



# The Sizewell C Project

## 6.7 Volume 6 Sizewell Link Road Chapter 3 Alternatives and Design Evolution

---

Revision: 1.0  
Applicable Regulation: Regulation 5(2)(a)  
PINS Reference Number: EN010012

---

May 2020

Planning Act 2008  
Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009



## Contents

3.	Alternatives and Design Evolution .....	1
3.1	Introduction .....	1
3.2	Alternative routes .....	1
3.3	Design evolution of the Sizewell link road.....	22

## Tables

Table 3.1:	Sizewell link road environmental comparison table .....	15
Table 3.2:	Stage 4: Summary of changes to the Stage 3 PEI.....	37

## Figures

**None provided.**

## Plates

Plate 3.1:	Stage 2 – Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance. ....	9
Plate 3.2:	Sizewell link road potential routes and alignments .....	14
Plate 3.3:	Stage 3: Indicative Sizewell link road overview plan.....	23
Plate 3.4:	Stage 3: Indicative Sizewell link road masterplan Area 1 .....	24
Plate 3.5:	Stage 3: Indicative Sizewell link road masterplan Area 2 .....	24
Plate 3.6:	Stage 3: Indicative Sizewell link road masterplan Area 3 .....	26
Plate 3.7:	Stage 3: Indicative Sizewell link road masterplan Area 4 .....	27
Plate 3.8:	Stage 3: Indicative Sizewell link road masterplan Area 5 .....	28
Plate 3.9:	Stage 4: Indicative Sizewell link road overview plan.....	31
Plate 3.10:	Stage 4: Indicative Sizewell link road masterplan Area 1 .....	32
Plate 3.11:	Stage 4: Indicative Sizewell link road masterplan Area 2 .....	33
Plate 3.12:	Stage 4: Indicative Sizewell link road masterplan Area 3 .....	34
Plate 3.13:	Stage 4: Indicative Sizewell link road masterplan Area 4 .....	35
Plate 3.14:	Stage 4: Indicative Sizewell link road masterplan Area 5 .....	36

### 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)** (Doc Ref. Book 6) presents a description of the main alternatives considered in relation to the proposed Sizewell link road (the ‘proposed development’).

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

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

- alternative routes considered for the proposed development; and
- alternative layouts, junction arrangements, engineering considerations, provision of bridges and landscaping considered for the proposed development. This includes details of how the site and layout have been influenced by environmental and transport considerations.

3.1.4 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 describe the strategic site selection process for the Sizewell link road. Further details on the relevant formal Stage 1, Stage 2, Stage 3, and Stage 4 consultations are described in the **Consultation Report** (Doc Ref. 5.1).

#### 3.2 Alternative routes

##### a) Background

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 experience traffic concerns, consideration was given to specific areas along the A12, which may experience potential traffic impacts including where the road passes the villages of Farnham and Stratford St Andrews, see **Volume 5** of

the **ES** for two village bypass proposals, at Yoxford, see **Volume 7** of the **ES** for Yoxford roundabout proposals, and communities between the A12 and the entrance to the main development site such as Theberton (discussed in this volume).

b) **Stage 2 proposals and consultation feedback**

3.2.2 No direct link road from the A12 to the main development site was proposed in the Stage 1 or Stage 2 consultation. However, a number of other highway improvements were presented in Stage 2 to help mitigate the impacts of Sizewell C construction traffic on residents and road users. Refer to **Chapter 3** of **Volume 7** of the **ES** for full details regarding this. Of relevance to this chapter however, the following highway improvements were proposed at the Stage 2 consultation:

- speed limit reductions;
- improvement of the B1122 to the west of the junction with Mill Street;
- pedestrian enhancements in Theberton; and
- improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance.

3.2.3 Further details on the improvements proposed are provided in the following sections, as well as responses from consultation.

3.2.4 In addition to providing comments on the options presented, there were also consultation responses which raised concerns regarding the impact of construction traffic on the B1122. The parish councils at Yoxford, Theberton and Middleton-cum-Fordley, together with Theberton and Eastbridge Action Group, were opposed to using the B1122 as the main route for Sizewell C construction traffic. Some respondents made specific reference to proposals for a new road, known as D2, put forward to facilitate the construction of the Sizewell B power station in the 1980s, however, the route was never built.

i. **Speed limit reductions**

3.2.5 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.

3.2.6 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 have helped improve safety and reduce the noise arising from vehicle movements along this stretch.

#### Consultation feedback

3.2.7 Compliance with existing speed limits is a concern for residents on the B1122 and measures to help improve compliance with current and any future amended speed limits were supported.

3.2.8 However, this option would have required the support and sponsorship of Suffolk County Council (SCC) as the highway authority, in consultation with Suffolk Constabulary. Discussions with SCC, Suffolk Constabulary and other interested parties on the speed limits along the B1122 were ongoing at the Stage 2 consultation.

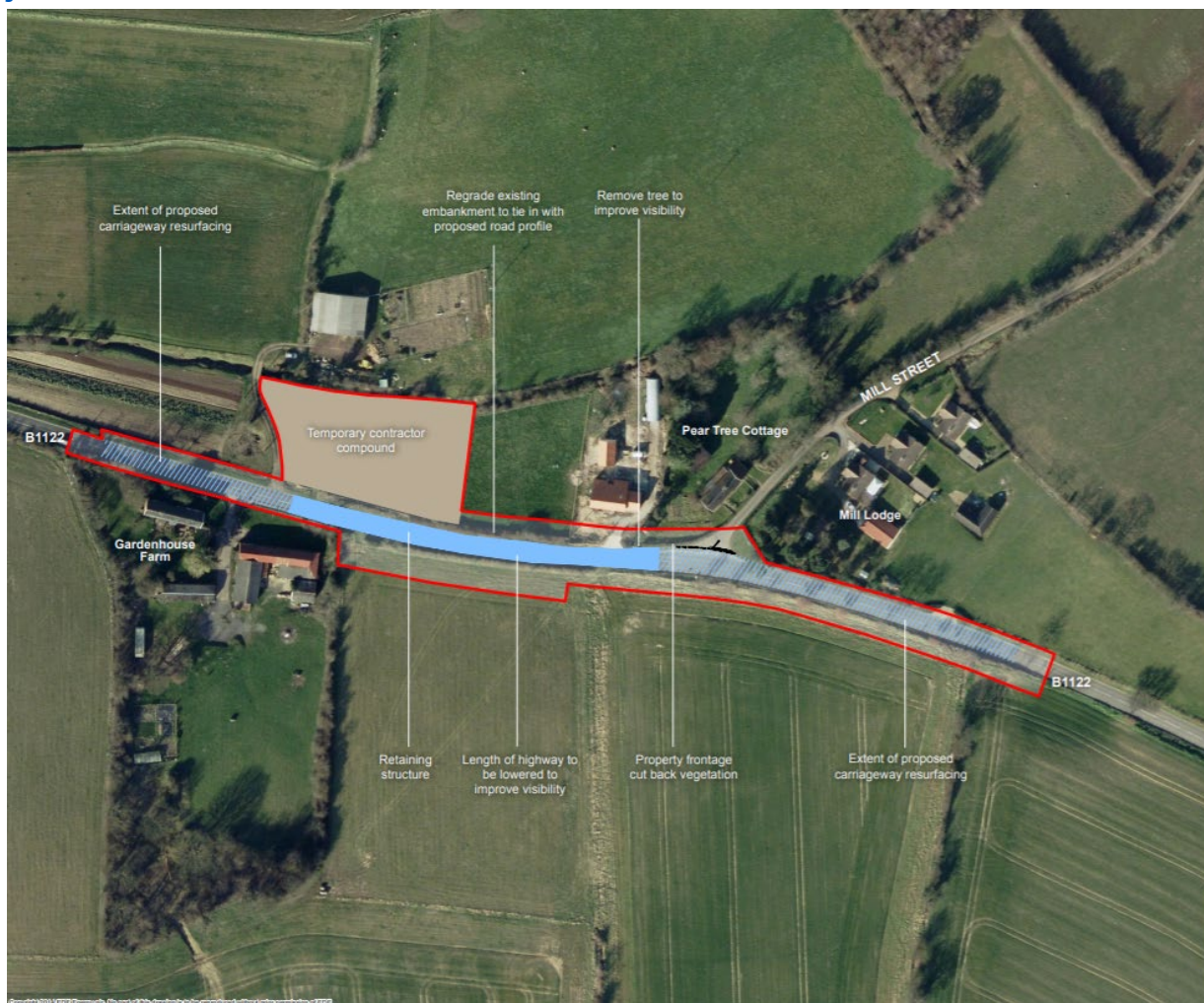
3.2.9 Following Stage 2, further options for this stretch of road evolved into proposals for the Sizewell link road and an alternative Theberton bypass dependent on the proposed freight management strategy of the Sizewell C Project. These proposals are described further in the **Site Selection Report** of the **Planning Statement** (Doc Ref. 8.4), and **Volume 6, Chapter 3** of the **ES**.

#### ii. B1122 west of the junction with Mill Street

3.2.10 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 (**Plate 3.1**). The proposed improvement works would have involved the reconstruction of this part of the B1122 to improve visibility for B1122 traffic and vehicles emerging from Mill Street.

3.2.11 It was anticipated that there would have been no significant environmental effects resulting from the works with the adoption of measures during construction to maintain satisfactory level of environmental protection, whilst minimising the potential for disturbance from construction activities as far as reasonably practicable.

**Plate 3.1 Stage 2 - Proposed improvement to the B1122 to the west of the junction with Mill Street.**



### Consultation feedback

**3.2.12** Following feedback from Stage 2 regarding this small-scale improvement at the B1122/Mill Street junction, these works were carried forward to Stages 3 and 4 as part of the rail-led freight management strategy that included Theberton bypass.

#### iii. Pedestrian enhancements in Theberton

**3.2.13** 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 (**Plate 3.2. and 3.3**).

**3.2.14** In order to re-connect with the existing footways further south, a further new pedestrian crossing on the B1122 was proposed at the point where the

footway outside of Ivy Cottages ends. It would have then connected with the existing footpath on the western side of the B1122 opposite the Church of St Peter through the addition of a new short section of footpath running just past the access to The Old Manor.

**3.2.15** The implementation of both the enhancement near Pump Cottages, and the proposed pedestrian crossing near the Church of St Peter would have, in combination with existing footpaths, created a pedestrian footpath connection along the length of the village, removing the need to walk in the road at any stage. It was considered that these works would have improved pedestrian access through Theberton.

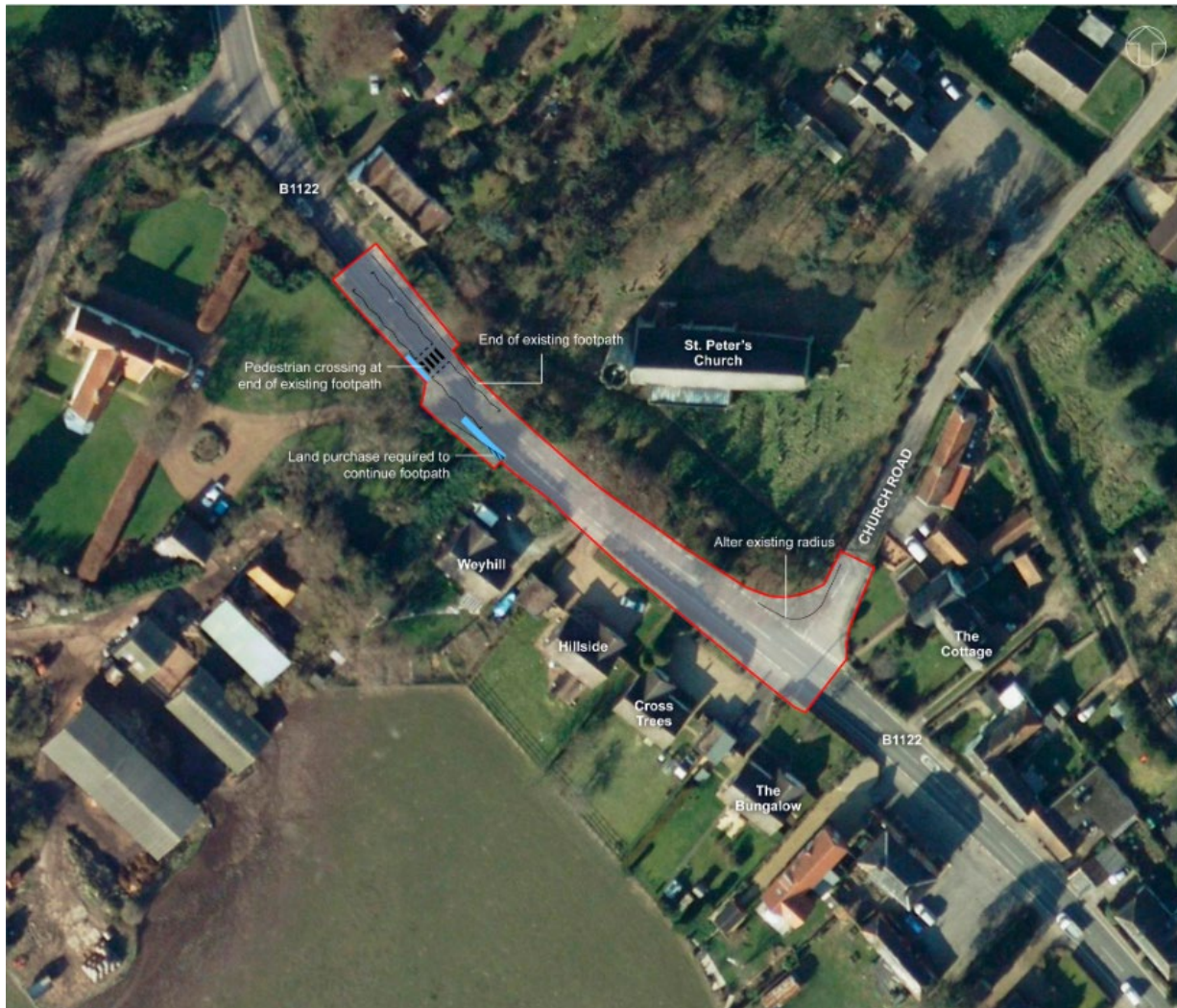
**3.2.16** It was anticipated that there would have been no significant environmental effects as a result of those works with the adoption of measures during construction to maintain satisfactory levels of environmental protection, whilst minimising the potential for disturbance from construction activities, as far as reasonably practicable.

Plate 3.2 Stage 2 - Proposed pedestrian crossing and footpath at Pump Cottages, Theberton





**Plate 3.3 Stage 2 – Proposed pedestrian crossing near the Church of St Peter, Theberton**



### Consultation feedback

- 3.2.17** Some respondents supported the proposals as necessary and supported the efforts to make crossing the road safer, suggesting it is an essential improvement. A few suggested they were necessary at present as the road could already be difficult to cross.
- 3.2.18** Others opposed it suggesting the proposed measures were inadequate at mitigating safety issues, and the proposed footpaths and the crossing did not take into account current pedestrian flows. Some did not want to have the additional lights that they expect would come from a pedestrian crossing.

- 3.2.19 Some suggested that the crossing should be a Pelican crossing rather than a zebra crossing to ensure safe access, or that the crossing should be adjusted to make it easier for schoolchildren to cross and reach the bus stop opposite Doughty Wylie Crescent.
- 3.2.20 These proposals were however not included in Stage 3 or 4 as the Sizewell link road or Theberton bypass proposals obviates the need for them.
- iv. [Alignment of the B1122 between Theberton and the Sizewell C construction site entrance](#)
- 3.2.21 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.
- 3.2.22 Implementation of the scheme would have required some earthworks and probably the loss of a small number of existing trees from Fishpond Grove.
- 3.2.23 The land area shown hatched in red on **Plate 3.4** was an indicative location for a temporary contractor's compound to deliver these works and the other proposed improvements; no permanent development would have occurred at this location.

**Plate 3.4: Stage 2 – Improvement to the alignment of the B1122 between Theberton and the Sizewell C construction site entrance.**



**3.2.24** It was anticipated that there would have been no significant environmental effects as a result of the works with the adoption of measures during construction to maintain satisfactory levels of environmental protection, whilst minimising the potential for disturbance from construction activities, as far as reasonably practicable.

**Consultation feedback**

**3.2.25** A few respondents supported the proposed realignment as a measure to improve visibility.

**3.2.26** A greater number of respondents expressed concern about the proposed realignment, suggesting it will only make vehicles go faster and make it less

safe in general. A few did not believe that the proposed realignment would have had the desired effect.

3.2.27 These proposals were however not included in Stage 3 or 4 as the Sizewell link road or Theberton bypass proposals obviates the need for them.

c) Stage 3

3.2.28 Following Stage 2 consultation, SZC Co. considered two alternative strategies for freight transport; a road-led and a rail led strategy.

3.2.29 As noted above, in response to Stage 2 consultation, concerns were raised against using the B1122 as the main route for Sizewell C construction traffic.

3.2.30 SZC Co. recognised the environmental impacts from, in particular, noise, vibration and severance from the Sizewell C traffic on the B1122 do require mitigation under both the rail-led, or the road-led freight management strategies. There were also concerns expressed at public consultation by TEAGS, Theberton Parish Council and the B1122 Action Group that the B1122 road structure would not be able to sustain the loads imposed by Sizewell C heavy goods vehicle (HGV) construction traffic. Regular and possibly significant highway maintenance could be required. This maintenance might 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. These factors 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.

3.2.31 Therefore, as part of the design development process, two options were considered for the two strategies.

i. [Improvements at Theberton and Mill Street/B1122 junction improvements](#)

3.2.32 As the rail-led freight transport strategy would have resulted in lower volumes of Sizewell C construction traffic on local roads, the Theberton bypass was proposed as an alternative to the Sizewell link road (proposed in the road-led freight transport strategy).

3.2.33 The Theberton bypass proposals comprised the eastern end of the Sizewell link road only and would have reduced the potential environmental impacts

through Theberton associated with increased traffic levels such as severance, noise and vibration impacts on residents.

3.2.34 In addition, SZC Co. proposed the small scale improvement at the B1122/Mill Street junction.

3.2.35 These proposals replaced the small scale pedestrian enhancements in the village that were proposed at Stage 2.

ii. Sizewell link road

3.2.36 Following further technical analysis and as a result of Stage 2 consultation responses, the option of a link road (referred to as the ‘Sizewell link road’) was developed to assist in accommodating the anticipated construction traffic associated with the Sizewell C main development site, under a road-led strategy.

3.2.37 In order to achieve the most benefit of alleviating traffic impacts associated with construction of Sizewell C, the location of the link road would need to be 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 (LGV)) delivering freight to the construction site. The link road would be open to public use as well as construction traffic associated with the Sizewell C Project.

3.2.38 In considering appropriate locations for the link road, the **Transport Assessment** (Doc Ref. 8.5) predicts that most construction traffic would travel along the A12 and reach the main development site via the B1122, through Theberton and Middleton Moor. By providing a link road in the vicinity of these communities, it could reduce traffic flows on the B1122.

3.2.39 Having identified the benefits of diverting traffic from the B1122, SZC Co. commenced a site selection exercise to identify potentially suitable route corridors. Potential routes for the Sizewell link road were originally identified from a combination of desk-based studies and field surveys within an area south of Saxmundham to the south of Yoxford.

3.2.40 Four routes and alignments (north, south) were considered to be potentially suitable, as shown in **Plate 3.5** and explained below. Route Z south proceeded as an option in the Stage 3 consultation.

- Route W (W south and W north)
  - Route W south was similar to the Route D2 which was previously proposed for the construction of Sizewell B in the 1980s. The

**NOT PROTECTIVELY MARKED**

route would have started 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 have crossed the River Fromus on a new bridge, and then passed just south of Bloomfield's Covert. It would have continued east, running just south of and parallel to the B1119 Saxmundham Road before crossing a watercourse near Woodfield Pit. It would then have run south of Leiston House Farm, and crossed Saxmundham Road between the farm and Highbury Cottages. Turning north, it would have crossed the Saxmundham to Leiston branch line at a new level crossing. It would have continued north, and just to the east of Buckle's Wood. It would have crossed Buckleswood Road at grade, and followed broadly the same alignment as the proposed green rail route, see **Volume 9** of the **ES**, until it reached Abbey Road where Abbey Lane and Lover's Lane meet the B1122.

- 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 would have started 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 have turned 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 (Y south and Y north)

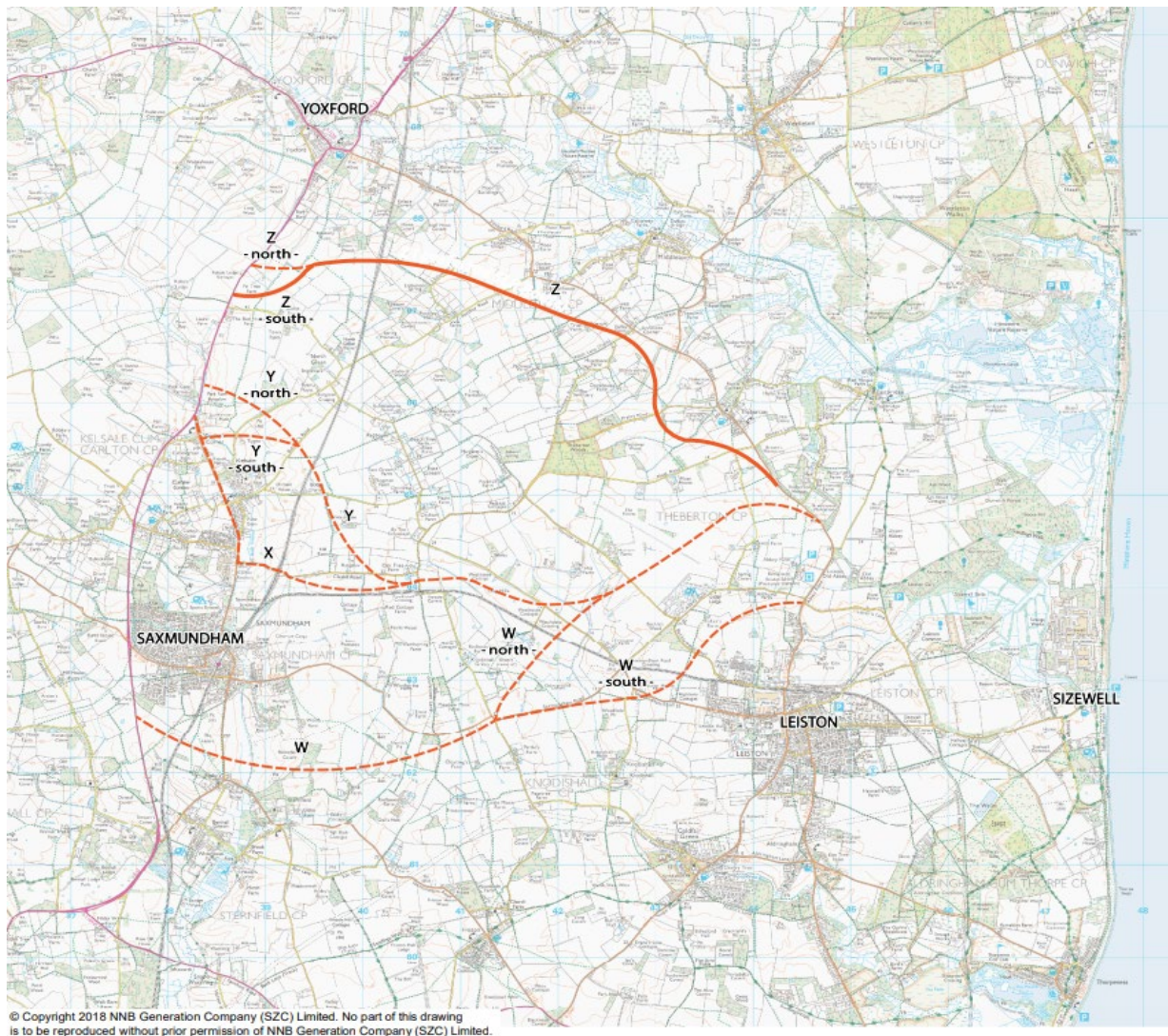
- Route Y would have run north of Kelsale and had two alternative connections to the A12 at the western end: Route Y south would

**NOT PROTECTIVELY MARKED**

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 Tiffin'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 (Z south and Z north)
  - 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 3.5: Sizewell link road potential routes and alignments



3.2.41 The Route Z south was presented at the Stage 3 consultation as the selected route. The other routes were included within the consultation reports as discounted considerations along with justification. This is summarised in **Table 3.1** and below.

- Route W – this route would have likely required engineering works to traverse the landform which would have had a significant adverse effect on the existing Landscape Character and there was the potential for the significant of several heritage assets to be affected adversely as a result of the route’s alignment. As such, the route was not considered suitable.



**NOT PROTECTIVELY MARKED**

- Route X – this route would have likely had the greatest effect on the existing road network and substantial engineering works would have affected the local Landscape Character. The overall effect on increased traffic on the road networks had the potential to have significant adverse effects on the amenity of local residents and listed buildings. As such the route was not considered suitable.
- Route Y – the complexity of crossing the local road and public right of way (PRoW) networks and the effects on Landscape Character to the north of Kelsale was considered to be potentially significant and therefore this route was not considered suitable.
- Route Z – this route would connect with the A12 away from existing settlements where the effects on local residents would be minimised. Elsewhere the route is generally positioned away from existing properties. Effects on the existing road network are likely to be minimal and Route Z (south) utilises the existing topography where possible. As such, Route Z (south) was identified as SZC Co.’s preferred route.

**Table 3.1: Sizewell link road environmental comparison table**

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	roads 1 railway* * Crossing of railway would require substantial engineering	Potential effects on the setting of a number of historic assets (Grade II and Grade II*) with the extent of	n/a	No landscape characteristics have been identified that would be considered to be of a greater value than will	Within the extent of Saxmundham

Route	Key Environmental Factors					
	PRoW	Roads & Railway	Heritage Assets	Landscape Designation	Landscape Character	Residential Amenity
		works.	Saxmundham		be locally appreciated.	
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 will be locally appreciated.	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 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 will be locally appreciated.	2 residential areas: <ul style="list-style-type: none"> <li>• to the south of Fir tree Farm and north of Buskie Farm; and</li> <li>• to the south of Valley Farm and Annesons Cottages.</li> </ul>
Z (south) 6816m	11	5 roads 1 railway				

iii. **Stage 3 consultation feedback**

**3.2.42** The Councils welcomed the provision of a relief road for the B1122 at the Stage 3 consultation but requested that the proposed route is supported by further evidence. However, the Councils accepted that Route X and Y would have had significant impacts on residential areas in Kelsale and the north of Saxmundham.

**3.2.43** The Councils requested comprehensive 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, and any other potential developments.

3.2.44 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.

3.2.45 The findings of these environmental and planning assessments are summarised below.

#### Environmental considerations

3.2.46 With regards to Route W, the engineering works to traverse the landform were considered likely to have a significant adverse effect on the existing Landscape Character due to the earthworks necessary to cross additional areas of undulating landform and the requirement for a second railway crossing (although engineering works would be required for Route Z south as well, it is anticipated that these would be less adverse than Route W due to the differing landscape within which each route is located). 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. The alignment of Route W (south) would have intersected one area of Ancient Woodland. 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 have been disrupted by the necessary engineering works that would have been required to facilitate a highway through this area, which could have resulted in significant adverse effects. It was also considered that the route could have had an adverse effect on the setting of the existing heritage assets including Hurts Hall and Leiston Abbey as they are situated approximately 450m north and 300m north of Route W respectively. The length of Route W was longer than Routes X and Z. Route W would also have impacted a greater number of PRowS, roads and railways compared to the other routes considered.

3.2.47 Route X proposed to utilise the existing B1121 to take traffic off the A12. The route would have required substantial engineering works (comprising earthworks and bridge structures) to cross the East Suffolk line at a height that would have achieved sufficient clearance, which would have significantly affected the local Landscape Character (although engineering works would be required for Route Z south as well, it is anticipated that these would be less adverse than Route X due to the greater sensitivity of the landscape immediately around Saxmundham). Furthermore, the overall effect of increased traffic, particularly HGVs on the B1121 north of Carlton Road was considered likely to have had a significant effect on the amenity of local residents along the B1121 north of Saxmundham. While there

would be no Sizewell C HGV or buses through Saxmundham, the Sizewell C car and LGV traffic using this route could have impacted listed buildings in Saxmundham; this includes seven Grade II Listed Buildings and 1 Grade II\* Listed Building. It was judged that where the proposed route followed an existing B road, there would have been limited potential to significantly affect the significance of designated heritage assets which would have been in close proximity. However, there would have been the potential for significant effects, due to increased traffic and HGV activity, on designated heritage assets immediately adjacent to the route at the junction of the B1121 and Clayhill Road. Furthermore, significant effects may have arisen from any highway works and woodland removal.

**3.2.48** With regards to Route Y, the proposed junction with the A12 was located near existing settlements and there was potential for significant effects on local residential amenity on residential properties near the junction with the A12 at Dorley's Corner. It was also considered that the likely effects on Landscape Character to the north of Kelsale would have been 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. This would have had a greater effect on Landscape Character in the vicinity of the A12 than Route Z.

**3.2.49** Route Z would limit Sizewell HGV traffic through Yoxford on the A12 during peak construction of the main development site. Route Z would likely affect the setting of some Grade II heritage assets (Dovehouse Farmhouse, Theberton Hall and The Gates / Walls at Theberton Hall) but it was noted at Stage 3 that this would be to a limited extent. Route Z is one of the shortest proposed routes, and follows the existing topography where possible. To the east of the East Suffolk 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 reduce beyond its vicinity due to the screening effect of vegetation in the surrounding landscape. Route Z (north) would have bisected 12 PRoW and Route Z (south) would bisect 11 PRoW.

### Transport

**3.2.50** Route W was located to the south of Saxmundham. Whilst Route W was the most southerly, and therefore best placed to intercept the Sizewell C HGV from the south, it would have required earthworks and structures at height to cross the East Suffolk line and achieve sufficient clearance. Route W would not have provided traffic relief to either Middleton Moor or Theberton, which was one of the key objectives of the proposed link road, and initial traffic modelling showed that traffic volumes in Theberton and

Middleton Moor would still have increased during Sizewell C construction with Route W. However, the route would have provided an alternative route for traffic otherwise using the A1094 / B1069 through Leiston and Knodishall.

- 3.2.51** Route X proposed to utilise the existing B1121 north of Carlton Road to remove traffic from the A12. However, this would have increased traffic on the B1121 through Kelsale and Carlton, which would have impacted on residential 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. Further north, facilities in Kelsale including two churches, a recreation area and the village centre are all accessed via Bridge Street and pedestrians would also be present in this area. North of Bridge Street, there are fewer such concerns, though the road is still subject to a 40mph speed limit. The junction with the A12 has good visibility and there have been few accidents. On balance however, SZC Co. considered that other routes were preferable to Route X.
- 3.2.52** Route Y was positioned to the north of Saxmundham and Kelsale and well placed to intercept traffic from the south, using the existing Saxmundham bypass, and from the north. However, it was considered that the connection point with the A12 would have been constrained as visibility standards on the A12 may be difficult to achieve. The engineering works needed to cross Tiggin's Lane, Butchers Road and the PRoW networks were considered to be out of character with the area that is characterised by country lanes that follow field boundaries.
- 3.2.53** Traffic modelling for Route Z showed that it would be the most effective at reducing traffic volumes (and therefore traffic-related environmental effects such as noise and air quality) along the B1122 through Middleton Moor and Theberton. These concerns were raised extensively by local residents, particularly at Stage 2 public consultation. 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.
- 3.2.54** Route Z does however require HGVs travelling to and from the south, which make up an estimated 85% of those related to Sizewell C construction, to travel further north to access the new road, creating additional vehicle

mileage and carbon emissions. Journey times to/from the south would be longer. However, the existing A12 Saxmundham bypass would be able to accommodate the additional volume.

- 3.2.55 The transport implications of providing an alignment along Route Z are described in the **Transport Assessment** (Doc Ref. 8.5).

### Conclusions

- 3.2.56 Route W was located to the south of Saxmundham where effects on local residents from the nearby village would have been minimised. The proposed alignment provided 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 had a significant adverse effect on the existing Landscape Character. The route would also have passed near to a number of existing heritage assets including Hurts Hall and Leiston Abbey. There was 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 was not considered suitable.
- 3.2.57 Route X relied on utilising the existing B1121 to take traffic off the A12 and across the East Suffolk railway line. It was likely to have the greatest effect on the existing road network and substantial engineering works were envisaged to upgrade the existing railway crossing on Clayhill Road, which would have affected the local Landscape Character. The overall effect of increased traffic on the road network would have had the potential to have a significant effect on the amenity of local residents and some listed buildings in Saxmundham. As such, this route was not considered suitable.
- 3.2.58 Route Y was positioned to the north of Saxmundham and Kelsale and would likely have had a reduced effect on the existing local road network when compared to Route X. However, the proposed junction with the A12 would still have been located in close proximity to existing settlements and a greater offset would be preferred. The crossings of the local road and PRow networks; and the effects on Landscape Character to the north of Kelsale would have been considered to be potentially significant. The amenity of local residents at Bridge Farm and Orchard House, also had the potential to be significantly affected by required engineering works in their vicinity. As such, this route was not considered suitable.
- 3.2.59 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. Whilst the road may have some impacts to isolated properties, the road provides an effective bypass to both the Middleton Moor and Theberton communities.

#### d) Stage 4 consultation

3.2.60 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.

3.2.61 However, an additional freight management strategy was proposed; the integrated strategy. The integrated strategy proposals included the use of Sizewell link road.

3.2.62 At Stage 4 SZC Co. also consulted on whether the Sizewell link road should be temporary so that it is removed and the land restored once Sizewell C is operational.

#### Stage 4 consultation feedback

3.2.63 Generally support was given for the Sizewell link road, noting that it is critical, would be an improvement to the area and would be of benefit both during construction and also during the operation of Sizewell C.

3.2.64 At the Stage 4 consultation preferences were expressed for the D2 route as it was considered by respondents that this would have provided more of a legacy benefit, a safer route for HGVs, catered better for HGVs coming from the south, and reduced amenity impacts to villages.

3.2.65 Concerns were raised regarding the landscape and visual impacts of the proposed route. Some respondents considered that the proposed Sizewell link road is inadequate to deal with the volumes of traffic proposed.

3.2.66 Both support and objection were given to the proposal of restoring the land to agricultural use once the construction of Sizewell C is complete.

#### e) Post-stage 4 consultation

3.2.67 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. Therefore, Route Z south (the Sizewell link road) is proposed rather than the Theberton Bypass. The **Planning Statement** provides detail of why the integrated strategy was selected (Doc. Ref.8.4).

3.2.68 As the integrated strategy was selected, the remaining sections of this chapter consider the Sizewell link road only.

### 3.3 Design evolution of the Sizewell link road

3.3.1 This section provides a summary of the evolution of the design of the proposed development, including the alternative designs considered, and modifications made throughout the design process, including any environmental considerations which have led to those modifications.

#### a) Stage 3 consultation

##### i. Proposals at Stage 3

3.3.2 **Plate 3.6** provides an overview of the Sizewell link road plan. The route was divided into five areas and these can be found at **Plates 3.6 to 3.11**.



Plate 3.6: Stage 3: Indicative Sizewell link road overview plan

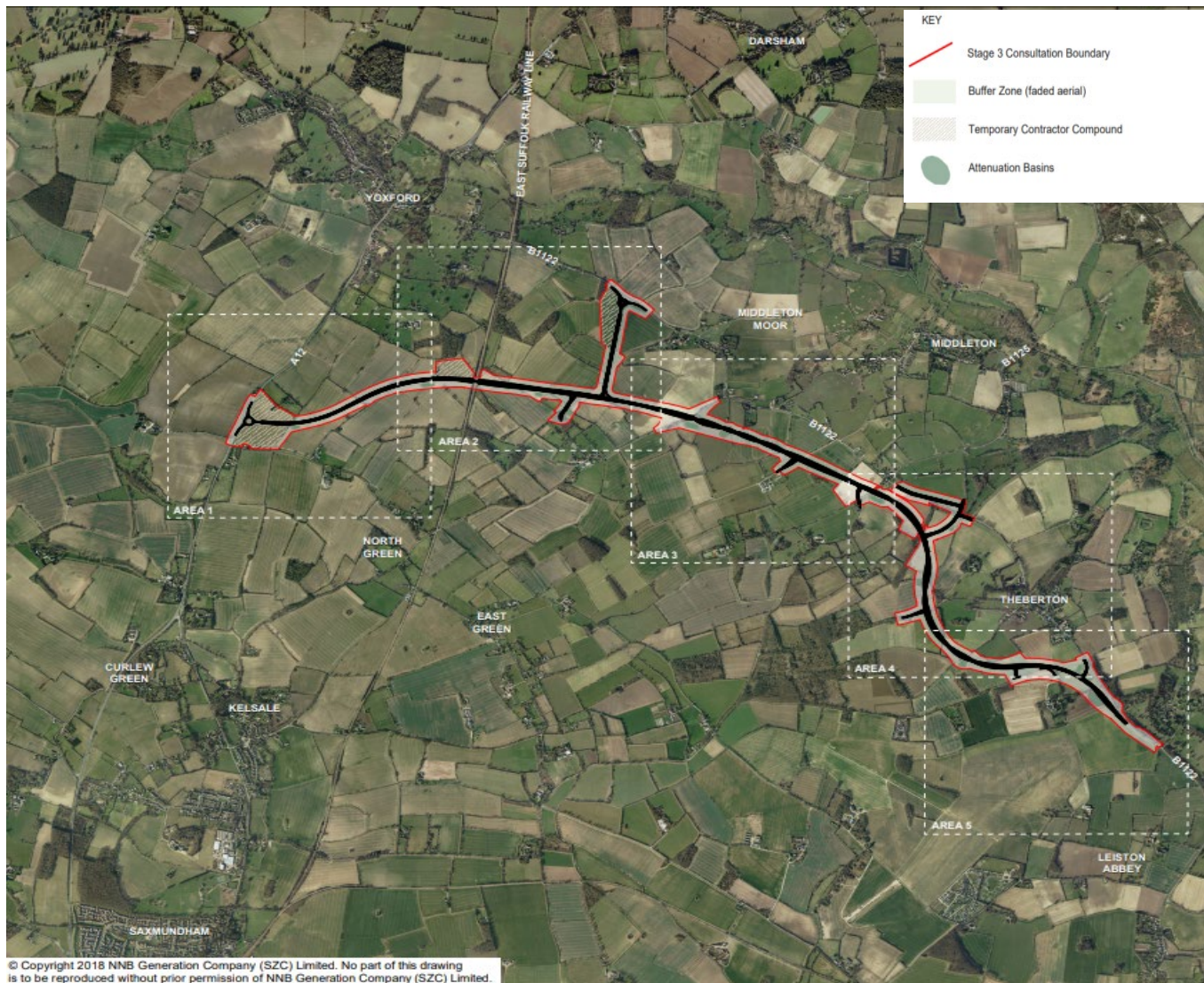


Plate 3.7: Stage 3: Indicative Sizewell link road masterplan Area 1



Plate 3.8: Stage 3: Indicative Sizewell link road masterplan Area 2



Plate 3.9: Stage 3: Indicative Sizewell link road masterplan Area 3



Plate 3.10: Stage 3: Indicative Sizewell link road masterplan Area 4



Plate 3.11: Stage 3: Indicative Sizewell link road masterplan Area 5



3.3.3 A wider area was consulted on during Stage 3 than would be required for the Sizewell link road, as the design and landscaping mitigation measures had yet to be finalised. The proposed environmental design and embedded mitigation measures at Stage 3 were:

- Retention of existing woodlands, scrub and hedgerows where possible.
- 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.
- New planting around attenuation features to ensure they integrate with the surrounding landscape.

- Positioning of the route within cuttings to reduce landscape and visual impacts.
- Culverts were included to maintain the existing flow of surface water.
- Further design consideration to each of the interfaces and crossing points with other access routes, for example, the crossing of the East Suffolk Line to avoid impact on the two woodlands immediately east of the railway line.
- Diversion of eleven PRoWs (all footpaths) to create safe crossing points of the proposed road. It was also noted that a further two PRoWs may require temporary diversions.

#### ii. Stage 3 consultation responses

3.3.4 Concerns were raised by landowners regarding the proposals causing a loss of farmland and bisecting agricultural land making it potentially unviable to use that land. Minor design changes were proposed in response to these concerns and these are explained in the Stage 4 consultation section below. In addition, consultation responses from Theberton Parish Council and Church Farm raised concerns about closing Pretty Road to the east of Sizewell link road. This would have prevented Theberton residents accessing the countryside to the west and farm access to grazing land west of the new road.

#### b) Stage 4 consultation

##### i. Proposals at Stage 4

3.3.5 At Stage 4, SZC Co. consulted on whether the Sizewell link road should be temporary so that it is removed and the land restored once Sizewell C is operational. The alignment of the proposed route of the Sizewell link road (shown in **Plates 3.12 to 3.17**) did not change following Stage 3. However, as a result of design development, and further landowner engagement, a number of changes were made to the design. These are summarised below, divided by area; no changes were proposed to Areas 1 and 5 during Stage 4 consultation.

3.3.6 In Area 2, the site boundary was extended to include Footpath E-584/016/0 to facilitate physical improvements to the path. The proposed junction of the Sizewell link road and Littlemoor Road was removed from the scheme.

3.3.7 In Area 3 the site boundary was amended so that an area of land was excluded to remove a residential property on Fordley Road from the site boundary, as no works were being undertaken on the property. A new

junction connecting Fordley Road to the south side of Sizewell link road was added to the scheme, replacing the removed Littlemoor Road junction.

- 3.3.8** In Area 4, a new road link to the north of Trust Farm from the Sizewell link road to the B1122 was added.
- 3.3.9** In response to concerns about connectivity with Pretty Road, between Stages 3 and 4, SZC Co.'s design team explored the feasibility of alternative solutions that would overcome these concerns, looking at three potential design solutions.
- 3.3.10** Potential solution 1 retained the road junction as proposed at Stage 3, adding a non-vehicular bridge on the south side parallel to Pretty Road. However, following consultation with landowners it was considered that this would not be suitable for livestock movements.
- 3.3.11** Potential solution 2 retained the Stage 3 road junction to the west but with a skewed non-vehicular bridge across Sizewell link road. SZC Co. discounted this proposal due to the long bridge span needed, which would have necessitated intermediate piers or a deeper bridge deck and a deeper cutting.
- 3.3.12** Potential solution 3 was a non-vehicular bridge on the existing Pretty Road alignment, moving the new road junction north of the bridge. SZC Co. favoured this option as it retained the same vehicle access as Stage 3, but provided a route for pedestrians, cyclists, equestrians and livestock between Theberton, Church Farm, the grazing land west of the new road and the countryside beyond. A vehicular bridge was not considered appropriate in this location. This is because it would necessitate a speed reduction on surrounding roads, the scale of the bridge would be out of character with the surrounding area and the alternative options discussed above were adequate to deal with the concerns raised. Option 3 was therefore progressed into the design.
- 3.3.13** Between Stage 3 and 4 consultation, other changes were made to the scheme design. Feedback at Stage 3 confirmed that Fordley Road was the most used route for trips to/from various facilities, including schools, at Saxmundham. It would therefore be a more appropriate junction with Sizewell link road than Littlemoor Road. The junction with Littlemoor Road was therefore removed from the scheme and replaced by a junction at Fordley Road. In making this change, the opportunity was taken to move the link road alignment approximately 20m north, increasing the distance from a residential property just south of the alignment on the east side of Fordley Road. After discussion with Trust Farm, 250m of new road was added to the scheme connecting the link road to the existing B1122 to improve access to farmland north of the B1122.



Plate 3.12: Stage 4: Indicative Sizewell link road overview plan

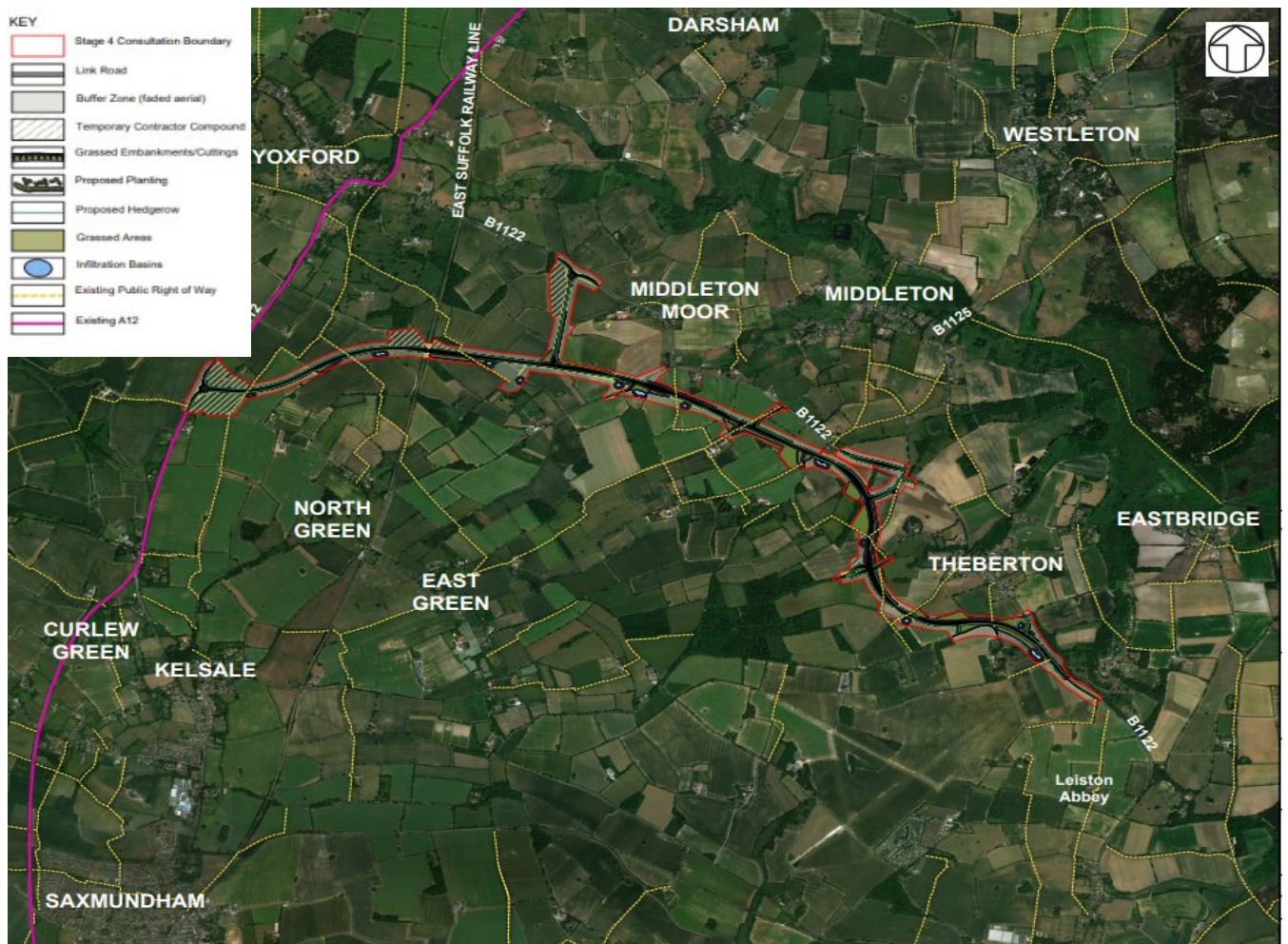


Plate 3.13: Stage 4: Indicative Sizewell link road masterplan Area 1

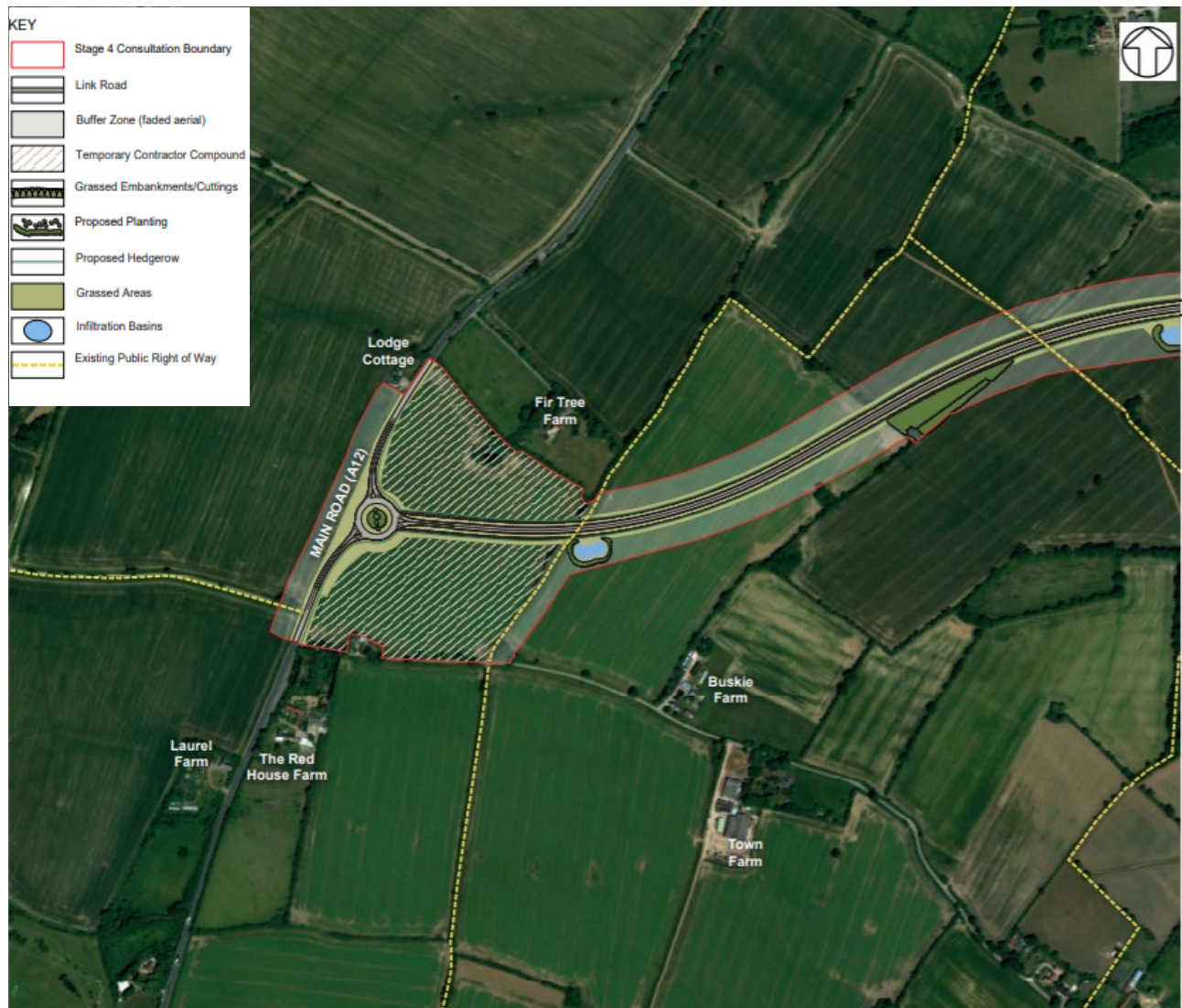


Plate 3.14: Stage 4: Indicative Sizewell link road masterplan Area 2

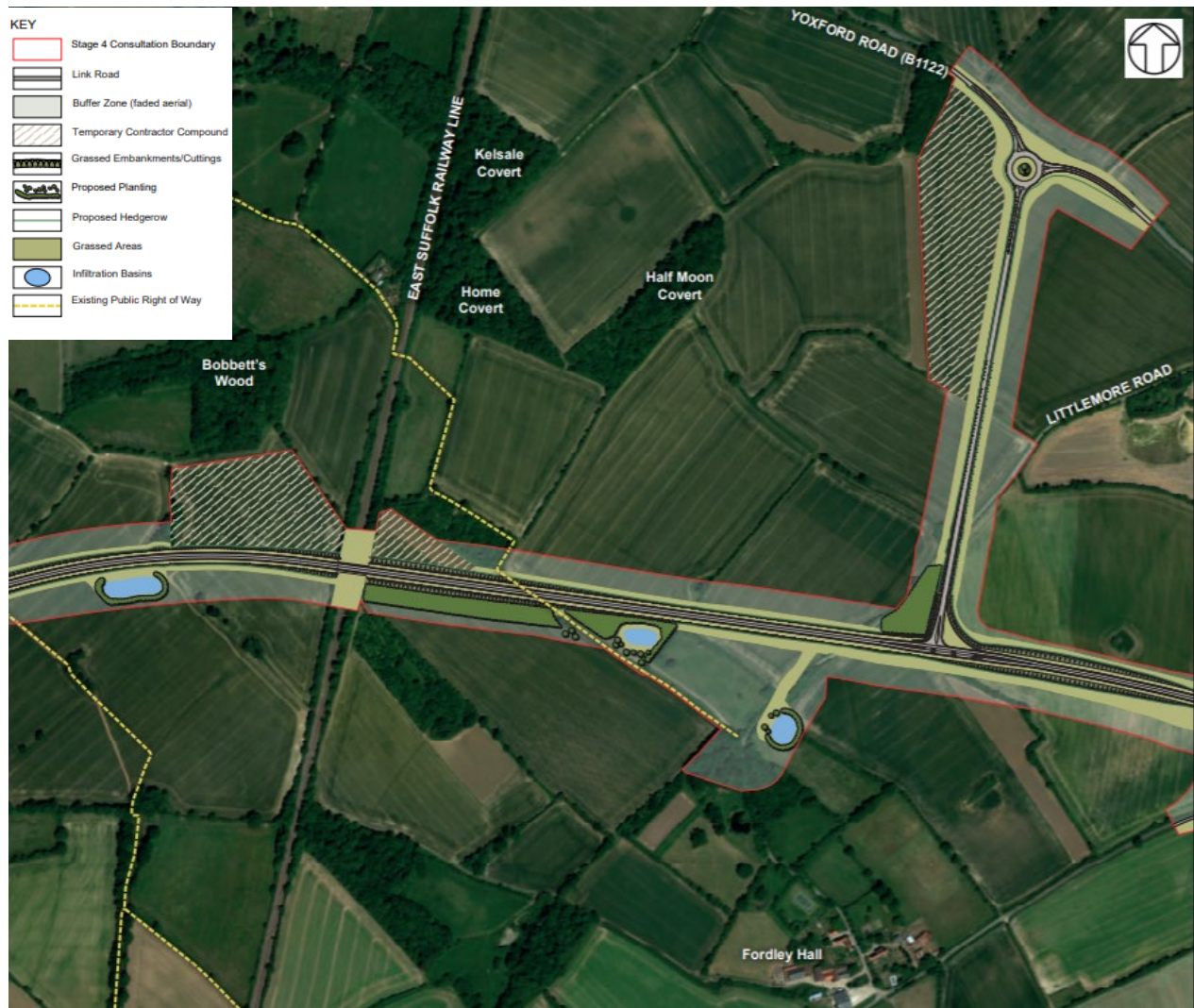


Plate 3.15: Stage 4: Indicative Sizewell link road masterplan Area 3



Plate 3.16: Stage 4: Indicative Sizewell link road masterplan Area 4



Plate 3.17: Stage 4: Indicative Sizewell link road masterplan Area 5



3.3.14 A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation was undertaken. This included a consideration of the changes since Stage 3 to baseline conditions (such as potential additional receptors affected and any changes to the extent of the study area), the assessment of effects and mitigation required.

3.3.15 As a result, the Stage 3 PEI relating to landscape and visual, terrestrial ecology and ornithology, amenity and recreation, terrestrial historic environment, soils and agriculture, noise and vibration, and traffic and transport assessments (refer to Volume 2A, Chapter 5 of the Stage 3 Main Consultation Document) was updated. A summary of changes can be found in **Table 3.2**.

**Table 3.2: Stage 4: Summary of changes to the Stage 3 PEI**

Changes To Receptors And/Or Baseline Environment	Updated Environmental Assessment
<b>Landscape and visual impact assessment</b>	
<p>The changes to the site boundary would extend the study area by a few metres to the north of Middleton and the south-west of Theberton. The zone of theoretical visibility may also be extended following the amendments to include new receptors along the B1122, including additional residential properties as well as receptors in and around Theberton.</p>	<p>The landscape design would need to be amended to reflect the removal of the Littlemoor Road connection and introduction of connections to Fordley Road and north of Trust Farm, and to provide screening to these properties, where required.</p> <p>During construction, there may be increased visibility of construction, with the provision of a non-motorised user bridge at Pretty Road being widely visible, and the other changes being visible from receptors along the B1122. However, the proposed amendments are not considered likely to alter the conclusions presented in the Stage 3 PEI for construction.</p> <p>During operation, the changes to the connector roads to the Sizewell link road would be visible to users of B1122 and Fordley Road, as well as residential properties along these roads. These changes are not considered likely to alter the conclusions presented in the Stage 3 PEI for construction.</p> <p>However, the introduction of a non-motorised user bridge at Pretty Road, depending on the final design, may increase the visibility of the development from Theberton, residential properties and PRowWs in the vicinity of the proposed bridge. This may introduce a new short-to medium-term, localised significant visual effect on these receptors since the Stage 3 PEI.</p>
<b>Terrestrial ecology and ornithology</b>	
<p>The proposals would result in approximately 3.3ha of additional land required within the site boundary. The additional land is comprised of hardstanding and arable land. However, there are not likely to be any additional ecological receptors of interest in this area compared to those already assessed in the Stage 3 PEI.</p>	<p>The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI due to the small area of additional arable land required in the context of the overall proposals.</p>
<b>Amenity and recreation</b>	
<p>The changes to the site boundary would extend the study area by a few metres to the north of Middleton and the south-west of Theberton. There may be additional locations on PRowWs or</p>	<p>The construction of the non-motorised user bridge at Pretty Road may increase visibility of the Sizewell link road development and increase noise levels experienced by users of nearby PRowWs</p>

Changes To Receptors And/Or Baseline Environment	Updated Environmental Assessment
<p>open access land that are affected by the proposed development. This includes sections of PRowS E-396/023/0 and E-515/003/0 that are now within the red line, and PRowS near the non-motorised user bridge at Pretty Road.</p>	<p>south-west of Theberton.</p> <p>During operation, the impacts of the increased visibility of the bridge on users of nearby PRowS would remain. There may also be some minor changes in effects on users of PRowS E-396/023/0 and E-515/003/0 due to physical changes to the routes and changes to views.</p> <p>Overall, the amendments are not considered likely to change the construction or operational assessment presented in the Stage 3 PEI.</p>
Terrestrial historic environment	
<p>The site boundary would include a small area of additional land within the site. However, no change is expected to the baseline presented in the Stage 3 PEI.</p>	<p>The additional land required would increase the area of ground disturbance in the proposals; however, the changes would be of the same predicted magnitude on as yet unknown buried heritage assets as presented in the Stage 3 PEI, and is unlikely to result in a significant effect.</p> <p>The proposed amendments to the site boundary include a deeper cutting compared to the Stage 3 proposals, which could introduce an additional change in the landscape around Theberton Hall (Grade II listed, LB 1287529) and increase the impact on the setting of this asset during construction and operation, due to the visibility of the structure. The effect on the setting of this asset may increase from not significant to significant as a result of the proposals in both phases.</p>
Soils and agriculture	
<p>A small amount of additional agricultural land would be affected by the change. This land is under arable production.</p>	<p>The additional land required is small in area in the context of the overall proposals. Therefore, the proposed change is not considered likely to alter the assessment of effects presented in the Stage 3 PEI.</p>
Noise and vibration	
<p>No change to the baseline environment relating to noise and vibration as presented in the Stage 3 PEI is expected. However, new receptors may be impacted, or existing receptors may be impacted to differing levels of significance due to the changes to the road alignment, such as Hawthorn Cottage and Trust Farm.</p>	<p>The new road added to the north of Trust Farm to connect the Sizewell link road to the existing B1122 may increase the significant noise effect on Trust Farm identified at Stage 3.</p> <p>The construction of the non-motorised user overbridge is not expected to result in a significant effect; however, this would be subject to further assessment.</p>



Changes To Receptors And/Or Baseline Environment	Updated Environmental Assessment
<b>Traffic and transport</b>	
<p>There are no changes to the baseline traffic flow presented in the Stage 3 PEI as a result of the extension in the site boundary.</p>	<p>During construction of the Fordley Road connection, all local road users would be diverted via Littlemoor Road. This would be a temporary diversion during the construction of the Sizewell link road compared to a permanent diversion presented in the Stage 3 PEI.</p> <p>During the construction of the Pretty Road non-motorised user bridge and the connection to Sizewell link road (from the west side), Pretty Road would be closed west of the Theberton Hall access and all users would be diverted via Moat Road and/or Hawthorn Road.</p> <p>The proposed changes have been introduced to improve non-motorised user connectivity across the Sizewell link road compared to that presented in the Stage 3 PEI, with no delay to cross the Sizewell link road, through the introduction of an overbridge at Pretty Road. Access would be maintained west of the Theberton Hall access through the amended Pretty Road junction to Sizewell link road and the impacts would be as presented in Stage 3.</p> <p>The amendments to the minor road junctions with the Sizewell link road would reduce journey time between Middleton and Saxmundham and reduce the length of the diversion and journey times for Trust Farm operations compared to the Stage 3 PEI.</p>

**3.3.16** The proposed design changes at this Stage 4 did not alter the baseline, mitigation proposals, the assessment of potential impacts and residual effects for any of the other environmental assessment topic areas as presented in the Stage 3 PEI (see Volume 2A, Chapter 5 of the Stage 3 Main Consultation Document).

ii. **Stage 4 consultation responses**

**3.3.17** Generally support was given for the Sizewell link road, noting that it is necessary, would be an improvement to the area and would be of benefit both during construction and also during the operation of Sizewell C.

**3.3.18** There were concerns raised regarding the landscape and visual impacts of the proposed route. **Chapter 6** of this volume of the **ES** provides the

anticipated residual landscape and visual effects of the proposed Sizewell link road.

3.3.19 Both support and objection was given to the proposal of restoring the land to agricultural use once the construction of Sizewell C is complete.

c) **The proposed development**

3.3.20 As part of design refinement and EIA process, there have been a number of updates to the design following Stage 4 consultation. These updates to the design have been developed to avoid or help reduce adverse environmental effects and to take account of comments raised during this process as well as through consultation with landowners and other stakeholders such as the Environment Agency, SCC and East Suffolk Council. These changes comprise:

- The extent of land take required for the construction and operation of the proposed development has been reduced by 22.53ha where practicable. This was to reduce the areas of land required from land holdings and reduce habitat loss. Further consideration was also given to the areas of land required permanently for the proposed development as well as those required to facilitate construction and would be returned to agricultural use upon completion of construction.
- Accommodation access tracks and private means of access have been refined or added to reduce severance impacts. This includes:
  - a new agricultural access from the A12 on the south side of the proposed Sizewell link road to maintain access to land associated with Rookery Farm (Yoxford);
  - A ghost island junction, and a new link road (the ‘Middleton Moor link’) from the proposed route of the Sizewell link road to the B1122 (north-west of Yankee Lodge), ensuring access remains to land associated with Fordley Hall Farm;
  - on the north side of the proposed route of the Sizewell link road, Fordley Road would be retained for use as a private means of access for Old Abbey Farm, and shared pedestrian access
  - provision of a staggered crossroads ghost island junction to give access to Trust Farm located to the south, and to the existing B1122 to the north, with a temporary access provided during construction;
  - provision of an access road from the south side of the route of the proposed Sizewell link road to Hawthorn Cottages;

- a new overbridge to carry non-motorised users only (pedestrians, cyclists, equestrians) over Pretty Road. This will also be used to move livestock associated with Church Farm; and
- a new junction to Moat Road to maintain access to the existing properties, including Theberton Grange and Moat House, and land associated with Moat Farm and Old Abbey farm.
- Amendments to the design of the culverts where the proposed development crosses existing watercourses. Larger portal culverts have been introduced into the design, which would minimise the impact on the watercourse banks and improving afflux in the event of a flood event. The larger culverts would also provide ecological connectivity beneath the route. In addition, to avoid the need to cross the watercourse at Fordley Road (the ‘Middleton watercourse’) twice and avoid the need for a long box culvert beneath the realigned Fordley Road, the watercourse would be diverted.
- Allowances for flood relief basins have also been included within the design, if required, adjacent to proposed watercourse crossings, to minimise flood risk. The flood relief basins would be designed to cater for a 100 years flood event plus a 40% allowance for climate change.
- Additional landscaping has been added to the design, including planting for bat-hop overs and ponds which would provide replacement habitat for great crested newts as well as increase biodiversity.
- Refinement of proposed PRoW diversions, as well as inclusion of temporary diversions, to ensure connectivity across the proposed development during both construction and operation. Further details are shown on the Rights of Way plans included in **Appendix 2A** of this volume.

**3.3.21** It is proposed that the Sizewell link road is retained as a permanent development in the application for Development Consent due to the legacy benefits that it offers. Once operational, the Sizewell link road would be open to general traffic during and after the construction of Sizewell C. There would be a long-term legacy of 900 permanent jobs at Sizewell C, as well as a regular short-term workforce of around 1,000 people during refuelling and maintenance outages at the Sizewell C main development site. These workers could make use of the Sizewell link road once in place.

**3.3.22** The design for the proposed development is described in **Chapter 2** of this volume and illustrated in **Figure 2.1**.