

## Deadline 2 Representation 2<sup>nd</sup> June 2021

**David and Belinda Grant, [REDACTED], Middleton-cum-Fordley, Suffolk. [REDACTED]**  
**Holders of 'Best Small Farm in Suffolk' and special award for 'Best Conservation' by SAA since 2019.**

This is our Deadline 2 Summary Representation together with Annexes to the Planning Inspectorate regarding the proposed Sizewell C nuclear development (SZC) currently before the Planning Inspectorate under DCO submission.

**In answer to the three issues raised by PINS following Preliminary Hearings:**

**Ag.1.25 – We have no private boreholes**

**Ag.1.27 – Maps contained in Second/Annex 2 hereto**

**Bio:1.35 – BSG ecology report attached Fourth/Annex 4**

We shall attempt to keep our Representation brief and we should like to concentrate on the following issues:

1. A request to the Planning Inspectorate to insist upon a reassessment of the features and benefits leading to the selection of Route Z in preference to Route W as requested by SCC and Dr Therese Coffey MP
2. Design and function of the junction at Fordley Road with proposed Sizewell Link Road (SLR)
3. A request for the Planning Inspectorate to consider information contained by our heritage expert Richard Hoggett
4. Ecology Report from BSG commenting on Applicant's subcontractor (Arcadis) findings and continued shortcomings together with ecological issues relating to [REDACTED]
5. Environmental Issues relating to [REDACTED]
6. Lack of constructive engagement by the Applicant, with examples
7. Summary of further concerns relating to the SZC project as a whole.

### **1. Route Selection.**

We attach a Technical Note dated 14<sup>th</sup> May 2021 (First Annex 1) from our independent Consulting Engineers, Create which provides an unbiased comparison of both Route Z and Route W.

We believe this to be self-explanatory and conclusive and would ask the Planning Inspectors to call for reassessment as already requested by Suffolk County Council and our MP Dr Therese Coffey.

### **2. Fordley Road/Route Z (SLR) Junction.**

We attach a further Technical Note from Create dated 1<sup>st</sup> June 2021 (Second Annex 2) setting out our researched proposals for the junction of Fordley Road at its intersection with Route Z (SLR).

The Inspectors are due to visit this location during their tour day on 9<sup>th</sup> June and hopefully they will appreciate the simple logic that we have employed; to maintain an effective 'status quo'.

Currently when travelling north, Fordley Road connects the residents of Fordley Road and Kelsale to the village of Middleton, its church, shop, pub and general community.

Southbound, Fordley Road currently provides access for the residents of Middleton and Middleton Moor to Saxmundham with its Health Centre, supermarkets and railway station.

The Applicant's current proposal is to simply provide access/egress to Fordley Road **only with the new SLR**, severing the community and depriving residents of access to essential local facilities.

It is not just a risk, but a guarantee, that this access to Fordley Road from the SLR will lead to its abuse as a 'rat-run' for SZC traffic – those wanting to avoid delays westbound at peak periods. Fordley Road is a single-track lane, with no official passing places, which connects to Butchers Road (again no passing places) into Kelsale and Saxmundham – a total distance of 2.5 miles. There is access from Fordley Road to the A12 via North Green – again, ideal for rat-running in the event of congestion at either of the two new roundabouts proposed by the Applicant at the western end of SLR or Yoxford at the junction with the A1120.

Therefore, Fordley Road must not be allowed direct access to the SLR; it needs to be retained to continue its current function of access to the B1122 for the local communities – hence our proposal to the Inspectors and the Applicant for Fordley Road to pass **below the proposed SLR**. Our consultants Create, confirm that this is not a great challenge from an engineering perspective and the SLR could then be reduced in width by 33% at the crossing point. Such a passage below the SLR could even be single track, with traffic lights to control directional traffic flow, whilst at the same time creating a permanent traffic calming measure.

There have been suggestions for a foot/bicycle bridge over the SLR; in that an HGV truck can be up to 4.6 metres high, so that, with a tolerance above of 2 metres, such a structure would have to be in excess of 6.6 metres above the projected height of the SLR – a veritable eyesore with very obvious shortcomings.

Such a structure should surely also be open to wheelchairs as well as bicycles thus requiring a series of ramps for access.

Such a structure would be a true blot on the rural landscape and clearly visible for many miles.

Such a structure will not resolve the issue of access to working farmland by several local farmers (including ourselves) who regularly use Fordley Road to move farming machinery, fertilizer, harvest yields etc to land south of the B1122; the only alternative being diversion west to Yoxford, then along the A12 and back down through North Green to Fordley Road - grossly inefficient both in time and cost.

Taking Fordley Road **under the SLR** will also provide access for emergency services to Middleton and Fordley communities (including the residential Nursing Home on Middleton Moor) in the event of closure of the A12 or an accident on the SLR itself.

As previously stated, our proposed design solution retains a true 'status quo', neither improving nor worsening the current local roadway system but certainly not severing communities or farmland business access.

### **3. Heritage Issues.**

A Heritage was prepared on our behalf by Dr Richard Hoggett (Third Annex 3) in March 2019 and again highlighted considerable discrepancies with the information provided by the Applicant at Stage 3 Consultation in relation to comparison of the number of listed Heritage assets on both Route W and Route Z and the questionable criteria employed – Section 6 on page 43 allows access to his conclusions and disquiet.

Dr Hoggett was from 2013-2016 Senior Archaeological Officer for Suffolk County Council.

The most disquieting finding being that the Applicant had regarded the roundabout at Yoxford to be outwith the SLR when calculating and comparing the number of Listed buildings affected by Route Z and Route W. Yoxford roundabout is effectively integral to the SLR concept in managing both southbound (A12) and eastbound (A1120) traffic but, by separating the two, then the numbers can be manipulated by the Applicant to provide dubious decision justification.

#### **4. Ecology Report and Discrepancies**

##### **a) Ecology Report:**

Please find attached (Fourth Annex 4) a thoroughly comprehensive Report prepared by Roger Buisson of BSG Consulting. It is self-explanatory, but raises, both in the Summary and Conclusions several severe shortcomings in the Applicants ecological survey work and results. We would ask the Inspectors to give serious consideration to this Report, especially in the light of the Applicant's finding of 'No Invertebrates' having surveyed over 37 acres of our farm – not credible as proven by BSG within their report.

##### **b) Discrepancies:**

When the Applicant's agents, Dalcour Maclaren (DM), first approached us requesting access for surveys in early 2019 we, not unreasonably, requested copies of the results thereof - this was refused. Ultimately, we agreed to be supplied with a brief 'synopsis' of the findings of all survey work; the big mistake that we made was not to stipulate a timescale for the receipt of this synopsis – over the last two years we have had to chase and chase for results – sometimes to actually be told by DM that 'there is no commitment to supply within any timeframe'; hardly positive engagement with Stakeholders.

We have previously brought to the attention of the Inspectors considerable discrepancies thrown up by the summary of the Applicants ecology report (Arcadis) received in January 2020 for their survey work between mid-July and end-August 2012 and that prepared by our own retained consultant ecologist Roger Buisson of BSG.

We have spoken to members of the subcontractor teams working for Arcadis about these discrepancies and they said that they too found it... "frustrating that so much of our work and findings never see the light of day – it's just box ticking – you might find some of it on the Suffolk Wildlife Trust website if you dig deep".

The Inspectors will draw their own conclusions; especially in that we are only one very small area within the scope of the SZC project overall.

#### **5. Environmental Issues**

Within Second Annex 2 the Technical Note dated 1<sup>st</sup> June from our consultants, Create Consulting Engineers Ltd grave concerns are raised over the issues of Noise, Lighting, Dust and Visual impact. The report also highlights to total severance of 50% of our working farmland by both elements of the SLR.

Again, there has been no engagement from either the Applicant or their agents DM on any of these issues since that launched their plans for the SLR in January 2019.

#### **6. Lack of True Engagement by the Applicant.**

Despite the seductive rhetoric of numerous Press releases and the recent Open Forum Hearings, the harsh reality is that meaningful engagement with the Applicant has been scarce and erring towards lip-service. Their Agents DM exchange emails, but rarely with any form of resolution of queries or commitment to firm timescales in terms of agreed actions.

After the announcement of the proposal for the SLR contained in Stage 3 Consultation in January 2019, the Director in charge of Project Transport/Logistics, Richard Bull kindly agreed to come and meet with us and our neighbouring farmers, the Bacon family from Theberton, on 12<sup>th</sup> February 2019.

Richard spent a good deal of time with us, and we travelled the length of both the SLR and Route W for an information gathering process. It transpired that the plan then envisaged to incorporate

Littlemoor Road as an access to the SLR was totally impractical due to its proposed width in proximity to the two Listed Grade 2 properties of Fordley Hall and Vale Farm opposite – Richard’s explanation being “oh, don’t worry, this sort of thing happens – it’s only a desk-top study”. The issuance of the Stage 4 Consultation subsequently stopped up Littlemoor Road and proposed SLR access/egress to Fordley Road which itself had been proposed for stopping up in Stage 3. Now, we are only farmers, but this was simple, practical stuff made evident by physically visiting site – but Richard Bull did review at Stage 4 Consultation as he had promised: good engagement. Since that time Covid 19 has provided a highly convenient screen behind which both the Applicant and DM hide. During Lockdown sub-contractors continued to access both this farm and most of the others on the SLR alignment, but all we were offered was a meeting (50% virtual) on 10<sup>th</sup> December 2020; Minutes of which were only issued months later. On 15<sup>th</sup> December a representative of the Applicant’s Roads consultants WSP, John Howell attended an on-site meeting and agreed to consider our suggestions and queries relating to the SLR, discuss with his principals and to revert – despite repeated requests for updates, we were only informed that Mr Howells no longer works for WSP in mid-May – another 5 months had passed on the way to the DCO process. Landowners have been engaged with the Applicant, its solicitors and agents for nearly two years in the negotiation of Heads of Terms for an Option to purchase of, and for the management of, land required for the SLR; a break date of 30<sup>th</sup> April was finally imposed by the Applicant beyond which financial incentives would fall away; no doubt to demonstrate to the Inspectors that it had indeed engaged with stakeholders. The HoTs as signed contained a commitment by the Applicant that the draft Option documentation would be issued by their solicitors by 4<sup>th</sup> May; they have failed in this their only promise – documents were over 20 days late in arrival at landowner’s solicitors.

## **7. Summary of further concerns**

We, like so many others who have spoken at OFH, are still bemused that consideration is even being given to the concept of SZC as promoted by the Applicant.

They have yet to complete any their own build of EPR reactors, with projects in Finland and France both already several times over original budget and with completion delays of almost a decade beyond expectation. Even in their home market, the Applicant is promoting new technology in preference to EPR.

Hinkley Point C (stated to be a duplicate of SZC) is already both over budget and late on construction - the only way it could even commence was for the UK Government to underwrite the purchase price of the power to be generated. This guarantee was at a price more than double the cost of renewables power generation; the British taxpayer and power consumer will have to bear the cost of this for generations to come. The Applicant once stated that it could build SZC at a 20% saving on HPC – 20% of what? Now the Applicant flails about to ‘possibly’ integrate an electrolyser for hydrogen production and then possible carbon capture in an attempt to breath life into a moribund concept.

We fully endorse the opinions and statements made so eloquently by both Mr John Walton (OFH2 session 1) and Alison Downes of Stop SZC (OFH9 session 1).

We should like to request participation in Issue Specific Hearings (when decided upon) regarding both Sizewell Link Road and Compulsory Purchase; we will be assisted by our relevant experts, Create, Dr Hoggett, BSG Eco, and Savills – please note that Greg Jones QC no longer represents our interests.

**We believe that there is no place, nor need for ‘Big Nuclear’ within the nation’s power generation agenda and we hope that PINS will determine not to recommend the adoption of SZC as a project.**



# Heritage Assessment

The Proposed Sizewell Link Road, Theberton  
Bypass and Yoxford Roundabout,  
Suffolk

prepared for  
Middleton and Theberton Landowners

March 2019

Richard Hoggett Heritage

[REDACTED]

[REDACTED] [REDACTED]@richard-hoggett.co.uk

## Contents

1	Introduction.....	1
2	Legislation and Planning Policy.....	3
2.1	Ancient Monuments and Archaeological Areas Act (1979).....	3
2.2	Planning (Listed Buildings and Conservation Areas) Act 1990.....	3
2.3	NPS EN-1.....	4
2.4	The National Planning Policy Framework.....	6
3	Project Background.....	8
4	Sizewell Link Road.....	11
4.1	Route Selection.....	11
4.2	Route Z.....	11
4.2.1	Designated Heritage Assets.....	13
4.2.2	Non-Designated Heritage Assets.....	17
4.3	Route W.....	19
4.3.1	Designated Heritage Assets.....	20
4.3.2	Non-Designated Heritage Assets.....	22
4.4	Discussion: Heritage Impacts of Routes Z and W.....	25
5	Yoxford Roundabout.....	34
5.1	Designated Heritage Assets.....	35
5.1.1	Yoxford Conservation Area.....	35
5.1.2	Listed Buildings.....	37
5.2	Non-Designated Heritage Assets.....	38
5.3	Discussion: Heritage Impacts of the Yoxford Roundabout.....	41
6	Conclusions.....	43
7	References.....	45
8	About the Author.....	47

Appendix 1: Designated Heritage Asset Maps (Route Z).....	48
Appendix 2: Designated Heritage Assets table of Route Z (Recalculated) with 750m buffer .....	51
Appendix 3: Designated Heritage Assets table of Route W (South) with 750m buffer .....	53
Appendix 4: Designated Heritage Assets table of Route W (North) with 750m buffer .....	55
Appendix 5: Designated Heritage Assets table of Route Z (Recalculated) with 375m buffer .....	57
Appendix 6: Designated Heritage Assets table of Route W (South) with 375m buffer .....	58
Appendix 7: Designated Heritage Assets table of Route W (North) with 375m buffer .....	59
Appendix 8: Designated Heritage Assets Map (Yoxford Roundabout) .....	60

## List of Figures

Figure 1.	The alternative routes for the Sizewell Link Road considered by EDF Energy (EDF Energy 2019 Vol. 1, p.312, Fig. 10.1) .....	10
Figure 2.	The misapplication of the 750m buffer zone to the Route Z corridor, effectively excluding Leiston Abbey from the reckoning. Copied scalebars indicate the extent of the shortfall. ....	14
Figure 3.	Route Z, showing the Listed Buildings and Scheduled Monument which lie within the recalculated 750m of the proposed road line. Compare Appendix 1, and note the inclusion of Listed Buildings in the Leiston Abbey complex. ....	15
Figure 4.	The southern variation of Route W, showing the Listed Buildings and Scheduled Monument which lie within 750m of the proposed road line. ....	23
Figure 5.	The northern variation of Route W, showing the Listed Buildings and Scheduled Monument which lie within 750m of the proposed road line. ....	24
Figure 6.	The numbers of Designated Heritage Assets within 750m and 375m of each proposed route. ....	27
Figure 7.	Route Z, showing the Listed Buildings which lie within the recalculated 375m of the proposed road line. ....	29
Figure 8.	The southern variation of Route W, showing the Listed Buildings and Scheduled Monument which lie within 375m of the proposed road line. ....	30
Figure 9.	The northern variation of Route W, showing the Listed Buildings which lie within 375m of the proposed road line. ....	31
Figure 10.	The current extent and proposed extensions to Yoxford Conservation Area (SCDC 2019).....	36
Figure 11.	The two landscape parks which adjoin the proposed site of the Yoxford roundabout. Scale 1:10,000.....	40

# 1 Introduction

This Heritage Assessment has been prepared by Dr Richard Hoggett MCIfA FSA at the request of the Middleton and Theberton Landowners group. It has been produced in response to development proposals put forward in the Sizewell C Stage 3 Pre-Application Consultation documents published by EDF Energy in January 2019 (EDF 2019a, 2019b, 2019c, 2019d). While the published consultation documents relate to all aspects of the proposed development of the Sizewell C complex and supporting infrastructure, this heritage assessment focusses specifically on the likely heritage impacts of two main elements of the proposed scheme:

- the Sizewell Link Road between the A12 and the construction site (including the route of the proposed Theberton Bypass), which has been introduced to the scheme since the Stage 2 consultation, including a comparative assessment of an alternative route further to the south; and
- the upgrading of the existing ghost-island junction between the A12 and the B1122 at Yoxford to a roundabout.

The content of this assessment has been informed by a data extract obtained from the Suffolk Historic Environment Record on 6 March 2019, designations data current to 15 February 2019 obtained from Historic England on 3 March 2019, and a site visit and client meeting undertaken on 14 March 2019. In preparing this heritage assessment, due regard has been paid to the professional guidance set out in the Chartered Institute for Archaeologists' *Standard and Guidance for Historic Environment Desk-based Assessment* (CIFA 2017).

Section 1 of this report sets out the legislative framework and planning policies under which the Sizewell C scheme is due to be determined and highlights the approaches to managing impact on the historic environment which are contained therein.

Section 2 describes the background to the Sizewell C project and sets out the wider context within which the two main elements of the proposals examined here sit.

Section 3 presents a critical appraisal of the approach to heritage impact taken to the proposed route of the Sizewell Link Road/Theberton Bypass, as set out in the consultation documents, and compares and contrasts this with the alternative Route W, which has not been taken forward as part of the proposal.

Section 4 presents a critical appraisal of the approach to heritage impact taken to the proposed new Yoxford roundabout at the junction of the A12 and B1122.

## 2 Legislation and Planning Policy

Under the terms of the Planning Act 2008, as a Nationally Significant Infrastructure Project (NSIP) the planning application for the development of the Sizewell C site and associated infrastructure will be determined at a national level by the Secretary of State, following examination by the Planning Inspectorate. Applications are determined within the context of the relevant National Policy Statements (NPSs), with the primary policy basis for nuclear projects being informed by the Overarching NPS for Energy (NPS EN-1) and the NPS for Nuclear Power Generation (NPS EN-6).

With specific regard to Designated Heritage Assets, reference also needs to be made to the terms of the Ancient Monuments and Archaeological Areas Act (1979) and the Planning (Listed Buildings and Conservation Areas) Act 1990. Summary details of the relevant legislations and policies as they pertain to the issues considered here are set out below.

### 2.1 Ancient Monuments and Archaeological Areas Act (1979)

Under the terms of the act, an archaeological site or historic building of national importance can be designated as a Scheduled Monument under the terms of the Ancient Monuments and Archaeological Areas Act (1979). Any works, including development, which might affect a Scheduled Monument are subject to the granting of Scheduled Monument Consent alongside any planning permission which may be required.

### 2.2 Planning (Listed Buildings and Conservation Areas) Act 1990

Legislation pertaining to buildings and areas of special architectural and historic interest is contained within the Planning (Listed Buildings and Conservation Areas) Act 1990. Section 66 of the 1990 Act states that 'in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority ... shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.'



## 2.3 NPS EN-1

Policies pertaining to the historic environment are contained within Section 5.8 of the NPS EN-1, and they mirror the then-current approach to heritage planning which was contained within Planning Policy Statement 5, published by the Department for Communities and Local Government in 2010 (DCLG 2010). PPS5 has since been superseded by the National Planning Policy Framework published in 2012 and revised in 2018 (MCLG 2019). For reference, a summary of the heritage planning approach contained within the NPPF is included in the next section.

In addition to Designated Heritage Assets, NPS EN-1 recognises that Non-Designated Heritage Assets may have equivalent significance in the decision-making process. This is set out in the following paragraphs:

- Para. 5.8.4: There are heritage assets with archaeological interest that are not currently designated as scheduled monuments, but which are demonstrably of equivalent significance.
- Para. 5.8.5: The absence of designation for such heritage assets does not indicate lower significance. If the evidence before the Infrastructure Planning Commission (IPC) indicates to it that a non-designated heritage asset of the type described in 5.8.4 may be affected by the proposed development then the heritage asset should be considered subject to the same policy considerations as those that apply to designated heritage assets.
- Para. 5.8.6: The IPC should also consider the impacts on other non-designated heritage assets, as identified either through the development plan making process (local listing) or through the IPC's decision making process on the basis of clear evidence that the assets have a heritage significance that merits consideration in its decisions, even though those assets are of lesser value than designated heritage assets.

With regard to the level of information required to be provide by the applicant in order to enable an informed decision to be made, NPS EN-1 states the following:

- Para. 5.8.8: As part of the Environmental Statement the applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance.
- Para. 5.8.9: Where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment

and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact.

- Para. 5.8.10: The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents.
- Para. 5.8.11: In considering applications, the IPC should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset.
- Para. 5.8.12: In considering the impact of a proposed development on any heritage assets, the IPC should take into account the particular nature of the significance of the heritage assets and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between conservation of that significance and proposals for development.
- Para. 5.8.13: The IPC should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution they can make to sustainable communities and economic vitality. The IPC should take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials and use.
- Para. 5.8.14: There should be a presumption in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be. ... Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. Loss affecting any designated heritage asset should require clear and convincing justification.
- Para. 5.8.15: Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of development, recognising that the greater the harm to the significance of the heritage asset the greater the justification will be needed for any loss.
- Para. 5.8.18: When considering applications for development affecting the setting of a designated heritage asset, the IPC should treat favourably applications that preserve those elements of the setting that make a positive contribution to, or better reveal the significance of, the asset. When considering applications that do not do this, the IPC should weigh any

negative effects against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval.

## 2.4 The National Planning Policy Framework

Although the primary policy basis for determining the Sizewell C application contained within NPS EN-1 and NPS EN-2, the extent to which the NPPF is deemed a material consideration is a matter for the examining authority and the Secretary of State.

Provision for the historic environment is considered in Section 16 of the NPPF, which directs Local Planning Authorities to set out 'a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats' (NPPF para. 185). The aim is to ensure that Local Planning Authorities, developers and owners of heritage assets adopt a consistent approach to their conservation and to reduce complexity in planning policy relating to proposals that affect them.

- Para. 189: In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance.
- Para. 190: Requires the applicant to 'identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset) taking account of the available evidence and any necessary expertise'.
- Para. 193: 'When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance'.
- Para. 194: 'Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification' (NPPF para. 194) and as a corollary, paragraph 196 states that 'Where a development proposal will lead to less than substantial harm to the significance of a designated heritage

asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use'.

- Para. 196: Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.
- Para. 197: The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.

### 3 Project Background

NNB Generation Company (SZC) Limited is proposing to build and operate a new nuclear power station, Sizewell C, on land immediately to the north of the existing Sizewell B power station, located on the Suffolk Coast, approximately half way between Felixstowe and Lowestoft, to the north-east of the town of Leiston. Details of the latest development proposals are put forward in the Sizewell C Stage 3 Pre-Application Consultation documents published by EDF Energy in January 2019 (EDF 2019a, 2019b, 2019c, 2019d). The Stage 3 consultation seeks further views on those proposals and on issues where different options for elements of the project are still being considered. It is intended that the consultation responses received will subsequently inform the preparation of an application for development consent.

The impact which the additional transport needs of the Sizewell C scheme will have on the local infrastructure and environment, especially during the construction phase of the new plant, have consistently been highlighted as a key issue during earlier consultation phases, and a number of different transport options have been examined. Since the Stage 2 consultation, EDF Energy have concluded that the marine-led strategy for construction traffic proposed at that stage would be too challenging to deliver, because of its impact on the marine environment and related potential to impact the project's construction programme and operational date. The Stage 3 consultation states that the marine-led transport strategy proposed in previous consultations is no longer considered to be viable. Instead, the Stage 3 consultation documents present two alternative transport options for the management of freight during the construction phase of the site: a rail-led strategy and a road-led strategy. A decision has yet to be made about whether a rail-led or road-led freight management strategy will be adopted.

The rail-led strategy would see construction materials brought straight to the main development site along an upgraded version of the existing Saxmundham to Leiston branch line and the East Suffolk main line. If the rail-led strategy were adopted, a bypass would be constructed on the B1122 around the village of

Theberton, to the north of the Sizewell site, to prevent construction traffic from travelling through the centre of the village.

The road-led strategy would involve the construction of a new link road, dubbed the 'Sizewell Link Road', which would connect the A12 with the development site. The proposed link road has emerged as part of the developing transport strategy for the movement of construction materials during the building and operations of Sizewell C. This route would also incorporate the route of the Theberton Bypass proposed for the rail-led strategy into its length.

Under both the rail-led and road-led transport strategies it is considered necessary to upgrade the existing ghost-island junction between the A12 and B1122 at Yoxford to a roundabout, in order to accommodate the greater volume of traffic the construction phase will generate. The route of the Theberton Bypass is also a common element of both schemes.

This report presents a heritage-based critique of the proposed Route Z of the Sizewell Link Road, which incorporates the Theberton Bypass, and comparative assessments of the northern and southern variations of alternative link-road Route W. This is followed by a separate critique of the heritage impacts of the proposed Yoxford roundabout, which are equally applicable to the rail- and road-led transport strategies, but which may not be necessary for either of the variations of Route W.



**Figure 10.1** Sizewell link road potential route options

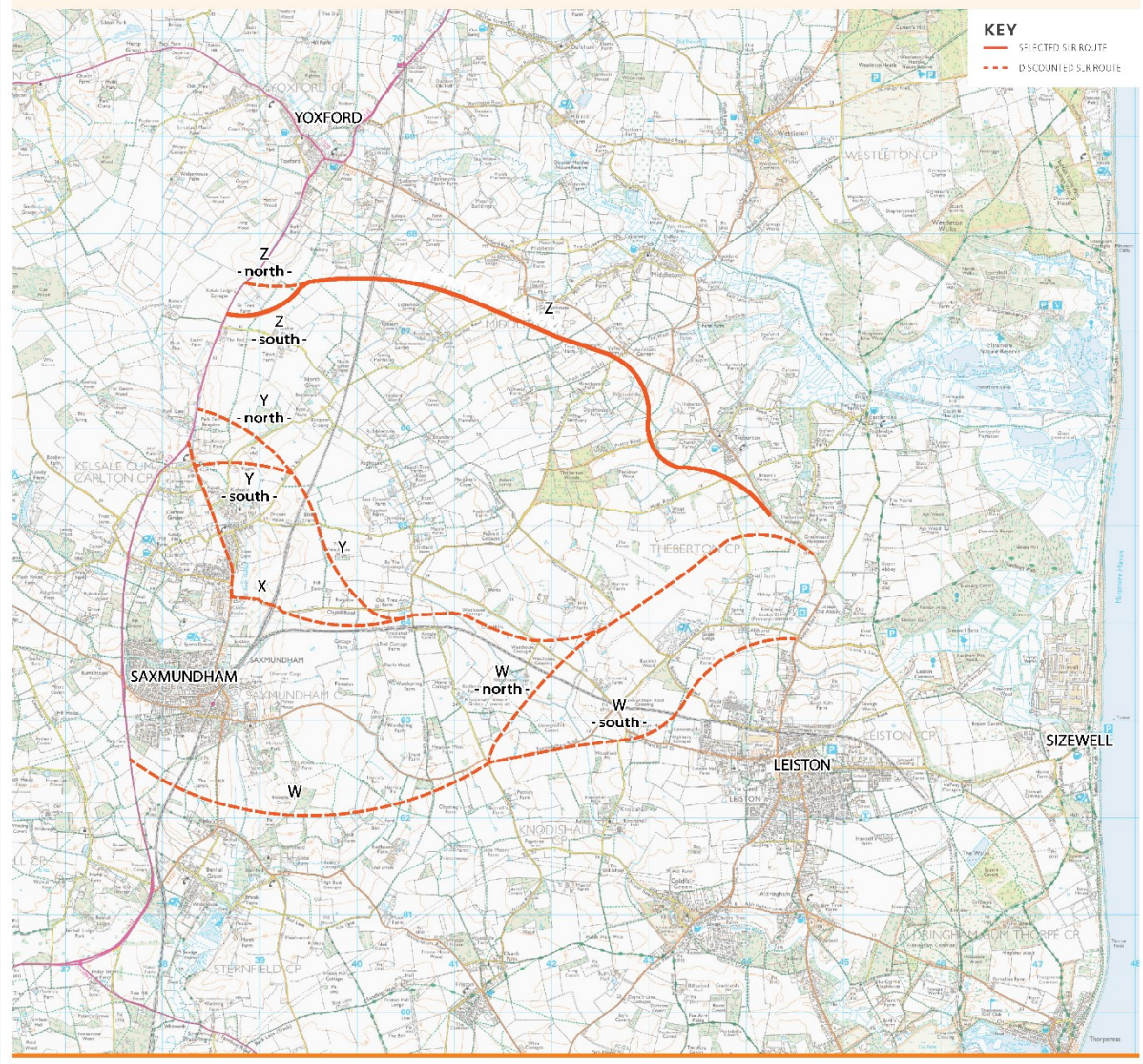


Figure 1. The alternative routes for the Sizewell Link Road considered by EDF Energy (EDF Energy 2019 Vol. 1, p.312, Fig. 10.1)

## 4 Sizewell Link Road / Theberton Bypass

One of the key subjects on which comment is invited during the Phase 3 consultation process is the decision which needs to be made between a road-led and a rail-led transport strategy for construction traffic (EDF Energy 2019 Vol. 1, Chapter 5). As currently proposed, the road-led strategy would involve the construction of a new link road, dubbed the 'Sizewell Link Road', which would connect the A12 with the development site (EDF Energy 2019 Vol. 1, Chapter 10). The proposed link road has emerged as part of the developing transport strategy for the movement of construction materials during the building and operations of Sizewell C.

### 4.1 Route Selection

As is set out in the consultation documents, four alternative routes for the Sizewell Link Road have been considered, with a high-level environmental appraisals conducted for each to aid decision-making. These appraisals summarised the potential effects of the proposed routes on a number of different environmental factors, including Designated Heritage Assets, i.e. Scheduled Monuments, Listed Buildings and Conservation Areas (EDF Energy 2019 Vol. 1, p. 314–16, paras 10.5.1–7). The four potential route options considered – referred to as Routes W, X, Y and Z – are illustrated in Figure 10.1 of the consultation documents (EDF Energy 2019 Vol. 1, p.312, Fig. 10.1, reproduced here as Figure 1). The route selected by EDF Energy is referred to as Route Z, the alternative route considered as part of this assessment is referred to as Route W.

### 4.2 Route Z

Details of the proposed Sizewell Link Road are set out in Chapter 10 of the Development Proposals consultation document (EDF Energy 2019 Vol. 1, pp. 311–23, paras 10.1.1–10.9.2), with supporting in-depth assessments given in Chapter 5 of the Preliminary Environmental Information document (EDF Energy 2019 Vol. 2a, pp. 259–308, paras 5.1.1–5.14.4). The assessment of the terrestrial Historic Environment examined here is presented in section 5.5 of the Preliminary Environmental Information (EDF Energy 2019 Vol 2a, pp. 274–81, paras 5.5.1–5.5.55).



The proposed new road would originate south of Yoxford and bypass Middleton Moor and Theberton. (EDF Energy 2019 Vol. 1, p. 311, para. 10.1.4). Route Z joins the A12 just north of Town Farm Lane then turns north past Buskie Farm and crosses the East Suffolk railway before heading east, crossing Littlemoor Road and Fordley Road. The route continues to the south of Gardenhouse Farm, broadly parallel to the B1122, past Valley Farm near Anneson's Corner. It then joins the alignment of the Theberton Bypass, passes through Plumtreehills Covert, crosses Pretty Road and continues to the south-west of Theberton. After crossing Moat Road, the route joins the B1122 alongside Brown's Plantation, to the north of the development site entrance (EDF Energy 2019 Vol. 1, p. 314, paras 10.4.7–8).

The western section of the link road, the 4.2km length between the A12 and the western edge of Theberton, would only be built under the road-led strategy. However, the element of the Sizewell Link Road which comprises a bypass around Theberton, effectively the eastern section of the link road, would be similar under the road- and rail-led strategies (EDF Energy 2019 Vol. 2a, p. 308, paras 5.14.1–2). The critique of the approach to assessing heritage impact presented here therefore applies to both the full length of the Sizewell Link Road and the shorter element which it shares with the Theberton Bypass.

In terms of the heritage impact of the selected Sizewell Link Road Route Z, the high-level environmental appraisals identified that 'whilst the proposed alignment gives consideration to Theberton Hall and the listed buildings within Theberton village, there is potential for the significance of several heritage assets to be affected adversely due to changes in their setting resulting from the route albeit to a limited extent' (EDF Energy 2019 Vol. 1, p. 316, para. 10.5.7). The conclusions summarised in the table of benefits and constraints, which described Route Z as having 'potential effects on the setting of a number of historic assets (Grade II) along each route. Key assets to consider include Dovehouse Farmhouse, Theberton Hall and The Gates/Walls at Theberton Hall.' (EDF Energy 2019 Vol. 1, p. 315, Table 10.1).

An archaeological desk-based assessment of the full length of the Sizewell Link Road (Route Z) was undertaken in April 2018, the results of which inform the

assessment of the terrestrial historic environment presented in the consultation documents (EDF Energy 2019 Vol 2a, pp. 274–8, paras 5.5.1–55). For heritage impact purposes, a study area comprising a 750m buffer zone around the proposed road corridor was agreed with the Suffolk County Council Archaeological Service as providing an appropriate context for the route. The proposed road corridor, which at approximately 30m is wide enough to accommodate all of the necessary roadside verges, earthworks and berms, and the extent of the buffer, are illustrated in Volume 3 of the EDF Energy consultation documents (EDF Energy 2019 Vol. 3, pp. 69–70, figs 5.5.1–2) and these figures are reproduced here as Appendix 1.

It should be noted that in generating their 750m buffer zone, EDF Energy have worked from the edges of the road line itself (shown in black on the plan in Appendix 1) rather than the edges of the working corridor (shown in red in Appendix 1). While for much of the route this approach makes little difference in terms of area, it does have significant implications for the assessment of Designated Heritage Assets at the eastern end of the route, as it effectively stops the study area buffer some 250m short of the recommended full 750m and therefore does not include the complex of Listed Buildings within the Leiston Abbey complex. This discrepancy is clearly illustrated in Figure 2, in which the scalebar from the EDF plans has been copied onto the buffer zone (Figure 2).

#### 4.2.1 Designated Heritage Assets

The desk-based assessment identified that no Scheduled Monuments lie within the working width of the road corridor, but the scheduled area of Leiston Abbey (Second Site) extends into the very eastern end of the 750m study area buffer zone (SM 1014520) (EDF Energy 2019 Vol. 2a, p. 274, para. 5.5.4). This relationship is also illustrated in the maps reproduced in Appendix 1, but as discussed above, there is a marked shortfall in the coverage of this end of the study area. The distance between the end of the proposed new link road and the Leiston Abbey site is considered sufficient to minimise any direct impact which the construction of the road itself may have on the setting of the Abbey (EDF Energy 2019 Vol. 2a, p. 277, para. 5.5.43 and 47). However, the proximity of the Abbey complex to the proposed entrance to the Sizewell C construction site means that the effects on its setting

are a material consideration in many different aspects of the development proposal. Leiston Abbey sits high on the hillside, and its open southern aspect, on which side the monastic cloister was located, contributes more to its significance than the more closed and cloister-free setting to the north.

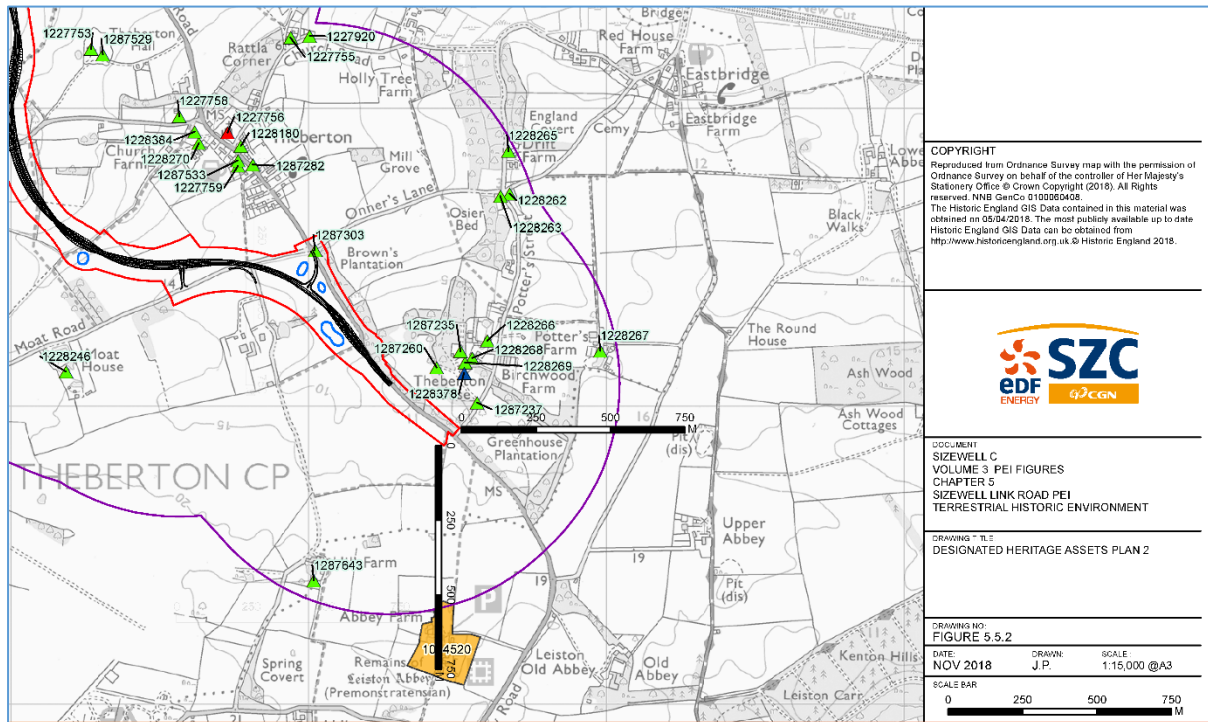


Figure 2. The misapplication of the 750m buffer zone to the Route Z corridor, effectively excluding Leiston Abbey from the reckoning. Copied scalebars indicate the extent of the shortfall.

The desk-based assessment identified that there is one Listed Building which stands within the proposed width of the road, the Grade II-listed Gate and Gate Piers of Theberton House (LB 1287303), while an additional 45 Listed Buildings stand within the 750m buffer zone around the road. Of these, one is the Grade I listed church of St Peter, Theberton (LB 1227756) and one the Grade II\* listed Theberton House (LB 1228378). The remaining 43 buildings are listed at Grade II and comprise buildings associated with Theberton House and within the village of Theberton itself, as well as farmhouses and associated buildings and cottage (EDF Energy 2019 Vol. 2a, p. 274, paras 5.5.3–4). The locations of these buildings are illustrated in the maps reproduced in Appendix 1, and many of them would be affected by both the construction of the full length of the Sizewell Link Road and the shorter Theberton Bypass.



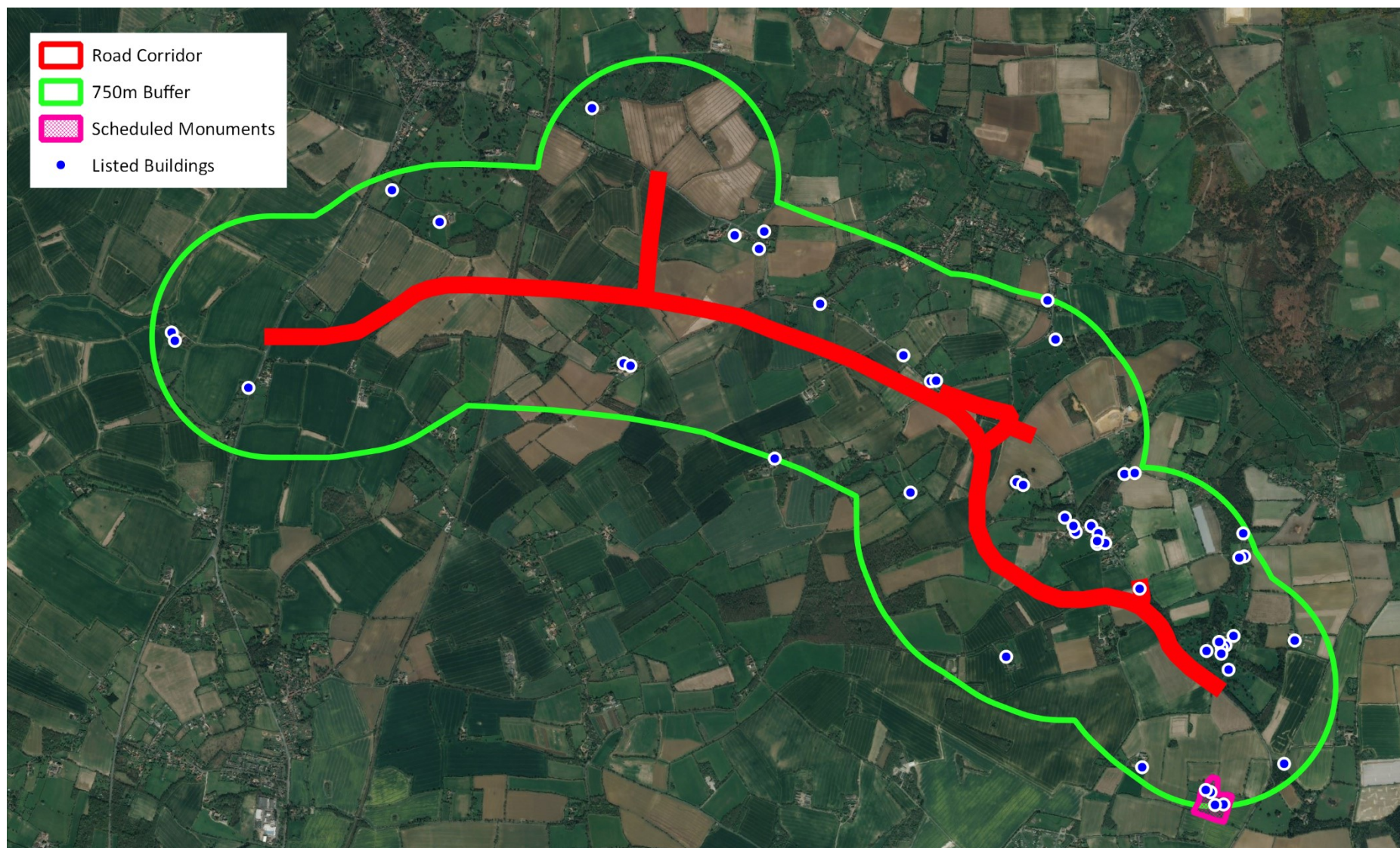


Figure 3. Route Z, showing the Listed Buildings and Scheduled Monument which lie within the recalculated 750m of the proposed road line. Compare Appendix 1, and note the inclusion of Listed Buildings in the Leiston Abbey complex.

For the purposes of this assessment, an alternative map of the proposed route has been created applying the 750m buffer to the working corridor of Route Z, and this is reproduced here as Figure 3. As can be seen, this recalculated study area includes all of the Listed Buildings and Scheduled Monument described above, but crucially also includes an additional five Listed Buildings in and around the Leiston Abbey site. These additional buildings include the Grade I-listed ruins of the Abbey, the Grade II\*-Listed Moor Farmhouse and three more Grade II-listed buildings. As can also be seen, the majority of these buildings lie at the eastern end of the proposed and would therefore be equally affected by the full Sizewell Link Road and the reduced length of the Theberton Bypass. The full list of Designated Heritage Assets identified in this recalculation is given in Appendix 2, which should be compared to the list in the EDF Energy consultation documents (EDF Energy 2019 Vol. 2a, pp. 280–1, tables 5.5.3 and 4)

The EDF Energy consultation documents state that change to the setting of Designated Heritage Assets arising from visibility of the proposed link road, and construction noise or changes to air quality, could give rise to loss of or harm to heritage assets (EDF Energy 2019 Vol. 2a, p. 276, para. 5.5.34). The use of the phrase 'loss of' in this paragraph is a cause for alarm, and in the absence of more detailed information it is difficult to be sure which Designated Heritage Assets are being referred to as likely to be being lost.

EDF Energy acknowledge that construction could potentially affect the settings of Designated Heritage Assets within and beyond the proposed route, and that persistent visibility of the completed road will remain a factor. In particular, they anticipate that the Gate and Gate Piers of Theberton House (LB 1287303) and the listed buildings at Anneson's corner (LB 1283470; LB 1377245) are likely to be most affected by the construction phase, but that the effect will diminish after that. Change to setting of Hill Farmhouse (LB 1030643), Moat Farmhouse (LB 1287643) and the listed buildings at Theberton House (LB 1228378) and Theberton Hall (LB 1287529) is expected to reduce on completion of construction activities. Theberton Hall may retain some visibility of the new road in views to the south, but these are not anticipated to result in a significant effect (EDF Energy 2019 Vol. 2a, p. 277,

5.5.38–9 and 45–7). Many of these impacts apply equally to both the proposed Sizewell Link Road and the Theberton Bypass.

It is suggested that detailed design would seek to minimise perceptual change, for example, existing hedgerow planting would be retained where practicable, and new planting and landscaping used to tie the road into the existing landscape and maximise screening; treatment of the road verges would be aimed at minimising the perceptibility of the proposed route as a new road where this can be achieved consistently with requirements for highways design (EDF Energy 2019 Vol. 2a, p. 276, para. 5.5.34).

However, it needs to be stressed that all of these assertions are speculative at this stage, as to date only an initial study has been undertaken to identify designated assets which have the potential to be affected by the construction of the proposed link road, in accordance with Step 1 of Historic England's (2017) guidance on the setting of heritage assets (EDF Energy 2019 Vol. 2a, p. 277, para. 5.5.37). In the light of the discussion presented above, even the presented numbers of affected Designated Heritage Assets in this preliminary assessment cannot be considered to be accurate, and the deliberate exclusion of a significant Grade 1-listed structure from the reckoning suggests that data have been presented selectively. For both of these reasons, the need to complete a full settings assessment is highlighted as a task to be undertaken in consultation with Historic England and the Suffolk Coastal District Council Conservation Officer before the application stage (EDF Energy 2019 Vol. 2a, p. 278, paras. 5.5.52–55).

#### 4.2.2 Non-Designated Heritage Assets

In addition to Designated Heritage Assets, due consideration also needs to be given to the impact which any development might have on Non-Designated Heritage Assets. Non-Designated Heritage Assets can include buried archaeological features, deposits or finds, historic buildings and structures, and landscape features, and they and their settings are given similar protection to Designated Heritage Assets under paragraphs 5.8.4–6 of the NPS EN–1 and paragraph 197 of the National Planning Policy Framework (MCLG 2019).

The archaeological desk-based assessment identified two entries recorded in the Suffolk Historic Environment Record (SHER) lying within the road corridor, the first being the line of the East Suffolk railway (SHER SUF 067 (MSF34987)) and the other the findspot of a bronze spout from a medieval cauldron (SHER THB 002 (MSF2059)). A further 38 entries from the Suffolk HER are recorded within the 750m study area buffer zone (EDF Energy 2019 Vol. 2a, p. 274, paras 5.5.2–5 and 7). These are used to present a brief chronological overview of the known archaeology of the immediate environs of the site and present an assessment of the likelihood of archaeological remains lying within the development site.

In the absence of any archaeological fieldwork, it is not yet possible to characterise the buried archaeology of the road corridor, but the archaeological desk-based assessment concluded that there is potential for archaeological remains dating from the prehistoric to modern periods to lie within the development area (EDF Energy 2019 Vol. 2a, p. 274–6, paras 11.5.9–32). The consultation documents recognise that the groundworks associated with the construction of the new road, including topsoil stripping, sub-soil disturbance, and the creation of cut and fill earthworks, could have an adverse effect on any surviving sub-surface archaeological remains, reducing or removing their ability to be further interpreted, resulting in the loss of archaeological interest (EDF Energy 2019 Vol. 2a, p. 276, para. 5.5.35).

By way of mitigation, the need for a programme of archaeological investigation of the road corridor is acknowledged, in order to ensure that the archaeological interest of any significant deposits and features within the site can be investigated, recorded and disseminated. This work would be specified and monitored by the Suffolk County Council Archaeological Service and would comprise archaeological evaluation by geophysical survey and trial trenching, to be followed by an archaeological mitigation phase, i.e. excavation and preservation by record, if required (EDF Energy 2019 Vol. 2a, p. 277–8, paras 5.5.48–9 and 54–5). This is a standard approach to mitigating buried archaeological deposits, and is an appropriate strategy to be employed in this case.



### 4.3 Route W

The alternative link-road route referred to as Route W (see Figure 1) was identified by EDF Energy as a possible alternative route for the Sizewell Link Road, but had been discounted prior to the issue of the consultation documents on the basis of a high-level environmental assessment (EDF Energy 2019, Vol. 1, p. 314–6, paras 10.5.1–7). This route closely mirrors that which was referred to as Route D2 during the construction of Sizewell B in the 1980s and which was considered again by consultants working for Suffolk County Council in 2014 (EDF Energy 2019, Vol. 1, p. 316, paras 10.6.1–4). The route has two variations at its eastern end, with northern and southern branches which take the road from the A12 to the Sizewell C construction site.

As is depicted in Figure 1 (EDF Energy 2019 Vol. 1, p.312, Fig. 10.1), the southern variation of Route W joins the A12 just south of Park Farm Covert, to the south of Saxmundham, then crosses over the East Suffolk railway line to meet the B1121. Travelling east, it then crosses the River Fromus on a new bridge and passes south of Bloomfield's Covert. It continues east, running south of and parallel to the B1119 Saxmundham Road before crossing a watercourse near Woodfield Pit. It then runs south of Leiston House Farm and crosses Saxmundham Road between the farm and Highbury Cottages. Turning north, it then crosses the Saxmundham to Leiston railway line and continues north, east of Buckle's Wood. It then crosses Buckleswood Road and continues north-eastwards until it reaches Abbey Road, where Abbey Lane and Lover's Lane meet the B1122 (EDF Energy 2019 Vol. 1, p. 313, para. 10.4.2).

The northern variation of Route W shares the same western alignment as the southern variation, but the routes diverge at the junction of the B1119 Saxmundham Road and the north–south Grove Road. From here, this variation of the route runs north of Clouting's Farm, north of Osierground Covert and south of Westhouse Farm before crossing the Saxmundham to Leiston railway line and a watercourse before heading north-east and following the line of the runway of the former RAF Leiston. North of Hill Farm, the route turns east to join the B1122 at the entrance to the construction site (EDF Energy 2019 Vol. 1, p. 313–4, paras 10.4.3–4).



Although no detailed assessment of the heritage impacts of Route W is presented in the consultation documents, the summary environmental appraisals of Route W identified that 'the route also passes near to a number of existing heritage assets including Hurts Hall and Leiston Abbey. There is potential for the significance of several heritage assets to be adversely affected due to changes in their setting resulting from the route's alignments, and as such, this route is not considered suitable' (EDF Energy 2019 Vol. 1, p. 314, para. 10.5.4). Although other factors were referred to, the implication of this statement is that this route was largely disregarded because of its potential heritage impacts. The table of benefits and constraints for each of the routes presented by EDF Energy described Route W as having 'potential effects on the setting of a number of historic assets (Grade I, II and II\*) along each route. Key assets to consider include Hurts Hall and Leiston Abbey' (EDF Energy 2019 Vol. 1, p. 315, Table 10.1).

#### 4.3.1 Designated Heritage Assets

Comparative analyses of the northern and southern variations of the route of proposed link road Route W, as illustrated in EDF Energy's 2019 Vol. 1, fig. 10.1, (see Figure 1), were undertaken as part of this heritage assessment in March 2019. This assessment considered existing records of archaeological features, finds and fieldwork extracted from the Suffolk Historic Environment Record on 6 March 2019, and designations data current to 15 February 2019 obtained from Historic England on 3 March 2019. In order to produce a comparable assessment of likely heritage impact, a 30m-wide corridor was created following the line of Route W set out in the EDF consultation documents. As per the Route Z analysis presented by EDF Energy, a 750m buffer was applied to the route and this was used to retrieve relevant heritage data.

These analyses demonstrated that the southern variation of Route W contained no Designated Heritage Assets within its road corridor, with one Scheduled Monument (Leiston Abbey, SM 1014520) lying within the 750m buffer zone, together with 41 Listed Buildings (Figure 4 and Appendix 3). Of these, one building, the ruins of St Mary's Abbey, is Grade I listed (LB 1215753) and three buildings are Grade II\* listed: Leiston House Farmhouse (LB 1287646), the church of St Mary

Magdalene (LB 1278252) and Buxlow Manor (LB 1215749). The remaining 37 buildings are all listed at Grade II.

By comparison, the northern variation of Route W also contained no Designated Heritage Assets within its road corridor, with the Leiston Abbey Scheduled Monument again lying within the 750m study area, together with 49 Listed Buildings (Figure 5 and Appendix 4). These included the Grade I-listed ruins of St Mary's Abbey (LB 1215753), three Grade II\*-Listed Buildings – the church of St Mary Magdalene (LB 1278252), Buxlow Manor (LB 1215749) and Theberton House (LB 1228378) – and 45 Grade II Listed Buildings. Given the convergence of the eastern ends of Route Z and the northern variation of Route W, many of the additional Grade II buildings fall within the buffers of both schemes.

Another Designated Heritage Asset common to both routes is the southern extent of the Saxmundham Conservation Area, which protrudes into the northern edge of the western end of the 750m buffer zone and contains a number of Listed Buildings lining the southern entrance to the town. The Grade II listed Hurts Hall stands just outside the town to the south-east, and is highlighted by EDF Energy as one of the key Designated Heritage Assets affected by the proposed route (EDF Energy 2019 Vol. 1, p. 315, Table 10.1). It is not clear from the consultation documents why Hurts Hall has been singled out in this way, as it shares its Grade II listing with 36 other buildings within the southern Route W corridor and 44 other buildings within the northern Route W corridor, and stands over 450m away from the road line. None of the other Grade II listed buildings was highlighted in this way.

As can be seen in Figures 4 and 5, in both variations the majority of the Listed Buildings within the 750m buffer lie away from the line of the road corridor, a consequence of the route following the gaps between settlements rather than skirting settlements more closely. There are distinct clusters of Listed Buildings at the western end of the route, with buildings in Benhall to the south and Saxmundham to the north, which the route traverses as part of the proposed new junction with the A12. Although there is a concentration of Designated Heritage Assets in the vicinity of the proposed junction, it is significant that the area has recently been brought forward as the proposed site of the Saxmundham Garden

Neighbourhood, which would see development of up to 800 houses to the south of the town. Therefore, if Route W were to be adopted it should be ensured that its design integrates with the masterplan for the area, so that any possible heritage impacts were minimised and the overall benefit of the scheme maximised.

The central section of Route W is sparsely populated, with a consequent reduction in the number of Listed Buildings in the vicinity of the road corridor. Those buildings that do lie within the wider buffer zone are at some distance from the road and are largely screened from it by trees. At its eastern end, the southern route comes closer to the Leiston Abbey Scheduled Monument and associated Listed Buildings, and the development of the route within the southern setting of the Abbey has the potential to have an adverse impact on the Abbey complex.

By contrast, within the eastern end of the northern route, the road corridor traverses the site of the former RAF Leiston and loops around the Leiston Abbey site to the north, before arriving to the south of the proposed end of Route Z. As discussed above, the land to the north of the Abbey contributes less significantly to the setting of the Abbey and, as such, development within this context will have a lesser impact upon the Designated Heritage Assets in this area. In addition, by following the course of the runway across the former airfield, the line of Route W would be utilising a modern landscape feature which has already seen much development since the Second World War, resulting in a lesser degree of change to the western setting of the Leiston Abbey complex.

#### 4.3.2 Non-Designated Heritage Assets

As with the proposed line of the Sizewell Link Road Route Z, it is not yet possible to characterise the buried archaeology of the road corridor, but the records for the 750m study area contained within the Suffolk HER indicate that there is potential for archaeological remains dating from the prehistoric to modern periods to lie within the proposed line of Route W. Assuming a broadly similar construction method to that proposed for Route Z, the groundworks associated with the construction of the new road could have an adverse effect on any surviving sub-surface archaeological remains, reducing or removing their ability to be further interpreted, resulting in the loss of archaeological interest.



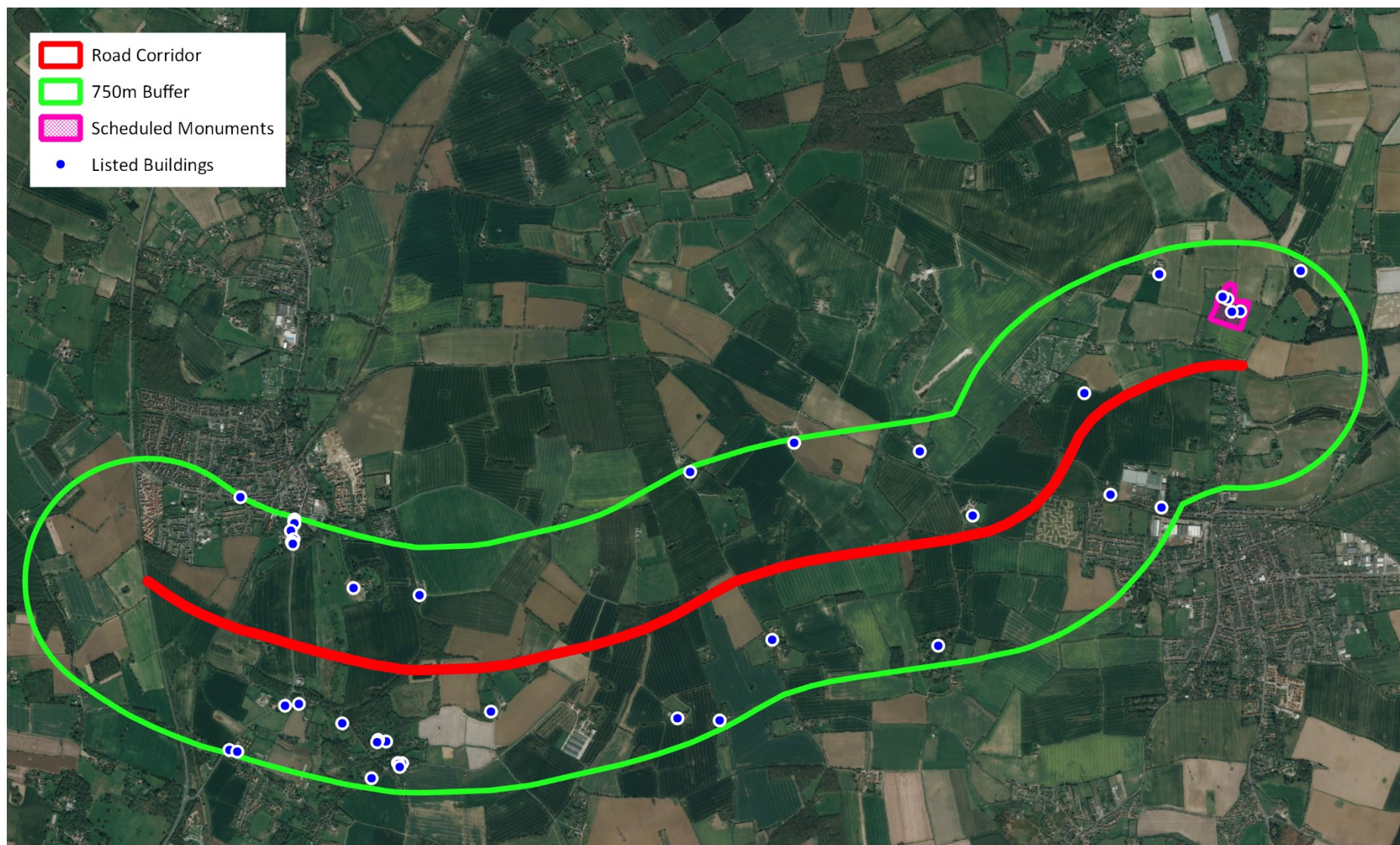


Figure 4. The southern variation of Route W, showing the Listed Buildings and Scheduled Monument which lie within 750m of the proposed road line.



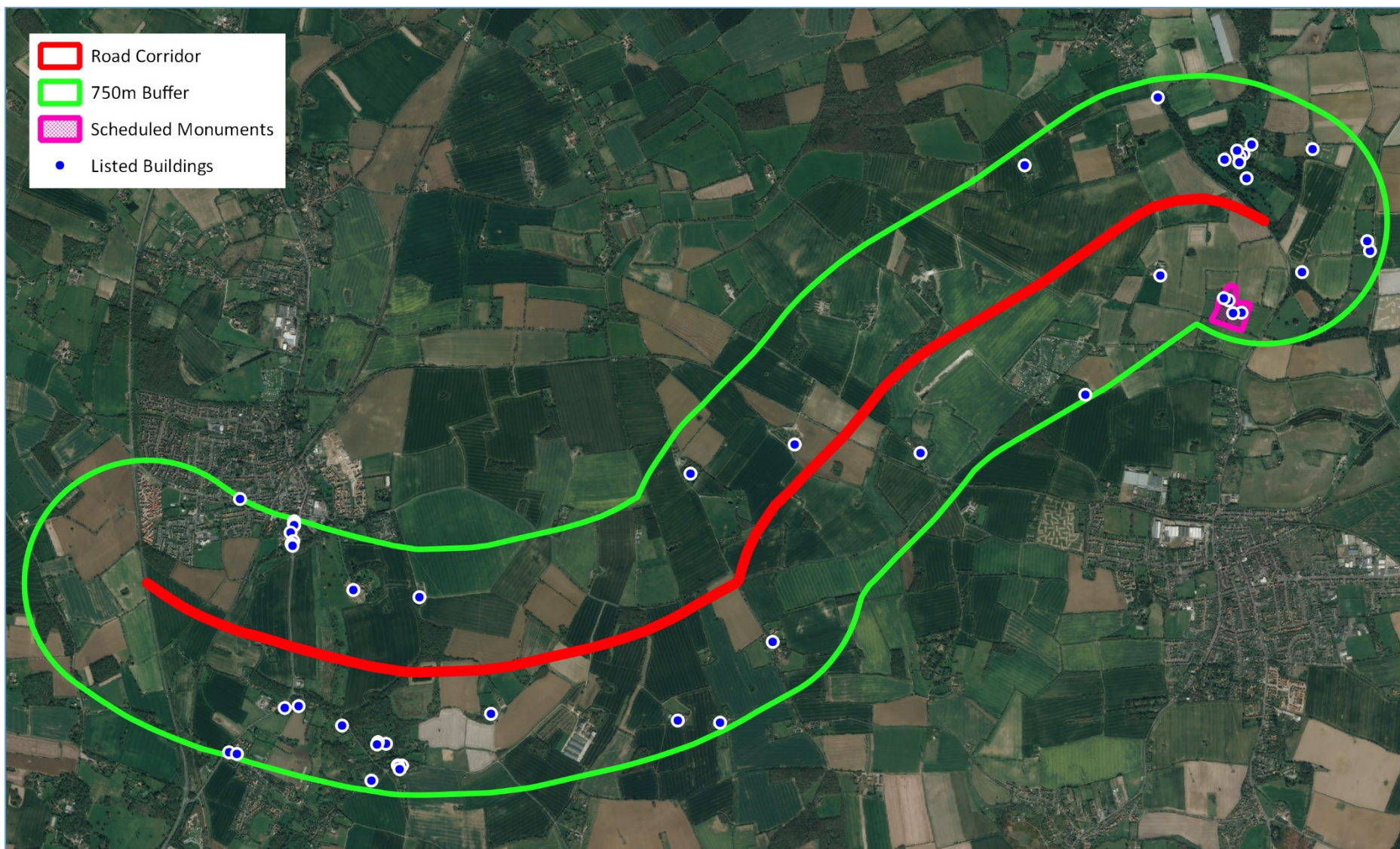


Figure 5. The northern variation of Route W, showing the Listed Buildings and Scheduled Monument which lie within 750m of the proposed road line.

This loss could be mitigated by a programme of archaeological investigation of the road corridor, in order to ensure that the archaeological interest of any significant deposits and features within the site can be investigated and recorded. This work would be specified and monitored by the Suffolk County Council Archaeological Service and would comprise archaeological evaluation by geophysical survey and trial trenching, to be followed by an archaeological mitigation phase, i.e. excavation and preservation by record, if required. This is a standard approach to mitigating buried archaeological deposits, and is an appropriate strategy to be employed in this case.

#### 4.4 Discussion: Heritage Impacts of Routes Z and W

Having introduced the concept of Sizewell Link Road between the A12 and the Sizewell C development site, which includes the length of the Theberton Bypass, as part of their road-led transport strategy, EDF Energy's Stage 3 consultation documents set out details of four proposed routes which were assessed before the published Route Z was decided upon. The documentation indicates that the decision-making process was influenced by a high-level assessment of environmental factors, which included an assessment of the potential for the route to impact upon Designated Heritage Assets. The table of benefits and constraints for each of the routes examined included the following high-level assessments of the likely heritage impacts (EDF Energy 2019 Vol. 1, p. 315, Table 10.1):

- Route W (north and south): 'Potential effects on the setting of a number of historic assets (Grade I, II and II\*) along each route. Key assets to consider include Hurts Hall and Leiston Abbey.'
- Route Z: 'Potential effects on the setting of a number of historic assets (Grade II) along each route. Key assets to consider include Dovehouse Farmhouse, Theberton Hall and The Gates/Walls at Theberton Hall.'

From these statements it would appear that there was actually very little difference between the routes with regard to affected Designated Heritage Assets in comparative terms, except between the Grades of the highlighted Listed Buildings. However, the summary environmental appraisals of Route W identified that 'the route also passes near to a number of existing heritage assets including

Hurts Hall and Leiston Abbey. There is potential for the significance of several heritage assets to be adversely affected due to changes in their setting resulting from the route's alignments, and as such, this route is not considered suitable' (EDF Energy 2019 Vol. 1, p. 314, para. 10.5.4). Although other factors were referred to, the implication of this statement is that this route was largely disregarded because of its potential heritage impacts.

The comparative analyses of Route Z and the northern and southern iterations of Route W presented here serve to confirm that the initial impression of the two routes being very similar in heritage impact terms is actually valid, with there being very little substantial difference between the positive and negative aspects of each route. However, closer examination of the presented Route Z reveals that the stipulated 750m buffer zone has been misapplied, so that at the eastern end of the route the significant cluster of Listed Buildings within the Leiston Abbey complex are excluded from EDF Energy's reckoning of the total number of affected Listed Buildings and their grades. This inclusion of these figures alters the picture somewhat, and suggests that the northern course of Route W has the lowest potential to impact upon Designated Heritage Assets of the three routes examined.

This conclusion has been reached based on the following arguments. The archaeological character of both routes is very similar and in all instances is able to be mitigated by an appropriate programme of archaeological investigations. The likely impact on buried archaeological remains is therefore not a material concern in distinguishing between the three routes. Of greater significance, though, are the relationships between the routes and the numerous Designated Heritage Assets which lie in their vicinities. Figure 6 presents a tabulated summary of the numbers of Designated Heritage Assets which lie within each of the 750m buffer zone study areas of the three proposed routes., and includes figures from the recalculated Route Z illustrated in Figure 3.

As can be seen, Route Z, comprising the full length of the Sizewell Link Road including the Theberton Bypass, is the only route which has a Listed Building within its proposed development corridor, and that the EDF study area contains more Listed Buildings than the southern version of Route W. When factoring in the



additional Listed Buildings which form a part of the Leiston Abbey complex, including the Grade I listed ruins, the total number of Listed Buildings within the Route Z 750m study area surpasses that of both of the Route W options.

	<b>Route Z (EDF)</b>	<b>Route Z (recalculated)</b>		<b>Route W (South)</b>		<b>Route W (North)</b>	
	<b>750m</b>	<b>750m</b>	<b>375m</b>	<b>750m</b>	<b>375m</b>	<b>750m</b>	<b>375m</b>
Listed Buildings (Corridor)	1	1	1	-	-	-	-
Listed Buildings (Study Area)	45	50	18	41	7	49	9
• Grade I	1	2	-	1	1	1	-
• Grade II*	1	2	1	3	1	3	1
• Grade II	43	46	17	37	5	45	8
Scheduled Monuments	1	1	-	1	1	1	-

*Figure 6. The numbers of Designated Heritage Assets within 750m and 375m of each proposed route.*

In terms of the grades of the building represented, all three Routes have one Grade I listed building, which in the case of the two Route Ws is the ruins of Leiston Abbey. As discussed, Route Z includes Theberton church, the recalculated Route Z also incorporates the Grade I-listed Abbey ruins, leaving it with twice as many Grade 1-listed buildings as the two variations of Route W.

While both Route Ws have three Grade II\* buildings, as opposed to Route Z's one or two under the recalculated Route Z, both Route Z and the northern Route W have approximately the same number of Grade II Listed Buildings as each other. EDF Energy's Route Z has 43, although the recalculated Route Z has 46; the northern variation of Route W has 45 Grade II Listed Buildings, but the southern version of Route W has considerably fewer with only 37.

More important than just the simple figures, though, is the distribution of those buildings within the study area. While many of the Listed Buildings in the Route Z study area stand in close proximity to the line of the proposed new link road, which broadly parallels the line of the existing B1122 and bypasses a significant concentration of the Listed Buildings at Theberton, the Listed Buildings which stand within the two Route W study areas are generally much more dispersed and



further removed from the proposed line of the road, which follows a path between settlements rather than seeking them out.

It should be noted that the 750m buffer zone study area was stipulated by the Suffolk County Council Archaeological Service, who would have recommended this with a view to it being an appropriate distance with which to assess the likely impact of the scheme of buried archaeological remains, and not the impact which the scheme is likely to have upon the setting of the Designated Heritage Assets which lie along its length. Issues of setting tend to be addressed by the district Conservation Officer and Historic England (the latter only in the case of Grade II\* and Grade I Listed Buildings). According to EDF Energy's consultation documents, neither body was involved in specifying the buffer zone, and it is considered that, in most instances, the setting of a Listed Building is of a considerably smaller than the specified 750m.

With this in mind, a more realistic assessment of the number of Designated Heritage Assets likely to be affected by each of the proposed routes might be achieved by applying a more limited buffer zone to the corridors, so that only Designated Heritage Assets which lie in closer proximity to the proposed routes are counted. In order to quantify this, the analyses based on a 750m buffer presented above were re-run using a 375m buffer (i.e. half the distance). The results of these analyses are also presented in Figure 6, with accompanying maps reproduced in Figures 7 (Route Z recalculated), 8 (Route W South) and 9 (Route W North).

As can clearly be seen, even with a buffer of half the size, the recalculated Route Z contains 1 Listed Building within its corridor and 18 Listed Buildings within the wider study area (Figure 7 and Appendix 5). These comprise 1 Grade II\* Listed Building and 17 Grade II Listed Buildings. The Leiston Abbey Scheduled Monument is not included in the reduced study area. It is also possible to see that the vast majority of the affected Designated Heritage Assets lie at the eastern end of the route, in the immediate environs of Theberton, and that these would be equally affected by the construction of the full Sizewell Link Road and the shorter Theberton Bypass.

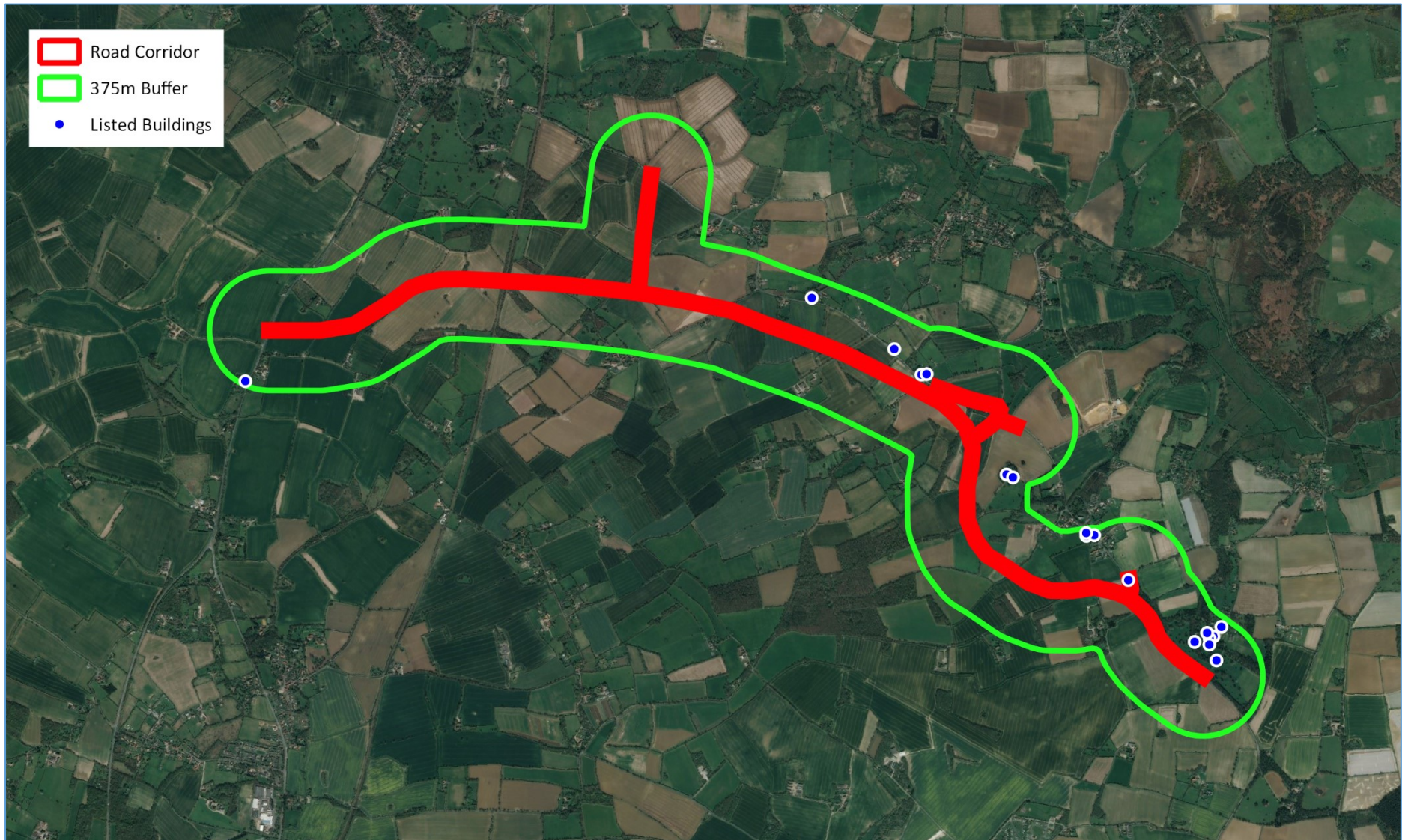


Figure 7. Route Z, showing the Listed Buildings which lie within the recalculated 375m of the proposed road line.



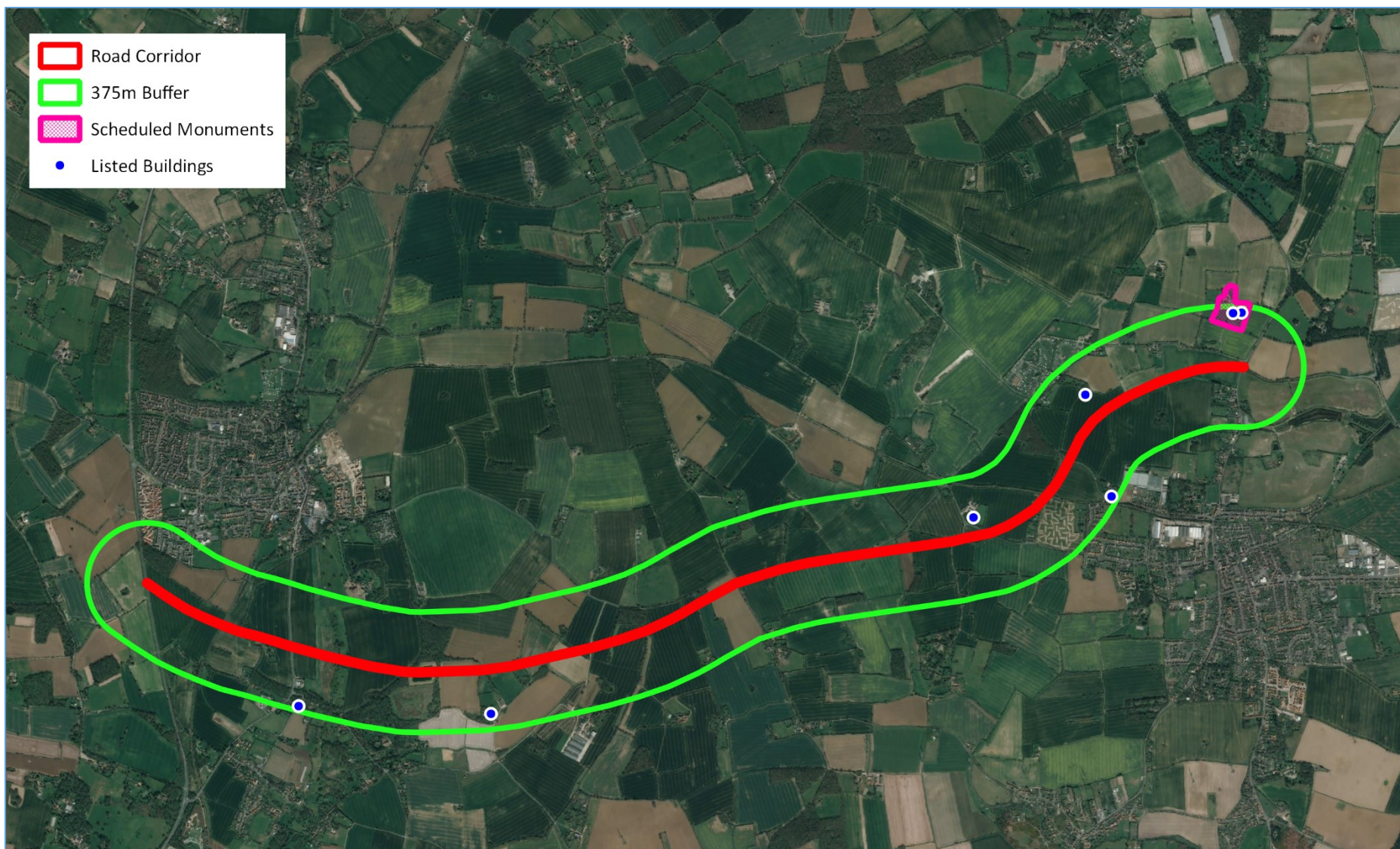


Figure 8. The southern variation of Route W, showing the Listed Buildings and Scheduled Monument which lie within 375m of the proposed road line.



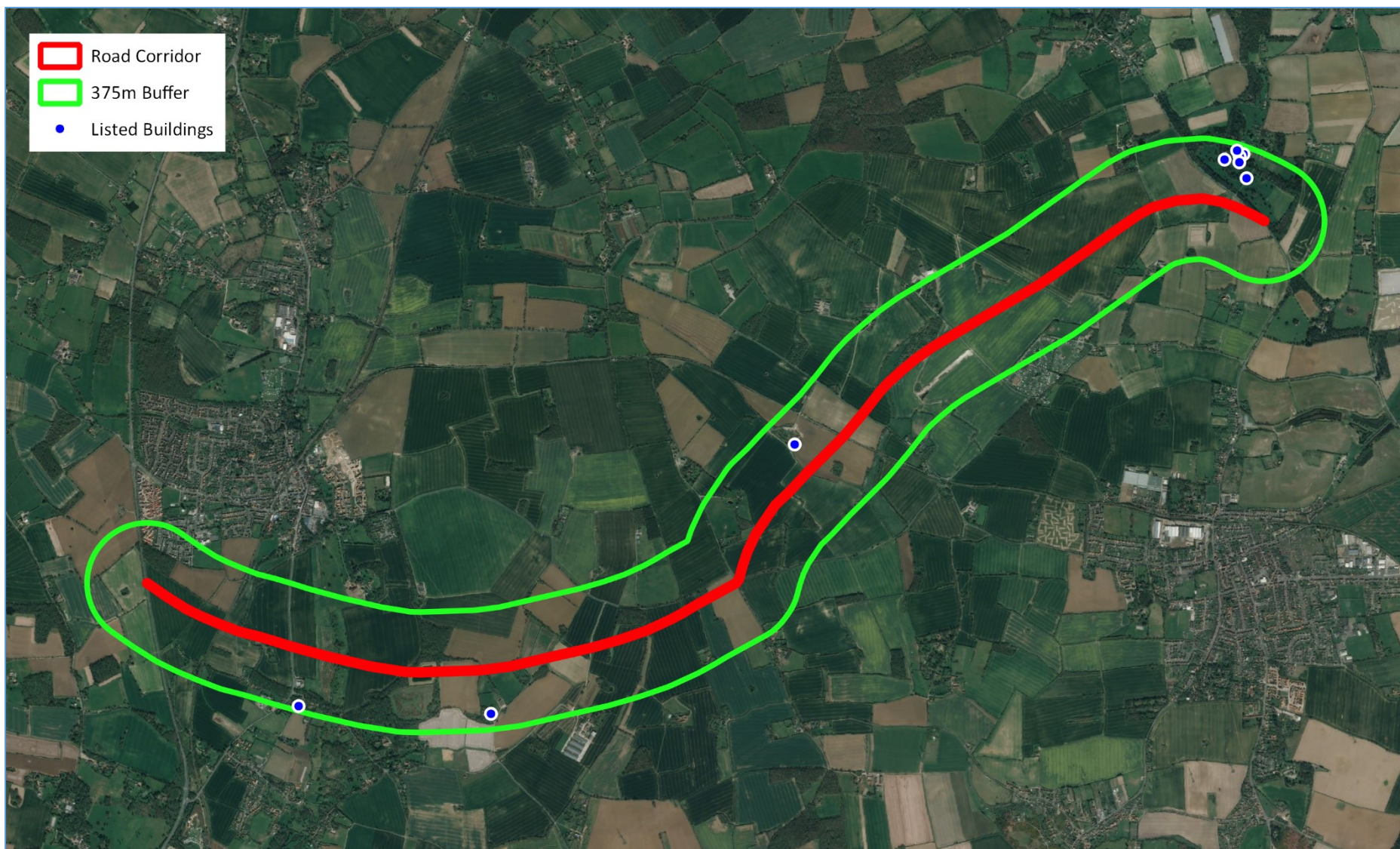


Figure 9. The northern variation of Route W, showing the Listed Buildings which lie within 375m of the proposed road line.

By contrast, with a buffer of half the size, the southern variation of Route W has no Listed Buildings within its corridor and only seven within the wider study area (Figure 8 and Appendix 6). These include 1 Grade I Listed Building, 1 Grade II\* Listed Building and only five Grade II Listed Buildings. The Leiston Abbey Scheduled Monument does lie within the reduced study area.

With a 375m buffer, the northern variation of Route W has no Listed Buildings within its corridor, and only nine Listed Buildings within the wider study area. These do not include any Grade I Listed Buildings, only 1 Grade II\* Listed Building and eight other Grade II Listed Buildings. The Leiston Abbey Scheduled Monument is not included in the reduced study area. Overall, these figures would suggest that of the three routes considered, the northern variation of Route W has the least impact on Designated Heritage Assets.

The EDF Energy consultation documents indicate that to date they have only undertaken an initial study to identify Designated Heritage Assets which have the potential to be affected by the proposed Route Z, and that more in-depth work has yet been carried out in order to assess the likely impact which the proposed scheme would have upon these Designated Heritage Assets. The reassessment of Route Z presented here suggests that even these high-level figures are wrong, and that several significant Designated Heritage Assets have been left out of the reckoning.

The comparative assessment presented here has indicated that while the likely heritage impacts of Route Z and the northern version of Route W are superficially very similar, when the study area of Route Z is calculated appropriately, the southern variation of Route W has the least heritage impact, with the northern variation of Route W also having a marginally lesser heritage impact than Route Z.

When a tighter buffer of 375m is applied instead of a 750m buffer, the dispersed nature of the Designated Heritage Assets along the line of Route W becomes very apparent, this would ultimately enable the impact to be mitigated more effectively with a consequent reduction in overall heritage impact. Both the northern and southern lines of Route W having considerably lower heritage impacts than Route Z. On balance, the fact that under this analysis the northern Route W affects no

Grade I Listed Buildings and avoids the Leiston Abbey Scheduled Monument, makes this the preferred option in heritage impact terms.

It is therefore considered to be premature to dismiss either of the proposed course of Route W on heritage impact grounds, as appears to have been the case thus far, without first undertaking the more detailed comparative analyses required by Historic England guidance so that an informed decision can be made.

In addition to the assessing the standalone heritage impacts of the proposed Route Z and the alternative northern and southern variations of Route W, an assessment of the likely heritage impact also needs to consider the cumulative effect of the associated roundabout at the junction between the A12 and B1122 in Yoxford. As is discussed more fully in the following section, the EDF Energy consultation documents indicate that under both the rail-led transport strategy and the road-led transport strategy which includes the construction of the Sizewell Link Road Route Z, it is considered necessary that a new roundabout is built. It is not considered to be the case that this roundabout would be necessary were either of the variations of Route W selected instead, thus reducing the overall impact of the road-led transport strategy.



## 5 Yoxford Roundabout

The redevelopment of the existing ghost-island junction between the A12 and the B1122 at Yoxford as a roundabout is a common element of both the rail-led and road-led transport strategies, in conjunction with Route Z, and is intended to increase capacity at this junction. The roundabout was one of two options for the junction put forward at the Stage 2 Consultation, where it was presented alongside a signalised junction, and a strong preference emerged for the roundabout option.

Details of the proposal are set out in Chapter 16 of the Development Proposals consultation document (EDF Energy 2019 Vol. 1, pp. 369–73, paras 16.1.1–16.5.12), with supporting in-depth assessments given in Chapter 11 of the Preliminary Environmental Information document (EDF Energy 2019 Vol. 2b, pp. 576–92, paras 11.1.1–11.14.2). The assessment of the terrestrial Historic Environment examined here is presented in section 11.5 of the Preliminary Environmental Information (EDF Energy 2019 Vol 2b, pp. 588–592, paras 11.5.1–11.5.37).

The new roundabout would be situated approximately 100m north of the existing junction, and be built on agricultural land to the east of the A12. The western end of the B1122 would be realigned to meet the roundabout, with a new length of road constructed to the north of the existing road. The outline proposal for the scheme indicates that construction of the roundabout requires cut earthworks to deal with existing ground levels and the removal of trees and hedgerows (EDF 2019 Vol. 1, p. 373, para. 16.5.10–11). Street lighting of the roundabout would be introduced as part of the scheme, as is depicted in the indicative illustration of the proposed roundabout (EDF 2019 Vol. 1, p. 377, fig. 16.2).

An archaeological desk-based assessment of the roundabout site was undertaken in April 2018, the results of which inform the assessment of the terrestrial historic environment presented in the consultation documents (EDF Energy 2019 Vol 2b, pp. 588–92, paras 11.5.1–37). For heritage purposes, a study area comprising a 500m buffer zone around the proposed development itself was agreed with the Suffolk County Council Archaeological Service as appropriate. The proposed development site and the extent of the buffer are illustrated in Volume 3 of the

EDF Energy consultation documents (EDF Energy 2019 Vol. 3, p. 135, fig. 11.5.1) and the figure is reproduced here as Appendix 8.

## 5.1 Designated Heritage Assets

The desk-based assessment identified that there is one designated heritage asset within the proposed development area, the Yoxford Conservation Area, and that an additional 26 Listed Buildings lie within the 500m study area around the site (EDF Energy Vol. 2b, p. 588, para. 11.5.3–4). This section considers the impacts which the proposed scheme might have upon these assets, based on the information presented and heritage data derived from the Suffolk Historic Environment Record and the National Heritage List for England.

### 5.1.1 Yoxford Conservation Area

The desk-based assessment identified that there is one designated heritage asset within the proposed development area, specifically the Yoxford Conservation Area, which the report states 'extends into the eastern edge of the site boundary' (EDF Energy Vol. 2b, p. 588, para. 11.5.3). This statement dramatically downplays the relationship between the proposed development area and the Yoxford Conservation Area, as the entire length of the A12 as it currently exists within the proposed development area, including the existing junction with the B1122, actually lies within the boundary of the Conservation Area itself. Indeed, the eastern edge of the A12 marks the boundary of the Conservation Area between the A12/B1122 junction and the line of the River Yox to the north (Figure 10). It should also be noted that at the time of writing (March 2019) a proposed extension to the Yoxford Conservation Area is being consulted upon, which, if successful, would dramatically extend the Conservation Area to the north, west and south-east by incorporating the areas of Cockfield Hall Park, Grove Park and Rookery Park respectively (SCDC 2019; Figure 10).

During the Stage 2 consultation on the Yoxford roundabout, Suffolk Coastal District Council expressed the view that further work was required to assess the impact of the proposals on the setting of the Yoxford Conservation Area (EDF 2019 Vol. 1, p. 370, para. 16.4.6).

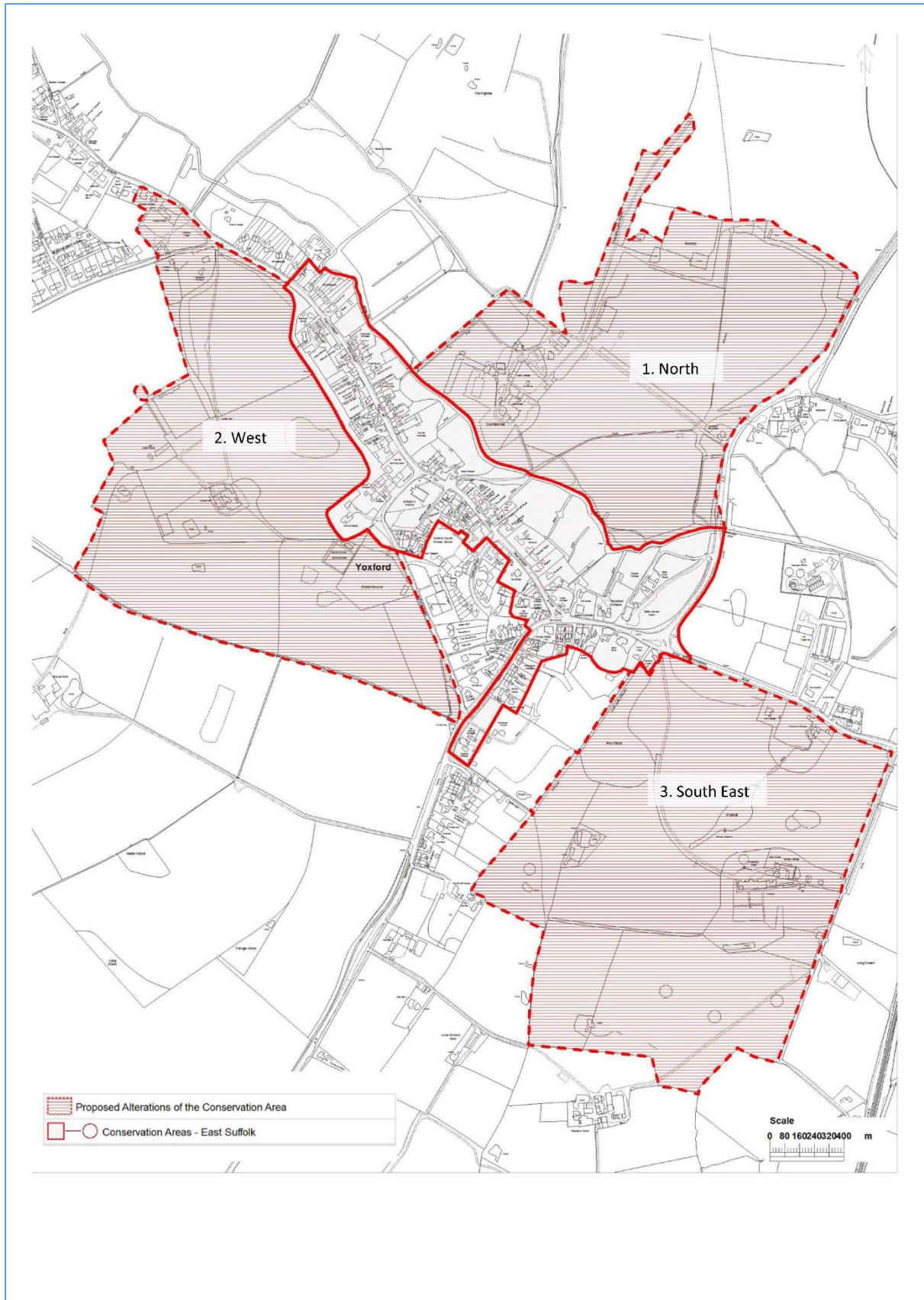


Figure 10. The current extent and proposed extensions to Yoxford Conservation Area (SCDC 2019)

The information set out in the Stage 3 consultation does little to demonstrate that this issue has been taken any further, and acknowledges that the new roundabout would have an effect upon the setting of Yoxford Conservation Area as a result of the visibility of the proposed roundabout in views of and from the fringes of the Conservation Area (EDF Energy 2019 Vol. 2b, p. 590, para. 11.5.29). Although the A12 is already a busy road, that redevelopment of the junction, with associated earthworks, landscaping, road-widening and street lighting will significantly alter the character of the Conservation Area itself and its setting. If these proposals are accepted, the proposed development area of the roundabout will be surrounded to the west and south by the enlarged Conservation Area, meaning that that the potential impacts of the scheme on the Conservation Area will be proportionally greater too. At this stage, it is proposed by EDF Energy that any impacts could be mitigated by 'design and screening' (EDF Energy 2019 Vol. 2b, p. 591, Table 11.5.2), although no details as to how these measures might be used to mitigate the impact are set out.

With overall regard to the impact on the Yoxford Conservation Area, it is acknowledged that there is still a need to undertake further consultation with the Suffolk Coastal District Council Conservation Officer on this matter (EDF 2019 Vol 1, p. 370, para. 16.4.6; Vol. 2b, p. 589–90, paras 11.5.27, 29 and 35). This statement suggests that at this stage EDF Energy have not yet identified a suitable mitigation scheme for the adverse impact which the proposed roundabout will have on the Yoxford Conservation Area. Indeed, it is not clear at this stage if the impact could be mitigated at all, requiring the negative impact on the designated heritage asset to be weighed up against the public benefits of the scheme under paragraph 196 of the revised National Planning Policy Framework (MCLG 2019).

### 5.1.2 Listed Buildings

The desk-based assessment identified that 26 Listed Buildings stand within the 500m study area buffer (EDF Energy 2019 Vol. 3, p. 135, fig. 11.5.1, reproduced here as Appendix 4). While none of these is within the development site itself, and the majority of the buildings are sufficiently removed and screened from the site so as to be unaffected by the proposed roundabout, several Listed Buildings stand in

close proximity to the development site and there is therefore the potential for development of the junction to have an adverse effect upon their settings. Specifically, the three buildings most likely to be affected are: Rookery Cottages (LB 1200791), which are listed at Grade II and stand immediately to the south-east of the point at which the line of the new stretch of the B1122 will leave the existing road; the Satis House hotel (LB 1200636), which is Grade II listed and stands to the west of the existing junction between the A12 and the B1122; and White Lodge and the White House (LB 1377237), which are also listed at Grade II and stand immediately to the south of the western end of the stretch of the A12 which is to be developed.

The consultation documents state that buildings close to the proposed roundabout may experience some disturbance during construction, and that as a result of the construction they may experience changed views and noise levels (EDF Energy Vol 2b., p. 589–90, paras 11.5.26 and 30). EDF Energy states that 'as these buildings are close to the existing A12 junction, it is unlikely that these changes would present sufficient change to give rise to a qualitative change to setting and, therefore, effects would not be significant' (EDF Energy Vol 2b., p. 590, paras 11.5.30). However, no evidence is presented for this assertion and it is clear from the surrounding text that formal assessments of the settings of the nearby Listed Buildings and any impacts upon their settings have not yet been undertaken. The need to complete a full settings assessment is highlighted as a task to be undertaken in consultation with Historic England and the Suffolk Coastal District Council Conservation Officer before the application stage (EDF Energy 2019 Vol. 2b, p. 590, paras. 11.5.34–35). Again, it is proposed that any impacts could be mitigated by 'design and screening' (EDF Energy 2019 Vol. 2b, p. 591, Table 11.5.2), although no details as to how these measures might be used to mitigate the impact are set out.

## 5.2 Non-Designated Heritage Assets

The archaeological desk-based assessment identified that one entry recorded in the Suffolk Historic Environment Record (SHER), pertaining to the medieval settlement core of Yoxford, overlapped with the proposed development area

(SHER YOX 023 (MSF25765)), and that a further 20 HER entries lie within the 500m study area buffer zone (EFD 2019 Vol. 2b, pp. 588, paras 11.5.2–5 and 7). These are used to present a brief chronological overview of the known archaeology of the immediate environs of the site and present an assessment of the likelihood of archaeological remains lying within the development site.

In the absence of any archaeological fieldwork, it is not yet possible to characterise the buried archaeology of the roundabout site, but the archaeological desk-based assessment concluded that there was potential for archaeological remains dating from the prehistoric to medieval periods to lie within the development area (EFD energy 2019 Vol. 2b, p. 588–9, paras 11.5.8–17) . The consultation documents recognise that the groundworks associated with the construction phase of the new roundabout will substantially disturb, if not remove entirely, any buried archaeological remains which may exist (EDF Energy 2019 Vol. 2b, p. 589, paras 11.5.22–23). EDF Energy acknowledge the fact that 'the loss of archaeological interest through material disturbance within the site during construction could have a significant adverse effect' (EDF Energy 2019 Vol. 2b, p. 590, para. 11.5.33).

By way of mitigation, the need for a programme of archaeological investigation of the site is acknowledged, in order to ensure that the archaeological interest of any significant deposits and features within the site can be investigated, recorded and disseminated. This work would be specified and monitored by the Suffolk County Council Archaeological Service and would comprise archaeological evaluation by geophysical survey and trial trenching, to be followed by an archaeological mitigation phase, i.e. excavation and preservation by record, if required (EDF Energy 2019 Vol. 2b, p. 590, paras 11.5.31–33 and 36). This is a standard approach to mitigating buried archaeological deposits, and is an appropriate strategy to be employed in this case.

However, in assessing the potential impact of the proposals on Non-Designated Heritage Assets, the current EDF Energy consultation documents fail to take into account the impact which the proposed development will have upon the two historic landscape parks which lie immediately to the north-west and south of the development site (Figure 11).





*Figure 11. The two landscape parks which adjoin the proposed site of the Yoxford roundabout. Scale 1:10,000.*

To the south, the development site shares a contiguous boundary on the southern side of the B1122 with the northern extent of Rookery Park, which has its origins in the mid-17<sup>th</sup> century and is recorded in the Suffolk HER as YOX 013 (MSF17530). To the north-west, the development site adjoins the south-eastern corner of Cockfield Hall Park, again with likely 17<sup>th</sup>-century origins, which is recorded in the Suffolk HER as YOX 006 (MSF13079). In addition to being listed in the Suffolk HER, both of these parks are identified as being of particular historic significance within the District in Suffolk Coastal District Council's Supplementary Planning Guidance 6, which concerns historic parks and gardens (SCDC 1995). The proposed revisions to the Yoxford Conservation Area referred to above, which are being consulted

upon at the time of writing, would incorporate Rookery Park, Cockfield Hall Park, and also Grove Park which lies to the west of the settlement, into the Conservation Area itself.

While the presence of these parks is acknowledged in the consultation documents, where they are described as lying outside the development site (EDF Energy 2019 Vol. 2b, p. 589, para. 11.5.17), no reference is made to the likely impact which the development of the roundabout will have upon their settings. In the case of Rookery Park, in particular, the construction of the roundabout and new feeder length of the B1122 will significantly alter the character of its northern boundary and its immediate setting to the north will be changed from one of agricultural fields to a busy road interchange.

### 5.3 Discussion: Heritage Impacts of the Yoxford Roundabout

The development of the new roundabout at the junction of the A12 and B1122 in Yoxford has the potential to have a significant adverse impact upon Designated and Non-Designated Heritage Assets, and on the basis of the information presented in the current consultation documents, it is not clear if or how some of these impacts are to be mitigated. In the case of Designated Heritage Assets, the length of the A12 which is due to be developed as part of the proposed scheme lies within the boundary of the current Yoxford Conservation Area. Although the A12 is already a busy road, it is argued that redevelopment of the junction, with associated earthworks, landscaping, road-widening and street lighting will significantly alter the character of the Conservation Area itself and its setting. Were the proposed expansion of the Yoxford Conservation Area to be adopted, then the development site would be bounded to the west and the south by the Conservation Area, increasing this impact further. There are also several Listed Buildings immediately adjacent to the site of the new roundabout which are likely to see short- and longer-term changes to their settings. To date no detailed assessments have been undertaken to identify the extent of these impacts or develop any meaningful mitigation strategies beyond 'design and screening'.

With regard to Non Designated Heritage Assets, buried archaeological features and deposits are well dealt with by the archaeological desk-based assessment

and the proposed programme of archaeological evaluation, which will ultimately inform any archaeological mitigation strategy which might be required. Less consideration has apparently been given to the impact which the proposed new roundabout will have on the character and setting of the adjacent landscape parks, Rookery Park immediately to the south of the development site and Cockfield Hall Park to its north-west. Both of these parks are recognised by Suffolk Coastal District Council as being of historical significance and both have the potential to be adversely affected by the construction and use of the new roundabout. Again, there are currently no detailed assessments of the extent of these impacts, nor have any meaningful mitigation strategies beyond 'design and screening' been proposed.

The consultation documents indicate that to date only an initial study has been undertaken to identify Designated Heritage Assets which have the potential to be affected by the proposed roundabout, in accordance with Step 1 of Historic England's guidance on the setting of heritage assets (Historic England 2017). However, it is apparent that no more in depth work has yet been carried out in order to assess the likely impact which the proposed schemes would have upon these assets, except in the most general terms, and the need to complete a full settings assessment is highlighted as a task to be undertaken in consultation with Historic England and the Suffolk Coastal District Council Conservation Officer before the application stage (EDF Energy 2019 Vol. 2b, p. 590, paras. 11.5.34–35). At this stage, in the case of the proposed Yoxford roundabout, consultees are being asked to comment upon a proposed development scheme for which the heritage impacts have yet to be fully identified and quantified. It is suggested that more information needs to be collected and provided regarding the likely heritage impact and any proposed mitigation methods before an informed decision can be made by consultees.

## 6 Conclusions

This heritage assessment has been produced in response to development proposals put forward in the Sizewell C Stage 3 Pre-Application Consultation documents published by EDF Energy in January 2019 (EDF 2019a, 2019b, 2019c, 2019d). Specifically, it has focussed on the likely heritage impacts of two main elements of the proposed scheme:

- the Sizewell Link Road between the A12 and the construction site, including a comparative assessment of an alternative route further to the south; and
- the upgrading of the existing ghost-island junction between the A12 and the B1122 at Yoxford to a roundabout.

The comparative analyses of the Sizewell Link Road Route Z and the northern and southern iterations of Route W presented here reveals that the stipulated 750m buffer zone has been misapplied to Route Z, so that at the eastern end of the route the significant cluster of Listed Buildings within the Leiston Abbey complex are excluded from EDF Energy's reckoning of the total number of affected Listed Buildings and their grades. This inclusion of these figures alters the picture somewhat, and suggests that that the northern course of Route W has the lowest potential to impact upon Designated Heritage Assets of the three routes examined.

The comparative assessment presented here has indicated that while the likely heritage impacts of Route Z and the northern version of Route W are superficially very similar, when the study area of Route Z is calculated appropriately, the southern variation of Route W has the least heritage impact, with the northern variation of Route W also having a marginally lesser heritage impact than Route Z.

With a 375m buffer applied, the northern variation of Route W has no Listed Buildings within its corridor, and only nine Listed Buildings within the wider study area. These do not include any Grade I Listed Buildings, only 1 Grade II\* Listed Building and eight other Grade II Listed Buildings. The Leiston Abbey Scheduled Monument is not included in the reduced study area. Overall, these figures would suggest that of the three routes considered, the northern variation of Route W has the least impact on Designated Heritage Assets.

The development of the Yoxford roundabout has the potential to have a significant adverse impact upon Designated and Non-Designated Heritage Assets. On the basis of the information presented in the current consultation documents, it is not clear if or how some of these impacts are to be mitigated. To date, no detailed assessments have been undertaken to identify the extent of these impacts or develop any meaningful mitigation strategies beyond 'design and screening'.

Therefore, in addition to the assessing the standalone heritage impacts of the proposed Route Z and the alternative northern and southern variations of Route W, an assessment of the likely heritage impact also needs to consider the cumulative effect of the associated roundabout at the junction between the A12 and B1122 in Yoxford. The EDF Energy consultation documents indicate that under both the rail-led transport strategy and the road-led transport strategy which includes the construction of the Sizewell Link Road Route Z, it is considered necessary that the new Yoxford roundabout is built. It is not considered to be the case that this roundabout would be necessary were either of the variations of Route W selected instead, thus reducing the overall impact of the road-led transport strategy.

With regard to both the Sizewell Link Road (Route Z), and its proposed alternative routes, and the Yoxford roundabout, it is clear that only an initial study has been undertaken to identify Designated Heritage Assets which have the potential to be affected by the proposed roundabout, in accordance with Step 1 of Historic England's guidance on the setting of heritage assets (Historic England 2017). However, it is apparent that no more in depth work has yet been carried out in order to assess the likely impact which the proposed schemes would have upon these assets, except in the most general terms, and the need to complete a full settings assessment is highlighted as a task to be undertaken in consultation with Historic England and the Suffolk Coastal District Council Conservation Officer before the application stage. At this stage in the process, consultees are being asked to comment upon a proposed development scheme for which the heritage impacts have yet to be fully identified and quantified. It is suggested that more information needs to be collected and presented regarding the likely heritage impact and any proposed mitigation before an informed decision can be made.



## 7 References

CIFA. 2017. *Standard and Guidance for historic environment desk-based assessment*. Chartered Institute for Archaeologists.

[https://www.archaeologists.net/sites/default/files/CIfAS&GDBA\\_2.pdf](https://www.archaeologists.net/sites/default/files/CIfAS&GDBA_2.pdf)

DCLG. 2010. *Planning Policy Statement 5: Planning for the Historic Environment*.

<https://webarchive.nationalarchives.gov.uk/20120920011334/http://www.communities.gov.uk/documents/planningandbuilding/pdf/1514132.pdf>

DECC (Department of Energy and Climate Change). 2011. *Overarching National Policy Statement for Energy (EN-1)*.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/47854/1938-overarching-nps-for-energy-en1.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf)

EDF Energy. 2019 Vol. 1. *Sizewell C Stage 3 Pre-Application Consultation. Volume 1: Development Proposals*.

[https://www.edfenergy.com/sites/default/files/volume\\_1\\_development\\_proposals-lr.pdf](https://www.edfenergy.com/sites/default/files/volume_1_development_proposals-lr.pdf)

EDF Energy. 2019 Vol. 2a. *Sizewell C Stage 3 Pre-Application Consultation. Volume 2a: Preliminary Environmental Information*.

[http://www.edfenergy.com/sites/default/files/volume\\_2a\\_preliminary\\_environmental\\_information-lr.pdf](http://www.edfenergy.com/sites/default/files/volume_2a_preliminary_environmental_information-lr.pdf)

EDF Energy. 2019 Vol. 2b. *Sizewell C Stage 3 Pre-Application Consultation. Volume 2b: Preliminary Environmental Information*.

[http://www.edfenergy.com/sites/default/files/volume\\_2b\\_preliminary\\_environmental\\_information-lr.pdf](http://www.edfenergy.com/sites/default/files/volume_2b_preliminary_environmental_information-lr.pdf)

EDF Energy. 2019 Vol. 3. *Sizewell C Stage 3 Pre-Application Consultation. Volume 3: Preliminary Environmental Information Figures*.

[https://www.edfenergy.com/sites/default/files/volume\\_3\\_preliminary\\_environmental\\_information\\_figures-lr2.pdf](https://www.edfenergy.com/sites/default/files/volume_3_preliminary_environmental_information_figures-lr2.pdf)



Historic England. 2017. *The Setting of Heritage Assets*. 2<sup>nd</sup> edition. Historic Environment Good Practice Advice in Planning 3.  
<https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/>

MCLG (Ministry of Communities and Local Government). 2019. *The National Planning Policy Framework*. Department of Communities and Local Government.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/779764/NPPF\\_Feb\\_2019\\_web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf)

SCDC (Suffolk Coastal District Council). 1995. *Supplementary Planning Guidance 6: Historic Parks and Gardens*.  
<https://www.eastsuffolk.gov.uk/assets/Planning/Suffolk-Coastal-Local-Plan/Supplementary-Planning-Guidance/SPG6-Historic-parks-and-gardens.pdf>

SCDC (Suffolk Coastal District Council). 2019. *Yoxford: Draft Conservation Area Appraisal and Boundary Review. Consultation document*.  
<https://www.eastsuffolk.gov.uk/assets/Planning/Design-and-Conservation/Conservation-Area-Reviews/Yoxford/Draft-Yoxford-Appraisal-and-boundary-review-2019.pdf>

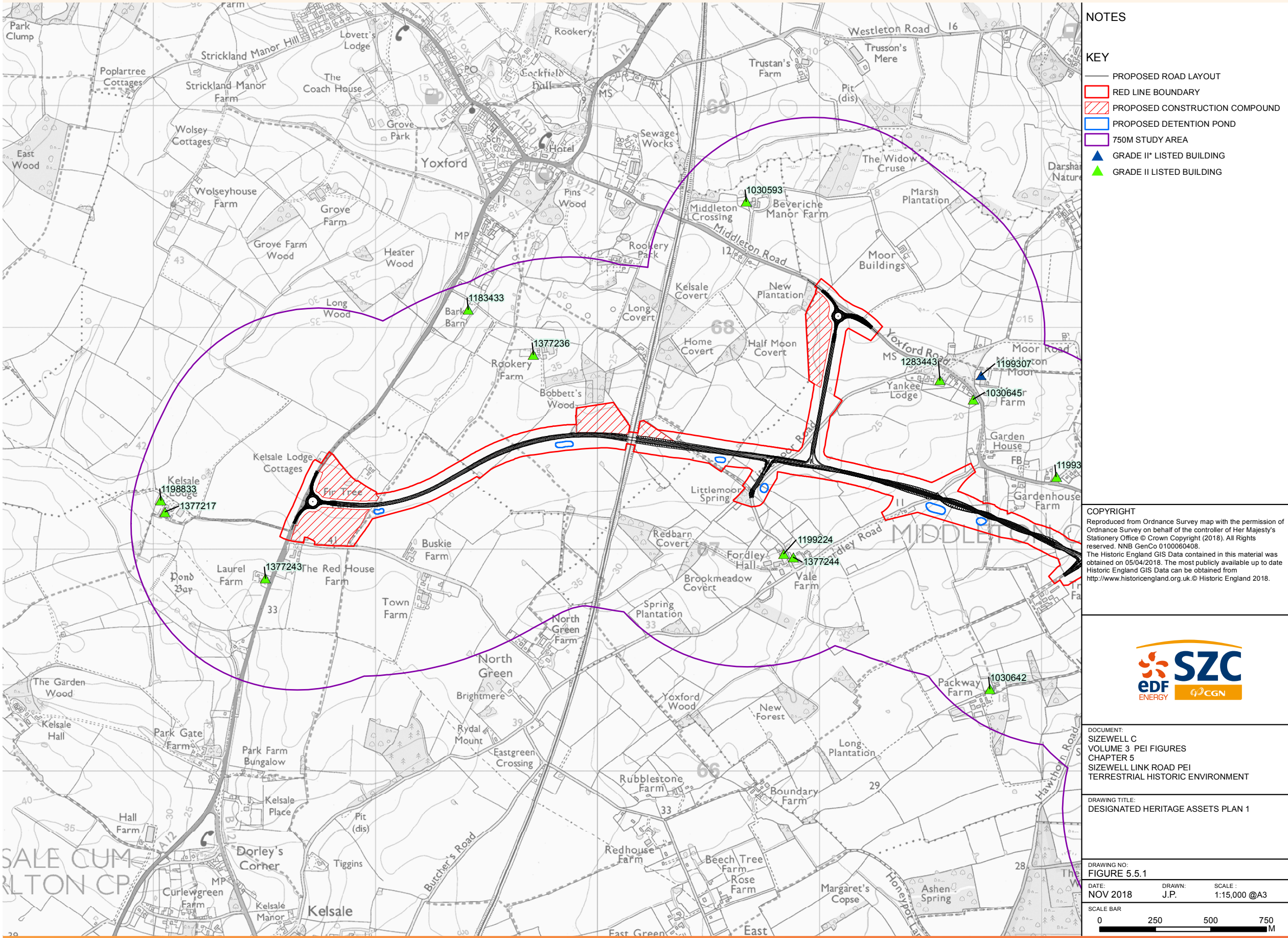
## 8 About the Author

Dr Richard Hoggett is a freelance heritage consultant with over 20 years' experience in the academic, commercial and local authority heritage sectors. Between 2013–16 he was a Senior Archaeological Officer for Suffolk County Council, in which capacity he assessed the heritage implications of planning applications pertaining to listed and historic buildings, and provided specialist advice to Local Planning Authorities, developers and landowners. He is a Fellow of the Society of Antiquaries of London and a Member of the Chartered Institute for Archaeologists.

## Appendix 1: Designated Heritage Asset Maps (Route Z)

Maps showing the Designated Heritage Assets lying within 750m of Route Z (EDF Energy 2019 Vol. 3, pp. 69–70, figs 5.5.1–2).

Figure 5.5.1 Designated heritage assets plan 1





SCALE BAR

0 250 500 750 M

## Appendix 2: Designated Heritage Assets table of Route Z (Recalculated) with 750m buffer

### Scheduled Monuments

List Entry	Name	Easting	Northing
1014520	Leiston Abbey (Second Site)	644457	264189

### Listed Buildings

List Entry	Name	Grade	Easting	Northing
1030593	Beveriche Manor Farmhouse	II	640671	268567
1030642	Packway Farmhouse	II	641769	266371
1030643	Hill Farmhouse	II	642580	266998
1030644	Fenn Farmhouse	II	643527	267081
1030645	Thatched House	II	641694	267675
1183433	Bark Barn	II	639419	268080
1198833	Kelsale Lodge	II	638034	267220
1199213	Dovehouse Farmhouse	II	642609	266146
1199224	Fordley Hall	II	640840	266980
1199307	Moor Farmhouse	II*	641728	267783
1199326	Pine Tree Cottage	II	642068	267327
1215753	St Mary's Abbey	I	644521	264174
1215754	Retreat House	II	644468	264172
1216380	Barn At Abbey Farm	II	644442	264252
1216395	Cottage 450 Metres South West Of Upper Abbey Farmhouse	II	644902	264420
1227753	Gates, Gateway, Walling And Wall Head 30 Metres West Of Theberton Hall	II	643270	266199
1227755	Nos. 1-4, Church Road	II	643941	266238
1227756	Church Of St Peter	I	643729	265918
1227758	The Old Rectory	II	643566	265973
1227759	Stable Block 10 Metres To South Of The Lion Public House	II	643764	265806
1227920	Lilycot	II	644005	266242
1228180	Thatched House	II	643773	265872
	The Cottage			
1228246	Moat Farmhouse	II	643186	265115
1228262	The Cottage	II	644676	265713
1228263	Flash Cottages	II	644646	265705
1228265	Woodview	II	644673	265856
1228266	Bob's Cottage	II	644601	265220
1228267	Potter's Farmhouse	II	644981	265185
1228268	Theberton House Stables	II	644550	265161



List Entry	Name	Grade	Easting	Northing
1228269	Gateway 45 Metres North Of Main Entrance To Theberton House	II	644526	265146
1228270	Barn 30 Metres South East Of Old Manor House	II	643632	265883
1228378	Theberton House	II*	644524	265111
1228384	Old Manor House	II	643618	265920
1268290	The Guesten Hall At Abbey Farm	II	644412	264266
1283440	Manor House	II	643482	267324
1283443	The Cottage (REDACTED)	II	641544	267762
1283470	Valley Farmhouse Annesons Corner	II	642748	266835
1287235	Walls Enclosing Garden 60 Metres To North Of Theberton House And Greenhouse At North End	II	644511	265184
1287237	Gate And Gate Piers 105 Metres South East Of Main Entrance To Theberton House	II	644567	265011
1287260	Gate And Gate Piers 80 Metres North West Of Main Entrance To Theberton House	II	644432	265129
1287282	Flint House	II	643814	265810
1287303	Gate And Gate Piers At Junction Of Leiston Road And Onner's Lane	II	644023	265523
1287529	Theberton Hall	II	643310	266180
1287533	The Lion Public House	II	643764	265824
1287643	Hill Farmhouse	II	644019	264414
1377217	Barn 50 Metres South East Of Kelsale Lodge	II	638053	267168
1377236	Rookery Farmhouse	II	639712	267877
1377243	Laurel Farmhouse	II	638505	266868
1377244	Vale Farmhouse	II	640883	266964
1377245	Farm Buildings 30 Metres East Of Valley Farmhouse, Annesons Corner	II	642780	266838

## Appendix 3: Designated Heritage Assets table of Route W (South) with 750m buffer

### Scheduled Monuments

List Entry	Name	Easting	Northing
1014520	Leiston Abbey (Second Site)	644457	264189

### Listed Buildings

List Entry	Name	Grade	Easting	Northing
1030866	The Limes	II	638518	261817
1187694	Benhall Stores	II	638166	261547
1215743	Little Moor Farm	II	641228	261678
1215749	Buxlow Manor	II*	641071	263232
1215753	St Mary's Abbey	I	644521	264174
1215754	Retreat House	II	644468	264172
1216049	High House Farm	II	640965	261696
1216275	Fisher's Farmhouse	II	643539	263680
1216380	Barn At Abbey Farm	II	644442	264252
1216395	Cottage 450m sw Upper Abbey Farmhouse	II	644902	264420
1227752	Wood Farmhouse	II	643691	263044
1227893	Westhouse Farmhouse	II	641723	263402
1231179	Wood Farmhouse	II	639369	262492
1231296	Hill Farmhouse	II	639802	261758
1231300	Sternfield House	II	639145	261583
1231355	Thatched Cottage	II	639242	261446
1258312	Garden Cottage	II	638605	261827
1268158	Beech Lawn Cottage	II	638597	262978
1268159	Beech Lawn House inc. Orangery to rear	II	638595	262967
1268160	Ivy House	II	638596	262954
1268161	16, South Entrance	II	638574	262909
1268162	Monks Cottages	II	638589	262855
1268163	The White House	II	638578	262838
1268164	Crown House	II	638584	262826
1268178	Hurts Hall	II	638958	262544
1268290	The Guesten Hall at Abbey Farm	II	644412	264266
1278159	Sternfield Hall	II	639050	261355
1278167	1 and 2, The Street	II	639216	261447
1278252	Church Of St Mary Magdalene	II*	639095	261594
1278253	8-10, Church Hill	II	638873	261701
1278254	Start Farm	II	639220	261442
1278255	34 and 35, The Street	II	639226	261423
1287528	24, Westward Ho	II	644008	262959

List Entry	Name	Grade	Easting	Northing
1287532	Crossing Farmhouse	II	642506	263335
1287643	Hill Farmhouse	II	644019	264414
1287646	Leiston House Farmhouse	II*	642829	262928
1287772	Pattle's Farmhouse	II	641565	262176
1287793	Knodishall Place	II	642600	262120
1366000	Post Mill Roundhouse	II	638262	263123
1377133	5 and 6, Benhall Green	II	638215	261536
1458741	Sternfield War Memorial	II	639089	261580

## Appendix 4: Designated Heritage Assets table of Route W (North) with 750m buffer

### Scheduled Monuments

List Entry	Name	Easting	Northing
1014520	Leiston Abbey (Second Site)	644457	264189

### Listed Buildings

List Entry	Name	Grade	Easting	Northing
1030866	The Limes	II	638518	261817
1187694	Benhall Stores	II	638166	261547
1215743	Little Moor Farm	II	641228	261678
1215749	Buxlow Manor	II*	641071	263232
1215753	St Mary's Abbey	I	644521	264174
1215754	Retreat House	II	644468	264172
1216049	High House Farm	II	640965	261696
1216275	Fisher's Farmhouse	II	643539	263680
1216380	Barn At Abbey Farm	II	644442	264252
1216394	Upper Abbey Farmhouse	II	645327	264545
1216395	Cottage 450m sw Upper Abbey Farmhouse	II	644902	264420
1216655	Barn 40m north of Upper Abbey Farmhouse	II	645312	264606
1227893	Westhouse Farmhouse	II	641723	263402
1228246	Moat Farmhouse	II	643186	265115
1228266	Bob's Cottage	II	644601	265220
1228267	Potter's Farmhouse	II	644981	265185
1228268	Theberton House Stables	II	644550	265161
1228269	Gateway 45m north of main entrance to Theberton House	II	644526	265146
1228378	Theberton House	II*	644524	265111
1231179	Wood Farmhouse	II	639369	262492
1231296	Hill Farmhouse	II	639802	261758
1231300	Sternfield House	II	639145	261583
1231355	Thatched Cottage	II	639242	261446
1258312	Garden Cottage	II	638605	261827
1268158	Beech Lawn Cottage	II	638597	262978
1268159	Beech Lawn House inc. Orangery To Rear	II	638595	262967
1268160	Ivy House	II	638596	262954
1268161	16, South Entrance	II	638574	262909
1268162	Monks Cottages	II	638589	262855
1268163	The White House	II	638578	262838
1268164	Crown House	II	638584	262826
1268178	Hurts Hall	II	638958	262544

List Entry	Name	Grade	Easting	Northing
1268290	The Guesten Hall at Abbey Farm	II	644412	264266
1278159	Sternfield Hall	II	639050	261355
1278167	1 and 2, The Street	II	639216	261447
1278252	Church of St Mary Magdalene	II*	639095	261594
1278253	8-10, Church Hill	II	638873	261701
1278254	Start Farm	II	639220	261442
1278255	34 and 35, The Street	II	639226	261423
1287235	Walls Enclosing Garden 60m to north of Theberton House and Greenhouse at North End	II	644511	265184
1287237	Gate and Gate Piers 105m south-east of Main Entrance to Theberton House	II	644567	265011
1287260	Gate and Gate Piers 80m north-west of Main Entrance to Theberton House	II	644432	265129
1287303	Gate and Gate Piers at Junction of Leiston Road and Onner's Lane	II	644023	265523
1287532	Crossing Farmhouse	II	642506	263335
1287643	Hill Farmhouse	II	644019	264414
1287772	Pattle's Farmhouse	II	641565	262176
1366000	Post Mill Roundhouse	II	638262	263123
1377133	5 and 6, Benhall Green	II	638215	261536
1458741	Sternfield War Memorial	II	639089	261580



## Appendix 5: Designated Heritage Assets table of Route Z (Recalculated) with 375m buffer

### Listed Buildings

List Entry	Name	Grade	Easting	Northing
1030643	Hill Farmhouse	II	642580	266998
1199326	Pine Tree Cottage	II	642068	267327
1227753	Gates, Gateway, Walling And Wall Head 30 Metres West Of Theberton Hall	II	643270	266199
1227759	Stable Block 10 Metres To South Of The Lion Public House	II	643764	265806
1228266	Bob's Cottage	II	644601	265220
1228268	Theberton House Stables	II	644550	265161
1228269	Gateway 45 Metres North Of Main Entrance To Theberton House	II	644526	265146
1228378	Theberton House	II*	644524	265111
1283470	Valley Farmhouse Annesons Corner	II	642748	266835
1287235	Walls Enclosing Garden 60 Metres To North Of Theberton House And Greenhouse At North End	II	644511	265184
1287237	Gate And Gate Piers 105 Metres South East Of Main Entrance To Theberton House	II	644567	265011
1287260	Gate And Gate Piers 80 Metres North West Of Main Entrance To Theberton House	II	644432	265129
1287282	Flint House	II	643814	265810
1287303	Gate And Gate Piers At Junction Of Leiston Road And Onner's Lane	II	644023	265523
1287529	Theberton Hall	II	643310	266180
1287533	The Lion Public House	II	643764	265824
1377243	Laurel Farmhouse	II	638505	266868
1377245	Farm Buildings 30 Metres East Of Valley Farmhouse, Annesons Corner	II	642780	266838

## Appendix 6: Designated Heritage Assets table of Route W (South) with 375m buffer

### Scheduled Monuments

List Entry	Name	Easting	Northing
1014520	Leiston Abbey (Second Site)	644457	264189

### Listed Buildings

List Entry	Name	Grade	Easting	Northing
1215753	St Mary's Abbey	I	644521	264174
1215754	Retreat House	II	644468	264172
1216275	Fisher's Farmhouse	II	643539	263680
1227752	Wood Farmhouse	II	643691	263044
1231296	Hill Farmhouse	II	639802	261758
1258312	Garden Cottage	II	638605	261827
1287646	Leiston House Farmhouse	II*	642829	262928

## Appendix 7: Designated Heritage Assets table of Route W (North) with 375m buffer

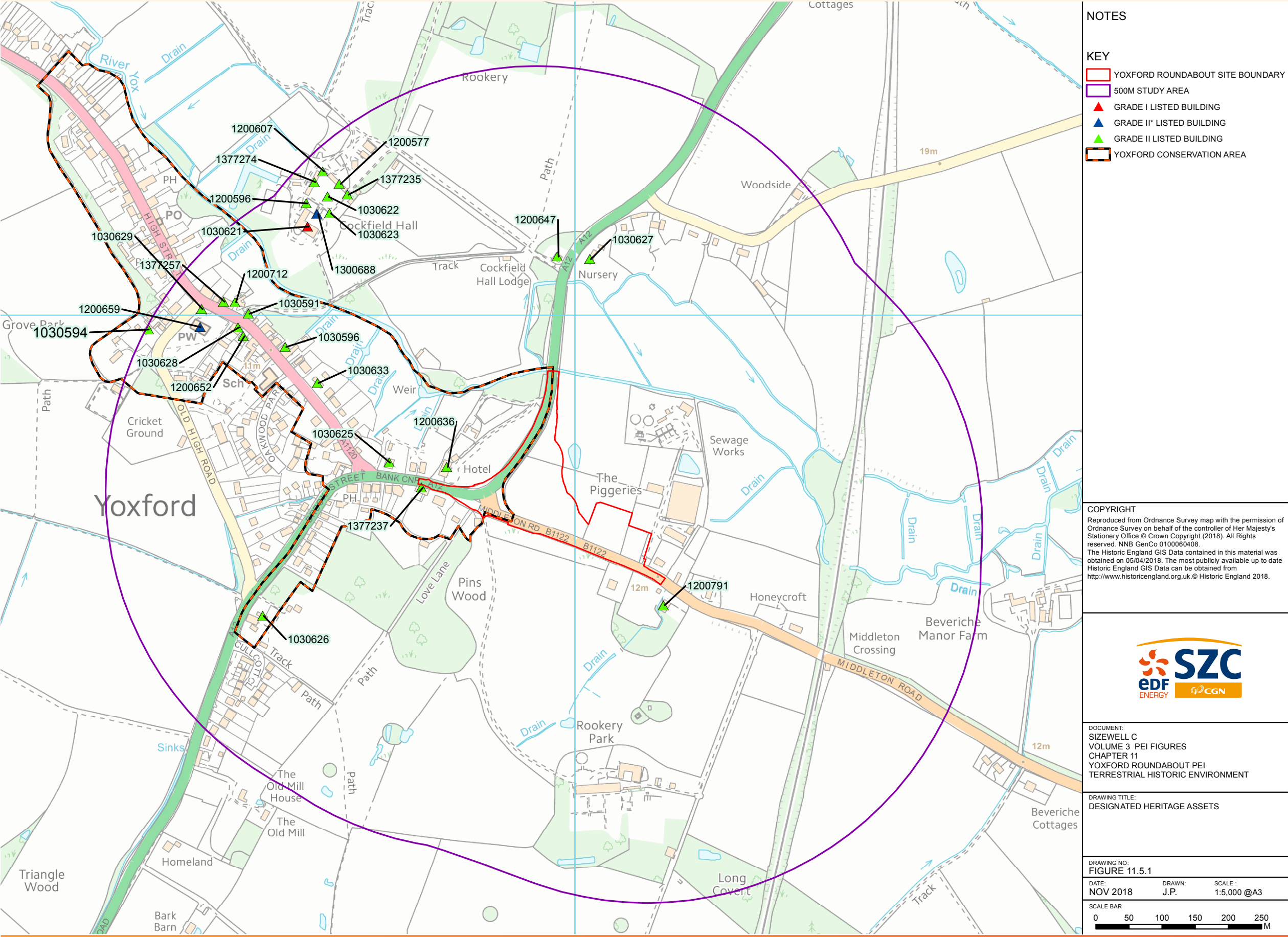
### Listed Buildings

List Entry	Name	Grade	Easting	Northing
1227893	Westhouse Farmhouse	II	641723	263402
1228268	Theberton House Stables	II	644550	265161
1228269	Gateway 45 Metres North Of Main Entrance To Theberton House	II	644526	265146
1228378	Theberton House	II*	644524	265111
1231296	Hill Farmhouse	II	639802	261758
1258312	Garden Cottage	II	638605	261827
1287235	Walls Enclosing Garden 60 Metres To North Of Theberton House And Greenhouse At North End	II	644511	265184
1287237	Gate And Gate Piers 105 Metres South East Of Main Entrance To Theberton House	II	644567	265011
1287260	Gate And Gate Piers 80 Metres North West Of Main Entrance To Theberton House	II	644432	265129

## Appendix 8: Designated Heritage Assets Map (Yoxford Roundabout)

Map showing the Designated Heritage Assets lying within 500m of the proposed Yoxford Roundabout (EDF Energy 2019 Vol. 3, p. 135, fig. 11.5.1).

Figure 11.5.1 Designated heritage assets





Annex 4 to Representation from David Grant  
Interested Party reference 20026043

**Sizewell C Link Road**

Review of submitted ecology  
information and assessment

Land at



BLANK PAGE

## Issuing office

Milton Hall | Ely Road | Milton | Cambridge | CB24 6WZ  
T: 01223 631635 | W: [www.bsg-ecology.com](http://www.bsg-ecology.com) | E: [info@bsg-ecology.com](mailto:info@bsg-ecology.com)

<b>Client</b>	David Grant, [REDACTED]
<b>Project</b>	Sizewell C Link Road: Landowner Representations
<b>Version</b>	FINAL
<b>Project number</b>	P20-935

## Disclaimer

This report is issued to the client for their sole use and for the intended purpose as stated in the agreement between the client and BSG Ecology under which this work was completed, or else as set out within this report. This report may not be relied upon by any other party without the express written agreement of BSG Ecology. The use of this report by unauthorised third parties is at their own risk and BSG Ecology accepts no duty of care to any such third party.

BSG Ecology has exercised due care in preparing this report. It has not, unless specifically stated, independently verified information provided by others. No other warranty, express or implied, is made in relation to the content of this report and BSG Ecology assumes no liability for any loss resulting from errors, omissions or misrepresentation made by others.

Any recommendation, opinion or finding stated in this report is based on circumstances and facts as they existed at the time that BSG Ecology performed the work. The content of this report has been provided in accordance with the provisions of the CIEEM Code of Professional Conduct. BSG Ecology works where appropriate to the scope of our brief, to the principles and requirements of British Standard BS42020.

Nothing in this report constitutes legal opinion. If legal opinion is required the advice of a qualified legal professional should be secured. Observations relating to the state of built structures or trees have been made from an ecological point of view and, unless stated otherwise, do not constitute structural or arboricultural advice.

## Contents

1	Summary .....	2
2	Introduction .....	5
3	Methods .....	7
4	Findings of the review .....	9
5	Conclusions .....	17
6	References .....	19
	Annex: Specific documents provided by the Applicant to landowners .....	20

# 1 Summary

- 1.1 This report provides an independent review of the potential effects of the Sizewell Link Road (SLR) for the proposed Sizewell C Nuclear Power Station on ecology interests present, or potentially present, on the land at [REDACTED], Middleton, Suffolk. This review does not address the potential effects of the Main Development Site or other associated infrastructure such as the Park and Ride sites.
- 1.2 The review has been prepared for David Grant, owner of [REDACTED], who is registered as an Interested Party in the Examination (IP reference 20026043).
- 1.3 This review takes a professional 'peer review' approach to the documents produced by the Applicant, or its consultants/agents, that have been placed in the public domain through submission to the Examination. Also included in the review are a small number of documents (correspondence/reports) supplied by the Applicant, or its consultants/agents, to the owner of [REDACTED]. These latter documents are included in the Appendix to make them available to other parties.
- 1.4 The review has come to a series of conclusions on issues that exist with the published assessment of the proposed SLR. These are listed below by topic.
- 1.5 On timeliness:
- There is an issue of how the results of the ecology surveys conducted in 2021 are to be accounted for in the decision-making process. It is likely that the results of a number of ecology surveys (e.g. those bat surveys continuing in to October 2021 and wintering birds surveys that would not commence until October 2021 and finish in March 2022) will not be submitted to the Examination and published in time for Interested Parties to review and comment on them. For similar timeliness reasons, the Examining Authority may not have the results available to consider in the preparation of their report to the Secretary of State and also for the Secretary of State to take account of them in the decision on the DCO.
- 1.6 On bats:
- The location of all static bat detectors deployed across the route of the proposed SLR in 2019 (not just those placed on the [REDACTED] landholding) were illustrated without numeric identifiers in the set of Figures accompanying the ES. This makes it impossible for any Interested Party or their advisers to relate the locations of the static detectors to the results that are presented in the assessment.
  - The evaluation of the bat species recorded by survey is considered to have been carried out erroneously when it compared the total amount of bat activity to the amount of activity of the scarce bat species. It is considered that the evaluation of the bat species should have been carried out on an individual species basis. A particular consequence of concern is that barbastelle was assessed as part of the assemblage and not as a separate species of high conservation status. It is considered that barbastelle should have been evaluated in its own right as an IEF, rather than included with the IEF that is the bat assemblage. The result of that would be a greater focus on the potential impacts of the proposed SLR on barbastelle and mitigation measures more tailored to the needs of this species. The current assessment risks not recognising the nature and scale of impacts on barbastelle and not bringing forward appropriate mitigation proposals.
- 1.7 On breeding birds
- The survey for breeding birds was based on a transect route that did not enter the [REDACTED] landholding. There was a gap in coverage between transect SLR1 to the west and transect SLR2 to the east. This gap in bird survey coverage is not explained (access was made to the [REDACTED] landholding in the spring of 2019 to undertake the Phase 1 habitat survey, the great crested newt survey and the bat surveys) or noted as a limitation. The result is that the assessment risks failing to identify the presence of some breeding bird



species and certainly underestimates the size of the populations of breeding birds present along the route of the proposed SLR.

- The breeding bird species identified to be present across the route of the proposed SLR are assessed as an assemblage. This results in components of that assemblage that have particular needs and sensitivities to impact being improperly assessed. This error in the assessment is particularly significant for skylark, a bird of large, open arable fields that will be negatively impacted by both the fragmentation caused by the proposed SLR and also the reduction in habitat openness created by the mitigation proposals (the planting of hedgerows and trees for other IEFs, including other components of the farmland bird assemblage). Neither the ES nor the ES Addendum for the SLR contain proposals to mitigate for the loss of skylark breeding habitat. This applies both to impacts on skylark within the [REDACTED] landholding and across the whole route of the SLR.

#### 1.8 On great crested newt

- The proposed mitigation for the overall impact on ponds occupied by great crested newt across the route of the SLR has a slightly lower ratio of lost to replaced ponds than is expected for developments that might be processed through Natural England's District Level Licence system (a ratio of 1:4 is delivered by the District Level Licence system).
- Within the [REDACTED] landholding there is a cluster of ponds supporting a meta-population of great crested newts. Within the footprint of the SLR within the [REDACTED] landholding there are the three ponds that have confirmed great crested newt presence that are to be lost. To provide a suitable ratio of lost to replacement ponds, if considering the [REDACTED] landholding alone (where one of the meta-populations is centred and hence this 'alone' assessment is logical), then 12 replacement ponds are required within the post-construction footprint of the SLR where it is proposed to cross the [REDACTED] landholding. The current proposals are for only 8 replacement ponds.

#### 1.9 On habitats

- The habitats across the route of the SLR were evaluated and assessed as if it were a homogeneous area. This has meant that the farmland within the [REDACTED] landholding was not evaluated separately or identified as being different in anyway. This contrasts with the awards recently won by the farm (Best Small Farm in Suffolk and the Special Award for Conservation from the Suffolk Agricultural Association) that identifies the farm as being different and of a higher wildlife value. It is considered that the evaluation has been too broad-brush and has not accounted for the level of attention that has been paid to the management of the farm by the owner and his farming contractor. One outcome of not accounting for the 'award winning' status of the [REDACTED] landholding is that the replacement planting (the mitigation proposals) risk being uniform and bland and it will result in a down-grading of the wildlife value of the landholding.

#### 1.10 Where it is considered relevant and appropriate recommendations have been provided on actions that could be taken by the Applicant to address the issues noted above. The Examining Authority is asked to consider the recommendations.

#### 1.11 The recommendations are:

- The Applicant should re-issue the relevant figures with the individual static bat detectors identified in the same manner that they are numbered in the ES.
- The Applicant should carry out further work to assess barbastelle at an individual species level.
- The Applicant should carry out further work to assess the potential impact on breeding birds, accounting for the gap in survey coverage at [REDACTED].
- The Applicant should carry out further work to assess the impact of the proposed SLR and its mitigation on the skylark breeding population.
- The Applicant should carry out further work to ensure that the mitigation proposals for great crested newt ponds achieves a suitable ratio of lost to replaced ponds.

- The Applicant should carry out further work to ensure that an appropriate number of replacement ponds are proposed within the SLR footprint where it crosses the [REDACTED] landholding.
- The Applicant should carry out further work to ensure that the mitigation proposals on land within the [REDACTED] landholding are of a 'bespoke' nature appropriate to its 'award winning' status.

## 2 Introduction

### Background to commission

- 2.1 EDF Energy (the Applicant) submitted in May 2020 an application for a Development Consent Order (DCO) to the Planning Inspectorate for a new nuclear power station at Sizewell (Sizewell C). That application included as Associated Development the proposed Sizewell Link Road (SLR).
- 2.2 The proposed SLR at its western end has a northern and western arm that pass across [REDACTED], Middleton, Suffolk. This farm is owned by David Grant who is registered as an Interested Party in the Examination (IP reference 20026043). Concerned about the potential effects on the wildlife and habitats on the farm, David Grant has engaged BSG Ecology to review the information related to the ecological interests that may be affected by the proposed SLR.

### Description of project

- 2.3 The proposed SLR will provide a new connection between the B1112 south of Theberton and the A12 between Yoxford and Saxmundham, bypassing Middleton Moor and Theberton; a distance of approximately 6.8 km and covering an area of approximately 109 ha. The proposed SLR will have a single carriageway in both directions with a speed limit of 60 mph. The area it will pass through is predominantly farmland with field boundaries that comprise mainly species rich hedgerows with trees.
- 2.4 It would be used during the construction phase of the Sizewell C main development site to transport construction workers arriving by car, buses from both the northern and the southern park and ride sites and goods vehicles (both light and heavy) delivering freight to the Sizewell C main development site. It would also be open to the public.
- [REDACTED]
- 2.5 [REDACTED] extends across approximately 132 ha (325 acres) with 101 ha (250 acres) being arable crops and the remainder being woodland, pasture, ponds etc. The arable crops include wheat, barley, oilseed rape, sugar beet, peas, beans and other legumes. The farming enterprise is serviced by a local contractor, Philip and Joe Bloomfield of [REDACTED], Yoxford. The farm is characterised by its small fields, big ditches, broad headlands and wildlife conservation. It has held both Best Small Farm in Suffolk and the Special Award for Conservation from the Suffolk Agricultural Association since 2019. The farm also provides DIY livery facilities to three horses (paddock and stabling) and seasonal grazing for up to a dozen cattle. There is a private shoot which operates six days a season and supplies local restaurants with red-legged partridge *Alectoris rufa* and pheasant *Phasianus colchicus*. Grey partridge *Perdix perdix* have been reintroduced and the population has grown but is not shot.
- 2.6 A map showing the property boundary and how it is affected by the proposed SLR is attached at Appendix 1. This map was prepared by copying the land plan and its key (some details redacted) supplied to the landowner by Dalcour Maclaren, acting for the Applicant, and adding a small parcel of land to the south omitted from that land plan.
- 2.7 The proposed SLR as it crosses [REDACTED] will lead to the loss of arable farmland, field margins, part of one woodland, four ponds (three of which have great crested newt *Triturus cristatus* present) and sections of 10 hedgerows of varying lengths. The detail of these losses have been taken from that illustrated on Sheet 2 of 4 of the SLR Site Clearance Plan (APP-449) with cross reference to the information presented in the Appendix of Figures to ES Chapter 7 Terrestrial Ecology and Ornithology (APP-463).
- 2.8 In addition to this direct loss of habitat across [REDACTED] identified above, the construction and operation of the SLR will lead to the fragmentation and division of habitats, create a barrier to species movements and create a zone where noise, light, pollutants and the presence of vehicles and people would lead to species displacement and deterioration in habitat quality (reviews of the

effects of roads on ecological receptors - sites, habitats and species - include Briggs *et al.*, 1993; ERM, 1996; Reijnen *et al.*, 1997; Altringham & Berthinussen, 2015; Ricardo-AEA, 2016; and Bennett, 2017).

### **Aim of this report**

- 2.9 This review aims to assess the extent to which the ecological information gathered along the route of the proposed SLR and submitted to the Examination that relates to [REDACTED] comes to conclusions on impacts and associated mitigation that are consistent with the baseline information gathered by desk study and field survey and is not deficient in information that can reasonably be expected to accompany an application.

### **Professional experience of the author of this report**

- 2.10 The review presented in this report has been carried out by Dr Roger Buisson CEnv MCIWEM, Associate Director of BSG Ecology. Roger has over 30 years' experience in assessing the impacts of man's water and land management activities on wildlife populations, the habitats that support them and the wider ecological interests of those habitats. He has 15 years' experience in a senior consultancy role, leading teams of ecologists delivering desk studies, species and habitat surveys and impact assessments for private and public sector clients. A significant proportion of his consultancy advice to both the private and public sector has been on assessing large infrastructure developments including ports, airports, roads, flood defence works, reservoirs, wind farms (onshore and offshore), power stations (biomass, fossil and nuclear), tidal generators, and waste management facilities. As many of these developments have the potential to give rise to significant environmental impacts and/or were in sensitive locations they required environmental impact assessment and, where relevant, habitats regulations assessment. His experience has resulted in him being contracted to carry out reviews of environmental statements and HRA reports for Government and its agencies and to prepare such documents for public bodies acting as the appropriate authority or the decision making body and for corporations acting as the developer. He has appeared as expert witness at Examinations in Public, Public Inquiries and DCO Hearings for strategic regional and local plans, road and rail infrastructure, energy generation, mineral extraction and residential housing development.

### **Declaration of compliance with professional code of ethics and conduct by the author of this report**

- 2.11 The advice which I have prepared and provided is true and has been prepared and provided in accordance with the Chartered Institution of Water and Environmental Management's Code of Professional Ethics and Code of Conduct. I confirm that the opinions expressed are my true and professional bona fide opinions.

### **Involvement of BSG Ecology as technical advisors to other Interested Parties**

- 2.12 In addition to being contracted to undertake this review, BSG Ecology has also been engaged by Suffolk County Council, East Suffolk Council and Suffolk Wildlife Trust to undertake a review specifically of the information submitted in relation to bats of the Main Development and its Associated Development (including the SLR). That contracted work has resulted in the submission to the Examination of two reviews:

*REP1-091 East Suffolk Council / Suffolk County Council Deadline 1 Submission - Joint Local Impact Report - Appendix 2.3 BSG Ecology Review of Bat Impact Assessment October 2020*

*REP1-092 East Suffolk Council / Suffolk County Council Deadline 1 Submission - Joint Local Impact Report -Appendix 2.4 BSG Ecology Review of Bat Impact Assessment: Second Review March 2021*

### 3 Methods

#### Approach to the review

- 3.1 The approach to the review is one that takes a professional 'peer review' of the documents produced by the Applicant, or its consultants/agents, that relate to ecological interests along and adjacent to the SLR where it crosses or runs close to [REDACTED].
- 3.2 In addition to documents that have been placed in the public domain through submission to the Examination, a small number of documents (correspondence/reports) supplied by the Applicant, or its consultants/agents, to the owner of [REDACTED] are reviewed for their information and context.
- 3.3 The review process considers the ecological information in a sequence of five steps:
- The scope of the ecological studies that inform the impact assessment (e.g. survey methods, desk study sources, etc.).
  - The surveys carried out and the information obtained.
  - The evaluation of the survey and desk study results (i.e. the identification of important receptors and effects).
  - The assessment of the survey and desk study results and the judgements made about the severity of impacts.
  - The implications of the findings for the impact assessment and the mitigation proposals.

#### Information and documents reviewed

- 3.4 The documents available for this review are principally those documents prepared by the Applicant, or its consultants/agents, and submitted to the Planning Inspectorate as part of the DCO application process. In addition, there is a small number of documents that the Applicant, or its consultants/agents, provided to landowners as part of their communication over land access or land rights.

#### *Documents submitted to the Examination*

- 3.5 Those documents submitted to the Examination that have been reviewed are referred to at appropriate places within the text in the sections that follow. All the submitted documents have been obtained by download from the Planning Inspectorate's National Infrastructure Planning website (<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/>) and have been listed in the Examination document library.
- 3.6 When these documents are referred to they are given the reference number that has been allocated to each in the Examination document library <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010012/EN010012-002292-Examination%20Library%20PDF%20Version%20Sizewell%20FINAL.pdf>. When a document is first referred to it is given a short text title in addition to the document library reference number in order to aid understanding.

#### *Documents provided by the Applicant to landowners*

- 3.7 The following documents were provided to the [REDACTED] owner, David Grant, being supplied in the process of seeking permission for access for surveys, reporting on those surveys and in the process of negotiating alternatives to compulsory acquisition:



- A map of SLR in relation to the [REDACTED] landholding - this is reproduced as Appendix 1.
- A report from Arcadis, one of the Applicant's consultants, on the findings of the ecology surveys conducted in 2019 that are specific to the [REDACTED] landholding – this is reproduced as Appendix 2.
- A letter from Dalcour Maclaren, one of the Applicant's consultants, on the programme of ecology surveys to be carried out in 2021 – this is reproduced as Appendix 3.

### **Spatial scope of the review**

- 3.8 This review considers that land within the [REDACTED] landholding, relating it to the 'footprint' of the SLR as originally set out in the description of the SLR (APP-446) and its related figures and plans appended to the ES for the SLR. This 'footprint' of the SLR was the basis for the surveys, evaluation and assessment in the original ES of the SLR submitted to the Examination (split in to chapters across the documents APP-445 -477).
- 3.9 It is noted that there were changes to the extent of the SLR with 'additional land' being brought within the Order Limits. Those 'additional land' parcels are identified as SLR/20/03a, SLR/20/03b, SLR/20/04a, SLR/20/04b, SLR/20/05a, SLR/20/06a, SLR/20/10b, SLR/20/10c, SLR/20/15 and SLR/20/15b; this information being drawn from sheet 20 of 28 of Land Changes Plans (AS-290). The evaluation and assessment of the 'additional land' is presented in the SLR ES Addendum (AS-185). It is noted that those further surveys undertaken in 2020 did not include that 'additional land' listed as a series of land parcels above which are within the [REDACTED] landholding.

## 4 Findings of the review

- 4.1 The findings of the review are laid out following the same order of topics as described above.

### Limitations and omissions in the findings of this review

- 4.2 This review is unable to include within its scope the results of the surveys conducted across the route of the SLR in 2021, including specific surveys undertaken on the [REDACTED] landholding. That is because those survey are either ongoing or have not commenced at the time that this review was prepared.

- 4.3 A significant series of consequences arise from those surveys being ongoing at the end of May 2021. It is likely that the results of a number of them (e.g. those bat surveys continuing in to October 2021 and wintering birds surveys that would not commence until October 2021 and finish in March 2022) will not be submitted to the Examination and published in time for Interested Parties to review and comment on them, for the Examining Authority to consider them in their preparation of their report to the Secretary of State and for the Secretary of State to take account of them in the decision on the DCO.

### The scope of the ecological studies that inform the impact assessment

- 4.4 The spatial scope of the impact assessment was based on defined Zones of Impact (Zol) that were set out in the ES Appendix 7A Ecological Baseline (APP-462) as follows:

- 5 km for statutory designated sites.
- 2 km for non-statutory designated sites.
- 2 km for habitats, plants, invertebrates, reptiles, amphibians, birds and terrestrial mammals.
- Species-specific Zols for bats, ranging from 10 km for barbastelle *Barbastella barbastellus* to 2 km for common pipistrelle *Pipistrellus pipistrellus*.

- 4.5 These Zols result in all of the land holding of [REDACTED] being within the spatial scope of the impact assessment.

- 4.6 Desk study data was obtained from the Suffolk Biodiversity Information Service on the basis of these Zols.

- 4.7 The field surveys carried out in 2019, that are listed with detailed methods in the ES Appendix 7A Ecological Baseline (APP-462) were for:

- Bats
- Breeding birds
- Great crested newt
- Protected species scoping
- Habitats

- 4.8 Separate sections below summarise the methods applied and their spatial relationship with the [REDACTED] landholding. Further information is not provided in this review on the water vole *Arvicola amphibius* and otter *Lutra lutra* surveys due to the absence of suitable watercourses within the [REDACTED] landholding.

- 4.9 As noted above, the surveys in 2020 did not cover the [REDACTED] landholding.

- 4.10 As noted above, the surveys in 2021 are ongoing and the results of those surveys have not been submitted to the Examination. It is assumed that the methods will repeat those used in 2019 or apply industry best practice guidance for those surveys that involve a new methodology. The

surveys known to have taken place to date on the [REDACTED] landholding (Dalcour Maclaren to David Grant *in litt*) are:

- i. Bat crossing point surveys.
- ii. Great crested newt presence / absence survey by sampling for eDNA and population survey using a variety of methods including bottle trapping.

### **Bats**

- 4.11 The methods applied in 2019 were bat activity transects, static detectors and a ground level tree assessment. The bat activity transects were undertaken monthly from April to October 2019 across originally four and then five routes with a post-dusk and a pre-dawn visit in each month. The transects included land both within and outside the SLR footprint. Eleven static detectors were deployed for a week each month across the period April to October 2019.

### **Breeding birds**

- 4.12 The method undertaken in 2019 involved walking a transect around field boundaries and along tracks that crossed the SLR footprint. The survey area was divided in to three routes (referred to as SLR1, SLR2 and SLR3) and walked during the mornings. Two visits were made to each transect with those visits being made in two narrow windows – the first visit between 02 and 05 April and the second visit between 14 and 17 May 2019.
- 4.13 This limited survey intensity (two visits) is able to identify the bird species assemblage across this large area but is not sufficient to quantify the numbers of breeding bird territories present for impact assessment and for the design of mitigation proposals for which both more visits are required and for them to span a wider period across the bird breeding season.

### **Great crested newt**

- 4.14 Ponds within 500 m of the SLR footprint were identified from maps and aerial photographs and visited in April to June 2019. A great crested newt Habitat Suitability Index (HSI) (Oldham *et al.*, 2000) was calculated and water sampled for environmental DNA (eDNA) analysis (Biggs *et al.*, 2014) of ponds considered to be suitable for breeding great crested newt.
- 4.15 From the correspondence concerning land access (Dalcour Maclaren to David Grant *in litt*) it is understood that in 2021 ponds within the [REDACTED] landholding will be sampled for eDNA and that a multiple visit programme for population estimation will take place involving torching and bottle trapping. It is assumed that at least one other method (e.g. netting or egg-searching) will be applied but that these were not flagged in the correspondence as they do not involve shining a high intensity light at night or leaving something at each pond, matters which it was considered necessary to bring to the attention of the landowner.

### **Protected species scoping**

- 4.16 A protected species scoping survey was undertaken in April and May 2019. The survey area was the entire site boundary with a 50 m buffer where access was possible. The survey focused in particular on the value of the area for:
- invertebrates
  - reptiles
  - breeding birds
  - foraging and commuting bats
  - trees for bat roost potential
  - badgers *Meles meles* including signs of activity and setts

- terrestrial mammals including dormouse *Muscardinus avellanarius*, brown hare *Lepus europaeus* and hedgehog *Erinaceus europaeus*

### **Habitats**

- 4.17 Habitats present were determined through a Phase 1 Habitat survey (JNCC, 2010) undertaken in April and May 2019 with hedgerows also surveyed to enable assessment under the Wildlife and Landscape Criteria of the Hedgerows Regulations.

### **The surveys carried out and the information obtained**

- 4.18 The identification of the surveys undertaken and how they relate to the [REDACTED] landholding was carried out by a detailed examination of the submitted documents that covered the ecology surveys undertaken in 2019 (ES Ch 7 Terrestrial Ecology and Ornithology, document reference APP-461; ES Appendix 7A Ecological Baseline, document reference APP-462; ES Appendix 7A Ecological Baseline Figures, document reference APP-463). In particular the Figures submitted were related to the boundary of the [REDACTED] landholding to determine whether or not a particular finding was in or out of the landholding.
- 4.19 As noted above, the surveys undertaken in 2020, reported in the Additional Ecology Baseline Survey Reports (AS-036) did not include any land within the [REDACTED] landholding and hence those results are outside the scope of this review.

### **Bats**

- 4.20 The surveys carried out and their findings in relation to the [REDACTED] landholding are described by type of survey below.

### **Transects**

- 4.21 Transect 5 passed across the [REDACTED] landholding. The bat species recorded on the transects, where they occurred on the [REDACTED] landholding, were common pipistrelle, soprano pipistrelle *Pipistrellus pygmaeus*, barbastelle, noctule *Nyctalus noctule* and the undifferentiated species records of common/soprano pipistrelle, common pipistrelle/barbastelle, 'big bat' and 'unknown'. Four barbastelle passes were recorded, all in August at the northern end of the landholding adjacent to woodland.

### **Statics**

- 4.22 Two static detectors were placed on the [REDACTED] landholding. The static locations are illustrated on Figures 7.12 – 7.14 (APP-463) as a yellow pentagon but since they are not given numeric identifiers on those Figures it has been impossible for this reviewer to relate the locations to the results that are presented in Table 1.19 of the ES Appendix 7A Ecological Baseline (APP-462).
- 4.23 This issue of being unable to relate the static locations to the recorded bat activity also hindered the specific bat reviews undertaken by BSG Ecology (REP1-091; REP1-092)). The first review in particular noted high rates of barbastelle activity recorded during the surveys for the SLR but could not relate that activity to specific locations. It noted "*The record of 93.6 bats per night at Detector 7 is the second highest encounter rate for barbastelle recorded (with regard to the Main Development Site, the Link Road and the Rail Link) at any detector deployed to sample bat activity in relation to the Sizewell C scheme*". It is not known where the location of Detector 7 is in relation to the [REDACTED] landholding.

### **Roost potential of trees**

- 4.24 The survey of trees for bat roost potential identified five trees classified as moderate roost potential (numbers 120, 130, 131, 132 and 133) and seven trees classified as low roost potential (numbers 125, 126, 127, 128, 129, 133 and 134) within the [REDACTED] landholding.

**Breeding birds**

- 4.25 The transect route, as marked on Figure 7.9 and 7.10 of APP-463, did not enter the [REDACTED] landholding. There was a gap in coverage between transect SLR1 to the west and SLR2 to the east. There is no explanation in the methodology (APP-462) or impact assessment (APP-461) as to why there was this gap in bird survey coverage (access was made to the [REDACTED] landholding in the spring of 2019 to undertake the Phase 1 habitat, great crested newt and bat surveys) and nor was it noted as a limitation.
- 4.26 The only Schedule 1, Red and Amber List or NERC Act Section 41 bird species (henceforth referred to birds of conservation status) noted on the [REDACTED] landholding in the survey results presented in the Figures (APP-463) was a skylark with its presence being recorded from the transect SLR2 as it passed to the east. That skylark record was also listed (it was the only bird listed) on the report supplied to David Grant that is reproduced as Appendix 2.
- 4.27 From results of the surveys of the farmland adjacent to [REDACTED] (shown on Figures 7.9 and 7.10 of APP-463) it is apparent that the Red List species linnet and yellowhammer, that occur on adjacent land, will have been present breeding at [REDACTED]. A considerably greater number of species can be postulated to be present at [REDACTED] based on the information contained in the desk study (APP-462) that includes evidence for the local distribution of the widespread bird species that have conservation status: Grey partridge, kestrel *Falco tinnunculus*, stock dove *Columba oenas*, barn owl *Tyto alba*, skylark *Alauda arvensis*, song thrush *Turdus philomelos*, dunnoek *Prunella modularis*, house sparrow *Passer domesticus*, linnet *Linaria cannabina*, yellowhammer *Emberiza citrinella* and reed bunting *E. schoeniclus*; and potentially one or more of the species with a restricted local distribution that have conservation status: Hobby *Falco subbuteo*, turtle dove *Streptopelia turtur*, yellow wagtail *Motacilla flava* and tree sparrow *Passer montanus*.

**Great crested newt**

- 4.28 From Figure 7.6 and 7.7 (APP-463) it can be identified that there were five ponds in the [REDACTED] landholding within the footprint of the SLR. Two of those ponds were dry and three were determined to have evidence of great crested newt presence. Surveys were also undertaken within a 500 m buffer zone of the SLR footprint and within the [REDACTED] landholding a further 14 ponds were located. Of those ponds four were dry, two were determined to have evidence of great crested newt presence and one evidence of absence and for seven ponds access was not possible.

**Protected species scoping**

- 4.29 The desk-study revealed only a single record of badger within the SLR footprint and no badger setts were recorded during the protected species scoping survey.
- 4.30 Only one reptile was noted as being recorded within the footprint of the SLR, an 'incidental' recording of a grass snake *Natrix helvetica*. Its location was described as the "base of a hedgerow, south of B1122 Yoxford Road within the site boundary" (APP-462) which potentially could place it at the northern end of the [REDACTED] landholding.
- 4.31 Based on the findings of this scoping survey it was concluded that further surveys were not justified for invertebrates, reptiles and terrestrial mammals (excluding bats) as the habitats within the footprint of the SLR were sub-optimal for these species (APP-462). Badger, otter and reptiles are given further consideration in the assessment (APP-461) in relation to legislative compliance rather than for reasons of EIA.

**Habitats**

- 4.32 The majority of the habitats within the [REDACTED] were categorised as arable. Within the [REDACTED] landholding sixteen hedgerows were identified, all but one of which were categorised as species rich native hedgerows (Figure 7.3 and 7.4 of APP-463).



- 4.33 A species rich road verge along the Littlemoor Road, identified as TN7 on Figure 7.4 (APP-463) is on, or adjacent to, the boundary of the [REDACTED] landholding.
- 4.34 None of the woodlands on the [REDACTED] landholding are ancient woodland.

#### **The evaluation of the survey and desk study results**

- 4.35 As part of the EIA process (CIEEM, 2018) the findings of the desk study and field survey are evaluated to identify the importance of each receptor in relation to its conservation status, legally protected status and geographical importance and, where it fulfils the criteria, evaluated as an Important Ecological Feature (IEF). The IEFs occurring on the [REDACTED] landholding (taken from ES Appendix 7A Ecological Baseline APP-462) are:
- Bat assemblage
  - Breeding birds
  - Great crested newt
  - Hedgerows
  - Ponds

#### **Bats**

- 4.36 The bat assemblage is evaluated as an IEF.
- 4.37 The evaluation of the bat species recorded by survey is considered to have been carried out erroneously when it concludes in the bat evaluation section of the ES Appendix 7a Ecological Baseline (APP-462) that "*barbastelle only accounted for a small proportion of the overall activity*" and on that basis does not proceed to provide any evaluation of barbastelle as a separate species (bats are evaluated as the assemblage and not species-by-species). Consideration of this matter of error in comparing the total amount of bat activity (dominated by the activity of the widespread and numerous bat species) to the amount of activity of the scarce bat species as a proportion, rather than the evaluating the absolute activity level of the rare species, is given in detail in the bat specific reviews carried out by BSG Ecology for East Suffolk Council and Suffolk County Council (REP1-091 and REP1-092).
- 4.38 The baseline studies and impact assessment for barbastelle is based on a Zol of 10 km. This has been extended from the BCT guidance (Collins, 2016) for a barbastelle Core Sustenance Zone (CSZ) of 6 km following the evidence from site specific radio tracking undertaken in 2010, 2011 and 2014 (the Bat Radio Tracking Report included within APP-245). With roosts used by breeding females having been identified over several years in the Ash Wood / Kenton Hills / Goose Hill area (APP-245) that is less than 6 km to the east of [REDACTED] then it is clear that [REDACTED] falls within the barbastelle CSZ (as does a significant proportion of the route of the proposed SLR).
- 4.39 For the above two reasons it is considered that barbastelle should be evaluated in its own right as an IEF, rather than included with the IEF that is the bat assemblage, and hence taken forward for detailed impact assessment in the ES. The result of that would be a greater focus on the potential impacts of the SLR on barbastelle and mitigation measures more tailored to the needs of this species.

#### **Breeding birds**

- 4.40 The evaluation of breeding birds has been on the basis of the whole route of the SLR and the outcome was that the farmland breeding bird assemblage was evaluated as an IEF.
- 4.41 There have been no surveys of breeding birds on the [REDACTED] landholding from which a landholding specific bird species list can be derived and then evaluated. The evidence held in the desk study data (identified above) along with professional judgement made about the species of birds that would be supported by the farmland habitats present allows an evaluation to be

undertaken. It is considered that the assemblage of farmland birds at [REDACTED] will include most, or all, of the widespread bird species that have conservation status (as identified above - grey partridge, kestrel, stock dove, barn owl, skylark, song thrush, dunnock, house sparrow, linnet, yellowhammer and reed bunting) and one or more of those species with a restricted local distribution that have conservation status (as identified above - hobby, turtle dove, yellow wagtail and tree sparrow).

#### ***Great crested newt***

- 4.42 The evaluation of great crested newt occurrence across the route across the route of the SLR identified ponds that were clustered in a manner to support three meta-populations of great crested newt. Of those, one cluster that contains the ponds P036, P064, P066, P119, P121 and P164, has the majority of those ponds within the [REDACTED] landholding. This species was evaluated as an IEF.

#### ***Protected species scoping***

- 4.43 Badger was evaluated as not an IEF with no setts recorded during the protected species scoping survey.
- 4.44 The reptile assemblage was evaluated as not an IEF with only an 'incidental' record of grass snake.

#### ***Habitats***

- 4.45 Arable habitat is widespread in Suffolk and no botanically rich arable margins were identified within the footprint of the SLR and hence the arable habitats were evaluated as not being an IEF. The arable fields within the [REDACTED] landholding of were not evaluated separately or identified as being different in anyway. This contrasts with the awards recently won by the farm (Best Small Farm in Suffolk and the Special Award for Conservation from the Suffolk Agricultural Association) and it is considered that the evaluation has been too broad-brush and not accounted for the level of attention paid to the management of the farm by the owner and his farming contractor.
- 4.46 Native, species rich hedgerows were evaluated as an IEF and all but one of the hedgerows within the [REDACTED] landholding are of this type.
- 4.47 The deciduous woodland blocks were evaluated as an IEF. Of the three woodland blocks crossed by or immediately adjacent to the [REDACTED] landholding, one was evaluated as semi-natural deciduous woodland and two as plantation deciduous woodland.

#### **The assessment of the survey and desk study results for impacts on IEFs**

- 4.48 This section considers the judgements made about the nature and severity of impacts in the SLR ES Chapter 7 Terrestrial Ecology and Ornithology (APP-461) in those cases where a receptor has been brought through the assessment as an IEF.
- 4.49 In cases where the preceding review has identified that an ecology receptor present, or likely to be present, on the [REDACTED] landholding has been omitted, under-evaluated or otherwise not addressed appropriately, then such instances are considered in the following section on the implications of the findings of this review for the impact assessment and the mitigation proposals.

#### ***Bats***

- 4.50 The assessment for bats, carried out at the level of the bat assemblage, concludes that impacts are minor, permanent and not significant. The conclusion on the impact assessment for bats depends heavily on the designed in mitigation that includes woodland and hedgerow planting, having most of the route of the SLR unlit (except for the major junctions) and having crossing points ('bat hop-overs') to facilitate the passage of bats across the road. The uncertainty in the effectiveness of this latter mitigation measure is discussed in the first BSG Ecology bat review for East Suffolk Council and Suffolk County Council (REP1-091)

- 4.51 As noted above, barbastelle was not identified as an IEF in its own right and hence not subject to detailed assessment and mitigation. This is addressed in the next section.

#### ***Breeding birds***

- 4.52 The assessment concludes that impacts are minor, permanent and not significant. This conclusion depends heavily on the designed in mitigation. That designed in mitigation includes woodland and hedgerow planting.
- 4.53 The impact assessment briefly addresses habitat fragmentation but does not recognise the habitat fragmentation effect of the SLR cutting across arable fields and reducing both individual field size and landscape openness. This reduction in field size and openness, including the knock-on effects of the compensatory woodland and hedgerow planting will particularly negatively affect skylark, a bird species identified as being present both along the whole route of the SLR and within the [REDACTED] landholding. It is considered to be the result of an impact assessment based on the breeding bird assemblage, rather than considering the habitat requirements of individual species such as skylark, that leads to this underestimation of impacts. Neither the ES (APP-461) nor the ES Addendum (AS-185) for the SLR contain proposals to mitigate for the loss of skylark breeding habitat.

#### ***Great crested newt***

- 4.54 The assessment concludes that impacts are minor and reversible and not significant. This conclusion depends heavily on the designed in mitigation. That designed in mitigation includes replacement ponds, terrestrial habitat enhancement and suitable crossing points, using culverts or underpasses, where the road is embanked. The number of ponds and their location is stated to be 'indicative' only with the detail to be worked up at the later design stage (APP-461). The section on ponds as IEF (APP-461) identifies that 8 ponds within the SLR footprint would be impacted during construction and 'approximately' 14 ponds would be created. This ratio is less than the 1:4 that is expected of developments that have sought to go through Natural England's District Level Licencing process (Natural England, 2019) although accounting for the presence/absence of great crested newts in the ponds lost across the development this ratio is close to being achieved.
- 4.55 Within the [REDACTED] landholding there is a cluster of ponds supporting a meta-population of great crested newts. The proposals for those ponds within the [REDACTED] landholding, as identified by a comparison of the maps of ponds related to great crested newt presence/absence (APP-463) and the Outline Landscape and Ecological Management Plan (oLEMP) text (AS-264) and Figures (AS-265) is that within the footprint of the SLR there is one pond that is retained and 5 ponds that are lost and that those 5 ponds are replaced with 8 ponds. This ratio of loss to replacement is less than 1:2. Accounting just for the three ponds that have confirmed great crested newt presence within the footprint of the SLR within the [REDACTED] landholding then replacement with 12 ponds would accord with the ratio of loss to replacement that is expected of developments that have sought to go through Natural England's District Level Licencing process.

#### ***Protected species scoping***

- 4.56 Protected species other than bats, breeding birds and great crested newt were scoped out of the impact assessment in the ES. This is considered to be an evidence based and reasonable professional judgement both for the SLR as a whole and for the [REDACTED] landholding.
- 4.57 No additional protected species are identified from the review that should be considered in the following section on the implications of the findings of this review for the impact assessment and the mitigation proposals.

#### ***Habitats***

- 4.58 The assessment concludes that the habitat losses are minor and reversible and not significant. This conclusion depends heavily on the designed in mitigation that includes replacement planting of hedges, shrubs and trees. This is considered to be an evidence based and reasonable professional judgement for the SLR as a whole. For the [REDACTED] landholding it has been

noted above that the evaluation process has not accounted for the 'award winning' status of the farm holding and it is considered that the outcome is that replacement planting (the mitigation) risks being uniform and bland and will result in a down-grading of the wildlife value of the landholding.

4.59 **The implications of the findings of this review for the impact assessment and the mitigation proposals**

4.60 This section considers instances where the review has identified that an ecology receptor present, or likely to be present, on the [REDACTED] landholding has been omitted, under-evaluated or otherwise not addressed appropriately in the impact assessment or within mitigation proposals.

***Bats***

4.61 As noted above, barbastelle was not identified as an IEF in its own right but was assessed together with the more numerous and widespread bat species as the bat assemblage. It is considered that this lack of a detailed assessment that is focused on the distribution, numbers and ecological requirements of barbastelle poses a risk of an assessment that does not recognise the nature and scale of impacts and does not bring forward appropriate mitigation proposals.

***Breeding birds***

4.62 As noted above, breeding birds are assessed as an assemblage and this results in components of that assemblage that have particular needs and sensitivities to impact being improperly assessed. This error in the assessment is particularly significant for skylark, a bird of large, open arable fields that will be negatively impacted by both the fragmentation caused by the SLR and also the reduction in habitat openness created by the mitigation hedgerow and tree planting for other IEFs, including other components of the farmland bird assemblage. The result is that there are no proposals to mitigate for the loss of skylark breeding habitat. This applies both to impacts on skylark within the [REDACTED] landholding and across the whole route of the SLR.

***Great crested newt***

4.63 As noted above, the proposed mitigation for the impact on ponds occupied by great crested newt across the SLR is slightly lower than expected for developments processed through the District Level Licence system. Within the [REDACTED] landholding the ratio is much lower than expected.

***Protected species scoping***

4.64 There are considered to be no issues to address under this topic.

***Habitats***

4.65 There are considered to be no issues to address under this topic.

## 5 Conclusions

- 5.1 The outcome of this review is a series of conclusions on issues within the assessment of the impact of the proposed SLR on ecological receptors present, or likely to be present, within the [REDACTED] landholding and along the route of the proposed SLR.
- 5.2 Those identified issues are brought together here and presented on the basis of the ecological receptor, or IEF, concerned rather than the stage of the review process or the stage of the impact assessment process. Where it is considered relevant and appropriate recommendations are provided on actions that could be taken by the Applicant to address the issues and the Examining Authority is asked to consider those recommendations.
- 5.3 There is also an issue centred around how the results of the ecology surveys conducted in 2021 are to be accounted for in the decision-making process. It is likely that the results of a number of ecology surveys (e.g. those bat surveys continuing in to October 2021 and wintering birds surveys that would not commence until October 2021 and finish in March 2022) will not be submitted to the Examination and published in time for Interested Parties to review and comment on them. For similar timeliness reasons, the Examining Authority may not have the results available to consider in the preparation of their report to the Secretary of State and also for the Secretary of State to take account of them in the decision on the DCO.

### **Bats**

- 5.4 The location of all static detectors deployed across the route of the proposed SLR in 2019 (not just those placed on the [REDACTED] landholding) were illustrated without numeric identifiers in the set of Figures accompanying the ES. This makes it impossible for any Interested Party or their advisers to relate the locations of the static detectors to the results that are presented in the assessment. **Recommendation:** The Applicant should re-issue the relevant figures with the individual static detectors identified in the same manner that they are numbered in the ES.
- 5.5 The evaluation of the bat species recorded by survey is considered to have been carried out erroneously when it compared the total amount of bat activity to the amount of activity of the scarce bat species. It is considered that the evaluation of the bat species should have been carried out on an individual species basis. A particular consequence of concern is that barbastelle was assessed as part of the assemblage and not as a separate species of high conservation status. It is considered that barbastelle should have been evaluated in its own right as an IEF, rather than included with the IEF that is the bat assemblage. The result of that would be a greater focus on the potential impacts of the proposed SLR on barbastelle and mitigation measures more tailored to the needs of this species. The current assessment risks not recognising the nature and scale of impacts on barbastelle and not bringing forward appropriate mitigation proposals. **Recommendation:** The Applicant should carry out further work to assess barbastelle at an individual species level.

### **Breeding birds**

- 5.6 The survey for breeding birds was based on a transect route that did not enter the [REDACTED] landholding. There was a gap in coverage between transect SLR1 to the west and SLR2 to the east. This gap in bird survey coverage is not explained (access was made to the [REDACTED] landholding in the spring of 2019 to undertake the Phase 1 habitat, great crested newt and bat surveys) or noted as a limitation. The result is that the assessment risks failing to identify the presence of some breeding bird species and certainly underestimates the size of the populations of breeding birds present along the route of the proposed SLR. **Recommendation:** The Applicant should carry out further work to assess the potential impact on breeding birds, accounting for this gap in coverage.
- 5.7 The breeding bird species identified to be present across the route of the proposed SLR are assessed as an assemblage. This results in components of that assemblage that have particular needs and sensitivities to impact being improperly assessed. This error in the assessment is



particularly significant for skylark, a bird of large, open arable fields that will be negatively impacted by both the fragmentation caused by the SLR and also the reduction in habitat openness created by the mitigation proposals (the planting of hedgerows and trees for other IEFs, including other components of the farmland bird assemblage). Neither the ES nor the ES Addendum for the SLR contain proposals to mitigate for the loss of skylark breeding habitat. This applies both to impacts on skylark within the [REDACTED] landholding and across the whole route of the SLR. **Recommendation:** The Applicant should carry out further work to assess the impact of the proposed SLR and its mitigation on the skylark breeding population.

#### ***Great crested newt***

- 5.8 The proposed mitigation for the overall impact on ponds occupied by great crested newt across the route of the SLR has a slightly lower ratio of lost to replaced ponds than is expected for developments that might be processed through Natural England's District Level Licence system (a ratio of 1:4 is delivered by the District Level Licence system). **Recommendation:** The Applicant should carry out further work to ensure that the mitigation proposals for great crested newt ponds achieves a suitable ratio of lost to replaced ponds.
- 5.9 Within the [REDACTED] landholding there is a cluster of ponds supporting a meta-population of great crested newts. Within the footprint of the SLR within the [REDACTED] landholding there are the three ponds that have confirmed great crested newt presence that are to be lost. To provide a suitable ratio of lost to replacement ponds, if considering the [REDACTED] landholding alone (where one of the meta-populations is centred and hence this 'alone' assessment is logical), then 12 replacement ponds are required within the post-construction footprint of the SLR where it is proposed to cross the [REDACTED] landholding. The current proposals are for only 8 replacement ponds. **Recommendation:** The Applicant should carry out further work to ensure that an appropriate number of replacement ponds are proposed within the SLR footprint where it crosses the [REDACTED] landholding.

#### ***Protected species scoping***

- 5.10 There are considered to be no issues to address.

#### ***Habitats***

- 5.11 The habitats across the route of the SLR were evaluated and assessed as if it were a homogeneous area. This has meant that the farmland within the [REDACTED] landholding was not evaluated separately or identified as being different in anyway. This contrasts with the awards recently won by the farm (Best Small Farm in Suffolk and the Special Award for Conservation from the Suffolk Agricultural Association) that identifies the farm as being different and of a higher wildlife value. It is considered that the evaluation has been too broad-brush and has not accounted for the level of attention that has been paid to the management of the farm by the owner and his farming contractor. One outcome of not accounting for the 'award winning' status of the [REDACTED] landholding is that the replacement planting (the mitigation proposals) risk being uniform and bland and it will result in a down-grading of the wildlife value of the landholding. **Recommendation:** The Applicant should carry out further work to ensure that the mitigation proposals on land within the [REDACTED] landholding are of a 'bespoke' nature appropriate to its 'award winning' status.

## 6 References

- Altringham, J. and Berthinussen, A. (2015) *Appendix A. Literature review: Bats, roads and railways*. Report to Defra on Research Project WC1060. University of Leeds, Leeds.
- Bennett, V.J. (2017). Effects of Road Density and Pattern on the Conservation of Species and Biodiversity. *Current Landscape Ecology Reports* 2: 1–11.
- Biggs, J., Ewald, N., Valentini, A., Gaboriaud, C., Griffiths, R.A, Foster, J., Wilkinson, J., Arnett, A., Williams, P. and Dunn, F. (2014). *Analytical and methodological development for improved surveillance of Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (Triturus cristatus) environmental DNA*. Freshwater Habitats Trust, Oxford.
- Briggs, B., Harley, D. and Taylor, J. (1993). *Transport and the Environment*. RSPB Conservation Review 7. RSPB, Sandy.
- Chartered Institute of Ecology and Environmental Management (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Chartered Institute of Ecology and Environmental Management, Winchester.
- Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 3rd edition. The Bat Conservation Trust, London.
- Environmental Resources Management (1996). *The significance of secondary effects from roads and road transport on nature conservation*. English Nature Research Report 178. English Nature, Peterborough.
- Joint Nature Conservation Committee (2010). *Handbook for Phase 1 habitat survey: a technique for environmental audit*. JNCC, Peterborough.
- Natural England (2019). *A Framework for District Licensing of Development Affecting Great Crested Newts*. Natural England Technical Information Note TIN176 [First edition 17th July 2019]. Natural England, Sheffield.
- Oldham, R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10: 143-155.
- Reijnen, R., Foppen, R. and Veenbaas, G. (1997). Disturbance by traffic of breeding birds: Evaluation of the effect and considerations in planning and managing road corridors. *Biodiversity and Conservation* 6, 567–581.
- Ricardo-AEA (2016). *The ecological effects of air pollution from road transport: an updated review*. Natural England Commissioned Report NECR199. Natural England, Worcester.

## **Annex: Specific documents provided by the Applicant to landowners**

### **Appendix 1: Map of the property boundary showing how it is affected by the proposed SLR**

This map was prepared by copying the land plan and its key (area details redacted) supplied to the landowner by Dalcour Maclaren, acting for the Applicant, and adding a small parcel of land to the south omitted from that land plan.

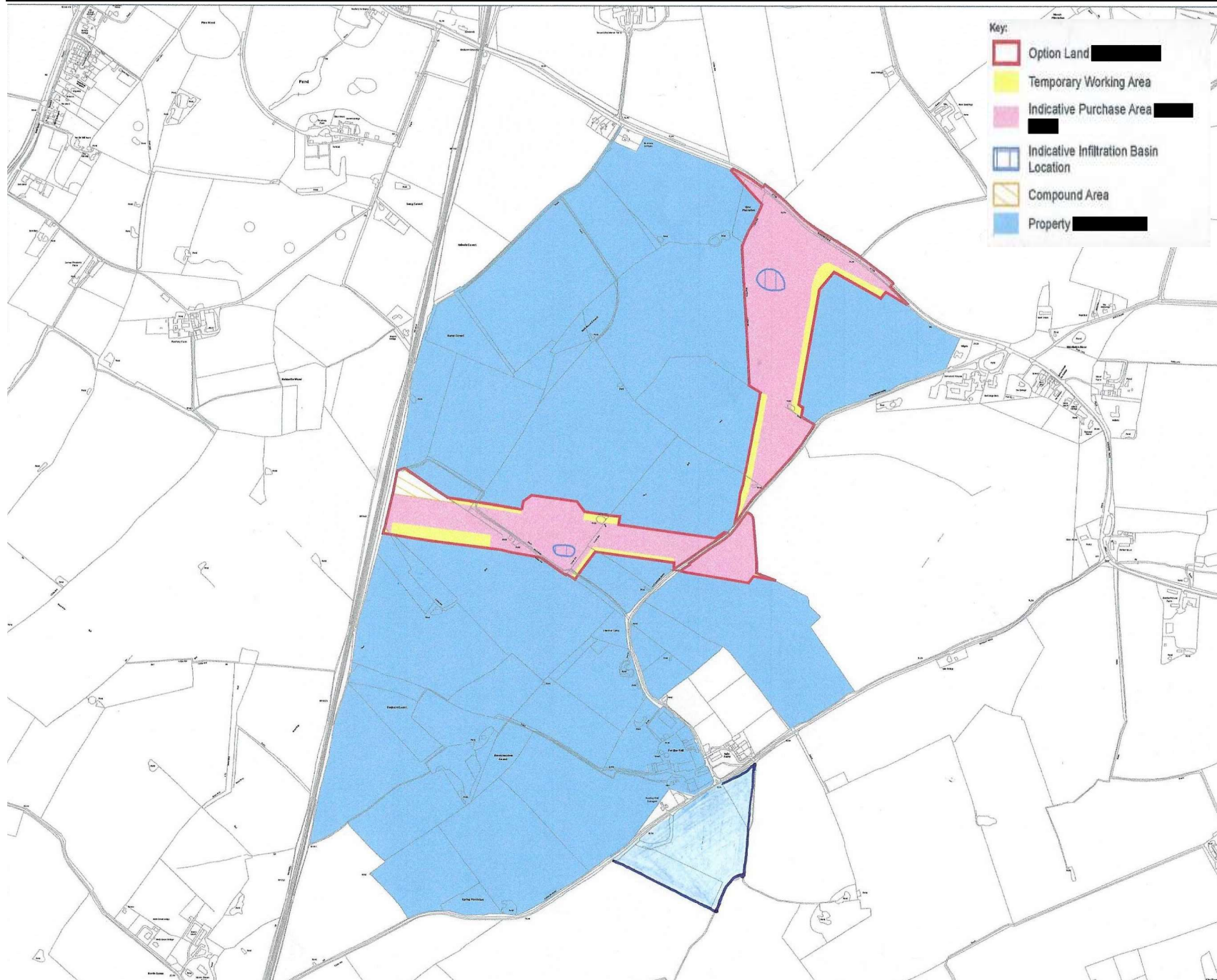
### **Appendix 2: Results of the ecology surveys conducted in 2019 specific to [REDACTED]**

This short report was supplied by Arcadis, one of the Applicant's consultants, following a request from David Grant for a copy the results of the ecology surveys that relate to [REDACTED]

### **Appendix 3: The programme of ecology surveys to be carried out in 2021**

This is a letter dated 04 March 2021 from Dalcour Maclaren, one of the Applicant's consultants, on the programme of ecology surveys to be carried out in 2021. Personal details have been redacted.

Appendix 1: Map of the property boundary showing how it is affected by the proposed SLR



## INDICATIVE SPECIES LIST – GRANT

### Flora (including Fungi)

Common Name	Scientific Name
Ash	<i>Fraxinus excelsior</i>
Bramble	<i>Rubus fruticosus</i> agg.
Common beech	<i>Fagus sylvatica</i>
Common ivy	<i>Hedera helix</i>
Common nettle	<i>Urtica dioica</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Dog's mercury	<i>Mercurialis perennis</i>
False wood brome	<i>Brachypodium sylvaticum</i>
Field maple	<i>Acer campestre</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Herb Robert	<i>Geranium robertianum</i>
Hornbeam	<i>Carpinus betulus</i>
Pedunculate oak	<i>Quercus robur</i>
Wild cherry	<i>Prunus avium</i>
Wych elm	<i>Ulmus glabra</i>

### Invasive Flora

Common Name	Scientific Name
Cotoneaster	<i>Cotoneaster horizontalis</i>

### Fish

No fish were recorded during surveys.

### Invertebrates

No invertebrates were recorded during surveys



## Amphibians

Common Name	Scientific Name
Great crested newt	<i>Triturus cristatus</i>

## Reptiles

No reptiles were recorded during surveys.

## Birds

Common Name	Scientific Name
Skylark	<i>Alauda arvensis</i>

## Mammals

Common Name	Scientific Name
Barbastelle	<i>Barbastella barbastellus</i>
Big bat*	*
Common pipistrelle	<i>Pipistrellus pipistrellus</i>
Noctule	<i>Nyctalus noctula</i>
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>

\*The term 'big bat' comprises Noctule, Leisler's bat (*Nyctalus leisleri*) and serotine (*Eptesicus serotinus*). These bats are difficult to identify from echolocation calls.



Our Ref: SZC.191934

4th March 2021

Mr D Grant

Unit 2  
Trident Business Village  
Kilvertsone Estate  
Thetford  
Norfolk  
IP24 2RL

T 0330 0945 894  
E SZC-NNB@dalcourmaclaren.com

Dear Mr Grant,

**NNB Generation Company (SZC) Limited – Sizewell C New Nuclear Power Station**

As you are aware EDF undertook survey works throughout 2020 to inform the ongoing design of the various project schemes.

Further survey works are being programmed to take place throughout 2021 and while location specifics are not readily available at this early stage, the project wishes to provide an overview of what is expected to come up in the first half of 2021. As soon as further details are known in respect of the proposed locations and timings we will be in contact to discuss these with you and ensure sufficient notice is provided under the agreed licence terms.

Please find attached to this letter an ecology guide and survey overview that provides detailed explanations of the method by which these surveys will be undertaken.

We would like to take this opportunity to thank you for your ongoing patience and understanding during EDFs ongoing survey programme.

Yours sincerely,

Dalcour Maclaren  
For and on behalf of SZC NNB

Enc. Survey Overview, Ecology Guide

## 2021 Survey Overview

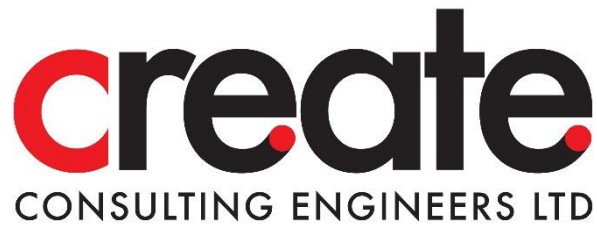
### Sizewell Link Road

Below is an indication as to what surveys are likely to be undertaken on the route of the proposed Sizewell Link Road in the first half of 2021. If archaeological trenching has already been completed on your property, it is unlikely that further works will be undertaken at this stage. Please note, this is indicative, and it is likely that further surveys will be required.

Survey Type	Intrusive / Non-Intrusive	Description
Great Crested Newt	Non-Intrusive	<p>This is a non-intrusive survey requiring a single daytime visit per pond. A suitably licenced surveyor will observe populations at the pond and take water samples from all ponds within the survey area. No equipment will be left onsite following the survey.</p> <p>A population survey will involve between 4 and 6 visits to individual ponds. Bottle traps will be deployed in the evening, and surveyors would return during the night to use a torch to spot newt movements. They will then revisit the site in the morning to inspect the bottle traps, which will be removed immediately.</p>
Bat Crossing Point	Non-Intrusive	<p>This is a non-intrusive survey to be undertaken monthly between April and October looking at hedgerows and linear woodlands crossed by new road alignments.</p> <p>Static detectors will be left on site and comprise two weather tight boxes padlocked shut and chained to a nearby feature (e.g. a fence/tree) with a cable running from it with a microphone on the end. The microphone will also be attached to an existing suitable feature (e.g. tree branch) with tape and/or cable ties.</p> <p>The static detectors will be deployed during daylight hours by an ecologist and then left in place for a minimum of five consecutive nights. They will then be collected during daylight hours by an ecologist between six- and ten-days post deployment.</p>



Bat Roost Survey	Non-Intrusive	This is a non - intrusive survey to be undertaken during daylight hours. Surveyors will walk over the survey area to identify any trees that may be suitable for use by roosting bats. Trees will be assessed from the ground to identify any features that also have the potential to be used by bats. Where accessible, from the ground or a ladder, features may be more closely inspected by a licenced bat ecologist using climbing equipment and a fiberscope. No equipment will be left onsite following the survey.
Bat Emergence Survey / Re-entry Surveys	Non-Intrusive	This survey involves a surveyor/s monitoring a feature with probable bat roosts. This survey will commence at dusk and run through the night. They will use equipment including bat detectors, thermal, night vision to observe bat movements.
Wintering Bird Survey	Non-Intrusive	Wintering Bird Surveys involve a small team, typically a pair, of ecologists walking a pre-planned transect through the centre of a scheme. Basic observational equipment such as binoculars and digital cameras are then used to observed and log any wintering birds that are identified on the land.
Bat Activity	Non-Intrusive	This can be either a static or a transect survey, with surveyor working overnight to observe bat movements. Bat detectors and other nocturnal monitoring equipment such as thermal and night vision. When a bat is observed, all aspects of the movement is recorded using map annotation and recorded commentary by the ecologist. These observations include elements such as bat species, behaviour and flying direction.



## TECHNICAL NOTE

Date: 1 June 2021

File Ref: NP/CS/P21-2187/03TN

Subject: Grant Family – Deadline 2 Response

---

### 1.0 DEADLINE 2 - SUBMISSION

1.1 Create Consulting Engineers have been appointed by the Grant family to provide a written response at Deadline 2 in line with the Planning Inspectorate timescale.

1.2 The purpose of this submission is to make the Inspector Panel aware of the following:

- Consider the issues raised by Mr. P Zanna on behalf of the Grant family at the open floor hearing (OFH) on Wednesday 19 May 2021;
- Highlight the severance of the Grant family home to Middleton and other important habitations as a result of the SLR; and
- Highlight fundamental concerns regarding the effect of the Sizewell Link Road (SLR) on the Grant family's home, specifically in relation to:
  - Noise
  - Lighting
  - Dust
  - Visual impact
  - Farm viability

1.3 Reference is made to the SLR Plans for Approval Parts 1 and 2, along with the associated Technical Documents provided by the Applicant and all necessary updates as of 31<sup>st</sup> May 2021. These include:

- SZC\_Bk2\_2.10\_SLR Plans For Approval Part 1 of 3
- SZC\_Bk2\_2.10\_SLR Plans For Approval Part 2 of 3
- Transport Assessment EN10012-002581 and Appendices / Updates
- Noise Assessment EN010012-002069 and Appendices



- Lighting Management Plan EN010012-001803
- Landscape and Visual Impact EN010012-002075
- Air Quality Assessment EN010012-002072

1.4 There are several other topic areas which the Grant family have highlighted as concerns with the SLR.

1.5 However, Create are aware that other parties, specifically Suffolk Council as the Highway Authority, will be addressing the following and therefore at this stage no further comments are made:

- Route alternatives and the lack of transparency for choosing the current SLR alignment.
- SLR alignment.
- SLR legacy benefit.

1.6 However, Create and the Grant family do reserve the right to provide additional information on these points should SCC or the Highway Authority fail to adequately challenge these points.

## **2.0 OPEN FLOOR HEARING - SEVERANCE**

2.1 Following the presentation by Mr. P Zanna at the OFH, the Inspector Panel requested plans which highlight the areas of concerns. These are provided in the following sections.

2.2 The Grant family own and actively farm land within the SLR DCO area and are directly affected by the DCO and associated works, specifically the Sizewell Link Road. The family home is Fordley Hall, a listed Grade 2 building, which is accessed and connected to Middleton via Fordley Road and Littlemoor Road.

2.3 The location of Fordley Road and Littlemoor Road, in relation to Fordley Hall (Grant family home) is shown on Figure 2.1 below. The Hall and associated buildings form a working farm and rely heavily on the connection to the B1122, Middleton and other surrounding villages.

2.4 [REDACTED] extends to approx. 325 acres in total of which 250 acres are arable cropped with the balance of 75 acres consisting of woodland, over 20 ponds, pastures and conservation areas. Since 2019, [REDACTED] has held awards from the Suffolk Agricultural Association for 'Best Small Farm' in Suffolk and a special award for 'Best Conservation'; something of which the Grants are very proud and reflect many years of hard work and investment in their land.

2.5 Figure 2.2 below shows how the proposed SLR dissects [REDACTED]; the resultant loss of acreage, 15% of the total arable area, and severance will impact negatively in the farm's viability.

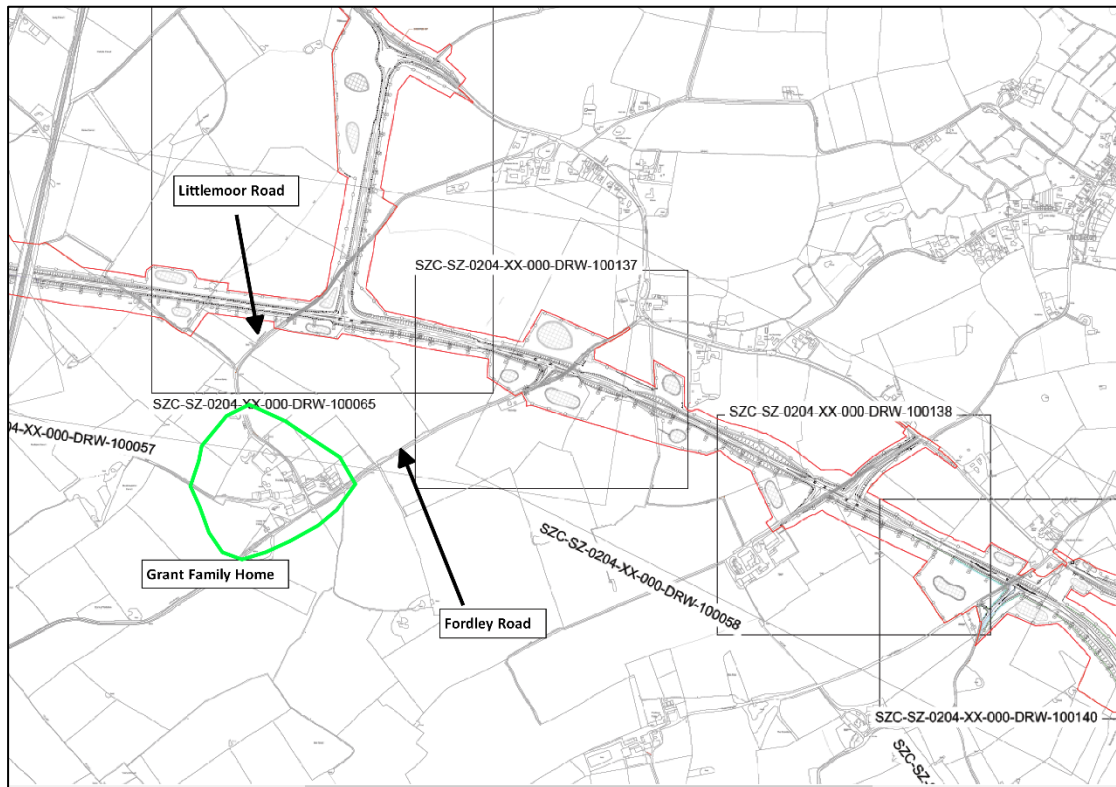


Figure 2.1 – Site Context

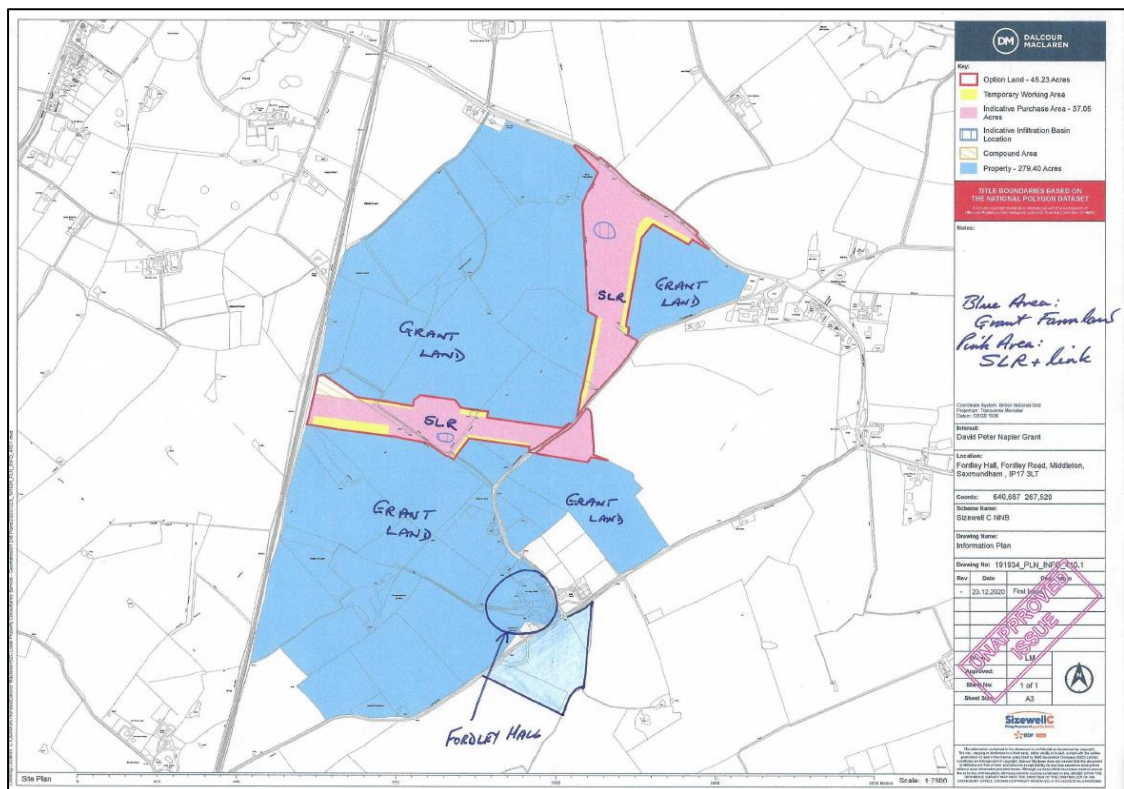


Figure 2.2 – Dissected by SLR

2.6 Considering the Grant's farming operations and family home, this is made worse by the proposed closure of Littlemoor Road. As a result, the following important points are highlighted:

- The closure of both Fordley Road and Littlemoor Road offers no direct connection from 50% of the Grant's farming operations to other land parcels north of the SLR. The Grant family and all other residents along Fordley Road are completely severed from important village facilities at Middleton, such as the Church, farm shop, pub and other important community services.
- The closure of Fordley Road and Littlemoor Road completely restricts the Grant's ability to access their farmland without lengthy diversion, road registration or even replacement of farm vehicles and equipment will be essential and add considerably to costs. The water supply for the farm's sprayers is located close to the B1122 north of the SLR. The Applicant has not engaged to offer mitigation solutions.
- The alternative access / diversion, on top of being lengthy, will at time's involve large / slow farm machinery using the SLR. Create do not consider the SLR a safe alternative given the Fordley Road / SLR junction proposed by the Applicant.
- The Applicant is proposing a ghost island junction to Fordley Road south from the SLR, the design standards applied to the junction are substandard and take no account of the wider impact and legacy benefit.
- The current proposal will, inevitably, see the Applicant's and their contractor's traffic 'rat running' along Fordley Road, south from the SLR to the A12, something that Create and the Grants had been led to believe that the Applicant was keen to avoid. This was clearly demonstrated and witnessed on April 21st whilst the Applicant's agents, Dalcour Maclaren were onsite and the A12 was diverted onto Fordley Road as a diversion caused a blocking of the road for a period of time.

2.7 From a review of the technical information, there is a lack of transparency by the Applicant over the current traffic levels on Fordley Road, the options for retaining Fordley Road and the traffic which will use Fordley Road with the southern connection in place direct from the SLR. All of which point to the solution currently proposed by the Applicant being flawed and wrongly promoted.

2.8 Taking account of the points described above, Create consider the closure of Fordley Road is fundamentally flawed, severing a number of residents from important services, disrupting the Grant's, and other local farming operations and creating a potential rat run to the A12. All of which fail to deliver the legacy benefits promoted by the Applicant.

2.9 Create consider there is an opportunity to provide a permanent legacy, should the SLR be approved; by retaining a direct connection along Fordley Road and the removal of any connection from the SLR to Fordley Road south. The benefits of this are clear:

- Maintains direct connectivity for Fordley Road residents to important community services
  - Maintains Fordley Road only for true local traffic
  - Maintains slow moving agricultural traffic on Fordley Road
  - Removes a potential safety concern at the Fordley Road junction with the SLR
  - Removes any risk of rat running traffic.
- 2.10 Create have considered solutions which maintain the Fordley Road link whilst considering the potential watercourse constraints. Appendix A provides two indicative solutions which retain the Fordley Road link.
- 2.11 These solutions are by no means fully worked up, however, they demonstrate there is a solution available with no technical constraint which cannot be overcome.
- 2.12 As a result, Create and the Grant family request that the Applicant reconsiders the Fordley Road link and remove any connection with the SLR, thus retaining Fordley Road for local traffic use only.

### 3.0 OPEN FLOOR HEARING - FORDLEY HALL DIRECT IMPACT

- 3.1 Create have reviewed the technical information supplied by the Applicant, including noise, visual impact, lighting and air quality, in particular. In all cases it is not clear that the predicted traffic from the SLR onto Fordley Road south has been considered. As a result, the direct impacts on the Grant's family home and farmland have not been accurately considered and could be much worse
- 3.2 Create have therefore provided some observations on the Environmental Statement, although as stated, Create feel the current information underestimates the actual impact. It should be noted that there has been no engagement by the Applicant with the Grants regarding mitigation of all the three principal headings shown below since the launch of proposals for the SLR in January 2019.

- **Noise** – limited background noise monitoring appears to have been undertaken at [REDACTED]

From what has been monitored, the survey suggests noise levels are very low, with values below 25dB. The predicted noise levels from the construction and operational phases state in Table 4.15 of the Noise ES chapter show values between 35 – 57 dB.

Such values are expected to be significant and therefore require mitigation measures should be provided, no mitigation is currently planned or proposed for Fordley Hall.

- **Air Quality** – The Grants currently enjoys very good air quality, which is not greatly influenced by traffic levels, or dust impacts. The Air Quality ES chapter suggests the Grant’s property and outside space are outside of the scope of influence, and therefore, there is no perceived change in levels during the construction or operational phase.

The Applicant has failed to take into account the extremely good background air quality levels, the outdoors recreation space, paddocks and tennis courts which are in frequent use by the Grants and the percentage change to both dust and emissions levels.

Create, therefore, request a wider study is completed to accurately consider the direct impact on the Grants property and usable outdoor space, with mitigation provided, as necessary.

- **Visual Impact / Lighting** – the Applicant highlights the effect of the SLR at Fordley Hall as medium, however the ES chapter fails to consider the direct line of sight to the SLR from the outdoors space the Grants enjoys, or the Listed Grade 2 residential dwelling itself.

In both cases the the visual effects of the SLR, which is elevated circa 1.5m above ground level as it passes Fordley Hall, has not been accurately considered. Little consideration is given to the B1122 / SLR link connection and the effect of lighting at the Grant’s dwelling or outdoors space.

Mitigation measures are considered necessary to mitigate against the direct impact of the SLR.

- 3.3 The above highlights a number of flaws in the information supplied by the Applicant. As a result, Create request further investigations are completed by the Applicant to consider the direct effects of the SLR during the construction and operational phase on the Grant’s residential and outdoor space.
- 3.4 Given the unique setting and background levels noted by the Applicant, Create would expect either online mitigation measures or direct measures within the Grant’s property to adequately protect the family home and outdoor space from the direct SLR impact.
- 3.5 A further area of concern for the Grants is the threat posed to their small, but well-respected commercial shoot; the SLR will destroy three or four drives and totally undermine the continuance of this traditional country pursuit which has been carried on at Fordley Hall for over 75 years; the shoot also provides seasonal employment to many local people. Again, the Applicant has not engaged, nor proffered any form of mitigation.



## **4.0 CONCLUSIONS**

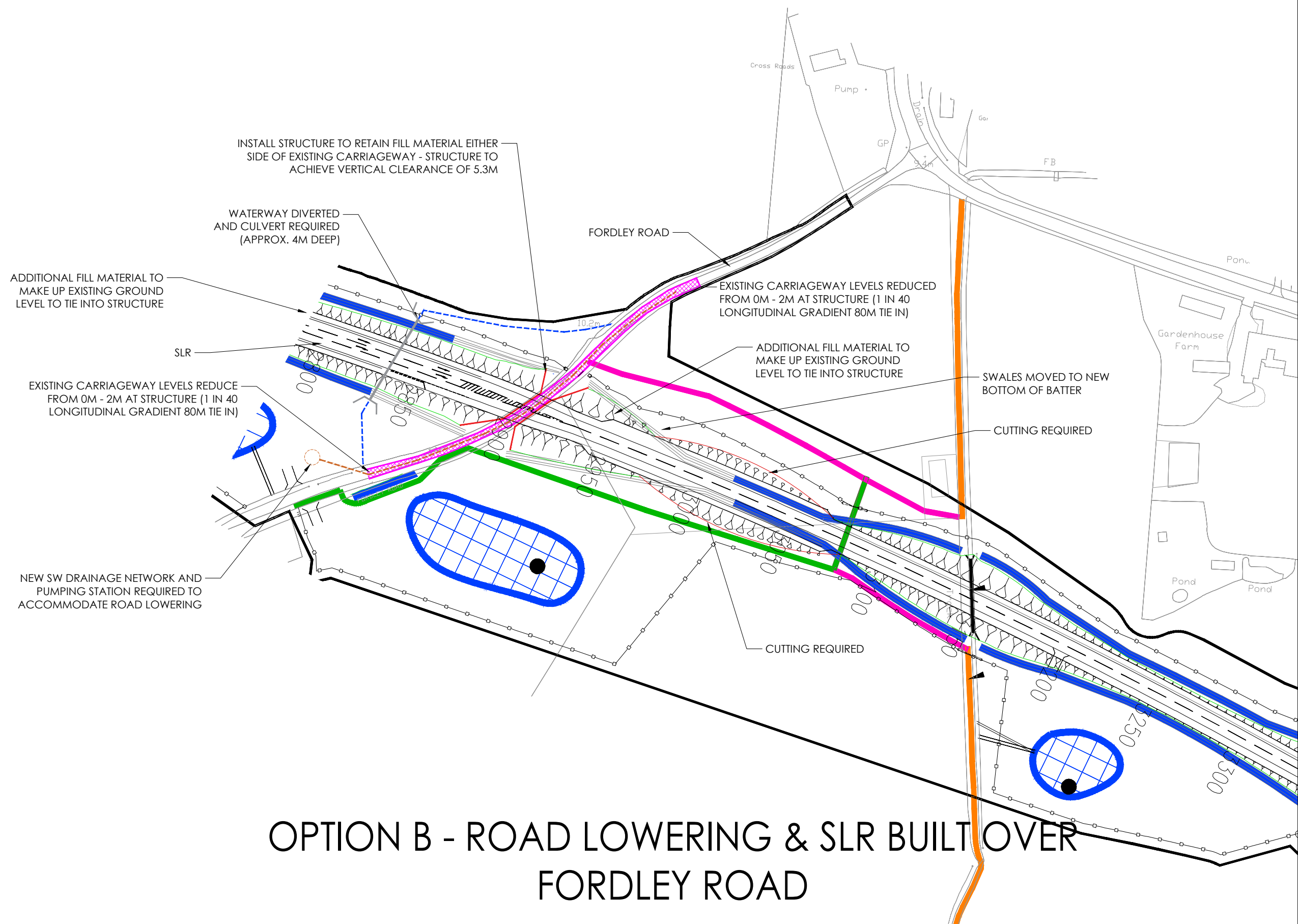
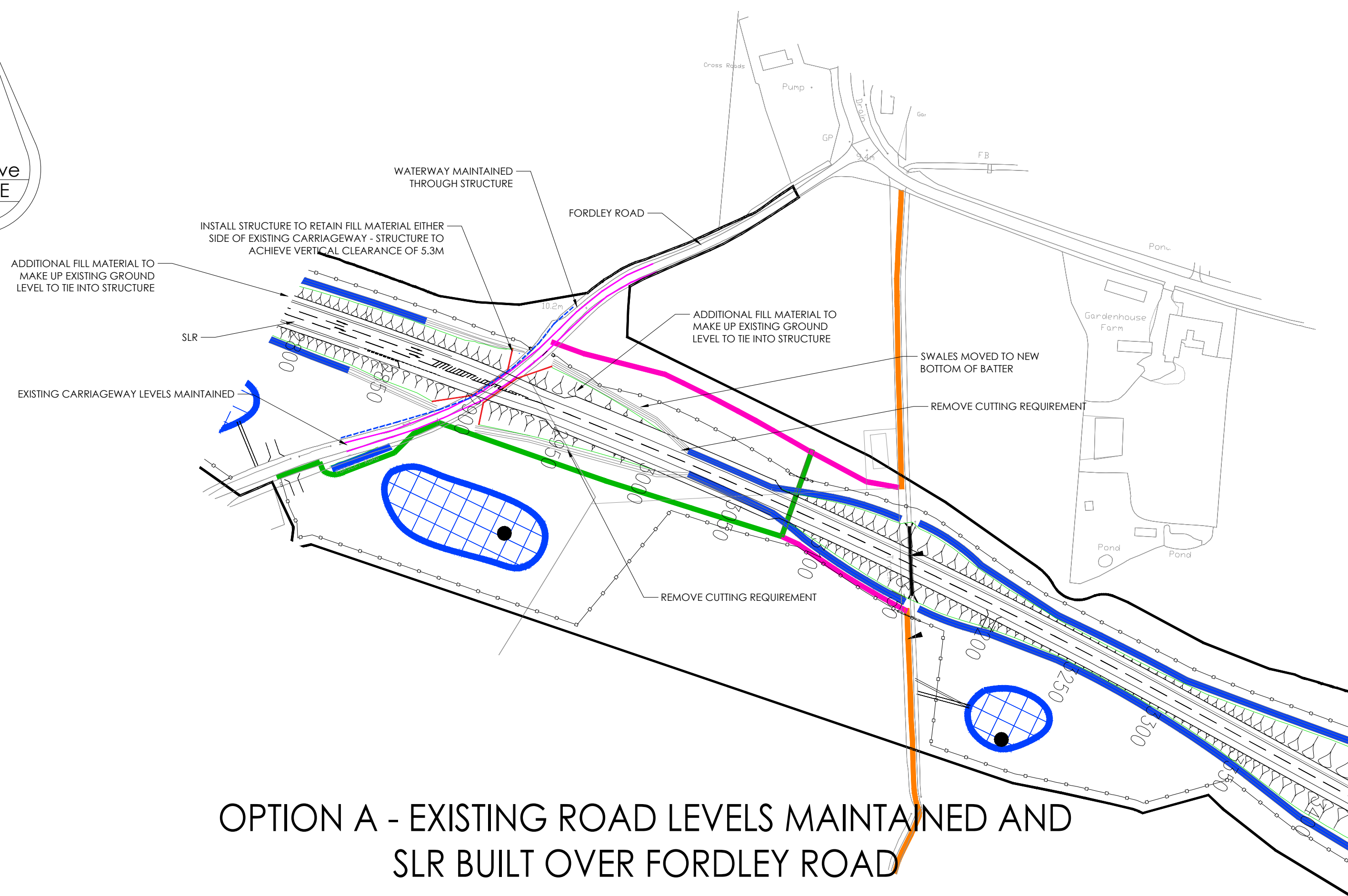
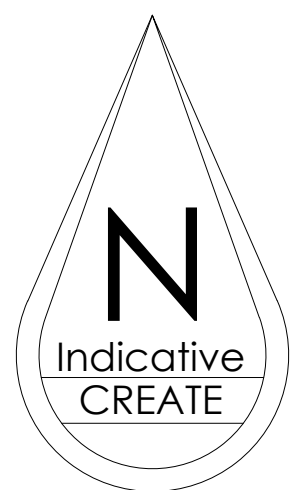
- 4.1 The purpose of this note is to consider the direct effects of the Sizewell Link Road on the Grant family's home, farming business, outdoor space and land interests.
- 4.2 Create have shown that the SLR / Fordley Road junction proposal is not safe for a number of reasons.
- 4.3 Create requests the Applicant revisits the Fordley Road link with a view to removing the SLR junction.
- 4.4 To offer a permanent legacy benefit to the local area, Create have provided an indicative solution to retain the Fordley Road link. On merit, the technical constraints can be overcome to retain this important local connection.
- 4.5 Create have reviewed a number of technical reports which consider the Grant family's direct landholdings and home. It has been shown that a number of important areas have been missed which could have misrepresented the final impact outcome.
- 4.6 This could potentially lead to the introduction of a number of mitigation measures.
- 4.7 As a result, Create request further information from the Applicant to allow a more comprehensive direct impact assessment to be completed.

**Note By:** Paul Zanna - Technical Director

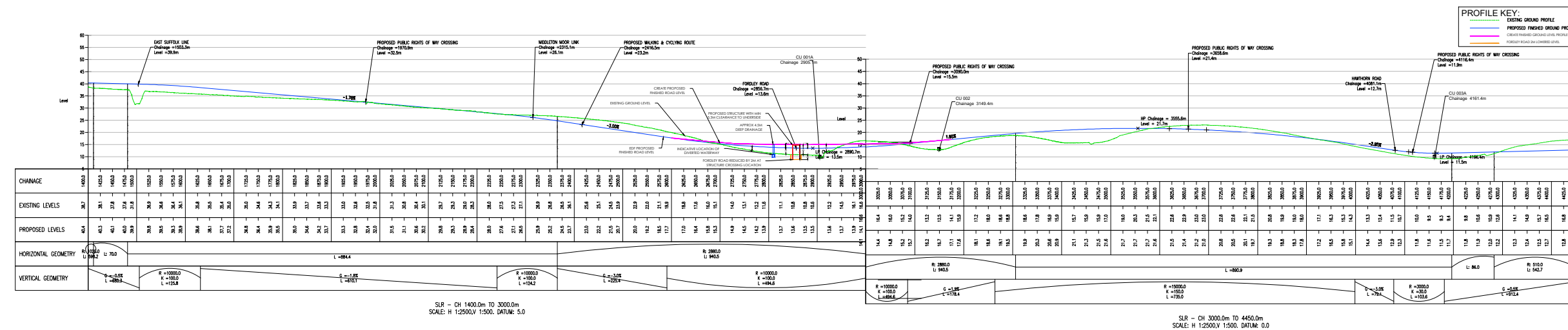
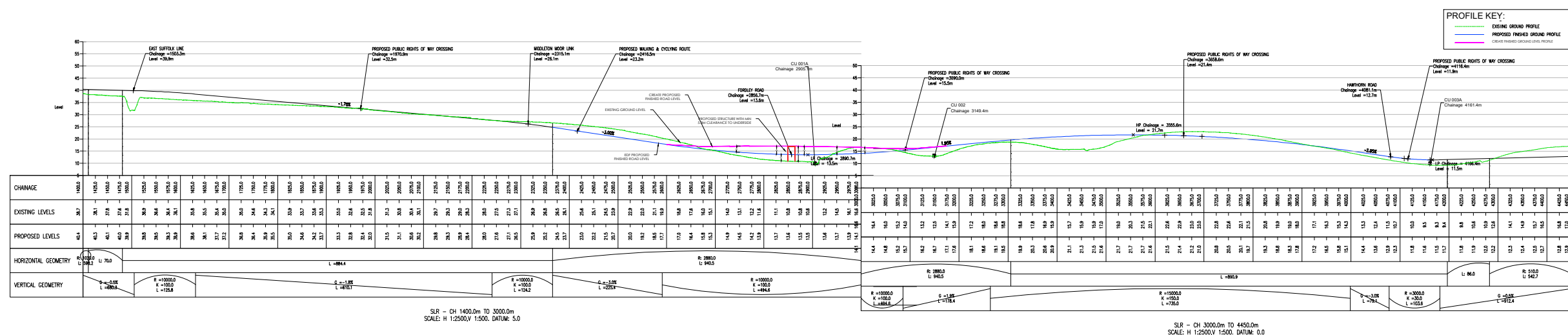
## **Appendix A Fordley Road Link Options**

## APPENDIX A

Fordley Road Options	Details	Proposals
<b>Option A</b> – Maintain current finished road levels.	Maintain the existing road level of Fordley Road, build up ground profiles either side of the road and construct a structure over the road with 5.3m clearance to mitigate the need to permanently close off Fordley Road at the junction with the Sizewell C Link Road (SLR).	<ul style="list-style-type: none"> <li>• Maintain full north / south access on Fordley Road</li> <li>• No need to construct a new 100m long slip road as per EDF proposal</li> <li>• No need to construct turning head on EDF proposal</li> <li>• No need to divert waterway as per EDF proposal</li> <li>• Tying into existing elevated ground levels approx. 100m/200m either side of the structure (see magenta line on long section).</li> <li>• Remove cutting between CH 3075 &amp; CH 2940</li> <li>• Additional filling required between CH 3000 &amp; CH 2660</li> <li>• Up to 3.5m fill above EDF proposed FRLs (but fits in with ground profiles either side)</li> <li>• 5.3m clearance structure / abutments and wingwalls required</li> <li>• Traffic flow could be maintained throughout project duration (short closure to lift / construct structure)</li> <li>• Existing drainage network could be maintained</li> <li>• Eliminate need for turning traffic / HGVs from Fordley Road onto SLR – therefore increased safety for Fordley Road Traffic</li> </ul>
<b>Option B</b> – Lower Fordley Road by 2m.	Lower Fordley Road by 2m at the junction with the SLR and construct a structure with 5.3m clearance to mitigate the permanent closure of Fordley Road north/south access. Ground profiles to be built up either side of the road.	<ul style="list-style-type: none"> <li>• Less fill earthworks than Option A but would require cutting between CH 3075 – CH 2975</li> <li>• Fill earthworks required either side of structure to build up ground profiles</li> <li>• Maintains full north/south access on Fordley Road</li> <li>• No need to construct a new 100m long slip road as per EDF proposal</li> <li>• No need to construct turning head on EDF proposal</li> <li>• Traffic flow not able to be maintained during construction due to road lowering (unless build adjacent to current road offline)</li> <li>• 5.3m clearance structure / abutments and wingwalls required</li> <li>• Surface water network will be installed to accommodate lower levels and possible flood prevention</li> <li>• Pumping station likely needed to control surface water (electrical supply and outfall to be source)</li> <li>• Waterway will require diverting (approx.. 4m deep drainage beneath SLR)</li> <li>• Approx. 160m of carriageway to be lowered to 2m at lowest point to meet acceptable longitudinal highway gradients</li> <li>• Eliminate need for turning traffic / HGVs from Fordley Road onto SLR – therefore increased safety for Fordley Road Traffic</li> </ul>
<b>Current EDF Proposal</b>	Cut off Fordley Road at the junction with the SLR and make access to the north of the SLR redundant from Fordley Road. Diversion requiring a 2km diversion route to access north side of Fordley road.	<ul style="list-style-type: none"> <li>• Cut off Fordley Road north of SLR</li> <li>• 2km diversion route created requiring northbound or southbound Fordley Road traffic to use SLR to access north side of Fordley Road</li> <li>• Cut and fill earthworks to build up ground profile</li> <li>• Earthworks to build up slip road</li> <li>• Divert waterway beneath SLR</li> <li>• Construct a turning head north side of Fordley Road to allow traffic to turn around</li> <li>• Cut off traffic flow along Fordley Road during construction phase</li> </ul>



## OPTION B - INDICATIVE LONG SECTION

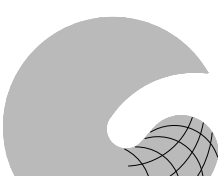


## OPTION A - INDICATIVE LONG SECTION

### NOTES:

- OVERLAY OF EDF DRAWING LAYOUT OBTAINED FROM SIZEWELL C PROJECT 2.10 SIZEWELL LINK ROAD PLANS PART 1 OF 3 PLANS FOR APPROVAL.
- CONCEPTS OUTLINED ON THIS PLAN ARE INDICATIVE ONLY AND SUBJECT TO FURTHER INVESTIGATION.
- THIS PLAN IS FOR INFORMATION ONLY.
- ALL DIMENSIONS SHOWN ARE APPROXIMATE IN METERS.

REV	DATE	AMENDMENT DETAILS	DRAWN	APPROVED
A	02.06.21	TEXT AMENDMENTS	SC	NP

PROJECT SIZEWELL C LINK ROAD		DATE 19.05.21		DRAWING STATUS INFORMATION		
DRAWING TITLE FORDLEY ROAD OPTIONS		SCALE(S) 1:2000 @ A1		DESIGNED SC	DRAWN SC	
		JOB No  P20-2187		CHECKED PZ	APPROVED PZ	
				CLIENT DAVID GRANT (MIDDLETON)		
		DRAWING No 03_001		REVISION A		create CONSULTING ENGINEERS LTD

www.createconsultingengineers.co.uk





## TECHNICAL NOTE

**Date:** 14<sup>th</sup> May 2021

**File Ref:** AF/VL/P20-2187/02TN Rev A

**Subject:** Sizewell Link Road (SLR) Route Z and Route W Comparison

---

### 1.0 INTRODUCTION

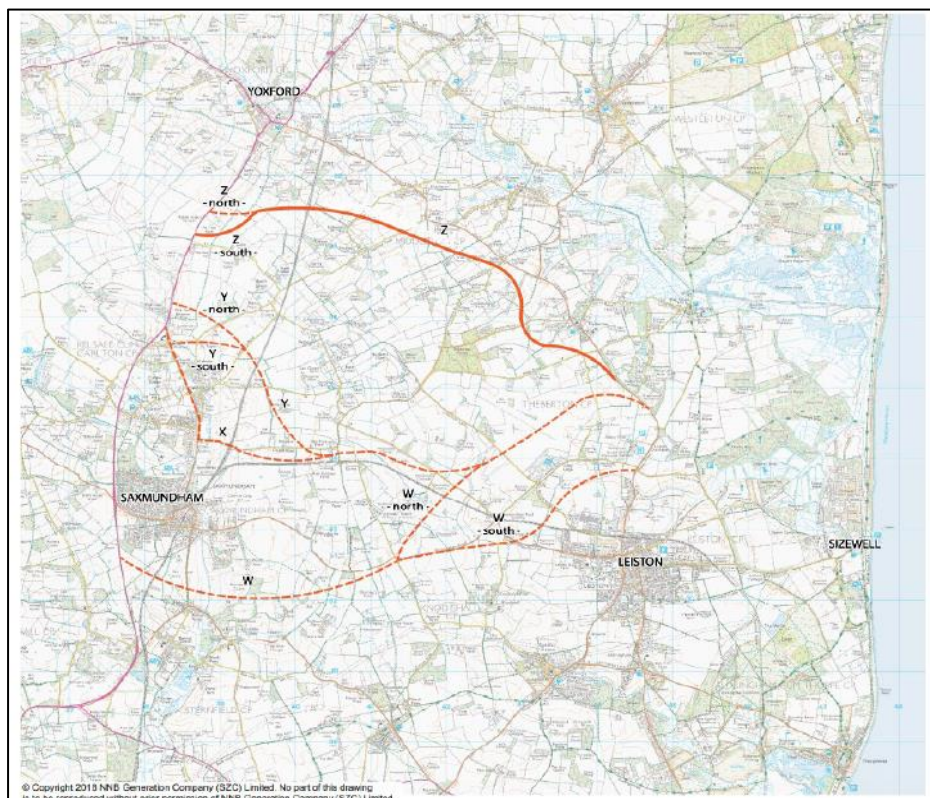
- 1.1 Create Consulting Engineers Ltd have been instructed by the Middleton and Theberton Landowners (MTL) to provide a comparison of impacts and benefits of the proposed Route Z (Sizewell Link Road or SLR) and Route W, following discussion with Thérèse Coffey, Secretary of State for Work and Pensions & MP for Suffolk Coastal.
- 1.2 This report focuses on the route choice from a transport planning viewpoint. It notes that a number of other elements have contributed to the selection of the proposed route, such as Landscape, Heritage, Noise and Air Quality. However, these are for others to comment on.
- 1.3 MTL is a consortium of farmers and landowners operating along the suggested alignment of Route Z and in the surrounding area. It should be noted that some of these land owners have land affected by both route options.
- 1.4 This Technical Note sets out the high-level review of Route Z and Route W outlining the benefits of each scheme and any shortcomings in EDF's decision making process when selecting the SLR as their preferred option.
- 1.5 The proposed alignment of Route Z is shown in Figure 1.





**Figure 1: Proposed alignment of Route Z**

- 1.6 This Technical Note looks specifically at the SLR (shown in Figure 2 below, as Route Z) and Route W (shown in Figure 2 below, as Route W North).



**Figure 2: Route Options**

---

## **2.0 FINANCIAL COMPARISON**

- 2.1 This section of the Technical Note compares the estimated costs of both route options using figures provided in EDF planning documents.
- 2.2 EDF have stated that cost was not a driver in their decision to adopt Route Z as their preferred option. However, in the April 2019 AECOM Report ‘Peer Review of Option Selection for Sizewell Link Road’, cost is identified as one of the key selection criteria in considering the route options. As such, MTL find EDF’s statement that cost is not a factor to be disingenuous.
- 2.3 The 2019 AECOM report, estimates the cost of Route W to be £55m and Route Z to have a cost of £46m.
- 2.4 It has been made clear to EDF that the local highway authority Suffolk County Council do not want to adopt the proposed SLR post construction of Sizewell C. Therefore, in addition to the £46m cost to construct the SLR, an additional cost to remove Route Z should be budgeted.
- 2.5 The removal of the SLR post construction of Sizewell C would cost between £10-15m. Therefore, bringing a total cost in excess of that of Route W, whilst providing zero legacy benefits to the region in regard to highways infrastructure.

### 3.0 LEGACY BENEFITS

- 3.1 The following section reviews the anticipated legacy benefits of both route options.

#### Route Z

- 3.2 Route Z has very few quantifiable legacy benefits to the area post the construction phase of Sizewell C and severs communities and their access to local towns and infrastructure.
- 3.3 The sole legacy benefit provided in the 2019 AECOM report is that the route will provide relief to Yoxford, Middleton Moor and Theberton during outages. An Outage is the shutdown of a generating unit, transmission line, or other facility for scheduled inspection, maintenance, or refuelling.
- 3.4 This reason alone is not substantial enough to warrant the retention of Route Z post construction. The existing highway network is more than capable of accommodating Sizewell traffic during outages without Route Z. Outages have previously been accommodated on the existing highways network for the existing power stations and would continue to be in the event Route Z is not constructed.
- 3.5 It should also be noted that Route W would also provide relief to Middleton Moor and Theberton during outages.
- 3.6 The alignment of Route Z runs effectively parallel to the existing B1122, therefore providing no legacy benefit in terms of connecting settlements that isn't already achieved by the B1122. In real terms the Route Z design would only sever local communities.
- 3.7 The B1122 would operate well within design capacity during the operational phase of Sizewell C and does not have any significant safety issues along its route between the A12 at Yoxford and Leiston.
- 3.8 Therefore, there is no justification for the retention of the Route Z post construction of Sizewell C.

#### Route W

- 3.9 Route W provides significantly more tangible legacy benefits in comparison to Route Z. Suffolk County Council has stated that it would prefer Route W for this reason.
- 3.10 Route W would be of true value to the local communities providing a much-needed improved route between the A12, Leiston, Friston, Aldringham, and Thorpeness. The new route would also offer relief to congestion in Saxmundham, due to traffic associated with two supermarkets and new housing developments to the east of the town, which must pass through the town centre before heading south along the B1121 to the A12.

- 3.11 Route W could also provide access from the A12 to the proposed Saxmundham Garden Village development of over 800 houses to the south of Saxmundham town.
- 3.12 Route W would also provide an improved route for tourism, a large contributor to the region's economy. Therefore, boosting the local economies of surrounding settlements such as Aldringham, Thorpness and Aldeburgh.
- 3.13 The alignment of Route W would provide Scottish Power with a safer and more efficient means of access to their proposed site at Friston, an example of the benefits of shared infrastructure proposed in the Joint East Anglian MPs Response to National Grid consultation in October 2020.
- 3.14 For the reasons stated above, the legacy benefits to the local community, tourism, economy and access for Scottish Power, provided by Route W significantly outweigh those associated with Route Z.

---

## 4.0 EDF ROUTE JUSTIFICATION – TRANSPORT FACTORS

- 4.1 EDF state that the assessment of alternative routes is summarised in *Volume 6 Sizewell Link Road Chapter 3 Alternatives and Design Evolution* in their DCO submission. This was then subject to the previously mentioned peer review from AECOM of April 2019 commissioned by EDF.
- 4.2 However, many of the findings in the AECOM review are felt to be inaccurate and misleading.
- 4.3 The AECOM report states that Route W does not provide mitigation to the communities of Yoxford, Middleton Moor and Theberton which are being relieved. However, it fails to make clear that these settlements would not need relief if Route W were to be adopted in place of Route Z.
- 4.4 EDF have stated that 85% of the Sizewell C freight would come from the A14 to the South and would travel north along the A12.
- 4.5 The AECOM review also states that Route Z would outperform Route W when it comes to minimising mileage. This is incorrect. With 85% of the freight travelling from the south on the A12, route mileage would be considerably less for Route W than it would for Route Z, given that Route W leaves the A12 some 5 miles south of Route Z.
- 4.6 In conclusion, from a transport standpoint Route W outperforms the Route Z on almost every metric and should be taken forward as the preferred option.



## 5.0 TECHNICAL NOTE SUMMARY

- 5.1 This Technical Note compares the benefits and disbenefits of Route Z and Route W.
- 5.2 The conclusion of this Technical Note is, from a transport standpoint, Route W outperforms the Route Z on almost every metric and as such the adoption of Route W should be reconsidered as a matter of major local importance.

**Author:** Aidan Fisher, BSc (Hons), MTPS

**Checker:** Paul Zanna, BSc (Hons)