Sizewell C

Proposed Nuclear Development

Stage 4 Pre-Application Consultation

Summer 2019

Consultation Document

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FOREWORD

I am pleased to be able to present developments in EDF Energy's proposals for a new nuclear power station, Sizewell C. The proposals for the power station have continued to develop following feedback from formal consultation, ongoing engagement, further technical work, and environmental studies.

Sizewell C would be built to the north of Sizewell B on the Suffolk coast and would make a major contribution to the economy of Suffolk and beyond, while also helping to meet the nation's future need for low carbon energy. EDF Energy and CGN are working in partnership to develop three new nuclear power stations in the UK. We are building Hinkley Point C in Somerset, and are jointly developing other proposals, with EDF Energy leading on Sizewell C and CGN leading on Bradwell B in Essex.

Our overarching aim for the development of Sizewell C remains to support the creation of significant business, training and job opportunities locally, regionally and nationally, while limiting or mitigating any adverse effects from construction for local people and the environment. We are also continuing to learn lessons from Hinkley Point C, already under construction, contributing significantly to the Somerset economy and on track to generate electricity from 2025.

The Stage 3 consultation, which ran from 4 January 2019 to 29 March 2019, described our development proposals for the Project and provided preliminary environmental information on its impacts. This Stage 4 consultation presents refinements to our plans in some areas, along with some new proposals, particularly for the transport of freight to and from the construction site and the provision of additional land to compensate for environmental impacts.

The Sizewell C team will be available at our consultation events to discuss our proposals and answer your questions. I hope you can join us and contribute to the further development of our plans. We look forward to receiving your views.

Jim Crawford
Sizewell C Project Development Director

1. INTRODUCTION

1.1. Introduction

1.1.1. NNB Generation Company (SZC) Limited1 is proposing to build and operate a new nuclear power station, Sizewell C, on the Suffolk Coast, on land immediately to the north of the existing Sizewell B power station. NNB Generation Company (SZC) Limited has been formed as a separate company to finance and construct Sizewell C. EDF Energy will seek additional shareholders in NNB Generation Company (SZC) Limited and is currently in discussion with UK pension funds. NNB Generation Company (SZC) Limited is referred to in this document as EDF Energy2. This document forms part of EDF Energy's Stage 4 public consultation, which is being undertaken in order to inform preparation of an application for development consent.

1.1.2. Our Stage 3 consultation was undertaken between 4 January and 29 March 2019. The Stage 3 Main Consultation Document includes our proposals for the construction, operation and maintenance of Sizewell C (the Project). We are grateful for the extensive feedback that has already been received from the local community, others with an interest in the Project and statutory consultees, including the local authorities. That feedback is helpful in guiding us to refine and revise our proposals and strategies for the development of Sizewell C.

1.1.3. EDF Energy is taking account of consultation feedback, further detailed studies and up to date learning from the construction of our sister project in Somerset, Hinkley Point C, to further develop our preferred proposals for Sizewell C. As our proposals continue to be refined in response to feedback and further learning, we want to share them with you and to seek any further views before we make our application.

1.1.4. The focus of this Stage 4 consultation is to obtain views on our evolving thinking since Stage 3 consultation on the management of freight, and on some potential changes to our development proposals.

1.1.5. In this Stage 4 consultation we are particularly interested in your views on:

- an alternative freight management option we are considering: a strategy we refer to as the "integrated strategy" because it combines features of both the rail-led and road-led strategies consulted on at Stage 3;
- an alternative approach for traffic management with regard to additional traffic movements through Wickham Market in connection with the southern park and ride facility;
- two new options for the formation of the Sizewell C pylons required to support overhead transmission lines;
- a new option for the rail head at land east of Eastland's Industrial Estate;
- whether the Sizewell link road should be a permanent development or whether sections of the road should be removed at the end of the construction period; and
- proposals to mitigate the ecological and flood risk impacts of our proposals, which require some significant additional land.

1.1.6. Other more minor changes from our Stage 3 proposals are also described in this Stage 4 consultation where these have arisen through developments in our design or mitigation proposals and require small areas of additional land.

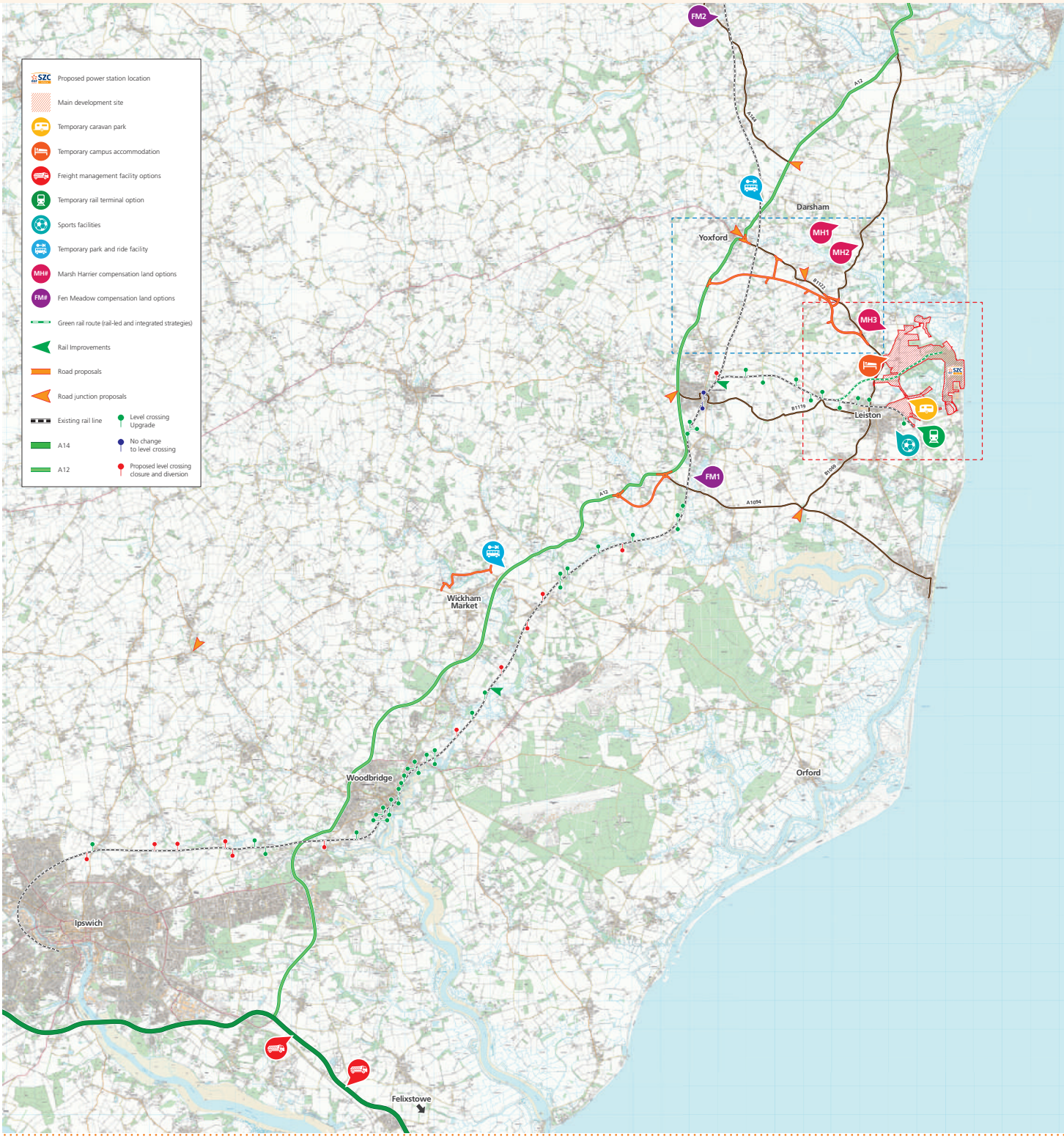
1.1.7. We are continuing to consider the options we put forward in our Stage 3 consultation, including in particular the adoption of a road-led or rail-led strategy. If you did not previously respond to our Stage 3 consultation and wish to do so, we would welcome your feedback on the options put forward in our Stage 3 consultation, as well as those put forward in this Stage 4 consultation. Consultation documents relating to both Stage 3 and Stage 4 consultations will be made available throughout the current consultation period (18 July 2019 to 27 September 2019). Much background information on the Project is set out in the Stage 3 consultation documents, including relevant preliminary environmental information, and is referred back to where relevant in this Stage 4 consultation document.

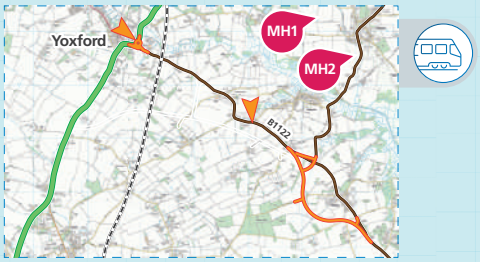
1.1.8. The locations of all elements of our proposals are shown in **Figure 1.1**. However, not all of this infrastructure will form part of our application for development consent. The nature of the proposals we take forward will depend upon decisions made following this consultation, and in particular which freight management strategy is adopted as explained in **section 1.4** of this chapter and Chapter 3 of this Stage 4 consultation document.

1.1.9. Information on where you can find copies of the Stage 3 and Stage 4 consultation documents, and how to respond to this consultation is set out on our website www.sizewellc.co.uk and in **Chapter 8** of this Stage 4 consultation document.

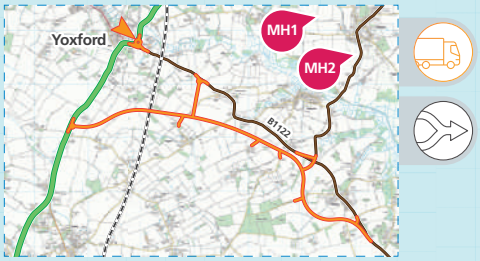
1 Company No. 9284825
2 NNB Generation Company (SZC) Limited is currently a joint venture company between EDF Energy and China General Nuclear Power Corporation (CGN)

Figure 1.1 Sizewell C Project, Suffolk

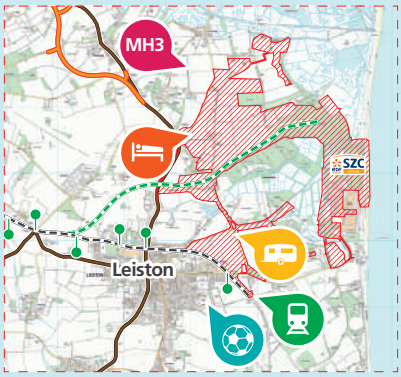




Rail-led strategy: Theberton bypass



Road-led and integrated strategy: Sizewell link road



Main development site

1.2. Policy context

1.2.1. The Overarching National Policy Statement (NPS) for Energy (NPS EN – 1) (Ref 1.1) and the NPS for Nuclear Power Generation (NPS EN – 6) (Ref 1.2) were formally designated by the Government in July 2011. Together they provide the primary basis for decisions on applications for development consent for nuclear projects.

1.2.2. The need for the Project is established in NPS EN – 6 which lists Sizewell as one of eight potentially suitable sites for the deployment of new nuclear power stations in England and Wales before the end of 2025. NPS EN – 1 confirms that all applications for development consent should be assessed on the basis that the Government has demonstrated that there is a need for those types of infrastructure. NPS EN – 1 confirms that it is Government policy that new nuclear power forms an important element of the strategy for moving towards a de-carbonised, diverse electricity sector by 2050, and that nuclear power should be able to contribute to the UK's need for new capacity. The need for new nuclear power generation is described as "urgent".

1.2.3. The Stage 3 consultation explained that in December 2017, the Government began the process of consulting on the preparation of a new NPS for nuclear power stations in light of the need to review and update government policy and, in particular, to take into account that progress with the development of new nuclear power stations has been relatively slow. Subject to the outcome of the Government's consultation, the document explains that the Government proposes to carry forward the sites listed in NPS EN – 6 as the list of sites potentially suitable for the deployment of nuclear power stations under the new NPS (including Sizewell), except for Hinkley Point C which has already secured consent. In the meantime, the consultation makes clear that the Government will continue to consider those sites to be appropriate and that they will retain strong Government support pending the designation of the new NPS.

1.2.4. A more detailed explanation of the planning policy context of the Project can be found in Volume 1, Chapter 3 of the Stage 3 Consultation Main Consultation Document.

1.3. Decarbonisation and the need for new nuclear capacity

1.3.1. Climate change is one of the greatest global challenges we face. To meet agreed global climate change targets, CO2 emissions from all sectors must be reduced to near zero levels. (Ref 1.3). The UK has recently announced a new target to reach net zero emissions by 2050. This represents a strengthening of the previous target set under the Climate Change Act to reduce greenhouse gas emissions to at least 80% of 1990 levels by 2050. Alongside this legally binding target, there is also a requirement to set carbon budgets every five years (Ref 1.4). On 12 June 2019, the Secretary of State for Business, Energy and Industrial Strategy Greg Clark announced the proposal to commit the UK to achieving a net zero carbon economy by 2050 (Ref 1.5). Legislation is now being brought forward to amend the Climate Change Act to reflect the increased targets implied by the net zero target.

1.3.2. Nuclear power is the largest source of low-carbon electricity in the developed world (Ref 1.6) and the UK Government recognises that new nuclear power stations will form a prominent part of the country's transition to a low-carbon energy system that is resilient, diverse and value for money for end users (Ref 1.7). Nuclear generation has a lower carbon footprint than low-carbon alternatives, such as large-scale solar and carbon capture and storage and a similar footprint to wind generation. It also has a significantly lower physical footprint, requiring around 1,000 times less land than solar and 1,500 times less land than onshore wind.

1.3.3. Renewable generation such as wind and solar are intermittent and their supply of electricity does not vary in line with variations in the demand for electricity. When it is not sunny or windy this intermittency can currently be accommodated by switching on coal and gas generation, but the ability to do this reduces as coal and gas are removed from the generation mix to meet decarbonisation targets. At times when wind and solar generation is high, renewable output can exceed demand and the potential electricity generation may go unused.

1.3.4. Storage of electricity (e.g. using batteries) is useful for managing very short, intra-day fluctuations in demand. But it is prohibitively expensive for long periods (e.g. to provide electricity for a wind lull that lasts several days) remains prohibitively expensive. Carbon capture and storage could allow coal and gas to manage the intermittency, but the technology is not yet widely proven and there are residual emissions released at the point of generation and in the extraction and transport of the coal and natural gas fuel.

1.3.5. Renewable energy will play a crucial and major role in meeting decarbonisation and wider energy policy objectives, but the baseload generation profile of nuclear means new nuclear is an essential complement to renewable generation to meet the UK's decarbonisation and security of supply objectives while minimising costs to consumers.

1.3.6. The UK Government recognises that new nuclear power stations are critical to the country's transition to a more resilient, affordable, and diverse low-carbon energy system. National Policy Statement EN-1 states that:

"Nuclear power generation is a low carbon, proven technology, which is anticipated to play an increasingly important role as we move to diversify and decarbonise our sources of electricity…[i]t is Government policy that new nuclear power should be able to contribute as much as possible to the UK's need for new capacity."

1.3.7. The UK Government's most recent published scenario for power generation envisages 12.3GW of new nuclear capacity by 2035 (Ref 1.8). Sizewell C would provide 3.2GW and therefore be meeting over a quarter of this capacity.

1.4. Structure of the Stage 4 consultation document

a) Overview of our proposals

1.4.1. **Chapter 2** of this Stage 4 consultation document gives an overview of all proposals, but focuses on the elements of the Project that are additional or different to those presented in Stage 3, including any likely differences in environmental impacts. The Stage 3 Main Consultation Document includes detailed descriptions, and justification for the selection of particular sites and proposed designs. Preliminary environmental information (PEI) on each element of the proposals is presented in Volumes 2 and 3 of the Stage 3 Main Consultation Document.

b) Freight management strategy

1.4.2. At this Stage 4 consultation, EDF Energy is consulting on a further alternative freight management strategy. In response to information from Network Rail and early analysis of feedback on the alternatives set out in Stage 3, we have developed an "integrated" freight management strategy, which we think may combine the benefits of the two alternative options presented at Stage 3. The integrated strategy would use three trains every 24 hours to transport freight directly to the main construction area via the green rail route at peak construction but removes the need for the new rail infrastructure and upgrade works on the East Suffolk line that would be necessary for the rail-led strategy. The integrated strategy also proposes to build the Sizewell link road and freight management facility along the A14 which were previously proposed in the road-led strategy.

1.4.3. The need to consider this additional integrated strategy has arisen from a concern that we may not be able to rely upon the rail-led strategy consulted on at Stage 3 because the extent of improvement works necessary to the East Suffolk line means that Network Rail is unable to guarantee that the works would be ready in time. We have therefore sought to identify the optimum rail strategy that could be delivered within our control.

1.4.4. **Chapter 3** of this Stage 4 consultation document describes the infrastructure that would be required for each of the alternative freight management strategies (road-led, rail-led and integrated) and explains how each would operate. The likely traffic and environmental impacts are summarised in **Chapter 3**, with justifications for why there are differences between the three strategies. **Chapter 4** of this Stage 4 consultation document presents the traffic modelling for the integrated strategy and compares that with the traffic modelling for the road-led and rail-led strategies that was explained at Stage 3.

c) Changes to the main development site and associated developments

1.4.5. We have been continuing to develop our proposals to reduce the impacts of construction and operation of Sizewell C on landowners and the environment. Some additional land requirements have been identified for these design changes or to accommodate the needs of affected stakeholders and we want to make you aware of them.

1.4.6. **Chapter 5** of this Stage 4 consultation document describes proposed changes to the main development site boundary (the "red line") with a justification for each change and an assessment of whether that change has any impact on the PEI presented at Stage 3. We have now identified sites that could be used to compensate some of the potential ecological and flood risk impacts of the Project. These are in addition to the mitigation that was proposed at Stage 3 and specifically relate to potential impacts on recreation, marsh harriers, fen meadow and compensatory flood land.

1.4.7. **Chapter 6** of this Stage 4 consultation document describes changes to our proposed associated developments. These are primarily changes to our red line boundaries as a result of design development or engagement with the relevant stakeholders. There is a description of our alternative approach with regard to traffic through Wickham Market associated with our proposals for a southern park and ride facility, which is presented as an alternative to the two traffic management

options presented at Stage 3 (see Chapter 14 of the Stage 3 Main Consultation Document).

1.4.8. Table 1.1 summarises the design or scheme changes to each element of development consulted on at Stage 3. The table also indicates where more detailed descriptions of the development and full PEI can be found in the Stage 3 Main Consultation Document.

1.4.9. Chapter 7 of this Stage 4 consultation document explains that large complex projects, such as Sizewell C generate a wide range of impacts both positive and negative. This chapter describes our efforts to maximise the benefits of the Project both nationally and to the local area and our proposals to mitigate and compensate where we cannot avoid or minimise negative impacts.

Table 1.1: Changes from Stage 3 described in this Stage 4 consultation document

Element of Development	Description of Change Proposed at Stage 4	Stage 3 Main Consultation Document Reference
Freight management strategy	Alternative freight management strategy option – the "integrated strategy". See **Chapter 3** of this Stage 4 consultation document.	Volume 1, Chapter 5, Transport Strategy PEI: Throughout Volume 2
Main development site	Minor red line changes to include an alternative entrance roundabout layout. See **Chapter 5, section 5.2** of this Stage 4 consultation document.	Volume 1, Chapter 7, Main Development Site, section 7.5 PEI: Volumes 2A and 3, Chapter 2, Main Development Site PEI
	Minor red line changes to include land necessary for National Grid's electricity pylons. See **Chapter 5, section 5.3** of this Stage 4 consultation document.	Volume 1, Chapter 7, Main Development Site, section 7.5 PEI: Volumes 2A and 3, Chapter 2, Main Development Site PEI
	Two new options presented for the Sizewell C electricity pylons. See **Chapter 5, section 5.4** of this Stage 4 consultation document.	Volume 1, Chapter 7, Main Development Site, section 7.4 PEI: Volumes 2A and 3, Chapter 2, Main Development Site PEI
	A new option for the rail head at land east of Eastland's Industrial Estate. See **Chapter 5, section 5.5** of this Stage 4 consultation document.	Volume 1, Chapter 7, Main Development Site, section 7.5 PEI: Volumes 2A and 3, Chapter 2, Main Development Site PEI
	Minor red line changes to accommodate public rights of way diversions. See **Chapter 5, section 5.6** of this Stage 4 consultation document.	Volume 1, Chapter 17, Highway Improvements, Cycling and Rights of Way PEI: Volumes 2A and 3, Chapter 2, Main Development Site PEI
	Minor red line changes to amend the off-site sports facilities red line. See **Chapter 5, section 5.7** of this Stage 4 consultation document.	Volume 1, Chapter 7, Main Development Site, section 7.6 PEI: Volumes 2A and 3, Chapter 2, Main Development Site PEI
	Minor red line changes to include the Round House. See **Chapter 5, section 5.8** of this Stage 4 consultation document.	Volume 1, Chapter 7, Main Development Site, section 7.5 PEI: Volumes 2A and 3, Chapter 2, Main Development Site PEI
	Minor red line changes to include the Kenton Hills car park. See **Chapter 5, section 5.9** of this Stage 4 consultation document.	Volume 1, Chapter 7, Main Development Site, section 7.5 PEI: Volumes 2A and 3 Chapter 2, Main Development Site PEI

Element of Development	Description of Change Proposed at Stage 4	Stage 3 Main Consultation Document Reference
	Proposed sites for ecological compensation land for marsh harriers. See **Chapter 5, section 5.10** of this Stage 4 consultation document.	New at Stage 4
	Proposed sites for ecological compensation land for fen meadows. See **Chapter 5, section 5.11** of this Stage 4 consultation document.	New at Stage 4
	Proposed sites for flood compensation land. See **Chapter 5, section 5.12** of this Stage 4 consultation document.	New at Stage 4
Green rail route and other rail improvements	Red line changes as a result of design development and stakeholder engagement. See **Chapter 6, section 6.2** of this Stage 4 consultation document.	Volume 1, Chapter 8, Rail and Chapter 9, Level Crossings PEI: Volumes 2A and 3, Chapters 3 (Rail PEI) and Chapter 4 (Other Rail Improvements PEI)
Sizewell link road	Red line changes as a result of design development and stakeholder engagement and consideration of whether all or part of the Sizewell link road should be temporary only. See **Chapter 6, section 6.3** of this Stage 4 consultation document.	Volume 1, Chapter 10, Sizewell Link Road PEI: Volumes 2A and 3, Chapter 5, Sizewell Link Road PEI
Theberton bypass	Red line changes as a result of design development and stakeholder engagement. See **Chapter 6, section 6.4** of this Stage 4 consultation document.	Volume 1, Chapter 11, Theberton Bypass PEI: Volumes 2A and 3, Chapter 6, Theberton Bypass PEI
Two village bypass	Red line changes as a result of design development and stakeholder engagement. See **Chapter 6, section 6.5** of this Stage 4 consultation document.	Volume 1, Chapter 12, Two Village Bypass PEI: Volumes 2B and 3, Chapter 7, Two Village Bypass PEI
Northern park and ride (Darsham)	Red line changes as a result of design development and stakeholder engagement. See **Chapter 6, section 6.6** of this Stage 4 consultation document.	Volume 1, Chapter 13, Northern Park and Ride PEI: Volumes 2B and 3, Chapter 8, Northern Park and Ride PEI
Southern park and ride (Wickham Market)	Description of an alternative approach for managing traffic impacts through Wickham Market. Red line changes as a result of design development and stakeholder engagement. See **Chapter 6, section 6.7** of this Stage 4 consultation document.	Volume 1, Chapter 14, Southern Park and Ride PEI: Volumes 2B and 3, Chapter 9, Southern Park and Ride PEI
Freight management facility	Red line changes as a result of design development and stakeholder engagement. See **Chapter 6, section 6.8** of this Stage 4 consultation document.	Volume 1, Chapter 15, Freight Management Facility PEI: Volumes 2B and 3, Chapter 10, Freight Management Facility PEI
Yoxford roundabout and other highway improvements	Red line changes as a result of design development and stakeholder engagement. See **Chapter 6, section 6.9** and **6.10** of this Stage 4 consultation document.	Volume 1, Chapter 16 (Yoxford Roundabout) and Chapter 17 (Other Highway Improvements) PEI: Volumes 2B and 3, Chapter 11 (Yoxford Roundabout PEI) and Chapter 12 (Other Highway Improvements PEI)

1.5. Approach to consultation

1.5.1. This Stage 4 consultation is being carried out in accordance with EDF Energy's Updated Statement of Community Consultation (SoCC) (2016), which has been agreed with Suffolk Coastal District Council (SCDC) (now East Suffolk Council) and SCC. As the SoCC explains, we have committed to undertaking three main stages pre-application consultation and further stages of limited, focused consultation as necessary prior to submitting our application for development consent. This Stage 4 consultation is a further focused consultation aimed at presenting refinements to our proposals. The planning process is illustrated in **Figure 1.2**.

Figure 1.2: Planning process

1.5.2. This Stage 4 consultation is planned to run between 18 July 2019 and 27 September 2019. Full details of the planned consultation activities are set out in **Chapter 8** of this Stage 4 consultation document.

1.5.3. The final proposals included in the application for development consent will have regard to the outcome of this consultation, further engagement with statutory consultees, and further environmental and modelling assessments.

1.5.4. Following the submission of the application for development consent, consultation will continue to be an important feature of the planning process. The application will be submitted to the Planning Inspectorate who will examine the application and make a recommendation to the Secretary of State who will ultimately determine whether development consent is granted. As part of that process, the Planning Inspectorate will encourage the submission of views on the entire Project from interested parties. The application will be largely examined in writing but it is likely that a series of open floor and issue specific hearings will be held so that the Planning Inspectorate is made fully aware of all the views of interested parties.

1.5.5. If stakeholders wish to understand more about the planning process for nationally significant infrastructure projects, further information is available on the Planning Inspectorate's website: http://infrastructure.planninginspectorate.gov.uk/

1.5.6. Outside these formal stages of the process we will continue to engage informally with interested parties.

1.6. Approach to acquisition of land

1.6.1. As part of this consultation, EDF Energy will continue to consult with land owners whose land would need to be acquired to deliver the proposals. EDF Energy is committed to acquiring all interests in land by private agreement wherever possible. However, EDF Energy will seek powers of compulsory purchase in the application for development consent over all third party land required for the development. In the event that negotiations with some land owners are unsuccessful, EDF Energy would propose to acquire land via compulsory purchase.

2. PROJECT OVERVIEW

2.1. Introduction

2.1.1. The Stage 3 Main Consultation Document provided detailed information on the Project as a whole, including the relevant planning policy context, our socio-economic and transport strategies, and detailed scheme descriptions for the development at the main site and each of the different associated development components - based on the two alternative freight management strategies: a rail-led and a road-led strategy.

2.1.2. The purpose of this Stage 4 consultation is to provide an update on EDF Energy's thinking in relation to the various components of the Project and to introduce, and seek views upon, an alternative third option for the management of freight transport, which we refer to as the 'integrated strategy'.

2.1.3. EDF Energy believes that rail should play an important role in the delivery of freight during construction, but feedback from Network Rail to our Stage 3 consultation has highlighted a risk that works to the East Suffolk line (which would be necessary as part of the rail-led strategy) could impact negatively on the programme for construction of the Project. Network Rail's consultation response states that *"…Network Rail has identified a number of risks to the rail-led solution that could potentially impact the programme in terms of the submission date for the DCO".* Due to Network Rail's obligations as a statutory undertaker with responsibilities across the whole rail network, Network Rail would not be able to commit to a definitive programme for carrying out works to the East Suffolk line, even after carrying out further assessment and design work. Pursuing the rail-led strategy would therefore mean accepting greater uncertainty about when the power station would become operational, which may be of concern to potential investors and to the Government given the "urgent" need for new nuclear capacity identified in the NPS for Nuclear Power Generation (NPS EN – 6). While we are continuing to consider the rail-led strategy as an option, the integrated strategy has the advantage that it uses rail freight deliveries to the maximum extent possible without requiring works to the East Suffolk line.

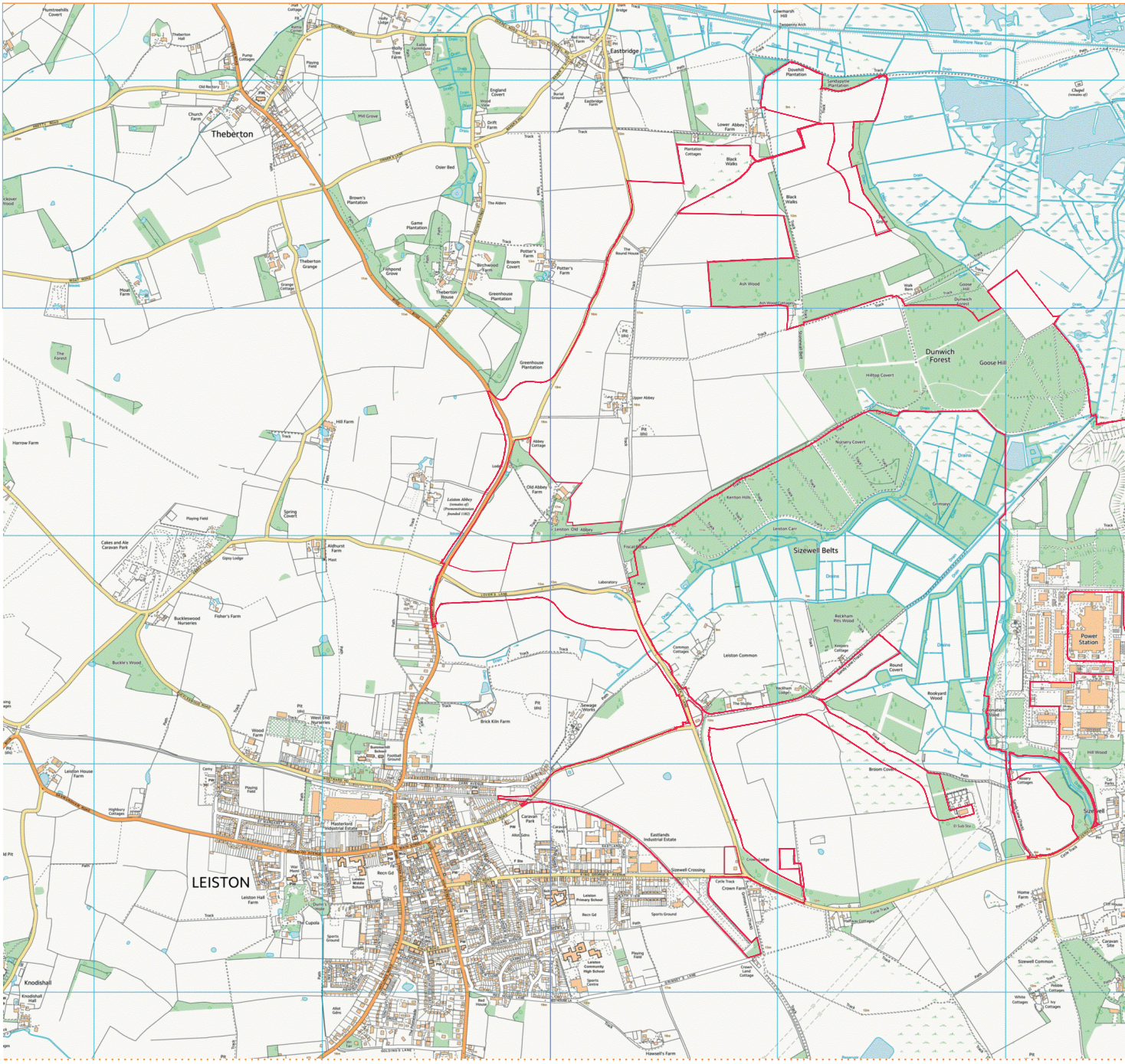
2.1.4. Details of the integrated strategy are set out in **Chapter 3** of this Stage 4 consultation document with updated traffic modelling information at **Chapter 4**.

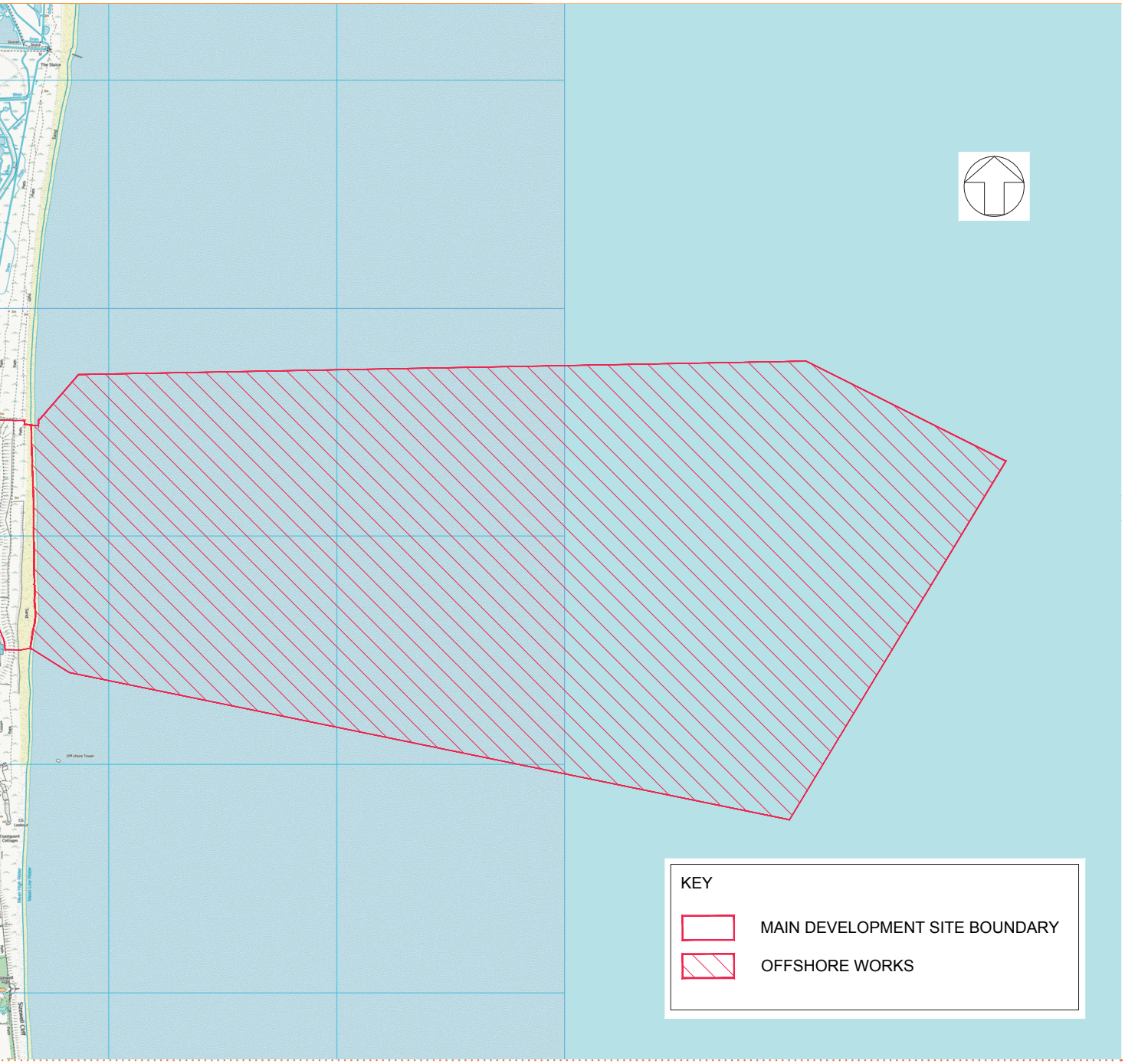
2.1.5. Much of the detail of the rest of our proposals set out at Stage 3 remains unchanged and has not therefore been repeated in full in this Stage 4 consultation document. This chapter provides a high-level overview of each element of the Project - with cross references to the Stage 3 material where details have not changed. Changes and alternative options that are proposed in this Stage 4 consultation are highlighted. We provide further details of the proposed changes and options at **Chapters 5** and **6** of this Stage 4 consultation document for the main development site and associated developments respectively.

2.2. Site and scheme overview

2.2.1. The Sizewell C site is located on the Suffolk Coast, approximately half way between Felixstowe and Lowestoft, to the north-east of the town of Leiston (see **Figure 2.1**). The proposed nuclear power station would be located immediately to the north of the existing Sizewell B power station and would comprise two United Kingdom European Pressurised Reactor (UK EPR™) units with an expected net electrical output of approximately 1,670 megawatts (MW) per unit, giving a total site capacity of approximately 3,340MW.

Figure 2.1: Main Development Site context




KEY
MAIN DEVELOPMENT SITE BOUNDARY
OFFSHORE WORKS

2.2.2. The design of the UK EPR™ units is based on technology used successfully and safely around the world for many years, including innovations to enhance performance and safety. The UK EPR™ design has passed the Generic Design Assessment (GDA) process undertaken by United Kingdom (UK) regulators, and has been licensed and permitted at Hinkley Point C. Once operational, Sizewell C would be able to generate enough electricity to supply approximately six million homes (about 20% of Britain's homes).

2.2.3. In addition to the key operational elements of the power station, the Project would comprise other permanent and temporary development to support the construction and operation of the power station, including temporary campus accommodation, two park and ride facilities, a freight management facility and various road and rail improvements. Different permutations of these associated development components would be progressed depending on which strategy is progressed for the management of construction freight (the road, rail or integrated strategies).

2.3. Main Development Site

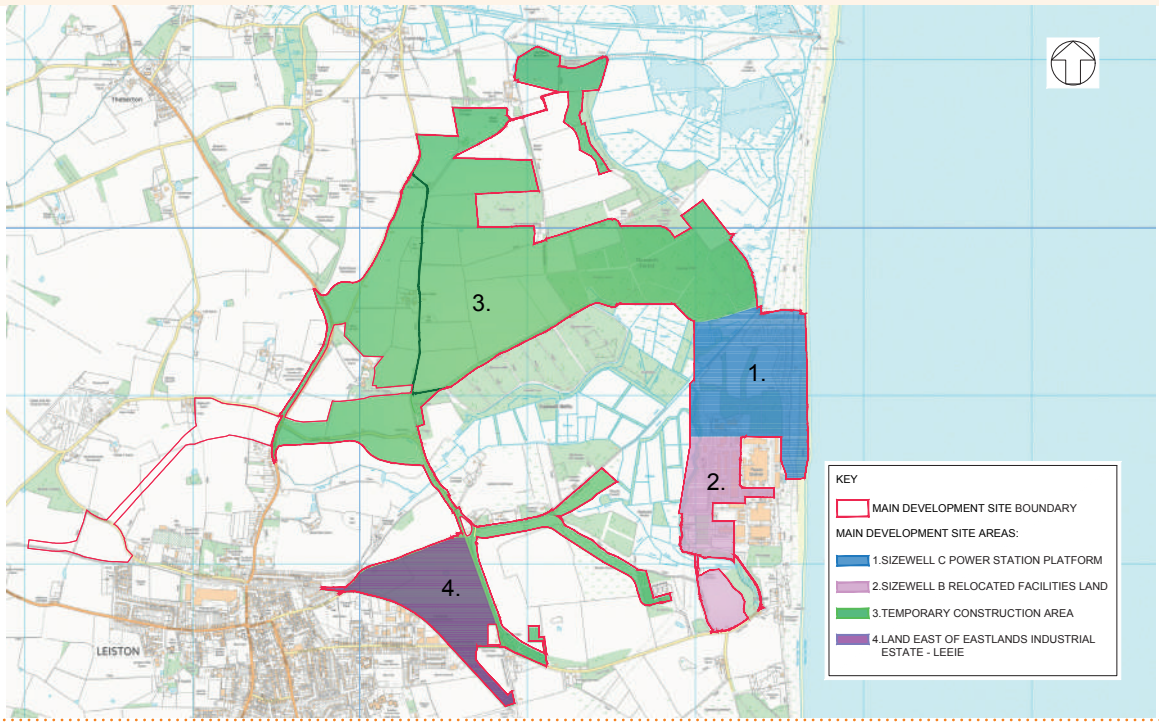
a) Introduction

2.3.1. The main development site, located on the Suffolk coast to the north-east of Leiston, comprises the total area needed for the construction and operation of the Sizewell C power station. It includes land required for permanent development to the north of the existing Sizewell B power station as well as additional land required to support the construction of the Sizewell C power station.

2.3.2. The main development site is made up of four principal components as shown at **Figure 2.2**, namely:

- **The power station platform (main platform):** the area that would become the power station itself.
- **Sizewell B relocated facilities land:** the area that certain Sizewell B facilities would be moved to in order to release other land for Sizewell C.
- **Temporary construction area:** the area located primarily to the north and west of the Site of Special Scientific Interest (SSSI) crossing, which would be used to support construction activity on the main platform.
- **Land east of Eastlands Industrial Estate (LEEIE):** the area directly north of Sizewell Halt, which would be used to support construction on the main platform and the temporary construction area.

Figure 2.2: Main development site and sub areas



b) Proposed development

i. Introduction

2.3.3. Development at the main development site is likely to comprise the following building, engineering or other operations:

- nuclear power station, including two UK EPR™ reactor units capable of exporting a total of approximately 3,340MW to the National Grid;
- associated buildings, plant and infrastructure within the power station perimeter, including overhead power lines and pylons;
- associated buildings, plant and infrastructure outside of the power station perimeter, including a training building, beach landing facility and flood defences;
- marine works and associated infrastructure, including a cooling water system and combined drainage outfall in the North Sea;
- a temporary accommodation campus for up to 2,400 construction workers and associated facilities, buildings and infrastructure, located east of Eastbridge Road;
- connection to the National Grid 400 Kilovolts (kV) substation to the south of Sizewell C by overhead lines;
- relocation of certain Sizewell B supporting buildings, plant and infrastructure south of Sizewell C;
- vehicular and pedestrian crossing over the Sizewell Marshes SSSI south of Goose Hill;
- power station access road, linking the SSSI crossing with a new roundabout onto Abbey Road (B1122);
- public access works including permanent and temporary closures and diversions of public rights of way;
- diversion and installation of utilities and services;
- temporary construction compounds, parking, laydown areas and working areas, plus related works and structures;
- temporary spoil management areas, including borrow pits and stockpiles;
- temporary rail infrastructure associated with the green rail route (for the rail-led and integrated strategies only);
- landscape restoration works and planting; and
- flood compensation areas.

2.3.4. Development at the LEEIE would comprise the following buildings, engineering or other operations. The majority of this development, unless otherwise stated, would be temporary and required only during the construction phase. This includes alternative options for either the reconfiguration of the existing Sizewell Halt (Option 1), the rail siding identified at Stage 3 (Option 2) or a new rail spur as described in **Chapter 5** of this document (Option 3):

- construction compounds, laydown areas and working areas, plus related works and structures;
- spoil management areas, including stockpiles;
- accommodation for approximately 400 caravans and associated welfare and parking;
- Heavy Goods Vehicle (HGV) and bus management area;
- a park and ride facility;
- reconfiguration of the existing railhead at Sizewell Halt to accommodate longer trains (for Option 1– permanent);
- overhead conveyor system to transfer freight material into LEEIE over King George's Avenue (for Option 1);
- a rail siding adjacent to the existing railway track (for Option 2);
- a new rail spur located centrally within the LEEIE (Option 3); and
- landscape restoration works and planting (permanent).

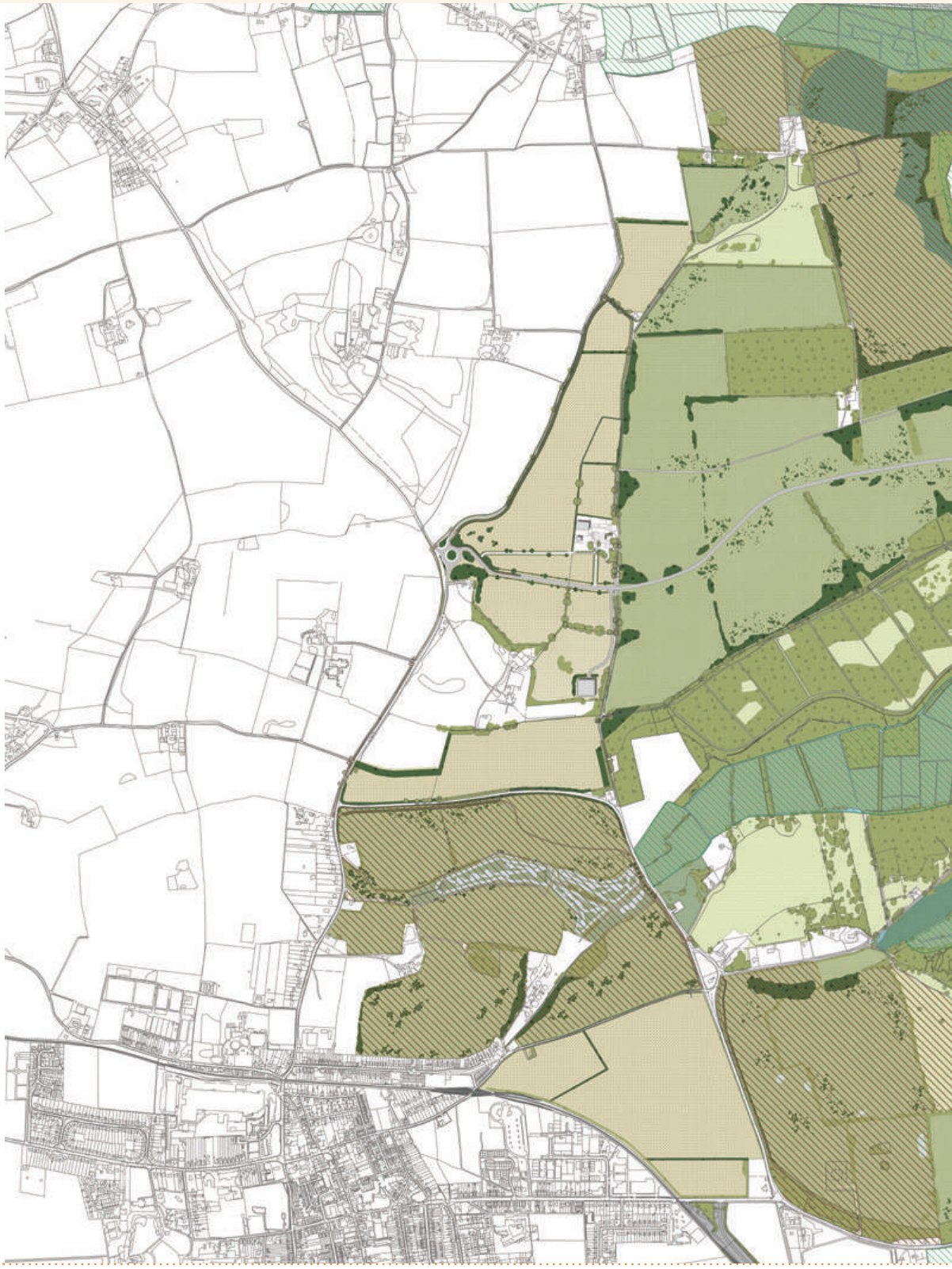
2.3.5. In addition to development within the boundary of the main development site, additional works are proposed as part of the development, which are directly related to works within the main development site. These include:

- ecological compensation sites;
- flood compensation areas; and
- new sports facilities at Leiston.

2.3.6. We provided an overview of how nuclear power works, including how the buildings and structures that serve a UK EPR™ reactor are typically arranged at Volume 1, Chapter 7, section 7.2 of the Stage 3 Main Consultation Document as well as the design principles and design brief that will guide the development of the main site.

2.3.7. A summary of the permanent development and construction phase at the main development site as proposed at Stage 4 is provided in **sections 2.3.8** to **2.3.32** of this chapter, followed by a summary in **sections 2.3.33** to **2.3.36** of this chapter of how this differs from what was proposed at Stage 3.

Figure 2.3: Operational masterplan



KEY

EXISTING:

- Site of Special Scientific Interest (SSSI)
- Vegetation / Woodland
- Wet Grassland / Reedbed
- Lowland Heath Mosaic
- Ponds, Scrapes, Drainage Channels
- Shingle Beach and Vegetated Dune

PROPOSED:

- Vegetation / Woodland
- Lowland Heath Mosaic
- Improved Pasture
- Vegetated Embankment
- Ponds, Scrapes, Drainage Channels
- Vegetated Sea Defence Structure
- Flood Compensation Areas
- Mitigation and Compensation Areas

ii) Permanent development

2.3.8. The Sizewell C power station would operate 24 hours a day for 60 years, with around 900 staff during normal periods of operation.

2.3.9. The operational masterplan for the main development site is shown at **Figure 2.3**.

2.3.10. The power station itself, to be located directly to the north of Sizewell B, is comprised of components including the nuclear safety buildings (including reactor building), turbine halls, cooling water pump houses, Operational Service Centre (OSC), interim spent fuel store, intermediate level waste interim store and the raw water supply and storage facility.

2.3.11. As explained at Stage 3, the nuclear safety buildings would be physically defined by their functions and operational requirements. We explained that these buildings would have an exposed concrete finish and that the Sizewell C reactor buildings cannot have cladding or be painted as this would mask any deterioration of the concrete. This principle applies to all the safety buildings.

2.3.12. The two turbine halls, along with the reactor buildings, would be the most prominent buildings on the power station. We recognise that their relationship with designated landscapes within the Area of Outstanding Natural Beauty (AONB) and Suffolk Heritage Coast is particularly important. We set out at Stage 3 how we are seeking to design the buildings and put forward two potential options for the colour and cladding of the buildings. We are continuing to consider these options.

2.3.13. The OSC, located between the two turbine halls, would be the main focus for the workforce during the power station's operational lifetime. It would be in operation 24 hours a day, seven days a week and largely comprise office space with workshop and warehouse functions at the lower levels.

2.3.14. The interim spent fuel store building would be located to the south-east of the power station platform. The design of the building means that the external facades do not need to be constructed of concrete, so cladding could be applied.

2.3.15. There is a requirement for one forebay for each UK EPR™ reactor unit, which would receive water from the intake tunnels and a single cooling water intake would feed directly into each open forebay. The forebay structures are not visible from the majority of public viewpoints.

2.3.16. It would be necessary to provide an electrical connection between Sizewell C and a National Grid substation to export the electrical output of Sizewell C. This connection will be provided via an overhead line, subject to the assessment of alternatives. As set out at Stage 3, four pylons are likely to be necessary. Further design work in response to consultation feedback has shown that we may be able to reduce the height of three of these four pylons by 25%. Alternatively, we could introduce an extra fifth pylon, which would allow all pylons to be 25% shorter than the heights set out at Stage 3.

2.3.17. We explained at Stage 3 the need for the relocation of the existing Sizewell B facilities that are currently on the Sizewell C site to other areas to the south of the Sizewell B complex.

2.3.18. The operational masterplan at **Figure 2.3** illustrates the layout of the remainder of the EDF Energy estate during the operational phase, including the proposed access from the B1122, staff car park, a training building, a SSSI crossing (at the point that the access road crosses the Sizewell Marshes SSSI), the northern mound, new sea defences, cooling water infrastructure, emergency equipment store and a backup generator at Upper Abbey Farm, an electrical substation, and a helipad.

2.3.19. The masterplan proposals would help to mitigate the landscape and visual effects of the power station development within the AONB as well as delivering ecological mitigation. This mitigation includes measures both on- and off-site, for example our Aldhurst Farm habitat creation scheme.

2.3.20. Further details on the layout and design of the power station when operational, the relocation of Sizewell B facilities currently on the Sizewell C site and the remainder of the EDF Energy estate during operation are provided at Volume 1, Chapter 7, section 7.4 of the Stage 3 Main Consultation Document, which should be read alongside the changes set out in this document, but which are summarised below and set out in detail at **Chapter 6** of this Stage 4 consultation document.

iii) Construction phase

2.3.21. The main development site can be divided into seven areas for the construction phase, as shown at **Figure 2.4**, namely:

1. land at, west and south of Sizewell A and Sizewell B power stations;
2. north of Sizewell B power station;
3. east of Bridleway 19 and north of Kenton Hills;
4. west of Bridleway 19;
5. land east of Eastlands Industrial Estate including Sizewell Halt;
6. north of Sizewell Gap and south of Sandy Lane; and
7. Suffolk Coast.

Figure 2.4: Main development site and sub areas during construction

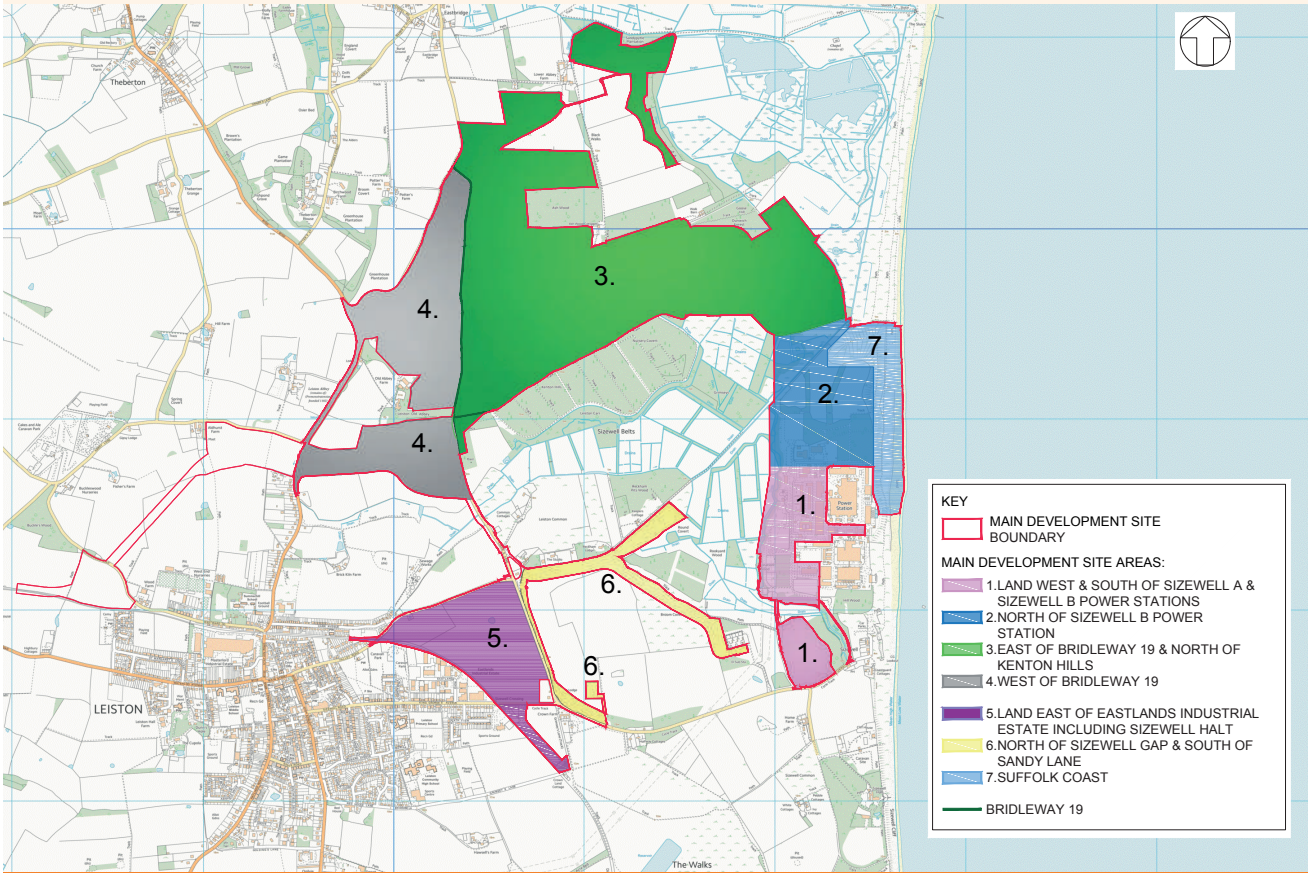
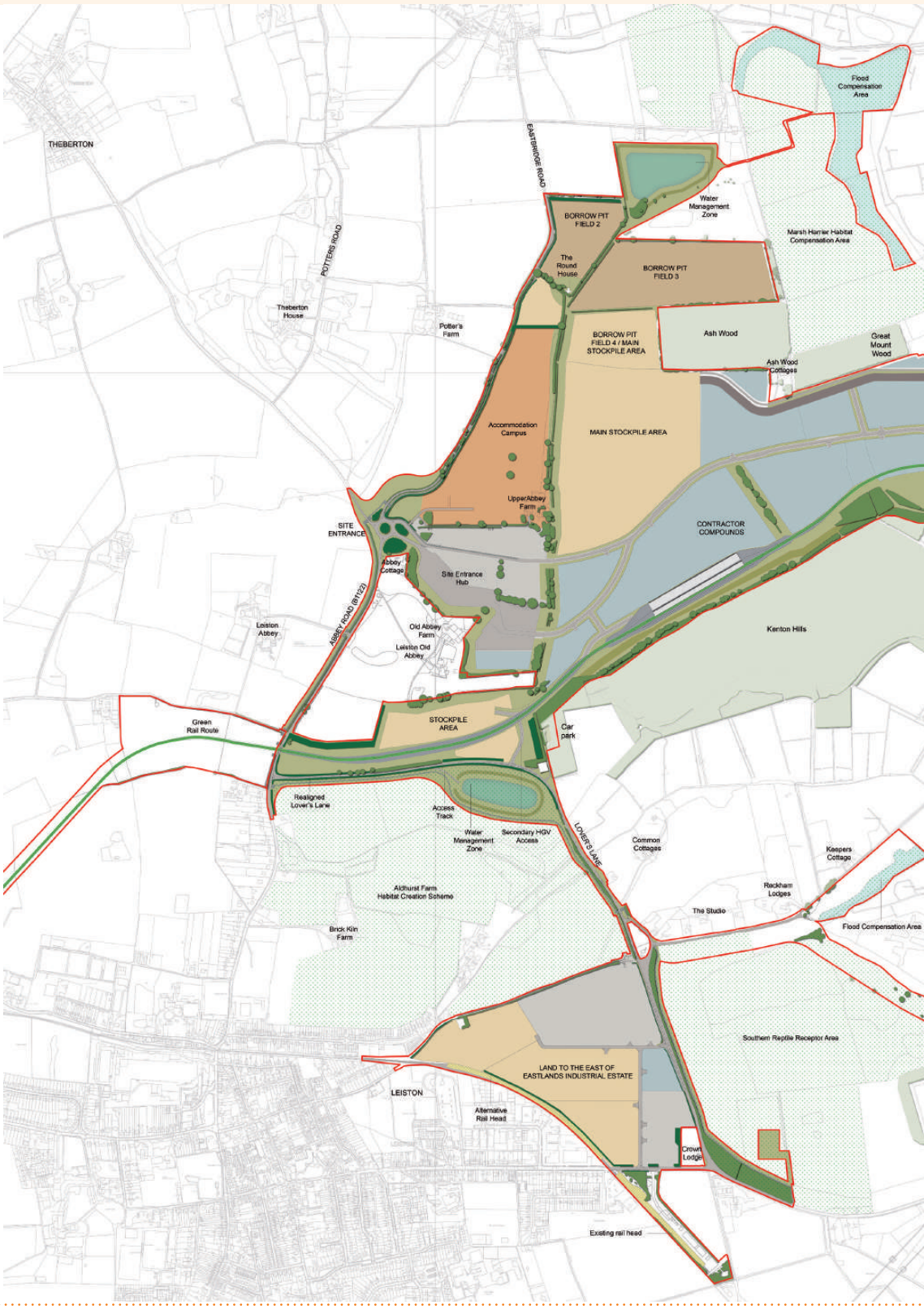


Figure 2.5: Construction masterplan: rail-led and integrated strategies




NORTH SEA
Access Track
Dunwich Forest
Water Management Zone
CONTRACTOR COMPOUNDS
Goose Hill
COMMON USER FACILITIES
SSSI Crossing
Sizewell drain
Grimseys
MAIN POWER STATION PLATFORM
Realigned ditch
Perimeter construction access road
National grid construction working area
Sizewell B Power Station
Sizewell A Power Station
Greater Gabbard substation
Galloper substation
PILLBOX FIELD
SIZEWELL VILLAGE
NORTH SEA

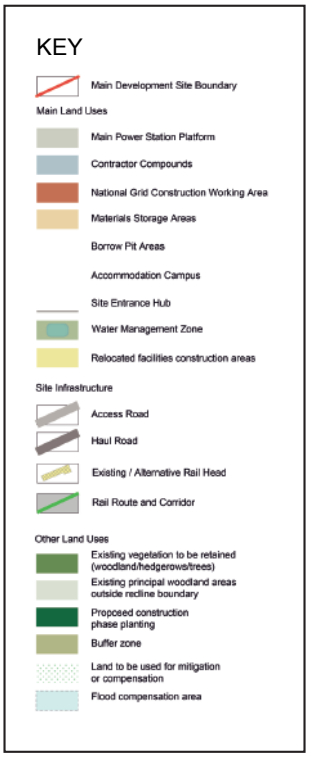
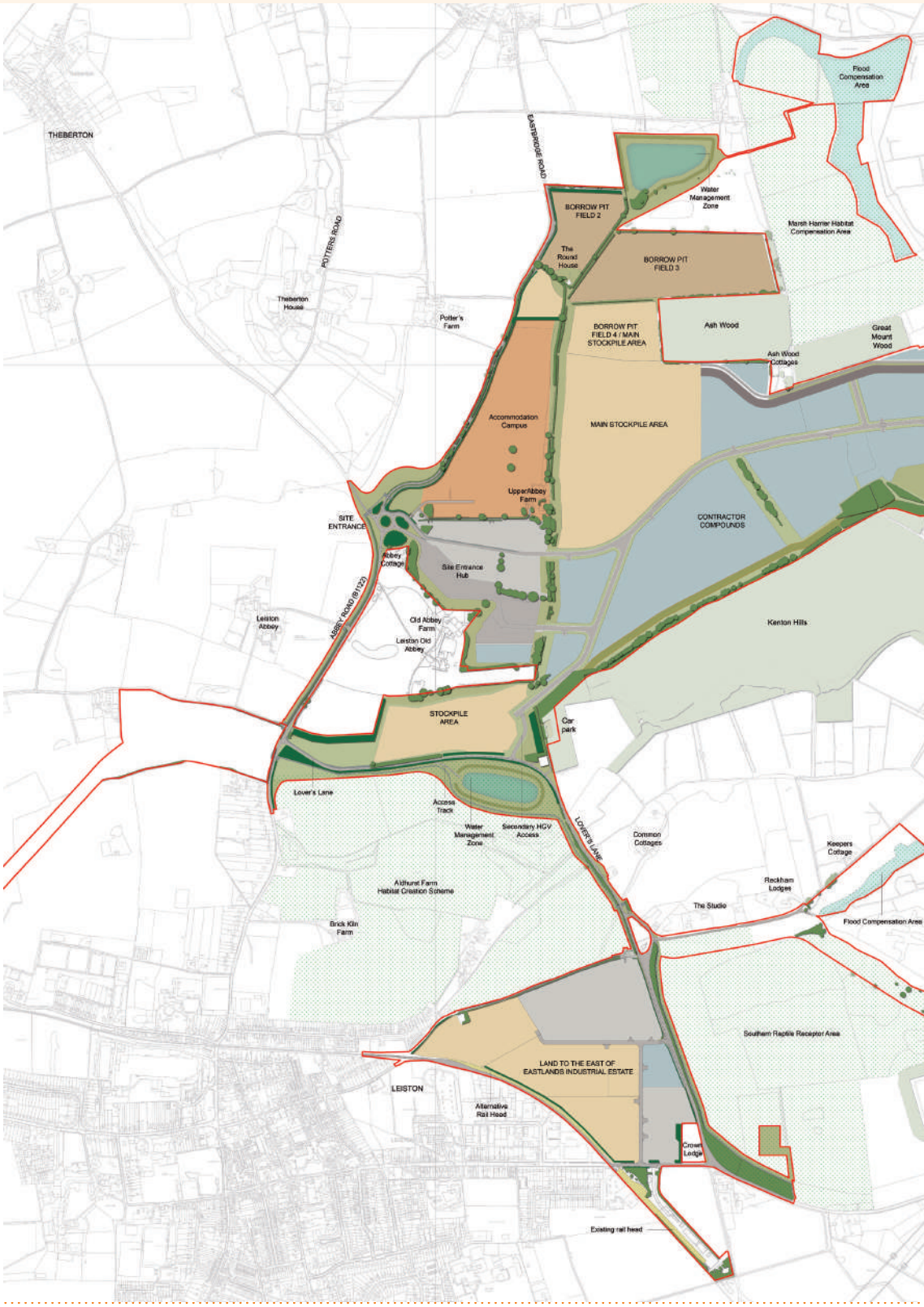

KEY
Main Development Site Boundary
Main Land Uses
Main Power Station Platform
Contractor Compounds
National Grid Construction Working Area
Materials Storage Areas
Borrow Pit Areas
Accommodation Campus
Site Entrance Hub
Water Management Zone
Relocated facilities construction areas
Site Infrastructure
Access Road
Haul Road
Existing / Alternative Rail Head
Rail Route and Corridor
Other Land Uses
Existing vegetation to be retained (woodland/hedgerows/trees)
Existing principal woodland areas outside redline boundary
Proposed construction phase planting
Buffer zone
Land to be used for mitigation or compensation
Flood compensation area

Figure 2.6: Construction masterplan: road-led strategy




NORTH SEA
Access Track
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Sizewell A Power Station
Greater Gabbard substation
Galloper substation
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Contractor Compounds
National Grid Construction Working Area
Materials Storage Areas
Borrow Pit Areas
Accommodation Campus
Site Entrance Hub
Water Management Zone
Relocated facilities construction areas
Site Infrastructure
Access Road
Haul Road
Existing / Alternative Rail Head
Rail Route and Corridor
Other Land Uses
Existing vegetation to be retained (woodland/hedgerows/trees)
Existing principal woodland areas outside redline boundary
Proposed construction phase planting
Buffer zone
Land to be used for mitigation or compensation
Flood compensation area

2.3.22. **Figures 2.5** and **2.6** illustrate two potential construction masterplans for the main development site for the rail-led or integrated strategies (where the masterplan would be the same) and for the road-led strategy.

2.3.23. The rail-led and integrated strategies include the green rail route, whereas the road-led strategy does not.

2.3.24. Construction of the power station would take between nine and twelve years, and we set out a five phase construction programme (from initial site establishment and preparation for earthworks through to the removal of the temporary facilities and site restoration) at Volume 1, Chapter 2 of the Stage 3 Main Consultation Document.

2.3.25. As we set out at Stage 3, in order to establish the main platform it would be necessary to develop on a small part of the Sizewell SSSI, involving the establishment of a cut off wall and dewatering and ground excavation and refilling to form the foundations of the power station. It would be necessary to provide a connection across the SSSI during both operation and construction and we outlined four different options for achieving this crossing at Stage 2. We explained our preference for a causeway over a culvert at Stage 3 (Volume 1, Chapter 7, section 7.4 of the Main Consultation Document).

2.3.26. The LEEIE plays an important role during construction by enabling the delivery of bulk materials by rail and providing other key functions including 400 temporary caravans for construction workers, a logistics compound, and a park and ride. We are still considering options for the delivery of freight to the LEEIE (either for a temporary period under the rail-led or integrated strategies or for the duration of the construction period under the road-led strategy), namely the Sizewell Halt (Option 1), a new rail siding adjacent to the existing Saxmundham to Leiston branch line on the LEIEE (Option 2) or a new rail spur located more centrally within the LEEIE (Option 3).

2.3.27. The land within the main development site to the east of Bridleway 19 and north of Sizewell Marshes includes the locations for a series of borrow pits and stockpile areas. The details and phasing for these were set out at Volume 1, Chapter 7 of the Stage 3 Main Consultation Document.

2.3.28. Development on the land to the north of the Sizewell Gap includes proposed underground cables between the Leiston 132kV substation at Sizewell Wents and a new substation located to the east of Old Abbey Farm.

2.3.29. The land to the west of Bridleway 19 and east of the B1122 would accommodate the site entrance hub, located to the east of the proposed new access junction off the B1122. This area would accommodate a number of site facilities during construction including the main site offices and induction facilities, site canteen, bus and car parking areas, freight areas, and security facilities. A roundabout is proposed at the junction with the B1122 to facilitate the main access to Sizewell C (as shown on the construction masterplan).

2.3.30. The proposed accommodation campus for up to 2,400 construction workers would be located to the north-east of the site entrance hub.

2.3.31. A secondary access road would be required to connect the main development site from Lover's Lane to the LEEIE during construction, to facilitate the early delivery of materials from the existing and proposed (if selected) rail infrastructure to the east of Leiston. This secondary entrance junction would be situated a short distance west of the survey laboratory off Lover's Lane (as also shown on the construction masterplan at **Figures 2.5** and **2.6**).

2.3.32. The area within the Suffolk coast section of the main development site would include the phased delivery of sea defences during construction and the beach landing facility to the north-east of the main power station platform.

c) Changes from Stage 3

2.3.33. We summarise in this section how the proposals we are consulting on at this Stage 4 differ from those presented at Stage 3. The main development site boundary as shown at **Figure 2.1** would remain largely the same as the boundary shown at Stage 3, subject to some slight amendments to accommodate changes to the Project in response to the development of more detailed design, further assessment work and responses to feedback provided at Stage 3 in order to limit environmental effects.

2.3.34. The potential changes to the scheme proposed during operational and construction phases are summarised below and set out in more detail at **Chapter 5**:

- **Access roundabout and approach roads** – we are proposing an extension to the red line boundary at the proposed access to the main entrance hub in order to accommodate a change to the location and increase in size of the proposed roundabout. An illustrative layout of the site entrance hub is shown at **Figure 2.7**.
- **Electricity pylons** – we are proposing a change to the red line which would be required for National Grid to carry out the required transmission line modifications. We are also continuing to assess options for the electrical connection between Sizewell C and the National Grid substation. These proposals are shown at **Figures 5.3 – 5.14** at **Chapter 5** of this document.

- **Public rights of way and Bridleway 19 diversion** – we are proposing the inclusion of additional land within the red line to allow for a wider bridleway corridor and to reflect other proposed minor design changes. This is shown at **Figures 5.15 – 5.17** at **Chapter 5** of this document.
- **Leiston off-site sports facilities** – we are proposing the inclusion of additional land between Leiston Leisure Centre and Alde Valley Academy to accommodate new sports facilities. The proposed location of the off-site sports facilities is shown at **Figure 2.8** of this chapter.
- **Round House** – we are now proposing the inclusion of the Round House property within the red line boundary, as shown at **Figure 5.20** at **Chapter 5** of this document.
- **Kenton Hills car park** – as shown at **Figure 5.21** at chapter 5 of this document we are proposing modifications to the site boundary at the Kenton Hills car park to enhance the access to Kenton Hills and the wider estate.
- **Marsh Harrier compensation land** – we have identified three possible sites which could provide suitable compensation for the potential impact of the construction site on Marsh Harriers. These areas are identified at **Figures 5.22 – 5.24** at **Chapter 5** of this document.
- **Fen meadow compensation land** – we have identified two possible locations which could provide appropriate compensation for the loss of Fen Meadow habitat within the Sizewell Marshes SSSI. These areas are identified at **Figures 5.25 – 5.26** at **Chapter 5** of this document.
- **Flood compensation land** – we have identified a requirement for additional land to compensate for the loss of floodplain within the main development site. These areas are identified at **Figures 5.27 – 5.28** at **Chapter 5** of this document.

2.3.35. Further details of the changes are provide in **Chapter 5** of this Stage 4 consultation document.

2.3.36. More detail on the development proposals for the main development site are provided at Volume 1, Chapter 7 of the Stage 3 Main Consultation Document. That chapter should be read alongside the changes set out in this Stage 4 document.

Figure 2.7: Site entrance hub, illustrative layout

Figure 2.8: Proposed location of the off-site sports facilities

Key:
Stage 4 Consultation Boundary

2.4. Green rail route

a) Introduction

2.4.1. The green rail route involves the construction of a rail extension which would branch off the existing Saxmundham to Leiston branch line into the main construction area on a temporary basis during construction. It would form part of the rail-led or integrated strategy options, but would not form part of the road-led strategy.

2.4.2. The purpose of the green rail route would be to facilitate the delivery of freight directly to the main development site - up to three freight deliveries per day during peak construction under the integrated strategy or up to five freight deliveries per day under the rail-led strategy.

Figure 2.9: Summary of rail proposals for the rail-led and integrated strategies

b) Proposed development

2.4.3. The route would extend in a north-easterly direction from the existing Saxmundham to Leiston branch line, approximately 1.5 kilometres (km) west of Leiston, into the main development site. A more detailed description of the land on and around the proposed route of the green rail route is provided in Volume 1, Chapter 8, section 8.4 of the Stage 3 Main Consultation Document.

2.4.4. The green rail route is comprised of a single line rail extension which would connect into the existing Saxmundham to Leiston branch line via a new junction (approximately 500 metres (m) east of the Saxmundham Road level crossing), travelling north-east though open countryside and into the main development site.

2.4.5. It would be constructed early in the construction phase of the Project (under the rail-led and integrated strategies) and construction of the rail infrastructure itself is envisaged to start at the eastern end and progress westwards. Once construction of the power station is complete, the green rail route would be removed and the land on which it was located restored to agricultural use.

2.4.6. At Stage 3 we presented two options: either for part of Buckleswood Road to be stopped up and a new footbridge constructed (Option 1 as shown at **Figure 2.10**) or for a level crossing to be provided at Buckleswood Road (Option 2 as shown at **Figure 2.11**).

Figure 2.10: Green rail route masterplan - option 1 closure of Buckleswood Road

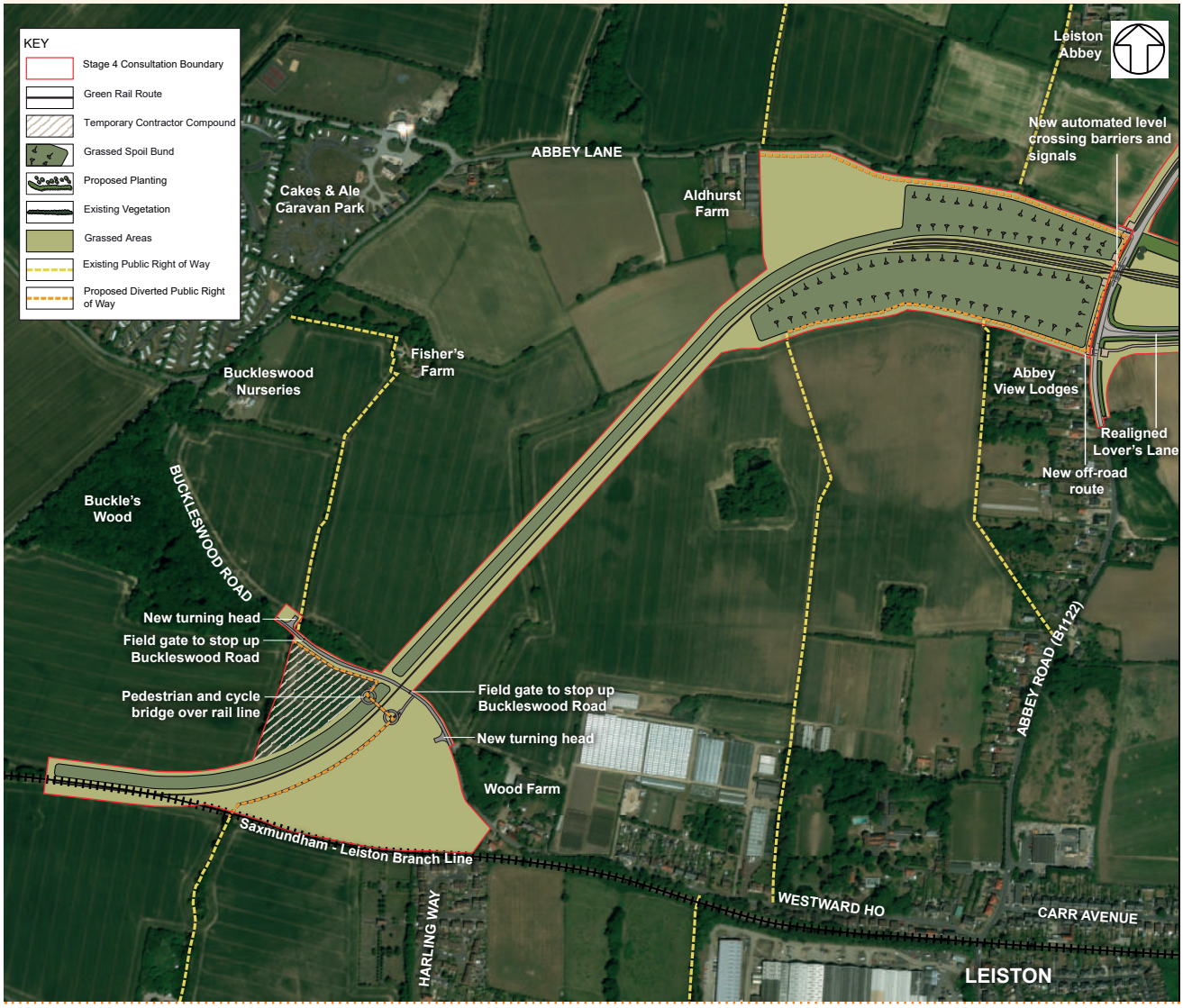
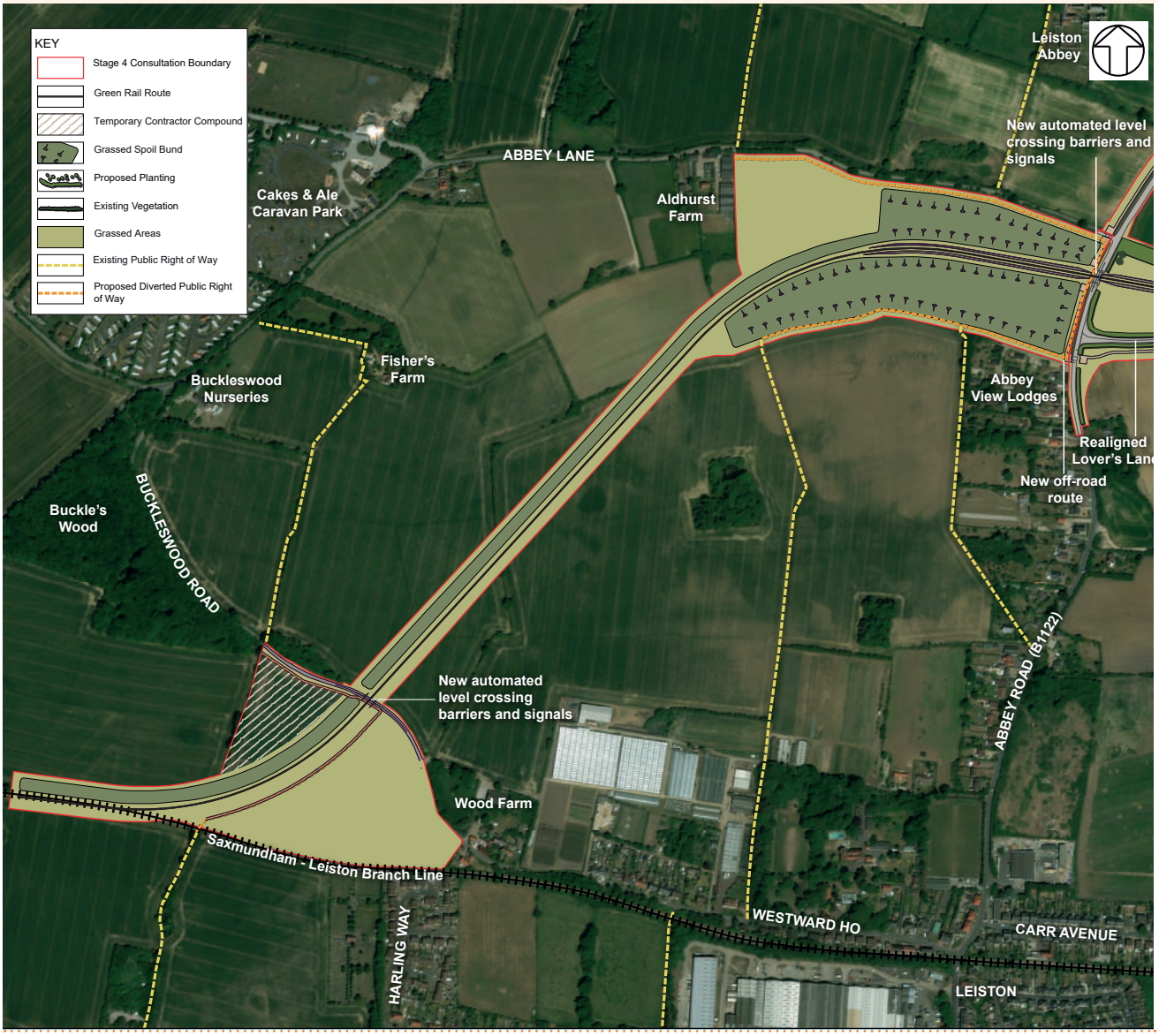


Figure 2.11: Green rail route masterplan - option 2 proposed level crossing



2.4.7. We are currently considering the responses received on these two options at Stage 3.

c) Changes from Stage 3

2.4.8. The physical details of the proposals for the green rail route being consulted on in this Stage 4 consultation remain unchanged from those shown at Stage 3.

2.4.9. The only difference is that under the integrated strategy the green rail route would accommodate three freight trains per day at peak construction (six movements per day) compared to five freight trains proposed under the rail-led strategy (ten movements per day). The implications of this difference are addressed in **Chapter 4** of this Stage 4 consultation document.

2.5. Other rail improvements and changes to level crossings

a) Introduction

2.5.1. The road-led and rail-led strategies we presented at Stage 3 involve different combinations of rail improvement works. These are outlined at Table 8.1 of Volume 1, Chapter 8 of the Stage 3 Main Consultation Document.

2.5.2. The rail-led strategy, in summary, includes:

- alternative options for freight deliveries during the early years of construction either using the existing Sizewell Halt (Option 1) or construction of a new rail siding adjacent to the Saxmundham to Leiston branch line on the LEEIE (Option 2). This strategy could now also be delivered with the construction of a new rail spur located more centrally within the LEEIE (Option 3), as summarised in **section 2.3** and **Chapter 5**;
- the green rail route (as summarised in **section 2.4**);
- infrastructure upgrades to the East Suffolk line, including a passing loop between Ipswich and Saxmundham, signalised upgrades, a track crossover at Saxmundham, 45 level crossings to be upgraded or closed, and rights of way to be diverted; and
- upgrades to the Saxmundham to Leiston branch line, including the upgrading of nine level crossings.

2.5.3. The road-led strategy also includes the three options for freight delivery by rail (i.e. the Sizewell Halt, the rail siding or the rail spur) though it would use whichever option was chosen throughout the entire construction phase, rather than developing the green rail route as per the rail-led and integrated strategy. The Saxmundham to Leiston branch line upgrades would be delivered under the road-led strategy but the East Suffolk line upgrades would not be required.

2.5.4. The new integrated strategy option would involve each of these elements, with the exception of the upgrades to the East Suffolk line.

b) Proposed development

i) Sizewell Halt, rail siding or rail spur

2.5.5. For each of the potential freight transport strategies, EDF Energy is considering using the existing Sizewell Halt rail terminal on the Saxmundham to Leiston branch line during this period, with some reconfiguration of the existing railhead to accommodate longer trains (as shown at **Figure 2.12**). Alternatively, we are considering the construction of a rail siding adjacent to the existing Saxmundham to Leiston branch line on the LEEIE (as shown at **Figure 2.13**) , or a new rail spur located more centrally within the LEEIE (as shown at **Figure 2.14**). Each option could support up to two freight trains per day.

Figure 2.12: Land east of eastlands industrial estate - option 1 Sizewell Halt

Figure 2.13: Land east of eastlands industrial estate - option 2 rail siding

Figure 2.14: Land east of eastlands industrial estate – option 3 rail spur

2.5.6. Freight would then be transferred by HGV along Lover's Lane to the main development site for any of the options (throughout construction in the road-led strategy or until the green rail route is provided in the rail-led and integrated strategies).

2.5.7. With the exception of the introduction of an option to provide a new rail spur in the LEEIE, the details of the road- and rail-led strategies have not changed since the Stage 3 consultation. A more detailed description of the strategies is provided at Volume 1, Chapter 8, section 8.3 of the Stage 3 Main Consultation Document.

2.5.8. We are still considering responses received at Stage 3 on the Sizewell Halt and rail sidings options, which will inform the final decision of which to progress in the Development Consent Order (DCO) application. We welcome your thoughts on the new option for a rail spur located more centrally within the LEEIE (Option 3). Further details are set out in **Chapter 5**.

ii) Upgrades to the East Suffolk line and changes to level crossings

2.5.9. At Stage 3 we presented a number of infrastructure upgrades and changes to level crossings to the East Suffolk line required for the rail-led strategy once the green rail route was operational. These works would be required in order to accommodate the additional five freight trains over a 24 hour period on the line.

2.5.10. These upgrades included:

- a passing loop between Ipswich and Saxmundham;
- improvements to the junction of the East Suffolk line and the Saxmundham to Leiston branch line (the Saxmundham crossover);
- signalling improvements as a result of the new passing loop and Saxmundham crossover; and
- upgrade or closure of 45 level crossings along the route.

2.5.11. These capacity upgrades to the East Suffolk line would be necessary for the rail-led strategy in order to facilitate up to ten freight train movements per day at peak construction. These improvements would not be necessary for the road-led strategy or the integrated strategy.

2.5.12. The details of these works have not changed since the Stage 3 consultation, although we have become concerned at Network Rail's ability to deliver them in line with the required programme for the delivery of the Project. A more detailed description of the options is provided at Volume 1, Chapter 8, sections 8.5 and 9.3 of the Stage 3 Main Consultation Document.

iii) Saxmundham to Leiston branch line and changes to level crossings

2.5.13. The Saxmundham to Leiston branch line includes the entirety of the line from the junction with the East Suffolk line to the Sizewell Halt to the east.

2.5.14. We explained at Stage 3 that the Saxmundham to Leiston branch line would require upgrades in order to handle the freight trains required for the Project. These include:

- track repairs or replacement works to the standard required for freight transport; and
- upgrades to each of the nine operational level crossings on the line.

2.5.15. These works would be necessary for each of the road-led, rail-led and integrated strategy options.

2.5.16. These changes would be retained following completion of construction of Sizewell C. For full details of the options, refer to Volume 1, Chapter 8, sections 8.6 and 9.4 of the Stage 3 Main Consultation Document.

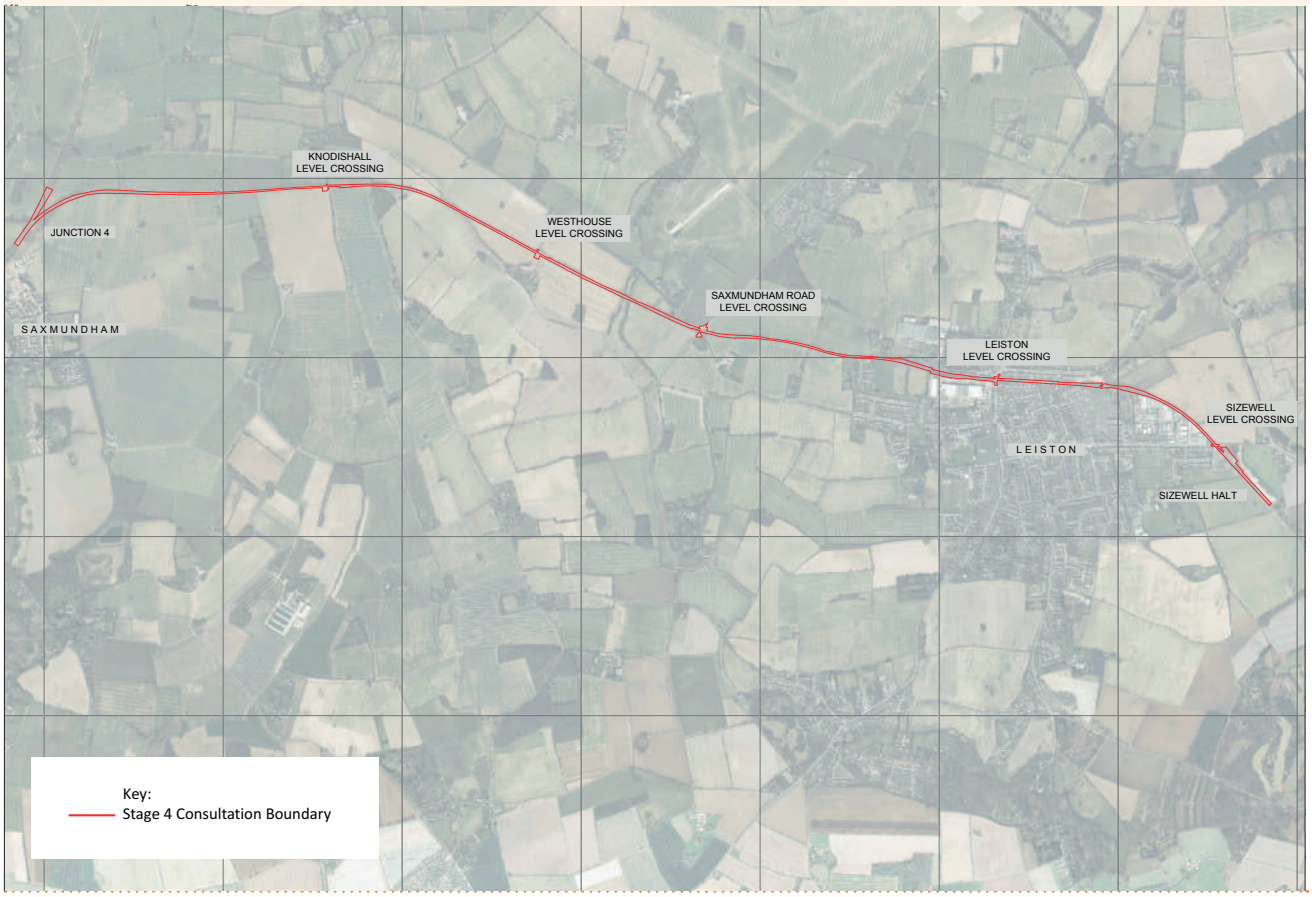
c) Changes from Stage 3

2.5.17. The two options for either the Sizewell Halt or new rail siding, as described at Stage 3, remain unchanged in this Stage 4 consultation. A new option for a rail spur located more centrally within the LEEIE is now included and more details are set out in **Chapter 5**. One of these options would be required for each of the rail-led, integrated or road-led strategies (temporarily for rail-led and integrated, or for the entire construction phase for the road-led strategy).

2.5.18. The upgrades to the East Suffolk line would only be required for the rail-led strategy and remain unchanged from Stage 3. Discussions with Network Rail, however, have identified that there are risks and uncertainty around the timing and deliverability of these improvements.

2.5.19. The upgrades to the Saxmundham to Leiston branch line are required for all strategy options and also remain largely unchanged in principle from Stage 3. However, in order to have control over the delivery of the necessary works, we now propose that the entire route of the Saxmundham to Leiston branch line (as shown at **Figure 2.15**) and all the land required to undertake the upgrade works would be included within the application red line. This includes extensions to the red line boundaries at five of the nine level crossings, to more accurately align with land ownership boundaries. This change of application boundary would mean that EDF Energy could deliver the upgrade works if necessary.

Figure 2.15: Saxmundham to Leiston branch line



2.6. Sizewell link road

a) Introduction

2.6.1. The Sizewell link road was introduced at Stage 3 as part of EDF Energy's proposals for the road-led transport strategy. It would not be required as part of the rail-led strategy, though it is proposed as part of the new integrated strategy option.

2.6.2. The Sizewell link road would involve the construction of a new road originating at the A12 to the south of Yoxford and heading east to the main development site, thereby providing a bypass for the B1112.

2.6.3. The traffic using all or part of the Sizewell link road would include construction workers arriving by car, park and ride buses from both the proposed northern and southern park and ride sites, and goods vehicles delivering freight to the construction site. The Sizewell link road would be open to public use alongside construction traffic associated with the Project.

2.6.4. The Sizewell link road would therefore relieve the B1122 through Theberton and Middleton Moor of this traffic. It would also substantially reduce Project-related traffic flow through Yoxford, by removing the need for traffic from the south to access the B1122 from the A12 at Yoxford.

b) Proposed development

2.6.5. The single carriageway 6.8km Sizewell link road would provide a bypass to the existing B1122 across predominantly agricultural land to the south-west of the B1122.

2.6.6. The proposed masterplan is shown at **Figures 2.16 – 2.21**.

Figure 2.16: Sizewell link road masterplan

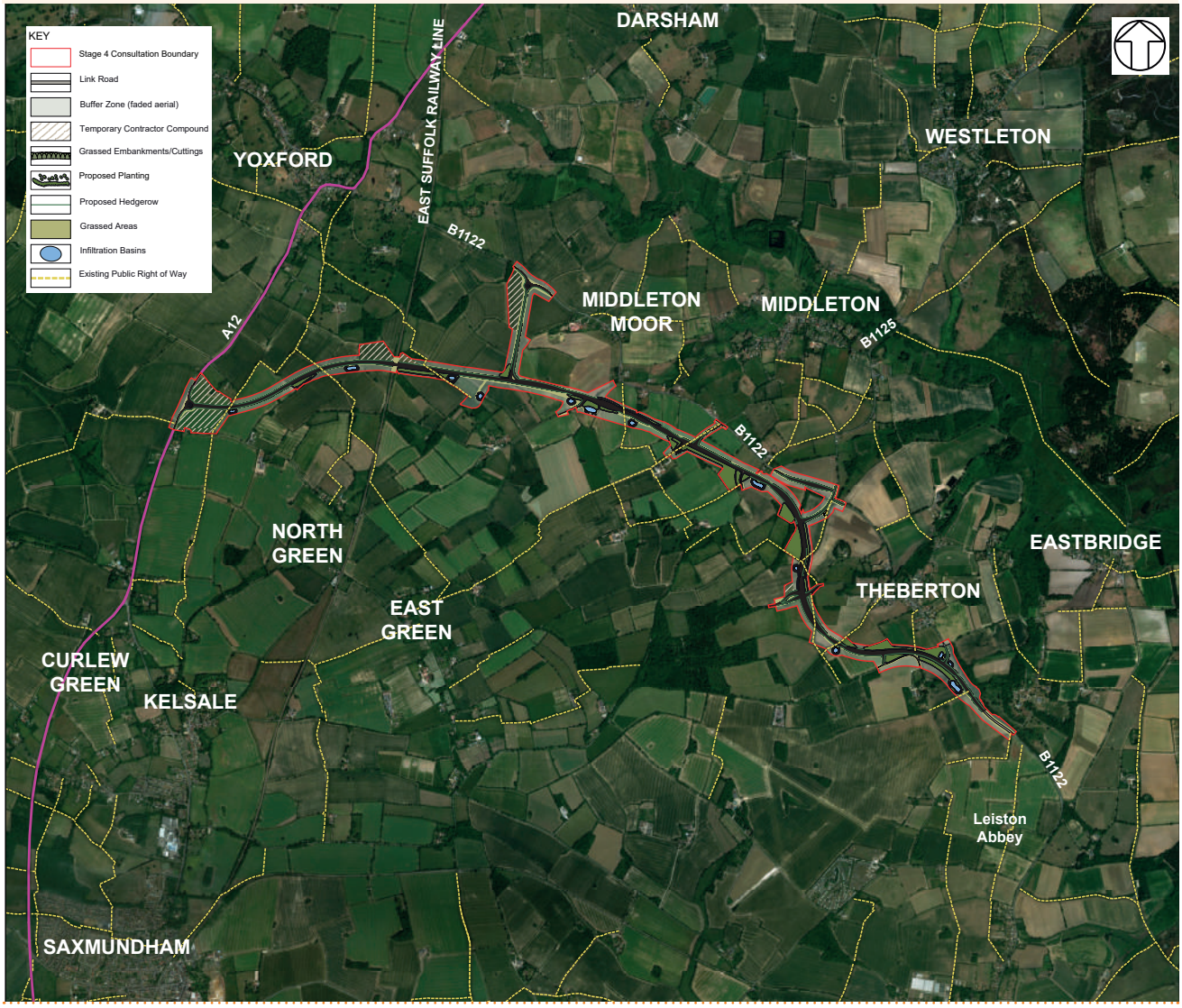
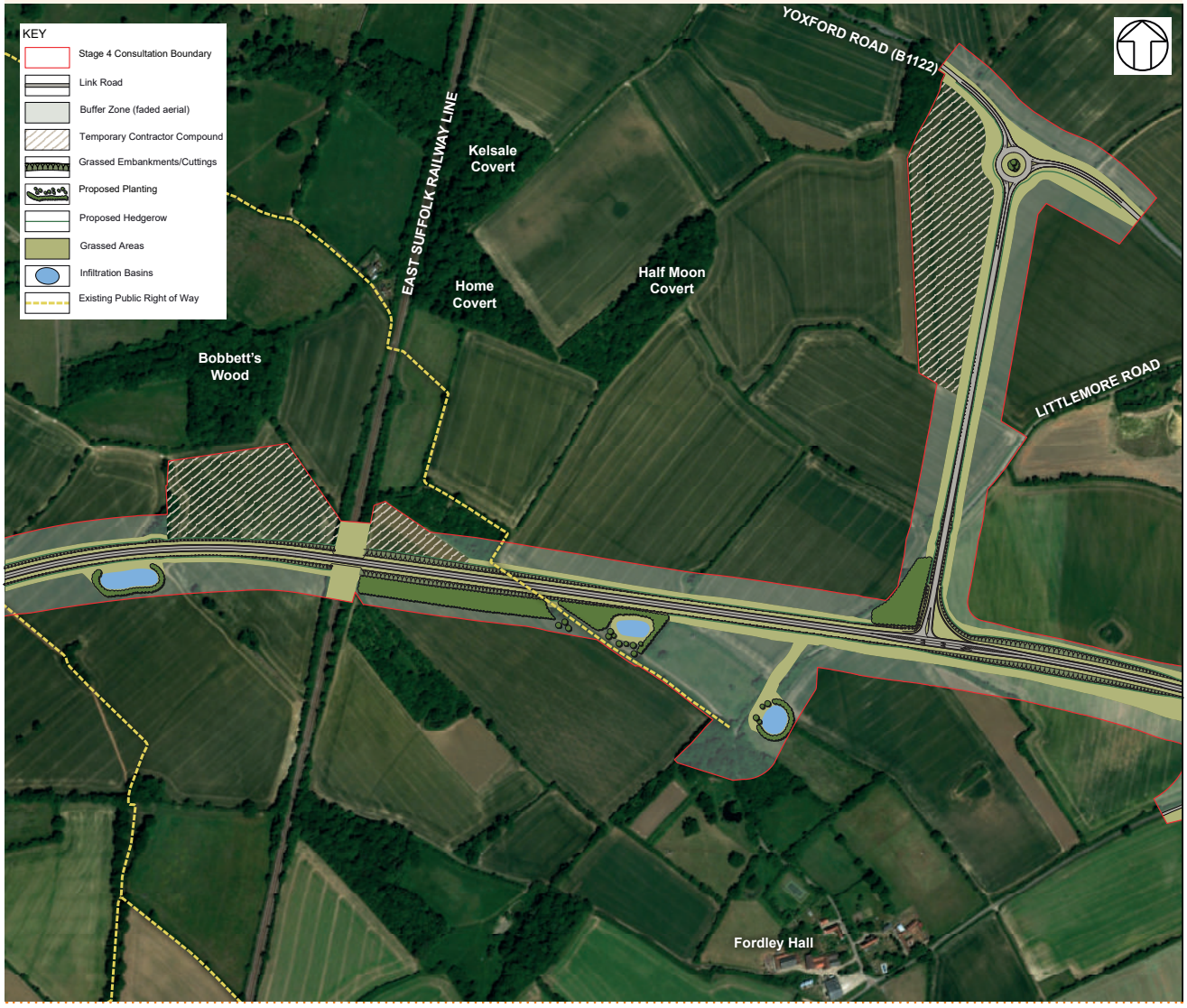


Figure 2.17: Sizewell link road masterplan – Area 1

2.6.7. Running from west to east, the proposed route would start at the A12, south of Yoxford, and run northeast at existing ground level over an existing channel.

Figure 2.18: Sizewell link road masterplan – Area 2



2.6.8. The route would then cross over the existing East Suffolk railway line before continuing east on an embankment before turning south to run broadly parallel to the B1122. A link north to the B1122 to the west of Middleton Moor is provided so that Sizewell C construction traffic would be removed from that settlement. Littlemoor Road, which the Sizewell link road would bisect, would be stopped up.

Figure 2.19: Sizewell link road masterplan – Area 3

2.6.9. The route would continue along an embankment to where it meets Fordley Road which would also be stopped up to the north but with a new junction from the Sizewell link road to the south.

2.6.10. Junctions leading off the Sizewell link road would also be provided to the north and south at Trust Farm, to provide access to the B1122.

Figure 2.20: Sizewell link road masterplan – Area 4

2.6.11. The route would then head in a south-east direction with a new ghost island junction provided along with an extension of the B1125 and reconfiguration of the existing B1122 to form suitable new junctions.

2.6.12. The route would continue south through a cutting underneath Pretty Road which would bridge over the Sizewell link road for use by non-motorised users. A vehicular junction is proposed between the Sizewell link road and Pretty Road (to the west) in order to provide vehicular access to and from Saxmundham.

Figure 2.21: Sizewell link road masterplan – Area 5

2.6.13. The road would progress along the cutting before the provision of a new junction at Moat Road to maintain access to the existing properties. The route would continue at ground level with a new junction to provide access to Theberton and would re-join the B1122 on a low embankment adjacent to Brown's Plantation.

2.6.14. Further details in relation to the earthworks required for the construction of the road, proposals for surface water drainage, vehicle restraint systems, rights of way and lighting, as well as information on the construction of the Sizewell link road were all provided in Volume 1, Chapter 10 of the Stage 3 Main Consultation Document.

c) Changes from Stage 3

2.6.15. The proposed route for the Sizewell link road being consulted on at Stage 4 has not changed since Stage 3.

2.6.16. At Stage 3 we set out a number of different potential route alignments for the Sizewell link road (Chapter 10, Volume 1 of the Main Consultation Document). These included four routes (Routes W, X, Y and Z) and variations of these options. Route W would join the A12 to the south of Saxmundham, with the other three routes and their variations connecting into the A12 at points between Dorley's Corner and Yoxford. We explained the justification for the selection of 'Route Z' at Stage 3 and explained why route "D2" (the route put forward in the 1980s to facilitate proposal for the construction of the Sizewell B power station) would not represent a viable option.

2.6.17. Further analysis undertaken by EDF Energy since Stage 3, of criteria including the relief each route would provide to communities on the routes from the A12 to the main development site, route length, transport policy, engineering impact and other environmental topics (including potential effects on PRoWs, local road character, heritage assets, landscape designations, landscape character and views, and residential amenity), supports our selection of Route Z as the most appropriate option. We are not therefore proposing any changes to the overall route alignment at Stage 4.

2.6.18. The point that Route Z connects with the A12 is located away from existing settlements and the route is generally positioned away from existing properties. Route Z is the shortest route of the options considered, minimises the effect on the existing road network and is most related to the communities on the B1122 that it the Sizewell link road seeks to relieve. Whilst there is potential for the significance of several heritage assets to be affected and localised effects on the amenity of residents it would be the least intrusive option overall in terms of engineering impact, and it remains our conclusion that it represents the most appropriate route.

2.6.19. As a result of design development we have, however, now refined the site area required for the development.

2.6.20. The changes since Stage 3 that we are proposing in this Stage 4 consultation are set out in detail in **Chapter 6** of this Stage 4 consultation document and are summarised below:

- a minor change to the red line boundary to exclude part of Fir Tree Farm (Area 1);
- inclusion of the public right of way to the south of the Sizewell link road within the red line boundary, in order to facilitate physical improvements (Area 2);
- the exclusion of land from the red line to remove a residential property on Fordley Road from the boundary of our proposals. Fordley Road would be stopped up to the north (Area 3);
- stopping up Litttlemoor Road rather than providing a connection onto the Sizewell Link Road as proposed as Stage 3;
- the addition of a new road link to the north of Trust Farm, from the Sizewell link road to the B1122 (Area 3);
- making the main alignment around Theberton in a deeper cut to enable the bridging of Pretty Road over the Sizewell link road (Area 4);
- inclusion of stretches of Pretty Road to the west and east of the Sizewell link road, and additional land for a compound area, to facilitate the connection of the bridge to the existing road (Area 4); and
- inclusion of the public right of way to the south-west of the Sizewell link road within the red line boundary, in order to facilitate physical improvements to the path (Area 4).

2.6.21. Further details on these changes are provided in **Chapter 6** of this Stage 4 consultation document.

2.6.22. We proposed at Stage 3 that the Sizewell link road would remain in place following construction for general traffic use, thereby reducing traffic and environmental impacts in Theberton, Middleton Moor and Yoxford in the long term. However, we are seeking views in this Stage 4 consultation on whether all or some of the route should only be provided temporarily during the construction phase and removed once Sizewell C is operational.

2.7. Theberton Bypass

a) Introduction

2.7.1. Whilst the rail-led strategy would not require the full Sizewell link road, it would include the Theberton Bypass, in order to reduce traffic volumes passing through Theberton, resulting in the reduction in noise, vibration, and severance impacts during the construction phase.

2.7.2. The Theberton bypass would only be progressed in isolation as part of the rail-led strategy.

b) Proposed development

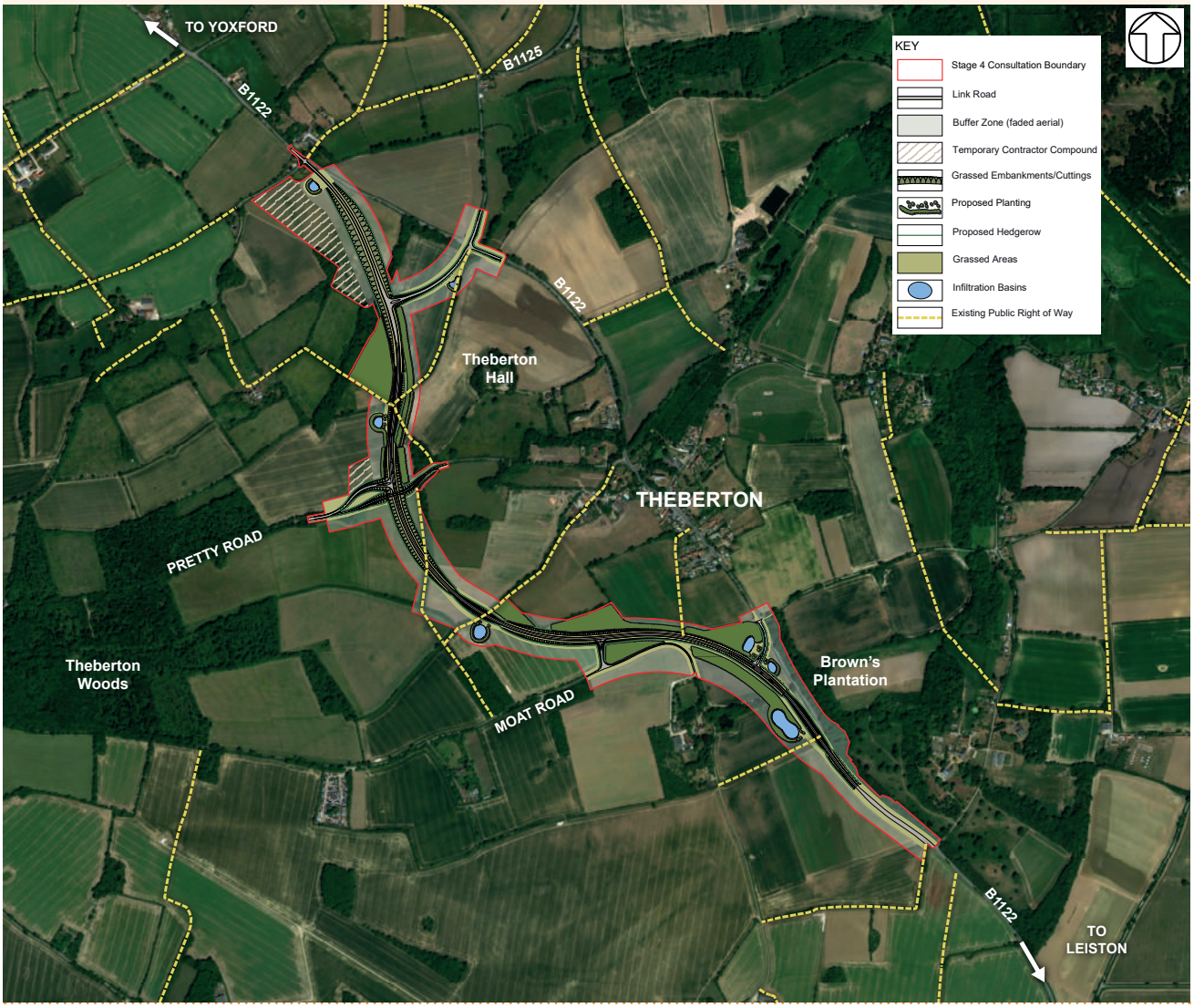
2.7.3. The route, as shown at **Figure 2.22**, would bypass the B1122 through Theberton with a new single carriageway road to the south-west.

2.7.4. The Theberton bypass would be very similar to Areas 4 and 5 of the Sizewell link road, with the exception that it would leave the B1122 at Anneson's Corner near to Coronation Cottages before heading south-east (on a similar line to the Sizewell link road) to the proposed ghost island junction with the B1125.

2.7.5. The Theberton bypass then progresses on the same route as the Sizewell link road across Pretty Road, providing the new junction with Moat Road and linking back onto the B1122 at Brown's Plantation.

2.7.6. Further details in relation to the earthworks required for the construction of the road, proposals for surface water drainage, vehicle restraint systems, rights of way, and lighting, as well as information of the construction of the Theberton bypass were all provided in Chapter 11, Volume 1 of the Stage 3 Main Consultation Document.

Figure 2.22: Theberton bypass masterplan



c) Changes since Stage 3

2.7.7. The route of the Theberton bypass as proposed in this Stage 4 consultation has not changed since Stage 3.

2.7.8. The only changes proposed are those set out above for Area 4 of the Sizewell link road, which are common for both roads, namely:

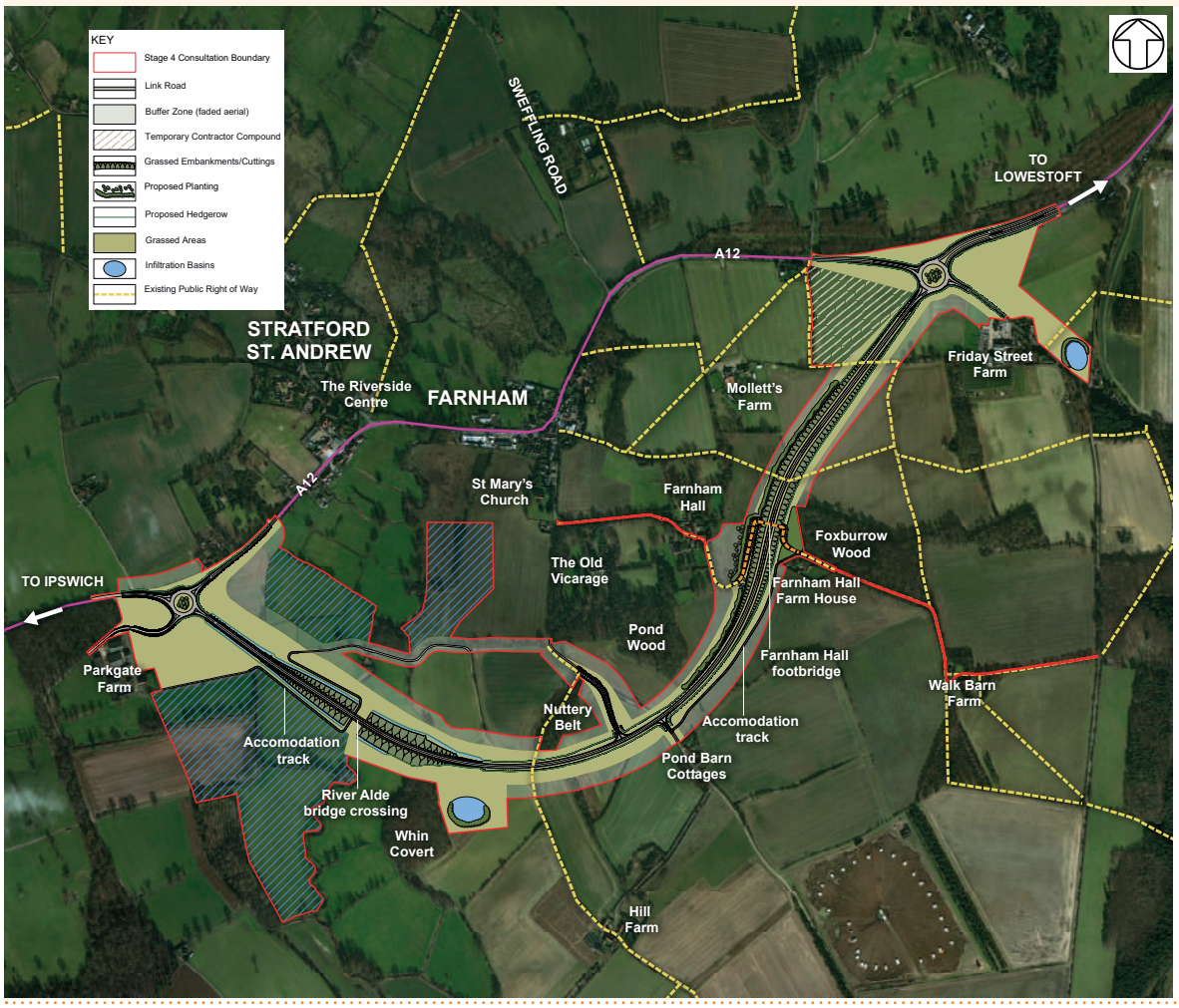
- making the main alignment around Theberton in a deeper cut to enable the bridging of Pretty Road over the Theberton bypass;
- inclusion of stretches of Pretty Road to the west and east of the Theberton bypass and additional land for a compound area, to facilitate the connection of the bridge to the existing road (Area 4); and
- inclusion of the public right of way to the south-west of the Theberton bypass within the red line boundary, in order to facilitate physical improvements to the path.

2.8. Two village bypass

a) Introduction

2.8.1. The two village bypass of Farnham and Stratford St Andrew was one of the options put forward for the mitigation of traffic and traffic-related effects consulted on during the Stage 2 consultation, and was selected as part of our proposals under both the rail-led or road-led strategies. The two village bypass would also be required as part of the new alternative integrated strategy.

Figure 2.23: Two village bypass masterplan



b) Proposed development

2.8.2. The two village bypass begins at a new four arm roundabout near Parkgate Farm, with the route of the bypass (as shown at **Figure 2.23**) leading south-east before turning east around Nuttery Belt before continuing north-east in between Farnham Hall and Foxburrow Wood, crossing the Farnham Hall track (which provides access to Pond Barn Cottages and Farnham Hall Farm House) before reconnecting at a second four arm roundabout.

2.8.3. As well as crossing local roads the route would also cross public rights of way in four locations as shown at **Figure 2.23**.

2.8.4. A detailed description of the proposals for the two village bypass is set out at Volume 1, Chapter 12 of the Stage 3 Main Consultation Document. This includes further detail on the required structures and lighting, landscaping and drainage and construction of the bypass.

2.8.5. The two village bypass would be permanent infrastructure which would not be removed when the construction of Sizewell C is complete.

c) Changes from Stage 3

2.8.6. Subject to further consideration of responses to Stage 3 and Stage 4 consultation, our provisional view is that the route proposed represents the most appropriate option.

2.8.7. We are not, therefore, currently proposing any significant changes to the route of the bypass, though we are proposing various minor changes in response to consultation and further survey work. In summary, the changes we are proposing at this Stage 4 include:

- the repositioning of the western roundabout;
- the inclusion of additional land to accommodate flood compensation land;
- a higher alignment over the River Alde to enable agricultural movements between land either side of the bypass;
- an extension of the site boundary along Tinker Brook;
- a change to the site boundary at the Farnham Hall track to exclude the north-west corner of Foxburrow Wood;an extension of the site boundary to the south of Foxburrow Wood in connection with the proposed pedestrian bridge crossing over the bypass;
- positioning of the bypass in a deeper cutting to help facilitate this bridge and reduce noise impacts on Farnham Hall and surrounding properties;
- at the north-eastern roundabout, an extension to the site boundary to accommodate potential changes to the drainage strategy; and
- the inclusion of additional land to accommodate the existing Farnham Hall track to enable it to be upgraded from a footpath to a bridleway.

2.8.8. These changes are explained in more detail in **Chapter 6** of this Stage 4 consultation document.

2.9. Northern park and ride (Darsham)

a) Introduction

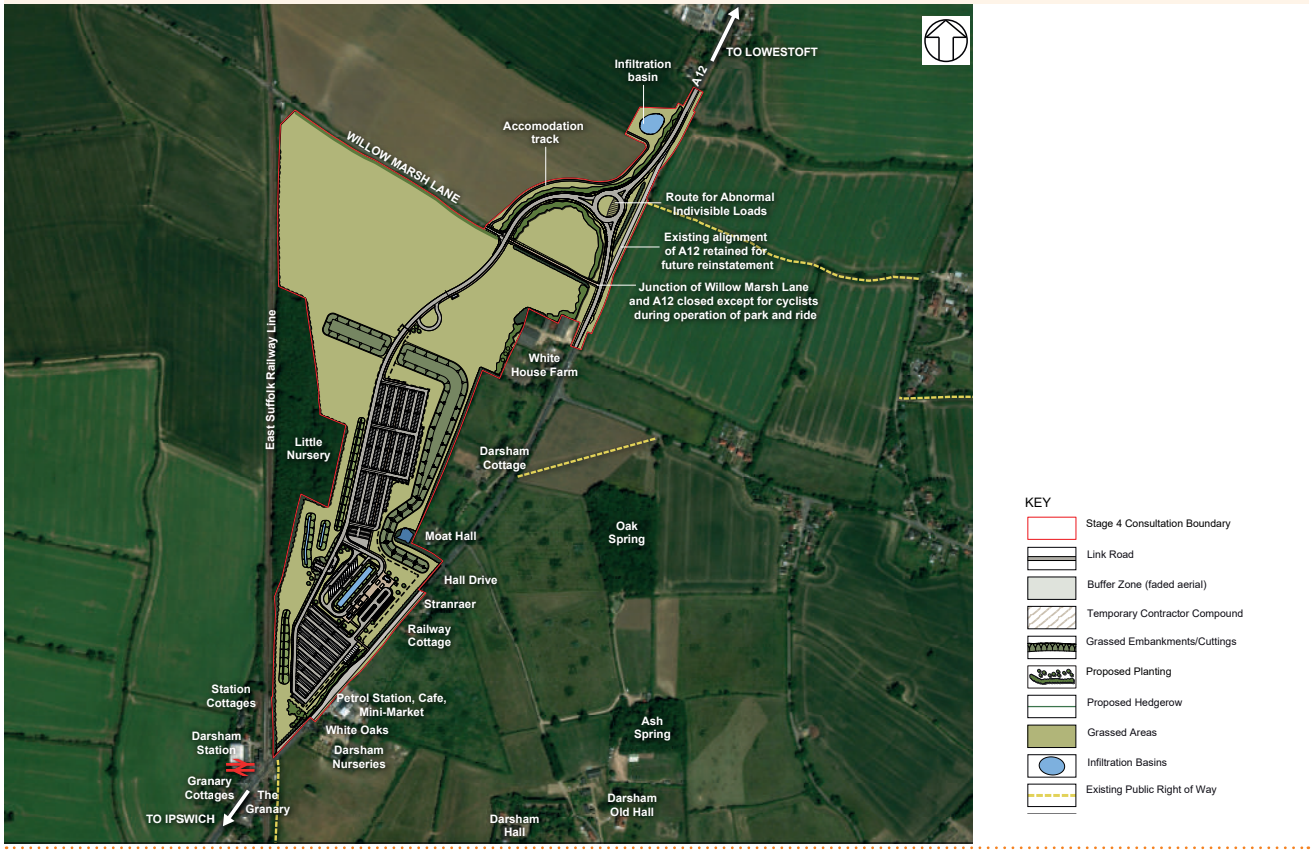
2.9.1. The northern park and ride at Darsham forms part of EDF Energy's commitment to reducing the amount of traffic generated by the construction workforce on local roads and through local villages.

2.9.2. EDF Energy's strategy for transporting the Project workforce has not changed since Stage 3. Some minor alterations to the design of the park and ride proposals are, however, proposed as a result of further survey and design work.

2.9.3. The park and ride proposals are required as part of the Project irrespective of which strategy is progressed in relation to the management of freight transport.

2.9.4. The northern park and ride site comprises 29 hectares (ha) of agricultural land located to the west of the village of Darsham, to the north of Darsham Station, to the west of the A12, and to the east of the East Suffolk line.

Figure 2.24: Northern park and ride (Darsham)



b) Proposed development

2.9.5. At Stage 3 we set out the operational requirements for the park and ride sites, which include parking provision for around 1,250 cars and associated infrastructure. The proposed masterplan for the northern park and ride is shown at **Figure 2.24**.

2.9.6. As explained at Stage 3, the overriding aim for the site has been to locate structures as far away as practicable to the southern end of the site. This would concentrate the operational elements around other development and keep the development as near to the existing built up area and station as possible.

2.9.7. Further details in relation to the buildings and structures, access, landscaping and drainage, and the operation and construction of the northern park and ride are provided at Volume 1, Chapter 13 of the Stage 3 Main Consultation Document.

2.9.8. The northern park and ride buildings and infrastructure would be removed following the construction of Sizewell C and the site returned to agricultural use.

c) Changes from Stage 3

2.9.9. Only very minor design changes are proposed to the northern park and ride as part of this Stage 4 consultation. The overall scale and composition of the proposal and its purpose remains unchanged.

2.9.10. The design changes that we propose to make include, in summary:

- minor alterations to the red line boundary to more closely align with land ownership boundaries; and
- a minor increase in the size of the roundabout diameter and also a small extension of the site boundary to the north of the roundabout.

2.9.11. These changes are explained in more detail at **Chapter 6** of this Stage 4 consultation document.

2.10. Southern park and ride (Wickham Market)

a) Introduction

2.10.1. The southern park and ride at Wickham Market also forms part of EDF Energy's strategy for transporting the construction workforce in order to reduce the amount of traffic generated during the construction phase.

2.10.2. Like the northern park and ride, the southern park and ride proposals are required as part of the Project irrespective of which strategy is progressed in relation to the management of freight transport.

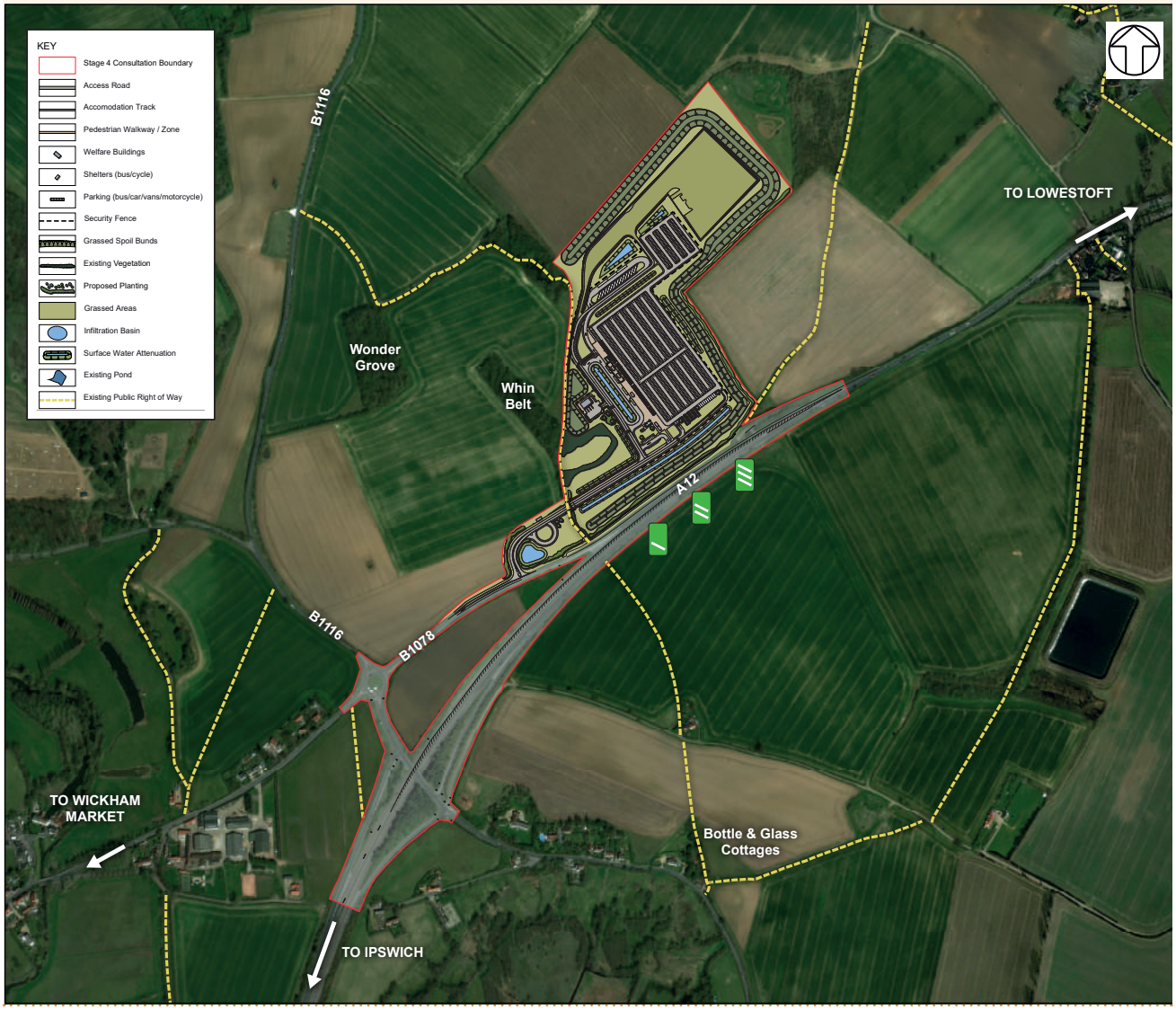
2.10.3. The southern park and ride facilities (as shown at **Figure 2.25**) comprise a park and ride scheme on 18ha of primarily agricultural land located to the north-east of Wickham market plus additional highways land.

b) Proposed development

i) The southern park and ride site

2.10.4. The proposals for the northern park and ride are shown at Figure 2.25 and include parking provision for around 1,250 cars and associated infrastructure.

Figure 2.25: Southern park and ride (Wickham Market)



2.10.5. As explained at Stage 3, the overriding aim for the site has been to locate structures away from the north and north-eastern parts of the site as the land generally rises in this direction and is less well screened by woodland.

2.10.6. The southern park and ride buildings and infrastructure would be removed following the construction of Sizewell C and the site returned to agricultural use.

2.10.7. Further details in relation to the buildings and structures, access, landscaping and drainage and the operation and construction of the southern park and ride are provided at Volume 1, Chapter 14 of the Stage 3 Main Consultation Document.

ii) Wickham Market congestion mitigation

2.10.8. At Stage 3 we identified that the southern park and ride development may increase congestion on the B1078 to the east of Spring Lane when traffic leaves the park and ride site. We therefore identified two different potential options proposed to mitigate these effects through Wickham Market. These included either: a) the temporary removal of on-street parking on the B1078 between Border Cot Lane and River Deben Bridge and reprovision elsewhere; or b) improvements to Valley Road and Easton Road to form a diversion route avoiding Wickham Market.

c) Changes from Stage 3

2.10.9. Like the northern park and ride, only very minor design changes are proposed to the southern park and ride in this Stage 4 consultation. The overall scale and composition of the proposal and its purpose remain unchanged.

2.10.10. The design changes that we propose to make include, in summary:

- minor alterations to the red line boundary to more closely align with land ownership boundaries; and
- the extension of the red line to include the B1078/B1116 roundabout in order to facilitate pedestrian and cycle improvements within the highway land.

2.10.11. In addition to the two alternative options consulted on at Stage 3 for the mitigation of traffic congestion at Wickham Market, with the benefit of feedback from Stage 3, we are now also proposing a potential alternative approach. This alternative option would be to work with the Parish Council to bring forward a public realm improvement scheme within the public highway which would represent the first phase of the implementation of the Neighbourhood Plan. This would consider footway and pedestrian crossing provision as well as the optimal location of on-street parking to meet parking demand. The scheme would provide a legacy benefit to Wickham Market.

2.10.12. These changes are explained in more detail at **Chapter 6** of this Stage 4 consultation document.

2.11. Freight Management Facilities

a) Introduction

2.11.1. The construction of Sizewell C would involve the movement of large amounts of building materials, equipment, and resources. EDF Energy's vision is to deliver the Project so that adverse transport effects on the environment and local communities are limited through mitigation before they arise, where reasonably practicable.

2.11.2. The road-led strategy, which involves more road-based transport, requires the construction of a freight management facility to serve as a holding area for HGVs away from the main development site. This will enable us to regulate the timing and flow of vehicles to the Sizewell construction site in conjunction with a Delivery Management System. The freight management facility will therefore facilitate a controlled pattern of deliveries by road with reduced movements during peak or sensitive hours.

2.11.3. The freight management facility would not be necessary under the rail-led strategy, but we propose that it would form part of the new integrated strategy.

b) Proposed development

2.11.4. At Stage 3 we identified two site options for the freight management facility: namely at Seven Hills (Option 1) and Innocence Farm (Option 2). Both are located on the A14 to the south-east of the A12 junction. We are still considering feedback received on these options at Stage 3 and continuing to undertake further feasibility work before making a decision on which option to progress through the DCO application.

Figure 2.26: Freight management facility site options

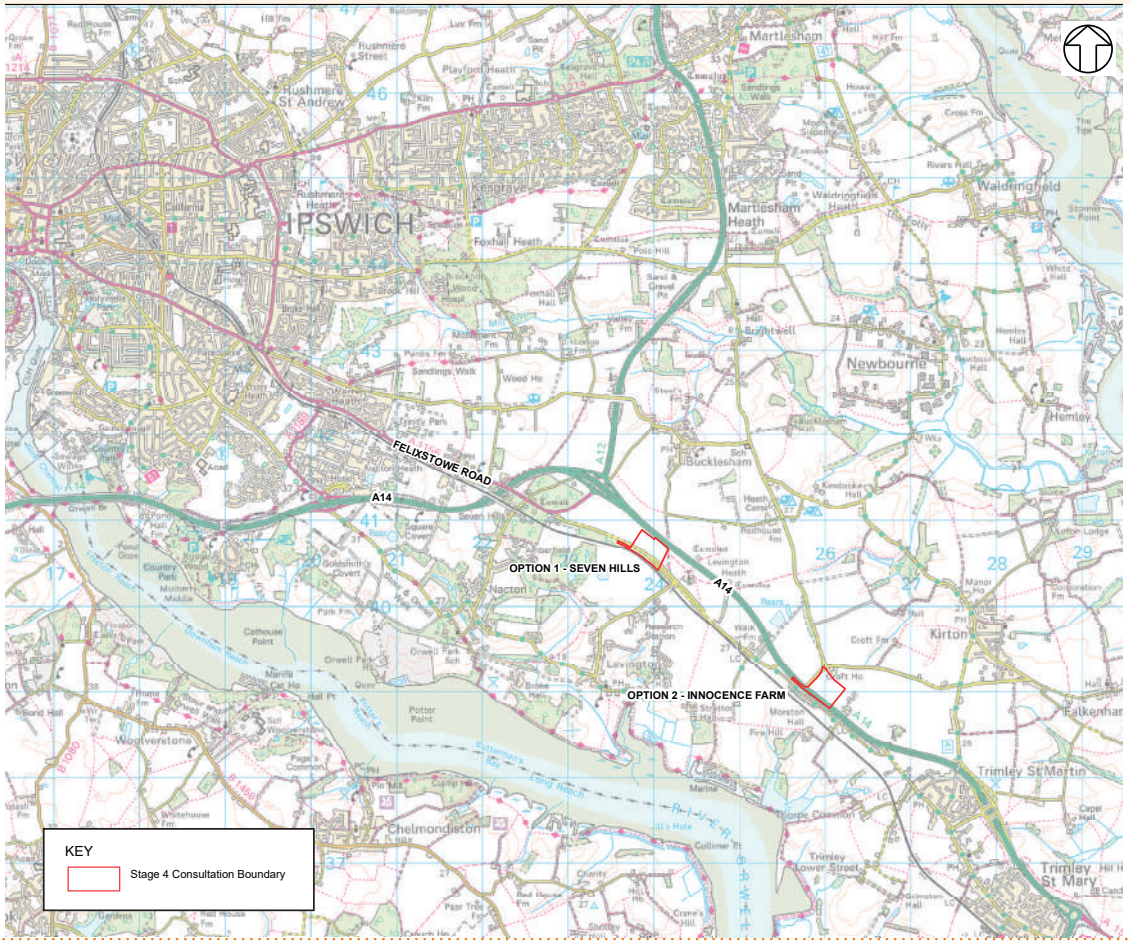


Figure 2.27: Freight management facility option 1 - Seven Hills

2.11.5. The Seven Hills site (Option 1) is an approximately 10ha area of agricultural land located on the southern side of the A14 to the south-east of the A12/A14 junction.

2.11.6. The site is accessed off the Felixstowe Road which runs parallel with the A14. A more detailed description of the site was provided in Volume 1, Chapter 15 of the Stage 3 Main Consultation Document. The proposed indicative site layout for this option is shown in **Figure 2.27**, which shows the access from Felixstowe Road centrally on the southern boundary and a landscaping buffer around the entire perimeter of the site.

2.11.7. A stretch of Felixstowe Road is included within the site boundary which provides the flexibility to provide a ghost island junction to accommodate right-turning HGVs.

Figure 2.28: Freight management facility option 2 – Innocence Farm

2.11.8. The Innocence Farm site (Option 2) forms part of a larger site which is located adjacent to Kirton and Trimley St Martin and immediately to the north of the A14 of which 9ha would be used for the freight management facility. The site is located further south-east along the A14 compared to the Seven Hills option. The proposed indicative site layout for this option is shown in **Figure 2.28**, which shows the access from Croft Lane and an area of perimeter landscaping. It also shows the extent of highways land required to accommodate the required visibility splays to the north on the A14.

2.11.9. The detailed design and layout for either site including landscaping and boundary treatment would be progressed further and included in the final development proposals. When no longer required the sites would be returned to agricultural use.

c) Changes from Stage 3

2.11.10. The Stage 4 proposals for the two freight management facility options remain largely unaltered from Stage 3, other than some minor changes to the site boundaries as a result of further design development.

2.11.11. The details of the proposals remain as set out in Volume 1, Chapter 15 of the Stage 3 Main Consultation Document, subject to the changes summarised below:

i) Option 1: A12/A14 Seven Hills site

- extension of the red line boundary to include a section of Felixstowe Road, to facilitate the inclusion of the ghost island;
- a reduction in the red line to exclude an existing drainage feature along the A14, to the north west of the site; and
- minor changes to the site boundary to align more accurately with land ownership boundaries.

ii) Option 2: Innocence Farm

- site access moved slightly south so visibility to the north remains within highway boundary; and
- red line extension north along the A14 as a cautious approach in case works are required.

2.11.12. These changes are explained in more detail at **Chapter 6** of this Stage 4 consultation document.

2.12. Yoxford roundabout

a) Introduction

2.12.1. At Stage 3 we set out our proposals for a new roundabout in Yoxford to replace the existing A12/B1122 ghost island junction.

2.12.2. This roundabout was required to support both the rail- and road-led strategies, and is retained as part of the integrated strategy being consulted on at Stage 4.

2.12.3. The purpose of the roundabout is to increase the capacity of the junction. The roundabout would be located approximately 90m to the north of the existing junction and built on agricultural land to the east of the A12. It would have an inscribed circle diameter of 60m and would include a realignment of the A12 at this point in order to facilitate use of the roundabout.

b) Proposed development

2.12.4. **Figure 2.29** shows the layout of the proposed new Yoxford roundabout.

Figure 2.29: Yoxford roundabout masterplan

2.12.5. The B1122 would be realigned to join the proposed roundabout via a new section of road that starts to the north of "the Cottage".

2.12.6. The A12 approach roads leading into the roundabout would be 7.3m in width with the B1122 approach road 6m wide. All three of the approaches would flare to create additional width at the proposed roundabout give way line.

c) Changes from Stage 3

2.12.7. The proposals for the roundabout, as shown at **Figure 2.29**, which are the subject of this Stage 4 consultation are very similar to the scheme put forward in Volume 1, Chapter 16 of the Stage 3 Main Consultation Document, though further detailed design work has resulted in minor proposed changes namely:

- the relocation of the roundabout approximately 20m to the south-east to meet highways design requirements, including enabling off line construction to reduce traffic management delays; and
- a revision to the red line to the south to avoid Sandy Stilt Puffball fungi found in this location.

2.12.8. These changes are explained in more detail at **Chapter 6** of this Stage 4 consultation document.

2.13. Other highways improvements

a) Introduction

2.13.1. A number of highways improvements would be delivered as part of the mitigation proposals to mitigate traffic impacts arising from the construction of Sizewell C.

2.13.2. The list of potential highways improvements we are considering include works at:

- A140 / B1078 west of Coddenham;
- B1078 / B1079 east of Easton & Otley College;
- A12 / A144 south of Bramfield;
- A12 / B1119 at Saxmundham;
- A1094 / B1069 south of Knodishall;
- A12 / A 1094 Friday Street north-east of Farnham;
- B1122 Mill Street improvement works; and
- the Wickham Market diversion route.

2.13.3. As explained above, we are also proposing an alternative approach at Wickham Market (to the options included at Stage 3, which included the Wickham Market diversion route) to ease the effect of traffic associated with the southern park and ride.

2.13.4. The highway works would all be required to support each of the road-led, rail-led or integrated strategies other than the Mill Street improvements previously consulted upon, which would only be required to support the rail-led strategy (associated with the Theberton bypass).

Figure 2.30: A140/B1078 west of Coddenham – proposed highway improvements

b) Proposed development

i) A140/B1078 west of Coddenham

2.13.5. The A14/B1078 junction is a priority T-junction on a dual carriageway, situated approximately 3.2km east of Needham Market. The A140 northbound to B1078 movement is provided by a right turn off slip, whilst the B1078 traffic is restricted to a left turn movement only onto the A140.

2.13.6. The works proposed at this junction are shown at **Figure 2.30**. This includes a minor change to the red line boundary as set out below and at **Chapter 6**.

Figure 2.31: B1078/B1079 east of Easton and Otley College – proposed highway improvements

ii) B1078 / B1079 east of Easton & Otley College

2.13.7. The B1078/B1079 junction is a rural priority T-junction approximately 1.5km south of Otley.

2.13.8. In order to mitigate the additional traffic generated from the Sizewell C development, we are proposing minor safety improvements for the B1078 and at the B1078 / B1079 junction.

2.13.9. The works proposed at this junction are shown at **Figure 2.31**. These works have not changed since Stage 3.

2.13.10. The works include vegetation maintenance to improve visibility, various new signage and road markings, and site monitoring.

Figure 2.32: A12 / A144 south of Bramfield - proposed highways improvements

iii) A12 / A144 south of Bramfield

2.13.11. The A12/A144 junction is a rural ghost island priority T-junction situated approximately 2.7km south of Bramfield and around 950m north of the northern park and ride access

2.13.12. The works proposed at this junction are shown at **Figure 2.32**. This includes minor site boundary and design changes since Stage 3 as set out below and at **Chapter 6**.

2.13.13. The proposed works include the addition of a central reservation island and waiting area to increase the capacity for the right turn from the A144 onto the A12.

Figure 2.33: A12 / B1119 Saxmundham – proposed highway improvements

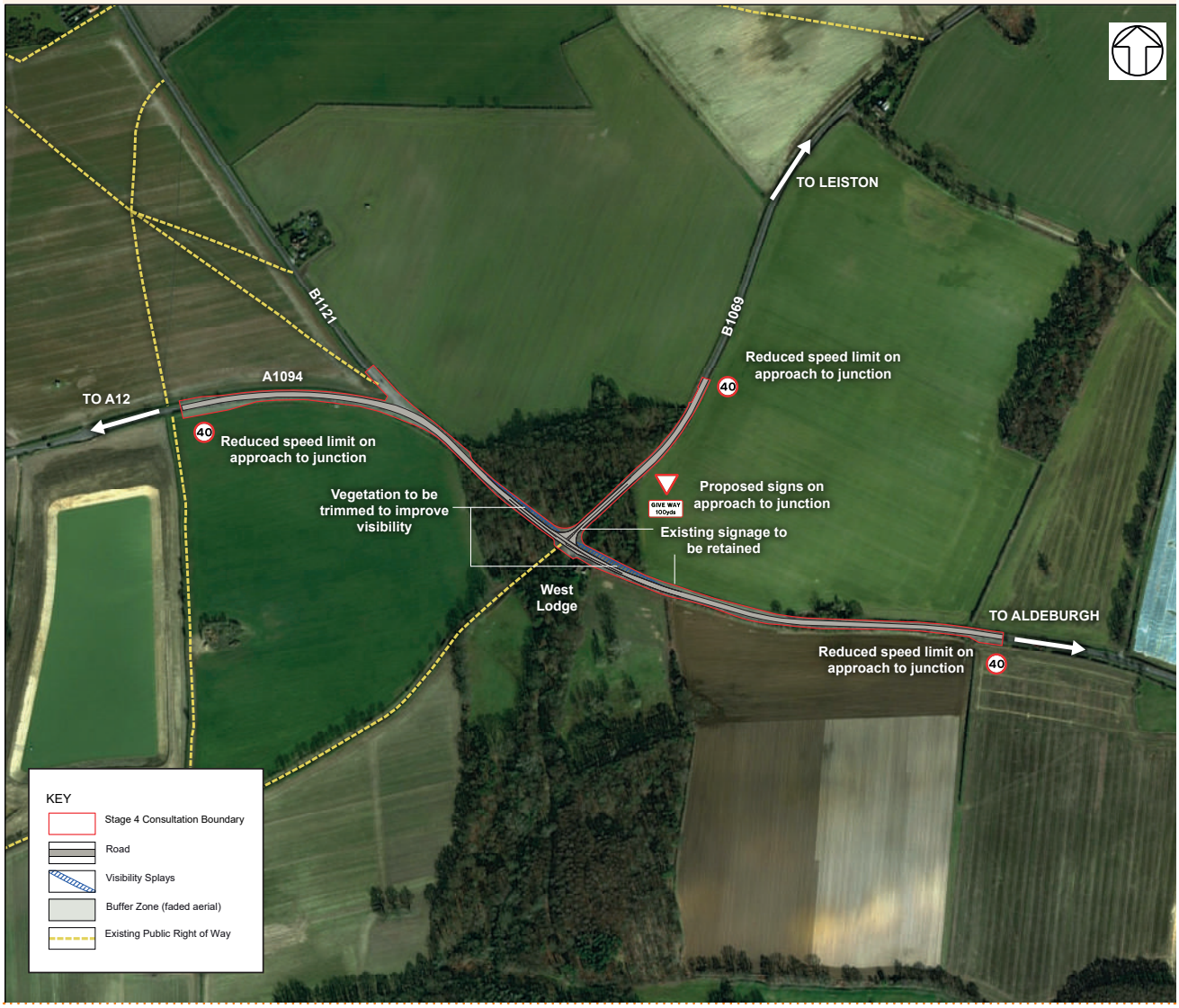
iv) A12 / B1119 at Saxmundham

2.13.14. The A12/B1119 junction is a ghost island staggered crossroads on the A12 situated 1.1km to the west of Saxmundham.

2.13.15. The works proposed at this junction are shown at **Figure 2.33**. This includes a minor change to the red line boundary since Stage 3.

2.13.16. The works include vegetation maintenance to improve visibility, various new signage and road markings, and site monitoring.

Figure 2.34: A1094 / B1069 – proposed highway improvements



v) A1094 / B1069 south of Knodishall

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

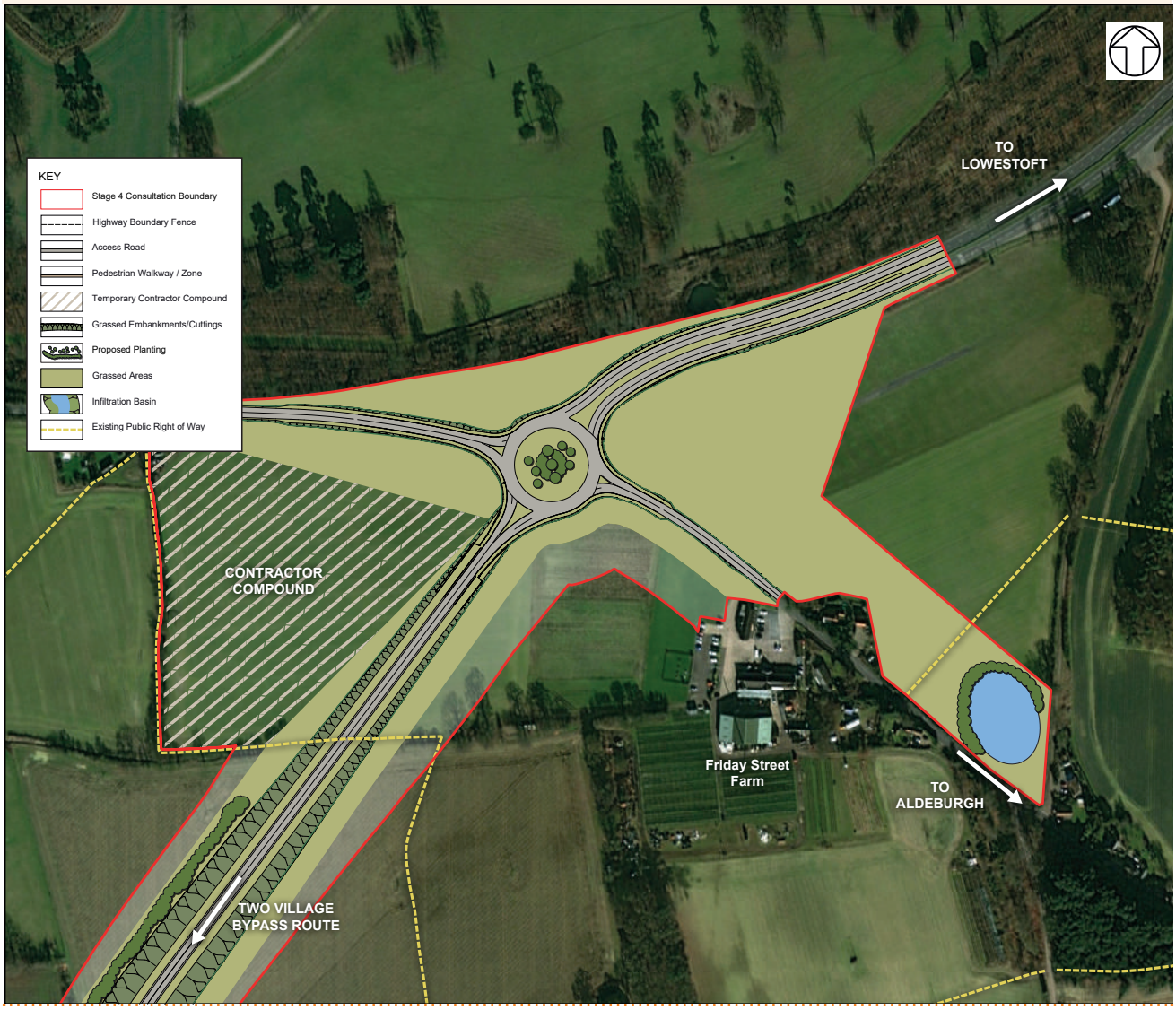
2.13.18. The junction has a narrow painted island provided for right turning traffic from the A1094 onto the B1069, but this is not wide enough for through traffic to pass a vehicle waiting to turn right.

2.13.19. The works proposed at this junction are shown at **Figure 2.34**. This includes a minor change to the red line boundary since Stage 3.

2.13.20. The works include vegetation maintenance to improve visibility, various new signage and road markings, and site monitoring, as well as a reduction of the current 60 miles per hour (mph) speed to 40mph to assist vehicles turning right out of the B1069.

2.13.21. The further detailed information provided at Volume 1, Chapter 11 of the Stage 3 Main Consultation Document should now be read alongside the changes set out in this Stage 4 document.

Figure 2.35: Friday Street north-east of Farnham – proposed highways improvements



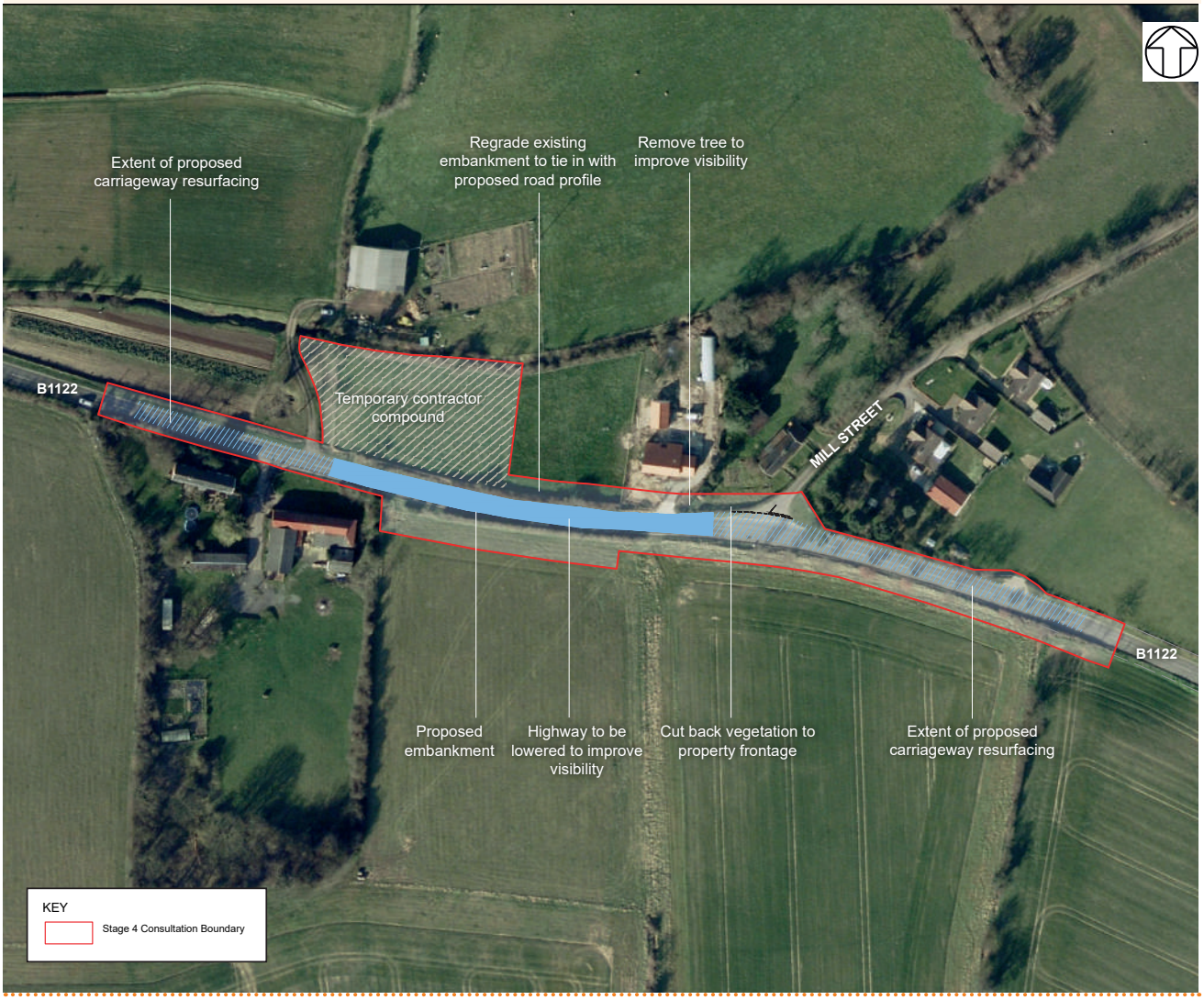
vi) A12/A1094 Friday Street north-east of Farnham

2.13.22. The A12/A1094 junction is a T-junction situated on a dual carriageway section of the A12 approximately 1km north-east of Farnham and 4km south of Saxmundham.

2.13.23. The proposed works would involve the construction of a four arm roundabout to replace the existing junction as shown at **Figure 2.35**.

2.13.24. These works would form part of the two village bypass proposals as summarised in **section 2.8**. They have not changed since Stage 3.

Figure 2.36: Mill Street (B1122) – proposed highways improvements



vii) B1122 Mill Street improvement works

2.13.25. Highways improvements to the Mill Street B1122 junction would be delivered in conjunction with the Theberton bypass under the rail-led strategy.

2.13.26. The works, as shown at **Figure 2.36**, would involve improvements to the vertical alignment of the B1122 just west of the junction, by reducing the road level. This would increase forward visibility for westbound traffic. The works have not changed since Stage 3.

2.13.27. These improvements would not be required under the road-led or integrated strategies given the B1122 would be relieved by the Sizewell link road.

Figure 2.37: Wickham Market diversion route

viii) The Wickham Market diversion route

2.13.28. The Wickham Market diversion route introduced at Stage 3 as part of the southern park and ride proposals would (as shown at **Figure 2.37**) start on the B1078 to the west of Wickham Market along a new Valley Road alignment, and provide road widening and improvements to the junction south of Glevering Bridge, before carrying on along to the junction of Easton Road. Easton Road then leads east to the B1116, providing an alternative route to Border Cot Lane / High Street through Wickham Market.

2.13.29. The details of this option were set out at Volume 1, Chapter 17 of the Stage 3 Main Consultation Document.

c) Changes from Stage 3

2.13.30. Since Stage 3 consultation, we have undertaken further detailed modelling in order to further understand the traffic impacts arising from the construction of Sizewell C, and have modified the proposals being consulted on at Stage 4 for some of these highways improvements. These changes are summarised in **sections 2.13.31** to **2.13.35** of this chapter.

i) A140/B1078 west of Coddenham

2.13.31. The only proposed change since Stage 3 which we are consulting on at Stage 4 is an extension of the red line boundary to the north and south along the A140 to allow for additional signage within the highways boundary.

ii) A12 / A144 south of Bramfield

2.13.32. We have made a series of proposed changes to the site boundary since Stage 3 which we are consulting on at Stage 4, namely:

- widening the boundary along the A12 on the west of the site, and reduction to the south-east, to reduce impact on residential gardens to the south-east of the junction; and
- relocation of the A144 arm to the south.

iii) A12 / B1119 at Saxmundham

2.13.33. The revised proposed design at Stage 4 includes a minor extension of the red line boundary to the south to include additional highway land on the A12 and to the west along the B1119.

iv) A1094 / B1069 south of Knodishall

2.13.34. The revised proposed design at Stage 4 includes a very minor extension of the red line boundary to allow for additional signage.

2.13.35. These changes are explained in more detail at **Chapter 6** of this Stage 4 consultation document.

3. FREIGHT MANAGEMENT STRATEGY

3.1. Introduction

3.1.1 At Stage 3 we presented two options: a road-led strategy and a rail-led strategy. We are still considering both of these options but we have become concerned that the rail-led strategy may not be deliverable within the necessary timescale to limit the impacts of construction traffic and, accordingly at this Stage 4 consultation, we are seeking views on a further alternative freight management strategy option: an integrated strategy.

3.1.2 The purpose of the integrated strategy is to optimise the extent of rail use that can be achieved for the transport of construction materials but to do so within a strategy that EDF Energy can be confident can be delivered.

3.1.3 Since the start of the Stage 3 consultation, EDF Energy has continued to develop transport and environmental assessments, working closely with Network Rail and learning lessons from Hinkley Point C. We have engaged with the local authorities, Network Rail, stakeholders and the public to gain a greater understanding of views about the freight management strategy across the region.

3.1.4 This chapter explains the potential integrated strategy, with comparisons to the road-led and rail-led strategies described at Stage 3:

- **section 3.2** describes the road-led and rail-led strategies presented at Stage 3.
- **section 3.3** describes the new integrated strategy.
- **section 3.4** compares the infrastructure and works that would be necessary for the three strategies.
- **section 3.5** compares the operation of the three strategies, primarily the level of heavy goods vehicles (HGVs) and railway movements.
- **section 3.6** describes the key differences between the three strategies and explains the reasons for those differences.
- **section 3.7** explains why we have developed and are now considering an integrated strategy.
- **section 3.8** describes the expected environmental impacts of the integrated strategy with comparison to the road-led and rail-led strategies.
- **section 3.9** compares the advantages and disadvantages of each strategy to assist you with your consultation response.
- **section 3.10** explains our next steps following the Stage 4 consultation and what further information will be available when EDF Energy applies for development consent.

3.1.5 The freight management assumptions, proposals for managing, monitoring and controlling HGVs, and proposals for managing worker transport remain as described in Volume 1, Chapter 6 of the Stage 3 Main Consultation Document and are not repeated in this chapter.

3.1.6 Traffic modelling for the integrated strategy, including a comparison with road-led and rail-led strategies is provided in **Chapter 4** of this Stage 4 consultation document.

3.2. Stage 3: road-led and rail-led strategies

3.2.1 At Stage 3 we presented two alternative freight management strategies:

- **A rail-led strategy** – This strategy would involve up to two freight trains per day travelling to the land east of Eastland's Industrial Estate (LEEIE) in the early years of construction for unloading and loading at either Sizewell Halt or a new rail siding adjacent to the existing Saxmundham to Leiston branch line. A new rail line (the "green rail route") would also be constructed as a spur off the Saxmundham to Leiston branch line into the main development site. Once constructed, up to five freight trains per day would use the green rail route at peak construction. Five trains at peak construction would require the refurbishment of the Saxmundham to Leiston branch line, but we would also be dependent on Network Rail providing new rail infrastructure on the East Suffolk line and upgrades to and closure of a large number of level crossings along the route. To reduce the impact on the B1122, a Theberton bypass is proposed as part of this strategy. A beach landing facility would allow some large deliveries to be delivered by sea.
- **A road-led strategy** – Unlike the rail-led strategy, this strategy would not include construction of the green rail route. However, it would still involve transporting some materials by rail. Through the construction period, up to two freight trains per day would travel to the LEEIE and terminate for unloading and loading at either Sizewell Halt or a new rail siding adjacent to the existing Saxmundham to Leiston branch line, with the remainder of freight transported by road. This would only require the refurbishment of the Saxmundham to Leiston branch line and upgrades to the level crossings on that branch

line. No works to the East Suffolk line are likely to be required. A new Sizewell link road from the A12 north of Saxmundham to the B1122 east of Theberton is proposed to relieve the B1122, Middleton Moor and Theberton of Sizewell traffic. This strategy also includes a freight management facility, near Ipswich, which would serve as a holding area for HGVs, regulating the timing and flow of vehicles to the Sizewell C main development site. A beach landing facility would allow some large deliveries to be delivered by sea.

3.3. Stage 4: integrated strategy

3.3.1 At this Stage 4, we are introducing a further alternative freight management strategy, which we think combines many of the benefits of both the rail-led and road-led strategies but, unlike the rail-led strategy is more within our control to deliver. Under the integrated strategy, the green rail route (proposed as part of the rail-led strategy) would be constructed, as well as the Sizewell link road and the freight management facility (proposed as part of the road-led strategy). Up to two freight trains per day would travel to the LEEIE in the early years of construction and terminate for unloading and loading at either Sizewell Halt or a new rail siding adjacent to the existing Saxmundham to Leiston branch line. At peak of construction, up to three freight trains per day would use the green rail route providing direct access to the main construction area. Like the alternative strategies, refurbishment of the branch line and upgrades to level crossings on that line would be required, but no rail infrastructure works or level crossing closures or upgrades would be proposed on the East Suffolk line. In order to provide more certainty that the branch line upgrades could be delivered on time, EDF Energy proposes to include the branch line in the application red line boundary, which would give it powers under a development consent order approval to agree to undertake the works. A beach landing facility is also proposed under this strategy to allow some large deliveries to be delivered by sea.

3.4. Comparison of the infrastructure and works under each strategy

3.4.1 All three strategies would utilise a beach landing facility for delivering freight to site by sea. The two village bypass and other highway improvements would be necessary under all three strategies. The only exception being the Mill Street junction improvements which are only necessary under the rail-led strategy which includes the Theberton bypass. Under the road-led and integrated strategies the B1122 would be bypassed by the Sizewell link road.

3.4.2 The five daily freight trains proposed under the rail-led strategy would require Network Rail to undertake works along the East Suffolk line, including upgrades to 33 level crossings and the closure of 12 level crossings, and the construction of a passing loop and crossover. However, under the integrated and road-led strategies these works would not be necessary. **Table 3.1** shows the infrastructure and works required under each freight management strategy, including highway and marine works. Full descriptions of all these works can be found in the Stage 3 Main Consultation Document (see Volume 1, Chapters 7–17) subject to the changes and alternative options presented in this document.

3.4.3 An explanation of why the infrastructure and works required under each strategy is different is set out in **section 3.6**.

Table 3.1: Comparison of the infrastructure and works required under the proposed freight management strategies.

Rail-led	Integrated	Road-led
Rail works proposed		
Green rail route	Green rail route	-
East Suffolk line improvements including a new passing loop between Melton and Campsea Ashe	-	-
East Suffolk line level crossing works: 12 closures, 33 upgrades	-	-
Saxmundham to Leiston branch line track upgrade	Saxmundham to Leiston branch line track upgrade	Saxmundham to Leiston branch line track upgrade
Saxmundham to Leiston branch level crossing works: 9 upgrades	Saxmundham to Leiston branch level crossing works: 9 upgrades	Saxmundham to Leiston branch level crossing works: 9 upgrades
Highway works proposed		
Theberton bypass	Sizewell link road	Sizewell link road
Two village bypass	Two village bypass	Two village bypass
Nine other highway improvements (including Yoxford roundabout and Mill Street)	Eight other highway improvements (including Yoxford roundabout)	Eight other highway improvements (including Yoxford roundabout)
-	Freight management facility along the A14	Freight management facility along the A14
Marine works proposed		
Beach landing facility	Beach landing facility	Beach landing facility

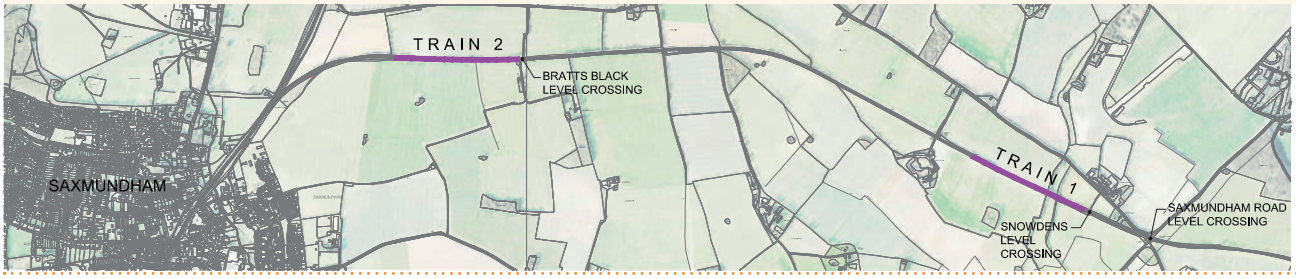
3.5. Comparison of the operation of each strategy

a) Rail movements

3.5.1 As explained, all three strategies would use two trains per day (four movements) to transport freight to the LEEIE in the early years. The trains would travel along the East Suffolk line overnight stopping at the designated holding places on the Saxmundham to Leiston branch line (see **Figure 3.1**) and continue to the LEEIE after 7:00 the next morning. At the LEEIE, freight would be unloaded and transferred to HGVs at the Sizewell Halt or new rail siding and transported along Lover's Lane to the main construction area. Under the road-led strategy, rail would continue to be used in this way throughout the construction period.

3.5.2 For the rail-led and integrated strategies, the frequency of rail movements increases once the green rail route and any associated rail works are completed.

Figure 3.1: Stabling locations on the Saxmundham to Leiston branch line



3.5.3 Under the rail-led strategy, once the green rail route, passing loop, track crossover and East Suffolk line upgrades have been completed, five trains per day (ten movements) would travel along the East Suffolk line, onto the Saxmundham to Leiston branch line and directly into the main construction area without going through Leiston. The passing loop and track crossover allow these trains to travel during the day without affecting the operational passenger service on the East Suffolk line.

3.5.4 Under the integrated strategy EDF Energy anticipates that three trains per day would be utilised to deliver freight direct to the main construction area once the green rail route has been completed. This would consist of five overnight movements and one daytime movement. Overnight movements would be necessary because the main line would not have been upgraded (with the level crossing works, the passing loop and crossover etc.) to provide additional daytime train capacity.

3.5.5 **Table 3.2** summarises the differences in the proposed rail movements under the three strategies.

b) HGV management

3.5.6 Volume 1, Chapter 6 of the Stage 3 Main Consultation Document described how EDF Energy would monitor HGV deliveries and manage any incidents on the road network. All strategies would rely on an electronic web-based Delivery Management System (DMS). Under the road-led and integrated strategies, a freight management facility on the A14 is also proposed to manage HGV deliveries. Under the rail-led strategy, HGV movements (using the proposed Theberton bypass) would be limited to 7:00 to 23:00, whereas hours of use might be extended under the road-led and integrated strategies as the Sizewell link road (proposed by these two strategies instead of the Theberton bypass) takes HGVs further from residential areas. **Table 3.2** summarises the differences in the proposed HGV movements under the three strategies.

3.5.7 At Stage 3 our traffic modelling assumed that the "busiest day" for HGV construction traffic would require twice the number of HGVs required on a "typical day". However, learning from Hinkley Point C has shown that the construction of Sizewell C could reliably be delivered with fewer HGVs on the busiest day under all strategies. In this Stage 4 consultation, modelling is based on the assumption that the busiest day would require only around 1.5 times the number of HGVs required on a typical day. This is based on HGV monitoring data from Hinkley Point C reported to the Transport Review Group. This assumption has been applied to all three strategies in **Table 3.2** for the purpose of comparison.

3.5.8 An explanation of why the number of rail and HGV movements would be different under the three strategies is set out in **section 3.6**.

Table 3.2: Comparison of rail and HGV movements under the proposed freight management strategies.

Rail-led	Integrated	Road-led
Proposed rail movements		
Early years: 2 movements to and 2 movements from LEEIE per 24-hour period (i.e. 4 total movements). Overnight movements along the East Suffolk line to and from the hold points on the Saxmundham to Leiston branch line, and during the day movements along the Saxmundham to Leiston branch line from the hold points to and from the LEEIE.	Early years: 2 movements to and 2 movements from LEEIE per 24-hour period (i.e. 4 total movements). Overnight movements along the East Suffolk line to and from the hold points on the Saxmundham to Leiston branch line, and during the day movements along the Saxmundham to Leiston branch line from the hold points to and from the LEEIE.	Early years: 2 movements to and 2 movements from LEEIE per 24-hour period (i.e. 4 total movements). Overnight movements along the East Suffolk line to and from the hold points on the Saxmundham to Leiston branch line, and during the day movements along the Saxmundham to Leiston branch line from the hold points to and from the LEEIE.
When the green rail route, passing loop, crossover and East Suffolk line upgrades delivered: 10 daytime movements directly to and from the main construction area.	When the green rail route is operational: 5 overnight movements and 1 daytime movement directly to and from the main construction area.	The early years movements continue throughout the construction period: 2 movements to and 2 movements from LEEIE per 24-hour period (i.e. 4 total movements). Overnight movements along the East Suffolk line to and from the hold points on the Saxmundham to Leiston branch line, and during the day movements along the Saxmundham to Leiston branch line from the hold points to and from the LEEIE.
Proposed HGV management		
Delivery Management System (DMS).	Freight management facility on the A14 and DMS.	Freight management facility on the A14 and DMS.
HGV operation 07:00 – 23:00	HGV operation potentially over extended hours.	HGV operation potentially over extended hours.
Typical day at peak: 225 HGVs (450 movements) Busiest day: 350 HGVs (700 movements)	Typical day at peak: 325 HGVs (650 movements) Busiest day: 500 HGVs (1000 movements)	Typical day at peak: 375 HGVs (750 movements) Busiest day: 575 HGVs (1150 movements)

3.6. Explanation of the differences in infrastructure and operations between the strategies

3.6.1 In developing alternative freight management strategies, EDF Energy has been driven by the desire to maximise the use of rail infrastructure, while balancing and mitigating environmental impacts, taking into account cost and potential delivery risks.

3.6.2 All three strategies involve use of rail, to different degrees. For safety and operational reasons, there is a difference in the scale of works to the existing rail network required to enable different numbers of rail movements, overnight or during the day.

3.6.3 All freight travelling by rail would need to use the East Suffolk line, which has sections of single track railway line, without disrupting the existing passenger service. These factors significantly constrain the East Suffolk line's potential for use for freight deliveries. EDF Energy has been working with Network Rail to understand these capacity constraints and develop freight strategies that can operate within these.

3.6.4 The premise of each strategy is that:

- the movement of materials by rail under each strategy is maximised, taking into account the capacity and operational constraints in each case;
- all material that cannot be transported by rail (or the beach landing facility) must be transported by road; and
- where the impact on communities of road transport on the existing road network would otherwise be unacceptable, new bypasses, highway improvements or constraints on the timing of HGV movements are proposed.

a) Rail constraints and opportunities

3.6.5 The road-led strategy operates in the same way as the integrated and rail-led strategies in the early years, with trains travelling overnight along the East Suffolk line to holding points on the Saxmundham to Leiston branch line to the west of Leiston before travelling through Leiston to the LEEIE in the mornings. This would continue throughout the construction period under the road-led strategy and there would be a heavier reliance on HGV movements to meet peak construction needs than under the other two strategies.

3.6.6 Network Rail carried out a feasibility study of the five trains per day (ten movements) proposed under the rail-led strategy and concluded that a passing loop between Melton and Campsea Ashe and track crossover at Saxmundham would be required in order to provide additional capacity to operate within the passenger train timetable on the East Suffolk line. This rail infrastructure would allow freight trains to operate on the East Suffolk line during the daytime and pass the passenger service trains at the designated places. In order for five trains to travel on the East Suffolk line within the timetable constraints, the freight trains would have to travel up to 40mph (compared with the 20 mph restrictions currently in place). This increased speed requires upgrade works to 33 level crossings and the closure of 12 level crossings for safety and operational efficiency reasons.

3.6.7 Under the integrated strategy there would only be one daytime freight movement (running in a gap in the passenger timetable) and the five other movements would need to run along the East Suffolk line overnight. These train movements would not be subject to the same capacity constraints because they would run outside of the passenger service hours. For this reason there would be no need to increase the speed above the current 20mph: these trains would travel within the current operation controls in place on the East Suffolk line and no changes to level crossings would be necessary.

3.6.8 The green rail route would be built under both the rail-led and integrated strategies. This temporary railway line would leave the Saxmundham to Leiston branch line west of Leiston and deliver freight directly to the main construction area. In the early years of construction, when rail freight deliveries are made to LEEIE under all three strategies, the volume of freight delivered by rail would be constrained by the length of trains which could be accommodated at Sizewell Halt or a new rail siding. Following the construction of the green rail route, longer trains with more wagons could be utilised therefore maximising volumes of material per train and HGVs would not be required to transport the freight to site along Lover's Lane. Under the rail-led strategy there would be ten movements travelling along the East Suffolk line, onto the branch line and direct into site via the green rail route through the day. Under the integrated strategy there would be one movement during the day and five movements would be overnight but travelling directly from the East Suffolk line to site without being held outside of Leiston.

3.6.9 Following the construction of the green rail, no trains would travel through Leiston under the rail-led and integrated strategies, reducing the noise impact through that area.

b) Theberton bypass or Sizewell link road

3.6.10 In order to consider the highway infrastructure necessary to support delivery of freight under the three different rail scenarios, we forecast the residual road traffic movements at key locations assuming HGVs were used on the existing road network to transport all freight not capable of being accommodated by rail or the beach landing facility. Traffic modelling shows that in 2027 without Sizewell C traffic there would be 6,800 two-way vehicles daily on the B1122 through Theberton over a 24 hour period. Without any mitigation, at peak construction the forecast daily vehicles that would route through Theberton on the B1122 for the rail-led strategy would be 9,150 two-way vehicles which compares to 9,350 under the integrated strategy and 9,450 under the road-led strategy. These forecasts include general traffic as well as the Sizewell C construction traffic (i.e. cars, light goods vehicles, buses and HGVs). The noise analysis has shown that the noise impacts on Theberton from the increase in vehicular movements under all three strategies would, at times, be significant. For this reason, to avoid the impacts on Theberton, a bypass is proposed under the rail-led strategy. Bypassing Theberton is proposed under the integrated and road-led strategies for the same reason, but, given that these strategies also give rise to significant impact on Middleton Moor (discussed in **section 3.6.11**), a longer bypass, (i.e. the Sizewell link road) of both Theberton and Middleton Moor, is considered justified for the integrated and road-led strategies.

3.6.11 In Middleton Moor, traffic modelling shows that in 2027 without Sizewell C traffic there would be 4,600 two-way vehicles on the B1122. Without any mitigation, at peak construction the forecast daily vehicles that would route through Middleton Moor on the B1122 for the rail-led strategy would be 6,200 two-way vehicles which compares to 6,400 under the integrated strategy and 6,500 under the road-led strategy. The rail-led strategy would necessitate 225 HGV deliveries per day (450 two-way HGV movements); the integrated strategy would necessitate 325 HGV deliveries per day (650 two-way HGV movements); and the road-led strategy would necessitate 375 HGV deliveries per day (750 two-way HGV movements). Noise analysis shows that the resultant noise impacts are not significant in Middleton Moor at the traffic volumes created by the rail-led strategy. Consequently, the Sizewell link road is not proposed under the rail-led strategy and Sizewell C traffic would continue to use the existing B1122 through Middleton Moor under that strategy.

3.6.12 Although the integrated strategy includes a greater use of rail than the road-led strategy to deliver freight to site, it would still require a greater use of the road network than the rail-led strategy because, without upgrade works to the East Suffolk line, rail freight deliveries are more limited even with the green rail route in

place (as explained in **section 3.5**). Our noise analysis has shown that, even with fewer HGV movements than proposed under the road-led strategy, it is still likely that there would be times where there would be significant impacts on Middleton Moor. As such the Sizewell link road is proposed to mitigate these impacts.

c) Timing and quantity of HGVs

3.6.13 Through the early years for the rail-led and integrated strategies, before the green rail route has been delivered, the freight brought by train to the LEEIE would be transported to the main construction site via HGVs. Once the green rail route has been built, there would be an average of 225 HGV deliveries per day at peak construction, with 350 HGV deliveries on the busiest day under the rail-led strategy. Under the integrated strategy there would be an average of 325 HGV deliveries per day at peak with 500 on the busiest day.

3.6.14 The road-led strategy includes two freight trains delivering freight to the LEEIE to be transported to site via HGV throughout the construction period. At peak construction there would be an average of 375 HGV deliveries per day, with 575 on the busiest day.

3.6.15 Under the rail-led strategy, where a bypass of Theberton alone is proposed, our assessments show that limiting HGV movements to between 07:00 and 23:00 would be necessary to avoid unacceptable noise and vibration impacts to residents along the A12 in Yoxford and the B1122 in Middleton Moor and Theberton. The Sizewell link road proposed under the road-led and integrated strategies would result in a reduction in noise and vibration impacts affecting these residents. This mitigation may allow the hours of operation of HGVs to be extended under these strategies without significant impact on residents. However, we are carrying out further noise assessments to understand the impacts of extended hours on these areas ahead of our application for development consent.

d) Freight management facility

3.6.16 As explained at Stage 3, a freight management facility is proposed under the road-led strategy to manage the additional HGVs along the A14. Under the integrated strategy this freight management facility would also be proposed. The lower number of HGVs required for the rail-led strategy could effectively be managed using the electronic web-based DMS. For this reason, the freight management facility is not proposed as part of the rail-led strategy.

3.7. Why are we considering an integrated strategy?

3.7.1 EDF Energy believes that rail should play an important role in the delivery of freight during construction and has explained this through each stage of formal consultation. This belief has driven the development of our freight management strategy from the start and has been maintained as the strategies have developed and more information has come to light. We have looked for opportunities to maximise the use of rail whilst considering the capacity restrictions on site, the types and quantities of freight needed at different times and the reliability of delivery.

3.7.2 The Government's overarching National Policy Statement for Energy states that rail transport is preferred to road transport at all stages of the Project where cost-effective (para 5.13.10, NPS EN-1 Ref 4.1).

3.7.3 In response to the Stage 3 consultation, Suffolk County Council (SCC) and Suffolk Coastal District Council (now East Suffolk Council) submitted a joint response. While preferring a marine-led strategy overall, between the road-led and rail-led strategies, both local authorities expressed support for the rail-led strategy, emphasising their support for 'sustainable' modes of transport. However, they acknowledged the difficulties of introducing additional rail movements to the existing rail network without impacting passenger trains or the economy of East Suffolk. In developing our proposals, we are aware that it is a priority of Network Rail not to impact the passenger services or the use of rail in the economy of East Suffolk. The local authorities also acknowledged the number of level crossing closures and upgrades along the East Suffolk line that would be necessary under the rail-led strategy.

3.7.4 The public demonstrated a clear preference for the rail-led strategy through their feedback at Stage 3. Many responses commented on the lower number of HGVs required under a rail-led option, and the associated emissions, as the reason for their preference. The impact on the local road network, especially the A12, was a concern, in part because of the impact of congestion on tourists and local residents.

3.7.5 As the Project progresses towards submitting the application for development consent, we are developing our construction programme based on learning from Hinkley Point C, input from potential contractors, and technical developments. Any uncertainty on programme for delivery of crucial rail infrastructure makes it difficult for EDF Energy to develop a reliable construction programme for the Project or provide Government or potential investors with assurance on the expected completion of construction and ultimately when

Sizewell C could start generating low-carbon energy. This is a concern in particular given the Government's policy position that new nuclear power is needed "*urgently*" (see **Chapter 1, section 1.2**). The earliest delivery of Sizewell C would also realise the public benefits of the Project including the direct employment benefits and estimated £4 billion impact on the regional economy and the contribution to meeting climate change targets.

3.7.6 Certainty is important. Given the scale of the investment necessary and the need to be able to rely on a clear, deliverable programme, EDF Energy, contractors, and investors will need to know as far as practicable when key infrastructure can be expected to be in place. A lack of timely delivery, or even the uncertainty that would be caused by a lack of confidence in the delivery plans could have severe impacts on costs, the length of the construction period and on communities (if the necessary mitigation is not in place by the time the principal Project impacts are felt).

3.7.7 Over the last six months, Network Rail has carried out further assessments of the estimated programme and cost of the additional rail infrastructure and works required for the rail-led strategy. In their Stage 3 consultation response, Network Rail stated that they have identified a number of risks to implementing the full infrastructure required for the rail-led strategy that could potentially impact on the programme for their delivery. In particular, they identified that completing the detailed design work and construction works along the East Suffolk line within EDF Energy's construction programme would be challenging.

3.7.8 At this stage Network Rail is unable to give EDF Energy any assurances on the programme for the works on the East Suffolk line. As these rail works are crucial for the safe and effective operation of freight delivery to site under the rail-led strategy, any delay in their completion would have an impact on the delivery of the rest of the Project. Due to their obligations as a statutory undertaker with responsibilities across the whole rail network, Network Rail will not be able to commit to a definitive programme, even after conducting further assessments. Neither would Network Rail accept liabilities for delay in construction. The Office of Rail and Road has also recognised the challenges of delivering rail for key infrastructure projects in part due to this uncertainty (Ref 4.2).

3.7.9 These concerns led EDF Energy and Network Rail to explore alternative ways to use rail to deliver freight to site while reducing the risk of programme delays to the Project.

3.7.10 Network Rail has recently concluded an updated capacity study of the East Suffolk line and Saxmundham to Leiston branch line. This revealed that there is now a gap in the passenger timetable that would allow for an additional train path along the rail network during the day without impacting the existing passenger service. Historically this train path was used by Sizewell A to transport nuclear fuel to and from the operational power station. As Sizewell A has entered the decommissioning phase it no longer requires use of this path.

3.7.11 The additional path would allow one freight train movement during the day on the East Suffolk line. Our analysis showed that with the addition of five overnight movements and construction of the green rail route, the delivery of freight by rail at peak construction could be maximised while avoiding the need to be reliant on upgrade works to the East Suffolk line (which as explained gives rise to a programme risk). While works to the Saxmundham to Leiston branch line would be required for each strategy, the scale and nature of these works is much less likely to give rise to delays, in part because the branch line is unused by passenger services. EDF Energy is also exploring with Network Rail the possibility that EDF Energy could carry out all works to the branch line, rather than Network Rail. This would give EDF Energy a higher degree of control over the programme for delivery of these works. This possibility does not exist on the East Suffolk line (if the rail-led strategy were pursued) given operational and safety issues associated with its passenger use.

3.7.12 By bringing forward the maximum scale of rail use that can confidently be delivered but also putting in place the road infrastructure to relieve impacts on the B1122 communities (as well as a freight management facility to regulate HGV movements), the integrated strategy may offer the optimum deliverable freight management strategy for the Project.

3.8. Environmental impacts of an integrated strategy

3.8.1 PEI for the road-led and rail-led strategies is provided in Volumes 2 and 3 of the Stage 3 Main Consultation Document. Volume 2 of the Stage 3 Main Consultation Document includes a comparison of the potential environmental effects of the two strategies at the end of each chapter. As the integrated strategy is made up of components from the road-led and rail-led strategies, this section describes the potential environmental effects under the integrated strategy in comparison to the other two strategies.

a) Preliminary environmental information for the integrated strategy

3.8.2 The integrated strategy is made up of infrastructure which is also proposed under the road-led and rail-led strategies. At Stage 3 we presented the PEI for each proposed infrastructure element. This included a description of the baseline, any environmental design or embedded mitigation, a preliminary assessment of effects, any additional mitigation required, and a preliminary assessment of any residual effects throughout the construction and operational phases of each development. **Table 3.3** shows where PEI which is relevant to the individual elements of the integrated strategy can be found in the Stage 3 Main Consultation Document, and any relevant differences in environmental effects under the integrated strategy.

Table 3.3: PEI for the integrated strategy

Elements of the Project under the integrated strategy	Environmental impacts of each element of the Project under the integrated strategy
Main development site	During the construction phase, under the integrated strategy, the number of train movements to the main development site would be less than those predicted to occur under the rail-led strategy but greater than under the road-led strategy. In addition, train movements would occur overnight, once the green rail route has been constructed. Therefore, whilst the worst-case air quality and noise effects associated with the day-time movements of trains under the integrated strategy would be less than the effects that are likely to occur under the rail-led strategy as presented in Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document, additional significant noise effects may occur due to night-time train movements on the green rail route. There would be fewer HGVs travelling to and from the main development site than proposed under the road-led strategy but more than proposed under the rail-led strategy. Therefore, the worst-case air quality and noise and vibration effects associated with the movement of HGVs under the integrated strategy would be less than the effects that would occur under the road-led strategy as presented in Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document. All other environmental impacts of the construction of the main development site would be the same as presented for the assessment under the rail-led strategy in Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document. The operational impacts would be the same under all three strategies and are presented in Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document. Changes to the preliminary environmental information (PEI) presented at Stage 3 as a result of other scheme changes at the main development site included in this Stage 4 consultation are described in **Chapter 5**, **section 5.13** of this document.
Green rail route	Under the integrated strategy, the green rail route would be constructed in the same way as under the rail-led strategy. Therefore, all of the environmental impacts for the construction of the green rail route under the integrated strategy would be the same as presented in Volume 2A Chapter 3 of the Stage 3 Main Consultation Document. Once the green rail route is operational there would be fewer train movements along the green rail route compared to the rail-led strategy, however some of these would be overnight movements. Therefore, under the integrated strategy, there is the potential for additional significant noise effects on sensitive receptors close to the green rail route due to the overnight rail movements than presented for the operation of the green rail route under the rail-led strategy. All other environmental impacts of the integrated strategy of the green rail route would be the same as presented for the operational assessment under the rail-led strategy in Volume 2A, Chapter 3 of the Stage 3 Main Consultation Document. The green rail route is not proposed under the road-led strategy, therefore, potential impacts associated with the construction and operation of the green rail route would not occur. Not included in Stage 4 PEI, as there were no design or red line boundary changes to the green rail route.
East Suffolk line upgrades including the passing loop etc.	Under the integrated strategy, upgrades to the East Suffolk line and the additional rail infrastructure would not be required. Therefore, the potential environmental impacts associated with the construction of the upgrades as identified in Volume 2A, Chapter 4 of the Stage 3 Main Consultation Document under the rail-led strategy, would not occur. For the rail operations during the construction of Sizewell C, there would be the same number of train movements on the than East Suffolk line under all three strategies in the early years. Therefore, the environmental impacts of the operation of the branch line in the early years presented in Volume 2A, Chapter 4 of the Stage 3 Main Consultation Document would be the same under the integrated strategy. Once the green rail route is operational, under the integrated strategy, there would be more train movements on the East Suffolk line than under the road-led strategy but fewer than under the rail-led strategy. However, under the integrated strategy, these would be predominantly overnight movements and therefore, there is a potential for significant noise effects overnight on sensitive receptors. All other environmental impacts associated with the operation of the East Suffolk line would be the same as presented for the rail-led strategy in Volume 2A Chapter 4 of the Stage 3 Main Consultation Document. Not included in Stage 4 PEI, as there were no design or red line boundary changes to the East Suffolk line.

Elements of the Project under the integrated strategy	Environmental impacts of each element of the Project under the integrated strategy
Saxmundham to Leiston branch line	The upgrade works on the Saxmundham to Leiston branch line are proposed under all three strategies. Therefore, all of the environmental impacts for the construction works associated with the upgrades to the Saxmundham to Leiston branch line under the integrated strategy would be the same as under the road-led and rail-led strategies presented in Volume 2A, Chapter 4 of the Stage 3 Main Consultation Document. Under the integrated strategy, the number of trains that would run on the Saxmundham to Leiston branch line would be the same as the road-led and rail-led strategies in the early years. Therefore, the environmental impacts of the operation of the branch line in the early years presented in Volume 2A, Chapter 4 of the Stage 3 Main Consultation Document would be the same under the integrated strategy. However, once the green rail route is operational, under the integrated strategy (the same as under the rail-led strategy) there would be no train movements through Leiston as proposed under the road-led strategy. There would be fewer train movements along the Saxmundham to Leiston branch line between Saxmundham and the green rail route than under the rail-led strategy but these would be predominantly overnight movements. Therefore, the potential noise effects through Leiston would be less than under the road-led strategy, but there is a potential for additional significant noise effects on nearby sensitive receptors than the rail-led strategy because of the increased overnight movements. All other environmental impacts associated with the operation of the Saxmundham to Leiston branch line would be the same as presented for the rail-led strategy in Volume 2A Chapter 4 of the Stage 3 Main Consultation Document. Changes to the PEI presented at Stage 3 as a result of changes to Saxmundham to Leiston branch line included in this Stage 4 consultation, are described in **Chapter 6, section 6.2** of this document.
Sizewell link road	Under the integrated strategy, the Sizewell link road would be constructed in the same way as under the road-led strategy. Therefore, all of the environmental impacts for the construction of the Sizewell link road under the integrated strategy would be the same as presented in Volume 2A Chapter 5 of the Stage 3 Main Consultation Document. Once the Sizewell link road is operational, there would be fewer HGVs travelling along this road under the integrated strategy compared to the road-led strategy. Therefore, the associated traffic noise impacts and emissions to air would be less than for the road-led strategy, as presented in Volume 2A Chapter 5 of the Stage 3 Main Consultation Document. All other environmental impacts associated with the operation of the Sizewell link road would be the same as presented in Volume 2A Chapter 5 of the Stage 3 Main Consultation Document. The Sizewell link road would not be built under the rail-led strategy and therefore, potential construction and operational impacts associated with the Sizewell link road in its entirety would not occur under the rail-led strategy. Changes to the PEI presented at Stage 3 as a result of changes to Sizewell link road included in this Stage 4 consultation, are described in **Chapter 6, section 6.3** of this document**.**
Theberton bypass	The Theberton bypass would only be built on its own under the rail-led strategy. Under the road-led and integrated strategies, Theberton bypass would form part of the Sizewell link road. However, as the design of the Theberton bypass is similar under all three strategies,-the likely impacts of construction would occur under all three strategies. Once the Theberton bypass is operational (as part of the Sizewell link road), there would be fewer HGVs travelling along this road under the integrated strategy compared to the road-led strategy but more than under the rail-led strategy. Therefore, the associated traffic noise impacts and emissions to air would be less than under the road-led strategy utilising the Sizewell link road but greater than the under the rail-led strategy, as presented in Volume 2A Chapter 6 of the Stage 3 Main Consultation Document. All other environmental impacts associated with the operation of the Theberton would be the same as under the Sizewell link road presented in Volume 2A Chapter 6 of the Stage 3 Main Consultation Document. Changes to the PEI presented at Stage 3 as a result of changes to Theberton bypass included in this Stage 4 consultation, are described in **Chapter 6, section 6.4** of this document**.**
Two village bypass	The two village bypass would be constructed in the same way under all three freight management strategies. Therefore, all of the environmental impacts for the construction of the two village bypass under the integrated strategy would be the same as presented in Volume 2B, Chapter 7 of the Stage 3 Main Consultation Document. Once the two village bypass is operational, there would be fewer HGVs travelling along the A12 and the two village bypass under the integrated strategy compared to the road-led strategy, however a greater number compared to the rail-led strategy. Therefore, the associated traffic noise impacts and emissions to air would be less than for the road-led strategy but greater than for the rail-led strategy. All other environmental impacts associated with the operation of the two village bypass would be the same as presented in Volume 2B Chapter 7 of the Stage 3 Main Consultation Document. Changes to the PEI presented at Stage 3 as a result of design changes to two village bypass included in this Stage 4 consultation, are described in **Chapter 6, section 6.5** of this document**.**
Northern park and ride	The northern park and ride would be constructed and operated in the same way under all three freight management strategies. Therefore, all of the environmental impacts for the construction and operation of the northern park and ride under the integrated strategy, would be the same as presented in Volume 2B, Chapter 8 of the Stage 3 Main Consultation Document. Changes to the PEI presented at Stage 3 as a result of design changes to the northern park and ride included in this Stage 4 consultation, are described in **Chapter 6, section 6.6** of this document**.**

Elements of the Project under the integrated strategy	Environmental impacts of each element of the Project under the integrated strategy
Southern park and ride	The southern park and ride would be constructed and operated in the same way under all three freight management strategies. Therefore, all of the environmental impacts for the construction and operation of the southern park and ride under the integrated strategy, would be the same as presented in Volume 2B, Chapter 9 of the Stage 3 Main Consultation Document. Changes to the PEI presented at Stage 3 as a result of changes to the southern park and ride included in this Stage 4 consultation, are described in **Chapter 6, section 6.7** of this document**.**
Freight management facility	Under the integrated strategy, a freight management facility would be constructed and operated in the same way as under the road-led strategy. Therefore, all of the environmental impacts for the construction and operation of a freight management facility under the integrated strategy would be the same as presented in Volume 2B, Chapter 9 of the Stage 3 Main Consultation Document. A freight management facility is not proposed under the rail-led strategy, therefore, the potential impacts associated with the construction and operation of a freight management facility would not occur. Changes to the PEI presented at Stage 3 as a result of design changes to the freight management facility included in this Stage 4 consultation, are described in **Chapter 6, section 6.8** of this document**.**
Other highways improvements including Yoxford roundabout	The Mill Street improvement would not be required under the integrated strategy, unlike the rail-led strategy. Therefore, the construction and operation impacts of this highway improvement would not occur under the integrated strategy. All other highway improvements are proposed under all three strategies therefore the environmental impacts associated with their construction under the integrated strategy would be the same as presented in Volume 2B, Chapters 11 and 12 of the Stage 3 Main Consultation Document. As the integrated strategy would utilise fewer HGVs than the road-led strategy but more than the rail-led strategy, the air quality and noise and vibration impacts would be no worse than those presented for the road-led strategy. All other environmental impacts associated with the operation of other highway improvements would be the same as presented in Volume 2B Chapters 11 and 12 of the Stage 3 Main Consultation Document. Changes to the PEI as a result of changes to the other highway improvements included in this Stage 4 consultation are described in **Chapter 6, sections 6.9** and **6.10**.

b) Environmental effects of the integrated strategy compared against the road-led and rail-led strategies

3.8.3 The proposed Sizewell link road would reduce traffic along the B1122 and therefore have a beneficial noise effect to both Middleton Moor and Theberton. This would be an improvement compared to the rail-led strategy where Middleton Moor would not be bypassed. Noise impacts associated with the operation of the Sizewell link road under the integrated strategy would be less than those predicted for the road-led strategy, and are predicted not to be significant with the provision of screening as appropriate.

3.8.4 Along the A12, the road traffic and associated noise impacts under the integrated strategy would be less than under the road-led strategy, but greater than the rail-led strategy. The proposed two village bypass is common to all options and would reduce traffic through Stratford St Andrew and Farnham under all three strategies. Noise impacts associated with the operation of the two village bypass under the integrated strategy would be less than those predicted for the road-led strategy, and are not predicted to be significant with the provision of screening as appropriate.

3.8.5 Traffic noise impacts on the wider highway network would be less for the integrated strategy than for the road-led strategy, but greater than for the rail-led strategy. Further modelling and assessment is being undertaken to fully understand the potential impact of traffic noise across the network, and if any further mitigation is required.

3.8.6 Under the integrated strategy, once the green rail route is operational, there would be up to three train deliveries (six rail movements) per day to the main development site. Five of these trains would operate at night, and could have significant noise impacts on properties close to the green rail route, Saxmundham to Leiston branch between Saxmundham and the green rail route, and on the East Suffolk line. This is greater than both the road-led and rail-led strategies because it introduces more overnight movements.

3.8.7 Preliminary assessment work indicates that properties close the green rail route on Abbey Road are likely to experience significant adverse noise effects at night, similarly on the existing branch line between Saxmundham and the western end of the proposed green rail route at the two closest receptors: Kelsale Covert and Westhouse Crossing Cottage.

3.8.8 To the west of Saxmundham junction, along the East Suffolk line north of Westerfield Junction, the passenger service operates between 06:00 and 23:00 with the occasional Network Rail maintenance train operating outside of these hours. The existing Felixstowe Branch Line joins the East Suffolk Line at Westerfield junction, freight trains currently run on the Felixstowe Branch Line and the East Suffolk line to the west and south of this junction. North of this, up to Saxmundham, the overnight movements from the freight trains associated with the construction of Sizewell C are predicted to give rise to significant adverse noise effects from train movements at night on properties close to the line in Martlesham, Woodbridge, Melton, Wickham Market and Saxmundham. Further modelling and assessment is being undertaken to fully understand the potential impact of these rail movements. If this assessment shows that noise from the train movements would reach levels that would require noise insulation, EDF Energy would offer noise insulation to the affected properties.

3.9. Which freight management strategy?

3.9.1 We consider that the integrated strategy could be suitable for freight delivery for the Project. However, we would welcome your feedback before we decide which is the most appropriate of the three strategies consulted on to include in our application for development consent.

3.9.2 In assessing the merits of the three options, it is important to have regard to the physical infrastructure and level of HGV movements proposed for each option as set out in **Figure 3.2**.

3.9.3 The integrated strategy involves elements of both the road-led and rail-led strategies. The key advantages and disadvantages of the integrated strategy are set out in **Table 3.4.**

3.9.4 **Table 3.5** draws out the advantages and disadvantages of the three alternative strategies to capture the principal points of comparison.

Figure 3.2: Freight management strategy options

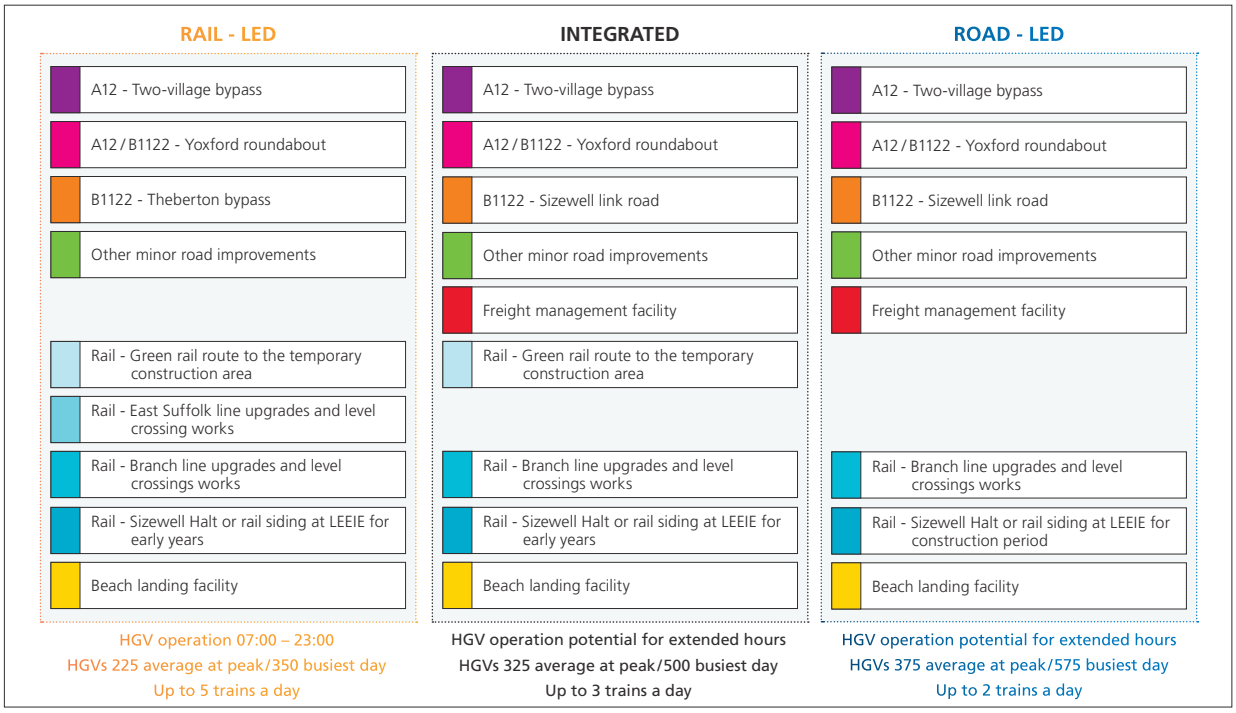


Table 3.4: Key advantages and disadvantages of the integrated strategy

Advantages	Disadvantages
Construction would be more within EDF Energy's control providing greater certainty of the Project programme being met and the necessary mitigation being in place in accordance with the programme than under the rail-led strategy.	There would be no East Suffolk line legacy benefits (e.g. passing loop) which would improve reliability and capacity of the main line rail network in the longer term.
No requirement to close and divert 12 level crossings and carry out upgrade works to 33 level crossings on the East Suffolk line.	The construction and later removal of the green rail route would have temporary environmental effects. These include effects on the setting of Leiston Abbey, already impacted by the temporary construction area to the east, and potentially additional effects on great crested newts and bats. These effects would be the same as for the rail-led strategy.
Abbey Road level crossing would only be used once during the daytime, unlike under the rail-led strategy, which would require closures 10 times during the day time.	There would be overnight train movements on the western end of the Saxmundham-Leiston branch line before trains join the green rail route.
Lower HGV impacts than the road-led strategy on Lover's Lane as more freight would be carried by rail directly into site once the green rail route is operational (as for the rail-led strategy).	The Sizewell link road would have environmental effects and an impact on more land owners than the Theberton bypass under the rail-led strategy. These adverse effects could include effects on great crested newts and bats but would be the same as for the road-led strategy.
Lower HGV impacts on the A12 and local road network than the road-led as more freight would be carried by rail directly into site.	Higher HGV impacts on the A12 than the rail-led strategy, except through Yoxford. However, the impacts and volumes of HGVs would be lower than under the road-led strategy.
Noise, air quality and road network improvements to Theberton and Middleton Moor as the Sizewell link road would remove Sizewell C and some existing traffic. This is the same as road-led strategy, whereas the rail-led strategy benefits only Theberton rather than the full B1122 corridor.	
Yoxford traffic impacts are significantly lower than in the rail-led strategy, including the complete removal of all Sizewell C HGV and buses because of the Sizewell link road. The impacts are also lower than for the road-led strategy as fewer HGVs would be used.	
Reduces impacts on B1122, B1119 and B1121 routes as some traffic chooses to use the Sizewell link road instead.	

Table 3.5: Advantages and disadvantages of the alternative freight management strategy options

Advantages

	Rail-led	Integrated	Road-led
Construction mostly under EDF Energy's control providing greater certainty of delivery to meet the Project programme and deliver timely mitigation.	N	Y	Y
Green rail route constructed allowing freight to be delivered directly to the main construction area.	Y	Y	N
Green rail route constructed removing trains travelling through Leiston.	Y	Y	N
Reduced traffic impacts on Lover's Lane as no HGVs travelling to/from LEEIE transporting freight to site after the early years of construction.	Y	Y	N
Reduced requirement to use Abbey Road level crossing during the day time.	N	Y	Y
No overnight movements on the East Suffolk line after the early years of construction.	Y	N	N
East Suffolk line upgrades would increase line capacity, creating a legacy.	Y	N	N
Noise, air quality and road network improvements to Theberton as traffic moved to Theberton bypass or Sizewell link road.	Y	Y	Y
Noise, air quality and road network improvements to Middleton Moor as Sizewell C and some existing traffic moved to Sizewell link road.	N	Y	Y
Reduced Sizewell C traffic impacts in Yoxford.	N	Y	Y
Comprehensively responds to the call for direct mitigation for all the communities along the B1122.	N	Y	Y

Disadvantages

	Rail-led	Integrated	Road-led
Reliant on Network Rail to deliver infrastructure in challenging timescales.	Y	N	N
Adverse environmental effects, particularly noise and amenity loss from the East Suffolk line improvements including the closure and diversion of 12 and upgrade works to 33 level crossings.	Y	N	N
Adverse environmental effects of the construction, operation and removal and reinstatement of the green rail route.	Y	Y	N
Adverse environmental effects and impact on more land owners of the construction and operation of the western 4.2km of the Sizewell link road.	N	Y	Y
Higher HGV impacts on the A12, except through Yoxford.	N	Y	Y
Some rerouting of existing traffic to B1069, B1078, A1120 and A143 as alternatives to the A12 due to more HGVs.	N	Y	Y
Traffic impacts on Lover's Lane from HGVs transporting freight to/from LEEIE after the early years	N	N	Y

3.10. Next Steps

3.10.1 EDF Energy will continue discussions with SCC to review any updates to the traffic modelling which inform our freight management proposals and will carry out further specific analysis as required with input from SCC. We are also continuing discussions with Network Rail to develop our rail proposals.

3.10.2 We will continue to work closely with Network Rail to develop the required infrastructure proposals and upgrades to help inform our decision on which freight management strategy to take forward to our application for development consent. The Governance for Railway Investment Projects (GRIP) is the process used by Network Rail to deliver infrastructure projects on the rail network. The next stage of the process, GRIP stage three, will commence during 2019 and will focus on option selection followed by option development, including detailed design.

3.10.3 Following analysis of the Stage 3 and Stage 4 consultation responses as well as further technical and environmental assessments, EDF Energy will decide which freight management strategy to take forward into its application for development consent. All necessary measures to control and mitigate the impact of rail and HGV movements will be taken into account in the assessment of environmental impacts presented as part of the application. EDF Energy will identify any necessary commitment and controls within its application for development consent, and comply with those imposed on any consent granted by the Secretary of State.

3.10.4 This will determine the modelling inputs, including freight mode split for the relevant strategy in order to inform the transport assessment for the application for development consent. All necessary measures to control and mitigate the impact of rail and HGV movements will be taken into account in the assessment of environmental impacts presented as part of the application, and EDF Energy would commit to relevant measures as part of any consent granted by the Secretary of State.

4. TRAFFIC MODELLING

4.1. Introduction

4.1.1. In order to assess the likely traffic effects of the Project, EDF Energy has modelled the potential effects of each of the three alternative freight management strategies. The modelling shows what the expected levels of traffic would be at particular points of time at different parts of the road network.

4.1.2. EDF Energy has developed a VISUM[1] traffic model of the local road network (refer to **Figure 4.1**). A 'base model' which aims to replicate the existing conditions on the local road network was produced and has gone through a process of calibration and validation so that the model gives a good reflection of observed traffic conditions. Expected general traffic growth and traffic associated with other 'committed developments' (major developments with planning permission but not yet built) are then added to the base traffic model, along with any known transport improvements associated with these or other schemes. This allows EDF Energy to estimate the future conditions on the road network without Sizewell C: the 'reference case' model. A reference case model has been produced for two forecast years, to enable assessment of different phases of construction:

- 2022 – early years construction phase, which would comprise a smaller construction workforce but before any principal mitigation has been put in place; and
- 2027 – peak construction period, which would comprise the peak construction workforce and the completed mitigation measures described in Volume 2 of the Stage 3 Main Consultation Document.

4.1.3. To examine the likely effects of the development on the road network, the forecast traffic generated by the Project is added to the two reference case models.

4.1.4. As the integrated strategy would operate in the same way as the road-led and rail-led strategies in the early years, the likely traffic effects are also the same. The early years modelling assumptions and likely effects of the Project would be as described in sections 6.5 and 6.6, Volume 1, Chapter 6 of the Stage 3 Main Consultation Document. The results of the early years modelling are therefore not repeated here. However, we would encourage you to review these sections of Stage 3 if you would like further information.

4.1.5. This chapter includes estimates of the additional traffic that the Project would generate during the period of peak construction under the integrated strategy. The modelling under road-led and rail-led strategies has also been repeated here to assist with the comparison. The period of peak construction is when the maximum number of construction workers would be on-site and is anticipated to be in the middle of the construction phase, assumed to be around 2027 for the purposes of the transport modelling, and to last one to two years. For robustness, we have assumed that the maximum number of workers would coincide with the peak number of Heavy Goods Vehicle (HGV) movements.

This chapter is structured as follows:

- **section 4.2** summarises the traffic conditions on the future highway network without the Project so that the effects of Sizewell C's construction and operational traffic can be assessed against it;
- **section 4.3** sets out the inputs to the peak construction traffic modelling and how they differ for each strategy; and
- **sections 4.4** to **4.11** describe the assessment of the effects of construction traffic during the peak construction phase comparing the three freight management strategies.

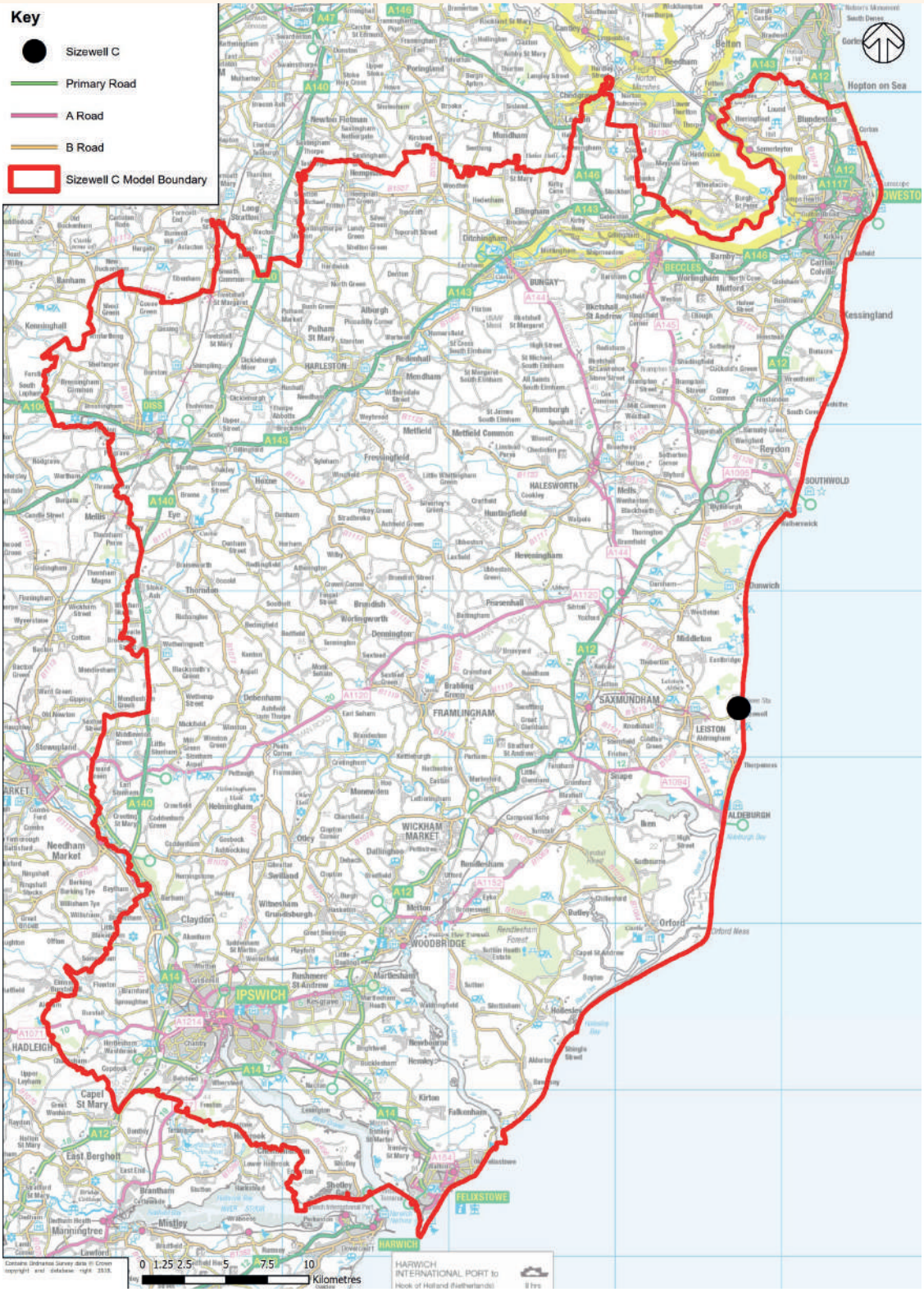
4.2. 'Without Sizewell C' traffic modelling

4.2.1. Since EDF Energy started modelling the traffic in the study area, the model has developed and been refined to improve the accuracy and reliability of the assessments it produces. As new developments have been committed, their impact on the study area has been included in the VISUM model. Analysis of how the traffic in the study area is likely to increase without Sizewell C has been carried out and discussed with Suffolk County Council (SCC).

4.2.2. The assumption at Stage 3, and not changed at this Stage 4 consultation is that peak construction would occur around the year 2027. A VISUM traffic model has been developed for the purposes of assessing Sizewell C traffic effects. VISUM is an industry standard software package used for transport modelling and is widely used in transport studies. The study area and modelled network for the VISUM model has been agreed with SCC and remains the same as that shown at Stage 2 and Stage 3: it extends to Lowestoft to the north, Ipswich to the south and the A140 to the west. The geographic extent of the model is shown in **Figure 4.1**.

1 VISUM is a widely used transport modelling platform developed by PTV VISION. More information on the model and methodology is provided in Volume 1, Chapter 6 of the Stage 3 Main Consultation Document

Figure 4.1: Geographic extent of the Sizewell C VISUM traffic model



4.2.3. In order to obtain the most reliable forecasts from the VISUM model, EDF Energy has considered how other factors affect the traffic levels on the road network in the reference case. EDF Energy has worked closely with SCC to ensure that there is a high level of agreement on the development of the transport modelling. The evolution of these considerations is described in section 6.2, Volume 1, Chapter 6 of the Stage 3 Main Consultation Document and they have not changed for this Stage 4 consultation. but there are two points are of particular note explained below.

a) Modelled time periods

4.2.4. The modelled time periods are:

- 06:00 to 09:00 hours in the weekday morning period: For robustness, this uses the average of Monday to Thursday morning traffic data because analysis has indicated that these periods are consistently busier than Friday mornings; and
- 15:00 to 19:00 hours in the weekday afternoon/evening period: Conversely, this uses the average of Friday traffic data because analysis has indicated that Friday afternoon and early evening traffic is consistently the busiest of the week and higher than in any other "neutral" month[2] weekday or weekend period.

b) Sizewell B outage

4.2.5. An 'outage' is performed periodically (typically over a six week period every 18 months) at Sizewell B, during which periods traffic flows in the area are higher than usual. So that the future year assessments are robust, trips generated by these periodic Sizewell B outages have been incorporated in all future year (for the reference case and with Sizewell C development) modelling scenarios. This is a robust assessment since there is no outage taking place for about 90% of the time and traffic flows would be lower than have been modelled during these periods.

4.3. Traffic modelling of the Sizewell C peak construction phase

4.3.1. The assumption in Stage 3 and this Stage 4 is that peak construction would occur around the year 2027. The traffic modelling assessment has been based on a workforce of 7,900 construction workers at peak and 600 associated development operational workers. This section sets out the key input parameters which have been used to generate the assessments of Sizewell C construction traffic on weekdays at peak construction. The figures are shown for the typical and busiest day under the integrated strategy and compared with the typical and busiest days under rail-led and road-led.

4.3.2. The only difference to the modelling presented at Stage 3 is that we have varied the assumption used for the number of HGVs needed on the busiest day compared with a typical day under each strategy. At Stage 3 it was assumed that the busiest day would require twice the number of HGVs on a typical day. However, learning from Hinkley Point C has shown that the construction of Sizewell C could reliably be delivered with fewer HGVs on the busiest day. In this Stage 4 consultation it is assumed that the busiest day would require around 1.5 times the number of HGVs required on the typical day. This assumption has been applied to all three strategies. Modelling under the road-led and rail-led strategies referring to the busiest day is therefore different to what was shown at Stage 3 in this respect.

4.3.3. The input parameters used for the modelling are collated in **Table 4.1** for ease of reference. The only difference between the assessments is the number of HGVs per day and the level of mitigation on the B1122, which can be summarised as follows:

- **Rail-led strategy**: Theberton bypass
  - bypassing Theberton and connecting with the B1122 to the east and west of Theberton.
- **Integrated strategy**: Sizewell link road
  - bypassing Theberton and Middleton Moor, and connecting with the A12 to the south of Yoxford.
- **Road-led strategy**: Sizewell link road
  - bypassing Theberton and Middleton Moor, and connecting with the A12 to the south of Yoxford.

2 A month avoiding main and local holiday periods, local school holiday and other abnormal traffic periods.

Table 4.1: Main input parameters relating to Sizewell C peak construction traffic

Issue	Input Parameter
Assessment construction workforce (basis for traffic modelling)	7,900
Associated development operational workers	600
Residential location of workforce	Based on Gravity Model
Working patterns of the construction workforce	Unchanged from Stages 2 and 3
Size of development site accommodation campus	2,400 on campus, plus 400 caravans on Land east of Eastlands Industrial Estate (LEEIE) (1.5 people per caravan, so 600 workers)
Frequency of shuttle buses from LEEIE (caravan site) to main site	12 buses from LEEIE to main site at 07:30, and returning at 17:00
Frequency of park and ride buses	Three to nine buses from northern and southern park and ride sites per hour during staff changeover periods, hourly service outside staff changeover periods
Frequency of direct buses from Ipswich and Lowestoft	Half hourly during staff changeover periods, four to eight buses per hour from Leiston plus hourly shuttle bus from Saxmundham station
Total number of direct and park and ride buses	644 movements per day
Routing of park and ride and direct buses	**Rail-led:** A12, B1122 and Theberton bypass **Integrated:** A12, B1122 (from north only) and Sizewell link road **Road-led:** A12, B1122 (from north only) and Sizewell link road
No. of workers travelling by direct bus	200 from Ipswich and Lowestoft, plus all residents in Leiston and Knodishall (a further 950 construction and associated development workers)
No. of workers travelling by rail	100
No. of workers walking / cycling / motorcycling to construction site or park and ride sites	No workers assumed to use these modes to give a robust assessment
Average level of car sharing	1.1 workers per car for home based (HB) workers and 2 workers per car for non-home based (NHB) workers
Weekend travel	A proportion of NHB workers likely to travel directly from their permanent home at the start of the week, and returning directly to their permanent home at the end of the week
Non-work trips (leisure, shopping etc.)	Included for all NHB workers (campus/caravan and off-site), based on national travel statistics
Visitors	It is assumed that there would be 200 daily visitors to the Sizewell B and C construction site and up to 800 daily visitors to the Sizewell C visitor centre, travelling in a combination of cars and larger vehicles (coaches and mini-buses)
LGVs	700 movements per day, of which 175 are to and from the postal consolidation facility at Wickham Market
Typical day – average number of HGVs per day at peak construction	**Rail-led:** 450 movements (225 deliveries) **Integrated:** 650 movements (325 deliveries) **Road-led:** 750 movements (375 deliveries)
Busiest day – maximum number of HGVs per day	**Rail-led:** 700 movements (350 deliveries) **Integrated:** 1000 movements (500 deliveries) **Road-led:** 1150 movements (575 deliveries)
Routing of HGVs	**Rail-led:** A12, B1122 and Theberton bypass **Integrated:** A12, B1122 (from north only) and Sizewell link road **Road-led:** A12, B1122 (from north only) and Sizewell link road
Origin of HGVs	85% from A12 south 15% from A12 north

Table 4.1: Main input parameters relating to Sizewell C peak construction traffic

Issue	Input Parameter
HGVs from LEEIE to main construction site	**Rail-led:** 140 movements (70 deliveries) **Integrated:** 140 movements (70 deliveries) **Road-led:** 280 movements (140 deliveries)
Freight management facility (FMF)	Under the **integrated** and **road-led** strategies, all HGVs from the south stop at the FMF adjacent to the A14 for around 1 hour, before moving on to the main construction site. Under the **rail-led** strategy, all HGVs go straight to site.
HGV delivery profile	**Rail-led:** between 07:00 and 20:00 **Integrated:** hours may be extended but this does not affect daily flows **Road-led:** hours may be extended but this does not affect daily flows

4.3.4. The inputs and assumptions set out in **Table 4.1** and used in the traffic modelling conducted for this Stage 4 consultation are the latest available, but may be subject to final refinements prior to submission of the application for development consent. EDF Energy considers the inputs used represent a sound basis for assessing potential Sizewell C traffic effects.

4.3.5. EDF Energy has taken a cautious approach in the considerations that have informed the traffic model. Taking account of these considerations, EDF Energy's view is that during many periods of the construction phase, the actual level of traffic generated by the construction of Sizewell C would be lower than has been considered in the traffic modelling.

4.3.6. Outputs from the modelling work are presented in **section 4.4** of this chapter, which sets out predicted traffic changes and effects of Sizewell C peak construction, together with mitigation proposals.

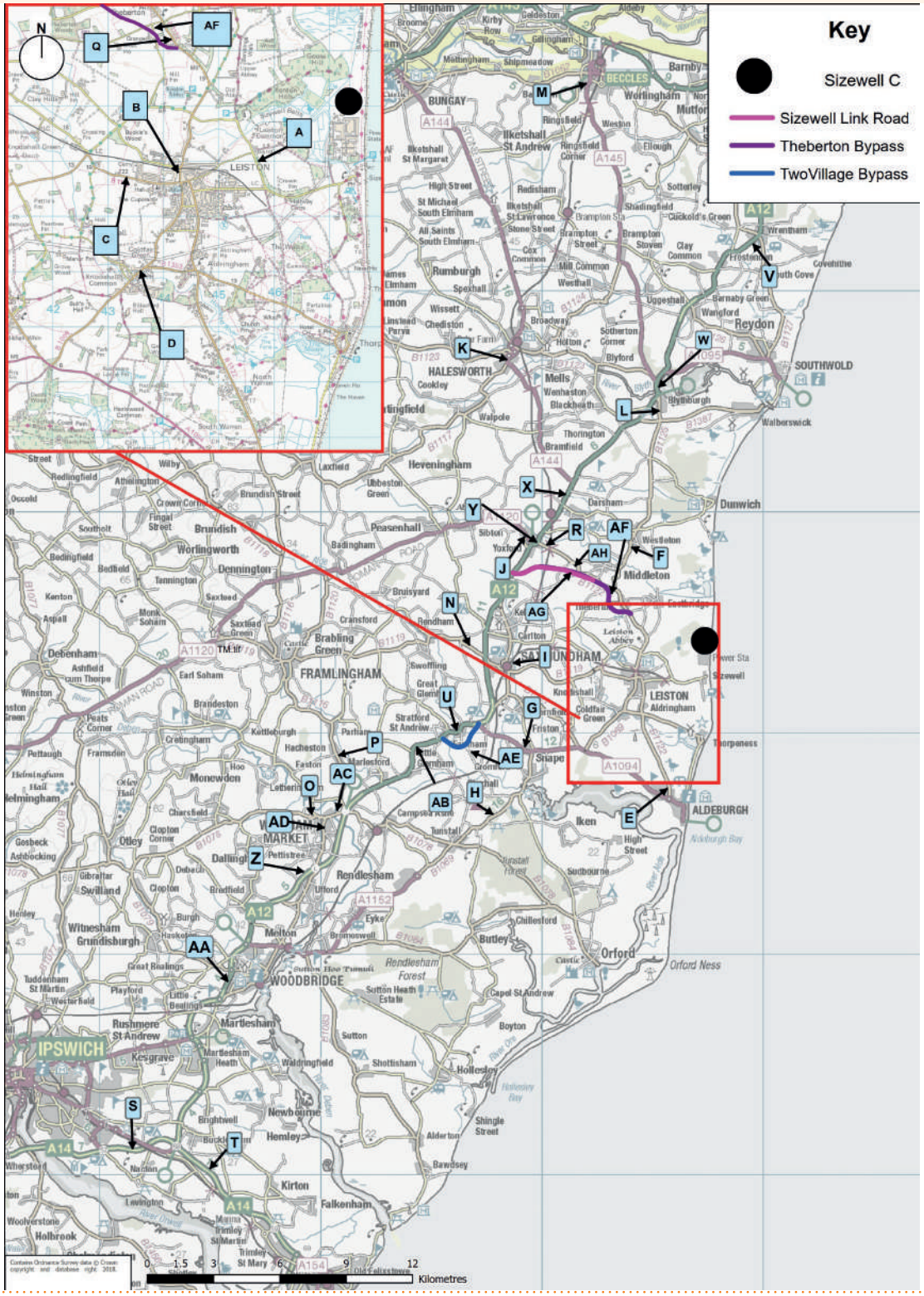
4.4. Peak construction traffic effects across the modelled area

4.4.1. The VISUM traffic model that is being used to assess Sizewell C traffic effects is a dynamic highway assignment model. This means that it replicates likely real life behaviour. Existing and development related traffic within the model can re-route to choose the best available routes, taking account of distance and journey time (other than HGVs and buses which are assigned to fixed routes).

4.4.2. This means that flow changes within the traffic model on any given route are not a simple direct addition of Sizewell C traffic onto a fixed and unchanging future year traffic flow. For this reason, a flow 'range' is presented that demonstrates the likely flow with or without any re-routeing. The potential scale of changes in daily traffic flows for the locations shown in **Figure 4.2** across the network is shown in **Table 4.2**.

4.4.3. The narrative throughout **sections 4.5 to 4.11** of this chapter focus on the estimated traffic effects of the integrated strategy. All tables referred to in this section can be found at the end of this chapter. Any changes to the estimates modelled under the road-led or rail-led strategies presented at Stage 3 as a result of the HGV busiest day calculation change are also highlighted. There is narrative explanation of the rest of the estimates for road-led and rail-led in section 6.4, Volume 1, Chapter 6 of the Stage 3 Main Consultation Document.

Figure 4.2: Locations in Tables 4.2 to 4.11 and Tables 4.13 to 4.18



4.5. Forecast daily 24 hour weekday traffic flows

4.5.1. This section provides a commentary of the traffic modelling data set out in **Table 4.2** at the end of this Chapter. **Table 4.2** shows the forecast daily 24 hour weekday traffic flows at the range of locations shown in **Figure 4.6** during the peak period of Sizewell C construction.

a) Traffic impacts of the integrated strategy

4.5.2. The most notable effects on traffic flows under the integrated strategy are on the A12 at Farnham (and Stratford St. Andrew) and the B1122 at Theberton, where traffic flows show substantial reductions due to the bypasses being proposed around these villages as part of the mitigation. The proposed two village bypass and Sizewell link road, along with improvements to the A12/B1122 junction provide a legacy benefit to the area, by taking traffic away from villages.

4.5.3. In some locations there is a large proportionate increase in traffic compared with the reference case (without Sizewell C), such as the B1122 Abbey Road in Leiston (location B), B1119 Saxmundham Road (location C) and the B1125 (locations F and L), however these increases are from low existing levels and the road capacity would not be exceeded. Similarly on the B1122 east of Yoxford the predicted increase of 15-22% is from a relatively low existing flow, and the Sizewell link road provides an alternative route to relieve some of the impact of additional traffic on this road.

4.5.4. There are no locations where the increase in daily traffic volume generated by the Project construction causes the road capacity to be exceeded.

4.5.5. As described at section 6.4, Volume 1, Chapter 6 of the Stage 3 Main Consultation Document, some locations may experience re-routeing of traffic away from or onto alternative roads as a result of congestion, which is generally present in the future year reference case scenarios (without Sizewell C). This is reflected by the flow 'range' that is presented to give an indication of the likely traffic flows with or without such re-routeing.

4.5.6. This occurs most notably on the A12 at Woodbridge (location AA), where road capacity is already exceeded in the reference case, without Sizewell C, and as a result around 2,250 vehicles per day could potentially re-route. SCC has recognised the need for improvements here to mitigate the effects of general traffic growth on this road and other roads that are affected by re-routing behaviour.

b) Comparison with rail-led and road-led strategies

4.5.7. Traffic flows on the A14 and the A12 would be lower under the integrated strategy than the road-led, though higher than under the rail-led strategy. With the Sizewell link road in place, a greater stretch of the B1122 would be relieved under both the integrated and road-led strategies than under the rail-led strategy, resulting in a reduction in traffic at Middleton Moor (location AH) compared with an increase under the rail-led strategy, and a smaller increase on the B1122 east of Yoxford (location R) compared with the rail-led strategy.

4.5.8. In some locations such as B1122 east of Yoxford (location R) and A14 east of Seven Hills junction (location T) the reported traffic flows are not noticeably different between the integrated and road-led strategies, however this is due to the rounding of traffic volume changes to the nearest 50 vehicles. Flows will in fact be slightly lower with the integrated strategy compared to the road-led strategy.

4.5.9. The levels of re-routing likely to happen under the integrated strategy are not noticeably different to those reported at Stage 3 under the rail-led and road-led strategies. In most of these locations the re-routed traffic volume is less than 5% of daily flows and would not be noticeable when spread over a whole day[3]. Further description of the circumstances and impacts of re-routeing is provided in section 6.4, Volume 1, Chapter 6 of the Stage 3 Main Consultation Document.

4.6. Peak hour percentage increases in weekday traffic

4.6.1. This section provides a commentary on the traffic modelling data set out in **Table 4.3** at the end of this Chapter. **Table 4.3** details the changes in weekday traffic flows during peak hours (rather than 24 hours as reported in **Table 4.2**) on the highway network arising from the peak period of Sizewell C construction as a percentage increase over the reference case.

a) Traffic impacts of the integrated strategy

4.6.2. **Table 4.3** demonstrates that, for the same locations considered in **Table 4.2**, the scale of changes in traffic at network peak hours, under the integrated strategy, is generally similar or somewhat lower than overall daily changes in traffic flows. This is because non-Sizewell C traffic is higher at network peak hours and also reflects that, due to the working patterns and other features of the development, Sizewell C-related construction traffic is relatively well spread across the day.

3 Variation in daily traffic flow levels is usually in the region of ±5%

b) Comparison with rail-led and road-led strategies

4.6.3. The pattern of changes in the integrated strategy is not noticeably different to those shown by the rail-led or road-led strategies.

4.7. Changes in HGV and bus flows (typical and busiest day) at ten locations identified in Figure 4.6

4.7.1. This section provides a commentary on the traffic modelling data set out in **Tables 4.4** and **4.5** at the end of this Chapter. **Table 4.4** shows the changes in HGV and bus movements across the highway network, on a typical day at the range of locations shown in **Figure 4.6**. The same figures are presented for a busiest day in **Table 4.5**. Note that the rail-led and road-led figures include the updated HGV busiest day flows, therefore differ from those presented at Stage 3.

a) Traffic impacts of the integrated strategy

4.7.2. This section provides a commentary on the traffic modelling data set out in **Tables 4.5 and 4.6** at the end of this chapter.

4.7.3. HGVs serving the Sizewell C construction site would be restricted to using the A12 and the Sizewell link road under the integrated strategy. Near the site, the only other road carrying Sizewell HGVs is Lover's Lane, as this route provides access from the LEEIE to the secondary site entrance.

4.7.4. The two largest proportionate increases in HGV and bus flow occur on Lover's Lane (location A), which carries the LEEIE HGVs along with buses from the caravan site, and the B1122 east of Yoxford (location R) which carries the Darsham park ride buses, direct buses to/from Lowestoft and some of the HGVs.

4.7.5. Significant reductions however are shown on the B1122 at Theberton (location Q) and Middleton Moor (location AH) as a result of the Sizewell link road which carries the bulk of the Project-related traffic along with the majority of existing traffic which would otherwise use the B1122 through these villages. A substantial reduction is also shown on the A12 at Farnham (location U) and also Stratford St. Andrew, due to the two village bypass providing relief to these villages.

4.7.6. In some locations, such as B1122 Abbey Road in central Leiston (location B) and B1069 Coldfair Green (location D), the relative increase in bus flows is substantial but this is from a low base level, and would not cause the road capacity to be exceeded. The B1122/Mill Street improvement would be in place by the very early stages of construction.

4.7.7. Most locations which show a high relative increase in HGV/bus volumes are those situated on the A12, for example south of Wickham Market (location Z), Woodbridge (location AA) and Marlesford (location AB). As indicated in **Table 4.2**, the total daily traffic volumes are unlikely to exceed the road capacity in any of these locations, except potentially at Woodbridge which is already congested in the reference case, as described in section 6.4, Volume 1, Chapter 6 of the Stage 3 Main Consultation Document.

b) Comparison with rail-led and road-led strategies

4.7.8. Increases in HGV volumes are generally lower under the integrated strategy than under the road-led strategy, but higher than under the rail-led strategy. However, for much of the B1122 traffic flows are also lower than under the rail-led strategy due to the Sizewell link road, for example at location R, east of Yoxford, under the integrated strategy this section only carries those vehicles from the north, whereas under the rail-led strategy all Project-related HGVs and buses would use this route.

4.7.9. There is also a substantial reduction in HGV and bus flows through the village of Middleton Moor, compared with rail-led, as a result of the Sizewell link road in the integrated strategy.

4.8. Traffic increases on the B1122

Tables 4.6, 4.7 and **4.8** which can be found at the end of this Chapter summarise the daily, peak hour and HGV and bus flow changes on the B1122, and the alternative routes offered by the proposed mitigation, at various locations under the rail-led, integrated and road-led strategies respectively.

a) Traffic impacts of the integrated strategy

4.8.1. As a result of the mitigation proposed on the B1122 in the integrated strategy, the effects of Project-related traffic are largely removed at Theberton and Middleton Moor.

4.8.2. Current weekday all-vehicle daily traffic flows on the section of the B1122 between the junction with the A12 east of Yoxford and the Sizewell C construction site are between around 3,450 and 5,150 vehicle movements per day. Flows at the higher end of this range are more characteristic of the section south-east of the B1122/B1125 junction and through Theberton. Future flows by the time of Sizewell

C peak construction (but without Sizewell C-related traffic) are predicted to rise to between around 4,600 and 6,800 vehicle movements per day.

4.8.3. EDF Energy's analysis shows that Sizewell C traffic at peak construction could add approximately a further 1,000 vehicles at the western end of B1122, east of Yoxford, with the Sizewell link road under the integrated strategy. Daily traffic flows on the B1122 at Theberton and Middleton Moor would reduce by around 90%.

4.8.4. The modelling work shows that all existing through traffic and Sizewell C HGVs, park and ride and direct buses to and from the south serving the construction site use the A12 and Sizewell link road under the integrated strategy. Traffic from the north would use the A12/B1122 roundabout and the B1122 until reaching the Sizewell link road to the west of Middleton Moor.

4.8.5. At B1122 Abbey Road in Leiston, flows increase significantly from a low existing level but the road capacity would not be exceeded. Traffic increases at the B1122 in Aldeburgh are small and are unlikely to cause any congestion, delays or significant environmental effects.

b) Comparison with rail-led and road-led strategies

4.8.6. Through the villages of Theberton and Middleton Moor, flows on the B1122 are lower under the integrated strategy than either rail-led or road-led strategies.

4.8.7. Under the road-led strategy there would be more Project-related HGVs and buses on the B1122 at the western end, east of Yoxford, and an even greater number under the rail-led strategy since all of the HGVs would use this route in the absence of the Sizewell link road.

4.8.8. The integrated strategy removes the majority of traffic from Middleton Moor as well as Theberton, which is also the case under the road-led strategy. Under the rail-led strategy all of the Project-related HGVs and buses would go through Middleton Moor.

4.9. Traffic increases on the A12

4.9.1. **Tables 4.9, 4.10** and **4.11** which can be found at the end of this Chapter summarise the daily, peak hour and HGV and bus flow changes on the A12, and the alternative routes offered by the proposed mitigation, at various locations under the rail-led, integrated and road-led strategies respectively.

a) Traffic impacts of the integrated strategy

4.9.2. The daily traffic flows at Sizewell C peak construction, under the integrated strategy, would be well within the traffic-carrying capacity of the A12 at Wrentham (location V), Blythburgh (location W), Darsham (location X), Yoxford (location Y) and Wickham Market (location Z).

4.9.3. The proposed two village bypass removes all Project-related traffic and the majority of existing traffic from the villages of Farnham and Stratford St. Andrew.

4.9.4. At locations to the north of the B1122, where traffic increases are proportionally higher than more southerly locations, these increases are from relatively low existing flows and would not exceed the road capacity.

4.9.5. At Woodbridge (location AA), the Sizewell C effect would be proportionally least, as the existing flows are higher. There is some evidence that non-Sizewell C traffic would choose other routes to avoid delay in this area, irrespective of whether Sizewell C goes ahead or not.

b) Comparison with rail-led and road-led strategies

4.9.6. Traffic flows under the integrated strategy generally fall somewhere between those reported of the rail-led and road-led strategies, so the extent of impacts are not substantially different to those presented at Stage 3.

4.9.7. For all locations on the A12, the predicted increase in traffic arising from wider economic growth and development unrelated to Sizewell C is broadly similar to the effect related to Sizewell C under all three strategies.

4.10. Traffic increases elsewhere

4.10.1. **Tables 4.12, 4.13** and **4.14** which can be found at the end of this Chapter summarise the daily, peak hour and HGV and bus flow changes at other locations on the network under the rail-led, integrated and road-led strategies respectively.

a) Traffic impacts of the integrated strategy

4.10.2. Aside from the A12 and B1122, the largest proportional increases in traffic arising from the construction phase under the integrated strategy, are predicted to occur near Leiston and Saxmundham, and in Westleton, mainly due to low existing flows and the introduction of bus services.

4.10.3. Under the integrated strategy, in the locations listed below the relative increase in either bus flows or overall traffic volume is substantial but this is from a low base level, and would not cause the road capacity to be exceeded:

- Lover's Lane, Leiston (location A);
- B1069 Coldfair Green (location D);
- B1125 Westleton (location F);
- B1069 Tunstall (location H);
- A1120 Yoxford (location J);
- B1125 Blythburgh (location L); and
- B1078 Wickham Market (location O).

4.10.4. On the A14, west of the Seven Hills roundabout (location S), a large volume of Sizewell C-related trips is expected including a significant proportion of HGVs. However, the Sizewell C traffic is a very small percentage of the existing traffic levels and is not expected to exceed the capacity of the junction. EDF Energy will discuss the investigation of effects on the A12/A14 junctions 55 and 58 with Highways England, prior to the application for development consent.

b) Comparison with rail-led and road-led strategies

4.10.5. These impacts reported under the integrated strategy are similar to those of the rail-led and road-led strategies reported at Stage 3.

4.10.6. EDF Energy will continue to engage with parish councils with regards to potential additional mitigation in these areas following this Stage 4 consultation.

4.11. Summary

4.11.1. NPS-EN1 (Ref. 6.3) recognises that Nationally Significant Infrastructure Projects (NSIPs) can create substantial effects on local transport infrastructure. These effects would be significantly reduced by the embedded mitigation included within the proposals set out in this Stage 4 consultation, namely:

- the construction of an accommodation campus for construction workers, so reducing journeys to work on the local road network;
- direct bus services from Ipswich and Lowestoft, as well as the Leiston area;
- the development of park and ride facilities to reduce car journeys by those living at home or in non-campus accommodation;
- the use of rail to deliver freight and the beach landing facility (BLF) for Abnormal Indivisible Loads (AILs);
- the provision of a two village bypass on the A12 to remove through-traffic from the villages of Farnham and Stratford St Andrew;
- the provision of a Sizewell link road (integrated and road-led strategies) or Theberton bypass (rail-led strategy) to reduce the amount of traffic on much of the B1122; and
- various junction improvement schemes to improve safety and/or increase capacity.

4.11.2. **Tables 4.2** to **4.5** present the residual traffic effects after these measures have been included. EDF Energy recognises that they represent, in many cases, significant increases in traffic flows over conditions that would be experienced in 2027 if Sizewell C were not under construction. However, in the great majority of cases, these increases are from low existing traffic volumes and the resulting traffic volumes would not exceed the traffic-carrying capacity of the road network. Consequently, they are unlikely to cause additional congestion or delays. It should also be noted that all forecast year traffic flows (both with and without Sizewell C) include Sizewell B outage traffic, which occurs periodically (typically over a six-week period every 18 months) therefore typical daily flows would be lower than those reported in this section, particularly on the B1122, B1125 and A12.

4.11.3. EDF Energy recognises that the environmental effects (such as noise and air quality effects) of the traffic increases generated by the construction of Sizewell C also need to be considered. These effects were presented for the rail-led and road-led strategies at Volumes 2A and 2B of the Stage 3 Main Consultation Document (with a comparison of the road and rail led strategies for the relevant elements of the proposal provided at the end of each chapter).

4.11.4. Under the integrated strategy as presented in this Stage 4 Main consultation document, the traffic flows

will generally be lower than for the road-led strategy, and therefore the associated effects are predicted to be less. The Stage 3 assessment (available as part of the current consultation at Volumes 2 and 3 of the Stage 3 Main Consultation Document) of the road-led strategy presents a worst-case for environmental effects associated with the Sizewell C traffic. However, further modelling work is being undertaken to better understand how significant the traffic impacts associated with the integrated strategy would be.

4.11.5. **Tables 4.4** and **4.5** also illustrate that, at locations geographically more distant from the construction site, the increases arising from the Project diminish and become an increasingly small increment on predicted future traffic flows. On nearly all these roads, save for the A145 at Beccles (location M) and on the A12, there is no increase in HGV and bus movements. The increase on the A14 at Ipswich is small when compared to the existing traffic flows.

4.11.6. In some locations, such as Farnham, Stratford St Andrew, Theberton, Middleton Moor and Yoxford, specific proposals to mitigate these effects were identified and presented at Stage 3, and any changes to the proposed schemes are presented in **Chapter 6** of this Stage 4 consultation document. Here and elsewhere on the local highway network EDF Energy has undertaken further investigations of the likely environmental effects of increased traffic flows, which are discussed in the relevant chapters of Volume 2 and 3 of the Stage 3 Main Consultation Document.

Table 4.2: Peak period of Sizewell C construction – forecast daily 24 hour weekday traffic flows at a range of locations

Location	Current average daily (24 hour) weekday all-vehicle traffic flows (based on 2015 data)	Estimated future weekday daily traffic flows without Sizewell C (reference case)	Rail-led			Integrated			Road-led		
			Estimated future daily weekday Sizewell C peak construction flows	Estimated future daily weekday traffic flows with Sizewell C peak construction traffic	Estimated percentage traffic increase from Sizewell C	Estimated future daily weekday Sizewell C peak construction flows	Estimated future daily weekday traffic flows with Sizewell C peak construction traffic	Estimated percentage traffic increase from Sizewell C	Estimated future daily weekday Sizewell C peak construction flows	Estimated future daily weekday traffic flows with Sizewell C peak construction traffic	Estimated percentage traffic increase from Sizewell C
Lover's Lane, Leiston (location A)	2,500	3,850	450	4,300	12%	450	4,300 – 4,550	12% - 18%	600	4,450 – 4,700	16% - 22%
B1122 Abbey Road, central Leiston (location B)	4,450	5,050	3,550	8,550 – 8,600	69% - 70%	3,300	8,300 – 8,350	64% - 65%	3,300	8,300 – 8,350	64% - 65%
B1119 Saxmundham Road, Leiston (location C)	3,750	4,550	1,450	5,950 – 6,000	31% - 32%	1,250	5,450 – 5,800	20% - 27%	1,250	5,450 – 5,800	20% - 27%
B1069 Coldfair Green (location D)	5,400	7,300	1,150	8,450	16%	1,150	8,450	16%	1,150	8,400 – 8,450	15% - 16%
B1122 Aldeburgh (location E)	3,300	4,250	700	4,900 – 4,950	15% - 16%	700	4,900 – 4,950	15% - 16%	700	4,850 – 4,950	14% - 16%
B1125 Westleton (location F)	2,400	2,950	650	3,600	22%	650	3,500 – 3,600	19% - 22%	650	3,500 – 3,600	19% - 22%
A1094 west of Snape Road (location G)	7,550	9,100	250	9,350 – 9,450	3% - 4%	250	9,350 – 9,450	3% - 4%	250	9,350 – 9,500	3% - 4%
B1069 Tunstall (location H)	3,050	4,400	650	4,900 – 5,050	11% - 15%	650	4,900 – 5,050	11% - 15%	600	4,900 – 5,000	11% - 14%
B1121 Saxmundham (location I)	4,550	5,400	450	5,750 – 5,850	6% - 8%	250	5,200 – 5,650	-4% - 5%	250	5,200 – 5,650	-4% - 5%
A1120 Yoxford (location J)	3,650	4,500	800	5,300	18%	800	5,300 – 5,350	18% - 19%	800	5,300	18%
A144 Halesworth (location K)	6,900	8,250	600	8,800 – 8,850	7% - 7%	600	8,850	7%	600	8,800 – 8,850	7% - 7%
B1125 Blythburgh (location L)	1,650	2,050	500	2,550	24%	500	2,500 – 2,550	22% - 24%	500	2,500 – 2,550	22% - 24%

Location	Current average daily (24 hour) weekday all-vehicle traffic flows (based on 2015 data)	Estimated future weekday daily traffic flows without Sizewell C (reference case)	Rail-led			Integrated			Road-led		
			Estimated future daily weekday Sizewell C peak construction flows	Estimated future daily weekday traffic flows with Sizewell C peak construction traffic	Estimated percentage traffic increase from Sizewell C	Estimated future daily weekday Sizewell C peak construction flows	Estimated future daily weekday traffic flows with Sizewell C peak construction traffic	Estimated percentage traffic increase from Sizewell C	Estimated future daily weekday Sizewell C peak construction flows	Estimated future daily weekday traffic flows with Sizewell C peak construction traffic	Estimated percentage traffic increase from Sizewell C
A145 Beccles (location M)	15,350	17,100	400	17,500	2%	400	17,500	2%	400	17,500	2%
B1119 between Framlingham and A12 (location N)	2,400	2,750	50	2,750 – 2,800	0% - 2%	100	2,800 – 2,850	2% - 4%	100	2,800 – 2,850	2% - 4%
B1078 Wickham Market (location O)	3,850	6,200	1,050	7,250	17%	1,000	7,200 – 7,250	16% - 17%	1,050	7,250 – 7,350	17% - 19%
B1116 Hacheston (location P)	6,650	7,250	250	7,500	3%	200	7,450 – 7,500	3% - 3%	200	7,450	3%
B1122 Theberton (location Q)	5,150	6,800	50	350	-95%	100	600	-91%	100	650	-90%
B1122 east of Yoxford (location R)	3,450	4,600	1,600	6,200 – 6,250	35% - 36%	1,000	5,300 – 5,600	15% - 22%	1,000	5,300 – 5,600	15% - 22%
A14 south of Ipswich (west of Seven Hills junction) (location S)	56,900	69,550	1,550	70,450 – 71,100	1% - 2%	1,750	70,850 – 71,300	2% - 3%	1,850	70,800 – 71,400	2% - 3%
A14 Felixstowe Branch (east of Seven Hills junction) (location T)	44,850	53,300	200	53,400 – 53,500	0% - 0%	200	53,500	0%	200	53,500	0%
A12 Farnham (location U)	18,900	21,400	0	300	-99%	0	300	-99%	0	300	-99%
A12 Wrentham (location V)	9,800	11,450	1,350	12,700 – 12,800	11% - 12%	1,350	12,700 – 12,800	11% - 12%	1,350	12,700 – 12,800	11% - 12%
A12 Blythburgh (location W)	10,350	11,900	1,950	13,750 – 13,850	16% - 16%	2,000	13,700 – 13,900	15% - 17%	2,000	13,750 – 13,900	16% - 17%
A12 north of Darsham Park & Ride (location X)	14,000	16,050	2,300	18,100 – 18,350	13% - 14%	2,300	18,200 – 18,350	13% - 14%	2,350	18,200 – 18,400	13% - 15%

Location	Current average daily (24 hour) weekday all-vehicle traffic flows (based on 2015 data)	Estimated future weekday daily traffic flows without Sizewell C (reference case)	Rail-led			Integrated			Road-led		
			Estimated future daily weekday Sizewell C peak construction flows	Estimated future daily weekday traffic flows with Sizewell C peak construction traffic	Estimated percentage traffic increase from Sizewell C	Estimated future daily weekday Sizewell C peak construction flows	Estimated future daily weekday traffic flows with Sizewell C peak construction traffic	Estimated percentage traffic increase from Sizewell C	Estimated future daily weekday Sizewell C peak construction flows	Estimated future daily weekday traffic flows with Sizewell C peak construction traffic	Estimated percentage traffic increase from Sizewell C
A12 Yoxford (location Y)	14,700	16,650	1,800	18,200 – 18,450	9% - 11%	1,100	16,900 – 17,750	2% - 7%	1,100	16,900 – 17,750	2% - 7%
A12 south of Wickham Market Park & Ride (location Z)	24,550	27,000	2,850	29,500 – 29,850	9% - 11%	3,000	29,550 – 30,000	9% - 11%	3,100	29,550 – 30,100	9% - 11%
A12 Woodbridge (location AA)	37,800	40,500	2,450	41,050 – 42,950	1% - 6%	2,650	40,900 – 43,150	1% - 7%	2,700	40,900 – 43,200	1% - 7%
A12 Marlesford (south of two village bypass) (location AB)	18,800	21,450	1,850	23,150 – 23,300	8% - 9%	1,950	23,300 – 23,400	8% - 9%	2,100	23,300 – 23,550	9% - 10%
B1078 Wickham Market (east of B1438) (location AC)	3,650	5,250	1,100	6,350 – 6,400	21% - 22%	1,100	6,350 – 6,400	21% - 22%	1,100	6,350 – 6,500	21% - 24%
B1438 High Street, Wickham Market (location AD)	2,200	3,250	50	3,250 – 3,300	0% - 2%	50	3,250 – 3,300	0% - 2%	50	3,250 – 3,300	0% - 2%
Two village bypass (location AE)	-	-	1,800	22,200	-	1,950	21,750	-	2,050	22,400	-
Theberton bypass (location AF)	-	-	2,300	8,850	-	2,650	9,550	-	2,750	9,650	-
Sizewell link road east of A12 (location AG)	-	-	-	-	-	1,050	2,200	-	1,150	2,300	-
B1122 Middleton Moor (location AH)	3,450	4,600	1,600	6,250	36%	0	450	-90%	0	450	-90%

Table 4.3 Peak period of Sizewell C construction – peak hour percentage increases in weekday traffic flows at a range of locations

Location	Rail-led		Integrated		Road-led	
	Percentage increase in traffic at peak Sizewell C construction in the weekday AM peak period (07:00-09:00)	Percentage increase in traffic at peak Sizewell C construction in the weekday PM peak period (16:00-18:00)	Percentage increase in traffic at peak Sizewell C construction in the weekday AM peak period (07:00-09:00)	Percentage increase in traffic at peak Sizewell C construction in the weekday PM peak period (16:00-18:00)	Percentage increase in traffic at peak Sizewell C construction in the weekday AM peak period (07:00-09:00)	Percentage increase in traffic at peak Sizewell C construction in the weekday PM peak period (16:00-18:00)
Lover's Lane, Leiston (location A)	10%	12%	14%	19%	18%	24%
B1122 Abbey Road, central Leiston (location B)	60%	47%	57%	43%	57%	43%
B1119 Saxmundham Road, Leiston (location C)	25%	21%	15%	14%	15%	14%
B1069 Coldfair Green (location D)	12%	12%	12%	12%	12%	12%
B1122 Aldeburgh (location E)	15%	12%	15%	11%	15%	11%
B1125 Westleton (location F)	12%	16%	7%	14%	7%	14%
A1094 west of Snape Road (location G)	5%	4%	6%	4%	6%	4%
B1069 Tunstall (location H)	8%	3%	10%	3%	10%	3%
B1121 Saxmundham (location I)	7%	5%	-3%	-4%	-3%	-4%
A1120 Yoxford (location J)	10%	12%	11%	13%	11%	12%
A144 Halesworth (location K)	5%	3%	5%	4%	5%	4%
B1125 Blythburgh (location L)	9%	17%	6%	16%	6%	16%
A145 Beccles (location M)	1%	2%	1%	2%	1%	2%
B1119 between Framlingham and A12 (location N)	1%	-1%	1%	1%	1%	-1%
B1078 Wickham Market (location O)	14%	7%	15%	8%	18%	9%
B1116 Hacheston (location P)	3%	3%	3%	3%	2%	3%
B1122 Theberton (location Q)	-95%	-94%	-88%	-92%	-87%	-92%
B1122 east of Yoxford (location R)	28%	29%	8%	11%	6%	10%
A14 south of Ipswich (west of Seven Hills junction) (location S)	Less than 1%	Less than 1%	1%	2%	1%	1%
A14 Felixstowe Branch (east of Seven Hills junction) (location T)	0%	Less than 1%	0%	Less than 1%	Less than 1%	Less than 1%
A12 Farnham (location U)	-98%	-99%	-98%	-99%	-98%	-99%
A12 Wrentham (location V)	8%	3%	8%	4%	8%	3%
A12 Blythburgh (location W)	10%	8%	9%	8%	10%	8%

Location	Rail-led		Integrated		Road-led	
	Percentage increase in traffic at peak Sizewell C construction in the weekday AM peak period (07:00-09:00)	Percentage increase in traffic at peak Sizewell C construction in the weekday PM peak period (16:00-18:00)	Percentage increase in traffic at peak Sizewell C construction in the weekday AM peak period (07:00-09:00)	Percentage increase in traffic at peak Sizewell C construction in the weekday PM peak period (16:00-18:00)	Percentage increase in traffic at peak Sizewell C construction in the weekday AM peak period (07:00-09:00)	Percentage increase in traffic at peak Sizewell C construction in the weekday PM peak period (16:00-18:00)
A12 north of Darsham Park & Ride (location X)	10%	6%	11%	6%	11%	6%
A12 Yoxford (location Y)	7%	5%	-2%	0%	-2%	-1%
A12 south of Wickham Market Park & Ride (location Z)	6%	5%	6%	6%	6%	5%
A12 Woodbridge (location AA)	-1%	-1%	-2%	-1%	-2%	-1%
A12 Marlesford (south of two village bypass) (location AB)	6%	6%	6%	6%	6%	6%
B1078 Wickham Market (east of B1438) (location AC)	20%	9%	21%	11%	22%	12%
B1438 High Street, Wickham Market (location AD)	-1%	1%	Less than 1%	0%	3%	0%
Two village bypass (location AE)	-	-	-	-	-	-
Theberton bypass (location AF)	-	-	-	-	-	-
Sizewell link road east of A12 (location AG)	-	-	-	-	-	-
B1122 Middleton Moor (location AH)	28%	29%	-90%	-89%	-90%	-89%

Table 4.4: Peak period of Sizewell C construction – changes in HGV and bus flows (typical day) at the locations identified in Figure 4.2

Location	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	Rail-led				Integrated				Road-led			
			Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase	Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase	Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase
Lover's Lane, Leiston (location A)	80	90	20	140	250	178%	20	140	260	189%	20	280	400	344%
B1122 Abbey Road, central Leiston (location B)	140	150	210	0	370	147%	210	0	360	140%	210	0	360	140%
B1119 Saxmundham Road, Leiston (location C)	60	80	30	0	100	25%	30	0	90	13%	30	0	90	13%
B1069 Coldfair Green (location D)	190	210	190	0	390	86%	190	0	390	86%	190	0	390	86%

Location	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	Rail-led				Integrated				Road-led			
			Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase	Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase	Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase
B1122 Aldeburgh (location E)	90	100	0	0	100	0%	0	0	100	0%	0	0	100	0%
B1125 Westleton (location F)	80	80	0	0	80	0%	0	0	80	0%	0	0	80	0%
A1094 west of Snape Road (location G)	180	200	0	0	210	5%	0	0	210	5%	0	0	210	5%
B1069 Tunstall (location H)	150	160	0	0	160	0%	0	0	160	0%	0	0	160	0%
B1121 Saxmundham (location I)	50	60	0	0	60	0%	0	0	60	0%	0	0	60	0%
A1120 Yoxford (location J)	180	200	0	0	200	0%	0	0	200	0%	0	0	200	0%
A144 Halesworth (location K)	240	270	0	0	270	0%	0	0	270	0%	0	0	270	0%
B1125 Blythburgh (location L)	60	60	0	0	60	0%	0	0	60	0%	0	0	60	0%
A145 Beccles (location M)	440	490	0	50	540	10%	0	70	560	14%	0	80	570	16%
B1119 between Framlingham and A12 (location N)	30	30	0	0	30	0%	0	0	30	0%	0	0	30	0%
B1078 Wickham Market (location O)	160	190	0	0	190	0%	0	0	190	0%	0	0	190	0%
B1116 Hacheston (location P)	70	80	0	0	80	0%	0	0	80	0%	0	0	80	0%
B1122 Theberton (location Q)	210	230	0	0	0	-100%	0	0	0	-100%	0	0	0	-100%
B1122 east of Yoxford (location R)	170	180	450	450	1,080	500%	230	100	510	183%	230	110	530	194%
A14 south of Ipswich (west of Seven Hills junction) (location S)	8,860	10,880	10	300	11,200	3%	10	530	11,430	5%	10	610	11,500	6%

Location	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	Rail-led				Integrated				Road-led			
			Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase	Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase	Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase
A14 Felixstowe Branch (east of Seven Hills junction) (location T)	7,190	9,150	0	50	9,190	0%	0	70	9,210	1%	0	80	9,220	1%
A12 Farnham (location U)	910	1,000	0	0	10	-99%	0	0	10	-99%	0	0	10	-99%
A12 Wrentham (location V)	430	480	40	20	540	13%	40	30	550	15%	40	40	550	15%
A12 Blythburgh (location W)	650	720	40	70	820	14%	40	100	850	18%	40	110	860	19%
A12 north of Darsham Park & Ride (location X)	820	920	40	70	1,020	11%	40	100	1,050	14%	40	110	1,060	15%
A12 Yoxford (location Y)	840	930	220	380	1,520	63%	0	0	910	-2%	0	0	910	-2%
A12 south of Wickham Market Park & Ride (location Z)	1,180	1,270	20	380	1,660	31%	20	550	1,830	44%	20	640	1,910	50%
A12 Woodbridge (location AA)	1,070	1,210	20	380	1,590	31%	20	550	1,760	45%	20	640	1,840	52%
A12 Marlesford (south of two village bypass) (location AB)	900	990	220	380	1,580	60%	220	550	1,750	77%	220	640	1,830	85%
B1078 Wickham Market (east of B1438) (location AC)	170	200	0	0	200	0%	0	0	200	0%	0	0	200	0%
B1438 High Street, Wickham Market (location AD)	10	10	0	0	10	0%	0	0	10	0%	0	0	10	0%
Two village bypass (location AE)	-	-	220	380	1,550	-	220	550	1,720	-	220	640	1,810	-
Theberton bypass (location AF)	-	-	450	450	1,120	-	450	650	1,330	-	450	750	1,430	-
Sizewell link road east of A12 (location AG)	-	-	-	-	-	-	220	550	900	-	220	640	980	-
B1122 Middleton Moor (location AH)	170	180	450	450	1,050	483%	0	0	30	-83%	0	0	30	-83%

Table 4.5: Peak period of Sizewell C construction – changes in HGV and bus flows (busiest day) at the locations identified in Figure 4.2

Location	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	Rail-led				Integrated				Road-led			
			Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase	Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase	Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase
Lover's Lane, Leiston (location A)	80	90	20	140	250	178%	20	140	260	189%	20	280	400	344%
B1122 Abbey Road, central Leiston (location B)	140	150	210	0	370	147%	210	0	360	140%	210	0	360	140%
B1119 Saxmundham Road, Leiston (location C)	60	80	30	0	100	25%	30	0	90	13%	30	0	90	13%
B1069 Coldfair Green (location D)	190	210	190	0	390	86%	190	0	390	86%	190	0	390	86%
B1122 Aldeburgh (location E)	90	100	0	0	100	0%	0	0	100	0%	0	0	100	0%
B1125 Westleton (location F)	80	80	0	0	80	0%	0	0	80	0%	0	0	80	0%
A1094 west of Snape Road (location G)	180	200	0	0	210	5%	0	0	210	5%	0	0	210	5%
B1069 Tunstall (location H)	150	160	0	0	160	0%	0	0	160	0%	0	0	160	0%
B1121 Saxmundham (location I)	50	60	0	0	60	0%	0	0	60	0%	0	0	60	0%
A1120 Yoxford (location J)	180	200	0	0	200	0%	0	0	200	0%	0	0	200	0%
A144 Halesworth (location K)	240	270	0	0	270	0%	0	0	270	0%	0	0	270	0%
B1125 Blythburgh (location L)	60	60	0	0	60	0%	0	0	60	0%	0	0	60	0%
A145 Beccles (location M)	440	490	0	70	560	14%	0	100	590	20%	0	120	610	24%
B1119 between Framlingham and A12 (location N)	30	30	0	0	30	0%	0	0	30	0%	0	0	30	0%
B1078 Wickham Market (location O)	160	190	0	0	190	0%	0	0	190	0%	0	0	190	0%
B1116 Hacheston (location P)	70	80	0	0	80	0%	0	0	80	0%	0	0	80	0%
B1122 Theberton (location Q)	210	230	0	0	0	-100%	0	0	0	-100%	0	0	0	-100%
B1122 east of Yoxford (location R)	170	180	450	700	1,330	639%	230	150	560	211%	230	170	590	228%
A14 south of Ipswich (west of Seven Hills junction) (location S)	8,860	10,880	10	470	11,360	4%	10	810	11,690	7%	10	930	11,820	9%

Location	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	Rail-led				Integrated				Road-led			
			Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase	Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase	Sizewell C buses	Sizewell C HGVs	With Sizewell C daily HGV and bus flow	% increase
A14 Felixstowe Branch (east of Seven Hills junction) (location T)	7,190	9,150	0	70	9,220	1%	0	100	9,240	1%	0	120	9,260	1%
A12 Farnham (location U)	910	1,000	0	0	10	-99%	0	0	10	-99%	0	0	10	-99%
A12 Wrentham (location V)	430	480	40	40	550	15%	40	50	560	17%	40	60	570	19%
A12 Blythburgh (location W)	650	720	40	110	860	19%	40	150	900	25%	40	170	920	28%
A12 north of Darsham Park & Ride (location X)	820	920	40	110	1,050	14%	40	150	1,100	20%	40	170	1,120	22%
A12 Yoxford (location Y)	840	930	220	600	1,730	86%	0	0	910	-2%	0	0	910	-2%
A12 south of Wickham Market Park & Ride (location Z)	1,180	1,270	20	600	1,870	47%	20	850	2,120	67%	20	980	2,240	76%
A12 Woodbridge (location AA)	1,070	1,210	20	600	1,800	49%	20	850	2,030	68%	20	980	2,160	79%
A12 Marlesford (south of two village bypass) (location AB)	900	990	220	600	1,790	81%	220	850	2,040	106%	220	980	2,170	119%
B1078 Wickham Market (east of B1438) (location AC)	170	200	0	0	200	0%	0	0	200	0%	0	0	200	0%
B1438 High Street, Wickham Market (location AD)	10	10	0	0	10	0%	0	0	10	0%	0	0	10	0%
Two village bypass (location AE)	-	-	220	600	1,770	-	220	850	2,010	-	220	980	2,140	-
Theberton bypass (location AF)	-	-	450	700	1,370	-	450	1,000	1,680	-	450	1,150	1,830	-
Sizewell link road east of A12 (location AG)	-	-	-	-	-	-	220	850	1,200	-	220	980	1,320	-
B1122 Middleton Moor (location AH)	170	180	450	700	1,300	622%	0	0	30	-83%	0	0	30	-83%

Table 4.6: Peak period of Sizewell C construction – changes in daily, peak hour and HGV and bus flows (rail led strategy) at the B1122 locations identified in Figure 4.2

Location	Current weekday traffic flows	Pre-Sizewell C weekday traffic flows	Sizewell C weekday peak construction traffic flows (typical day)	With Sizewell C weekday peak construction traffic flows (typical day)	% increase	07:00-09:00 weekday construction traffic % increase (typical day)	16:00-18:00 weekday construction traffic % increase (typical day)	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	With Sizewell C daily HGV and bus flow (typical day)	% increase	With Sizewell C daily HGV and bus flow (busiest day)	% increase
B1122 Abbey Road, central Leiston (location B)	4,450	5,050	3,550	8,550 – 8,600	69% - 70%	60%	47%	140	150	370	147%	370	147%
B1122 Aldeburgh (location E)	3,300	4,250	700	4,900 – 4,950	15% - 16%	15%	12%	90	100	100	0%	100	0%
B1122 Theberton (location Q)	5,150	6,800	50	350	-95%	-95%	-94%	210	230	0	-100%	0	-100%
B1122 east of Yoxford (location R)	3,450	4,600	1,600	6,200 – 6,250	35% - 36%	28%	29%	170	180	1,080	500%	1,330	639%
Theberton bypass (location AF)	-	-	2,300	8,850	-	-	-	-	-	1,120	-	1,370	-
B1122 Middleton Moor (location AH)	3,450	4,600	1,600	6,250	36%	28%	29%	170	180	1,050	483%	1,300	622%

Table 4.7: Peak period of Sizewell C construction – changes in daily peak hour and HGV and bus flows (integrated strategy) at the B1122 locations identified in Figure 4.2

Location	Current weekday traffic flows	Pre-Sizewell C weekday traffic flows	Sizewell C weekday peak construction traffic flows (typical day)	With Sizewell C weekday peak construction traffic flows (typical day)	% increase	07:00-09:00 weekday construction traffic % increase (typical day)	16:00-18:00 weekday construction traffic % increase (typical day)	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	With Sizewell C daily HGV and bus flow (typical day)	% increase	With Sizewell C daily HGV and bus flow (busiest day)	% increase
B1122 Abbey Road, central Leiston (location B)	4,450	5,050	3,300	8,300 – 8,350	64% - 65%	57%	43%	140	150	360	140%	360	140%
B1122 Aldeburgh (location E)	3,300	4,250	700	4,900 – 4,950	15% - 16%	15%	11%	90	100	100	0%	100	0%
B1122 Theberton (location Q)	5,150	6,800	100	600	-91%	-88%	-92%	210	230	0	-100%	0	-100%
B1122 east of Yoxford (location R)	3,450	4,600	1,000	5,300 – 5,600	15% - 22%	8%	11%	170	180	510	183%	560	211%
Theberton bypass (location AF)	-	-	2,650	9,550	-	-	-	-	-	1,330	-	1,680	-
Sizewell link road east of A12 (location AG)	-	-	1,050	2,200	-	-	-	-	-	900	-	1,200	-
B1122 Middleton Moor (location AH)	3,450	4,600	0	450	-90%	-90%	-89%	170	180	30	-83%	30	-83%

Table 4.8: Peak period of Sizewell C construction – changes in daily, peak hour and HGV and bus flows (road led strategy) at the B1122 locations identified in Figure 4.2

Location	Current weekday traffic flows	Pre-Sizewell C weekday traffic flows	Sizewell C weekday peak construction traffic flows (typical day)	With Sizewell C weekday peak construction traffic flows (typical day)	% increase	07:00-09:00 weekday construction traffic % increase (typical day)	16:00-18:00 weekday construction traffic % increase (typical day)	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	With Sizewell C daily HGV and bus flow (typical day)	% increase	With Sizewell C daily HGV and bus flow (busiest day)	% increase
B1122 Abbey Road, central Leiston (location B)	4,450	5,050	3,300	8,300 – 8,350	64% - 65%	57%	43%	140	150	360	140%	360	140%
B1122 Aldeburgh (location E)	3,300	4,250	700	4,850 – 4,950	14% - 16%	15%	11%	90	100	100	0%	100	0%
B1122 Theberton (location Q)	5,150	6,800	100	650	-90%	-87%	-92%	210	230	0	-100%	0	-100%
B1122 east of Yoxford (location R)	3,450	4,600	1,000	5,300 – 5,600	15% - 22%	6%	10%	170	180	530	194%	590	228%
Theberton bypass (location AF)	-	-	2,750	9,650	-	-	-	-	-	1,430	-	1,830	-
Sizewell link road east of A12 (location AG)	-	-	1,150	2,300	-	-	-	-	-	980	-	1,320	-
B1122 Middleton Moor (location AH)	3,450	4,600	0	450	-90%	-90%	-89%	170	180	30	-83%	30	-83%

Table 4.9: Peak period of Sizewell C construction – changes in daily, peak hour and HGV and bus flows (rail led strategy) at the A12 locations identified in Figure 4.2

Location	Current weekday traffic flows	Pre-Sizewell C weekday traffic flows	Sizewell C weekday peak construction traffic flows (typical day)	With Sizewell C weekday peak construction traffic flows (typical day)	% increase	07:00-09:00 weekday construction traffic % increase (typical day)	16:00-18:00 weekday construction traffic % increase (typical day)	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	With Sizewell C daily HGV and bus flow (typical day)	% increase	With Sizewell C daily HGV and bus flow (busiest day)	% increase
A12 Farnham (location U)	18,900	21,400	0	300	-99%	-98%	-99%	910	1,000	10	-99%	10	-99%
A12 Wrentham (location V)	9,800	11,450	1,350	12,700 – 12,800	11% - 12%	8%	3%	430	480	540	13%	550	15%
A12 Blythburgh (location W)	10,350	11,900	1,950	13,750 – 13,850	16% - 16%	10%	8%	650	720	820	14%	860	19%
A12 north of Darsham Park & Ride (location X)	14,000	16,050	2,300	18,100 – 18,350	13% - 14%	10%	6%	820	920	1,020	11%	1,050	14%
A12 Yoxford (location Y)	14,700	16,650	1,800	18,200 – 18,450	9% - 11%	7%	5%	840	930	1,520	63%	1,730	86%
A12 south of Wickham Market Park & Ride (location Z)	24,550	27,000	2,850	29,500 – 29,850	9% - 11%	6%	5%	1,180	1,270	1,660	31%	1,870	47%
A12 Woodbridge (location AA)	37,800	40,500	2,450	41,050 – 42,950	1% - 6%	-1%	-1%	1,070	1,210	1,590	31%	1,800	49%
A12 Marlesford (south of two village bypass) (location AB)	18,800	21,450	1,850	23,150 – 23,300	8% - 9%	6%	6%	900	990	1,580	60%	1,790	81%
Two village bypass (location AE)	-	-	1,800	22,200	-	-	-	-	-	1,550	-	1,770	-

Table 4.10: Peak period of Sizewell C construction – changes in daily peak hour and HGV and bus flows (integrated strategy) at the A12 locations identified in Figure 4.2

Location	Current weekday traffic flows	Pre-Sizewell C weekday traffic flows	Sizewell C weekday peak construction traffic flows (typical day)	With Sizewell C weekday peak construction traffic flows (typical day)	% increase	07:00-09:00 weekday construction traffic % increase (typical day)	16:00-18:00 weekday construction traffic % increase (typical day)	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	With Sizewell C daily HGV and bus flow (typical day)	% increase	With Sizewell C daily HGV and bus flow (busiest day)	% increase
A12 Farnham (location U)	18,900	21,400	0	300	-99%	-98%	-99%	910	1,000	10	-99%	10	-99%
A12 Wrentham (location V)	9,800	11,450	1,350	12,700 – 12,800	11% - 12%	8%	4%	430	480	550	15%	560	17%
A12 Blythburgh (location W)	10,350	11,900	2,000	13,700 – 13,900	15% - 17%	9%	8%	650	720	850	18%	900	25%
A12 north of Darsham Park & Ride (location X)	14,000	16,050	2,300	18,200 – 18,350	13% - 14%	11%	6%	820	920	1,050	14%	1,100	20%
A12 Yoxford (location Y)	14,700	16,650	1,100	16,900 – 17,750	2% - 7%	-2%	0%	840	930	910	-2%	910	-2%
A12 south of Wickham Market Park & Ride (location Z)	24,550	27,000	3,000	2,9550 – 30,000	9% - 11%	6%	6%	1,180	1,270	1,830	44%	2,120	67%
A12 Woodbridge (location AA)	37,800	40,500	2,650	40,900 – 43,150	1% - 7%	-2%	-1%	1,070	1,210	1,760	45%	2,030	68%
A12 Marlesford (south of two village bypass) (location AB)	18,800	21,450	1,950	23,300 – 23,400	8% - 9%	6%	6%	900	990	1,750	77%	2,040	106%
Two village bypass (location AE)	-	-	1,950	21,750	-	-	-	-	-	1,720	-	2,010	-

Table 4.11: Peak period of Sizewell C construction – changes in daily, peak hour and HGV and bus flows (road-led strategy) at the A12 locations identified in Figure 4.2

Location	Current weekday traffic flows	Pre-Sizewell C weekday traffic flows	Sizewell C weekday peak construction traffic flows (typical day)	With Sizewell C weekday peak construction traffic flows (typical day)	% increase	07:00-09:00 weekday construction traffic % increase (typical day)	16:00-18:00 weekday construction traffic % increase (typical day)	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	With Sizewell C daily HGV and bus flow (typical day)	% increase	With Sizewell C daily HGV and bus flow (busiest day)	% increase
A12 Farnham (location U)	18,900	21,400	0	300	-99%	-98%	-99%	910	1,000	10	-99%	10	-99%
A12 Wrentham (location V)	9,800	11,450	1,350	12,700 – 12,800	11% - 12%	8%	3%	430	480	550	15%	570	19%
A12 Blythburgh (location W)	10,350	11,900	2,000	13,750 – 13,900	16% - 17%	10%	8%	650	720	860	19%	920	28%
A12 north of Darsham Park & Ride (location X)	14,000	16,050	2,350	18,200 – 18,400	13% - 15%	11%	6%	820	920	1,060	15%	1,120	22%
A12 Yoxford (location Y)	14,700	16,650	1,100	16,900 – 17,750	2% - 7%	-2%	-1%	840	930	910	-2%	910	-2%
A12 south of Wickham Market Park & Ride (location Z)	24,550	27,000	3,100	29,550 – 30,100	9% - 11%	6%	5%	1,180	1,270	1,910	50%	2,240	76%
A12 Woodbridge (location AA)	37,800	40,500	2,700	40,900 – 43,200	1% - 7%	-2%	-1%	1,070	1,210	1,840	52%	2,160	79%
A12 Marlesford (south of two village bypass) (location AB)	18,800	21,450	2,100	23,300 – 23,550	9% - 10%	6%	6%	900	990	1,830	85%	2,170	119%
Two village bypass (location AE)	-	-	2,050	22,400	-	-	-	-	-	1,810	-	2,140	-

Table 4.12: Peak period of Sizewell C construction – changes in daily, peak hour and HGV and bus flows (rail-led strategy) at the remaining locations

Location	Current weekday traffic flows	Pre-Sizewell C weekday traffic flows	Sizewell C weekday peak construction traffic flows (typical day)	With Sizewell C weekday peak construction traffic flows (typical day)	% increase	07:00-09:00 weekday construction traffic % increase (typical day)	16:00-18:00 weekday construction traffic % increase (typical day)	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	With Sizewell C daily HGV and bus flow (typical day)	% increase	With Sizewell C daily HGV and bus flow (busiest day)	% increase
Lover's Lane, Leiston (location A)	2,500	3,850	450	4,300	12%	10%	12%	80	90	250	178%	250	178%
B1119 Saxmundham Road, Leiston (location C)	3,750	4,550	1,450	5,950 – 6,000	31% - 32%	25%	21%	60	80	100	25%	100	25%
B1069 Coldfair Green (location D)	5,400	7,300	1,150	8,450	16%	12%	12%	190	210	390	86%	390	86%
B1125 Westleton (location F)	2,400	2,950	650	3,600	22%	12%	16%	80	80	80	0%	80	0%
A1094 west of Snape Road (location G)	7,550	9,100	250	9,350 – 9,450	3% - 4%	5%	4%	180	200	210	5%	210	5%
B1069 Tunstall (location H)	3,050	4,400	650	4,900 – 5,050	11% - 15%	8%	3%	150	160	160	0%	160	0%
B1121 Saxmundham (location I)	4,550	5,400	450	5,750 – 5,850	6% - 8%	7%	5%	50	60	60	0%	60	0%
A1120 Yoxford (location J)	3,650	4,500	800	5,300	18%	10%	12%	180	200	200	0%	200	0%
A144 Halesworth (location K)	6,900	8,250	600	8,800 – 8,850	7% - 7%	5%	3%	240	270	270	0%	270	0%
B1125 Blythburgh (location L)	1,650	2,050	500	2,550	24%	9%	17%	60	60	60	0%	60	0%
A145 Beccles (location M)	15,350	17,100	400	17,500	2%	1%	2%	440	490	540	10%	560	14%
B1119 between Framlingham and A12 (location N)	2,400	2,750	50	2,750 – 2,800	0% - 2%	1%	-1%	30	30	30	0%	30	0%
B1078 Wickham Market (location O)	3,850	6,200	1,050	7,250	17%	14%	7%	160	190	190	0%	190	0%
B1116 Hacheston (location P)	6,650	7,250	250	7,500	3%	3%	3%	70	80	80	0%	80	0%
A14 south of Ipswich (west of Seven Hills junction) (location S)	56,900	69,550	1,550	70,450 – 71,100	1% - 2%	Less than 1%	Less than 1%	8,860	10,880	11,200	3%	11,360	4%
A14 Felixstowe Branch (east of Seven Hills junction) (location T)	44,850	53,300	200	53,400 – 53,500	0% - 0%	0%	Less than 1%	7,190	9,150	9,190	0%	9,220	1%

Table 4.13: Peak period of Sizewell C construction – changes in daily, peak hour and HGV and bus flows (integrated strategy) at the remaining locations

Location	Current weekday traffic flows	Pre-Sizewell C weekday traffic flows	Sizewell C weekday peak construction traffic flows (typical day)	With Sizewell C weekday peak construction traffic flows (typical day)	% increase	07:00-09:00 weekday construction traffic % increase (typical day)	16:00-18:00 weekday construction traffic % increase (typical day)	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	With Sizewell C daily HGV and bus flow (typical day)	% increase	With Sizewell C daily HGV and bus flow (busiest day)	% increase
Lover's Lane, Leiston (location A)	2,500	3,850	450	4,300 – 4,550	12% - 18%	14%	19%	80	90	260	189%	260	189%
B1119 Saxmundham Road, Leiston (location C)	3,750	4,550	1,250	5,450 – 5,800	20% - 27%	15%	14%	60	80	90	13%	90	13%
B1069 Coldfair Green (location D)	5,400	7,300	1,150	8,450	16%	12%	12%	190	210	390	86%	390	86%
B1125 Westleton (location F)	2,400	2,950	650	3,500 – 3,600	19% - 22%	7%	14%	80	80	80	0%	80	0%
A1094 west of Snape Road (location G)	7,550	9,100	250	9,350 – 9,450	3% - 4%	6%	4%	180	200	210	5%	210	5%
B1069 Tunstall (location H)	3,050	4,400	650	4,900 – 5,050	11% - 15%	10%	3%	150	160	160	0%	160	0%
B1121 Saxmundham (location I)	4,550	5,400	250	,5200 – 5,650	-4% - 5%	-3%	-4%	50	60	60	0%	60	0%
A1120 Yoxford (location J)	3,650	4,500	800	5,300 – 5,350	18% - 19%	11%	13%	180	200	200	0%	200	0%
A144 Halesworth (location K)	6,900	8,250	600	8,850	7%	5%	4%	240	270	270	0%	270	0%
B1125 Blythburgh (location L)	1,650	2,050	500	2,500 – 2,550	22% - 24%	6%	16%	60	60	60	0%	60	0%
A145 Beccles (location M)	15,350	17,100	400	17,500	2%	1%	2%	440	490	560	14%	590	20%
B1119 between Framlingham and A12 (location N)	2,400	2,750	100	2,800 – 2,850	2% - 4%	1%	1%	30	30	30	0%	30	0%
B1078 Wickham Market (location O)	3,850	6,200	1,000	7,200 – 7,250	16% - 17%	15%	8%	160	190	190	0%	190	0%
B1116 Hacheston (location P)	6,650	7,250	200	7,450 – 7,500	3% - 3%	3%	3%	70	80	80	0%	80	0%

A14 south of Ipswich (west of Seven Hills junction) (location S)	56,900	69,550	1,750	70,850 – 71,300	2% - 3%	1%	2%	8,860	10,880	11,430	5%	11,690	7%
A14 Felixstowe Branch (east of Seven Hills junction) (location T)	44,850	53,300	200	53,500	0%	0%	Less than 1%	7,190	9,150	9,210	1%	9,240	1%

Table 4.14: Peak period of Sizewell C construction – changes in daily, peak hour and HGV and bus flows (road-led strategy) at the remaining locations

Location	Current weekday traffic flows	Pre-Sizewell C weekday traffic flows	Sizewell C weekday peak construction traffic flows (typical day)	With Sizewell C weekday peak construction traffic flows (typical day)	% increase	07:00-09:00 weekday construction traffic % increase (typical day)	16:00-18:00 weekday construction traffic % increase (typical day)	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	With Sizewell C daily HGV and bus flow (typical day)	% increase	With Sizewell C daily HGV and bus flow (busiest day)	% increase
Lover's Lane, Leiston (location A)	2,500	3,850	600	4,450 – 4,700	16% - 22%	18%	24%	80	90	400	344%	400	344%
B1119 Saxmundham Road, Leiston (location C)	3,750	4,550	1,250	5,450 – 5,800	20% - 27%	15%	14%	60	80	90	13%	90	13%
B1069 Coldfair Green (location D)	5,400	7,300	1,150	8,400 – 8,450	15% - 16%	12%	12%	190	210	390	86%	390	86%
B1125 Westleton (location F)	2,400	2,950	650	3,500 – 3,600	19% - 22%	7%	14%	80	80	80	0%	80	0%
A1094 west of Snape Road (location G)	7,550	9,100	250	9,350 – 9,500	3% - 4%	6%	4%	180	200	210	5%	210	5%
B1069 Tunstall (location H)	3,050	4,400	600	4,900 – 5,000	11% - 14%	10%	3%	150	160	160	0%	160	0%
B1121 Saxmundham (location I)	4,550	5,400	250	5,200 – 5,650	-4% - 5%	-3%	-4%	50	60	60	0%	60	0%
A1120 Yoxford (location J)	3,650	4,500	800	5,300	18%	11%	12%	180	200	200	0%	200	0%
A144 Halesworth (location K)	6,900	8,250	600	8,800 – 8,850	7% - 7%	5%	4%	240	270	270	0%	270	0%
B1125 Blythburgh (location L)	1,650	2,050	500	2,500 – 2,550	22% - 24%	6%	16%	60	60	60	0%	60	0%
A145 Beccles (location M)	15,350	17,100	400	17,500	2%	1%	2%	440	490	570	16%	610	24%
B1119 between Framlingham and A12 (location N)	2,400	2,750	100	2,800 – 2,850	2% - 4%	1%	-1%	30	30	30	0%	30	0%

Location	Current weekday traffic flows	Pre-Sizewell C weekday traffic flows	Sizewell C weekday peak construction traffic flows (typical day)	With Sizewell C weekday peak construction traffic flows (typical day)	% increase	07:00-09:00 weekday construction traffic % increase (typical day)	16:00-18:00 weekday construction traffic % increase (typical day)	Current daily HGV and bus flow	Pre-Sizewell C daily HGV and bus flow	With Sizewell C daily HGV and bus flow (typical day)	% increase	With Sizewell C daily HGV and bus flow (busiest day)	% increase
B1078 Wickham Market (location O)	3,850	6,200	1,050	7,250 – 7,350	17% - 19%	18%	9%	160	190	190	0%	190	0%
B1116 Hacheston (location P)	6,650	7,250	200	7,450	3%	2%	3%	70	80	80	0%	80	0%
A14 south of Ipswich (west of Seven Hills junction) (location S)	56,900	69,550	1,850	70,800 – 71,400	2% - 3%	1%	1%	8,860	10,880	11,500	6%	11,820	9%
A14 Felixstowe Branch (east of Seven Hills junction) (location T)	44,850	53,300	200	53,500	0%	Less than 1%	Less than 1%	7,190	9,150	9,220	1%	9,260	1%

5. MAIN DEVELOPMENT SITE

5.1. Introduction

5.1.1. The main development site comprises the total area needed for constructing and operating Sizewell C. The buildings, engineering and operations that make up the main development site are summarised in **Chapter 2** of this Stage 4 consultation document and detailed in Volume 1, Chapter 7 of the Stage 3 Main Consultation Document. The preliminary environmental information (PEI) available about the likely impacts of the main development site is in Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document.

5.1.2. This chapter describes and explains changes to the main development site red line and mitigation proposals from those that were presented at Stage 3. Except for the changes included in this chapter, our proposals for the main development site are as described in Volume 1, Chapter 7 and Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document. The red line boundary shows the extent of land that we propose to apply for powers over through our application for development consent. Since the start of Stage 3, we have continued to develop our proposals and engage with relevant stakeholders, and this has resulted in additional land being required for the main development site. **Figure 5.1** shows the red line boundary presented at Stage 3 compared with the red line boundary presented at this Stage 4.

5.1.3. EDF Energy continues to carry out environmental assessments to understand the likely impacts of the construction and operation of Sizewell C on the environment. At Stage 3, PEI was presented for each proposed development site in Volumes 2 and 3 of the Stage 3 Main Consultation Document. The PEI included proposals for both embedded and additional mitigation measures to reduce potential adverse impacts where possible. The mitigation that EDF Energy relies on will also include land not within the red line but under EDF Energy's control.

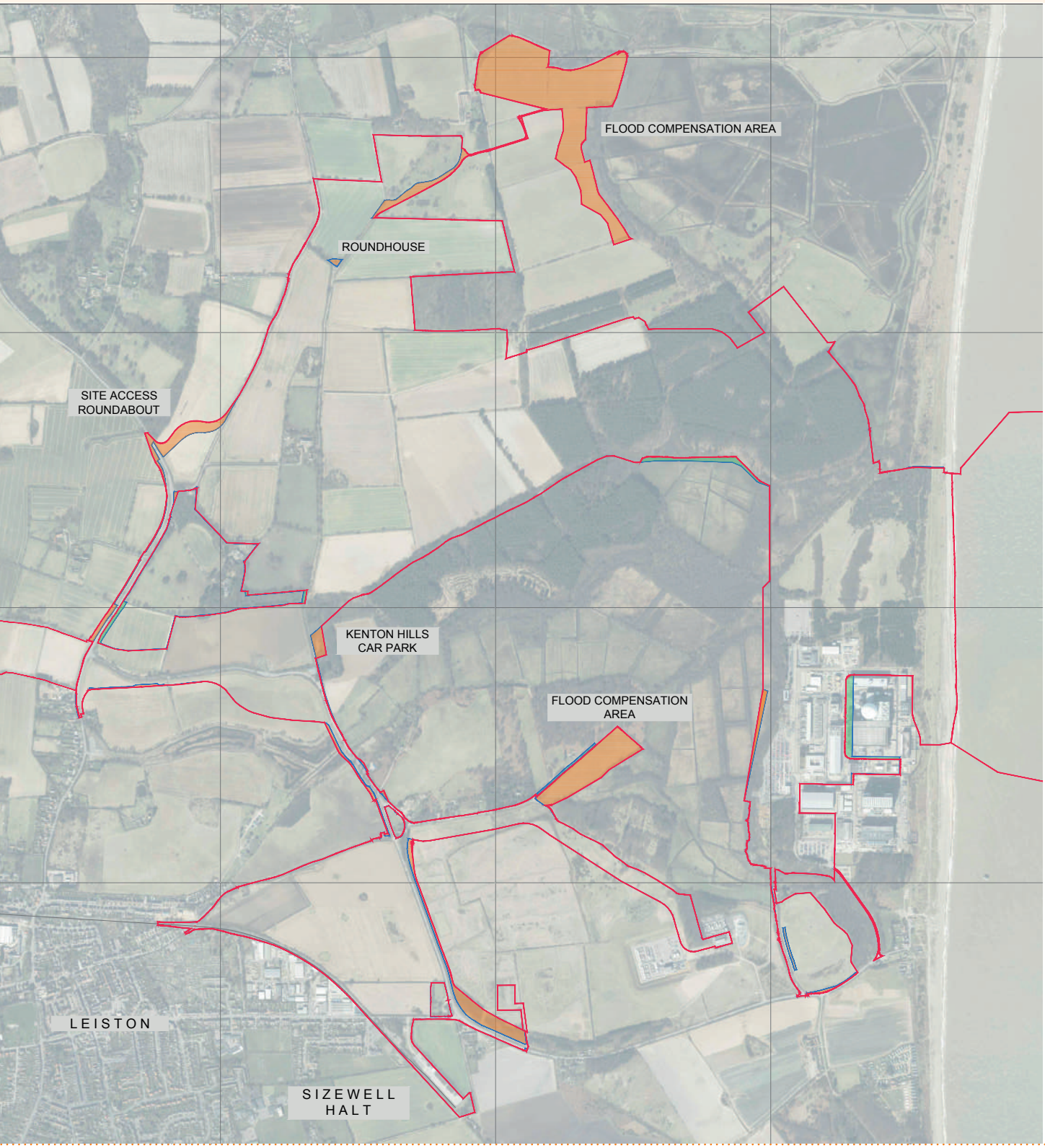
5.1.4. For clarity, each change has been summarised and compared to the Stage 3 proposal with an explanation. For each change, we have included a figure that clearly compares the Stage 3 red line site boundary with the Stage 4 red line boundary and shows the additional land included at this Stage 4 consultation in blue. We have also provided a description of any changes to the PEI presented at Stage 3 that arise as a result of the red line changes or mitigation proposals described in this chapter.

5.1.5. Most of the changes are a result of designs developing in detail and assessments reaching a new level of maturity. We welcome your views on the changes presented here.

5.1.6. This chapter is structured as follows:

- **section 5.2:** access roundabout and approach roads;
- **section 5.3:** National Grid pylons;
- **section 5.4:** Sizewell C pylons;
- **section 5.5:** a rail spur at land east of Eastlands Industrial Estate;
- **section 5.6:** Bridleway 19;
- **section 5.7:** Leiston off-site sports facilities;
- **section 5.8:** Round House;
- **section 5.9:** Kenton Hills car park;
- **section 5.10:** marsh harrier compensation land;
- **section 5.11:** fen meadow compensation land; and
- **section 5.12:** flood compensation land; and
- **section 5.13:** describes changes to the PEI presented at Stage 3 as a result of the proposed changes included in this chapter.

Figure 5.1: Changes to the main development site red line


FLOOD COMPENSATION AREA
ROUNDHOUSE
SITE ACCESS ROUNDABOUT
KENTON HILLS CAR PARK
FLOOD COMPENSATION AREA
LEISTON
SIZEWELL HALT

5.2. Access roundabout and approach roads

5.2.1. At Stage 3, EDF Energy proposed a new roundabout to access the main entrance hub west of Upper Abbey Farm and south of the accommodation campus and to provide a permanent access route to the operational Sizewell C (see Volume 1, Chapter 7, section 7.5 of the Stage 3 Main Consultation Document). Once operational, this new roundabout would act as the primary site access point for HGV and LGV deliveries, works and visitor vehicles, and external bus connections. Stage 3 showed the roundabout located in the southern part of the field between the existing Eastbridge Road and Greenhouse Plantation.

a) Red line boundary change

5.2.2. The red line boundary has now been extended to include additional agricultural land and woodland from Greenhouse Plantation to the north of Eastbridge Road and woodland to the south of Eastbridge Road (as shown in **Figure 5.2**).

b) Description of the Project change

5.2.3. The access roundabout presented at Stage 3 was designed to the specifications required for vehicles travelling through the roundabout at a speed of 30mph.

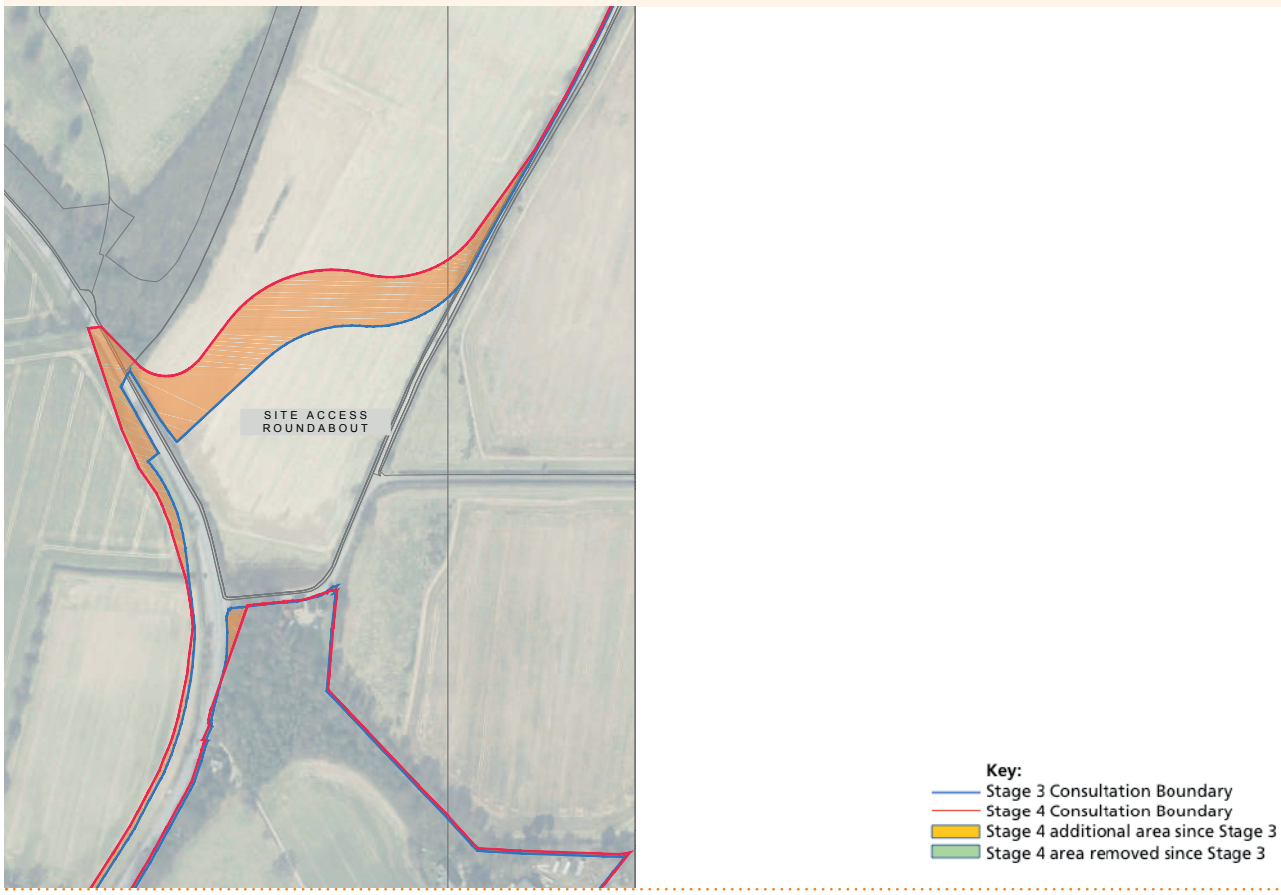
5.2.4. Suffolk County Council (SCC) has now expressed a preference for the speed limit through the roundabout to be 40mph. Increasing the speed of vehicles approaching the roundabout may require design changes to comply with standard specifications required for vehicles travelling at this speed.

c) Why this change is necessary

5.2.5. The additional land would be needed to accommodate a revised design of the roundabout if ongoing discussions with SCC conclude this is needed.

5.2.6. EDF Energy is assessing the impacts of this red line change on the environment including woodland, Greenhouse Plantation and Leiston Abbey, and will take steps to minimise the impact.

Figure 5.2: Access roundabout and access roads red line change



5.3. National Grid pylons

5.3.1. National Grid would connect to the proposed 400 kilovolt (kV) substation to allow the electricity generated at Sizewell C to be distributed across the country. Stage 3 explained that National Grid would need to carry out works to their pylons and overhead lines to connect to the substation.

a) Red line boundary change

5.3.2. The red line has moved slightly west into the Sizewell Marshes Site of Special Scientific Interest (SSSI) in a localised area underneath the proposed route of the National Grid overhead lines. This is to allow the temporary working area within the SSSI to be increased. There is no increase in the extent of the permanent development within the SSSI. The change would result in the temporary loss of an additional 0.37 hectares (ha) of SSSI compared with the Stage 3 proposals in this location.

5.3.3. However, the red line has been reduced to the south of the temporary construction area south of Dunwich Forest, west of Goose Hill, since Stage 3, resulting in 0.664ha less SSSI land being needed in that location (as shown on **Figures 5.3** and **5.4**). This was possible because design development has shown that we can reduce the amount of SSSI land included here to avoid the loss.

b) Description of the Project change

5.3.4. National Grid has now appointed a contractor to investigate the feasibility of this work and develop the design. They have confirmed that of the existing two National Grid pylons, one pylon needs to be removed, one pylon needs to be retained (or replaced with a similar pylon in the same place) and one new pylon is required to the north of the existing ones. There is no net increase in the number of National Grid pylons since Stage 3.

5.3.5. The requirements for the replacement pylon in the north have been analysed in more detail and its location needs to be refined. However, it would be located within the red line boundary shown at Stage 3 and here in Stage 4 and no additional earthworks would be required. Initial studies show that the height of the replacement pylon would be 55 metres (m) (the same height as the existing pylon that is to be left in situ), although this still needs to be validated so National Grid have requested a parameter height of 60m as a worst case assumption.

5.3.6. The red line needs to be moved to ensure that the full area underneath the overhead line conductors is included. The nature of the temporary work within the SSSI is yet to be defined by National Grid. However, it is likely to involve vegetation clearance (including tree felling) and creation of a safe working area to allow the new overhead line conductors to be installed.

c) Why this change is necessary

5.3.7. This change is driven by development of the National Grid substation layout and overhead line design, leading to a better understanding of the new pylon location and overhead line alignment. The additional land underneath the overhead lines is necessary for National Grid to carry out the works required to connect Sizewell C to the substation.

Figure 5.3: Changes to land required within Sizewell Marshes SSSI at Stage 3

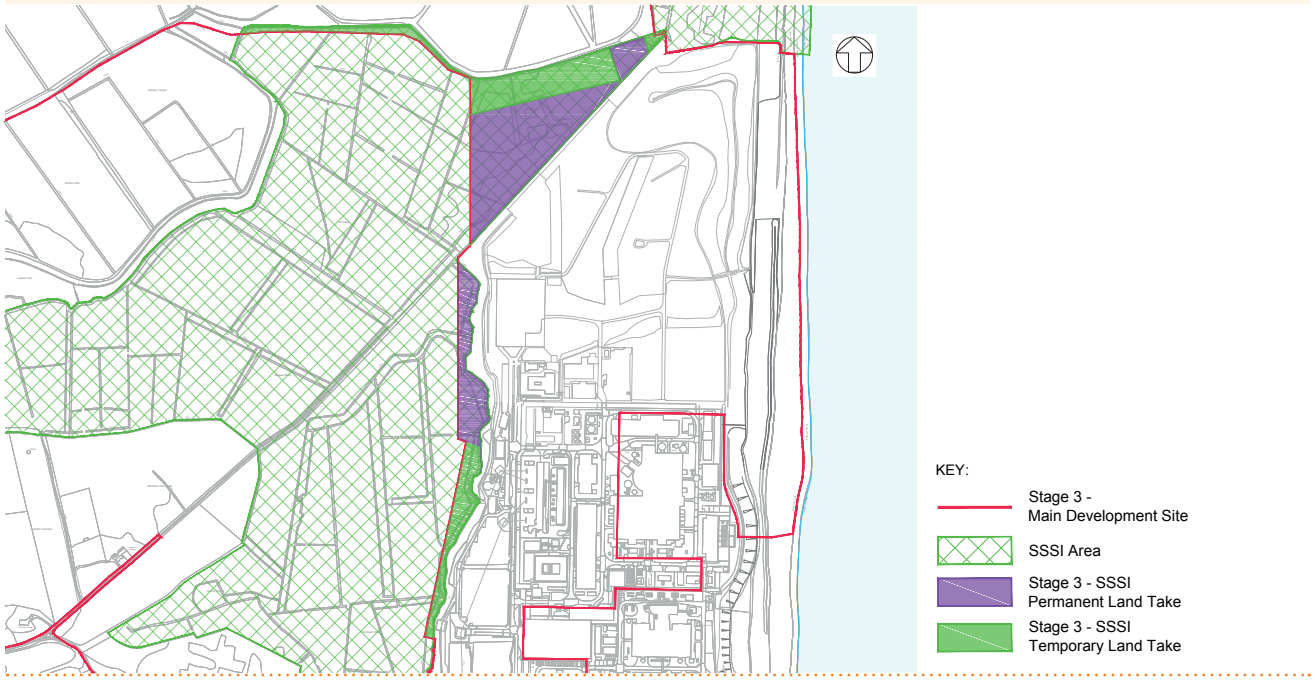
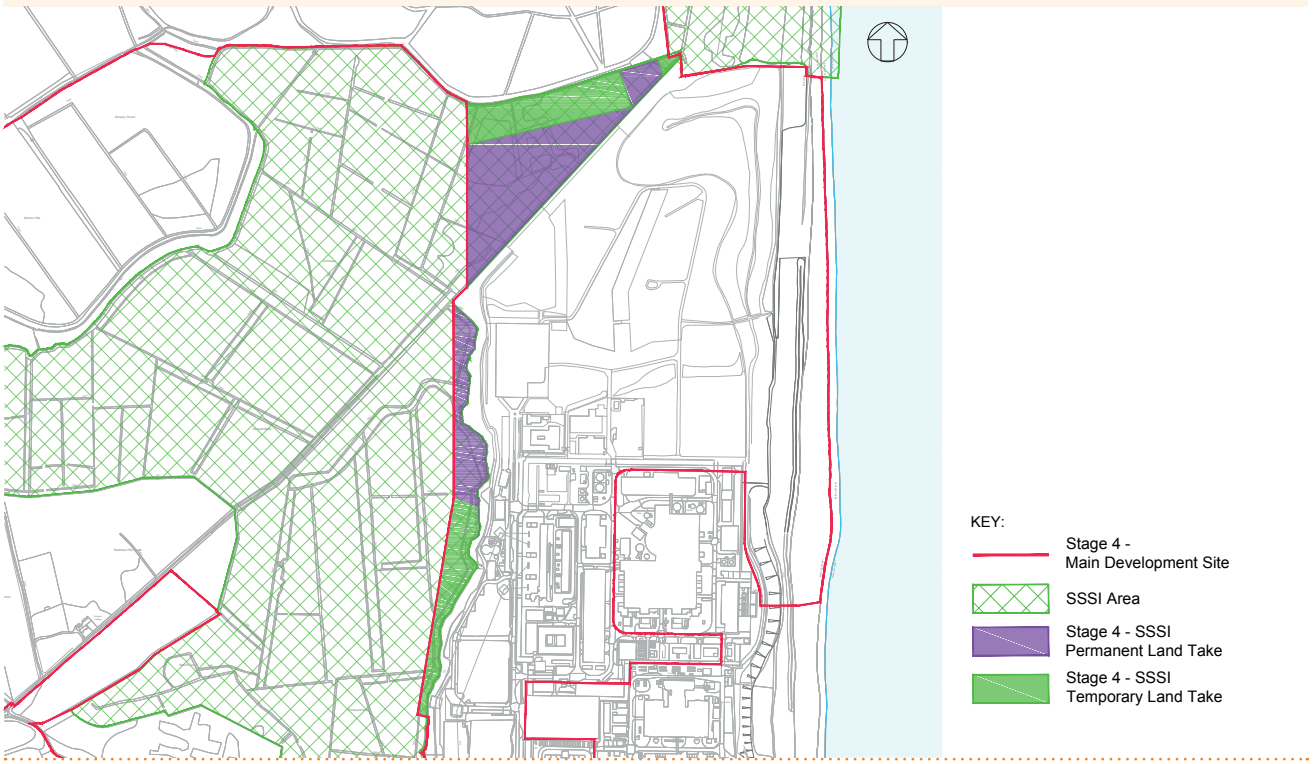


Figure 5.4: Changes to land required within Sizewell Marshes SSSI at Stage 4



5.4. Sizewell C pylons

5.4.1. In addition to the National Grid changes described in **section 5.3**, we are also continuing to assess options for the electrical connection between Sizewell C and the National Grid substation.

a) Red line boundary change

5.4.2. This further design development does not result in a change to the red line boundary.

b) Description of the Project change

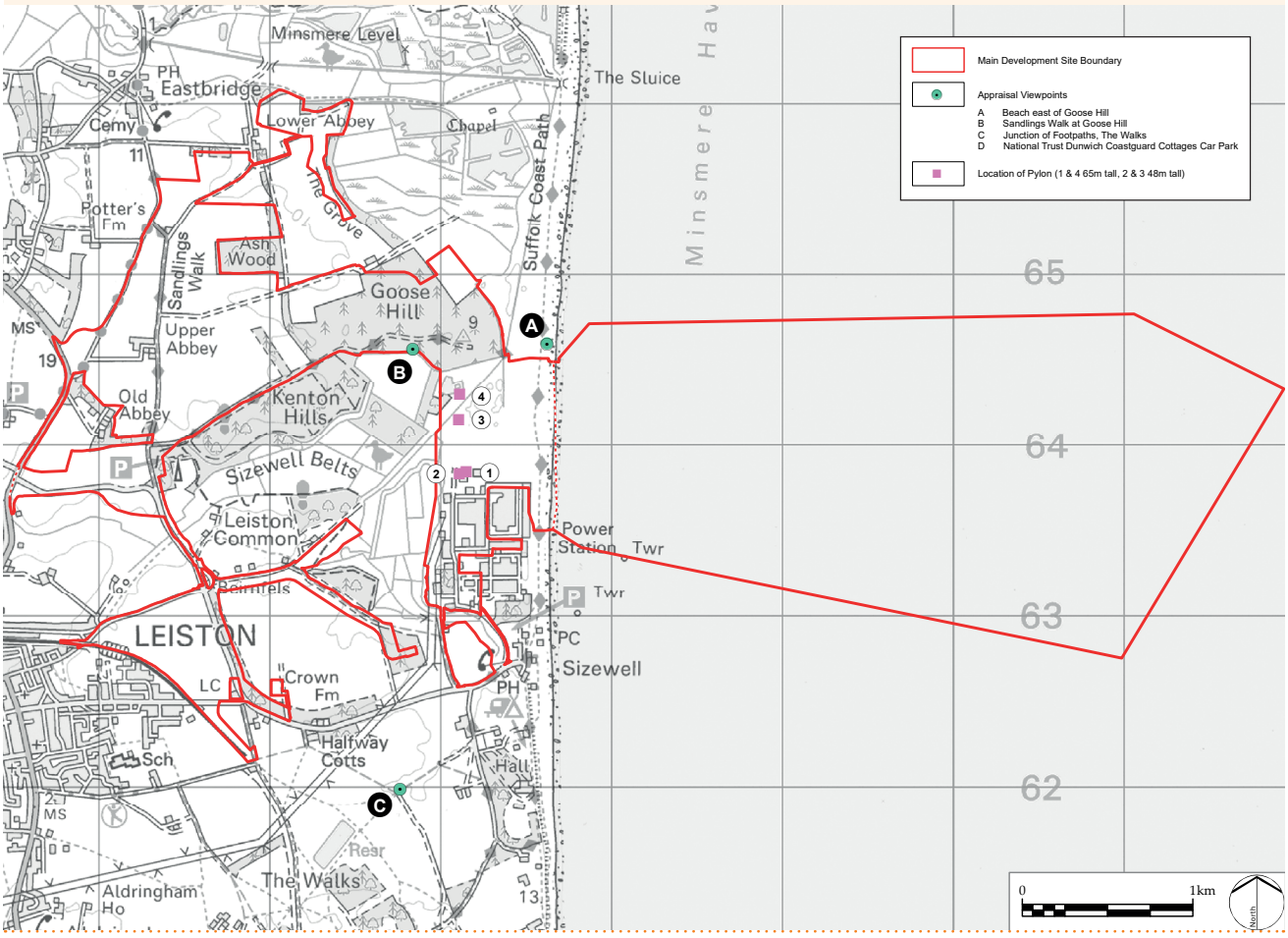
5.4.3. At Stage 3 we proposed four pylons between the National Grid substation and the turbine halls.

5.4.4. Feedback from that consultation showed a preference from consultees for undergrounding the electrical connection, thereby removing the need for overhead lines in this area. We are continuing to assess the practicability of this and the implications for the Project, which are likely to be significant.

5.4.5. As an alternative we have also sought to reduce the visual impact of the pylons in response to consultation feedback. We have found opportunities to reduce their height and refine their locations relative to each other and key viewpoints.

5.4.6. It is likely that we can reduce the height of three of the four pylons by approximately 25%. In order to reduce the height of the fourth pylon it would be necessary to introduce one extra pylon in the vicinity of the SSSI crossing within the main power station platform. This would allow the overhead line to go around the emergency diesel generator building rather than over it.

Figure 5.5: Indicative location of Sizewell C pylons under option 1



5.4.7. Therefore there are two main options and we welcome your views on which is the most preferable:

- Option 1: reducing the height of three of the four pylons presented at Stage 3 by approximately 25% (excluding the northernmost pylon); or
- Option 2: adding one more pylon, to allow all pylons to reduce in height by approximately 25%.

5.4.8. **Figure 5.5** shows the indicative proposed location of pylons under Option 1 and **Figures 5.6, 5.7, 5.8** and **5.9** show views of the proposed connection from different locations under Option 1. Figure 5.10 shows the indicative proposed location of pylons under Option 2 and **Figures 5.11, 5.12, 5.13** and **5.14** show views of the proposed connection from different locations under Option 1

c) Why this change is necessary

5.4.9. These options have been developed in response to consultation feedback to minimise the visual impact of the pylons as far as reasonably practicable.

Figure 5.6: viewpoint A looking south-west from Sizewell beach east of Goose Hill under option 1

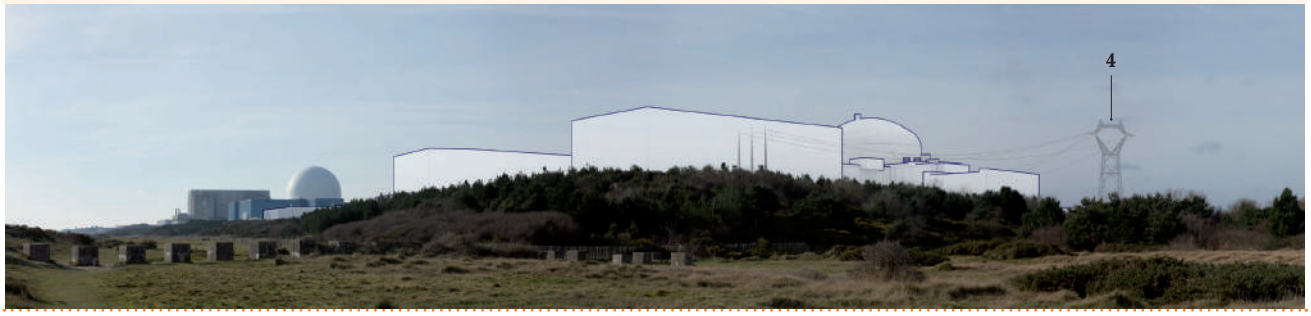


Figure 5.7: viewpoint B looking south-east from Sandlings Walk at Goose Hill under option 1

Figure 5.8: viewpoint C looking north-east from junction of footpaths at The Walks under option 1

Figure 5.9: viewpoint D looking south from National Trust Dunwich Coastguard Cottages car park under option 1

Figure 5.10: Indicative location of Sizewell C pylons under option 2

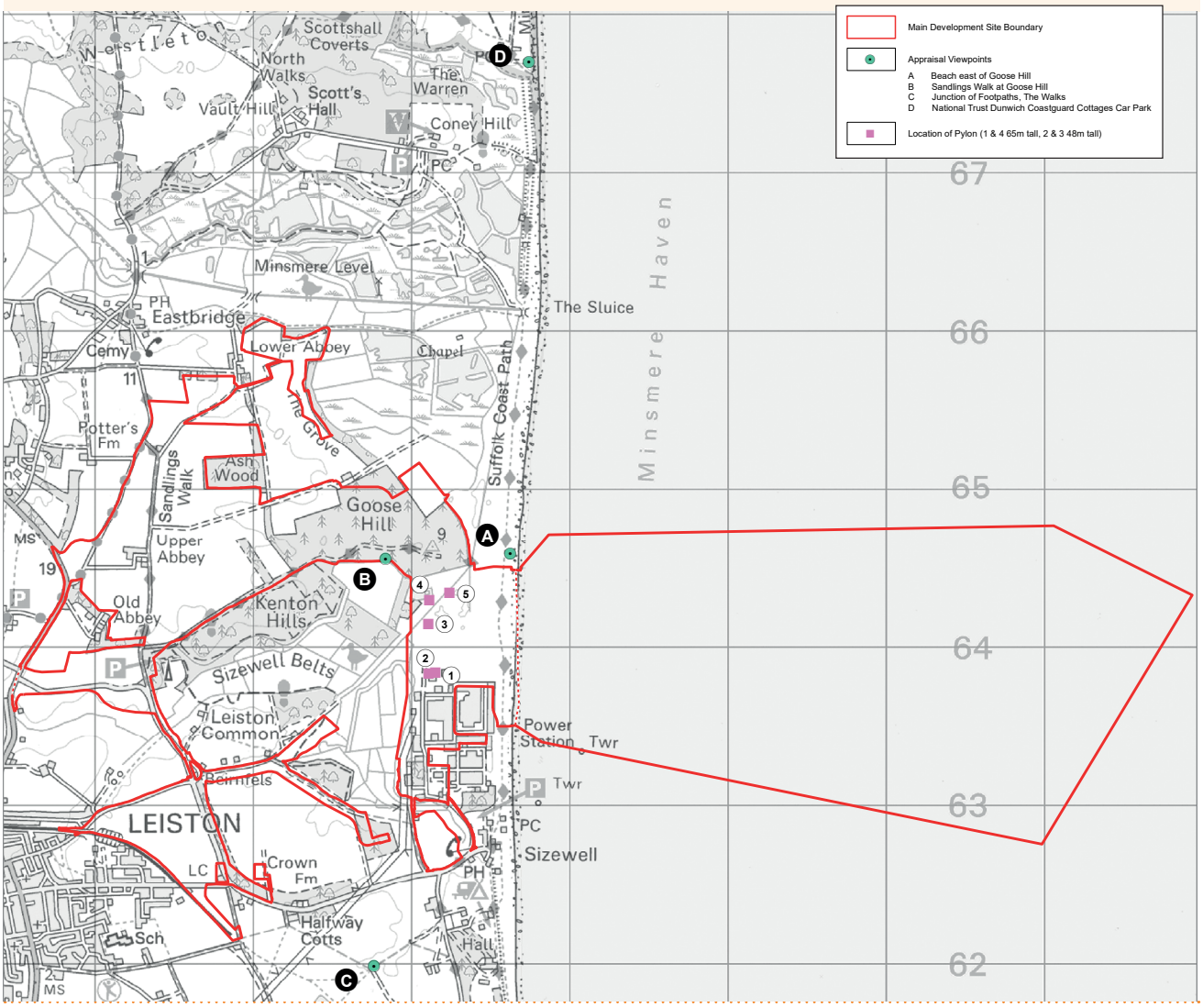


Figure 5.11: viewpoint A looking south-west from Sizewell beach east of Goose Hill under option 2

Figure 5.12: viewpoint B looking south-east from Sandlings Walk at Goose Hill under option 2

Figure 5.13: viewpoint C looking north-east from junction of footpaths at The Walks under option 2

Figure 5.14: viewpoint D looking south from National Trust Dunwich Coastguard Cottages car park under option 2

5.5. A rail spur at land east of Eastlands Industrial Estate (LEEIE)

5.5.1. We are continuing to assess options for development at the LEEIE. The two options for either the Sizewell Halt or new rail siding, as described in Volume 1, Chapter 7, section 7.5 of the Stage 3 Main Consultation Document, remain unchanged in this Stage 4 consultation. A new option for a rail spur located more centrally within the LEEIE is now included and described below. We welcome your thoughts on the new option.

a) Red line boundary change

5.5.2. This new option does not result in a change to the red line boundary.

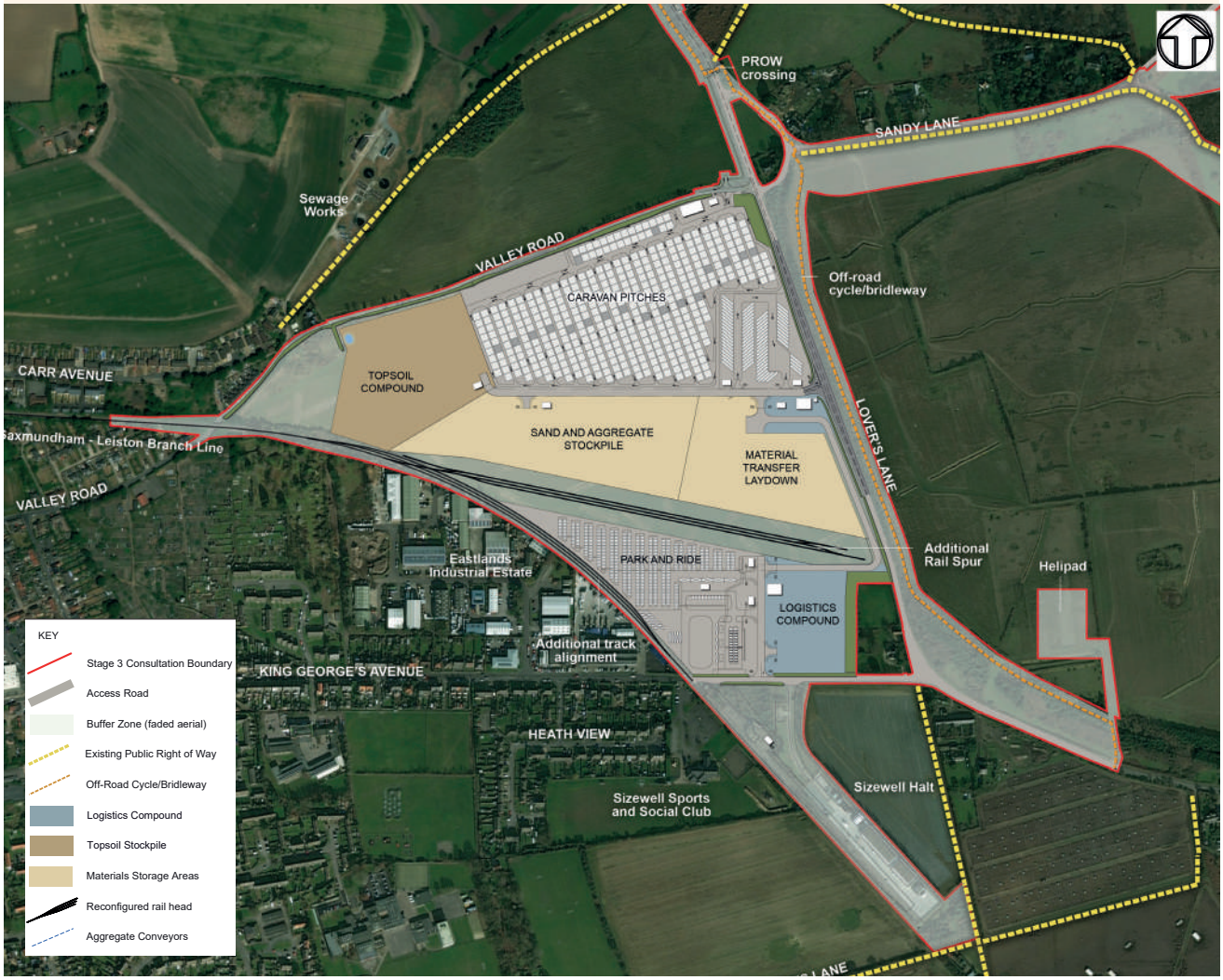
b) Description of the Project change

5.5.3. We have identified an alternative location for the rail head that is located more centrally within the LEEIE. Uses within the LEEIE remain the same. The topsoil storage area is now more distant from properties on Valley Road and the Park and Ride is now located further from Crown Lodge. **Figure 5.15** illustrates the option.

c) Why this change is necessary

5.5.4. This option results in a straighter alignment of the railway track compared with the rail siding (Option 2) and avoids the need to cross King George's Avenue (Option 1), thereby allowing longer trains to be used and more freight to be delivered per train.

Figure 5.15: Land east of Eastlands Industrial Estate: option 3 rail spur



5.6. Public Right of Way and Bridleway 19 diversion

5.6.1. Throughout the construction and operation of Sizewell C there would be impacts on public rights of way (PROW). At Stage 3 we explained that we are developing an access strategy. The principles on which this access strategy would be based were outlined in Volume 1, Chapter 17, sections 17.11 and 17.12 of the Stage 3 Main Consultation Document. We are continuing to work with SCC to develop appropriate diversion proposals where PROWs must be closed either temporarily or permanently.

5.6.2. A full description of the affected PROWs on the main development site and our proposals for diversions are included in Volume 1, Chapter 17, sections 17.11 and 17.12 of the Stage 3 Main Consultation Document. Bridleway 19 currently runs through the proposed main construction area so will be diverted throughout the construction phase. Stage 3 describes the diversion route which is predominantly the same route as that which is described here.

a) Red line boundary change

5.6.3. The red line now includes more land along the Bridleway 19 diversion to allow for a wider bridleway corridor to be offset from the carriageway as well as the area required for its construction. Additional land has been included on the western side of the B1122 south of the B1122 / Lover's Lane junction, and less land on the eastern side of the B1122 north of the green rail route. Other extensions are to allow for the diversion to be on the other side of the road to minimise the number of crossings users would need to make.

b) Description of the Project change

5.6.4. The Bridleway 19 diversion is proposed to be a single 8-metre-wide route (5 metre bridleway and 3 metre combined footpath and cycle path), surfaced to bridleway standards and with waiting boxes at crossing points as per British Horse Society design guidelines. This off-road route would allow for the closure and diversion of part of Bridleway 19 during the construction phase.

5.6.5. From the south, Bridleway 19 is now proposed to run along the southern side of Lover's Lane as far west as the B1122, and no longer along the northern side. **Figure 5.16** illustrates the re-aligned Lover's Lane and bridleway. It will cross the B1122 south of the green rail route level crossing instead of to the north of it and will then be located on the western, not eastern, side of the green rail route level crossing.

5.6.6. Pegasus crossings are signalised crossings that have two sets of buttons at different heights. One located for cyclists and pedestrians and the other two metres above the ground for horse riders so they do not have to dismount to operate the crossing. Pegasus crossings would be provided:

- on the realigned Eastbridge Road north of the site access roundabout;
- on the B1122 (north) arm of the site access roundabout (unchanged from Stage 3);
- on the B1122 south of the relocated Lover's Lane Junction; and
- on Lover's Lane north of Sandy Lane (unchanged from Stage 3).

5.6.7. The distance of the diversion from the carriageway has been increased to allow for vegetation. Additionally, a footpath is provided alongside the western side of Lover's Lane between Valley Road and the new Pegasus crossing proposed on Lover's Lane. **Figures 5.17** and **5.18** illustrate our rights of way strategy through the construction phase and operational phase.

c) Why this change is necessary

5.6.8. As the PROW strategy has developed there have been opportunities to provide well-considered diversions. Increasing the offset from the highway will make the route more aesthetically pleasing, reduce the impact of traffic on bridleway users, and allow for vegetation to be retained. These changes are proposed to provide enhancement to the access provision within the EDF Energy estate, by making this location more attractive to walkers and dog walkers.

5.6.9. Reducing the number of Pegasus crossings that are required to deliver the same level of connectivity from five (as presented at Stage 3) to four (as being presented in Stage 4) makes the route more attractive to all users. Additionally, bridleway users will not need to cross the busy section of the B1122 between the site access roundabout and Lover's Lane.

5.6.10. Including a proposal for the provision of a footpath on the western side of Lovers Lane south of Sandy Lane introduces an off-road pedestrian route from the land east of Eastlands Industrial Estate (LEEIE) to the main construction area entrance. This would make it easier for the construction workforce who would temporarily live in the caravans on LEEIE to travel to work by foot, thereby reducing the amount of traffic on the local road network.

Figure 5.16: Illustrative cross-section showing the boundary treatment between Lover's Lane, the re-aligned bridleway and the adjacent stockpile area

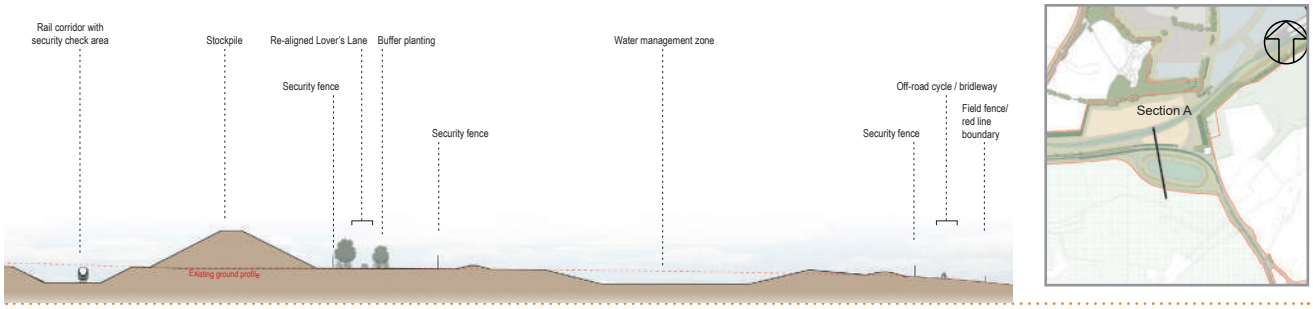


Figure 5.17: Public rights of way and access strategy – construction phase

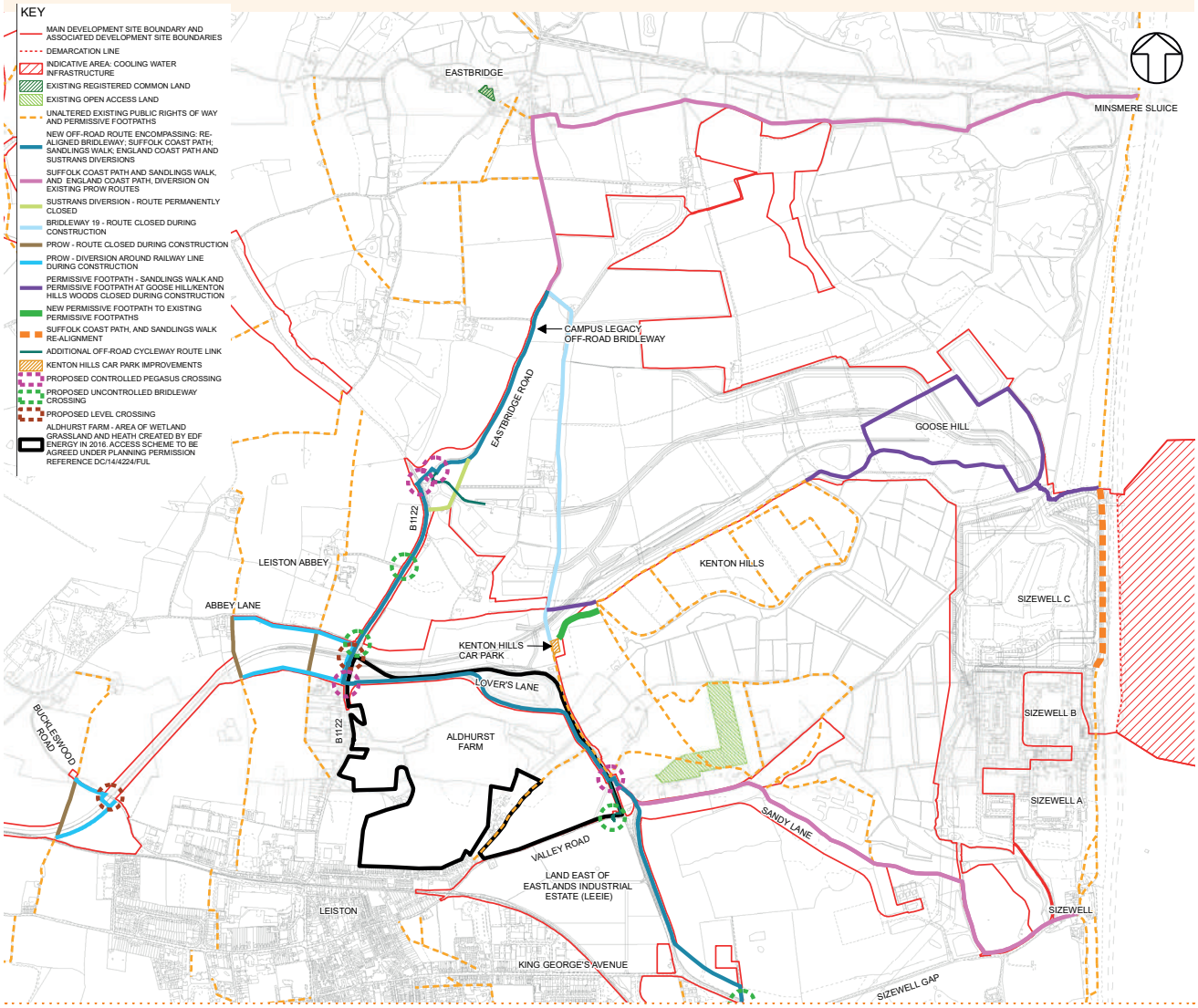
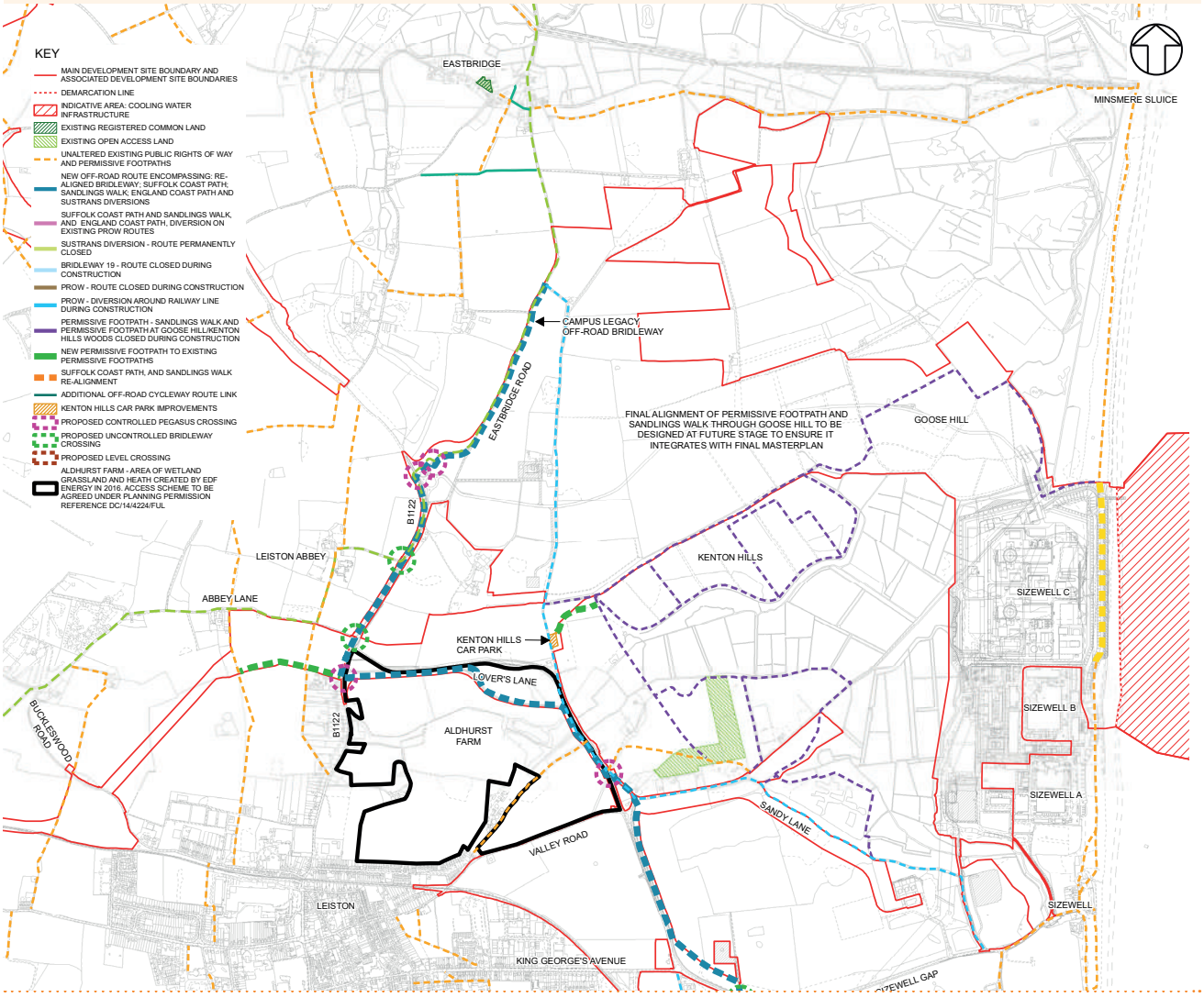


Figure 5.18: Public rights of way and access strategy – operational phase



5.7. Leiston off-site sports facilities

5.7.1. The Stage 3 consultation set out EDF Energy's proposal for new off-site sports facilities (see Volume 1, Chapter 7 of the Stage 3 Main Consultation Document). It was proposed that these new sports facilities would be provided on land between Leiston Leisure Centre and Alde Valley Academy. During construction, access would be shared between Alde Valley Academy, the local community and construction workers with a shuttle bus from the campus providing access for workers. The facilities would then offer potential legacy benefits following the construction phase.

5.7.2. As proposed in Stage 3 and here in Stage 4, facilities would likely include:

- one full-size 3G pitch, 400mm pile, rubber crumb surface suitable for football, non-contact rugby and hockey (currently the closest similar facilities are in Framlingham and Woodbridge); and
- two MUGAs to the south west of the full-size pitch suitable for basketball, netball, tennis and football (currently the closest similar facility is in Yoxford).

a) Red line boundary change

5.7.3. The red line has been extended to the north-west to include the entire school field as shown in **Figure 5.19**.

b) Description of the Project change

5.7.4. Following further consultation with East Suffolk Council, Alde Valley Academy, Leiston Leisure Centre and Pulse (East Suffolk Council's leisure development partner) the red line now extends to the north-west and includes the entire school field. The number of pitches proposed is the same as presented at Stage 3.

c) Why this change is necessary

5.7.5. Our discussions with local stakeholders have revealed a preference to locate the sports facilities in the north-west of the field closer to the existing leisure centre and the car park. This location is also further away from the homes to the east which would minimise any potential light or noise impacts of the facilities on the properties when they are in use. The design is continuing to develop with engagement from local stakeholders; as such, the entire field has been included in the red line to allow for flexibility in the design.

Figure 5.19: Off-site sports facilities red line change

5.8. Round House

a) Red line boundary change

5.8.1. The Round House property located in the main construction area was previously completely enclosed by the red line and is now included within it as shown in **Figure 5.20**.

b) Description of the Project change

5.8.2. No works will take place to the property and it will be protected in-situ during the construction phase.

c) Why this change is necessary

5.8.3. Site selection continues to show that it is necessary to use the area surrounding Round House for construction works, including earthworks stockpiles. Access to the property would need to be via the active construction site. Including the property within the red line is now proposed and EDF Energy will consult with the affected landowner directly.

Figure 5.20: Round House red line change

5.9. Kenton Hills car park

5.9.1. The Kenton Hills car park is located to the far west of the Kenton Hills estate and to the east of Lover's Lane. Kenton Hills is a wooded area popular with walkers and dog walkers.

a) Red line boundary change

5.9.2. The red line of the main development site at Kenton Hills car park has been changed to include the car park and access into Kenton Hills as shown in **Figure 5.21**.

b) Description of the Project change

5.9.3. It is proposed that the car park and access into Kenton Hills woodland would be improved to enhance the visitor experience. The following improvements are being considered:

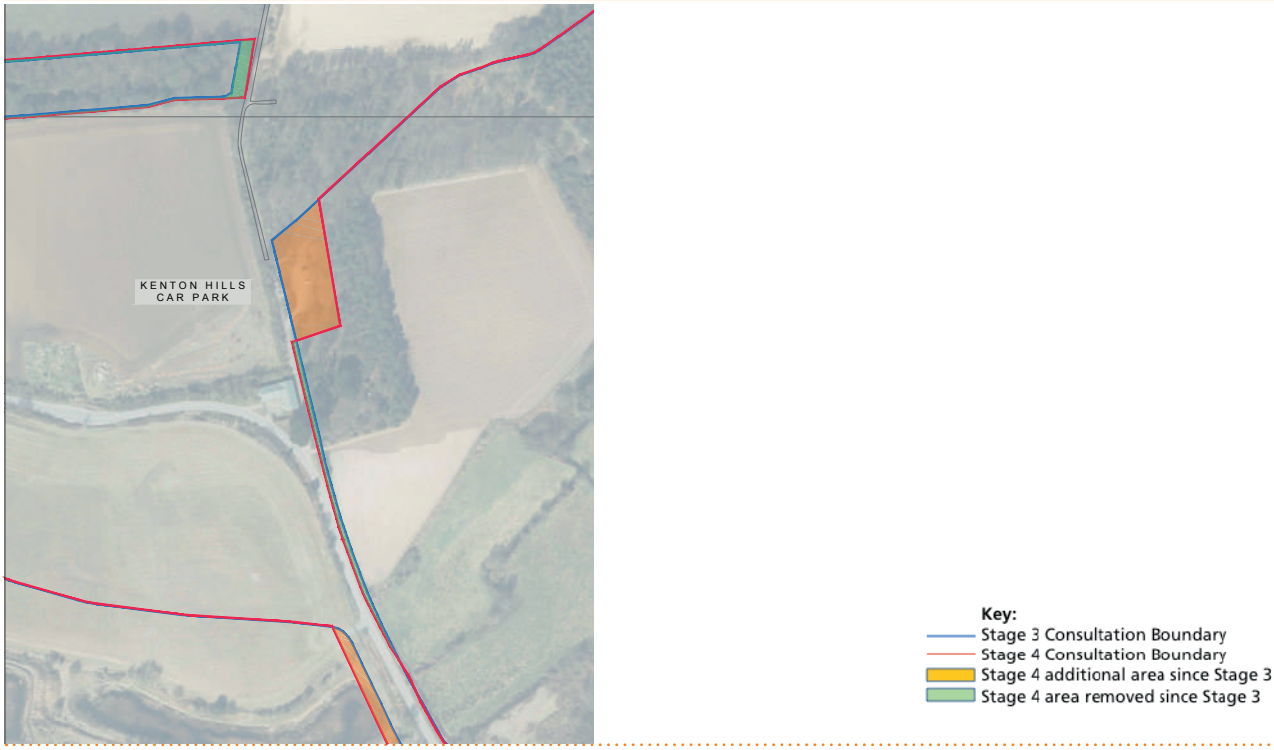
- modifying the car park layout to provide additional parking spaces;
- making the car park less enclosed by selective vegetation removal so that it feels safer;
- selective tree removal either side of the existing path from the car park into Kenton Hills wood to allow more light to reach the ground and make it feel safer;
- improvements to signage; and
- potential provision of additional facilities such as picnic tables close to the car park.

c) Why this change is necessary

5.9.4. In recognising the impact that the proposed development of Sizewell C would have on amenity and recreation we are proposing to improve existing recreational areas. Including the Kenton Hills car park in the red line allows works to be carried out to enhance the access provision within the EDF Energy estate, by making this location more attractive to walkers and dog walkers. This is mainly for the following purposes:

- to help mitigate potential adverse effects of the severance of the permissive path between Kenton Hills and the coast as well as some closures of the coastal path during the construction phase;
- to increase usage of the retained areas of the Sizewell estate, particularly Kenton Hills, to mitigate for possible 'recreational displacement' to other designated European sites during the construction phase; and
- to provide permanent improvements during operation.

Figure 5.21: Kenton Hills car park red line change



5.10. Marsh harrier compensation land

5.10.1. Marsh harriers nesting at Minsmere hunt over Sizewell Marshes SSSI and adjacent arable farmland, and detailed survey work has established the extent of this foraging behaviour. Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document describes the PEI which identified the possible effects on marsh harriers and describes in full the nature of the proposed mitigation.

a) Red line boundary change

5.10.2. Three sites have been included for the location of the marsh harrier compensation land:

- Site 1 is 54.26ha and is located to the west of Westleton (**Figure 5.22**). The site includes predominantly arable land. The southern boundary is Yoxford Road and the eastern boundary is Darsham Road. The properties to the west of Darsham Road and Wash Lane are not included in the site.
- Site 2is 46.21ha and is located to the south of Westleton (**Figure 5.23**). This site includes land either side of Reckford Road with residential properties along that road and in Westleton excluded. Black Slough Road is along the south-eastern boundary of the site.
- Site 3 is 61.52ha and is located to the south of

Eastbridge, east of Theberton and to the north of the proposed accommodation campus (**Figure 5.24**). The site is comprised of four separate parcels of land that are predominantly arable land. There is land included both north and south of Onner's Lane, in between Potter's Street, Baker's Hill and Eastbridge Road and east of Eastbridge Road.

b) Description of the Project change

5.10.3. Three marsh harrier compensation sites have been identified which could provide additional foraging for marsh harriers. EDF Energy is currently establishing compensatory habitat on the EDF Energy estate but these additional sites are being included in case this compensatory habitat provides insufficient foraging for marsh harriers.

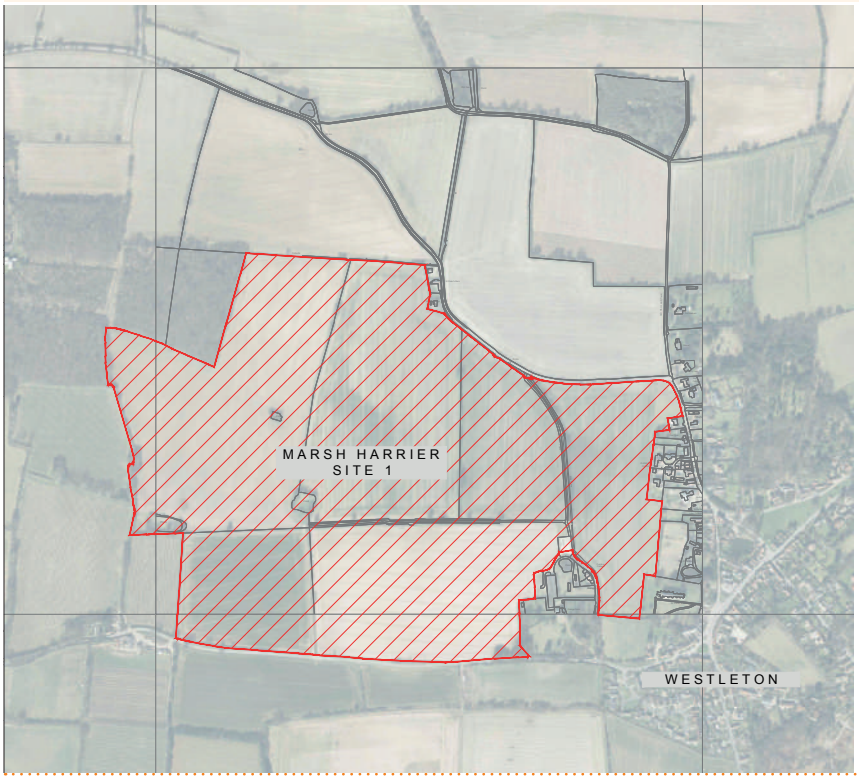
5.10.4. These three compensation sites have been identified as suitable because of their location and because they comprise mainly existing arable land. Sites should be within four kilometres of the RSPB's reserve at Minsmere so that nesting marsh harriers are more likely to locate and use the compensatory habitats. Existing arable land is preferable for the compensation land because it is likely to be capable of being enhanced for foraging marsh harriers without damaging more valued habitats. It is unlikely that the full extent of the three sites identified would be required and the extent is likely to be refined further prior to our application for development consent.

5.10.5. Works to create the required habitats could include: the use of 'set-aside' approaches; direct sowing of grassland seed mixes to create rough grassland; or the use of sown 'game strips' to attract small mammals and birds which would provide additional prey for marsh harriers. Some additional scrub and hedgerow planting may also be undertaken.

c) Why this change is necessary

5.10.6. This change provides additional marsh harrier foraging habitats to support the marsh harrier breeding population, one of the designated features of the Minsmere - Walberswick Special Protection Area (SPA), should already planned compensatory habitat prove insufficient. The foraging habitat for marsh harriers would be provided to mitigate any potential disturbance effects which might discourage marsh harriers from foraging over parts of the Minsmere South Levels and Sizewell Marshes SSSI during construction. This habitat creation would also likely provide additional habitat for nesting bird species and potential foraging for bat species.

Figure 5.22: Marsh harrier compensation land - Site 1



Key:
Stage 4 Consultation Boundary
Stage 4 Main Dvelopment Site

Figure 5.23: Marsh harrier compensation land - Site 2

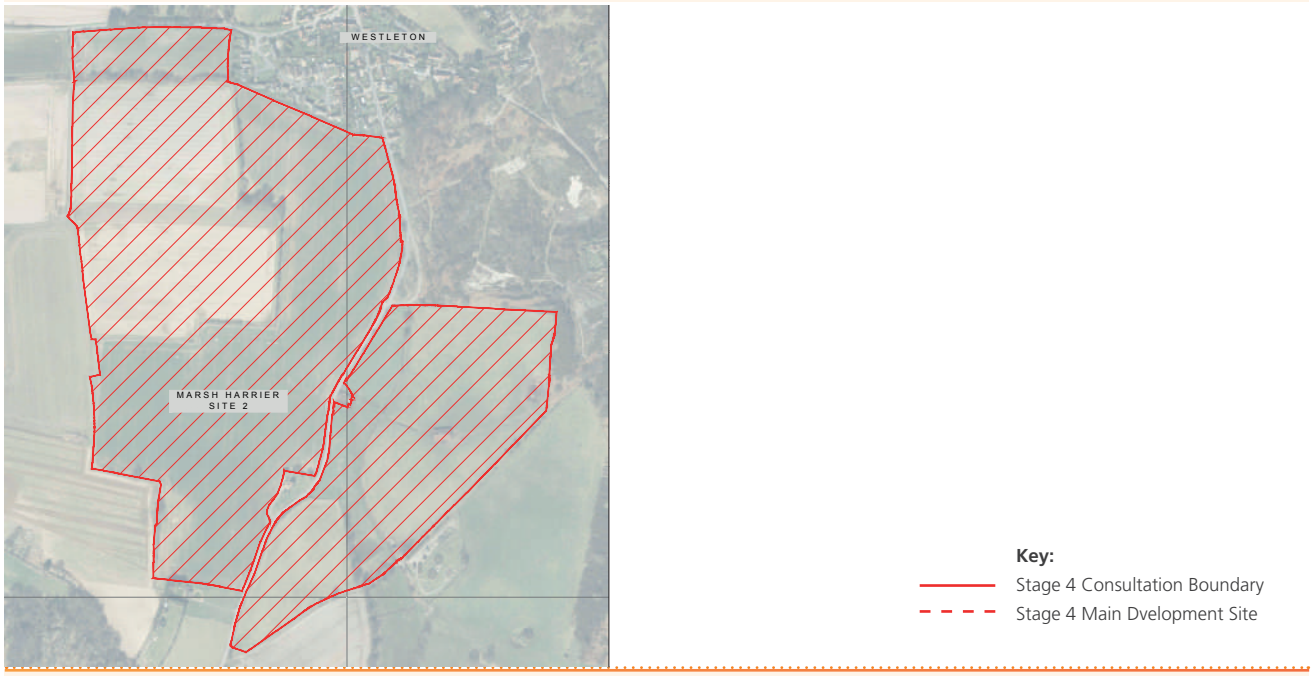
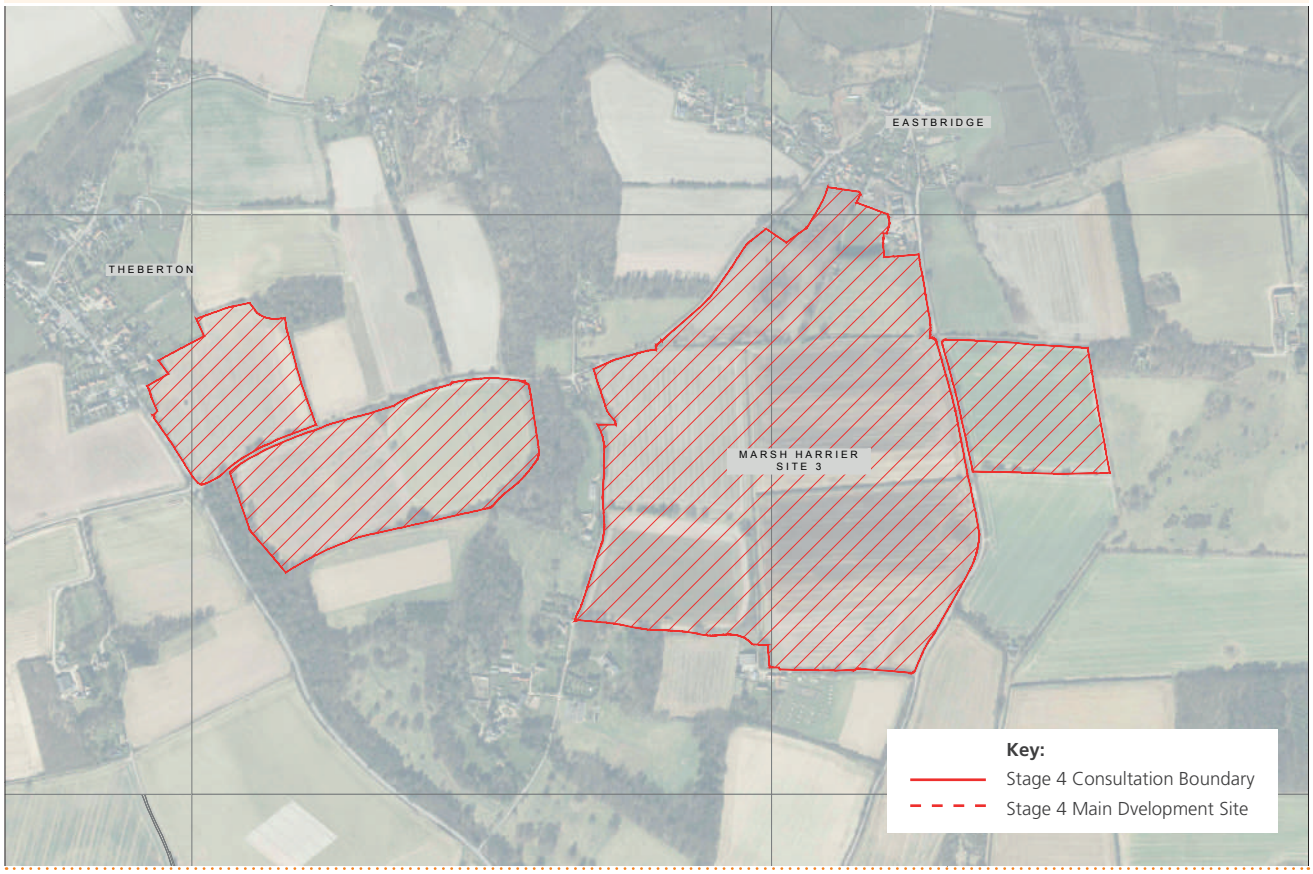


Figure 5.24: Marsh harrier compensation land - Site 3



5.11. Fen meadow compensation land

5.11.1. As explained at Stage 3, approximately 0.5ha of fen meadow is being lost from the Sizewell Marshes SSSI in the main development site to provide the western edge of the Sizewell C platform. Fen meadow compensation areas have now been identified to facilitate new areas of fen meadow habitats.

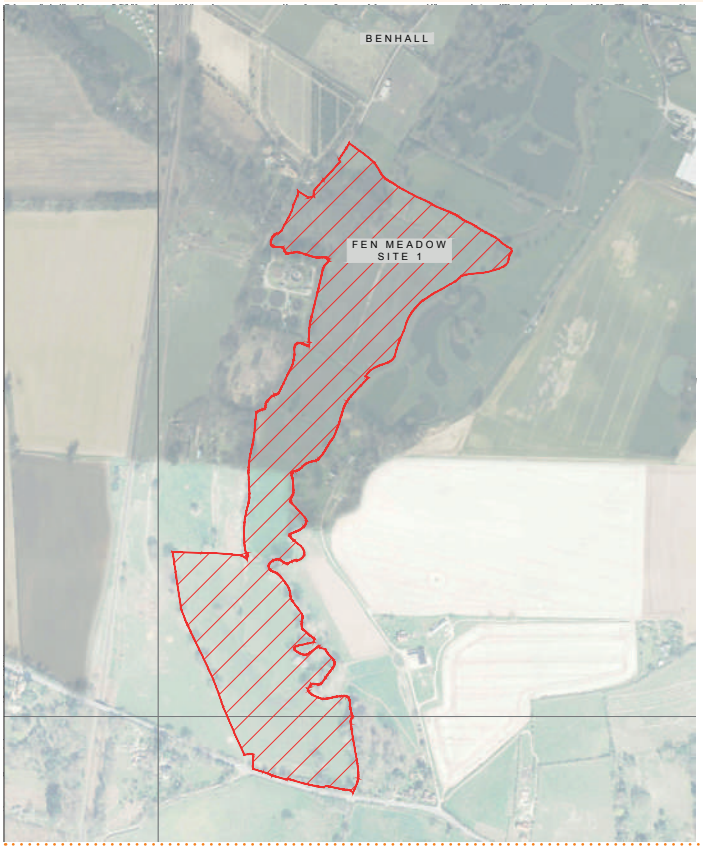
5.11.2. The proposed main development site scheme seeks to minimise land take from within the SSSI. Essential requirements mean that a small proportion of the SSSI would be permanently lost in order to provide access to the power station, establish the boundary of the main platform and for pylon works associated with National Grid. This area supports habitats including wet woodland, reedbeds, ditches and fen meadow. To provide compensation for this loss EDF Energy has developed a habitat creation scheme at Aldhurst Farm, which is upstream and contiguous with the Sizewell Marshes SSSI. This provides a series of extensive reedbeds with interconnecting ditch habitat within a surrounding matrix of semi-natural acid grassland and heath. However, there are certain aspects for which EDF Energy is proposing additional mitigation land.

a) Red line boundary change

5.11.3. Two sites have been included for the location of the fen meadow compensatory habitat:

- Site 1 is comprised of 12.68ha and is located to the south of Benhall (**Figure 5.25**). The A1094 runs along the southern boundary of the site and is predominantly improved pasture.
- Site 2 is comprised of 4.26ha and is located to the east of Halesworth (**Figure 5.26**). The south-west boundary is the A144 and Blyth Road marks the north-west boundary. The site is predominantly improved pasture.

Figure 5.25: Fen meadow compensation land – Site 1



Key:
Stage 4 Consultation Boundary
Stage 4 Main Dvelopment Site

b) Description of the Project change

5.11.4. The two sites have been identified as suitable because of their location within river valleys and proximity to other fen meadow sites. The sites have been surveyed in detail and have a good potential to create new fen meadow habitats over the long-term.

5.11.5. The full extent of both of the two options identified would not be required and the extent is likely to be refined further prior to making our application for development consent. Further assessment will be undertaken to determine the viability of each site, including the need for any engineering operations to modify existing landforms, soils and to raise water levels where necessary. Any such works are likely to involve a small number of plant, such as a single excavator, and a construction compound is not likely to be required.

c) Why this change is necessary

5.11.6. This change would, in due course, seek to provide fen meadow habitats to compensate for the loss of fen meadow habitats from the SSSI.

Figure 5.26: Fen meadow compensation land – Site 2

Key:
Stage 4 Consultation Boundary
Stage 4 Main Dvelopment Site

5.12. Flood compensation land

a) Red line boundary change

5.12.1. Two sites have been included for the location of flood compensation land:

- Site 1 is located to the north of the temporary construction area to the east of Lower Abbey Farm (**Figure 5.27**); and
- Site 2 is located to the south of the temporary construction area south of Sandy Lane (**Figure 5.28**).

b) Description of the Project change

5.12.2. The Flood Compensation Areas (FCAs) would be up to approximately three metres in depth, below existing ground levels and would be permanent features in the landscape, forming extensions to the functional floodplain. Boundaries to the FCAs would seek to avoid an overly 'engineered' appearance and would adopt a naturalistic design. Works would comprise site clearance and excavation to the extent necessary to create sufficient additional floodplain volume to mitigate the loss of floodplain at the SSSI crossing.

5.12.3. In developing the design of the FCAs, there is the potential opportunity to also establish valuable wildlife habitats similar to those in the surrounding areas. Depending on ground conditions and water levels, this could include wetland habitats, such as reedbeds or wet woodlands.

5.12.4. A compound area would be provided north of site 1. Spoil from these FCAs would be stockpiled in existing stockpile areas within the temporary construction area, and would be transported via an additional haul connection route added into the red line. Site 2 would be accessed via Sandy Lane and spoil would be managed at LEEIE.

5.12.5. It is likely that works would take place concurrently with first works at the SSSI crossing and at an early stage in the construction programme, in order to provide timely compensatory storage.

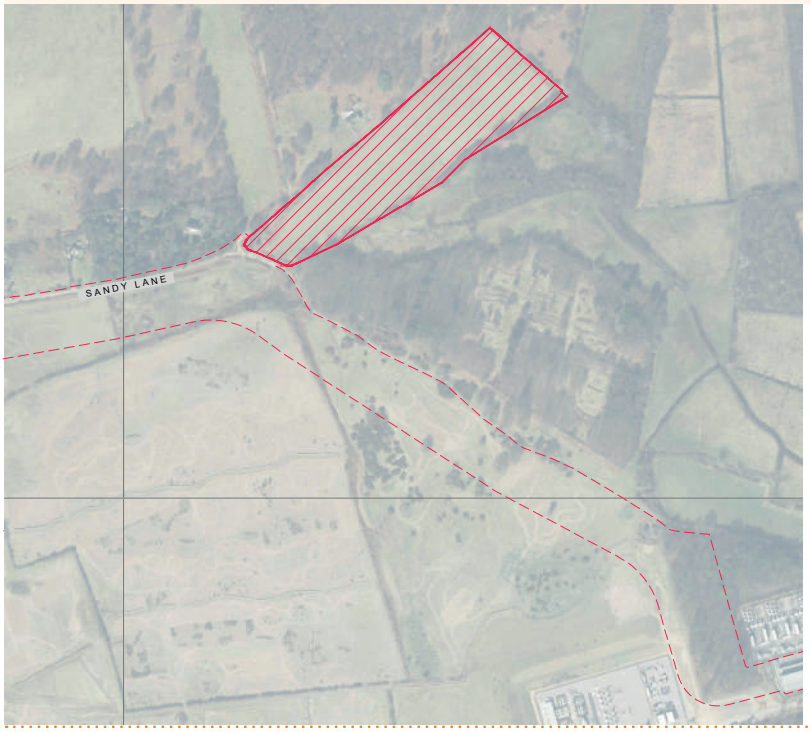
c) Why this change is necessary

5.12.6. This change provides approximately 90,000 cubic metres of replacement floodplain volume to compensate for equivalent losses associated with construction and operation of the SSSI crossing. It is envisaged that site 1 would be designed to enhance the proposed marsh harrier mitigation land, although there may be some disturbance to those habitats during the FCA construction period. The FCAs would be permanent features and so any wetlands created would remain at the end of construction.

Figure 5.27: Flood compensation land – Site 1

Key:
Stage 4 Consultation Boundary
Stage 4 Main Dvelopment Site

Figure 5.28: Flood compensation land – Site 2



Key:
Stage 4 Consultation Boundary
Stage 4 Main Dvelopment Site

5.13. Preliminary Environmental Information

a) Red line boundary and design changes

5.13.1. A preliminary environmental assessment of the design changes presented as part of this Stage 4 consultation has been undertaken. This has included a consideration of the changes 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.

5.13.2. As a result, the Stage 3 PEI related to landscape and visual, terrestrial ecology and ornithology, amenity and recreation, terrestrial historic environment and soils and agriculture assessments (refer to Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document) has been updated as set out within **Table 5.1**. The proposed design changes do not alter the baseline, mitigation proposals, the assessment of potential impacts and residual effects identified for any of the other environmental assessment topic areas as presented in the Stage 3 PEI at Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document.

5.13.3. A summary of the effects associated with the changes in traffic on the road network and rail movements on the Saxmundham to Leiston branch line and East Suffolk line, as a result of the integrated freight strategy is provided in **Chapter 4** of this Stage 4 consultation document.

5.13.4. Proposals for further work to complete the environmental assessment of the main development site as set out within the Stage 3 PEI at Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document remain valid. However in addition to the Stage 3 PEI proposals, a capacity assessment of the main site access roundabout junction and a Stage 1 Road Safety Audit is proposed. The need for further survey work to inform the baseline assessment will be reviewed and undertaken, where required, subject to access (such as additional bat surveys and archaeological investigations).

Table 5.1: Summary of changes to the Stage 3 PEI

Changes to Receptors and/ or Baseline Environment	Updated Environmental Assessment
Landscape and visual	
(with reference to Volume 2A, Chapter 2, section 2.2 of the Stage 3 Main Consultation Document)	
The revised red line site boundary is within the study area of the assessment presented in the Stage 3 PEI. No additional landscape or visual receptors to those identified in the Stage 3 PEI have been identified.	The revised proposals would result in the removal of additional vegetation (including established trees and hedgerows). Vegetation to be removed forms part of the screening to views (notably of the accommodation campus) from within the vicinity of Leiston Abbey and local roads and footpaths. However, it is judged that the additional vegetation loss would not result in a change to the assessment presented in the Stage 3 PEI. In addition, EDF Energy will explore opportunities to provide further planting and screening in the area to minimise the visual impact. There is the potential for the proposed development to enhance historic hedgerows, particularly that on the north side of Lovers Lane, which will no longer be affected by the diverted Bridleway 19, and by the offsetting of the bridleway from the carriageway, which will allow greater retention of existing vegetation. With regards to the options for the Sizewell C pylons considered in **section 5.4**, it is judged that Option 2 would generate a greater adverse effects in views from Sizewell beach compared to Option 1, due to a greater amount of visual 'clutter' extending out from the existing and proposed power station structures into what is an otherwise relatively simple coastal landscape. The difference in pylon heights between Options 1 and 2 make a marginal difference to the effects arising from the remaining viewpoints assessed. In views from Sizewell beach, Option 1 results in similar effects to those arising from the configuration of pylons presented in the Stage 3 PEI. Option 2 results in greater effects than those arising from the configuration of pylons presented in the Stage 3 PEI, as two pylon towers would be visible from the viewpoint located on Sizewell beach. The difference in pylon heights and layouts presented in Options 1 and 2 make a marginal difference to the effects arising from the configuration of pylons presented in the Stage 3 PEI on the remaining viewpoints assessed. The new Option 3 for a rail spur at LEEIE is not considered to give rise to any new or significantly different environmental impacts from those presented at Stage 3 with appropriate screening where required to minimise landscape and visual and noise impacts.
Terrestrial ecology and ornithology	
(with reference to Volume 2A, Chapter 2, section 2.3 of the Stage 3 Main Consultation Document)	
Additional temporary land take (0.37ha) in the Sizewell Marshes SSSI would be required to accommodate works to National Grid pylons. However, land take within the SSSI has been reduced to the south of the temporary construction area since Stage 3, resulting in 0.664ha less SSSI land being needed in that location. In total there is a net reduction of 0.294ha of Sizewell Marshes SSSI land being used. Elsewhere, changes to the site boundary include additional land take, mostly comprising agricultural land with the exception of the proposed changes associated with the public rights of way strategy which will include 0.49ha of additional landtake within Aldhurst Farm Habitat Compensation Area. There is a known barbastelle bat roost (and other potential roost trees) within the Greenhouse Plantation, which may be impacted by the changes to the main site access roundabout. There are no changes to the baseline relating to other protected species presented in the Stage 3 PEI.	Predicted habitat loss has increased slightly since Stage 3 although this does not change the conclusions of the assessment presented in the Stage 3 PEI. The works in the newly included part of Sizewell Marshes SSSI would be of a temporary nature, associated with extending the corridor for restringing overhead power lines and there would be no additional permanent habitat loss within the SSSI. The reduction in the total temporary land take from the SSSI does not change the conclusions of the assessment presented in the Stage 3 PEI. The land take within the Aldhurst Farm Habitat Compensation Area would include placing a bridge or boardwalk across a length of the drain and adjacent reedbed immediately to the west of Lover's Lane and the loss of some of the rough grassland and former arable habitats around the eastern-most edge of the site. The resultant effect is not likely to be significant. Additional bat surveys and a detailed assessment of potential effects on bats would be undertaken, if the design changes to the main site access roundabout are taken forward. Additional water vole surveys would be undertaken of the crossing of the Leiston Drain, if the public rights of way strategy is taken forward as shown. In summary, there is no change to the overall assessment of residual effects presented in the Stage 3 PEI.

Changes to Receptors and/ or Baseline Environment	Updated Environmental Assessment
Amenity and recreation	
(with reference to Volume 2A, Chapter 2, section 2.4 of the Stage 3 Main Consultation Document)	
The extended red line site boundary is within the study area of the assessment presented within the Stage 3 PEI. There is one additional recreational resource located within the red line boundary, the car park at Kenton Hills. The car park is accessed from Bridleway 19 and allows access to a series of permissive paths on the EDF Energy estate around Kenton Hills and provides access into Goose Hill and the beach via Sandlings Walk.	Kenton Hills car park and access into Kenton Hills woodland would be improved to enhance the visitor experience. Changes to the proposed public rights of way strategy would provide recreational amenity enhancements to the routes presented at Stage 3 consultation. These changes would result in additional beneficial effects for the user, including better parking facilities and improved access into the permissive footpath network. However the overall assessment of residual effects presented within the Stage 3 PEI is not considered to have changed.
Terrestrial historic environment	
(with reference to Volume 2A, Chapter 2, section 2.5 of the Stage 3 Main Consultation Document)	
The extended red line site boundary is within the study area of the assessment presented within the Stage 3 PEI. There is one additional monument record and one additional non-designated designed landscape listed within the Historic Environment Record (HER) within the site boundary as a result of the changes introduced. These are a round barrow or 18th century landscape feature within the southwest of Greenhouse Plantation and Theberton House non-designated parkland. The proposals are also within the settings of a number of heritage assets and there is the potential for previously unknown archaeological features and deposits on the site, particularly to the west of the B1122. In addition, there are a number of important historic hedgerows along the site boundaries.	The proposals for the main site access roundabout would remove vegetation which currently acts as screening for Leiston Abbey (Second Site, SM 1014520 & LB 1 215753). This could increase the magnitude of change within the setting of Leiston Abbey (Second Site), which the Stage 3 PEI concluded would potentially be significant, while replacement planting matures. Removal of mature woodland plantation from the periphery of Theberton House non-designated parkland for the main site access roundabout may give rise to an adverse effect of low magnitude on the setting of the asset which is not considered likely to be significant. Additional groundworks associated with the proposed design changes may adversely affect any surviving sub-surface archaeological remains, reducing or removing their ability to be further interpreted, resulting in a loss of archaeological interest, although disturbance would be of equivalent or lower magnitude to that considered in the Stage 3 PEI. Furthermore, the proposals would remove vegetation from the site of a HER monument record in the southwest of Greenhouse Plantation, on the edge of Theberton House non-designated parkland. This may disturb archaeological remains which could give rise to a significant adverse effect. There is the potential for the proposed development to enhance historic hedgerows, particularly those on the north side of Lover's Lane which would no longer be affected by the diverted Bridleway 19, and by the offsetting of the bridleway from the carriageway which will allow greater retention of existing vegetation. If an additional pylon is included within the layout of the main development site, this may increase the magnitude of change in the setting of heritage assets considered at the Stage 3 PEI as a result of the increased visibility of the pylons. Overall, it is anticipated that the proposed design changes may cause a slight increase in the magnitude of change within the setting of heritage assets. This magnitude would, in part, be limited as a result of the surrounding at-height construction activity within the main development platform, which has already been considered in the Stage 3 PEI. A detailed assessment of the impacts on the setting of heritage assets will be included within the ES.
Soils and agriculture	
(with reference to Volume 2A, Chapter 2, section 2.6 of the Stage 3 Main Consultation Document)	
A small area of additional agricultural land would be affected by the change. This land is under arable production.	The additional land required is small in area in the context of the overall proposals for the main development site. Therefore, the proposed change is not considered likely to alter the assessment of effects presented in the Stage 3 PEI.

b) Leiston off-site sports facilities

5.13.5. A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation has been undertaken. This has included a consideration of the proposed site for the off-site sports facilities including a review of baseline conditions, the assessment of effects and identification of additional mitigation required. The results of these assessments have been summarised within **Table 5.2**.

5.13.6. Proposals for further work to complete the environmental assessment include consultation with Suffolk County Council, East Suffolk District, Natural England and the AONB Partnership on the requirements for landscape and visual assessment. Furthermore, if required and subject to access, bat surveys to understand the level of use of the boundary tree-lines will be undertaken.

5.13.7. Archaeological features and deposits have been identified to the south of the proposed site and there is the potential to encounter sub-surface archaeological remains on the proposed development site. This potential is being further investigated by a geophysical survey.

5.13.8. The potential effects on infiltration to groundwater and potential increases in runoff will also be reviewed, and an appropriate drainage strategy would be developed to minimise effects.

Table 5.2: Summary of preliminary environmental assessment for off-site sports facilities

Baseline Environment	Environmental Assessment
Landscape and visual	
Potential visual receptors of the off-site sports facilities site include local residents, users of Alde Valley Academy and Leiston Leisure Centre, users of the rights of way close to the site and motorists on local roads.	Measures such as retention of established vegetation where possible, reinforcing existing vegetation around the perimeter of the site and landscaping early in the construction phase would provide localised screening to reduce visual effects and contribute to the enhancement of landscape character and improve biodiversity interest. There would still likely be views of construction works and plant for the duration of the construction phase from local residential properties, users of Alde Valley Academy and Leiston Leisure Centre, as well as users of rights of way close to the site and local roads. There are also likely to be temporary effects on the character of the site and its immediate (townscape) surroundings. Overall, during construction it is unlikely that effects on visual receptors and landscape character will be significant due to the scale and temporary nature of the works required. Once operational, due to the scale of works proposed, no significant effects have been identified. It is noted that the existing site is already used for sports pitches, therefore the proposed development would not change the use of the existing site, but improve existing facilities.
Terrestrial ecology and ornithology	
The existing site comprises grassland used for sports pitches, and the eastern and southern boundaries are lined with trees. There is the potential for bats to be present on site. Therefore bat surveys to understand the level of use of the boundary tree-lines will be undertaken if required, subject to access. However, the assessment will assume use of the boundary trees by bats as a reasonable worst-case.	Measures such as the retention of established vegetation, where possible, and reinforcing existing vegetation around the perimeter of the site will reduce the impacts on bats. With these measures in place, an initial assessment has identified no significant effects during construction and operation. Further assessment will be completed for the Environmental Statement.
Amenity and recreation	
The site is located between Leiston Leisure Centre and Alde valley Academy, at a location slightly north of the area proposed at Stage 3 consultation.	There are likely to be temporary effects on the users of nearby recreational resources, such as pedestrians along Grimseys Lane south of the site which connects to the wider network of Public Rights of Way. However, these effects are unlikely to be significant due to the temporary nature and scale of works proposed. The existing site is already used for sports pitches, and the proposed development would not alter this use. It would also improve the existing facilities. Therefore no significant effects have been identified during operation.
Historic environment	
There are no designated heritage assets on the site or in its immediate vicinity. However there is the potential for buried archaeological deposits on the site. Geophysical surveys are being undertaken to assess this potential and results are pending.	Groundworks associated with the proposed development may adversely affect any surviving sub-surface archaeological remains and could result in a loss of archaeological interest during construction. Additional mitigation would comprise the adoption of an agreed written scheme of investigation as set out in the Stage 3 PEI. Where appropriate mitigation is in place, it is anticipated that effects would not be significant. No significant effects during operation have been identified.

Baseline Environment	Environmental Assessment
Soils and Agriculture	
The site is not currently under agricultural use.	The proposed development would not require any land under agriculture use, therefore there would be no effects on soils and agriculture.
Noise and vibration	
The site is bordered by Leiston Leisure Centre and Alde Valley Academy. The closest residential properties are within 65m of the site boundary on Quakers Way.	During construction, due to the scale of works proposed and on the basis that Best Practice Measures for the mitigation of construction noise would be applied, no significant effects are likely to occur. The use of the site would not be changed by the proposed works, and therefore no significant effects have been identified during operation.
Air quality	
As reported for the noise and vibration baseline, the site is bordered by Leiston Leisure Centre and Alde Valley Academy, with the closest residential properties being 65m from the site boundary.	During construction, due to the scale of works proposed and on the basis that Best Practice Measures for the mitigation of construction dust and emissions would be applied, no significant effects are likely to occur. The use of the site would not be changed by the proposed works, and therefore no significant effects have been identified during operation.
Geology and land quality	
A review of historic uses of the site will be undertaken to inform the assessment of potential contamination sources.	Works would require the removal of topsoil and minor earthworks. Physical effects including changes in soil erosion and soil compaction associated with these works is anticipated to be minimal. Impacts associated with ground contamination, if identified, would be mitigated by good practice construction management measures, as set out within the Construction Environmental Management Plan (CEMP). With appropriate mitigation in place, no significant effects are considered likely. Due to the proposed use of works, no significant effects during operation are anticipated.
Groundwater and surface water	
There are no surface water receptors within the vicinity of the site. The depth of groundwater at the site is currently not known.	No significant effects have been identified with the implementation of good practice construction measures, which will be set out within the CEMP. During operation, no significant effects associated with the use of the sports pitches are anticipated with an appropriate drainage strategy in place.
Flood risk	
The site is not within an area at risk of flooding, as identified by Environment Agency flood mapping.	No significant effects have been identified with the implementation of good practice construction measures, as set out within the CEMP. During operation, no significant effects associated with the operation of the sports pitches are anticipated with an appropriate drainage strategy in place.
Traffic and transport	
The sports pitches would be accessed via Abbey Road or King George's Avenue to the centre of Leiston, and then on to Aldeburgh Road and Red House Lane. Workers residing in both the accommodation campus and at LEEIE would also be able to reach the sports pitches on foot and by bicycle. In addition to taking the same route as vehicles, it is also possible to walk or cycle from Sizewell Gap to Grimseys Lane and from there westwards to Red House Lane. Average daily traffic volumes are approximately 4,300 vehicles per day along Abbey Road, 4,800 per day along King George's Avenue and 4,900 per day along Aldeburgh Road. On-street parking is available along Red House Lane.	The construction of the sports pitches would not generate large numbers of vehicle movements. The site is adjacent to Alde Valley Academy and consequently there are high numbers of children moving around the area at the start and end of the school day. Construction traffic would be carefully managed to minimise journeys at these times, and all drivers would be instructed to take extra care when driving to, from and within the site. No significant effects have been identified with the implementation of good practice construction measures, which will be set out within the CEMP. The sports facilities would be accessed by the Sizewell C construction workforce as well as the community. The sports pitches are located at the southern end of Leiston but are nevertheless within easy walking distance of the town centre, and can be reached on foot or by bicycle from workers accommodation. There is on-site parking, meaning that people driving to the sports pitches will not need to park on the street. There is also space within the site for coaches to park and manoeuvre, thereby minimising disruption on nearby roads.

Baseline Environment	Environmental Assessment
	Given that construction workers are likely to use the sports pitches outside of peak times, at weekends and on week nights, traffic generated by the sports pitches is likely to be imperceptible on the local road network. There would be some coach movements transporting workers to and from the pitches, however it is noted that buses already use the local roads to reach Alde Valley Academy. No significant effects relating to traffic and transport have been identified to arise from the operation of the site.

c) Marsh harrier compensation land

5.13.9. A preliminary environmental assessment of marsh harrier mitigation sites presented as part of this Stage 4 consultation has been undertaken. This has included a consideration of baseline conditions, the assessment of effects and mitigation required.

5.13.10. Works to create marsh harrier mitigation areas are equivalent to less intense farming operations on land which is currently in agricultural use. The areas would either be set aside to create rough grassland or sown with rough grassland or game strip crops, with some additional hedgerow and scrub planting undertaken. Therefore, no significant effects with regards to landscape and visual, amenity and recreation, noise and vibration, air quality, geology and land quality, groundwater and surface water, flood risk, and traffic and transport assessments are considered likely and these topics have been scoped out of the preliminary environmental assessment.

5.13.11. A summary of the preliminary assessment with regards to terrestrial ecology and ornithology, historic environment and soils and agriculture is presented in **Table 5.3**.

Table 5.3: Summary of preliminary environmental assessment for marsh harrier mitigation sites

Baseline Environment	Environmental Assessment
Terrestrial ecology and ornithology	
All sites The sites proposed for marsh harrier mitigation comprise land currently within agricultural use bordered by hedgerow and woodland planting.	**All sites** The identified sites would be enhanced to create additional foraging habitat for marsh harriers in order to mitigate potential disturbance effects generated by construction activities on the main development site, which may discourage marsh harriers from foraging over parts of the Minsmere South Levels and Sizewell Marshes SSSI. The Stage 3 PEI considered that the disturbance generated by construction activities may also impact on the breeding population of marsh harriers within the Minsmere to Walberswick SPA and Ramsar Site. With the provision of compensatory marsh harrier foraging habitats, the construction disturbance of the main development site is not considered to be significant. This habitat creation would also likely provide additional habitat for nesting bird species and potential foraging habitat for bat species, mitigating adverse effects on these species.
Historic Environment	
Site 1 – west of Westleton There are no designated assets within the site; however, there are two Grade II Listed Buildings immediately to the southeast, on Wash Lane: The Grange (LB 1030692) and Cottages to the NE of Westleton Grange (LB 1392677) and the Grade II* Listed St Peter's Church to the east. Medieval pottery (WLN021) is recorded on the Suffolk Heritage Explorer (the website version of the Suffolk HER) in the eastern part of the site and there is the potential for additional non-designated heritage assets within the site and its immediate vicinity. There is the potential for previously unknown archaeological features and deposits on the site	**All sites** Intrusive groundworks associated with the creation of marsh harrier foraging sites would be limited. There is, therefore, a low potential for groundworks to adversely affect any surviving sub-surface archaeological remains, reducing or removing their ability to be further interpreted, resulting in, at worse, a very limited loss of archaeological interest. Intrusive elements of the works could be relocated to avoid areas of archaeological sensitivity, and there is a potential for the habitat creation works to minimise any further damage to archaeological remains by removing them from ploughing.

Baseline Environment	Environmental Assessment
Site 2 – south of Westleton There are no designated heritage assets within the site or its immediate surroundings; however, there is the potential for non-designated heritage assets. There is the potential for previously unknown archaeological features and deposits on the site.	It is not anticipated that the work required for the proposed change to the land management regime would affect the setting of any heritage assets. Where required, mitigation of direct effects on buried archaeology would comprise detailed design and location of intrusive elements of the works and the adoption of an agreed written scheme of investigation. This mitigation would be proportionate to the potential level of disturbance. No direct effects or change to the setting of designated assets are anticipated following the completion of works.
Site 3 – between Theberton and Eastbridge There are no additional designated heritage assets within the site boundary as a result of the changes introduced. However, there are two Grade II Listed buildings on the southern boundary: Bob's Cottage (LB 1228266) and Potter's Farmhouse (LB 1228267) and Grade II* Theberton House (LB 1228378) and associated listed buildings to the southwest of the proposed site. Multi-period field systems have been identified on the eastern part of the site (THB027) and there is the potential for further non-designated heritage assets beyond the Stage 3 PEI study area. There is potential for previously unknown archaeological features and deposits on the site.	
Soils and agriculture	
All sites The sites proposed for marsh harrier compensation land currently comprise arable land.	**All sites** Whilst the majority of the land for marsh harrier habitat creation would remain in agricultural use, the type and intensity of agricultural operations may change, resulting in potential effects on the existing farm holdings. A detailed assessment of the effects will be presented in the Environmental Statement.

d) Fen meadow compensation land

5.13.12. A preliminary environmental assessment of fen meadow compensation sites presented as part of Stage 4 consultation has been undertaken. This has included a consideration of baseline conditions, the assessment of effects and mitigation required.

Works to create fen meadow compensation areas may require modifications to landforms and soils, in order to raise water levels, where necessary. However, following the completion of works, the land would remain in agricultural use for grazing albeit at reduced rates, to reflect the habitat creation objectives. No significant effects with regards to noise and vibration, air quality and traffic and transport assessments are considered likely due to the scale of works proposed. Therefore, these topics have been scoped out of the preliminary environmental assessment.

5.13.13. A summary of the preliminary assessment with regards to landscape and visual, terrestrial ecology and ornithology, amenity and recreation, historic environment, soils and agriculture, geology and land quality, groundwater and surface water and flood risk is presented in **Table 5.4**.

5.13.14. Further viability assessments will be undertaken to define in more detail the potential to create high quality fen meadow habitats at each of the sites identified. This will include determination of any construction requirements (excavations), hydrological considerations (ground and surface water requirements) as well as any other environmental constraints.

5.13.15. Once constructed, a long term monitoring and management programme would be implemented to determine the success or otherwise of the habitat creation proposals.

Table 5.4: Summary of preliminary environmental assessment for fen mitigation sites

Baseline Environment	Environmental Assessment
Landscape and visual	
All sites The sites proposed for the fen meadow compensation areas would introduce new landscape and visual receptors such as local residents, users of rights of way close to and within the site and on local roads into the study area.	**All sites** The design of the fen meadow compensation areas would retain established boundary vegetation whilst the creation of the fen meadow habitats would contribute to the enhancement of landscape character and improve biodiversity interest. During construction there is likely to be views to construction plant and works for the duration of the construction phase from visual receptors in close proximity to the sites. The works are also likely to have temporary effects on the character of the site and its immediate surroundings, as well as on the special qualities of the Special Landscape Area. However, these effects will be temporary and are not likely to be significant.
Site 2 – east of Halesworth For Site 2, further additional receptors would include caravan park users and the site is located adjacent to and partially within a Special Landscape Area.	Following the establishment of the fen meadow sites, there will be no effects on landscape and visual receptors.
Terrestrial ecology and ornithology	
The sites proposed for fen meadow compensation comprise pastures bordered by hedgerow and woodland planting.	The identified sites would be enhanced to create new fen meadow habitats in order to compensate for the loss of 0.5ha of fen meadow from Sizewell Marshes SSSI by construction activities on the main development site. Assuming the provision of the off-site fen meadow habitats is successful, the loss of fen meadow habitat from the SSSI on the main development site is considered to be not significant. Further investigation of the two sites is ongoing relating to the feasibility of providing fen meadow habitat. During construction there may be a requirement for additional mitigation to manage any protected species that may be onsite prior to works commencing. Once constructed, a long term monitoring and management programme would be implemented to determine the success or otherwise of the habitat creation proposals.
Amenity and recreation	
The sites proposed for the fen meadow habitat would introduce new amenity and recreational receptors into the study area, including public rights of way. Public Right of Way E-137/026/0 crosses Site 1 south of Benhall.	There are likely to be temporary effects on the users of recreational resources including Public Rights of Way within and close to the sites due to temporary disturbance during construction. During the works and following their completion, the Public Right of Way would be retained. Therefore no significant effects on the users of Public Rights of Way are likely to occur.
Historic environment	
Site 1: south of Benhall There are no designated heritage assets within the site; however, one listed building is located on the eastern site boundary (LB II 1278152, Watering End). Non-designated assets (BNL004 - a Medieval moated site; BNL005 - a possible Neolithic burnt mound, and SNP040 - an 18th-century bridge) have also been identified on the western and southern site boundaries. There is also potential for non-designated heritage assets and previously unknown archaeological features and deposits within the site.	**All sites** It is anticipated that intrusive groundworks associated with the creation of the fen meadow sites will be minimal. There is, therefore, a low potential for groundworks to adversely affect any surviving sub-surface archaeological remains and this would result in a very limited loss of archaeological interest. Where required, mitigation of direct effects on buried archaeology would comprise the adoption of an agreed written scheme of investigation. This mitigation would be proportionate to the potential level of disturbance.
Site 2: east of Halesworth There are no designated heritage assets within the site or in the immediate vicinity; however, there is a non-designated 18th-century bridge (HWT 016) on the southern boundary of the site. There is potential for non-designated heritage assets and previously unknown archaeological features and deposits on the site.	No direct effects or change to the setting of designated assets are anticipated following the completion of works.

Baseline Environment	Environmental Assessment
Soils and agriculture	
The sites proposed for fen meadow habitat currently comprise grazing land.	During the habitat improvement works, the sites would be temporarily excluded from agricultural use. However, due to the short duration of any works required, the effects are not considered to be significant. Following the completion of works, it is anticipated that grazing of the land would continue, albeit with a possible reduction in grazing density to support the habitat creation objectives. This is not considered likely to result in a significant effect on existing farming operations.
Geology and land quality	
Site 1: south of Benhall A sewage works is present on the western boundary and there is the potential for possible infilled opencast workings on the northern and eastern boundaries. A review of historic uses of the site will be undertaken to inform the assessment of potential contamination sources on-site and in the surrounding area.	Minor modifications to topography and landforms may be required to raise water levels. The physical effects would include changes in soil erosion and soil compaction associated with stripping of topsoil, vegetation clearance, stockpiling, earthworks and associated machine movements is anticipated to be minimal. However, these effects would be mitigated by measures to be included within a CEMP.
Site 2: east of Halesworth A sewage works is present on the north-eastern boundary, an industrial estate on the north-western boundary and Brick Kiln Farm to the south of the site. A review of historic uses of the site will be undertaken to inform the assessment of potential contamination sources on-site and in the surrounding area.	Impacts associated with ground contamination, if identified, would similarly be mitigated by good practice construction management measures to be included within a CEMP. With appropriate mitigation in place, no significant effects are considered likely. Following the establishment of the fen meadow sites, effects relating to ground conditions are not likely to be significant.
Groundwater and surface water	
Site 1: south of Benhall The proposed fen meadow site is immediately adjacent to the River Fromus, which is classified as a Main River by the Environment Agency and is a reportable reach under the Water Framework Directive (WFD) (GB105035045980). The site lies within the functional floodplain of the River Fromus. Whilst the morphology of the River Fromus has the potential to 'support Good' ecological status, the ecological status of the waterbody has been classified as 'Poor' under WFD reporting. Physico-chemical water quality also fails to support Good status.	Minor modifications to topography and landforms may be required to raise water levels at both sites. This may result in physical impacts such as soil erosion and sediment transport associated with stripping of topsoil, vegetation clearance, stockpiling, earthworks and associated machine movements is anticipated to be minimal. However, any effects would be suitably controlled by construction environmental management measures set out within a CEMP. Considering that the proposed works would be of limited extent, impacts on surface water and groundwater not likely to be significant. Following the establishment of the fen meadow sites, the proposals will create a mosaic of habitats, with small-scale water management controls operated to maximise the area of fen meadow created within the site area with the groundwater available. It is anticipated that the proposals will complement the existing floodplain and riverine habitats and, consequently, would not give rise to significant effects for surface or ground water receptors. Once established, ongoing monitoring and management would be undertaken to deliver and maintain the target habitats.
Site 2: east of Halesworth The proposed site is immediately adjacent to the River Blyth, which is classified as a Main River be by the Environment Agency and is a reportable reach under the WFD (GB105035046030). The site lies within the functional floodplain of the River Blyth. The river has been designated as a heavily modified waterbody and as a result of changes to the hydrological regime, 'does not support Good' status under WFD reporting. However, the physico-chemical water quality is classified as Good and biological quality is of High Status.	
Flood risk	
Both sites are located within Flood Zone 3 and adjacent to a 'Main River, as classified by the Environment Agency.	An assessment of flood risk both on-site and off-site would be undertaken. Appropriate mitigation measures will be specified to minimise the risk of surface water flooding, therefore no significant effects are considered likely.

d) Flood compensation land

5.13.16. A preliminary environmental assessment of the flood compensation areas presented as part of Stage 4 consultation has been undertaken. This has included a consideration of the 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. A summary of the preliminary assessment and how this changes the conclusions of the Stage 3 PEI for the main development site, which were previously set out in Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document, is presented in **Table 5.5**.

5.13.17. Proposals for further work to complete the environmental assessment of the main development site as set out within the Stage 3 PEI set out at Volume 2A, Chapter 2 of the Stage 3 Main Consultation Document remain valid. The need for further survey work to inform the baseline assessment will be reviewed and undertaken, where required, subject to access (such as additional agricultural land classification and soil surveys, and archaeological investigations).

Table 5.5: Summary of changes to the Stage 3 PEI

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Landscape and visual (with reference to Volume 2A, Chapter 2, section 2.2 of the Stage 3 Main Consultation Document)	
The revised red line boundary is within the study area of the assessment presented in the Stage 3 PEI. The proposed changes would not require a notable change to the extent of the 15km study area for the Landscape and Visual Impact Assessment (measured from the onshore part of the main development site). No additional landscape or visual receptors to those identified in the Stage 3 PEI have been identified.	Flood compensation sites would be designed to avoid damage to existing trees, woodlands and hedgerows within and bordering the site. This would include avoiding excavation in the Root Protection Areas of trees within adjacent plantations (e.g. Sandypytle Plantation, The Grove, within adjacent tree lines and hedges north of Round Covert). Mitigation presented in the Stage 3 PEI would also apply to the flood compensation sites. This includes retaining, where possible established vegetation, and landscaping early in the construction phase to provide localised screening/ reinforcing existing vegetation around the perimeter of the main development site, and ongoing management to maintain the long-term screening function of vegetation. Overall, there is no change to the assessment presented in the Stage 3 PEI for the main development site.
Terrestrial ecology and ornithology (with reference to Volume 2A, Chapter 2, section 2.3 of the Stage 3 Main Consultation Document)	
Areas proposed for flood compensation sites comprise former agricultural land that have been allowed to revert to grassland, bordered by woodland planting and hedgerows. The proposed flood compensation area at the northern boundary of the main development site is adjacent to (and potentially overlaps) a north-south corridor for bats which also contains identified roosts. This corridor is also one of the sites where advanced mitigation (bat boxes) has been installed.	Mitigation presented in the Stage 3 PEI for the main development site would also apply to the flood compensation sites. This will include the retention of existing vegetation on site boundaries. Therefore, a strong north-south bat flight corridor would be retained, as would all tree roosts. Initial assessment has identified no additional significant effects to those presented in the Stage 3 PEI for the main development site, however an assessment of the potential effects on bats and Minsmere Nature Reserve is to be undertaken for the Environmetnal Statement.
Amenity and recreation (with reference to Volume 2A, Chapter 2, section 2.4 of the Stage 3 Main Consultation Document)	
The extended site boundary is within the study area of the assessment presented within the Stage 3 PEI. Public Right of Way E-363/020/0 runs immediately north of flood compensation site to the north of the main development site. A permissive footpath runs through the existing field proposed for flood compensation opposite Keepers Cottage. There are no other changes to the baseline as a result of the proposed design changes.	The permissive footpath would be diverted to retain the circular permissive route around Reckham Pits wood. With the diversion in place, no new significant effects have been identified.

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Terrestrial historic environment (with reference to Volume 2A, Chapter 2, section 2.5 of the Stage 3 Main Consultation Document)	
The site is within the study area of the assessment presented within the Stage 3 PEI. There are no additional designated heritage assets within the site boundary as a result of the changes introduced. However, the flood compensation area within the northern part of the main development site lies on an access route (PRoW ref. E-363/020/0) to Leiston Abbey (First Site, SM 1015687), which is c.560m to the east. There are seven additional HER monument records within the northern flood compensation area: three of which relate to cropmarks of possible medieval and post-medieval field systems (LCS 189, 193 & 194), a former WWII field artillery position and training area (LCS 204), the site of an L-shaped WWII barbed wire obstruction (LCS 096), and cropmarks of a possible ring ditch (LCS 192), and a possible salt production site (LCS 195). Archaeological investigations to the south of the proposed site suggest that there is a potential for archaeological features and deposits relating to prehistoric and medieval to post-medieval agricultural activity. In summary, there is the potential for previously unknown archaeological features and deposits on the site, in particular remains associated with medieval and post-medieval agricultural activity. The wetland fringe context of the site also holds the potential for later prehistoric activity and preserved peat deposits. Field boundaries associated with the northern flood compensation area, where surviving hedgerows would be considered important are located on the northern, eastern and southern site boundaries and bisect the site along the existing field boundary. The proposed flood compensation area opposite Keepers Cottage includes no additional designated heritage assets within the site boundary. However, there are three additional HER monument records within the proposed flood compensation site: cropmarks of two possible ring ditches (LCS 070) and possible medieval or post-medieval field system (LCS Misc), and a scatter of medieval and post-medieval pottery (LCS 168). There is the potential for archaeological features and deposits relating to these or to previously unknown heritage assets.	The works required for the flood compensation area along the Public Right of Way between Eastbridge and Leiston Abbey (First Site) could increase the magnitude of change within the setting of Leiston Abbey (First Site), which the Stage 3 PEI concluded would potentially be significant. Construction works would be of limited duration and the increased magnitude of change would be relatively short-lived. Additional groundworks associated with the flood compensation areas would adversely affect any surviving sub-surface archaeological remains, reducing or removing their ability to be further interpreted, resulting in a loss of archaeological interest. As set out in the Stage 3 PEI, where required, additional mitigation of direct effects on buried archaeology would comprise the adoption of an agreed written scheme of investigation. The effect on historic hedgerows is assessed as not significant. During operation, no adverse change to the setting of designated assets is anticipated. There is the potential to enhance the setting of Leiston Abbey (First Site) through the creation of a marshland environment consistent with the historic development of the landscape around the abbey. No direct effects are anticipated during the operation of the proposed development.
Soils and agriculture (with reference to Volume 2A, Chapter 2, section 2.6 of the Stage 3 Main Consultation Document)	
Land required for the flood compensation areas at the northern boundary of the main development site has been removed from agricultural use and allowed to revert to grassland. The proposed flood compensation area opposite Keepers Cottage is lightly grazed and has been subject to a previous Agricultural Land Classification survey, which mapped the site as Grade 4 agricultural land. Grade 4 land does not fall within the category of best and most versatile agricultural land.	The proposed change to the site boundary will result in an additional loss of agricultural land opposite Keepers Cottage. However, the additional land take is small in comparison to the overall land take for the main development site and thus, the proposed change is not considered likely to alter the assessment of effects presented in the Stage 3 PEI for the main development site.

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Noise and vibration (with reference to Volume 2A, Chapter 2, section 2.7 of the Stage 3 Main Consultation Document)	
There is no change to the baseline relating to noise and vibration presented in the Stage 3 PEI. There are no new receptors affected due to the proposed extension to the site boundary.	There is a potential for an increase in construction noise at Lower Abbey Farm due to construction vehicles using the access track to the flood compensation area within the northern part of the main development site. This increase is unlikely to exceed the Significant Observed Adverse Effect1 Level for noise and is likely occur over a short duration while the works are occurring. There is also a potential for construction noise levels at Keepers Cottages to reach or exceed the Lowest Observed Adverse Effect Level (LOAEL)2 during the peak of construction activities at the flood compensation area opposite Keepers Cottage. Noise levels and impacts at all other times and receptors are likely to be below the LOAEL. Construction vehicles travelling on Sandy Lane may result in an increase in noise levels at noise sensitive receptors along that route. This would only be for a relatively short duration while the flood compensation area opposite Keepers Cottage is being constructed. Mitigation specified for the main development site within the Stage 3 PEI would also apply to the mitigation of construction noise for the flood compensation areas. With appropriate mitigation in place, no additional significant effects are considered likely. A detailed assessment of construction noise effects will be undertaken for the Environmental Statement.
Air quality (with reference to Volume 2A, Chapter 2, section 2.8 of the Stage 3 Main Consultation Document)	
There is no change to the baseline relating to air quality. There are no new receptors affected due to the proposed extension to the site boundary.	Construction works for the flood compensation areas will be adjacent to the Lower Abbey Farm and Keepers Cottage. Mitigation specified for the main development site within the Stage 3 PEI would also apply to the mitigation of construction dust and emissions from the flood compensation areas. With appropriate mitigation in place, no additional significant effects are considered likely. A detailed assessment of the effects on air quality will be undertaken for the Environmental Statement.
Geology and land quality (with reference to Volume 2A, Chapter 2, section 2.9 of the Stage 3 Main Consultation Document)	
There are no existing contamination sources within the areas proposed for flood compensation. In addition, a review of historical mapping has indicated no historical contamination sources. Baseline geology is assumed to comprise natural sands, gravels and peat. A detailed assessment of baseline geology and land quality is to be undertaken for the Environmental Statement.	Excavation works for the flood compensation areas may disturb ground up to 2.0m to 3.0m deep, which may cause physical effects including changes in soil erosion associated with stripping of topsoil, vegetation clearance, stockpiling, and earthworks. However, these effects would be mitigated by measures to be included within a CEMP for the main development site. Considering the likely absence of contamination sources, impacts due to contamination and physical effects are not likely to be significant.
Groundwater and surface water (with reference to Volume 2A, Chapter 2, sections 2.10 and 2.11 of the Stage 3 Main Consultation Document)	
There is no change to the baseline relating to groundwater and surface water. There are no new receptors affected due to the proposed extension to the site boundary.	Relevant mitigation measures specified for the main development site in the Stage 3 PEI would also be applied for the construction of the flood compensation areas, as appropriate. Management of groundwater levels and connectivity with the adjacent wetlands will be considered during design development of the flood compensation areas. With mitigation in place, the construction of flood compensation areas is not considered to result in new significant effects on groundwater and surface water receptors.

1 Defined as the level above which significant adverse effects on health and quality of life occur (Noise Policy Statement for England, 2010).
2 Defined as the level above which adverse effects on health and quality of life can be detected (Noise Policy Statement for England, 2010).

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Flood risk	
(with reference to Volume 2A, Chapter 2, section 2.12 of the Stage 3 Main Consultation Document)	
The flood compensation areas comprise additional agricultural land and have been sized to be able to manage appropriate volumes of displaced fluvial flood water.	The flood compensation areas have been incorporated within the design of the main development site to displace fluvial flood water for up to the 1 in 100-year event with climate change. This would offset the effects of the Sizewell Marshes SSSI crossing and main platform. Monitoring and maintenance, including vegetation maintenance to preserve design capacity and habitat is proposed following the completion of the works. Overall, the provision of the flood compensation areas will mitigate the adverse effect of the main development site, resulting in no significant residual effects with regards to flood risk.
Traffic and transport	
(with reference to Volume 2A, Chapter 2, section 2.13 of the Stage 3 Main Consultation Document)	
There is no change to the baseline relating to traffic and transport. Access to the flood compensation areas will be via the main development site to the north, or via Sandy Lane. Sandy Lane has not previously been identified as a route to be used by construction traffic. It is currently an access road serving a number of properties, and also forms part of Bridleway 19.	Relevant mitigation measures specified for the main development site in the Stage 3 PEI would also be applied for the construction of the flood compensation areas, as appropriate. Non-motorised users would potentially conflict with construction vehicles using Sandy Lane during the construction period. The number and duration of these vehicle movements are not expected to be significant. On days when HGV movements are taking place along Sandy Lane, traffic marshals would be put in place to ensure there is no conflict between vehicles and pedestrians, cyclists, or equestrians. With this mitigation in place, the construction of flood compensation areas is not considered to result in additional significant effects related to traffic and transport.

6. ASSOCIATED DEVELOPMENT

6.1. Introduction

6.1.1. The associated development for the project is developmenht which supports the construction and/or operation of the Sizewell C power station or helps to address its impacts. The different components of Associated Development are summarised in **Chapter 2** of this document and detailed in Volume 1, Chapters 8 - 17 of the Stage 3 Main Consultation Document. The preliminary environmental information (PEI) available about the likely impacts of the Associated Development is in Volume 2A, Chapters 3 - 6 and Volume 2B, Chapters 7-12 of the Stage 3 Main Consultation Document.

6.1.2. This chapter describes and explains the proposed changes to the associated development proposals and, where applicable, modifications to the red line boundaries to those presented at Stage 3.

6.1.3. The majority of the changes proposed to the Associated Development involve minor changes to the site boundary either to reflect further design work undertaken since Stage 3, to respond to feedback or to more accurately align the red lines with land ownership boundaries.

6.1.4. In response to feedback received at Stage 3, we are also considering an alternative approach for traffic mitigation at Wickham Market in relation to the southern park and ride proposals, in addition to the options presented at Stage 3.

6.1.5. We are also seeking your views on whether all or some of the Sizewell link road (or Theberton bypass for the rail-led strategy) should only be provided temporarily during the construction period and removed once Sizewell C is operational, as an alternative to retaining it post-construction (as proposed at Stage 3).

6.1.6. Except for the changes and alternative options included in this chapter, our proposals for the Associated Development sites remain as described in the Stage 3 Main Consultation Document. This chapter summarises and explains each change compared to the Stage 3 proposal. We have also provided a description of any changes to the PEI presented at Stage 3 that arise as a result of the proposed changes and alternative options described in this chapter.

6.1.7. We welcome your views on the changes and alternative options presented here.

6.1.8. This chapter only describes the proposed changes to the Stage 3 proposals to the Associated Development. Where no changes are proposed to an element of Associated Development it is not referred to in this chapter.

6.1.9. This chapter is structured as follows:

- **section 6.2** outlines the proposed changes to the rail improvements (limited to the inclusion of the Saxmundham to Leiston branch line within the red line boundary and minor modifications to the level crossing red lines).
- **section 6.3** sets out the proposed changes to the Sizewell link road.
- **section 6.4** sets out the proposed changes to the Theberton bypass (which would be implemented instead of the Sizewell link road for the rail-led strategy).
- **section 6.5** outlines the proposed changes to the two village bypass.
- **section 6.6** describes the proposed changes to the northern park and ride (Darsham).
- **section 6.7** describes the proposed changes to the southern park and ride (Wickham Market) including revised proposals for traffic mitigation at Wickham Market.
- **section 6.8** outlines proposed minor changes to the two potential options for the freight management facility at Seven Hills or Innocence Farm.
- **section 6.9 and 6.10** describes proposed changes to the proposed highways improvement works including the Yoxford roundabout.

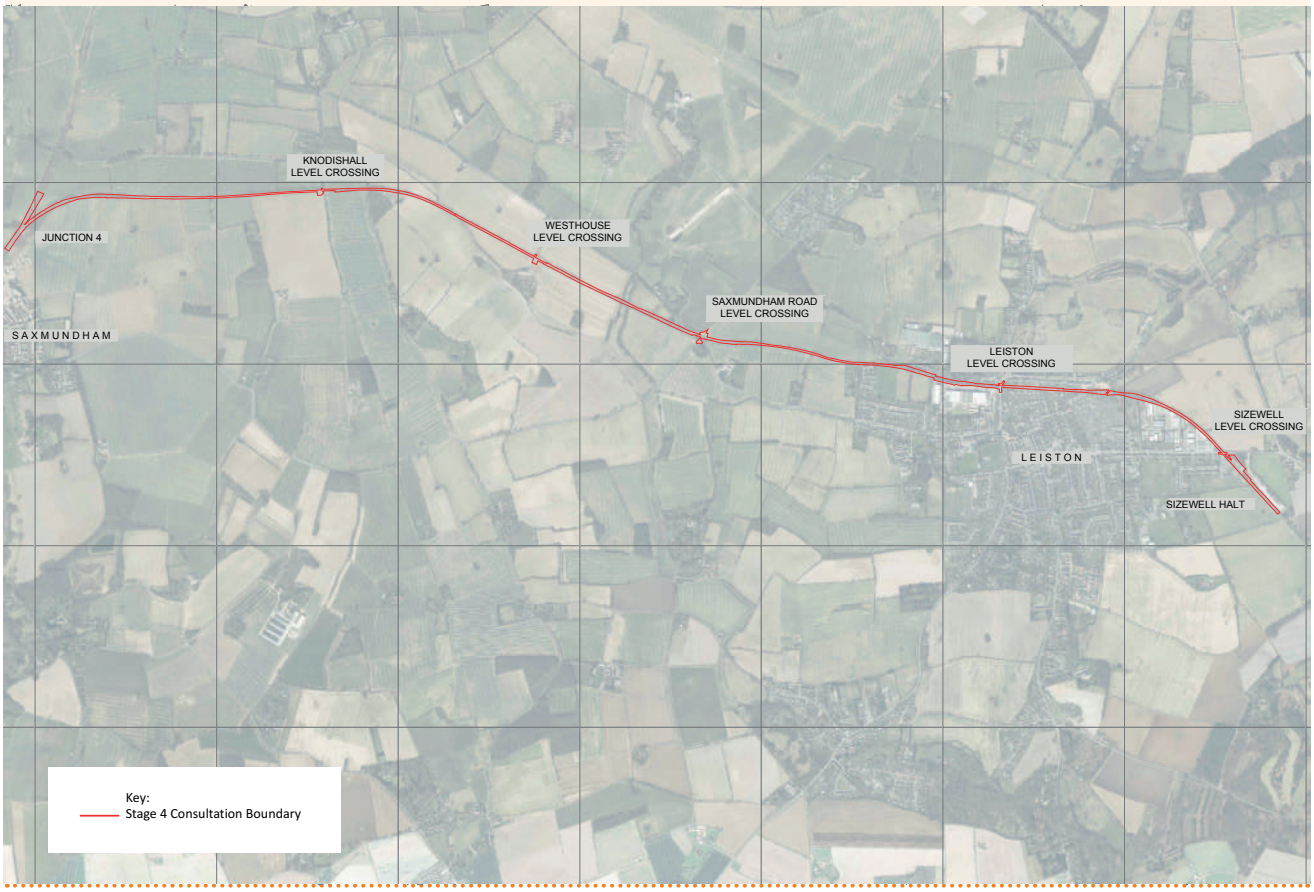
6.2. Rail

6.2.1. As explained in **Chapter 2**, no changes are proposed to the green rail route or any of the other rail improvements, with the exception that the entire route of the Saxmundham to Leiston branch line, and each of the level crossings that would be upgraded, is now proposed to be included within the application red line boundary.

a) Description of the change

6.2.2. The red line boundary for the Saxmundham to Leiston branch line (from the junction with the East Suffolk line at Saxmundham to Sizewell Halt to the east) is shown at **Figure 6.1**.

Figure 6.1 – Saxmundham to Leiston branch line



6.2.3. The nature of the proposed works has not changed. The only change is that all of the works along the branch line are now proposed to be incorporated into the red line boundary.

6.2.4. At Stage 3 only five of the nine crossings on the branch line were shown within the red line (i.e. those which require upgrades involving more than miniature stop lights). Those five crossings are:

- Knodishall;
- West House;
- Saxmundham Road;
- Leiston; and
- Sizewell.

6.2.5. The other four crossings at Bratts Black House, Snowdens, Buckles Wood and Summerhill, which require minor works on Network Rail land, are now also included in the red line boundary.

b) Why these changes are necessary

6.2.6. At Stage 3 it was assumed that Network Rail would undertake the track repairs and replacement works on the branch line. The inclusion of the branch line within the red line boundary, however, provides the flexibility for these works to be undertaken either by Network Rail or EDF Energy.

6.2.7. The minor modifications to the red line boundary at the five crossings listed above are to include additional highways or Network Rail land required for the upgrade works.

c) Preliminary Environmental Information

6.2.8. A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation has been undertaken. This has included a consideration of the changes 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.

6.2.9. As a result, the Stage 3 PEI relating to terrestrial ecology and ornithology, terrestrial historic environment, geology and land quality, ground water and surface water, and Flood Risk Assessments (refer to Volume 2A, Chapter 4 of the Stage 3 Main Consultation Document) have been updated as set out within **Table 6.1** below. The proposed design changes do not alter the baseline, mitigation proposals and the residual effects identified for the construction and operational phases presented in the Stage 3 PEI (see Volume 2A, Chapter 4 of the Stage 3 Main Consultation Document) for any of the other environmental assessment topic areas.

6.2.10. A summary of the effects associated with the change in traffic on the road network and rail movements on the Saxmundham to Leiston branch line and East Suffolk line as a result of the integrated freight strategy is provided in **Chapter 3** of this Stage 4 consultation document.

6.2.11. Proposals for further work to complete the environmental assessment of the other rail improvements as set out within the Stage 3 PEI (see Volume 2A, Chapter 4 of the Stage 3 Main Consultation Document) remain valid. The need for further survey work along the Saxmundham to Leiston branch line to inform the baseline will be reviewed and undertaken where required, subject to access. Rail noise models are continuing to evolve as more details are becoming available. Any new areas located within an area at risk of flooding from any source will be included within the Flood Risk Assessment to comply with planning policy. Any additional work would be undertaken in line with that proposed in the Stage 3 PEI (see Volume 2A, Chapter 4 of the Stage 3 Main Consultation Document).

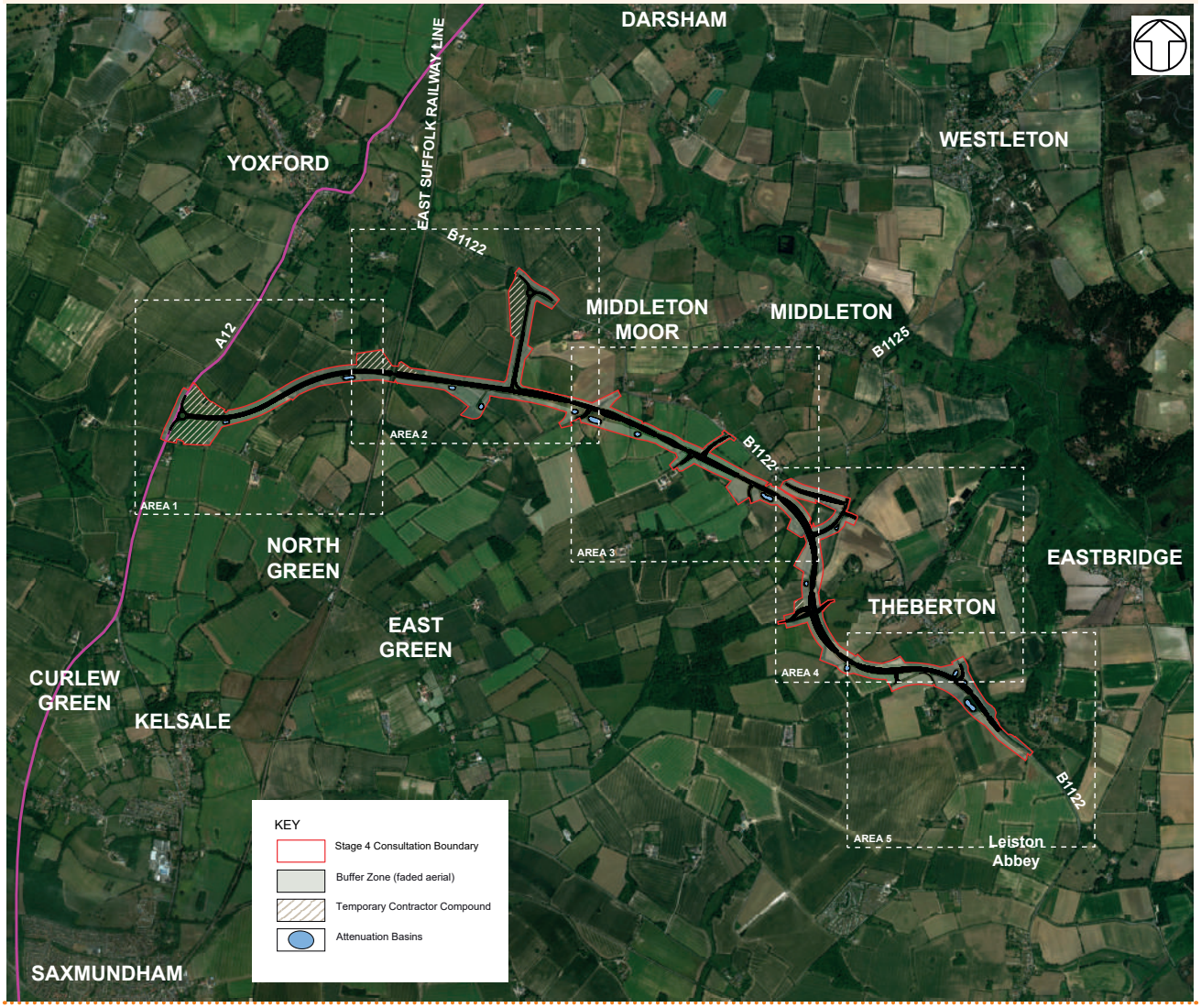
6.2.12. At present, discussions between EDF Energy and Network Rail are still ongoing to determine the upgrades that may be required to the existing Saxmundham to Leiston branch line and East Suffolk line. EDF Energy will continue to liaise with Network Rail to develop the rail proposals.

Table 6.1: Summary of changes to the Stage 3 PEI

Changes to receptors/ baseline environment	Updated environmental assessment
Terrestrial ecology and ornithology (with reference to Volume 2A, Chapter 4, section 4.6 of the Stage 3 Main Consultation Document)	
Approximately 11.8 hectares (ha) of additional land would be required following the extension of the site boundary to include the Saxmundham to Leiston branch line (and level crossings). This is predominantly comprised of existing rail infrastructure. Habitat alongside the branch line is likely to comprise of scrub, rough grassland, tall ruderal species and linear belts of trees. The section of railway line also crosses the Hundred River.	Mitigation presented in the Stage 3 PEI for the other rail improvement will be applied as appropriate. With this mitigation in place, it is considered that there are no likely significant effects, as any habitat loss would be limited to that alongside the branch line. However, further assessment will be undertaken for the Environmental Impact Assessment (EIA). If the potential for impacts on protected species is identified, further surveys will be undertaken, subject to access. Additionally, if works to the Hundred River culvert are required, a detailed assessment will be undertaken for the EIA, with consideration given to appropriate mitigation as required.
Terrestrial historic environment (with reference to Volume 2A, Chapter 4, section 4.7 of the Stage 3 Main Consultation Document)	
No designated or non-designated assets lie within the extended site boundary for Saxmundham to Leiston branch line and level crossing improvements. The Saxmundham Conservation Area and associated listed buildings within the core of Saxmundham lie approximately 250m to the south of the site boundary. This is included as a new receptor, since the Stage 3 PEI, at the request of Historic England.	During construction there would be limited potential for disturbance to archaeological remains as a result of the limited scope of works to improve the existing Saxmundham to Leiston branch line. There is no overall change to the assessment presented in the Stage 3 PEI. Whilst construction activities may be visible from the listed buildings and conservation area, no likely significant effects on these assets have been identified. During operation, the rail movements to the north of Saxmundham may be visible from the listed buildings and conservation area; however, no significant effects are anticipated.

Changes to receptors/ baseline environment	Updated environmental assessment
Geology and land quality (scoped out of the Stage 3 Main Consultation Document for other rail improvements)	
The site boundary has been extended to include the existing Saxmundham to Leiston branch line (and level crossings). This existing rail infrastructure is likely to introduce new sources of contamination within the site through contaminated ballast and industrial uses adjacent to the Saxmundham - Leiston branch line.	The works to improve the Saxmundham to Leiston branch line would entail the replacement of existing ballast, and replacement of concrete sleepers and rail. Whilst there would be limited earthworks, there is the potential for the mobilisation of contamination sources along the Saxmundham to Leiston branch line associated with spills and leaks cannot be ruled out. However, with mitigation in place in accordance with good practice construction management measures, the physical effects and those which may arise from contamination, are not likely be significant.
Groundwater and surface water (with reference to Volume 2A, Chapter 4, sections 4.9 and 4.10 of the Stage 3 Main Consultation Document)	
The extension of the site boundary would include a crossing of the Hundred River by the existing Saxmundham to Leiston branch line.	Works to improve the Saxmundham to Leiston branch line would be limited, and no significant effects have been identified as a result of the proposals. However, if works to the Hundred River culvert are required, a detailed assessment will be undertaken for the EIA, with appropriate mitigation specified.
Flood risk (with reference to Volume 2A, Chapter 4, section 4.11 of the Stage 3 Main Consultation Document)	
The extension of the site boundary would include a crossing of the Hundred River by the existing Saxmundham to Leiston branch line. An additional area of high surface water flood risk would be introduced as a result of the amendments to the site boundary; this is the area of the branch line to the east of Saxmundham Crossover. The access route off Clayhill Road has areas of low surface water flood risk; however, it is on the boundary of an area of high surface water flood risk.	Any surface water flood risk to the Saxmundham to Leiston branch line would be mitigated through the standard track design. Works to improve the Saxmundham to Leiston branch line would be limited and with embedded mitigation no significant effects have been identified as a result of the proposals. However, if works to the Hundred River culvert are required, a detailed assessment will be undertaken for the EIA, with appropriate mitigation specified.

Figure 6.2: Sizewell link road overview plan

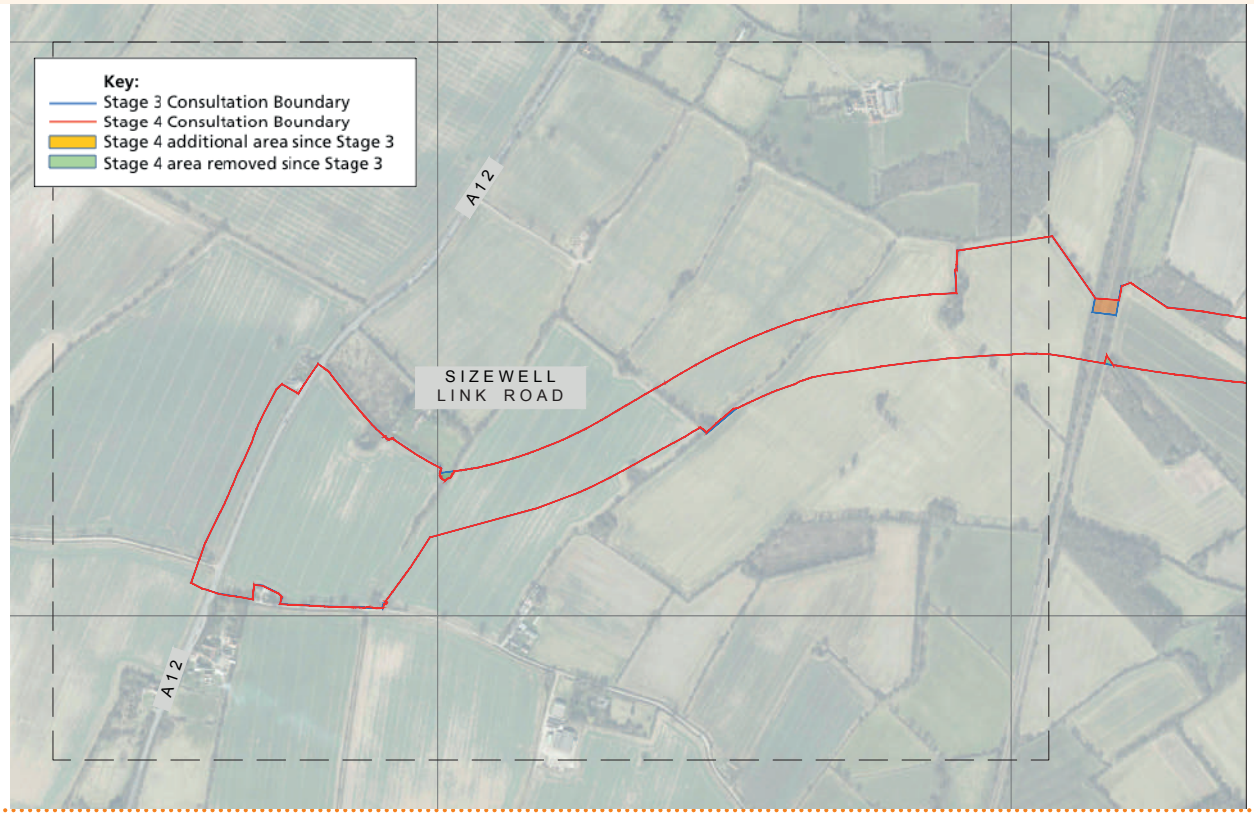


6.3. Sizewell link road

a) Description of the change

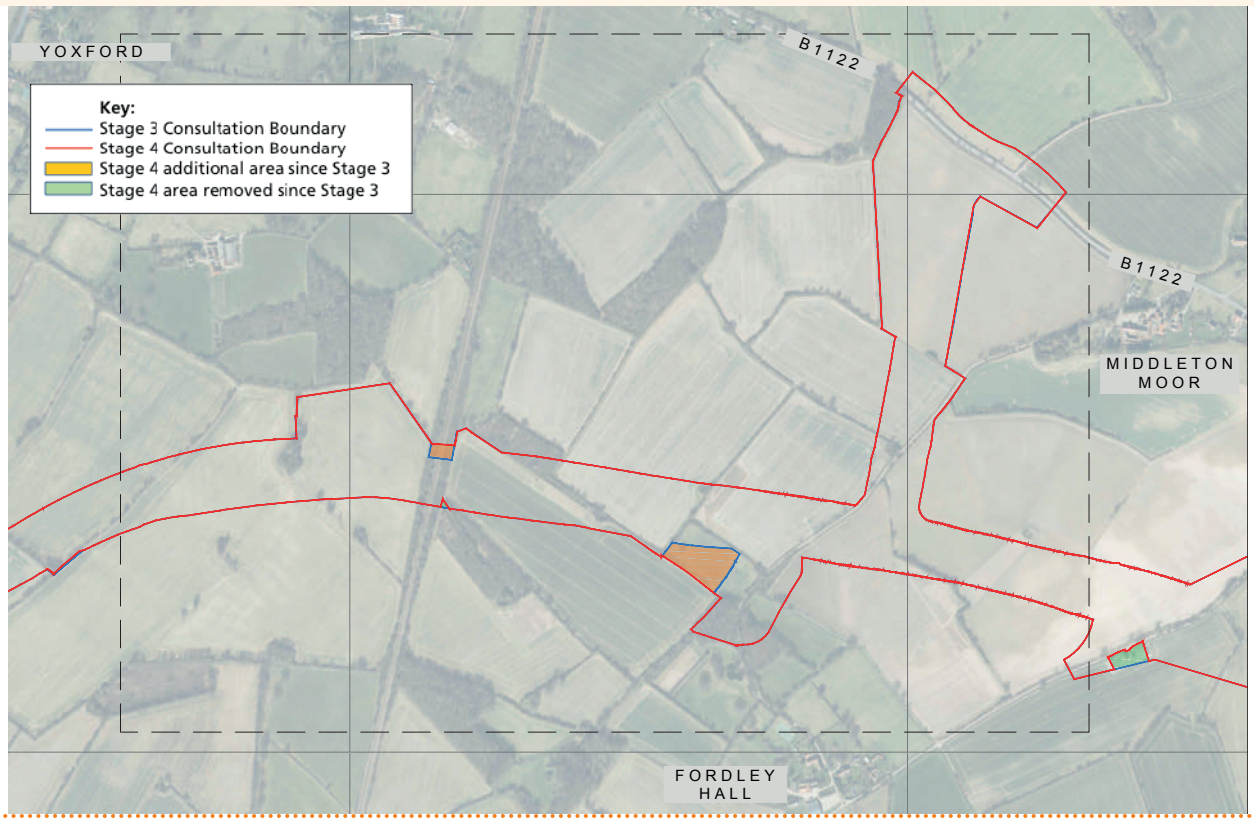
6.3.1. The full length of the Sizewell link road is shown on the overview plan at **Figure 6.2** and the proposed changes are shown on **Figures 6.3 – 6.7**. For description purposes, we have divided the link road into five areas from the A12 south of Yoxford heading east to the main development site.

Figure 6.3: Sizewell link road masterplan - Area 1 (Stage 4 over stage 3)



6.3.2. The only change to Area 1 would be a small modification to the red line boundary to exclude part of Fir Tree Farm, as shown at **Figure 6.3**.

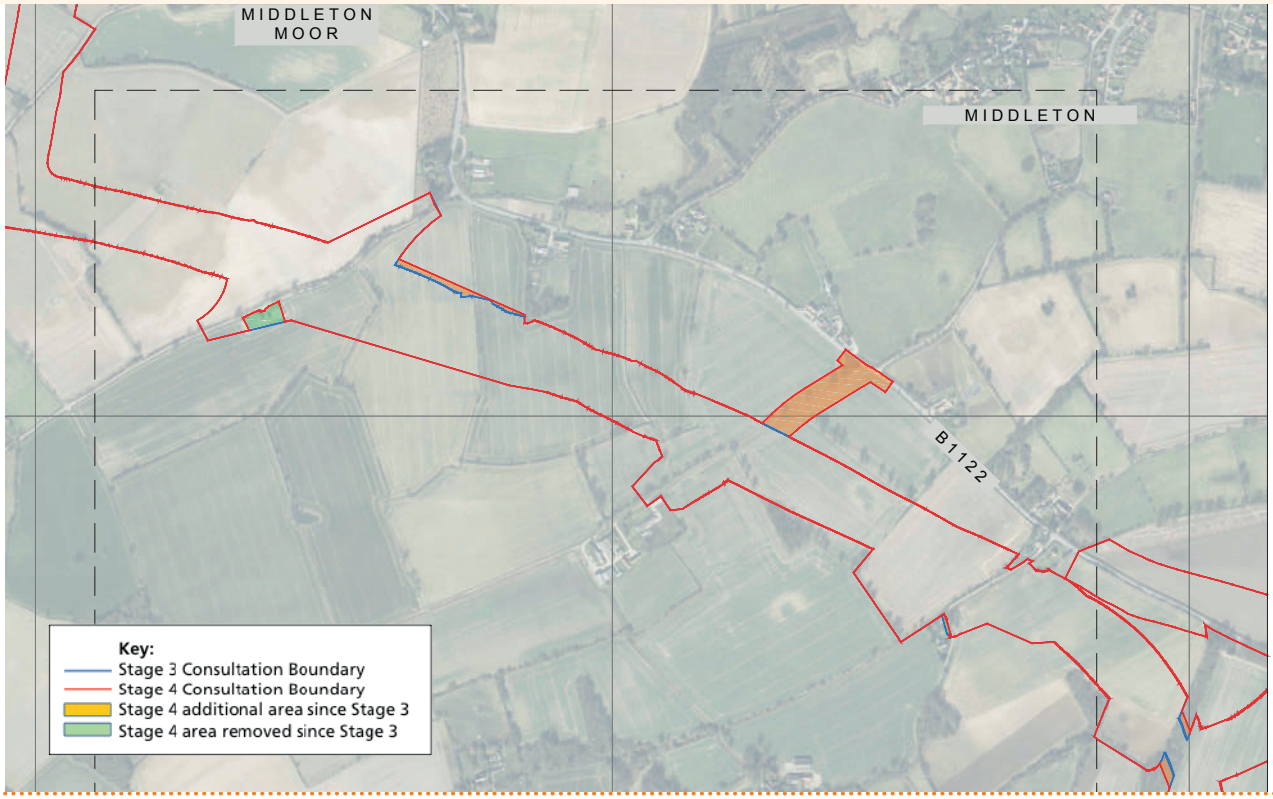
Figure 6.4: Sizewell link road masterplan - Area 2 (Stage 4 over stage 3)



6.3.3. The proposed changes to the red line boundary within Area 2, as shown at **Figure 6.4**, include an extension of the red line to include the Public Right of Way (PRoW) to the south of the Sizewell link road.

6.3.4. We are also now proposing to stop up Littlemoor Road rather than the option of providing a connection onto the Sizewell link road as proposed at Stage 3.

Figure 6.5: Sizewell link road masterplan - Area 3 (Stage 4 over stage 3)



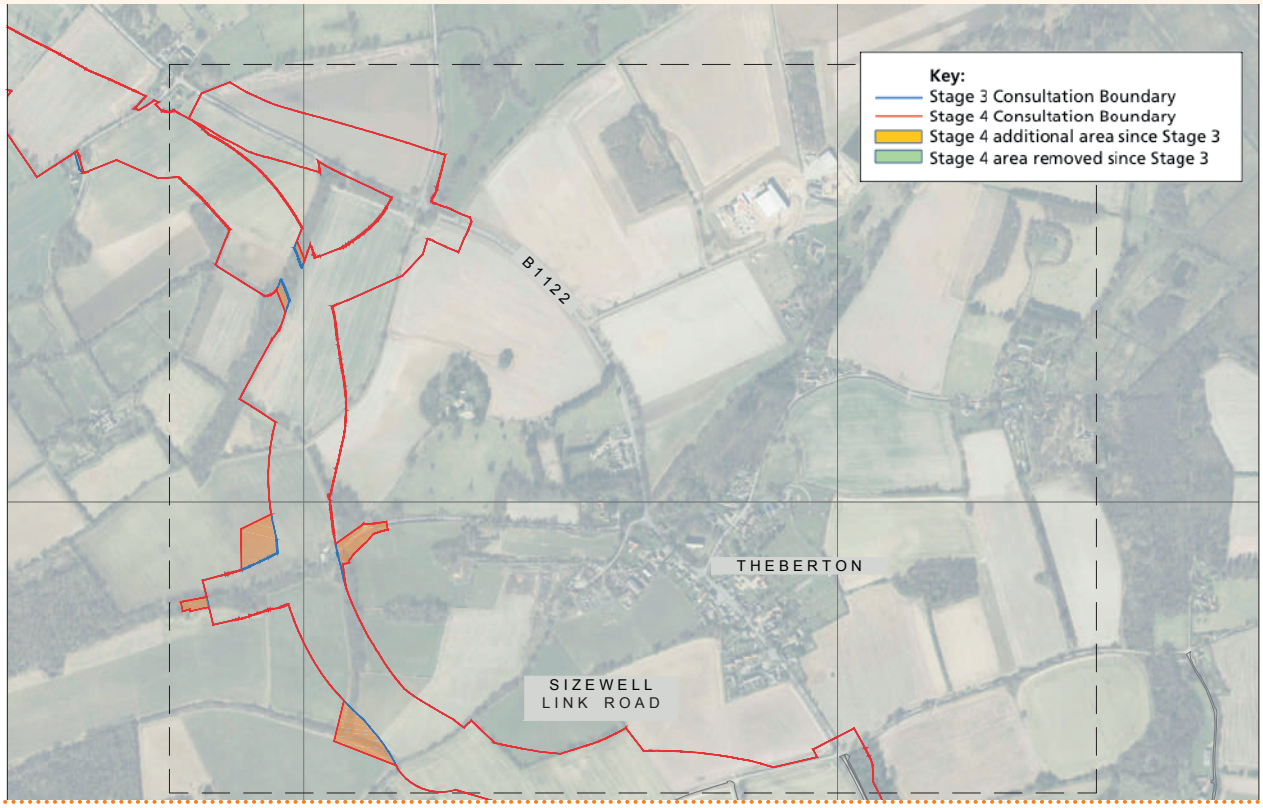
6.3.5. The changes proposed to Area 3, as shown at **Figure 6.5,** include a modification to the red line to exclude the residential property located to the south of Fordley Road from the site boundary.

6.3.6. We are also proposing a design change to create a junction onto the Sizewell link road at Fordley Road to replace the Littlemoor Road junction proposed at Stage 3.

6.3.7. We are proposing the addition of a new road link to the north of Trust Farm, from the Sizewell link road to the B1122.

6.3.8. The proposals also include an increase in the proposed speed limit on the Sizewell link road from 50mph to 60mph to the east of Trust Farm.

Figure 6.6: Sizewell link road masterplan - Area 4 (Stage 4 over stage 3)



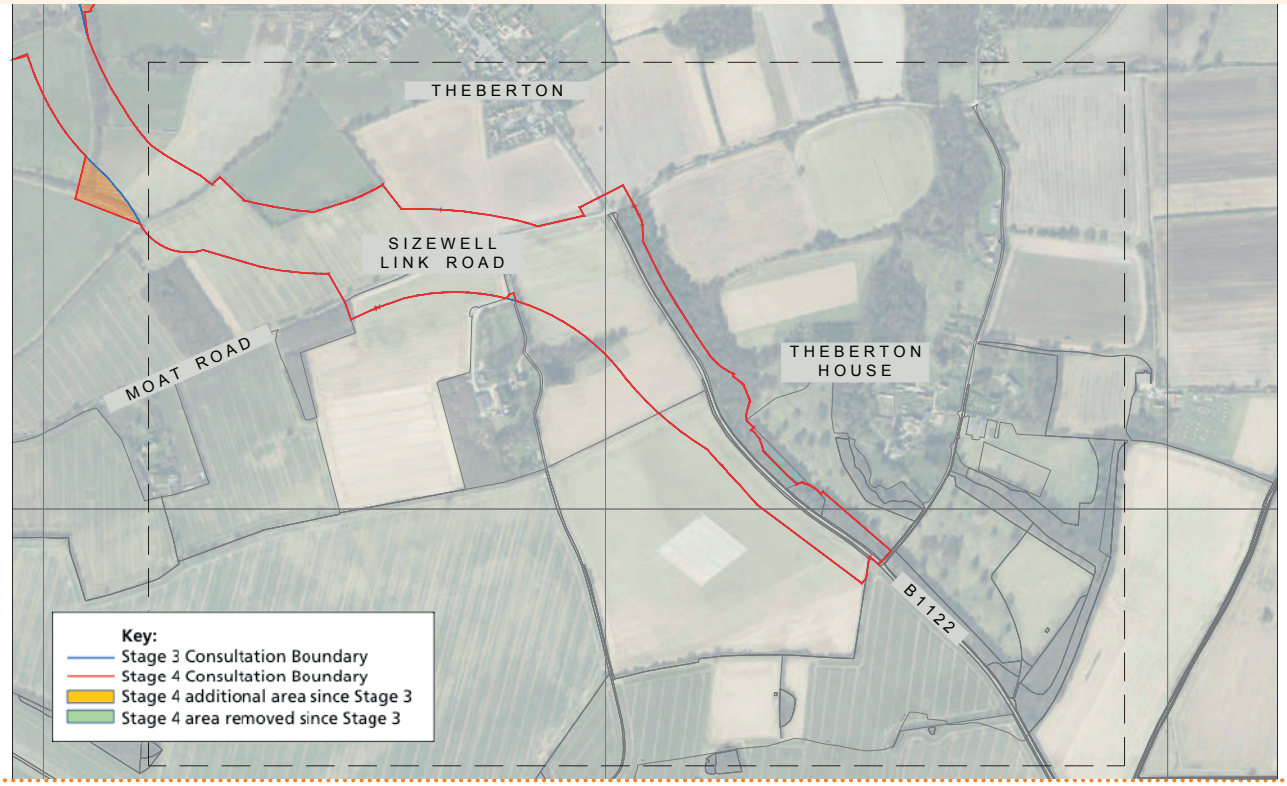
6.3.9. The changes proposed to the red line boundary for Area 4, as shown at **Figure 6.6**, include the addition of a stretch of Pretty Road to the east of the Sizewell link road, additional land to the west of the Sizewell link road and north of Pretty Road and the inclusion of the PRoW to the south-west of the Sizewell link road within the red line boundary.

6.3.10. Pretty Road is to be bridged over the Sizewell link road to improve non-motorised user connectivity across the Sizewell link road compared to the proposals at Stage 3. The bridge is to be designed for pedestrians, cyclists and equestrians (i.e. all non-motorised users). Vehicular access onto the Sizewell link road would be maintained from the west via a junction off Pretty Road.

6.3.11. We are also proposing to put the main alignment around Theberton in a deeper cutting to enable Pretty Road to bridge over the Sizewell link road.

6.3.12. Note that these changes to Area 4 would also apply to the Theberton bypass which would be progressed under the rail-led option rather than the full Sizewell link road.

Figure 6.7: Sizewell link road masterplan - Area 5 (Stage 4 over stage 3)



6.3.13. There are no changes proposed to the final section within Area 5, though **Figure 6.7** is again included for completeness.

6.3.14. In addition to these changes to the scheme and red line boundary, EDF Energy is also considering whether all or parts of the Sizewell link road should be temporary only, to be removed following the construction period. We would welcome your views on this.

b) Why these changes are necessary

6.3.15. The proposed route for the Sizewell link road being consulted on at Stage 4 has not changed since Stage 3. The changes we are proposing since Stage 3 are therefore limited to mostly minor boundary changes.

6.3.16. The extensions to the site boundary at Areas 2 and 4 are to allow us to make physical improvements to these PRoWs.

6.3.17. The change to the boundary within Area 3 to exclude the residential property is because this area is not required to facilitate the proposed works to Fordley Road.

6.3.18. The more substantial addition to the site boundary within Area 3 is the inclusion of land to the north of Trust Farm. This is proposed in order to facilitate access to land to the north of the existing B1122.

6.3.19. The extension to the red line to the east and west of Pretty Road, within Area 4, is required because additional land is required to incorporate the Pretty Road footbridge within the proposals. The additional land to the west of the Sizewell link road and north of Pretty Road may be required for a construction compound, and to accommodate the junction with the Sizewell link road.

6.3.20. Whilst it was our intention, as expressed at Stage 3, to retain the Sizewell link road post-construction, in response to feedback received at Stage 3 we are open to an alternative approach to remove all or part of the road.

c) Preliminary Environmental Information

6.3.21. A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation has been undertaken. This has 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.

6.3.22. 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) has been updated as set out within **Table 6.2**. The proposed design changes at this Stage 4 do 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).

6.3.23. A summary of the effects associated with the change in traffic on the road network as a result of the integrated freight strategy is provided in **Chapter 3** of this Stage 4 consultation document.

6.3.24. Proposals for further work to complete the environmental assessment of the Sizewell link road as set out within the Stage 3 PEI (see Volume 2A, Chapter 5 of the Stage 3 Main Consultation Document) remain valid. However, in addition to the Stage 3 PEI proposals, a capacity assessment of the junction with the A12 and a Stage 1 Road Safety Audit of the Sizewell link road is still proposed. The need for further survey work to inform the baseline will be reviewed and undertaken where required, subject to access. Any additional work would be undertaken in line with that proposed in the Stage 3 PEI (see Volume 2A, Chapter 5 of the Stage 3 Main Consultation Document).

Table 6.2: Summary of changes to the Stage 3 PEI

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Landscape and visual impact assessment (with reference to Volume 2A, Chapter 5, section 5.2 of the Stage 3 Main Consultation Document)	
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.	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. 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. 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. 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 PRoWs 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.
Terrestrial ecology and ornithology (with reference to Volume 2A, Chapter 5, section 5.3 of the Stage 3 Main Consultation Document)	
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.	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.

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Amenity and recreation (with reference to Volume 2A, Chapter 5, section 5.4 of the Stage 3 Main Consultation Document)	
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 PRoWs or 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.	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 PRoWs south-west of Theberton. 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. Overall, the amendments are not considered likely to change the construction or operational assessment presented in the Stage 3 PEI.
Terrestrial historic environment (with reference to Volume 2A, Chapter 5, section 5.5 of the Stage 3 Main Consultation Document)	
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.	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. 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.
Soils and agriculture (with reference to Volume 2A, Chapter 5, section 5.6 of the Stage 3 Main Consultation Document)	
A small amount of additional agricultural land would be affected by the change. This land is under arable production.	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.
Noise and vibration (with reference to Volume 2A, Chapter 5, section 5.7 of the Stage 3 Main Consultation Document)	
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.	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. 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.
Traffic and transport (with reference to Volume 2A, Chapter 5, section 5.13 of the Stage 3 Main Consultation Document)	
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.	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. 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. 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. 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.

6.3.25. The Stage 3 PEI and updated assessments presented in **Table 6.2** assumes the Sizewell link road would be permanent. If the Sizewell link road was temporary, the road and associated infrastructure would be removed and reinstated following the construction of the Sizewell C main development site. The removal and reinstatement phase would be approximately 24 months. With the exception of noise and vibration effects, the likely effects during this phase are predicted to be no worse than those presented in the construction phase in the Stage 3 PEI (refer to Volume 2A, Chapter 5 of the Stage 3 Main Consultation Document). During the breaking of surfaced areas and removal of the road and associated infrastructure, there is the potential for significant adverse noise and vibration effects on nearby residential properties, as well as on the amenity of users of PRoWs (amenity and recreation) and the setting of Theberton Hall (terrestrial historic environment). Whilst the potential for significant effects on soils and agriculture was identified in the Stage 3 PEI for the construction phase, the removal and reinstatement phase is unlikely to be significant as it would not result in the loss of further agricultural land and would instead reinstate it to former use.

6.4. Theberton bypass

a) Description of the change

6.4.1. The proposed route of the Theberton bypass (which would only be progressed in isolation as part of the rail-led strategy) has not changed since Stage 3.

6.4.2. The only changes proposed are the same as those that would apply to the Sizewell link road as described above, namely:

- the inclusion of additional land at Pretty Road within the red line boundary;
- the bridging over of the Theberton bypass (facilitated by accommodating the road in a deeper cutting at this point) and the associated relocation of the junction with Pretty Road; and
- the inclusion of the PRoW to the south-west of the Theberton bypass within the red line boundary.

6.4.3. Like for the Sizewell link road, we would welcome your views on the potential to remove the Theberton bypass on completion of construction of the power station, rather than retaining it as proposed at Stage 3.

b) Why these changes are necessary

6.4.4. The extension to the red line to the east and west along Pretty Road is required because additional land is needed to incorporate the Pretty Road overbridge within the scheme proposals. The additional land to the west of the Theberton bypass and north of Pretty Road may be required for a compound, and to accommodate the junction with the Theberton bypass.

6.4.5. The extension to the site boundary to include the PRoW is to allow us to make physical improvements to this route.

c) Preliminary Environmental Information

6.4.6. A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation has been undertaken. This has included a consideration of the changes 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.

6.4.7. 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 6 of the Stage 3 Main Consultation Document) have been updated as set out within **Table 6.3** below. The proposed design changes do 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 6 of the Stage 3 Main Consultation Document).

6.4.8. Proposals for further work to complete the environmental assessment of the Theberton bypass as set out within the Stage 3 PEI (see Volume 2A, Chapter 6 of the Stage 3 Main Consultation Document) remain valid. The need for further survey work to inform the baseline will be reviewed and undertaken where required, subject to access. Any additional work would be undertaken in line with that proposed in the Stage 3 PEI (see Volume 2A, Chapter 6 of the Stage 3 Main Consultation Document).

Table 6.3: Summary of changes to the Stage 3 PEI

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Landscape and visual impact assessment	
(with reference to Volume 2A, Chapter 6, section 6.2 of the Stage 3 Main Consultation Document)	
The changes to the site boundary would extend the study area by a few metres to 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.	During construction, there may be increased visibility of construction, with the construction of 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 not considered likely to alter the conclusions presented in the Stage 3 PEI for construction. During operation, 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 PRoWs 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.
Terrestrial ecology and ornithology	
(with reference to Volume 2A, Chapter 6, section 6.3 of the Stage 3 Main Consultation Document)	
The proposals would result in approximately 1.7ha 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 to those already assessed in the Stage 3 PEI.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI due to the small area of additional land required in the context of the overall proposals at the Theberton bypass site.
Amenity and recreation	
(with reference to Volume 2A, Chapter 6, section 6.4 of the Stage 3 Main Consultation Document)	
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 PRoWs or 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 located within the site boundary, and PRoWs near the non-motorised user bridge at Pretty Road.	The construction of the non-motorised user bridge at Pretty Road may increase visibility of the proposed development and increase noise levels experienced by users of nearby PRoWs. During operation, the impacts of the increased visibility of the bridge on users of nearby PRoWs would remain. Overall, the amendments are not considered likely to change the construction assessment presented in the Stage 3 PEI.
Terrestrial historic environment	
(with reference to Volume 2A, Chapter 6, section 6.5 of the Stage 3 Main Consultation Document)	
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.	The additional land required would increase the area of ground disturbance; 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 not likely to be significant. The proposed amendments would deepen the 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 notsignificant to significant as a result of the proposals during both phases.
Soils and agriculture	
(with reference to Volume 2A, Chapter 6, section 6.6 of the Stage 3 Main Consultation Document)	
A small amount of additional agricultural land would be affected by the change. This land is under arable production.	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.

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Noise and vibration	
(with reference to Volume 2A, Chapter 6, section 6.7 of the Stage 3 Main Consultation Document)	
No change to the baseline environment relating to noise and vibration as presented in the Stage 3 PEI is expected.	The construction of the non-motorised user overbridge is not expected to result in significant effects; however, this would be subject to further assessment.
Traffic and transport	
(with reference to Volume 2A, Chapter 6, section 6.13 of the Stage 3 Main Consultation Document)	
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.	During the construction of the Pretty Road non-motorised user bridge and the connection to Theberton bypass (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. The proposed changes have been introduced to improve non-motorised user connectivity across the Theberton bypass compared to that presented in the Stage 3 PEI, with no delay to cross the bypass, through the introduction of an overbridge at Pretty Road. Access would be maintained west of the Theberton Hall access through the amended junction to Theberton Bypass and the impacts would be as presented in Stage 3.

6.4.9. The Stage 3 PEI and updated assessments presented in **Table 6.3**, assume the Theberton bypass development would be permanent. If the Theberton bypass was temporary, the road and associated infrastructure developments would be removed and reinstated following the construction of the Sizewell C main development site. The removal and reinstatement phase would be approximately 12 months, however, the likely effects during this phase are predicted to be no worse than those presented in the construction phase in the Stage 3 PEI (see Volume 2A Chapter 6 of the Stage 3 Main Consultation Document) as updated by the Stage 4 proposals where appropriate. Potential temporary, significant effects may be experienced by noise and vibration, through the breaking up and removal of the road and associated infrastructure, which could lead to significant effects on the amenity of users of PRoWs (amenity and recreation) and the setting of Theberton Hall (terrestrial historic environment). Whilst the potential for significant effects on soils and agriculture was identified in the Stage 3 PEI for the construction phase, the removal and reinstatement phase is unlikely to be significant as it would not result in the loss of further agricultural land and would instead reinstate it to former use.

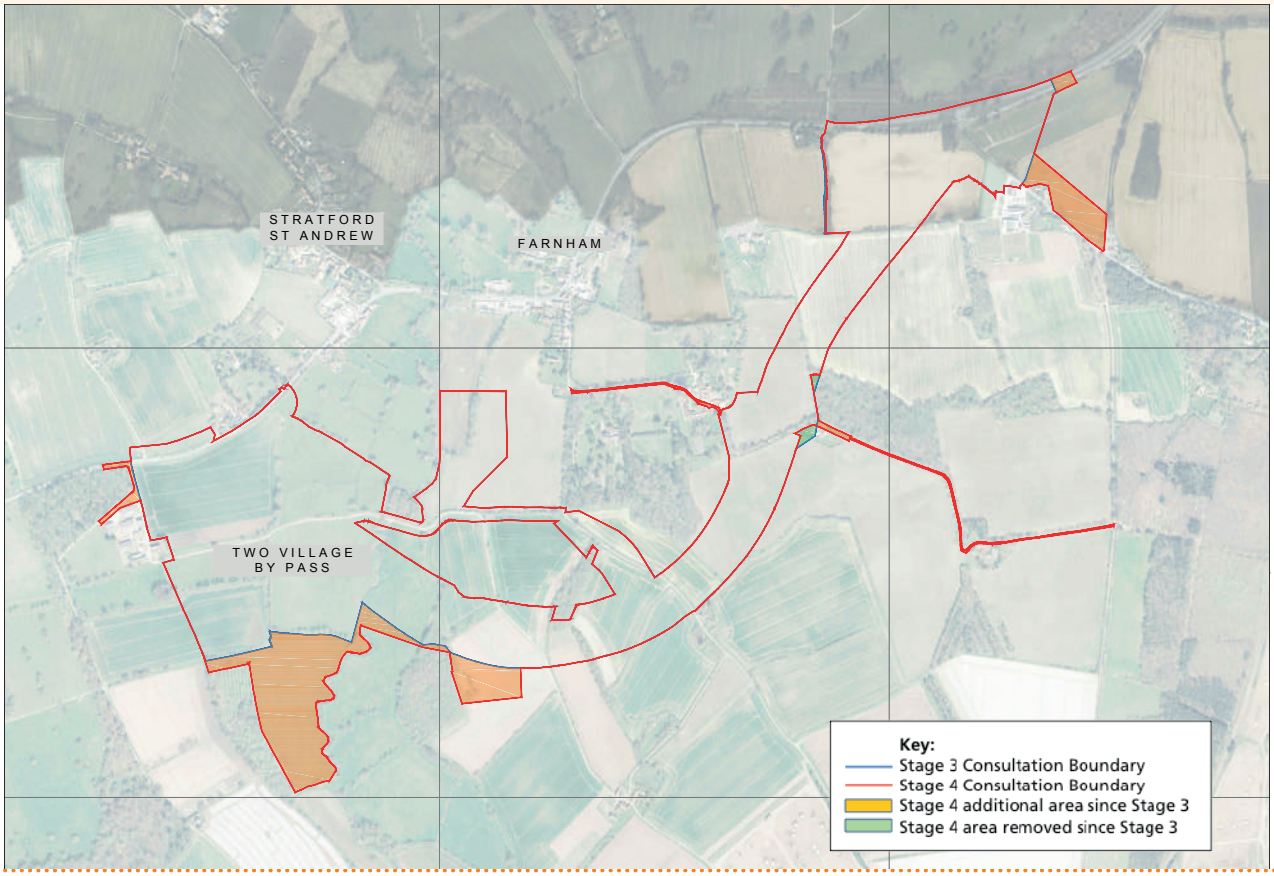
6.5. Two village bypass

a) Description of the change

6.5.1. The proposed route for the two village bypass remains largely unchanged since Stage 3, though we are proposing the following amendments as shown at **Figure 6.8** as a result of more detailed design work and feedback from stakeholders:

- The repositioning of the western roundabout;
- An extension to the site boundary to include land for flood compensation and drainage;
- A higher alignment of the road over the River Alde;
- An extension of the site boundary along Tinker Brook;
- A change to the site boundary at the Farnham Hall track to exclude the north-west corner of Foxburrow Wood;
- An extension of the site boundary to the south of Foxburrow Wood in connection with the proposed bridge crossing over the bypass (the bypass is also in a cutting now in this location);
- At the north eastern roundabout an extension to the site boundary along the A12 and into the field to the south east; and
- The inclusion of additional land to accommodate an existing footpath within the red line boundary.

Figure 6.8: Two village bypass – Stage 4 over Stage 3



b) Why these changes are necessary

6.5.2. The proposed expansion of the red line to the western end of the bypass is to facilitate the minor changes to the positioning of the western roundabout and because it is now proposed as a four arm rather than three arm roundabout.

6.5.3. The extension of the site boundary along Tinker Brook is proposed in order to accommodate farm traffic via the roundabout, thus reducing the interaction with the national cycle route travelling north to south across the A12. The extension to the red line avoids encroachment into Stratford Plantation which is designated as Historic Parks and Gardens.

6.5.4. At the Farnham Hall Track, the proposed red line changes are to:

- exclude the north-west corner of Foxburrow Wood; and
- provide additional land required to facilitate works to ramp up to the proposed bridge.

6.5.5. The proposed bridge at the Farnham Hall Track would allow pedestrian, cyclist and equestrian access over the bypass, which would be in a cutting at this point. Placing the bypass in a 4.5m deep cutting would help to reduce the noise impact on Farnham Hall and its nearby neighbouring properties.

6.5.6. To allow for sufficient headroom above the bypass, the proposed bridge would be 2.5m above existing ground levels. West of the bypass, the existing track would rise on a 2.5m high embankment that would further reduce noise impacts from the bypass on the neighbouring properties. The cutting would also reduce the visual impact of the bypass on this part of its route. East of the bypass, the track would ramp back down to existing ground levels.

6.5.7. The additional land on the A12 would be required following design development of the proposed A12/A1094 roundabout. The extension into the field to the south-east is to allow for a revised drainage strategy following feedback Stage 3 consultation.

6.5.8. We have carefully considered an alternative alignment put forward by Farnham with Stratford St. Andrew Parish Council in their response to the Stage 3 consultation. This alternative route would (from west to east) travel to the south of Pond Barn Cottages before curving northwards, passing Foxburrow Wood on its east side and meeting the proposed Friday Street Roundabout to the north. This would be an alternative to our proposed alignment to pass Foxburrow Wood on its west side.

6.5.9. Taking into account the impacts on the environment and nearby receptors, we do not consider the alternative route to represent a better solution for achieving the objectives of the bypass. By passing Foxburrow Wood on its east side, the alternative alignment would pass through the ancient woodland between Foxburrow Wood and Palant's Grove to the east, which would be permanently lost as a result. The alternative alignment would also be closer to Walk Barn Farm than the current proposal is to any neighbouring property.

6.5.10. A particular benefit of the proposed alignment put forward by EDF Energy is that it would be attractive to the road user, being sufficiently short that it would not deter drivers from using it. Any proposed bypass must offer road users a viable, alternative route that would be quicker than travelling through the villages in order to provide the relief sought to these local communities. The route put forward by the Parish Council would be significantly longer and is therefore less likely to encourage road users to bypass the current A12 route through Stratford St. John and Farnham.

6.5.11. Our work has focused on detailed design issues to limit the effects of the proposed alignment. In environmental terms, the proposed route would avoid the Foxburrow Wood ancient woodland and Stratford Plantation, which is part of Glemham Hall Registered Park and Garden. It has also been routed as far away from residential properties as possible, whilst still avoiding the environmentally important woodland and gardens.

c) Preliminary Environmental Information

6.5.12. A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation has been undertaken. This has 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.

6.5.13. 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, flood risk and traffic and transport assessments (refer to Volume 2B, Chapter 7 of the Stage 3 Main Consultation Document) has been updated as set out within **Table 6.4**. The proposed design changes at this Stage 4 do 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 2B, Chapter 7 of the Stage 3 Main Consultation Document). The extension of the site boundary to include the length of Footpaths E-243/003/0 and E-243/011/0 to convert these routes to a bridleway would bring residential properties Walk Barn Farm, Farnham Hall Farm House and residential properties to the east of Farnham closer to the site boundary. However, there would be no physical works associated with the conversion of these PRoWs, and therefore the amendment would have no effect on sensitive receptors and has been scoped out of the preliminary environmental assessment.

6.5.14. Proposals for further work to complete the environmental assessment of the two village bypass as set out within the Stage 3 PEI (see Volume 2B, Chapter 7 of the Stage 3 Main Consultation Document) remain valid. However, in addition to the Stage 3 PEI proposals, a capacity assessment of the two proposed roundabout junctions that form part of the two village bypass and a Stage 1 Road Safety Audit is still proposed and fluvial modelling for site is being undertaken to review the need and potential locations of flood compensation areas downstream of the bypass. The need for further survey work to inform the baseline will be reviewed and undertaken where required, subject to access. Additional noise modelling will be undertaken to determine the extent of the effects and mitigation required for properties in the vicinity of Farnham Hall Farm. Any additional work would be undertaken in line with that proposed in the Stage 3 PEI (see Volume 2B, Chapter 7 of the Stage 3 Main Consultation Document).

Table 6.4: Summary of changes to the Stage 3 PEI

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Landscape and visual impact assessment (with reference to Volume 2B, Chapter 7, section 7.2 of the Stage 3 Main Consultation Document)	
The changes to the site boundary would extend the study area by a few metres to the east and west. The zone of theoretical visibility may also be extended following the amendments to include new receptors in the vicinity of the proposed roundabouts at either end of the bypass, as well as residential receptors at Friday Street, and in and around Farnham Hall.	The landscape design would need to be amended to reflect the proposed amendments. During construction, though there may be increased visibility of construction due to the increased height of the River Alde crossing and the introduction of a non-motorised user bridge near Farnham Hall, the proposed amendments are not considered likely to alter the conclusions presented in the Stage 3 PEI for construction. During operation, the change to the height of the crossing over the River Alde may be more discernible in views from Stratford St Andrew and Farnham; however, the amendment is not considered likely to alter the conclusions presented in the Stage 3 PEI for construction. There may also be increased visibility of the development for users of the A1094, including additional residential properties at Friday Street as a result of the amendment. These effects are unlikely to be significant. However, the introduction of a non-motorised user bridge east of Farnham Hall, depending on the final design, may increase the visibility of the development from the group of properties at Farnham Hall, as well as residential properties and PRoWs 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. The extent of localised significant effects on the Special Landscape Area is also likely to increase.
Terrestrial ecology and ornithology (with reference to Volume 2B, Chapter 7, section 7.3 of the Stage 3 Main Consultation Document)	
The proposals would result in approximately 9ha of additional land required within the site boundary. The additional land is predominantly comprised of arable land as well as small areas of hardstanding. These areas include land near Friday Street and additional areas of rough grassland and an extended stretch of the River Alde to provide an option to increase flow conveyance south of the crossing.	Whilst a larger area of additional land is required than proposed at Stage 3, approximately 8.5ha would be used as flood plain compensation or is where the site has been extended to include the diversion of a PRoW. The scheme design would incorporate measures to minimise changes in the hydrological regime of the flood plain and grazing marsh habitat. On this basis, the proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI.
Amenity and recreation (with reference to Volume 2B, Chapter 7, section 7.4 of the Stage 3 Main Consultation Document)	
The changes to the site boundary would extend the study area by a few metres to the east and west. The proposed amendments would result in an additional section of the Suffolk Coastal and Sustrans Regional cycle route now being located within the site at the western end of the site. A new PRoW (Footpath E-137/028/0) also now lies within the site at the eastern end site, and Footpaths E-243/003/0 and E-243/011/0 would be upgraded to bridleways.	The proposed amendments would increase the height of the proposed non-motorised user bridge and River Alde crossing, as well as a deeper cutting near Farnham Hall. During construction, there may be increased visibility of and noise associated with the proposed amendments. Overall, the amendments are not considered likely to change the construction assessment presented in the Stage 3 PEI. During operation, Footpaths E-243/003/0 and E-243/011/0 would be upgraded to bridleways though no physical works would be required. The increased height of the River Alde crossing and introduction of the non-motorised user bridge, would increase the visibility of the two village bypass proposals as the proposed bridge may be visible from PRoWs to the north and south of Farnham Hall. However, users of PRoW E-243/003/0 would pass over the two village bypass road on the non-motorised user overbridge and would avoid having to cross the road as in the Stage 3 PEI. Overall, the proposed amendments are not likely to change the outcome of the assessment presented in the Stage 3 PEI.

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Terrestrial historic environment (with reference to Volume 2B, Chapter 7, section 7.5 of the Stage 3 Main Consultation Document)	
The site boundary would include a small area of additional land within the site but this does not change to the baseline presented in the Stage 3 PEI.	The additional land required would increase the area of ground disturbance, however, the changes would be of the same predicted magnitude on as yet unknown heritage assets as presented in the Stage 3 PEI. Therefore, the proposed change to the site boundary is not considered likely to alter the assessment of effects presented in the Stage 3 PEI. The retention of the PRoW (E-243/003/0) to the east of Farnham Hall would maintain the historical connection between Farnham Hall and Foxburrow Woodland (an ancient woodland) which it may be associated with. The deeper cutting may also reduce the noise levels experienced at Farnham Hall, and may reduce the adverse effect on the setting of the Grade II listed building. The effect is anticipated to remain not significant, as reported in the Stage 3 PEI. The crossing of the two village bypass road at a higher elevation over the River Alde could increase its visibility from St Mary's church, and slightly increase any adverse effect on the setting of the Grade II* listed building. The effect on the setting of this asset may increase from not significant to significant as a result of the proposals.
Soils and agriculture (with reference to Volume 2B, Chapter 7, section 7.6 of the Stage 3 Main Consultation Document)	
As discussed above, a small amount of additional agricultural land would be affected by the change. This land is predominantly under arable production.	The additional land required is small in area in the context of the overall proposals for the two village bypass. Therefore, the proposed change is not considered likely to alter the assessment of effects presented in the Stage 3 PEI.
Noise and vibration (with reference to Volume 2B, Chapter 7, section 7.7 of the Stage 3 Main Consultation Document)	
No change to the baseline environment relating to noise and vibration as presented in the Stage 3 PEI is expected.	The development of the scheme proposals includes environmental design measures to reduce noise impacts on Farnham Hall and surrounding properties, through the provision of a deeper cutting (of up to 4.5m deep). A combination of the 4.5m cutting, PRoWs ramp and 2.5m embankment should help to significantly reduce operational noise associated with traffic movements on the bypass; however, it would be unlikely to fully mitigate significant operational impacts at Farnham Hall Farm, as presented in the Stage 3 PEI. Further noise modelling is being undertaken to determine the extent of the effects and mitigation required.
Flood risk (with reference to Volume 2B, Chapter 7, section 7.12 of the Stage 3 Main Consultation Document)	
The additional land within the site boundary would include two small isolated areas of high surface water flood risk in the vicinity of Tinker Brook Road and Friday Street. The proposed extension to the south of the site boundary is located on the right bank of the River Alde, downstream of the proposed bypass. This extension is to provide an option to include further flood plain compensation through increasing flow conveyance south of the crossing.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI as the additional areas of high surface water flood risk impacted by the two village bypass proposals would be mitigated through highway drainage design.
Traffic and transport (with reference to Volume 2B, Chapter 7, section 7.13 of the Stage 3 Main Consultation Document)	
There are no changes to the baseline traffic flows presented in the Stage 3 PEI as a result of the extension in the site boundary.	The construction of the higher embankment and crossing across the River Alde would extend the construction period of the bypass and increase the period over which the effects of Sizewell C traffic on Stratford St Andrew and Farnham would be experienced. The connection of Tinker Brook into the western roundabout would improve connectivity between Parkgate Farm and land to the north, which would provide safer access than in Stage 3. Additionally, the proposed non-motorised user overbridge over the bypass east of Farnham Hall would reduce the severance effects of the bypass on the PRoW (E-243/003/0) compared to the Stage 3 PEI.

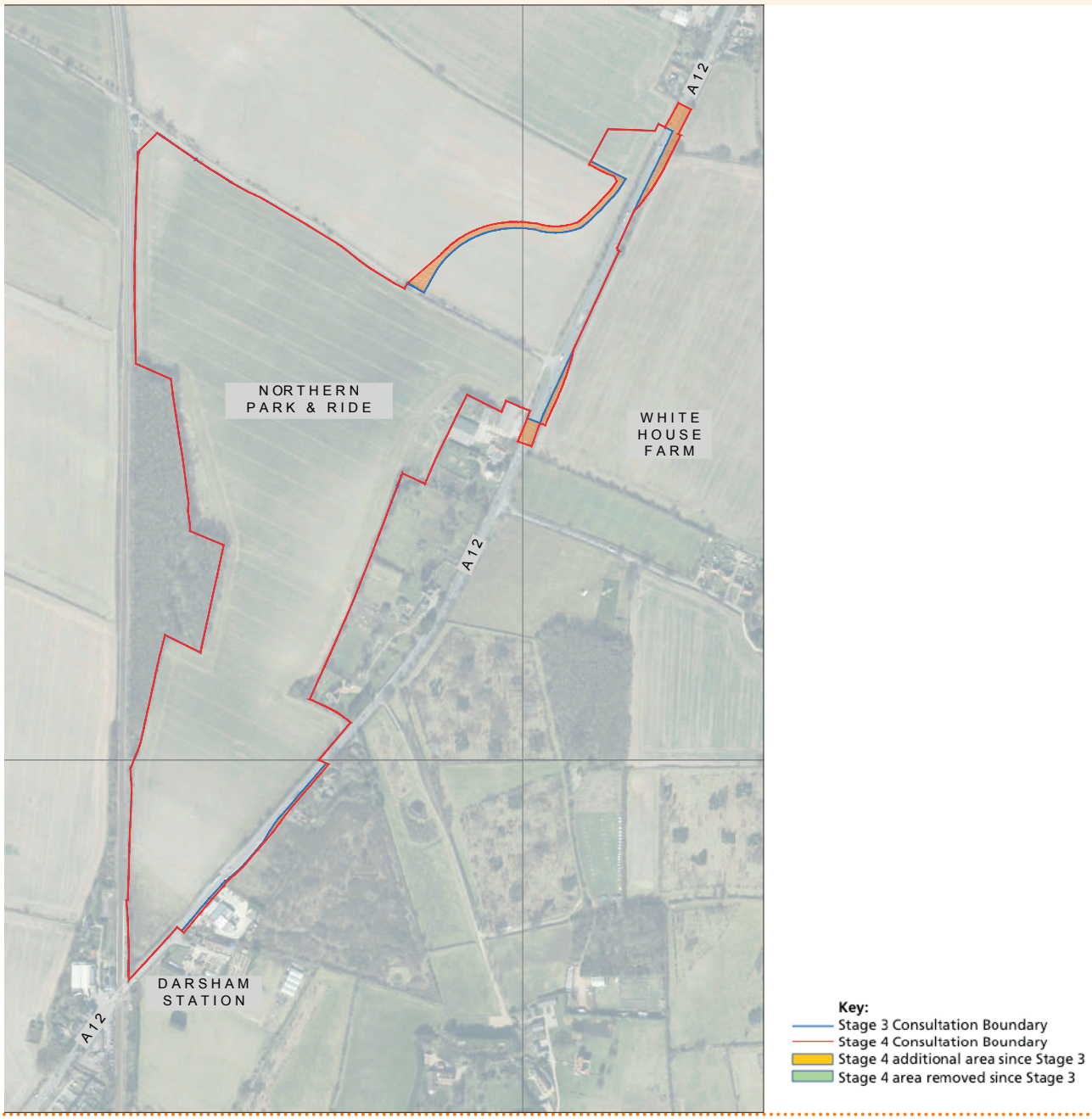
6.6. Northern park and ride (Darsham)

a) Description of the change

6.6.1. The diameter of the proposed new access roundabout on the A12 would be slightly larger than the design shown at Stage 3.

6.6.2. The red line boundary would be extended to the north of the roundabout and access road into the site, as well as very minor alterations to the red line boundary for the northern park and ride as shown at **Figure 6.9**.

Figure 6.9: Northern park and ride – Stage 4 over Stage 3



b) Why is this change necessary

6.6.3. The extension of the red line to the north is to facilitate land access to the fields to the north and because the diameter of the roundabout into the site has increased slightly since Stage 3.

6.6.4. The minor reductions and extensions proposed to the boundary are to align more accurately with land ownership boundaries.

c) Preliminary Environmental Information

6.6.5. A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation has been undertaken. This has included a consideration of the changes to Stage 3 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.

6.6.6. As a result, the Stage 3 PEI relating to terrestrial ecology and ornithology, terrestrial historic environment, and soils and agriculture assessments (refer to Volume 2B, Chapter 8 of the Stage 3 Main Consultation Document) has been updated as set out within **Table 6.5**. The proposed design changes do 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 2B, Chapter 8 of the Stage 3 Main Consultation Document).

6.6.7. Proposals for further work to complete the environmental assessment of the northern park and ride as set out within the Stage 3 PEI (see Volume 2B, Chapter 8 of the Stage 3 Main Consultation Document) remain valid. However, in addition to the Stage 3 PEI proposals, a capacity assessment of the junction with the A12 and a Stage 1 Road Safety Audit is still proposed.

Table 6.5: Summary of changes to the Stage 3 PEI

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Terrestrial ecology and ornithology (with reference to Volume 2B, Chapter 8, section 8.3 of the Stage 3 Main Consultation Document)	
The proposals would result in approximately 0.4ha 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.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI due to the small area of additional land required in the context of the overall proposals at the northern park and ride site.
Terrestrial historic environment (with reference to Volume 2B, Chapter 8, section 8.5 of the Stage 3 Main Consultation Document)	
As referred to above, a small area of additional agricultural land will be included within the site boundary; however, there are not likely to be any additional historic environment receptors in this area compared to those already assessed in the Stage 3 PEI.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI due to the small area of additional land required in the context of the overall proposals at the northern park and ride site.
Soils and agriculture (with reference to Volume 2B, Chapter 8, section 8.6 of the Stage 3 Main Consultation Document)	
A small area of additional agricultural land would be affected by the change. This land is under arable production. The additional land lies within a field already impacted by the proposed development.	The additional land required is small in area in the context of the overall proposals for the northern park and ride. Therefore, the proposed change is not considered likely to alter the assessment of effects presented in the Stage 3 PEI.

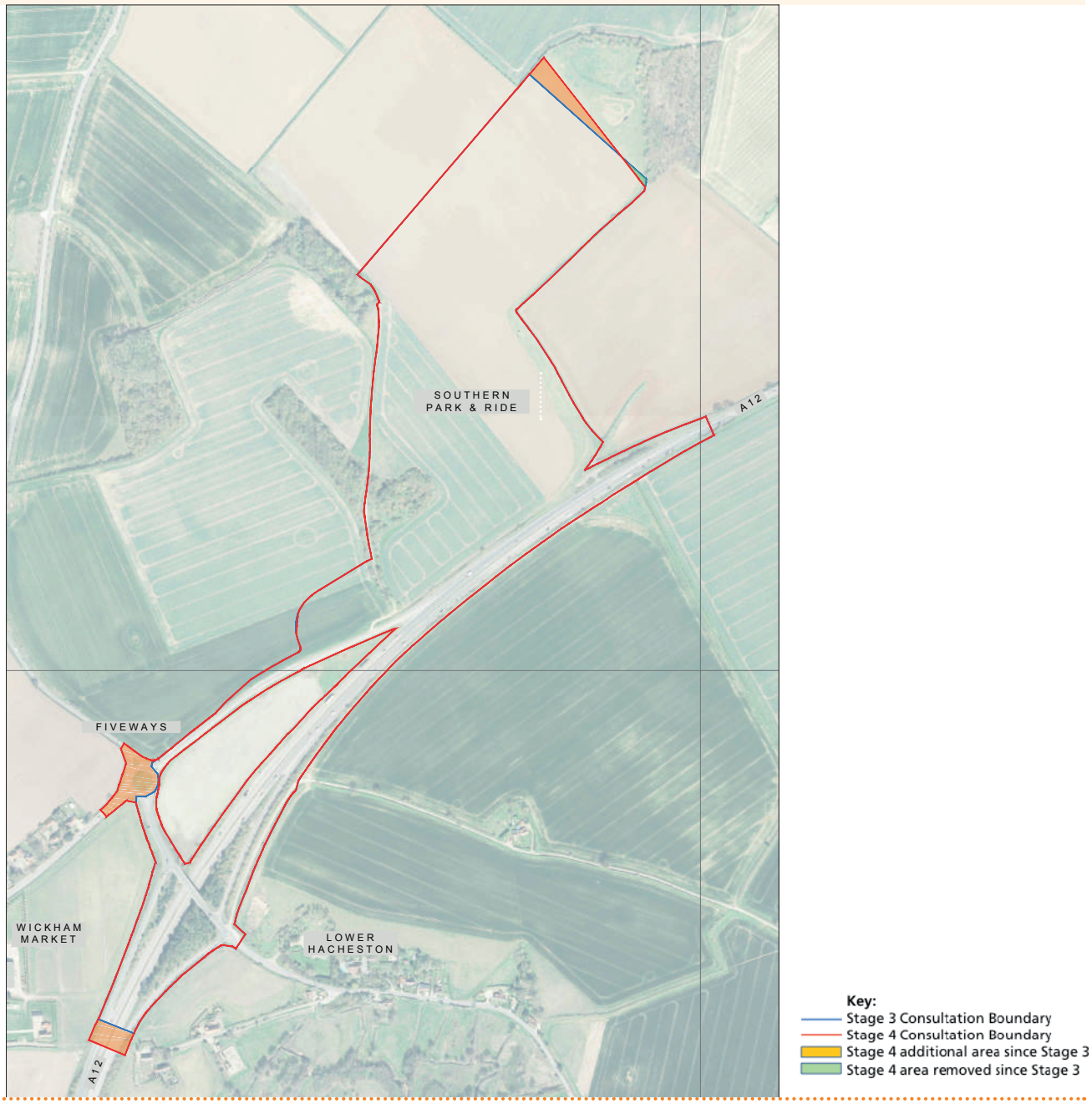
6.7. Southern park and ride (Wickham Market)

a) Description of the change

i. Scheme change

6.7.1. We are proposing very minor changes to the red line boundary for the southern park and ride (both reductions and extensions) as shown at **Figure 6.10**

Figure 6.10: Southern park and ride – Stage 4 over Stage 3.



6.7.2. The red line is proposed to be extended to include B1078/B1116 roundabout which was previously excluded from the Stage 3 boundary.

6.7.3. A further extension would be made to the boundary to the south of the junction of the A12 and B1078 to include additional highways land.

ii. Wickham Market traffic mitigation

6.7.4. At Stage 3, two potential mitigation proposals were presented, namely to either a) divert Sizewell C traffic via Valley Road, Easton Road and the B1116, or b) temporarily relocate the on-street parking on B1078 between Border Cot Lane and the River Deben bridge to an offsite location nearby.

6.7.5. We are now also considering an alternative approach to work with the Parish Council to bring forward a public realm improvement scheme within the public highway that would act as the first phase of the Neighbourhood Plan. This would consider footway and pedestrian crossing provision as well as the optimal location of on-street parking to meet parking demand. The scheme would also provide a legacy benefit to Wickham Market.

b) Why is this change necessary

6.7.6. The minor alterations to the red line boundary to the north-east and south-west of the site are simply to align more accurately with land ownership boundaries.

6.7.7. The inclusion of the B1078/B1116 roundabout is to facilitate the provision of walking/cycling improvements within the highway land if the results of our ongoing detailed design work show that this is necessary.

6.7.8. The additional highways land to the south is required to extend the taper road marking further south for highway safety reasons following feedback from Suffolk County Council.

The alternative approach to traffic mitigation measures at Wickham Market are in response to feedback from the community received at Stage 3, to seek to minimise delay to through traffic. The scheme would also provide a legacy benefit to Wickham Market.

c) Preliminary Environmental Information

6.7.9. A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation has been undertaken. This has included a consideration of the changes to Stage 3 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.

6.7.10. As a result, the Stage 3 PEI relating to terrestrial ecology and ornithology, amenity and recreation assessment and terrestrial historic environment (refer to Volume 2B, Chapter 9 of the Stage 3 Main Consultation Document) has been updated as set out within **Table 6.6**. The proposed design changes do 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 2B, Chapter 9 of the Stage 3 Main Consultation Document).

6.7.11. Proposals for further work to complete the environmental assessment of the southern park and ride as set out within the Stage 3 PEI (see Volume 2B, Chapter 9 of the Stage 3 Main Consultation Document) remain valid. However, in addition to the Stage 3 PEI proposals, a capacity assessment of the junction and a Stage 1 Road Safety Audit is still proposed.

Table 6.6: Summary of changes to the Stage 3 PEI

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Terrestrial ecology and ornithology (with reference to Volume 2B, Chapter 9, section 9.3 of the Stage 3 Main Consultation Document)	
A small amount of additional land within the existing highway boundary at the Fiveways roundabout has been included within the site boundary; however, this change is not considered to affect additional ecological receptors to those already assessed in the Stage 3 PEI.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI due to the small area of additional land required in the context of the overall proposals at the southern park and ride site.
Amenity and recreation (with reference to Volume 2B, Chapter 9, section 9.4 of the Stage 3 Main Consultation Document)	
The extended site boundary remains within the study area of the assessment presented within the Stage 3 PEI and would only extend the study area south westwards by a few metres. The northern tip of PRoW E-288/011/0 joins the revised site boundary. There are no other additional recreational resources or receptors within the site boundary as a result of the changes introduced.	The proposed design changes will include improvements to the walking and cycling infrastructure on Fiveways roundabout. These works would not result in new or different effects during the construction, operation or removal and reinstatement phases from those reported in the Stage 3 PEI.

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Terrestrial historic environment (with reference to Volume 2B, Chapter 9, section 9.5 of the Stage 3 Main Consultation Document)	
The inclusion of the Fiveways roundabout within the site boundary will involve works on additional land within the existing highway boundary. No additional designated or non-designated assets lie within the site boundary as a result of the changes introduced.	The additional highway land included within the site boundary comprises an area where ground has been previously disturbed. While the immediate surrounding area within the vicinity of the site is of high sensitivity due to the known presence of Roman remains, no additional effects on buried archaeology to those established at the Stage 3 PEI are considered likely.

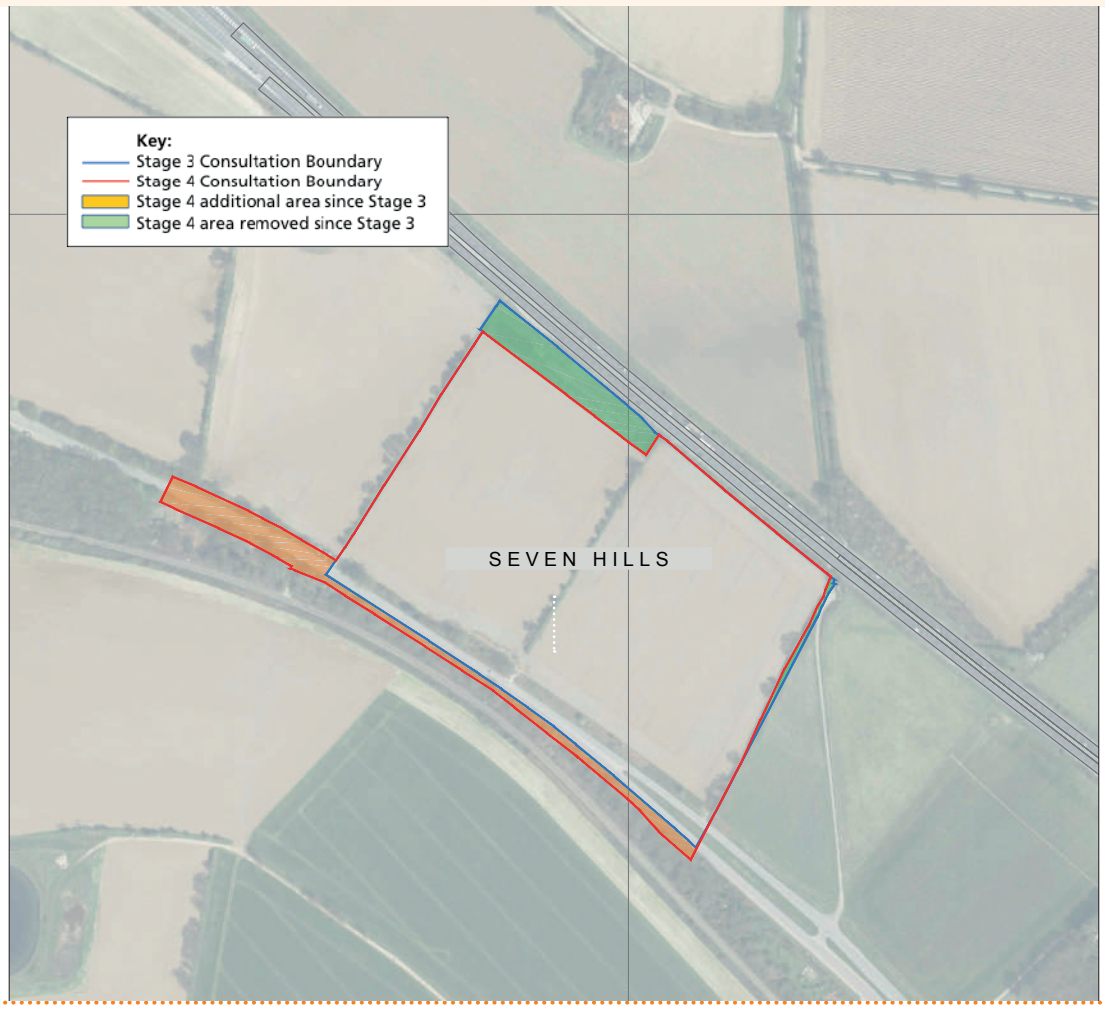
6.8. Freight Management Facility

a) Seven Hills

i. Description of the change

6.8.1. The proposed changes to the red line boundary shown in **Figure 6.11** include an extension along Felixstowe Road and the exclusion of an existing drainage feature to the north-west of the site, which was shown within the site boundary at Stage 3.

Figure 6.11: Freight Management Facility Option 1: Seven Hills (Stage 4 over Stage 3)



ii. Why is this change necessary

6.8.2. The inclusion of highway land on Felixstowe Road would facilitate localised widening for the provision of a ghost island junction to accommodate right turning traffic if our further analysis shows us that this is necessary.

6.8.3. Whilst the drainage feature to the north-west of the site was included within the site boundary at Stage 3, it would not be required for the freight management facility proposals and does not therefore need to be included in the site boundary.

6.8.4. Other minor alterations to the red line boundary are proposed to align more accurately with land ownership boundaries.

iii. Preliminary Environmental Information

6.8.5. A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation has been undertaken. This has included a consideration of the changes to Stage 3 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.

6.8.6. As a result, the Stage 3 PEI relating to terrestrial ecology and ornithology, soils and agriculture, geology and land quality, and traffic and transport assessments (refer to Volume 2B, Chapter 10 of the Stage 3 Main Consultation Document) has been updated as set out within **Table 6.7**. No change to the baseline environment relating to noise and vibration as presented in the Stage 3 PEI is expected. The proposed design changes do 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 2B, Chapter 10 of the Stage 3 Main Consultation Document).

6.8.7. A summary of the effects associated with the change in traffic on the road network as a result of the integrated freight strategy is provided in **Chapter 3** of this Stage 4 consultation document.

6.8.8. Proposals for further work to complete the environmental assessment of the Seven Hills freight management facility as set out within the Stage 3 PEI (see Volume 2B, Chapter 10 of the Stage 3 Main Consultation Document) remain valid. However, in addition to the Stage 3 PEI proposals, a capacity assessment of the site access junction and a Stage 1 Road Safety Audit is still proposed. The need for further survey work to inform the baseline will be reviewed and undertaken where required, subject to access. Any additional work would be undertaken in line with that proposed for Stage 3 (see Volume 2B, Chapter 10 of the Stage 3 Main Consultation Document).

Table 6.7: Summary of changes to the Stage 3 PEI

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Terrestrial ecology and ornithology (with reference to Volume 2B, Chapter 10, section 10.3 of the Stage 3 Main Consultation Document)	
The proposals would result in approximately 0.2ha 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.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI due to the small area of additional land required in the context of the overall proposals at the Seven Hills site.
Soils and agriculture (with reference to Volume 2B, Chapter 10, section 10.6 of the Stage 3 Main Consultation Document)	
As discussed above, a small amount of additional agricultural land would be affected by the change. This land is under arable production.	The additional land required is small in area in the context of the overall proposals for the Seven Hills site. Therefore, the proposed change is not considered likely to alter the assessment of effects presented in the Stage 3 PEI.
Geology and land quality (with reference to Volume 2B, Chapter 10, section 10.9 of the Stage 3 Main Consultation Document)	
Felixstowe Road is considered as a potential source of contamination and is now included in the site boundary.	Whilst Felixstowe Road was previously considered as a potential off-site source of contamination within the Stage 3 PEI, inclusion of it now as a potential on-site source is not considered to change the overall conclusions of the assessment presented in the Stage 3 PEI.

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Traffic and transport (with reference to Volume 2B, Chapter 10, section 10.13 of the Stage 3 Main Consultation Document)	
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.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI, as the widening of Felixstowe Road to provide the ghost island junction would not impact traffic flow during construction. Once operational, the provision of ghost island junction would reduce delay to through traffic compared to the Stage 3 PEI.

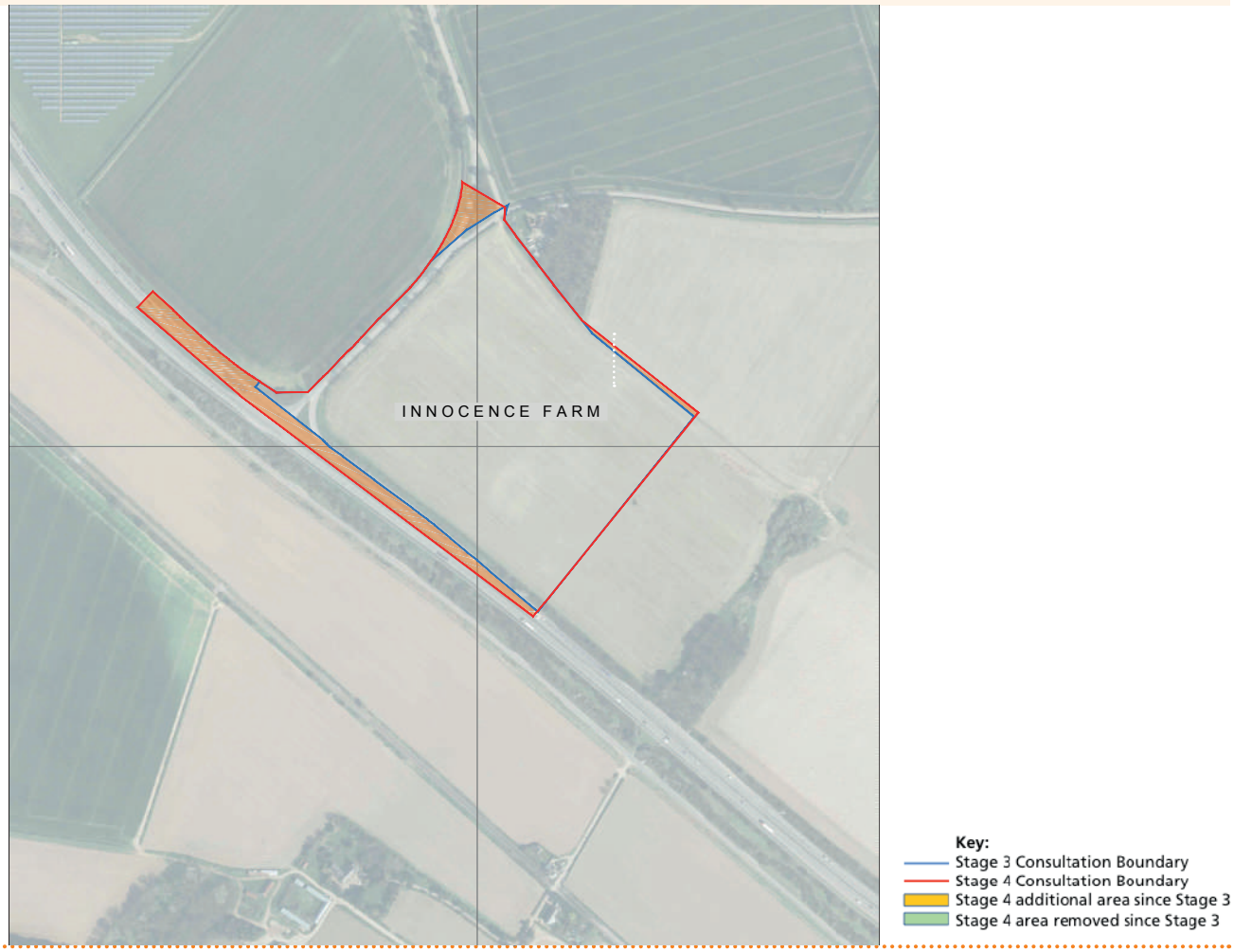
b) Innocence Farm

i. Description of the change

6.8.9. We are proposing extensions to the red line within the highway boundary to the north on Brightwell Road, and north-west along the A14. These changes are shown at **Figure 6.12**.

6.8.10. We are also proposing to move the site access slightly south along Innocence Lane.

Figure 6.12: Freight Management Facility Option 2: Innocence Farm (Stage 4 over Stage 3)



ii. Why is this change necessary

6.8.11. The extensions to the red line along the A14 are to accommodate any potential works needed.

6.8.12. The relocation of the access is to contain the visibility splay to the north within the highway boundary.

iii. Preliminary Environmental Information

6.8.13. A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation has been undertaken. This has included a consideration of the changes to Stage 3 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.

6.8.14. As a result, the Stage 3 PEI relating to terrestrial ecology and ornithology, soils and agriculture and traffic and transport assessments (refer to Volume 2B, Chapter 10 of the Stage 3 Main Consultation Document) has been updated as set out within **Table 6.8**. The proposed design changes do 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 2B, Chapter 10 of the Stage 3 Main Consultation Document).

6.8.15. A summary of the effects associated with the change in traffic on the road network as a result of the integrated freight strategy is provided in **Chapter 3** of this Stage 4 consultation document.

6.8.16. Proposals for further work to complete the environmental assessment of the Innocence Farm freight management facility as set out within the Stage 3 PEI (see Volume 2B, Chapter 10 of the Stage 3 Main Consultation Document) remain valid. However, in addition to the Stage 3 PEI proposals, a capacity assessment of the site access junction and a Stage 1 Road Safety Audit is still proposed. The need for further survey work to inform the baseline will be reviewed and undertaken where required, subject to access. Any additional work would be undertaken in line with that proposed in the Stage 3 PEI (see Volume 2B, Chapter 10 of the Stage 3 Main Consultation Document).

Table 6.8 Summary of changes to the Stage 3 PEI

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Terrestrial ecology and ornithology (with reference to Volume 2B, Chapter 10, section 10.3 of the Stage 3 Main Consultation Document)	
The proposals would result in approximately 1.2ha 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 to those already assessed in the Stage 3 PEI.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI due to the small area of additional land required in the context of the overall proposals at the Innocence Farm site.
Soils and agriculture (with reference to Volume 2B, Chapter 10, section 10.6 of the Stage 3 Main Consultation Document)	
As referred to above, a small amount of additional agricultural land would be affected by the change. This land is under arable production.	The additional land required is small in area in the context of the overall proposals for the Innocence Farm site. Therefore, the proposed change is not considered likely to alter the assessment of effects presented in the Stage 3 PEI.
Traffic and transport (with reference to Volume 2B, Chapter 10, section 10.13 of the Stage 3 Main Consultation Document)	
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.	The requirement of westbound traffic exiting the Innocence Farm site to travel east along the A14 and u-turn at the Dock Spur roundabout (Junction 60) and not the Kirton/Trimley St Martin junction (Junction 59) as presented at Stage 3, would increase the journey length for construction vehicles. However, the volume of vehicles using the freight management facility would be as presented in the Stage 3 PEI and would be low compared to the existing volume of traffic on the A14. It would have a negligible impact on A14 traffic flow and operation of the junctions and the proposed change is not considered likely to alter the assessment of effects presented in the Stage 3 PEI.

6.9. Yoxford Roundabout

a) Description of the change

6.9.1. The change to the Yoxford roundabout involves the relocation of the roundabout approximately 20m to the south-east, as shown at **Figure 6.13**.

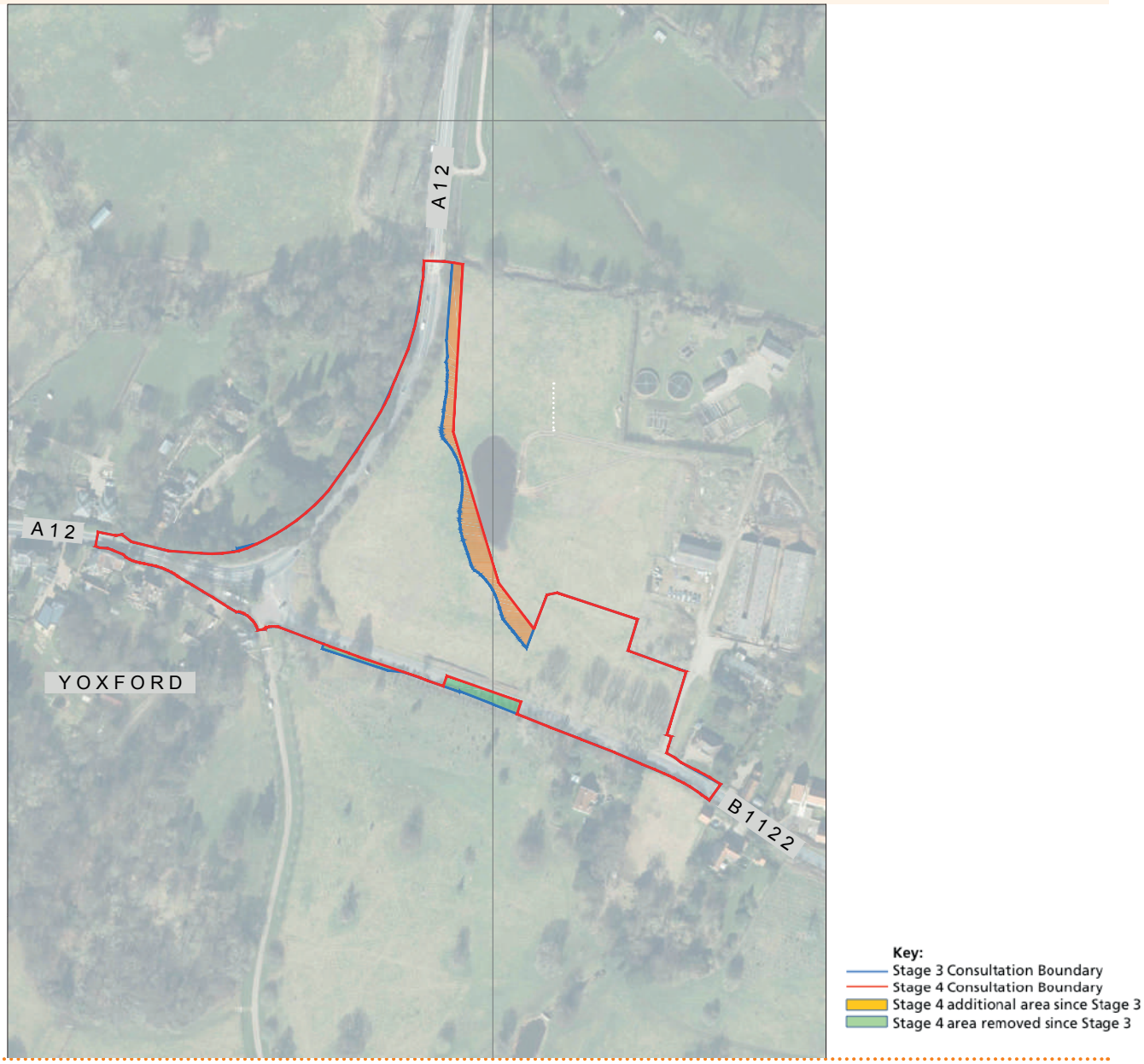
6.9.2. We are also proposing a revision to the site boundary to the south of the site.

b) Why is this change necessary

6.9.3. The relocation of the roundabout is proposed to meet highways design requirements and will enable off-line construction to reduce traffic and management delays.

6.9.4. The change to the site boundary to the south is proposed in order to avoid encroachment into an area in which Sandy Stilt Puffball fungi is present.

Figure 6.13: Yoxford roundabout (Stage 4 over Stage 3)



c) Preliminary Environmental Information

6.9.5. A preliminary environmental assessment of the design changes presented as part of Stage 4 consultation has been undertaken. This has included a consideration of the changes to Stage 3 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.

6.9.6. 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 and traffic and transport assessments (refer to Volume 2B, Chapter 11 of the Stage 3 Main Consultation Document) has been updated as set out within **Table 6.9**. The proposed design changes do 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 2B, Chapter 11 of the of the Stage 3 Main Consultation Document).

6.9.7. A summary of the effects associated with the change in traffic on the road network as a result of the integrated freight strategy is provided in **Chapter 3** of this Stage 4 consultation document.

6.9.8. Proposals for further work to complete the environmental assessment of the Yoxford roundabout as set out within the Stage 3 PEI (see Volume 2B, Chapter 11 of the Stage 3 Main Consultation Document) remain valid. However, in addition to the Stage 3 PEI proposals, a capacity assessment of the junction and a Stage 1 Road Safety Audit is still proposed. The need for further survey work to inform the baseline assessment will be reviewed and undertaken, where required, subject to access.

Table 6.9: Summary of changes to the Stage 3 PEI

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Landscape and visual (with reference to Volume 2B, Chapter 11, section 11.2 of the Stage 3 Main Consultation Document)	
There are no additional landscape and visual resources or receptors within the site boundary as a result of the changes introduced.	There may be some visibility of the proposed changes for users of PRoWs within Cockfield Hall Park to the north and Rookery Park to the south. However, given the existing presence of the A12 in views from the north and the limited extent of any potential views from the south-west, this is unlikely to result in significant visual effects for the users of the PRoWs.
Terrestrial ecology and ornithology (with reference to Volume 2B, Chapter 11, section 11.3 of the Stage 3 Main Consultation Document)	
The proposals would result in approximately 1,300m2 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.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI due to the small area of additional land required in the context of the overall proposals for Yoxford roundabout.
Amenity and recreation (with reference to Volume 2B, Chapter 11, section 11.4 of the Stage 3 Main Consultation Document)	
There are no additional recreational resources or receptors within the site boundary as a result of the changes introduced.	There may be some visibility of the proposed changes for users of PRoWs within Cockfield Hall Park to the north and Rookery Park to the south. However, given the existing presence of the A12 in views from the north and the limited extent of any potential views from the south-west, this is unlikely to result in significant effects on the amenity and recreational value of the PRoWs.

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Terrestrial historic environment	
(with reference to Volume 2B, Chapter 11, section 11.5 of the Stage 3 Main Consultation Document)	
A small area of additional agricultural land will be included within the site boundary; however, there are not likely to be any additional historic environment receptors of interest in this area compared to those already assessed in the Stage 3 PEI.	While the changes to the site boundary increase the site area by approximately 1,300m2 in a long strip along the north-east edge, the proposed design and existing ground disturbance is of the same nature as assessed within the Stage 3 PEI. The movement of the roundabout 20m south-east would have little to no effect on the assessment of the effects of the proposed development on the setting of nearby assets, including Yoxford Conservation Area presented in the Stage 3 PEI. Therefore, the conclusions of the Stage 3 PEI assessment remain valid.
Soils and agriculture	
(with reference to Volume 2B, Chapter 11, section 11.6 of the Stage 3 Main Consultation Document)	
A small area of additional agricultural land would be affected by the change. This land is under arable production. The additional land lies within a field already impacted by the proposed development.	The additional land required is small in area in the context of the overall proposals for the northern park and ride. Therefore, the proposed change is not considered likely to alter the assessment of effects presented in the Stage 3 PEI.
Traffic and transport	
(with reference to Volume 2B, Chapter 11, section 11.13 of the Stage 3 Main Consultation Document)	
There are no changes to the baseline environment relating to traffic and transport presented in the Stage 3 PEI.	The updated design of the roundabout will enable a greater level of off-line construction, which would further reduce traffic management delays on the A12 compared to those presented at the Stage 3 PEI.

6.10. Other highway improvements

a) A140/B1078 west of Coddenham

i. Description of the change

6.10.1. As shown at **Figure 6.14**, the only minor change to these road improvements since Stage 3 is an extension of the red line boundary to the north and south along the A140.

ii. Why is this change necessary

6.10.2. This change is proposed in order to allow for additional signage within the highway boundary notifying road users of the junction and surrounding junctions and routes.

Figure 6.14: A140/AB1078 west of Coddenham (Stage 4 over Stage 3)

b) A12/A144 south of Bramfield

i. Description of the change

6.10.3. We are proposing changes to the site boundary, as shown at **Figure 6.15** which include widening the boundary along the A12 to the west of the A12 and reduction of the boundary to the south-east of the junction and the relocation of the A144 arm to the south.

ii. Why is this change necessary

6.10.4. The purposes of these proposed changes are to reduce the impact on residential gardens to the south-east of the junction and to reduce the impact of the A144 arm on Stone Cottage.

Figure 6.15: A12/A144 south of Bramfield (Stage 4 over Stage 3)

c) A12/B1119 Saxmundham

i. Description of the change

As shown at **Figure 6.16** the proposed changes to the site boundary since Stage 3 involve only very minor extensions to the south to include additional highway land on the A12 and to the west along the B1119.

ii. Why is this change necessary

6.10.5. This additional land within the highway provides us with additional flexibility for highways improvements as our detailed design work progresses, following additional discussion with the highways authority.

6.10.6. The extension to the red line to the west is proposed to include the advanced 'give way' sign to the north-west on the B1119.

Figure 6.16: A12/B1119 Saxmundham (Stage 4 over Stage 3)

d) A1094 / B1069 south of Knodishall

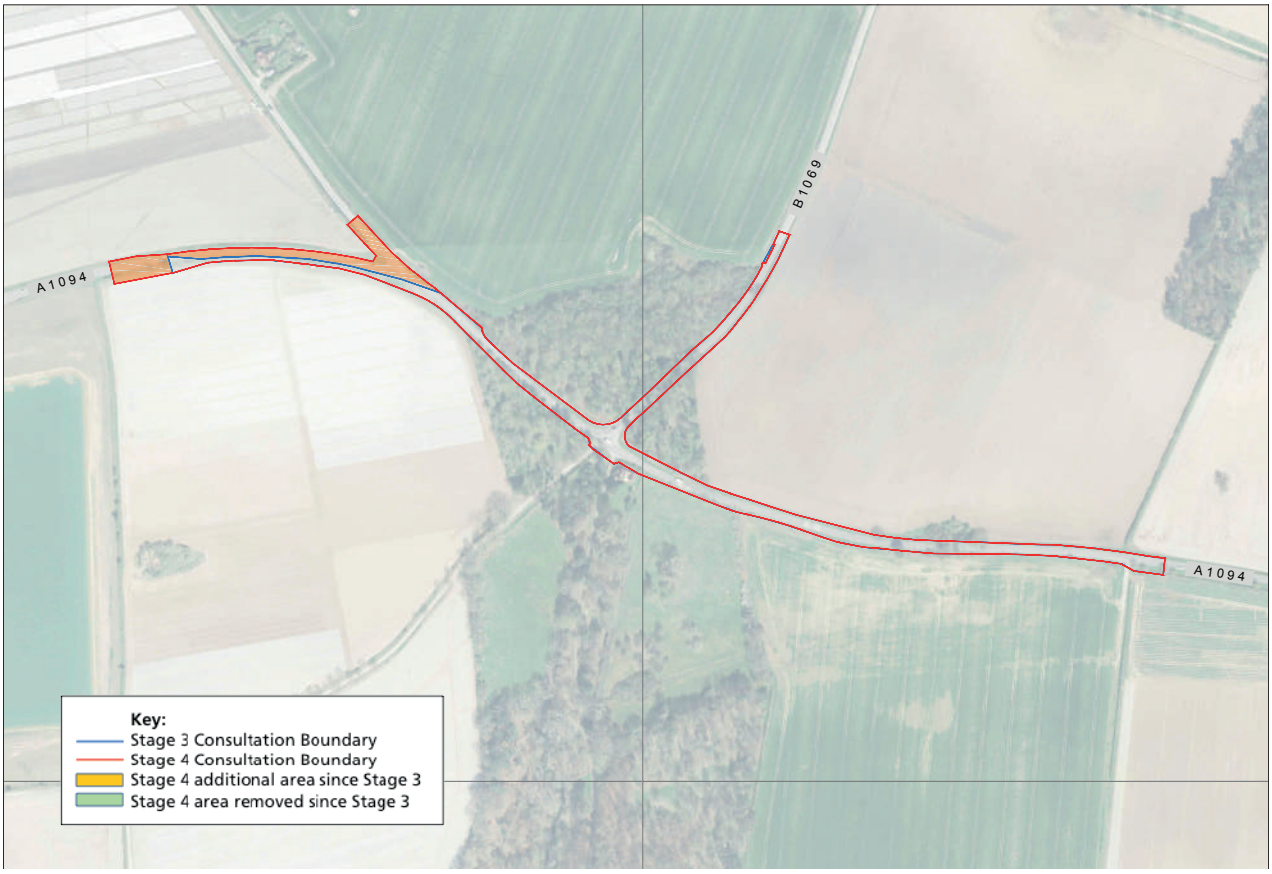
i. Description of the change

6.10.7. As shown at **Figure 6.17** the proposed changes to the site boundary since Stage 3 involve only very minor extensions north along the A1094 and B1121.

ii. Why is this change necessary

6.10.8. This additional land within the highway is proposed to allow for speed limit signs to be incorporated at an appropriate distance from the junction.

Figure 6.17: A1094 / B1069 south of Knodishall (Stage 4 over Stage 3)



e) Preliminary Environmental Information

6.10.9. The A140/B1078 and A12/B1119 junctions highway improvement works were considered to be of scale at which no significant effects would be likely to arise and, therefore, no PEI was presented for those improvements at Stage 3.

6.10.10. Stage 3 consultation provided preliminary environmental information on the following highway improvement works:

- Wickham Market diversion route via Valley Road and Easton Road;
- Mill Street (B1122) junction; and
- A1094/B1069 south of Knodishall.

6.10.11. There are no changes in Stage 4 to the Wickham Market diversion route or Mill Street scheme and only a minor change to the red line boundary for the A1094/B1069 scheme. No revised PEI is therefore presented in Stage 4.

6.10.12. Proposals for further work to complete the environmental assessment of the highway improvement works as set out within the Stage 3 PEI (see Volume 2B, Chapter 12 of the Stage 3 Main Consultation Document) remain valid. However, in addition to the Stage 3 PEI

proposals, a capacity assessment of highway junctions and Stage 1 Road Safety Audits are still proposed. The need for further survey work to inform the baseline assessment will be reviewed and undertaken, where required, subject to access.

6.10.13. A preliminary environmental assessment of the A12/A144 design changes presented as part of Stage 4 consultation has been undertaken. This has included a consideration of the changes to Stage 3 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.

6.10.14. As a result, the Stage 3 PEI relating to terrestrial ecology and ornithology, terrestrial historic environment, soils and agriculture and traffic and transport assessments (refer to Volume 2B, Chapter 12 of the Stage 3 Main Consultation Document) has been updated as set out within **Table 6.10**. The proposed design changes for A12/A144 junction do 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 2B, Chapter 12 of the Stage 3 Main Consultation Document).

Table 6.10: Summary of changes to the Stage 3 PEI

Changes to Receptors and/or Baseline Environment	Updated Environmental Assessment
Terrestrial ecology and ornithology (with reference to Volume 2B, Chapter 12, section 12.3 of the Stage 3 Main Consultation Document)	
No ecological constraints were identified at the Stage 3 PEI for the site and, therefore, it was scoped out of further assessment. Whilst the site boundaries have been extended, this is unlikely to change the conclusions presented at the Stage 3 PEI. A pre-construction ecological walkover would be undertaken to confirm the presence/absence of any new ecological receptors prior to the works being undertaken.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI due to the scale of works proposed.
Terrestrial historic environment (with reference to Volume 2B, Chapter 12, section 12.5 of the Stage 3 Main Consultation Document)	
The revised site boundary is within the study area for the assessment undertaken as part of the Stage 3 PEI. No designated or non-designated assets lie within the red line boundary.	The proposed change is not considered likely to alter the conclusions presented in the Stage 3 PEI, with the majority of additional land being within the existing highway boundary where ground has been previously disturbed.
Soils and agriculture (with reference to Volume 2B, Chapter 12, section 12.6 of the Stage 3 Main Consultation Document)	
A small amount of additional agricultural land would be affected by the change. This land is predominantly under arable production.	The additional land required is small in area in the context of the overall proposals for the site. Therefore, the proposed change is not considered likely to alter the assessment of effects presented in the Stage 3 PEI.
Traffic and transport (with reference to Volume 2B, Chapter 12, section 12.13 of the Stage 3 Main Consultation Document)	
There are no changes to the baseline relating to traffic and transport presented in the Stage 3 PEI.	Increased level of off-line construction to that presented at the Stage 3 PEI would result in fewer traffic delays. In addition, the access to Stone Cottage from the A12 could be retained by moving the existing gates further into the property. Alternatively, access could be entirely from the A144. 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.

7. MITIGATING OUR IMPACT

7.1. Introduction

7.1.1. EDF Energy intends to submit an application for development consent to the Planning Inspectorate to develop the Sizewell C Project. We are fully committed to being a good neighbour to our local communities, as well as to the natural habitats around the site.

7.1.2. Large scale and complex projects, such as Sizewell C, generate a wide range of impacts. Whilst some are positive, such as the creation of thousands of job opportunities and the generation of low carbon energy, others can be negative, particularly if efforts are not made to address these impacts. We are working hard in our efforts to minimise the negative impacts and maximise the benefits of the Project. We are seeking to avoid or minimise impacts in the first instance but, where this is not possible, we would look to mitigate them and where we cannot do this we would look to put in place appropriate compensation.

7.1.3. We take our requirements to assess the full extent of environmental impacts very seriously. We have recently sought a new EIA Scoping Opinion from the Secretary of State to ensure that we fully take account of the changes to the Project proposals, which have evolved since 2014 when we undertook our original scoping exercise, and to reflect the new regulations for additional environmental effects to be considered within the Environmental Impact Assessment (EIA) process, in particular: climate change, human health and risk of major accidents. In parallel, we continue to engage with key statutory consultees and other interested parties to refine our Project proposals.

7.1.4. Following the close of the Stage 4 consultation we will be finalising our EIA to identify the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development and identify those measures necessary to control impacts. All of this will be reported in the Environmental Statement that will accompany our application for development consent.

7.1.5. Our application for development consent will also include statements that explain how our Project proposals have evolved, how they respond to the policy context, and the rationale for our final proposals. These statements will include an explanation of the freight management strategy that we decide to take forward into our application and other technical assessments (e.g. a Habitat Regulations Assessment and flood risk Assessments).

7.2. How would we control impacts?

7.2.1. Our intention is to avoid significant harm, including through mitigation and consideration of reasonable alternatives. However, where significant harm cannot be avoided or mitigated, then appropriate compensation measures will be committed to and secured. This is in line with the requirements of national policy.

7.2.2. We are embedding best practice mitigation into our Project proposals from the outset. The construction sector has developed ways of managing negative impacts through a Code of Construction Practice to ensure that construction can be planned, managed and controlled. We have adopted a Code of Construction Practice at Hinkley Point C, and we are working to identify specific measures for a Sizewell C Code of Construction Practice, which builds on lessons learnt from Hinkley Point C and best practice from other large scale infrastructure projects, whilst responding to the unique location of Sizewell C. An Outline Code of Construction Practice will be submitted as part of the application for development consent. Sizewell C will be legally required to manage the delivery of Sizewell C in accordance with this document.

7.2.3. We continue to design in mitigation to the proposals for the scheme, referred to as embedded mitigation. Measures include careful siting of the proposals (e.g. road alignment) and design of components of the development (e.g. inclusion of ecological and landscaping measures, and diversions of footpaths). Sizewell C will be required to construct its proposals in accordance with approved plans, to ensure compliance with the approved designs.

7.2.4. Mitigation will also include controls placed on the construction and operation of the proposed development. These will be identified through the conclusions of the EIA that is being completed by specialist independent consultants, as well as through measures identified through our engagement with key stakeholders. Measures could include controls to limit vehicle traffic, time limitations to ensure delivery of key pieces of infrastructure and limits to control environmental emissions (e.g. noise), as well as funding to ensure that there would be no adverse socio-economic impacts (e.g. funding of police and ambulance services). A Development Consent Order (DCO) and associated legal agreement would specify those limits to manage and ensure compliance.

7.2.5. Where sufficient mitigation cannot be achieved through the measures described above, compensation would be proposed in certain instances to address the residual impacts of the Project. Measures could include requirements to pay financial contributions to third parties to deliver measures that have been agreed between the relevant stakeholders.

7.3. Project benefits

7.3.1. The impacts of the Project overall will be overwhelmingly positive. Sizewell C would aim to replicate and build on the benefits of Hinkley Point C. The benefits of Sizewell C will include:

- the generation of up to 8,500 workers (7,900 on the main development site and 600 on the associated development sites), comprising approximately 25,000 roles on the main development site during the construction phase, as well as 900 new jobs once the station becomes operational;
- a minimum target of 1,000 apprentices;
- apprentice schemes to link the south-west (i.e. the location of Hinkley Point C) and the east (i.e. the location of Sizewell C) of England;
- continuing to work with Suffolk colleges and businesses to maximise the opportunities for their involvement in the Project;
- aiming to meet the nuclear sector target of a 40% female workforce; and
- maximising the opportunities arising from at least £100 million a year entering the regional economy during peak construction and £40 million per year during its 60 years of operation.

7.3.2. Currently, EDF Energy is working with the Suffolk Chamber of Commerce and other local stakeholders to understand what services local and regional businesses may offer which may be helpful to the Project and to ensure that East Anglian companies are registering their details on our online portal (www.sizewellcsupplychain.co.uk) to support in the delivery of the Project, once construction starts.

7.3.3. Prior to the start of construction, EDF Energy will be:

- launching a dedicated service in East Anglia to promote Hinkley Point C jobs to people in East Anglia and to provide for the transition of the skilled workforce from Hinkley Point C to Sizewell C;
- working with 'HPC Jobs' to reach out to those in East Anglia and advertise all Hinkley Point C apprenticeships and jobs prior to them being advertised nationally;
- working with local schools and colleges to understand what measures would be most effective to engage young people in Science, Technology and Maths;
- working with stakeholders to understand and communicate the skills and training needs required to deliver Sizewell C, publishing promotional material that will enable key stakeholders in the community to better understand our skills, education and employment offer;
- piloting a mobile "Have a Go" scheme within secondary schools in our priority areas, with a particular focus on our critical skills (e.g. welding simulators and mobile rigs);
- working with the Off-Shore Sector Deal and the All Energy Industry Council to raise Sizewell C's profile in education and skills in the region, to share learning and experience; and
- continuing to focus Sizewell B's activities in local areas, particularly through participation in local skills events and outreach to schools through the visitor centre.

7.4. Delivering our commitments and obligations

7.4.1. Our Project development process has ensured that we have embedded environmental principles into our Project proposals, to ensure that mitigation and compensation is at the heart of the Sizewell C Project. This has enabled the team to identify how negative impacts can be avoided or reduced, and how positive impacts can be further enhanced.

7.4.2. We are completing our environmental assessments to ensure that the mitigation and compensation measures identified in our application for development consent achieve the economic benefits that Sizewell C can deliver, whilst respecting environmental, economic and social concerns. We will be taking an upper estimate of the workforce number during construction within our EIA, to ensure that we identify all potential significant impacts and ensure any mitigation and/or compensation would be sufficient to address these.

7.4.3. Our application for development consent will include a Schedule of Mitigation which specifies all of the commitments and controls committed to by the Project to manage the impacts (both positive and negative). This will enable stakeholders to have full visibility of the commitments made by Sizewell C and understand how these would be controlled during delivery.

7.4.4. Our Project proposals will be interrogated by an independent Examining Authority once the application has been accepted. The Examining Authority will assess all aspects of our application against policy, and will need to be satisfied that our mitigation and compensation is appropriate and

acceptable. Feedback from stakeholders will be an important element in informing their judgement. Once agreed, many of the measures will be secured through a DCO and associated legal agreement.

7.5. Compensation

a) Community Fund

7.5.1. EDF Energy already makes a significant contribution to its local communities each year, through a variety of measures including its work in local schools and colleges and grants to support community projects.

7.5.2. In our Stage 3 consultation EDF Energy committed to instigating a Community Fund to ensure that any intangible residual effects of the Project can be managed effectively. We stated that the Community Fund would be provided for schemes, measures and projects that promote the economic, social or environmental well-being of communities and enhance their quality of life, for example through grants to charities, voluntary groups and social enterprises. This is in recognition of the potential for residual impacts on local communities as a result of combined environmental effects, both perceived and real, that cannot be directly mitigated through physical design measures, and require a more reactive approach. The Community Fund would also help enhance the benefits of the Project for those living locally.

7.5.3. In our application for development consent we will identify the guiding principles behind our Community Fund and where and on what the fund should be spent, as well as the amount to be allocated to the fund during each year of construction. The amount to be allocated to the Community Fund can only be determined once we understand all of the impacts and what has been mitigated through other means (i.e. best practice, embedded mitigation and controls).

b) Property Support

7.5.4. EDF Energy is committed to reducing and mitigating adverse effects from construction which may impact local people. We recognise that homeowners within proximity of the Sizewell C construction site may be affected during the construction of the power station, as well as during the construction and operation of some of the off-site associated developments. In the first instance we will work to minimise the impacts of construction at source through best practice, embedded mitigation and controls.

7.5.5. There is law in place to protect homeowners impacted by infrastructure projects, not only for those residential properties within the development area but also those properties which may have depreciated in value due to physical factors arising after works authorised by a DCO become operational. Discussions have been had with a number of homeowners within the development area and further discussions will be had during 2019 in order to further understand individual circumstances and explore alternatives to statutory blight claims.

7.6. Next Steps

7.6.1. EDF Energy is continuing to develop its mitigation proposals for the Project in relation to: natural environment (i.e. landscape/ecology); coastal processes; heritage (i.e. archaeology); transport (including public rights of way); tourism; housing; community safety; economic development; education; health; leisure; skills, education and training; resourcing; property support and a community fund.

7.6.2. We also recognise that there may be cumulative negative effects on some parts of the environment depending upon the location and extent of clustering of new energy and other infrastructure projects. These impacts are being assessed in the context of the Sizewell C Project. Any necessary mitigation and/or compensation will be identified and secured through our development consent application.

8. RESPONDING TO CONSULTATION

8.1. Finding out more

8.1.1. Copies of this Stage 4 consultation document and the Stage 4 consultation Summary Document (including a questionnaire) along with the Stage 3 consultation materials will be available at the exhibitions (see below) and at the Sizewell C Information Office (48-50 High Street, Leiston, IP16 4EW), which is open 09:30 to17:00 Monday to Friday and is also open 09:00 to 12:00 on Saturday throughout the Stage 4 consultation period (between 18 July 2019 and 27 September 2019). The documents are also available to view during office hours in the offices of East Suffolk, Suffolk County and Ipswich Borough Councils and at local public libraries, and are available on the project website (http://sizewell.edfenergyconsultation.info).

8.1.2. If you require this information in a different format for accessibility reasons please call 0800 197 6102 or email sizewell@edfconsultation.info

8.1.3. In addition to the consultation documents, other tools are available to support engagement with this consultation, including:

- **Contact the Team** - call the team on 0800 197 6102 during normal office hours or drop into the Sizewell C Information Office during the hours listed in section 8.1.1;
- **Newsletters** - EDF Energy has publicised the consultation programme, including details of events and how people can respond, in its Sizewell C Newsletter;
- **Local Media** - EDF Energy will publicise the consultation activities in the local media; and
- **Public Exhibitions** - EDF Energy will hold exhibitions and events. An early event will be held at Sizewell. Staffed exhibitions using presentation boards and literature to explain the strategies and proposals will be held at: Leiston, Hacheston, Yoxford, Stratford St Andrew, Wickham Market, and Woodbridge. **Table 8.1** shows the details of the Stage 4 consultation exhibitions.
- **Sizewell C Information Office** - The exhibition material will remain available for the public to view at the Sizewell C Information Office after the close of the formal consultation, as well as being available to download from the project website;
- **Presentations** - town and parish councils can request meetings and presentations during the consultation period, which EDF Energy will seek to accommodate where possible;
- **Drop-in Sessions** - for villages or towns which are not exhibition locations, or those communities which require greater opportunities to engage with the team, EDF Energy will seek to accommodate requests where possible. These sessions would operate like surgeries, where local people can have discussions with members of the EDF Energy team; and
- **Social Media** - EDF Energy has a Twitter account and followers will be updated on the latest events and news during the public consultation (@edfesizewellc).

Table 8.1 Stage 4 consultation exhibitions

Town/Parish	Venue	Date/Time
Leiston	Leiston United Church, High Street, Leiston IP16 4EL	23 July 2pm-8pm
Yoxford	Village Hall, Old High Road, Yoxford IP17 3HN	24 July 1pm-6pm
Wickham Market	Village Hall, High Street Wickham Market IP13 0HE	25 July 12pm-3pm
Hacheston	Village Hall, The Street, Hacheston IP13 0DW	25 July 5pm-8pm
Woodbridge	Community Hall, Station Road, Woodbridge, IP12 4AU	26 July 2pm-8pm
Startford St Andrew	Riverside Centre, Great Glemham Road, Stratford St Andrew IP17 1LL	27 July 10am-4pm

8.2. Responding to this consultation

8.2.1. We encourage you to respond to this Stage 4 consultation as feedback will help us to evolve our strategies and proposals further. Those wishing to respond can:

- Complete a questionnaire either online (www.sizewellc.co.uk) or post a completed form to FREEPOST SZC CONSULTATION (no stamp or further address required);
- Email comments to sizewell@edfconsultation.info;
- Post comments to FREEPOST SZC CONSULTATION (no stamp or further address required); and
- Call 0800 197 6102 during normal office hours.

8.2.2. The deadline for responses to this Stage 4 consultation is **27 September 2019**.

REFERENCES

Reference Number	Reference
1.1	Department of Energy and Climate Change, National Policy Statement for Nuclear Power Generation (EN-6) (London: The Stationery Office, 2011)
1.2	Department of Energy and Climate Change, Overarching National Policy Statement for Energy (EN-1) (London: The Stationery Office, 2011)
1.3	Neil Hirst, The role of nuclear electricity in a low-carbon world (Imperial College London, 2018) Available at: <https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/BP24-The-role-of-nuclear-electricity-in-a-low-carbon-world.pdf>
1.4	Parliament of the United Kingdom, Climate Change Act 2008 (London, 2008)
1.5	Gov.uk, PM Theresa May: we will end UK contribution to climate change by 2050 (London, 2019) Available at: < https://www.gov.uk/government/news/pm-theresa-may-we-will-end-uk-contribution-to-climate-change-by-2050>
1.6	Neil Hirst, The role of nuclear electricity in a low-carbon world (Imperial College London, 2018) Available at: <https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/BP24-The-role-of-nuclear-electricity-in-a-low-carbon-world.pdf>
1.7	Department for Business, Energy & Industrial Strategy, Updated Energy and Emissions Projections 2018 (London, 2019) Available at: <http://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file /794590/updated-energy-and-emissions-projections-2018.pdf>
1.8	Department for Business, Energy & Industrial Strategy, Updated Energy and Emissions Projections 2018 (London, 2019) Available at: <http://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file /794590/updated-energy-and-emissions-projections-2018.pdf>
4.1	Department of Energy and Climate Change, Overarching National Policy Statement for Energy (EN-1) (London: The Stationery Office, 2011)
4.2	Office of Rail and Road, 2018 periodic review final determination: Overview of approach and decisions (London, 2018) Available at: <https://orr.gov.uk/__data/assets/pdf_file/0019/39304/pr18-final-determination-overview-and-decisions.pdf> Office of Rail and Road website: https://orr.gov.uk/rail/investigations-and-current-issues
5.1	Department of Energy and Climate Change, Overarching National Policy Statement for Energy (EN-1) (London: The Stationery Office, 2011)

ABBREVIATIONS

Abbreviation	Term
AIL	Abnormal Invisible Loads
ALC	Agricultural Land Classification
AONB	Area of Outstanding Natural Beauty
Bn	Billion
CEMP	Construction Environmental Management Plan
DCO	Development Consent Order
DMS	Delivery Management System
ES	Environmental Statement
FCA	Floodplain Compensation Area
FID	Final Investment Decision
FMF	Freight Management Facility
FRA	Flood Risk Assessment
GDA	Generic Design Assessment
GW	Gigawatt
Ha	Hectare
HB	Home Based
HER	Historic Environment Record
HGV	Heavy Goods Vehicle
HIA	Health Impact Assessment
JCP	Jobcentre Plus
km	Kilometre
kV	Kilovolt
kW	Kilowatt
LEEIE	Land to the East of Eastlands Industrial Estate
LGV	Light Goods Vehicle
LOAEL	Lowest Observed Adverse Effect Level
LVIA	Landscape and Visual Impact Assessment
m	Metre
m2	Metre squared
mph	Miles per Hour
MW	Megawatt
NHB	Non-Home Based
NPS	National Policy Statement
NPS EN-1	Overarching National Policy Statement for Energy (EN-1)
NPS EN-6	National Policy Statement for Nuclear Power Generation (EN-6)
NSIP	Nationally Significant Infrastructure Project
OSC	Operational Service Centre

Abbreviation	Term
ORR	Office of Rail and Road
PEI	Preliminary Environmental Information
PRoW	Public Right of Way
PRS	Private Rented Sector
SCC	Suffolk County Council
SCDC	Suffolk Coastal District Council
SOAEL	Significant Observed Adverse Effect Level
SoCC	Statement of Community Consultation
SPA	Suspended Particulate Matter/Special Protection Area (as appropriate in context)
SSSI	Site of Special Scientific Interest
TRG	Transport Review Group
UK	United Kingdom
UK EPR™	United Kingdom European Pressurised Reactor
WFD	Water Framework Directive

LIST OF DEFINED TERMS

Term	Definition
Abnormal Indivisible Loads (AILs)	Large loads to be delivered to the site which by their nature cannot be broken into smaller multiple deliveries. Wherever possible, AILs are to be brought in by sea, with any transport to the site by road delivered on a low loader with a police escort.
Accommodation Campus	Purpose-built accommodation campus close to the construction site to house Sizewell C employees.
Accommodation Strategy	Strategy to ensure an organised and robust approach to minimising effects from its workforce on community cohesion, accommodation capacity and a range of socio-economic concerns.
Additional mitigation	This is often referred to as 'secondary mitigation' and includes actions that will require further activity in order to achieve the anticipated outcome. These may be imposed as part of the planning consent
Agricultural Land Classification (ALC)	A classification of agricultural land in England and Wales according to its quality and agricultural versatility. The classifications range from Grade 1 (the best and most versatile), through Grades 2, 3a, 3b, 4, down to Grade 5 (the least versatile).
Aldhurst Farm habitat creation scheme	Land on which a habitat creation scheme has been created to help compensate for any future land-take from the Sizewell Marshes SSSI should Sizewell C be constructed. This land extends from the B1122 Abbey Road in Leiston to Lover's Lane. Permission was granted for the scheme in March 2015 and it has now been created.
Area of Outstanding Natural Beauty (AONB)	AONBs were formally designated under the National Parks and Access to the Countryside Act 1949 to protect areas of the countryside of high scenic quality that cannot be selected for National Park status due to their lack of opportunities for outdoor recreation (an essential objective of National Parks). Further information on AONBs can be found at www.aonb.org.uk
Associated Development	Development which is associated with a Nationally Significant Infrastructure Project (NSIP), as defined in the Planning Act 2008. It should be subordinate to and necessary for the construction and/or the effective operation of the NSIP that is subject of the application.
Baseline	The environmental conditions, resources and receptors that currently exist on the site and in the surrounding area.
Beach Landing Facility	The permanent facility to allow AILs to be brought to Sizewell C by sea during operation or construction.
Construction phase	The period during which the contractor must complete construction, subject to the conditions of the contract.
Cooling water Infrastructure	Infrastructure located offshore that will provide a cooling mechanism for the plant via the intake and outflow of sea water.
Decommissioning	At the end of its operational life, the power station buildings, other than the Interim Spent Fuel Store (ISFS) and the Intermediate Level Waste (ILW) building, would be removed. The process that is required to do this is known as decommissioning.
Delivery Management System (DMS)	Measures put in place to control the flow of HGV movements to and from the main development site.
Development Consent Order (DCO)	A DCO is the form in which the Secretary of State grants consent for development applied for under the Planning Act 2008. A DCO removes the need to obtain a range of other separate consents, such as planning permission and listed building consent.
Disturbance	A perturbation in the system (either biological, e.g. predation, or physical, e.g. storms) which alters the nature of the biological community.
East Suffolk Council	Local planning authority for the district including Sizewell and the associated development site options
East Suffolk line	The railway line which runs hourly (Monday to Saturday and every other hour on Sundays) from Ipswich to Lowestoft passing through Wickham Market, Saxmundham, and Darsham. Under the rail-led strategies this line will accommodate up to five freight trains per day when the green rail route is operational. Upgrade works on this line include a passing loop, signalling upgrades, track crossover at Saxmundham, level crossing works, and bridge strengthening works. Under the road-led and integrated strategies this line would accomodate up to two/three freight trains per day. EDF Energy is working with Network Rail to identify upgrades needed under the road-led and integrated strategies.
EDF Energy	The UK subsidiary of EDF Group, which is one of the world's largest energy companies and safely operates the world's largest fleet of nuclear power plants.
EDF Energy Estate	Land owned by EDF Energy in the Sizewell area.

Term	Definition
Embedded mitigation	This is often referred to as 'primary mitigation' and includes modifications to the location or design of the development made during the pre-application phase that are an inherent part of the project, become a fundamental part of the design for which consent is sought, and do not require additional action to be taken (e.g. architectural treatment of proposed facilities to be in keeping with similar adjacent buildings in its external appearance; reduction in the height of a building to reduce visual impact; identifying a key habitat that should remain unaffected by the development's layout and operation e.g. retaining hedgerows as bat foraging routes; developing a transport strategy that reduces trips, avoiding the need for junction improvements).
Entrainment	Term used to describe the passage of marine organisms small enough to go through the cooling water filtration screens, through the power station cooling water circuit and then discharged to sea.
Environment Agency	A Government Agency responsible for matters relating to contaminated land, waste management, surface water drainage and discharges, flood risk management, and water quality and has responsibility for ensuring that new nuclear power station designs meet high environmental standards and use the Best Available Techniques (BAT) to achieve this.
Environmental Impact Assessment (EIA)	A process for predicting the effects of a proposed development on the environment that informs decision-makers in relation to planning permissions, consents, licences and other statutory approvals, as required by European Union Directive 2011/92/EU (which codified Directive 85/337/EEC) (the EIA Directive).
Environmental Statement (ES)	The document reporting the process and outcomes of the EIA.
Gravity Model	The Gravity Model calculates where both home-based and non-home-based workers would be likely to live across the region. It predicts the location of the permanent homes of homebased workers and temporary accommodation of non-home based workers.
Groundwater	Water occurring below ground in natural formations (typically rocks, gravels and sands).
Highways England	The Government agency responsible for Strategic Road Network (SRN).
Historic England	A Government Agency which promotes conservation and understanding of the historic environment and advises Government on the selection of listed buildings and scheduled monuments for protection and provides grant aid for the maintenance of historic buildings and monuments.
Historic Parks and Gardens	Parks and gardens identified by English Heritage as being of particular interest and quality by reasons of their historic layout, features and architectural ornaments. Like listed buildings they are graded I, II* and II.
Land east of Eastlands Industrial Estate (LEEIE)	Land to the east of the Eastlands Industrial Estate, which is directly north of Sizewell Halt, would be used to support construction on the power station platform and temporary construction area.
Landscape Character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.
Landscaping	A general term used for the means by which, where appropriate, development is made to fit visually into its surroundings by control of siting and layout and use of trees, shrubs or grass (soft landscaping) and/or fences, walls or paving (hard landscaping).
Listed Buildings	Buildings and structures which have been identified as being of special architectural or historic interest and whose protection and maintenance are the subject of special legislation. Their curtilage and setting is also protected. Listed building consent is required before any works can be carried out on a listed building.
Lowest Observed Adverse Effect Level (LOAEL)	Level above which adverse effects on health and quality of life can be detected due to increase in noise as defined in Noise Policy Statement for England (2010).
Main Power Station Platform	The area containing the principal power station buildings including the two UK EPR™ and key ancillary buildings and plant. At Sizewell C, this comprises the area adjacent to Sizewell B power station.
Mitigation	Measures recommended through the EIA process and applied through the regulatory approvals process to avoid, reduce or offset significant adverse effects on the environment.
Morphology	Shape or form.
National Grid	The organisation that runs and operates the high voltage electric power transmission network in Great Britain, connecting power stations and major sub-stations and ensuring that electricity generated anywhere in Great Britain can be used to satisfy demand elsewhere.

Term	Definition
National Policy Statement (NPS)	Policy statements that set out the Government's objectives for the development of nationally significant infrastructure. They undergo a democratic process of public consultation and parliamentary scrutiny before being designated (i.e. published). They provide the framework within which the Planning Inspectorate makes its recommendation to the Secretary of State. The Government is currently undergoing a re-nomination process to understand whether the sites named under EN-6 remain suitable for deployment between 2025-2035.
NNB Generation Company (SZC) Limited	NNB Generation Company (SZC) Limited, part of EDF Energy, is the Company that will be the licensee for the development at Sizewell C. NNB stands for Nuclear New Build.
Operational Phase	The period during which Sizewell C nuclear power station is operational.
Park and ride	Associated development aiming to alleviate traffic going to and from the main development site.
Piling	The installation of bored and driven piles and the effecting of ground treatments by vibratory dynamic and other methods of ground stabilisation.
Proposals	The works that EDF Energy is proposing to undertake as part of the Sizewell C Project. This includes all the components of the nuclear power station itself, as well as 'associated developed', which are the works required to facilitate development of the power station.
Public Access	Permitted use of land by members of the public. Access can be allowed by a variety of means including: public rights of way (i.e. footpath, bridleway, byway); Acts of Parliament; the granting of conditional access by landowners (i.e. National Trust); custom or tradition.
Public Rights of Way (PRoW)	These are designated 'highways' under the Countryside and Rights of Way Act 2000, which the public can use at any time.
Ramsar Site	The Ramsar Convention on Wetlands of International Importance, especially as Waterfowl Habitat (1971) imposes a requirement on the UK Government to promote the wise use of wetlands and to protect wetlands of international importance. This includes the designation of certain areas as Ramsar Sites, where their importance for nature conservation (especially with respect to waterfowl) and environmental sustainability meet certain criteria. Further information can be found on the RAMSAR convention on wetlands website: www.ramsar.org
Receptor	Used to refer to human beings that may be affected by changes arising due to the development and the socio-economic systems on which they depend. These can be reflected individually or collectively. For example, resident, employees, communities.
Resources	Bio-physical features or items of 'environmental capital'. For example, species and their habitats, aquifers, access routes and community facilities.
Sea protection and flood defence (sea defences)	The integrated coastal protection and flood defences are a set of hard and soft engineering features designed to safeguard the station during periods of elevated water levels on the coast (e.g. storm surges and high waves).
Significant Observed Adverse Effect Level (SOAEL)	Level above which significant adverse effects on health and quality of life occur due to increase in noise, as defined in Noise Policy Statement for England (2010).
Site of Special Scientific Interest (SSSI)	An area designated as being of special interest by reason of any of its flora, fauna or geological or physiographical features. SSSIs are designated by Natural England under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000.
Sizewell A / Sizewell A power station	The existing Sizewell A power station and associated infrastructure, located to the south of the existing Sizewell B power station and the location of the proposed Sizewell C power station platform.
Sizewell B / Sizewell B power station	The existing Sizewell B power station and associated infrastructure, located to the south of the location of the proposed Sizewell C power station platform.
Sizewell C Main Development Site	The site of the proposed nuclear power station development (the main development) and construction areas.
Sizewell C / Sizewell C power station	The proposed power station to be located to the north of the existing Sizewell A and Sizewell B power stations.
Sizewell Halt	The nearest railhead to Sizewell nuclear power station, about one mile inland.
Special Protection Area (SPA)	Designated under Article 4 of the European Directive on the Conservation of Wild Birds (2009/147/EC) (i.e. the Birds Directive) to protect the habitats of threatened and migratory birds.

Term	Definition
Stage 3 Main Consultation Document	The documents entitled Volume 1 – Development Proposals", "Volume 2A – Preliminary Environmental Information", "Volume 2B – Preliminary Environmental Information" and "Volume 3 – Preliminary Environmental Information Figures" which together make up the main document consulted on as part of the Sizewell C Proposed Nuclear Development Stage 3 Pre-Application Consultation.
Suffolk County Council	County planning authority for the land area including Sizewell and the associated development site options.
Suffolk Heritage Coast	Areas of coast that are managed to conserve their natural beauty and, where appropriate, to improve accessibility for visitors.
Surface Water	Terrestrial water bodies that are found above ground level, such as lakes, rivers and ditches, and including fresh and inland brackish water.
UK EPR™	The third generation Pressurised Water Reactor design. It has been designed and developed mainly in France and Germany. In Europe this reactor design was called the European Pressurised Reactor and the international name of this reactor is Evolutionary Power Reactor, but is now referred to as EPR™.
VISSIM	Vissim is a multi-modal traffic flow simulation software package.
VISUM	Visum is a traffic analysis and forecasting software package.
Water Management Zone (WMZ)	Zone in which surface water run-off would be attenuated, treated if required and monitored before being infiltrated back into the groundwater system or discharged to local watercourses under a relevant water discharge permit.
Water Framework Directive (WFD)	European Community Directive (2000/60/EC) on integrated river basin management. The WFD sets out environmental objectives for water status based on: ecological and chemical parameters; common monitoring and assessment strategies; arrangements for river basin administration and planning; and a programme of measures in order to meet the objectives. For further detail consult the European Commission website: http://europa.eu.int
Zone of theoretical visibility	The likely (or theoretical) extent of visibility of a development, usually shown on a map.