impacts on the settings of the Grade II listed White Lodge for both options would be limited.
- 3.3.24 Both options demonstrated the potential for the mobilisation of contamination (if present), as well as dust and noise impacts arising from any works (e.g. site clearance and levelling).
- 3.3.25 At the Stage 2 consultation, SZC Co. did not identify a preferred option but the modelling demonstrated that Option A (a roundabout) would have shorter queues and impose less delay on the A12 and B1122 traffic flows.

Consultation responses

- 3.3.26 Option A (roundabout) was preferred by respondents to the Stage 2 consultation, with over three times more support than for Option B (signalised junction). The feedback from several respondents, including the emergency services, was that the roundabout would result in less delay than the signalised junction, reduce congestion, keep traffic moving, and make it easier to join the A12 from the B1122.
- 3.3.27 As the roundabout was also considered to cause less queuing back towards the A1120 junction, it was noted that this could also reduce noise and air pollution in the village caused by standing traffic.
- 3.3.28 The local authorities reported they were not in a position at Stage 2 consultation to support either the roundabout or signalised junction proposals and concluded more technical information was required on performance of the junction. In addition, it was considered that further work was required to assess the impact on the setting of the Yoxford Conservation Area.

iv. Speed limit reductions

- 3.3.29 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.

3.3.30 The Stage 2 consultation proposed a reduction in speed limit to a maximum of 40mph on the stretch between Middleton Moor and Theberton to be more in keeping with the characteristics of the road in this location. This would help improve safety and reduce the noise arising from vehicle movements along this stretch. A reduction to 30mph between Theberton and the construction site entrance was also proposed to reduce the extent of land needed to meet visibility requirements at this location.

3.3.31 Discussion with SCC, the police and other interested parties on the speed limits along the B1122 were ongoing at the Stage 2 consultation. However, following Stage 2, the requirement for speed reductions and further works on the B1122 were removed as options developed for both the Sizewell link road (road-led transport proposals) and the Theberton bypass (rail-led transport proposals). These options and the design evolution of the Sizewell link road are described further in the **Site Selection Report** appended to the **Planning Statement** (Doc Ref. 8.4), and **Volume 6, Chapter 3** of the **ES**.

v. [B1122 west of the junction with Mill Street](#)

3.3.32 At Stage 2 SZC Co. proposed to improve the vertical alignment of the B1122 to the west of the junction with Mill Street, improving visibility for traffic on the B1122 and traffic exiting Mill Street. The proposed improvement works would involve reconstruction of this part of the B1122 to improve visibility for B1122 traffic and vehicles emerging from Mill Street.

3.3.33 Following Stage 2, the requirement for further works on the B1122 in Theberton was removed as options developed for both the Sizewell link road (road-led transport proposals) and the Theberton bypass (rail-led transport proposals). These options and the design evolution of the Sizewell link road are described further in the **Site Selection Report** appended to the **Planning Statement**, and **Volume 6, Chapter 3** of the **ES**.

vi. [Pedestrian enhancements in Theberton](#)

3.3.34 At Stage 2 it was proposed to create a new pedestrian crossing south of Pump Cottages and a footpath on the eastern side of the B1122 to connect to the existing footway outside Ivy Cottages in Theberton.

3.3.35 This would create a pedestrian footpath connection along the length of the village, removing the need to walk in the road at any stage, improving pedestrian access through Theberton.

3.3.36 Following Stage 2, the requirement for further works on the B1122 in Theberton were removed as options developed for both the Sizewell link road (road-led transport proposals) and the Theberton bypass (rail-led transport proposals). These options and the design evolution of the Sizewell link road

are described further in the **Site Selection Report** appended to the **Planning Statement**, and **Volume 6, Chapter 3** of the **ES**.

vii. [Alignment of the B1122 between Theberton and the Sizewell C construction site entrance](#)

3.3.37 The existing horizontal and vertical alignment of the B1122 immediately east of Onner's Lane and Moat Road provides poor forward visibility for its 60mph speed limit. The visibility would remain poor, even if speed limits were reduced to 40mph on this stretch of the B1122. Therefore, it was proposed at Stage 2 to modify the alignment of the B1122 at this location to improve forward visibility for motorists.

3.3.38 Following Stage 2, the requirement for further works on the B1122 in Theberton were removed as options developed for both the Sizewell link road (road-led transport proposals) and the Theberton bypass (rail-led transport proposals). These options and the design evolution of the Sizewell link road are described further in the **Site Selection Report** appended to the **Planning Statement**, and **Volume 6, Chapter 3** of the **ES**.

3.3.39 SZC Co.'s proposal for a new roundabout junction at the Sizewell C construction site entrance with the B1122 is described in **Volume 2, Chapter 6** of this **ES**.

c) [Stage 3 consultation](#)

3.3.40 Following further work to consider the traffic impacts arising from the construction of Sizewell C, and feedback from the Stage 2 consultation, SZC Co. proposed the following highway improvements at the Stage 3 consultation to mitigate the impact of Sizewell C construction traffic on the local highway network:

- Yoxford roundabout.
- Mill Street/B1122 junction improvements, as provided in **Chapter 3** of **Volume 6** of the **ES**.
- B1078/B1079 junction improvements east of Easton and Otley College.
- A1094/B1069 junction improvements south of Knodishall.
- A140/B1078 junction improvements west of Coddenham.
- A12/A144 junction improvements, south of Bramfield.

- A12/B1119 junction improvements at Saxmundham.

3.3.41 The newly proposed junction improvements around Easton and Otley College, Knodishall, Coddendam and Saxmundham were introduced at Stage 3 due to highway safety concerns at these junctions, and the A12 and A144 junction improvements south of Bramfield was proposed to increase junction capacity.

3.3.42 Junction improvements to the A12 and A1094 at Friday Street, north of Farnham, were also presented within the highway improvement options at Stage 3. This junction forms part of the proposed two village bypass, and is detailed in the **Site Selection Report** appended to the **Planning Statement** and **Volume 5, Chapter 3** of this **ES**.

i. **Yoxford roundabout**

3.3.43 Of the two options presented at the Stage 2 consultation for the A12 and B1122 junction east of Yoxford (the roundabout and signalised junction), the Yoxford roundabout was carried forward to Stage 3. This was based on feedback received from the Stage 2 consultation and further studies, including additional traffic modelling and the preliminary environmental information presented within the Stage 3 consultation. A roundabout, rather than a signalised junction, was considered to result in less congestion, queuing and delays, with a free-flow of traffic.

3.3.44 The Stage 3 proposal would replace the existing A12/B1122 ghost island junction and would be approximately 100m north of the existing junction, and would be built on agricultural land to the east of the existing A12. The Stage 3 masterplan of the Yoxford roundabout can be found at **Plate 3.3**.

3.3.45 The design of the A12/B1122 Yoxford roundabout at Stage 3 was similar to the proposals put forward at the Stage 2 consultation. However, minor amendments were made based on utilities records, understanding of likely drainage requirements, and further information received on site topography. The changes at Stage 3 consisted of:

- defining an overrun area for AILs on the roundabout central island;
- allowance for an infiltration basin south of the roundabout;
- showing the location of anticipated street lighting column;
- inclusion of further detail on the extent of earthworks; and
- defining areas of existing carriageway that could be landscaped.

Plate 3.3: Stage 3 – Yoxford roundabout masterplan.



3.3.46 Existing trees and hedgerows adjoining the site boundary would be retained where possible but some trees and hedges to the east of the A12 would be lost. However, by retaining existing trees to the western side of the site, screening of the proposed Yoxford roundabout would also be provided during both construction and operation, lessening impacts on visual amenity and on nearby heritage assets. The proposed Yoxford roundabout would include additional hedgerow planting to replace that lost and would also include some grassed areas and further planting around the infiltration basin.

3.3.47 During both construction and operation measures would be adopted to maintain satisfactory levels of environmental protection, whilst minimising the potential for disturbance from construction activities, as far as reasonably practicable.

Consultation responses

3.3.48 The feedback from the Stage 3 consultation on the above option was largely positive with several respondents arguing that it would be safer than the existing junction. Some additional suggestions were proposed by

respondents, including a signalised junction which had already been considered and discounted. None were considered to provide a better alternative in highway safety and capacity terms, and the roundabout was taken forward to Stage 4.

3.3.49 Some comments were raised by the Environment Agency and Suffolk Wildlife Trust relating to the potential impacts on Roadside Nature Reserve 197, designated for the presence of the Sandy Stilt Puffball fungus, found at approximately 30 sites in the UK, of which seven are in Suffolk.

ii. **B1078/B1079 junction improvements east of Easton and Otley College**

3.3.50 The B1078/B1079 junction is a rural priority T-junction approximately 1.5km south of Otley and 400m east of the Otley campus of Easton and Otley College.

3.3.51 Road safety analysis undertaken ahead of the Stage 3 consultation indicated a higher than expected number of collisions on the B1078 between the college and the B1079 junction. There is limited forward visibility which has most likely contributed to accidents in the area. SCC has already undertaken works in the area to make drivers more aware of their surroundings.

3.3.52 Junction modelling of 2022 and 2027 of scenarios both with and without Sizewell C in place was undertaken for Stage 3 (noting that the ES now assumes an early years assessment date of 2023 and peak of 2028). This junction modelling indicated that the B1078/B1079 junction will be above capacity by 2022 and in 2027 even without the Sizewell C development. Capacity issues arise because nearly all B1078 traffic turns right onto the B1079. The analysis demonstrated that the limited visibility at the junction has little influence on the delays.

3.3.53 With the Sizewell C development in place, it was predicted that the traffic at this junction would increase by up to 8% by 2027. This increase in traffic would impact upon the performance of the junction.

3.3.54 To mitigate the effects of the Sizewell C traffic, minor safety improvements for the B1078 and at the B1078/B1079 junction were proposed, these comprised:

- Vegetation maintenance: to improve forward visibility on the B1078 and to increase visibility for vehicles at the B1078/B1079 junction; and
- Signage and road markings: additional signs on the B1078 approach to the junction. The centre warning line of the carriageway would be highlighted with road studs to increase driver awareness.

3.3.55 Whilst some delays would still be expected, it is expected that these highway improvements would improve the safety of the B1078 approach and the B1078/B1079 junction.

Consultation responses

3.3.56 The feedback from the Stage 3 consultation included a few respondents registering concerns that the B1078 and B1079 are not suitable to hold construction traffic.

iii. A1094/B1069 junction improvements south of Knodishall

3.3.57 The A1094/B1069 junction is a single carriageway priority T-junction situated approximately 2.6 kilometre (km) south of Knodishall and 1.1km south-east of Friston.

3.3.58 The safety issues at this junction are a combination of speeds on the A1094, and poor visibility from the B1069 approach to the junction. Road safety analysis undertaken showed a higher than expected accident record for the volume of traffic carried. Between 2011 and 2015, six of the eight collisions involved vehicles turning in or out of B1069, likely due to:

- poor visibility due to overgrown vegetation;
- surface defects causing skidding on the approach to the junction; or
- inappropriate speed limit for the concealed nature of the junction.

3.3.59 Junction modelling of 2022 and 2027 of scenarios both with, and without, Sizewell C in place were undertaken and showed that the junction would continue to operate with spare capacity.

3.3.60 However, the additional traffic generated from Sizewell C construction could exacerbate the identified road safety issues. To mitigate the effects of the peak Sizewell C traffic, SZC Co. proposed minor safety improvements at the A1094/B1069 junction, these were:

- vegetation maintenance: to improve visibility both to the left and right for vehicles exiting the B1069;
- signage and road markings: update these to comply with current regulations and add signage, including speed limit reduction signs, to increase driver awareness prior to the junction. Road markings would be refreshed; and

- reduce the speed limit: SZC Co. would ask SCC to promote a reduction in the speed limit at the junction to 40mph. This would match the required stopping distance to the visibility available when vegetation has been maintained, therefore assisting vehicles turning right out of the B1069 to find suitable gaps in the A1094 traffic and safely complete the manoeuvre.

3.3.61 SZC Co. expects that these highway improvements would improve the safety of the A1094/B1069 junction.

Consultation responses

3.3.62 The feedback from the Stage 3 consultation on the above option, including from SCC, was supportive with the reduced speed limit seen as a positive proposal.

iv. A140/B1078 junction improvements west of Coddenham

3.3.63 The A140/B1078 junction is a priority T-junction on a dual carriageway. It is situated approximately 3.2km east of Needham Market and 650m north-east of the A14/ A140 Beacon Hill junction.

3.3.64 Road safety analysis was undertaken ahead of the Stage 3 consultation which showed a higher than expected number of collisions on wet/damp road surfaces, and a higher than expected number of HGVs involved in collisions at this junction. From 2011-2015, 8 out of 11 collisions involved vehicles turning into the B1078 across the A140, colliding with southbound vehicles. Potential reasons for these collisions included:

- speeding on the A140 southbound due to the downward gradient of the A140;
- visual obstruction from the ‘Give Way’ line; or
- poor driver behaviour.

3.3.65 Junction modelling of 2022 and 2027 of scenarios both with, and without, Sizewell C in place were also undertaken. Modelling indicated that due to background traffic growth to 2022, queuing on the B1078 approach to the junction will increase, irrespective of Sizewell C. By 2027, delays on the B1078 will cause vehicles to divert to alternative routes. This increase in traffic will impact on the performance of the A140/B1078 junction. With Sizewell C Project development, traffic at this junction would increase by up to 2% by 2022 and 7% by 2027. This increase in traffic could marginally impact upon the performance of the junction and delays would increase when compared with the reference case. The increase in traffic using the junction

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may impact safety. To mitigate the impact, SZC Co. propose minor safety improvements to the A140/B1078 junction comprising:

- vegetation maintenance: to improve visibility for vehicles turning right onto the B1078 and left onto the A140;
- improved signage and road markings:
 - change the existing ‘Give way’ sign at the right turn from the A140 northbound towards the B1078 to a ‘Stop’ sign, requiring drivers to observe oncoming vehicles on the A140 southbound before crossing safely;
 - update signs to comply with highway regulations and provide sufficient notice in advance of the junction, where necessary; and
 - extend the existing hatching to the full length of the right turn lane on both sides, preventing vehicles from stopping parallel to each other and obscuring visibility. Road markings would be refreshed.

3.3.66 SZC Co. expects that whilst these junction improvement works would not increase the capacity of the junction, and delays are still likely, they would improve the safety of the A140/B1078 junction.

Consultation responses

3.3.67 In the feedback from the Stage 3 consultation on the above option, several respondents expressed concern around congestion in Coddendam, arguing that the B1078 is inappropriate for large volumes of construction traffic. A few people registered concern that cyclists will be endangered at this junction.

3.3.68 Several respondents requested specifically that traffic is routed around Coddendam entirely, rather than completing the proposed works to the A140/B1079 there.

3.3.69 There was some concern about the impact on the local roads from the proposed highway improvement works overall, with some respondents arguing that the proposed improvements would change the ‘rural’ feel of the area, and cause congestion on the A12 and other local roads by increasing their use, and encourage faster and more dangerous driving in an area within existing ‘accident blackspots’.

3.3.70 However, generally the respondents to the Stage 3 consultation were supportive of the proposed road improvements, with many stating that the A12 is currently overwhelmed and unsafe.

v. [A12/A144 junction improvements, south of Bramfield](#)

- 3.3.71 The A12/A144 junction is a rural ghost island priority T-junction situated approximately 2.7km south of Bramfield, and 950m north of the northern park and ride access.
- 3.3.72 Whilst there is no road safety concern at this ghost island junction, due to the speed and volume of traffic on the A12, right turning vehicles on the A144 queue are delayed while they seek suitable gaps in the northbound and southbound traffic streams.
- 3.3.73 Junction modelling of 2022 and 2027 scenarios both with, and without, Sizewell C in place were undertaken, which indicated that the A12/A144 junction operates at, or close to, capacity at expected 2022 and 2027 traffic volumes without any Sizewell C construction traffic. The Sizewell C development would increase traffic at this junction by 4% in 2022 and up to 13% on the A144 and 14% on the A12 in the peak construction year, and would exacerbate the queueing on the A144 arm of the junction. It should be noted that the the 2022 and 2027 scenarios were assumptions at Stage 3, whereas the **ES** now assumes an early years assessment date of 2023 and peak of 2028.
- 3.3.74 In light of the predicted traffic increases, an improvement to increase the capacity for the right-turn movement from the A144 onto the A12 was proposed.
- 3.3.75 The proposed improvement creates a single lane dualling junction with a waiting area within the junction to allow vehicles turning right from the A144 to legally undertake the manoeuvre in two stages. Drivers, therefore, would need to find a suitable gap in the northbound A12 traffic, move to the central area, and then find a gap in the southbound A12 traffic.
- 3.3.76 The junction modeling indicates that the improvements would reduce queueing and delay on the A144 approach to the same level as the reference case, thus mitigating the effect of the peak Sizewell C construction traffic on the junction.
- 3.3.77 The site boundary was designed to provide sufficient space to construct an effective drainage network, which would incorporate sustainable urban drainage system measures.

[Consultation responses](#)

- 3.3.78 A few respondents support the changes to the A12 / A144 south of Bramfield, as they feel they will make the junction safer and allow traffic to flow more smoothly.

3.3.79 Conversely some respondents argue the plans are not adequate. A small number of respondents feel the widening of the road will not help as traffic will still struggle to find a gap to make the right turn. A couple of respondents worry that the proposals will result in further environmental damage.

3.3.80 Some respondents suggest additional improvements that could be made, including the addition of traffic lights or a roundabout, as well as a couple of respondents who suggest a 40mph speed limit should be put in place.

vi. [A12/B1119 junction improvements at Saxmundham](#)

3.3.81 The A12/B1119 junction is a single lane dualling staggered crossroads on the A12 situated 1.1km west of Saxmundham. In addition to the usual staggered crossroad 'Give way' lines, there are additional 'Give way' lines for both A12 left-turn movements and offside divergent lanes for right-turning traffic.

3.3.82 Junction modelling of 2022 and 2027 of scenarios both with, and without, Sizewell C in place was undertaken and indicated that whilst traffic would increase by up to 4% during peak construction of the Sizewell C Project, the junction would still operate with spare capacity. It should be noted that the the 2022 and 2027 scenarios were assumptions at Stage 3, whereas the **ES** now assumes an early years assessment date of 2023 and peak of 2028.

3.3.83 However, road safety analysis indicated a higher than expected number of collisions for the traffic volumes carried. Between 2011 and 2015, four out of five collisions were side-on collisions, and three of them occurred in conditions of low light or darkness. The collisions occurred at the northern junction and involved vehicles turning right out of the B1119 junction onto the southbound A12.

3.3.84 It is considered that the construction traffic may exacerbate the identified road safety issues, and therefore improvements to safety were proposed to mitigate any impact of additional Sizewell C traffic on the junction. The proposed works comprise:

- vegetation maintenance: to improve visibility from the B1119; and
- signage and road markings: existing signage interferes with driver visibility in some locations, so existing signs would be mounted higher, or relocated if necessary. New 'Give way' signs would also be situated before the bend on the B1119 approach to the northern junction to raise awareness of the junction. New road markings would be installed within the junction, to clarify the priority within the central reserve, and allow right-turning vehicles from the B1119 to negotiate the junction in two manoeuvres, improving operation and safety.

Consultation responses

3.3.85 A small number of respondents comment on the improvements to the A12 near Saxmundham, arguing that the junction currently has poor visibility so should be improved. East of England Ambulance Service NHS Trust are amongst the organisations to support the improvements but do suggest some further consideration from SZC Co. for proposed mitigation at this location.

3.3.86 A few respondents express concern over the proposals, suggesting that no real improvements are proposed by SZC Co., or that they will have a minimal impact. A couple of respondents feel this route should not be used at all and that it will result in too much traffic for the area.

d) Stage 4 consultation

3.3.87 Stage 4 consulted on a number of minor changes from Stage 3 to Yoxford roundabout and the other highway improvements. The main changes related to amendments of the site boundary as a result of design development and stakeholder engagement.

3.3.88 At Stage 4, the potential highways improvements consulted on were:

- Yoxford roundabout (A12 and B1122 junction east of Yoxford);
- B1078/B1079 east of Easton & Otley College;
- A1094/B1069 south of Knodishall;
- A140/B1078 west of Coddendam;
- A12/A144 south of Bramfield; and
- A12/B1119 at Saxmundham.

3.3.89 **Table 3.1** sets out the main changes to each proposal between Stages 3 and 4.

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Table 3.1: Main changes to Yoxford roundabout and the other highway improvements at Stage 4.

Highway Improvement Site	Changes	Reason
Yoxford roundabout.	<ul style="list-style-type: none"> Relocation of the roundabout approximately 20m to the south-east; and Revision to the site boundary to the south. Additional agricultural land would be required compared to Stage 3. 	<ul style="list-style-type: none"> To meet highways design requirements, including enabling off-line construction to reduce traffic management delays; and To avoid roadside nature reserve 197.
B1078/B1079 east of Easton & Otley College.	No change.	N/A
A1094/B1069 south of Knodishall.	Minor extension of the site boundary to the north along the A1094 and B1121.	To allow for speed limit signs to be incorporated at an appropriate distance from the junction.
A140/B1078 west of Coddenham.	Extension of the site boundary to the north and south along the A140.	To allow for additional signage within the highways boundary notifying road users of the junction and surrounding junctions and routes.
A12/A144 south of Bramfield.	<ul style="list-style-type: none"> Widening the site boundary along the A12 on the west of the site and reduction to the south-east; and Realignment of the A144 arm to the south. 	<p>To reduce impact on residential gardens to the south-east of the junction and to reduce the impact of the A144 arm adjacent to Stone Cottage, the designated heritage asset. Access to Stone Cottage from the A12 could be retained by moving the existing gates further into the property.</p> <p>The changes are anticipated to result in fewer traffic delays. The widening of the central physical island on the A12 to 10m would provide additional space for larger vehicles to wait for a gap in A12 traffic and should reduce queuing and delays for A144 traffic.</p>
A12/B1119 at Saxmundham.	Minor extension of the site boundary to the south on the A12 and to the west along the B1119.	<p>To include additional land on the A12 allowing flexibility for highway improvements as our detailed design work progresses, following additional discussion with the highways authority.</p> <p>To include the advanced 'give way' sign on the B1119.</p>

Consultation responses

- 3.3.90 Consultation feedback at Stage 4 on the Yoxford roundabout included comments from some respondents expressing concern that it will lead to further congestion in the village of Yoxford, and have a harmful effect on air quality. However, other respondents commented that it would be a positive addition to the local highway network with some stating that it will aid the movement of HGVs towards Sizewell.
- 3.3.91 On the other highway improvements, some respondents expressed concerns that, even with these road improvements, the A12 will be unable to cope with the increased HGV movements, and will be heavily congested as a result.
- 3.3.92 However, given the alternative options previously considered and the modelling and preliminary environmental assessments undertaken, SZC Co. considered that the options presented were the best for reducing the impact of the Sizewell C Project on the highway network.

e) Current proposals

- 3.3.93 The design for the proposed Yoxford roundabout and other highway improvements is described in **Chapter 2** of this volume and illustrated in **Figure 2.1**.
- 3.3.94 In summary, the designs are largely the same as proposed at Stage 4. The two B1078 schemes (the B1078 and B1079 junction east of Easton and Otley College and the A140 and B1078 junction west of Coddensham) will be secured by an obligation in the Section 106 Agreement, provided in the **Section 106 Heads of Terms** appended to the **Planning Statement** (Doc. Ref. 8.4). The site boundary at Yoxford roundabout has been amended slightly adjacent to the roadside nature reserve containing Sandy Stilt Puffball fungi. The change would still exclude the protected flora but would include the adjacent existing footway.