THE SIZEWELL C PROJECT (EN010012)

DEADLINE 2

WRITTEN REPRESENTATION SUBMITTED BY THE HEVENINGHAM HALL ESTATE (THE HHE)

(INTERESTED PARTY NUMBER: 20026675)



NORTON ROSE FULBRIGHT





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1 Summary

THE SIZEWELL C PROJECT

(EN010012)

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SUMMARY OF WRITTEN REPRESENTATION SUBMITTED BY THE HEVENINGHAM HALL ESTATE (THE HHE)

(INTERESTED PARTY NUMBER: 20026675)

1.1 The HHE's objection to NNB Generation Company (SZC) Limited's (**the Applicant's**) application concerns ecology, transport and heritage. Key issues identified in its Written Representation are summarised below.

1.2 Transport

- (a) The HHE's principal concerns in respect of the Northern Park and Ride (**NPR**) relate to (1) the site selection and location for the NPR; (2) the risks associated with increased use of Darsham level crossing; and, (3) the size of the NPR.
- (b) Given the known highway risks associated with the existing level crossing, the high increase in PCUs and the fact no construction workers are now predicted to travel by train, the Applicant's decision to locate the NPR at Darsham seems incongruous.
- (c) The HHE's primary concerns in respect of the Yoxford Roundabout (YR) relate to (1) the Applicant's junction capacity modelling for the YR; (2) the traffic modelling for Yoxford and Darsham; and, (3) the design of the YR.
- (d) In summary, due to flaws in the Applicant's assessment, there is a risk that the modelling produced as part of the Transport Assessment/Addendum underestimates the capacity of the YR and overestimates queues and delays. This means that there is a concrete possibility that the YR is over-engineered.

1.3 Ecology

- (a) There are several flaws with the Applicant's approach to identifying the baseline position at the NPR and Little Nursery Wood, which immediately adjoins the NPR to the west. Most of the survey data relied on is inadequate and out of date. There are also issues with the assessments undertaken. Given the critical importance of establishing the baseline position, if potential effects are to be properly assessed, these types of issues and inconsistencies undermine confidence in the Applicant's overall assessment.
- (b) With regard to the YR, the Applicant seems to have effectively ignored the close proximity of Roadside Nature Reserve 197, which is a non-statutory designated site of ecological importance because of the presence of the rare and protected Sandy Stilt Puffball fungus. The Applicant has also failed to properly survey for roosting bats and reptiles. These omissions undermine a proper understanding of the baseline position and the Applicant's ultimate findings.

1.4 Heritage

- (a) While the HHE accepts that the completed nuclear power station is unlikely to have a material impact on the significance of heritage assets forming part of the HHE, there is a very real risk that the construction phase (including additional HGV and bus movements) and associated development, such as the YR and NPR, will cause such harm. Permanent harm may also be caused by the YR post construction.
- (b) The Applicant has failed to adequately assess: the significance of heritage assets located on the HHE, including (i) the Cockfield Hall complex of buildings which have significant group value; (ii) the significance of heritage assets within the Yoxford Conservation Area, which includes the Cockfield Hall complex; and (iii) the contribution of setting, being the surroundings in which a heritage asset is experienced.
- (c) The Applicant's determination of harm has therefore not been properly made and, in most instances, impacts have been grossly underestimated. In particular, the impact of the 12 year construction phase on heritage assets and their settings has not been properly assessed.

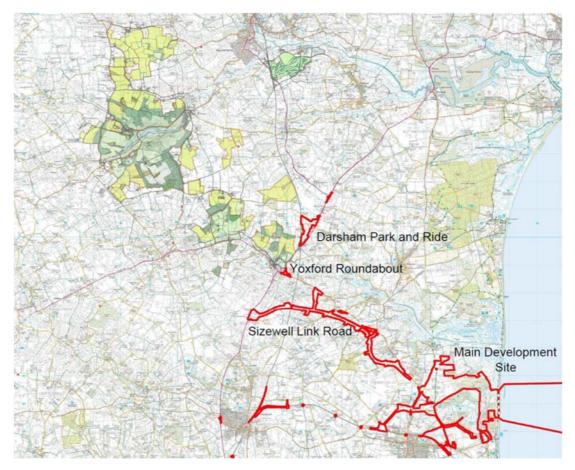
Norton Rose Fulbright LLP

2 June 2021

2 Introduction

- 2.1 This written representation (**Written Representation**) is submitted on behalf of the Heveningham Hall Estate (the **HHE**) in response to the application (the **Application**) by NNB Generation Company (SZC) Limited (the **Applicant or SZC**) for an Order granting Development Consent for The Sizewell C Project (the **Project**). It has been prepared jointly by:
 - (a) Transport Planning Associates (TPA);
 - (b) Ecology Solutions;
 - (c) Savills; and
 - (d) Norton Rose Fulbright LLP (NRF).
- 2.2 A summary of TPA, Ecology Solutions and Savills' credentials is included as Appendix 1.
- 2.3 The HHE owns and has restored more than 2,500 hectares of Suffolk's parkland, farmland, and woodland, with no fewer than 32 designated heritage assets on the estate, of which 11 are located in Yoxford. The HHE is shown shaded dark and light green to the west of the A12 at **Figure 1**. Conservation is a core principle which underpins the HHE's ethos. Its reputation for stewardship of the natural and historic environment; protecting and enhancing the local Suffolk landscape its unique habitats, ancient buildings and dark skies has contributed to its reputation not only as a paradigm for 21st century estate management, but as a world class travel destination.

Figure 1: The HHE



- 2.4 The HHE has significant concerns regarding the impact of the Project on the estate and the Suffolk region more generally, especially during the construction phase. In particular, the HHE is concerned about elements of off-site associated development forming part of the Project, specifically the temporary Northern Park and Ride (NPR) and the permanent Yoxford Roundabout (YR). As show on Figure 1, part of the HHE is located south of the NPR site, while another part of the HHE falls within land required temporarily to facilitate the YR.
- 2.5 This Written Representation is comprised of two parts:
 - (a) Part 1, which focuses on the associated development forming part of the Project, specifically the NPR and YR, and any adverse effects and issues identified by the HHE's professional team in relation to transport, ecology and heritage; and
 - (b) Part 2, which includes the HHE's comments on the wider Project.
- 2.6 References to Application documents in this Written Representation followed by "EXL" and then a reference number (e.g. **EXL AS-107**) are references to the document's unique Examination Library reference.
- 2.7 Please note that due to the volume of documents comprising the Application, the HHE and its consultant team have had to be selective in undertaking their review. Accordingly, silence on a particular point in connection with the Application should not be interpreted as tacit approval.

PART 1

ASSOCIATED DEVELOPMENT

1 The NPR and YR

1.1 Figs 2, 3 and 4 show the proximity of the HHE to the NPR and YR, and identify features of interest.

Figure 2: The NPR and the YR

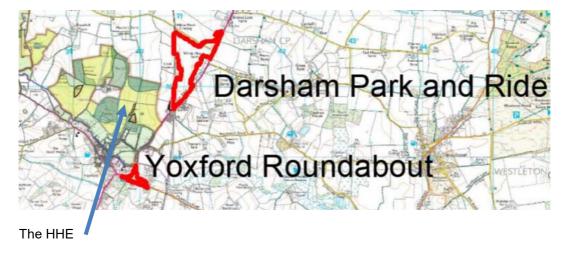


Figure 3: The Cockfield Hall Complex and the YR



The Cockfield Hall complex

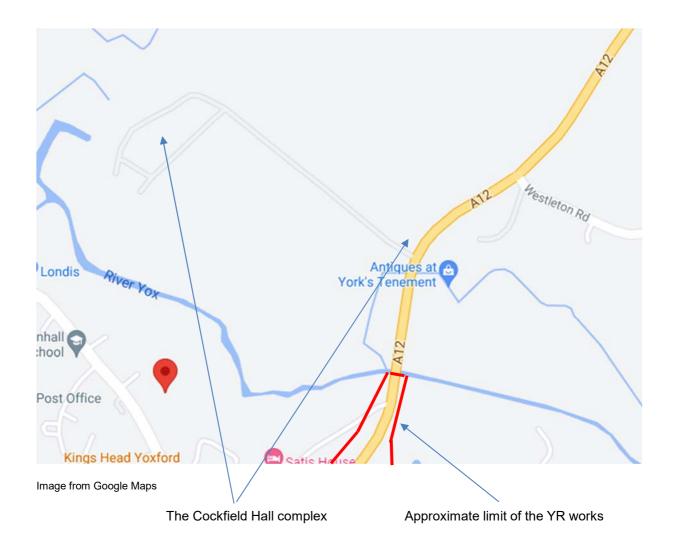
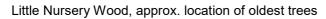
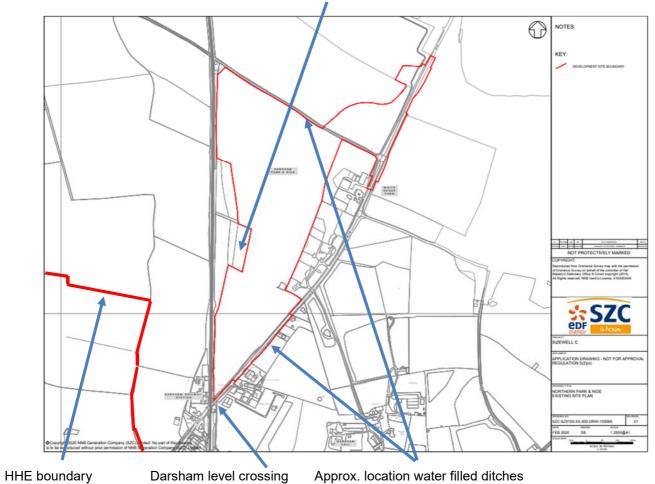


Figure 4: The HHE and the NPR

Northern Park and Ride Existing Site Plan (not for approval) SZC-SZ0100-XX-000-DRW-100066 Rev 01 marked up with features of interest.





2 Transport

NPR

Overview

- 2.1 The HHE's principal concerns in respect of the NPR relate to (1) the site selection and location for the NPR; (2) the risks associated with increased use of Darsham level crossing; and, (3) the size of the NPR.
- 2.2 The NPR is to be located immediately north of Darsham railway station, with vehicular access via a new roundabout and pedestrian access via a new passage to the existing footway on the A12. There will be no direct connection between the NPR and Darsham station. The HHE notes:
 - (a) access to the NPR (vehicular and pedestrian) would result in increased use of the existing level crossing at Darsham, which already carries a very high Network Rail risk rating. The most recent Risk Assessment of the Darsham level crossing undertaken by Network Rail in July 2020 gives it a risk score of F2. F means "moderate" risk on an "Individual Risk" rating¹ and 2 means "Very High" on a "Collective Risk" rating² (one below the maximum). It is worth highlighting that Network Rail notes that, of the two scores, the "Collective Risk" rating "is the most important part when prioritising crossings".³ See further details below;
 - (b) the Transport Assessment Addendum⁴ (**TA Addendum**) predicts a HGV distribution of 15% from the North and 85% from the South. Based on 15% HGVs coming from the North, out of 700 daily deliveries during the busiest day of the construction period, 105 HGVs are predicted to come from and then return to the north via the A12. All of these HGVs would therefore need to cross using the level crossing at Darsham. This equates to 305 passenger car units (**PCUs**)⁵ even without any additional bus movements. Should the 76 predicted bus movements to the NPR each way be added to the equation, the number of PCUs increases from 305 to 685 additional PCU movements (305 + 380⁶). This increase does not take into account additional bus movements to and from other destinations:
 - (c) no construction workers are now predicted to travel by train (the Transport Assessment (**TA**) previously estimated 100 works would travel by rail daily).⁷
- 2.3 In light of the above, the decision to locate the NPR at Darsham seems incongruous. The locations for the two park and rides forming part of the Project were chosen with the aim of "intercepting construction workforce traffic at strategic locations to reduce traffic through the towns and villages closer to the main development site". Out of a number of options the Applicant considered Darsham to be the best location for the NPR site from a transport perspective, as it offered the potential to reduce overall traffic movements by acting as a "rail and bus interchange, as well as a car and bus interchange". It was also regarded as the "best option in terms of highway safety for access" A location on the A12 for the park and ride was also seen as the most suitable, as it would enable traffic to be intercepted on the network prior to reaching the

¹ The Individual Risk Rating is the risk to individual users of the crossing. It is presented as a single letter, with A being the highest risk and M being the lowest risk.

² The Collective Risk Rating is the overall risk of any incident involving any person or vehicle on the crossing, including train staff and passengers, as well as users of the crossing. It is presented as a number with 1 being the highest risk and 13 being the lowers risk.

³ https://www.networkrail.co.uk/communities/safety-in-the-community/level-crossing-safety/

⁴ Paragraph 8.2.45, Transport Assessment Addendum (EXL AS-266).

⁵ Based on a PCU equivalence factor of 2.9, corresponding to Artic Goods Vehicle (see Table 9.2: PCU Factors by Vehicle Type (on page 256) in the Transport Assessment (**EXL APP-602**).

⁶ Based on a PCU equivalence factor of 2.5, corresponding to Public Service Vehicle (see Table 9.2: PCU Factors by Vehicle Type (on page 256) in the Transport Assessment (**EXL APP-602**).

⁷ Paragraph 7.2.23, Transport Assessment (**EXL APP-602**).

⁸ Paragraph 4.4.8, Transport Assessment (EXL APP-602).

⁹ Paragraph 3.2.27, Volume 3 Northern Park and Ride Chapter 3 Alternatives and Design Evolution (**EXL APP-353**).

¹⁰ Paragraph 3.2.20, Volume 3 Northern Park and Ride Chapter 3 Alternatives and Design Evolution (**EXL APP-353**).

B1122.¹¹ Given the known highway risks associated with the existing level crossing, the high increase in PCUs and the fact no construction workers are now predicted to travel by train, the Applicant's decision to locate the NPR at Darsham does not add up.

Site selection

- 2.4 The Applicant has not adequately justified its selection of Darsham as the location for the NPR. Better locations could and should have been identified. For example:
 - (a) neither the TA, nor the TA Addendum makes any reference to the Darsham level crossing, except for the location of the access and impact of queues on the operation of the surrounding junctions. There is no acknowledgement of the risks associated with the crossing itself, which is a glaring oversight;
 - (b) given the TA Addendum now advises that no construction workers are predicted to travel by train, 12 the existence of Darsham train station is irrelevant. It can have had no bearing on the selected location for the NPR;
 - (c) in terms of the predicted use of the NPR (see the catchment areas at **Figure 5**), there is doubt that the figures and assessment feeding into Plate 7.4: Travel mode catchments peak construction are reliable. The Applicant needs to explain¹³:
 - (i) why some residents living west of Saxmundham are predicted to use the NPR when they live closer to the Southern Park and Ride (see Plate 7.4 of the TA);
 - (i) why residents living in the immediate vicinity of the NPR are predicted to drive directly to the main development site.

Figure 5: Park and ride site catchment areas

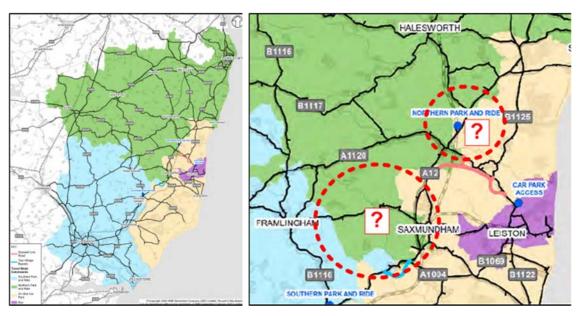


Plate 7.4 of the TA TPA's review

¹³ Plate 7.4: Travel mode catchments – peak construction (on page 156), Transport Assessment (EXL APP-602),

¹¹ Paragraph 3.2.20, Volume 3 Norther Park and Ride Chapter 3 Alternatives and Design Evolution (EXL APP-353).

¹² Paragraph 3.3.3, Transport Assessment Addendum Appendices 7A-8B Appendix 7D: Direct Bus Strategy (**EXL AS-268**).

Darsham level crossing

- (d) Exacerbating existing safety issues
 - (i) Darsham level crossing currently has a Network Rail risk rating of F2, based on an individual rating of F (moderate) and a collective rating of 2 (very high). Key risk drivers identified by Network Rail in connection with the use of the crossing include: crossing is near a station; large numbers of HGVs; large numbers of users; sun glare; deliberate misuse or user error; blocking back. See Figure 7 and Figure 8 for information about how Darsham's risk rating compares to other level crossings in the local area.
 - (ii) One of the key risks associated with the Darsham crossing is the large number of HGVs using it. The increase in traffic (particularly HGVs and buses) in connection with the construction of the Project will exacerbate existing issues. In this regard, TPA notes:
 - (A) traffic flow data included in the diagrams in Appendix A to the Yoxford Microsimulation Modelling Technical Note (included in the TA Addendum)¹⁴ show that traffic at the Darsham level crossing is predicted to increase by up to +10.3% a substantial increase, given its existing "Very High" Collective Risk rating (one below the maximum) (see **Table 1**);
 - (B) for traffic modelling purposes the Applicant predicts a HGV distribution of 15% travelling from the north and 85% coming from the south. 15 This means that out of 700 daily deliveries during the busiest day of the construction period, 105 (i.e. 15% from the north) are going to cross using the Darsham level crossing. This equates to 305 PCUs, 16 which is a significant value that would exacerbate existing issues with the current use of the crossing. As noted earlier, when the 76 x 2 daily additional bus movements to the NPR are included, the additional number of HGVs increases and reaches a value of 685 PCUs. This is again a significant value that would exacerbate existing safety issues.
 - (iii) In summary, TPA considers the significant predicted increase in use of an already high risk rated level crossing to be a fundamental highway safety issue that the Applicant has overlooked in preparing its transport evidence base.

Table 1: Darsham level crossing: Peak hour flows (with or without the Project)¹⁷

			AM Peak			PM Peak			
		Future base	With Project	Net	%	Future base	With Project	Net	%
2023	NB	534	547	+13	+2.4	751	828	+77	+10.3
Early Years	SB	610	647	+37	+6.1	535	570	+35	+6.5
	Total	1,144	1,194	+50	+4.4	1,286	1,398	+112	+8.7
2028	NB	557	557	0	0.0	787	816	+29	+3.7
	SB	654	667	+13	+2.0	558	598	+40	+7.2

¹⁴ Transport Assessment Addendum Appendices 8B-9B Appendix 9B: Yoxford VISSIM Model (EXL AS-269).

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¹⁵ Paragraph 8.2.45, Transport Assessment Addendum (**EXL AS-266**)...

¹⁶ Using a 2.9 equivalence factor, corresponding to Artic Goods Vehicle (being the same factor used in the TA) (see Table 9.2: PCU Factors by Vehicle Type (on page 256) in the Transport Assessment (**EXL APP-602**).

¹⁷ Transport Assessment Addendum Appendices 8B-9B Appendix 9B: Yoxford VISSIM Model (EXL AS-266)

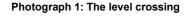
Peak construction	Total	1,211	1,224	+13	+1.1	1,345	1,414	+69	+5.1
2034	NB	592	596	+4	+0.7	838	834	-4	-0.5
Operational Phase	SB	690	699	+9	+1.3	597	601	+4	+0.7
	Total	1,282	1,295	+13	+1.0	1,435	1,435	0	0.0

(e) No mitigation

- (i) Despite the predicted increase in HGVs and buses using the level crossing, the Applicant's mitigation package does not comprise any improvements to the existing level crossing infrastructure, including pedestrian provision at Darsham which includes narrow footways and a level crossing (see the photograph montage at **Figure 6**).
- (ii) The HHE also notes that in exploring the possibility of running more trains on the East Suffolk line, especially during the peak construction period, the Applicant acknowledged that increased use of trains as part of its revised transport strategy may require "Network Rail to undertake improvements to level crossings on the East Suffolk line, in line with their duties as infrastructure manager, to mitigate the risk to level crossing users arising from more frequent services" (emphasis added). Given this acknowledged risk, it is even more remarkable that the Applicant has not put forward any proposals to upgrade pedestrian and vehicular safety at the Darsham and Middleton level crossings, particularly at the former, which is regarded by Network Rail as the crossing with the highest rated risk, but which is also predicted to suffer the largest increase in users.

Figure 6: Darsham level crossing montage¹⁹







Photograph 2: Train using level crossing

¹⁸ Paragraph 4.2.6, Transport Assessment Addendum (EXL AS-266)...

¹⁹ TPA photographs – August 2020 and NRF photographs – 2021.





Photograph 3: Pedestrian walkway by level crossing

Photograph 4: Pedestrian walkway by level crossing



Photograph 5: Sign at Darsham Level Crossing

Мар Satellite Darsham (F2) High Risk Medium Risk Middleton (F4) Low Risk Low Risk - with mitigation Halesworth (D5) Fordly Hall (D10) RSPB Minsmere North Green (F6) East Green (B4) East Bridge Kelsale Red House Farm (D7) Knodishall (J8) Saxmundham (D10) West House (L11) Snowdens (H12) Saxmundham Road (L8) Bratts Black House (E6) Leiston

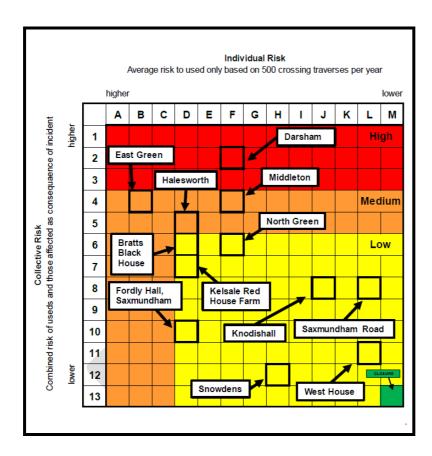
Figure 7: Risk scores associated with local level crossings²⁰

Figure 8: Comparison of risk scores associated with local level crossings²¹

²⁰ Network Rail base mapping and risk scores, with annotations by TPA. Colour coding based on Aegis Engineering - Level

crossing risk assessments – case study (Derby to Stoke RE-signalling)

21 Network Rail risk scores, with annotations by TPA. Colour coding based on Aegis Engineering - Level crossing risk assessments – case study (Derby to Stoke RE-signalling)



Size of the NPR

- 2.5 The Applicant used a gravity model to estimate the residential distribution of the peak construction workforce, as well as assumed car share ratios and shift patterns²². This modelling informed the design of the NPR. TPA has, however, identified issues, which undermine the Applicant's conclusions regarding the size (not to mention the location) of the NPR:
 - (a) it is unclear how Table 1 (Workforce Profile) of WSP Technical Note "Sizewell C Gravity Model Technical Note" was derived²³. In particular, TPA notes that 3,000 workers are anticipated to live in the on-site campus or in a caravan, yet this is not reflected in the gravity model. Given these workers represent 35% of the total workforce (7,900+600), if the number of on-site workers ends up being less, there is a risk that the Applicant has underestimated the number of drivers in its gravity model, especially during the Monday morning and Friday afternoon peaks. SZC Co. should quantify the impact of the development during a Monday morning and a Friday evening, when significant movements of workers living on the on-site campus and on caravans are to be expected. The impact associated with these weekly tidal movements may well be greater than any of those assessed in the TA / TA Addendum;
 - (b) based on the assertions made in the TA, the NPR is predicted to be used by 1,230 workers from the main development site, using 1158 vehicles. This equates to an average vehicle occupancy of 1.06. TPA would have expected an average vehicle occupancy of between 1.10 and 1.54, as the Applicant has derived these values based on those observed at

²² Transport Assessment Appendices 2A - 7B Appendix 7A: Sizewell C Gravity Model (EXL APP-603),

²³ Table 1: Workforce Profile (on page 448) in the Transport Assessment Appendices 2A - 7B Appendix 7A: Sizewell C Gravity Model (EXL APP-603),

- Hinkley Point C, noting that the expected values at the NPR should be between these two (i.e. not less). This is a point that the Applicant needs to clarify;
- (c) Some additional, detailed comments on the gravity model and the Visum modelling at the basis of the assessment are at **Appendix 9** of this report.
- Therefore, TPA has been unable to find any evidence to suggest that the NPR needs to have 1,250 car parking spaces to meet anticipated demand. The Addendum suggests that 1,054 spaces as the maximum predicted number at the peak of construction²⁴, a slight increase from the previously estimated 1,006 in the TA²⁵, even those figures are to be questioned due to potential flaws in the gravity model (see above). On any view, if the maximum number of spaces required is 1,054 there is no justification for a 1,250 space car park. The proposed supply significantly outstrips demand.
- 2.7 We add that the Southern Park and Ride (**SPR**) also has significant spare capacity, with a maximum occupancy of 894 spaces (out of 1,250)²⁶; that is 71.5% occupancy during peak construction. Clearly, both sites have been overdesigned. Considering that, in their evidence, the NPR attracts traffic from the south, the catchments of the two Park and Rides should, as a minimum, be similar, rather than resulting in a higher demand in the NPR. In practice, we would have expected the SPR to have a bigger catchment and that is why we query the justification for the location and size of the NPR.
- 2.8 In conclusion, there is no evidence that the two Park and Rides should have a combined capacity of 2,500 spaces when the peak is predicted as 1,948 (78%) and, in particular, that the NPR needs 1,250 of them.

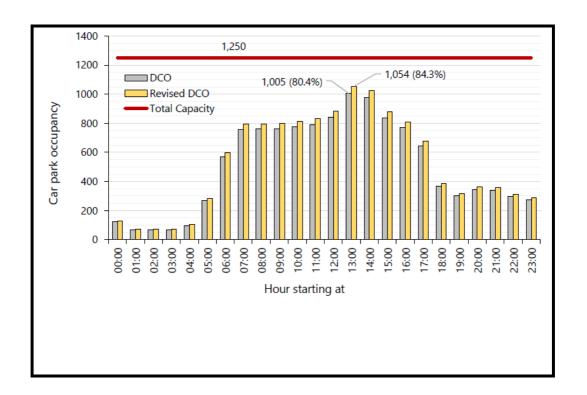
Figure 9: NPR occupancy profile across a typical day²⁷

²⁵ Table 13: Car park accumulation – peak construction (on page 475) in the Transport Assessment Appendices 2A - 7B Appendix 7B: Sizewell C Visum Model Traffic Input Calculations (**EXL APP-603**).

²⁶ Table 3: Car park accumulation – peak construction (on page 6) in the Transport Assessment Addendum Appendices 7A – 8B Appendix 7A: Sizewell C Traffic Inputs (**EXL AS-268**).

²⁴ Paragraph 7.2.6, Transport Assessment Addendum (**EXL AS-266**).

²⁷ Table 13: Car park accumulation – peak construction (on page 475) in the Transport Assessment Appendices 2A - 7B Appendix 7B: Sizewell C Visum Model Traffic Input Calculations (**EXL APP-603**), Table 3: Car park accumulation – peak construction (on page 6) in the Transport Assessment Addendum Appendices 7A – 8B Appendix 7A: Sizewell C Traffic Inputs (**EXL AS-268**).



YR

Overview

- 2.9 The HHE's primary concerns in respect of the YR, as set out in **Part 1** of these Written Representations, relate to (1) the Applicant's junction capacity modelling for the YR; (2) the traffic modelling for Yoxford and Darsham; and, (3) the design of the YR.
- 2.10 In summary, due to flaws in the Applicant's assessment, there is a high probability that the modelling produced as part of the TA/TA Addendum underestimates the capacity of the YR and overestimates queuing and delays. This has resulted in the YR being over-engineered. As explained in Section 4 (Heritage) below, the YR harms the significance of designated heritage assets. This increases the importance of ensuring that it is not over-engineered and larger than necessary.

Junction modelling

- 2.11 TPA has identified the following flaws with the Applicant's modelling at (1) the junction between the A12 and the A1120; and, (2) the junction between the A12 and the B1122 (the site of the proposed YR):
 - (a) The roundabout is actually a 55m Inscribed Circle Diameter (**ICD**) roundabout, not 60m as claimed in the TA;²⁸
 - (b) It is unclear why the base scenario was not assessed in Junctions 9 software. The reason given in the TA was that the Junctions 9 assessment was only undertaken "to reinforce the results being presented from the VISSIM model" and therefore focussed "on determining the likely operation of the three-arm roundabout and [did] not assess the current or forecast operation of the existing T-junction layout." It is not clear why then other junctions (such

²⁸ Paragraph 5.3.45, Transport Assessment (EXL APP-602).

²⁹ Paragraph 9.16.6, Transport Assessment (**EXL APP-602**).

³⁰ Paragraph 9.16.7, Transport Assessment (**EXL APP-602**).

as the one between the A12 and the A1120) were instead modelled with both modelling tools;

- (c) the TA claimed that "Junctions 9 is not able to take account of unequal lane usage so where this is present a manual adjustment to the model is needed to prevent the modelled capacity being overestimated" and on this basis the Applicant "modelled as a single lane (measured approach width, 4m entry width and a 10m flare length) to reflect the fact approximately half of the road space will be unutilised". TPA notes that Junctions 9 is able to model unequal lane usage, via the Lane Simulation tool and that this would have produced a better representation of the predicted operation of the roundabout, without the need to artificially manipulate the model. This was clearly an oversight in the Addendum.
- 2.12 The cumulative effect of the above is that it is inevitable that the Applicant's model underestimates capacity at the junctions between (1) the A12 and the A1120 and (2) the A12 and the B1122 and thus overestimates queues and delays. With regard to the YR in particular, this risk should be read in the context of a maximum predicted ratio of flow to capacity (RFC) of 0.87 during one hour of the Early Years construction period see Table 2. In short, the design of the YR seems to be significantly over-engineered. In TPA's opinion this is due to errors with the Applicant's modelling methodology and its decision to design the YR on the basis of a maximum RFC predicted to last for 1 hour only (17:00 18:00) during the Early Years construction period.

Table 2: Results of the junction capacity assessment at the YR³³

RFC	FC Base		23	20	028	20	34
		RC	Early years	RC	Peak construction	RC	Operational phase
06:00– 07:00	0.00	0.37	0.42	0.39	0.42	0.40	0.41
07:00- 08:00	0.00	0.58	0.75	0.58	0.63	0.62	0.60
08:00- 09:00	0.00	0.65	0.71	0.65	0.68	0.70	0.66
15:00- 16:00	0.00	0.71	0.74	0.74	0.72	0.79	0.76
17:00- 18:00	0.00	0.76	0.87	0.79	0.76	0.80	0.76

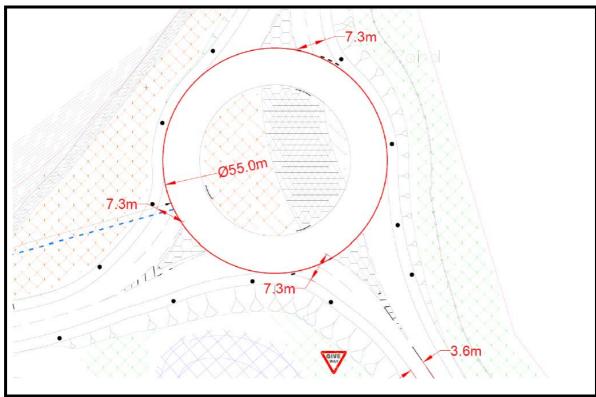
Figure 10: YR – modelling parameters in the TA Addendum and actual geometries³⁴

³² Paragraph 9.16.10, Transport Assessment (EXL APP-602).

³¹ Paragraph 9.16.8, Transport Assessment (**EXL APP-602**).

³³ Values above 0.85 highlighted, as in the TA Addendum. A12 / B1122 - Mitigation Model (on page 82) in the Transport Assessment Addendum Appendices 8B-9B Appendix 9A: Junction Model Results Summary (**EXL AS-269**).

³⁴ Roundabout Geometry (on page 3183) in the Transport Assessment Addendum Appendices 9D Appendix 9D: Raw Junction Model Outputs (**EXL AS-271**).



TPA measures shown in red. Approaches are 7.3 metres wide (not 4.0 metres or 5.63 metres). Full measurements appended.

	ut geometry					
Arm	V – Approach road half-width (m)	E-Entry width (m)	l' – Effective flare length (m)	R –Entry radius (m)	D – Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)
A-A12 North	3.80	4.00	10.0	20.9	55.0	37.0
B – B1122 Middleton Road	3.80	5.63	10.0	20.4	55.0	41.0
C – A12 South	3.60	4.00	10.0	20.9	55.0	37.0

2.13 Given the modelling flaws identified above, TPA recommends that the Applicant:

- (a) clarifies why the YR has been designed for a maximum RFC of 0.76 during the Peak Construction and Operational Phase scenarios, reaching 0.87 during one hour of the Early Years phase. TPA would have considered it more appropriate to design such a roundabout with a RFC of 0.85 (potentially rising to 1.00 during the Early Years or Peak Construction phases i.e. a limited period of time where a degree of queues and delays could be acceptable for a temporary period);
- (b) justifies a 55m ICD roundabout, given a smaller one with alternative approach geometric parameters would have been sufficient to mitigate the impact resulting from the Project. Please see **Figure 10**, which depicts the modelling parameters in the Addendum and the actual geometries;

(c) re-runs the model using the actual geometries (specifically 7.3m wide entries, rather than 4m), which will allow the RFCs to reduce even further, thereby making the creation of such a large roundabout even less justifiable. See **Figure 10**.

Yoxford and Darsham traffic modelling

- 2.14 Due to concerns about the operation of the highway network at Yoxford and Darsham in connection with the Project, the Applicant carried out microsimulation modelling using Vissim software. These findings helped inform the design of the YR, which TPA in its professional opinion regards as over-engineered. TPA has identified the following issues with the Applicant's microsimulation modelling:
 - (a) the modelled queues at the Darsham and Middleton level crossings do not always match the observed ones. This is noticeable at Figures 8 to 13 of the Technical Note at Appendix 9B.³⁵ The observed queues are in some cases outside the range of any of the runs of the model and TPA disagrees with WSP's statement that "Considering this variability, and the fact that the observed queues represent a single day, modelled and observed queues were shown to be reasonably well matched".³⁶ The result of this is that the model may not be fully representative of typical conditions;
 - (b) TPA regards Tables 12, 13 and 14 as being misleading in that they appear to highlight that each section of the journey routes validate against the WebTAG criteria ("PASS" in each row) despite highlighting values above 15% in red. In reality compliance is overall, based on the whole route (rather than being based on its individual components).
- 2.15 The Applicant therefore needs to provide some reassurance that its model can be considered reliable, as it would appear some elements (such as the modelled queues) do not match. TPA has produced a drawing (TPA ref 2009-039 MP01, see Appendix 2 Yoxford Roundabout: Modelling Parameters (55m ICD, DCO Version)) showing the correct measurements that should be used in the model.

Design of the YR

- 2.16 The YR has been designed to operate within the theoretical capacity of RFC 0.85 in all scenarios, except for one hour in the Early Years when the RFC is predicted to reach 0.87 RFC. These figures are based on modelling that underestimates capacity (see comments at section 2.11 above). As the RFC is in practice going to be less than anticipated, the YR is overdesigned. This is supported by the fact that the Applicant's Vissim model does not replicate the observed queues well. Accordingly, the results are questionable.
- 2.17 In summary, TPA has seen no evidence that the junction between the A12 and B1122 requires a 55 metre ICD roundabout to offset the impact of the Project. Given the issues highlighted above regarding the junction modelling used to inform the design of the YR, the Applicant should demonstrate why a 55 metre ICD roundabout is required and explain why a smaller one would not be more appropriate.
- 2.18 TPA wonders whether the Applicant have considered a 40m ICD roundabout, a sketch of which is appended to this report, for illustrative purposes only (TPA ref 2009-039 SK05, see Appendix 3 Yoxford Roundabout: Indicative Sketch of a 40m ICD Roundabout). Clearly, the roundabout would require significantly less land, also resulting in less impact on heritage and ecology.
- 2.19 Noting the requirement to accommodate AIL movements too, TPA has also tested the possible swept path of a 27.6m long vehicle (drawing **2009-039 SP01**, see **Appendix 4** Yoxford

³⁵ Figures 8-13 (on pages 38-43) in the Transport Assessment Appendices 9B – 10A Appendix 9B: Yoxford VISSIM Model Technical Note (**EXL APP-605**).

³⁶ Paragraph 4.3.6, Transport Ássessment Appendices 9B – 10A Appendix 9B: Yoxford VISSIM Model Technical Note (**EXL APP-605**).

Roundabout: Swept Path of a 27.6m Long AIL Vehicle), which demonstrates that the manoeuvre is feasible (notwithstanding the illustrative nature of the drawing).

3 Ecology

Overview

- 3.1 There are several flaws with the Applicant's approach to identifying the baseline position at the NPR and Little Nursery Wood, which immediately adjoins the NPR to the west. Most of the survey data relied on is inadequate and out of date. There are also issues with the assessments undertaken. Given the critical importance of establishing the baseline position, if potential effects are to be properly assessed, these types of issues and inconsistencies undermine confidence in the Applicant's overall assessment.
- 3.2 With regard to the YR, the Applicant seems to have effectively ignored the close proximity of Roadside Nature Reserve 197 (RNR 197), which is a non-statutory designated site of ecological importance because of the presence of the rare and protected Sandy Stilt Puffball fungus. The Applicant has also failed properly to survey for roosting bats and reptiles. Again, these omissions undermine a proper understanding of the baseline position and the Applicant's ultimate findings.

NPR

Inadequate and out of date data

- 3.3 The survey data undertaken at the NPR is manifestly inadequate and most of it is out of date for the purposes of informing the robust assessment of potential effects arising from the NPR.
- 3.4 The majority of the baseline survey data relied upon by the Applicant is more than three years old (and mostly more than five years old), as illustrated by **Table 3** below. The Applicant's decision to rely on surveys beyond their "lifespan" conflicts with the Chartered Institute of Ecology and Environmental Management's (**CIEEM's**) 2019 guidance that where the age of data is more than three years old: "The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated (subject to an assessment by a professional ecologist, as described above" (emphasis added).³⁷ CIEEM is the professional body representing ecologists and environmental managers in the UK and Ireland. A copy of the guidance is included at **Appendix 5**.

Table 3: Summary of key NPR surveys³⁸

Surveys issued with original Application	Approx. age at time of submission (May 2020)	Approx. age during Examination (June 2021)		
Extended Phase 1 Survey (2011)	8 years old	9 years old		
Great Crested Newt surveys (2011, 2015 and partial survey in 2019 ³⁹)	9, 5, 1 years old	10, 6 and 2 years old		
Breeding birds between April and June 2014	6 years old	7 years old		
Wintering birds between November 2014 and March 2015	5-6 years old	6-7 years old		
Bat surveys (2011, 2014, 2015)	9, 6, 5 years old	10, 7 and 6 years old		
Updated walkover survey (2018)	2 years old	3 years old		

³⁷ CIEEM (2019). *Advice Note on the Lifespan of Ecological Reports and Surveys*. April 2019. Chartered Institute of Ecology and Environmental Management, Winchester.

³⁸ Section 1.4, Volume 3 Northern Park and Ride Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statements (**EXL APP-364**), Additional Ecology Baseline Survey Report Part 1 of 2 (**EXL AS-036**).

³⁹ 2019 survey was restricted to environmental DNA surveys of two off-site waterbodies identified in 2018. None of the waterbodies previously surveyed were subject to further work.

Desk Study (2014)	6 years old	7 years old		
Updated surveys issued post- submission of Application	Approx. age at time of submission (late 2020)	Approx. age to-date (June 2021)		
Extended Phase 1 survey and badger survey (2020)	Less than 1 year	Less than 1 year		
Bats - ground-level appraisal of trees (NPR and Little Nursery Wood) (2020)	Less than 1 year	Less than 1 year		
Updated Great Crested Newt survey of on-site waterbody only (Habitat Suitability Index (HSI) assessment and environmental DNA (eDNA) survey) (2020)	Less than 1 year	Less than 1 year		

- 3.5 There is therefore considerable scope for the current baseline at the NPR site to have changed, especially for mobile species such as bats and birds. It is also clear that a comprehensive suite of updated survey work is required in respect of all of the above protected species before a robust assessment of potential effects arising from the NPR proposals can be undertaken. In the absence of updated work, the Applicant's assessment of potential effects must be treated with extreme caution and the approach to avoidance and at the very least, mitigation must be highly precautionary.
- 3.6 Ecology Solutions also has the following additional concerns about the survey work undertaken by the Applicant set out at Table 4.

Table 4: Summary of concerns regarding surveys

Survey	Concerns				
Desk Study ⁴⁰	Desk studies are an important element to inform the assessment of current baseline conditions. ⁴¹				
	Given the age of the Applicant's study (six years old at submission; seven years old to-date), it is plausible (and indeed likely) that this exercise could have missed important records of protected and notable species which have been recorded in the local area since 2015. For instance, the location of bat roosts or Great Crested Newts in close proximity to the NPR site. This could have implications for the assessment of potential effects arising from the Project, which in turn would inform the requirement for specific avoidance and mitigation measures.				
Habitat Survey ⁴²	There are significant discrepancies between the habitat descriptions included the Applicant's original habitat survey 2011 and the updated survey undertake in June 2020. ⁴³ For example:				
	 Little Nursery Wood – The original survey described the woodland as comprising predominately mature Ash and Pedunculate Oak with occasional conifer species. The updated survey makes no reference to 				

⁴⁰ Annex 7A.2, Volume 3 Northern Park and Ride Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statements (EXL APP-364),

⁴¹ See CIEEM (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Maritime. version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.

42 Annex 7A.3, Volume 3 Northern Park and Ride Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological

Baseline and Method Statements (EXL APP-364),

⁴³ Paragraphs 1.4.20 – 1.4.23, Appendix 7A Ecological Baseline and Method Statements (EXL APP-364), Paragraphs 4.1.2 – 4.1.15, Additional Ecology Baseline Survey Report Part 1 of 2, Northern Park and Ride Survey Report 2020 (EXL AS-036).

Survey	Concerns						
	Pedunculate Oak or coniferous species being present within the woodland. ⁴⁴						
	 Hedgerows – The original survey refers to species-poor hedgerows along three boundaries of the NPR site. In contrast, the 2020 survey advises that there are seven hedgerows, two of which are assessed to be species- rich.⁴⁵ 						
	It is inconceivable that the composition of woodland or hedgerows could have changed to such a significant degree. Accordingly, there are doubts over the robustness of the reports. In short, they cannot both be correct. Yet, establishing the existing habitats at the NPR site is critical to properly assess potential effects arising from the Project.						
Great	Age of data						
Crested Newt Survey ⁴⁶	The ecological baseline in respect of Great Crest Newts – a European protected species afforded strict legislative protection under the Habitats Regulations (as amended) - is primarily based on aquatic surveys of a number of ponds in 2015, meaning the data is now five plus years old. While the Applicant did carry out additional survey work in 2019 and 2020, this work was extremely limited and involved:						
	 the completion of environmental DNA (eDNA) surveys of two additional off-site waterbodies in 2018 to ascertain the presence or absence of Great Crested Newts; 						
	 a Habitat Suitability Index (HSI) assessment and eDNA survey of the single on-site pond to the East of the NPR site to re-confirm the presence of Great Created Newts.⁴⁷ 						
	 This limited work is insufficient. It does not enable robust conclusions to be reached. 						
	Inconsistent approach						
	The Applicant has been inconsistent in terms of its assumptions and there are gaps in its approach:						
	 The Applicant has assumed that the complex of waterbodies associated with residential dwellings immediately adjoining the NPR site to the east (ponds 79 – 82) must collectively support a meta-population of Great Crested Newts⁴⁸, although specific surveys were not undertaken (see below). Yet, it has not applied the same assumption to a number of off-site waterbodies within the vicinity of the NPR site (ponds 88 - 95), which in Ecology Solutions' professional view are not separated from the site by barriers to movement (see below), and no survey works were undertaken of any off-site waterbodies in 2020 (see further below). Please see Figure 12 below for the location of these waterbodies; 						
	 The Applicant has not surveyed a ditch along the northern boundary of the NPR site, despite this being noted in the 2020 extended Phase 1 survey; 						

Paragraph 1.4.10 – 1.4.23, Appendix 7A Ecological Baseline and Method Statements (EXL APP-364), Paragraph 4.1.12, Additional Ecology Baseline Survey Report Part 1 of 2 Northern Park and Ride Survey Report 2020 (EXL AS-036).
 Paragraph 1.4.22, Appendix 7A Ecological Baseline and Method Statements (EXL APP-364), Paragraph 4.1.9, Additional

Ecology Baseline Survey Report Part 1 of 2 Northern Park and Ride Survey Report 2020 (**EXL AS-036**).

46 Annex 7A.3, Volume 3 Northern Park and Ride Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statements (**EXL APP-364**),

47 Paragraph 4.1.12, Additional Ecology Baseline Survey Report Part 1 of 2 Northern Park and Ride Survey Report 2020 (**EXL**

AS-036).

48 Paragraph 1.4.38, Appendix 7A Ecological Baseline and Method Statements (EXL APP-364).

Survey	Concerns
	 While the Applicant carried out HSI and eDNA assessments of a single on-site pond in 2020, it did not assess population size via full aquatic surveys. Population size is a key factor in terms of determining mitigation requirements.
	European Protected Species Mitigation Licence
	In Ecology Solutions' opinion it is extremely likely Natural England will raise fundamental concerns about the age of the Applicant's survey data, (as well as the absence of population data). In Ecology Solutions' experience, it is also unlikely that Natural England would licence the proposed NPR development. In light of <i>Morge v Hampshire CC</i> [2011] UKSC 2 and <i>Prideaux v Buckinghamshire CC</i> [2013] EWHC 1054 (Admin), this is an important factor which should be taken into account by the ExA.
Reptile Survey ⁴⁹	The Applicant has not undertaken specific survey work to ascertain whether reptiles - protected species under the Wildlife and Countryside Act 1981 - are present at the NPR site. It is therefore impossible to undertake a robust assessment as to whether the NPR proposals would affect this group. This is despite the fact the Applicant acknowledges elements of the NPR site constitutes suitable habitat:
	"Within the site boundary, most of the land comprises arable fields which are considered sub-optimal habitat to support reptile species however the small areas of species poor semi-improved grassland around the arable field margins, the hedgerows and Little Nursery Woodland comprised suitable foraging habitat for reptile species, with the woodland also containing numerous brash piles and log piles which are considered suitable hibernation sites" (emphasis added). ⁵⁰
	Mitigation measures proposals intended to "build in" avoidance and mitigation measures on a precautionary basis are not appropriate for all reptile species ⁵¹ For example, habitat manipulation measures to encourage the "dispersal" of common reptiles into adjoining habitats may be suitable for Grass Snakes, but would be insufficient for Slow-Worms, which are less mobile and therefore could potentially be harmed.
Badger Survey ⁵²	The Applicant has provided limited details regarding the methodology applied to updated Badger survey work undertaken in 2020. In addition, the 2020 survey does not provide information as to whether outlier setts previously recorded within the NPR site still constitute rabbit holes, or indeed whether they are present at all. Nor, does it clarify whether other evidence indicative of the presence of Badgers (e.g. latrines, footprints, well-used pathways, hairs or foraging pits) were searched for or identified during the updated survey.
	As Badger activity at a site can change in a relatively short space of time, updated survey and assessment work should be carried out prior to the commencement of any works at the NPR site to ensure adverse impacts on this species are avoided.
Bat Surveys ⁵³	Age of data
Jul veys	The Applicant's assessment of the current baseline at the NPR is uncertain, since:

Additional Ecology Baseline Survey Report Part 1 of 2 Reptile Survey Report 2020 (EXL AS-036).
 Paragraph 4.1.19, Additional Ecology Baseline Survey Report Part 1 of 2 Northern Park and Ride Survey Report 2020 (EXL

AS-036).

NPR-TE11, Mitigation Route Map (**EXL APP-616**).

AS-036 Annex 7A.3, Volume 3 Northern Park and Ride Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological

Baseline and Method Statements (**EXL APP-364**),

53 Annex 7A.3, Volume 3 Northern Park and Ride Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statements (**EXL APP-364**),

Survey	Concerns							
	emergence and dawn re-entry su	the Applicant omitted to carry out tree-climbing assessments, evening emergence and dawn re-entry surveys, walked transect surveys and static detector surveys as part of its 2020 updated assessment;						
	 in light of the above, a full suite of 2014/2015; 	n light of the above, a full suite of bat survey work was last undertaken in						
	Applicant regards as having be assessment, and the findings of below. While trees with bat room management, storms and roosting of change between the two sees accuracy of the Applicant's fire significant decline, as opposed to roosting potential) or at least methodology. In Ecology Soluti	there are discrepancies between the number of trees and/or features the Applicant regards as having bat roosting potential, as per its original assessment, and the findings of its 2020 survey. Please see the table below. While trees with bat roosting potential may change due to land management, storms and roosting features degrading over time, the scale of change between the two sets of assessments casts doubt over the accuracy of the Applicant's findings (particularly, as they indicate a significant decline, as opposed to an increase, in trees / features with high roosting potential) or at least suggests a difference in assessment methodology. In Ecology Solutions' opinion, it is more likely to be latter, since ground-level appraisals are more subjective.						
		Ecology Baseline Report ⁵⁴	2020 Ecology Survey Report ⁵⁵					
	Number of trees identified to bat roosting potential	have 44	52					
	Confirmed Bat roosts	1	-					
	Feature with high bat roost pote	ential 26	3					
	Feature with moderate bat potential	roost 16	56					
	Feature with moderate to low roost potential	v bat 3	-					
	Feature with low/negligible bat potential	roost 9	23					
	The above uncertainties undermine the impacts on Bats arising from the NPR.	ne Applicant's asses	sment of potential					

Figure 11: Bat survey areas⁵⁶

⁵⁴ Table 1.10: Summary of bat tree assessment results (on page 36) in the Appendix 7A Ecological Baseline and Method

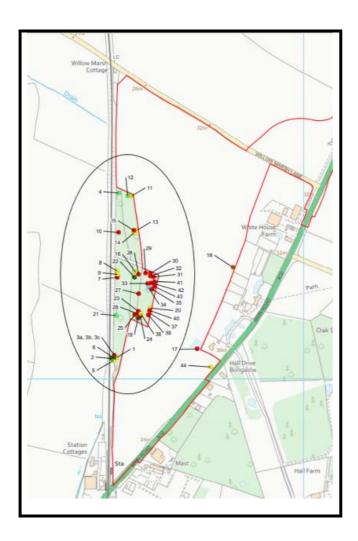
Statements (**EXL APP-364**)

Statements (**EXL APP-364**)

Table 5: Summary of bat tree assessment results (on page 5) and Appendix B in the Additional Ecology Baseline Survey Report Part 1 of 2, Northern Park and Ride Survey Report 2020 (**EXL AS-036**).

Figure 7.8: Northern Park and Ride at Darsham Bat Tree Assessment Results 2015, Volume 3 Northern Park and Ride

Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statement Annex 7A.1: Figures 7.1 - 7.9 (EXL APP-365).



Inadequate assessments

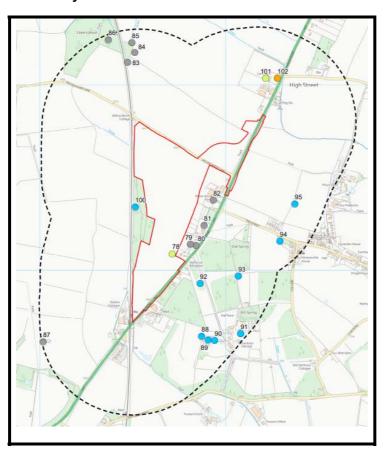
- 3.7 There are issues with the detail of the assessments undertaken by the Applicant, in particular:
 - (a) **Great Crested Newts**: Great Crested Newts are known to be present in on-site pond 78 (shown in green in **Figure 12**), and hence a European Protected Species mitigation licence from Natural England is required. However, the survey work undertaken by the Applicant is inadequate fully to assess potential effects arising from the NPR. For instance:
 - (i) eight off-site waterbodies (ponds 88 95 shown in blue at **Figure 12**) to the east of the NPR site were scoped out of survey work on the basis that the A12 to the east of the site represents a substantial barrier to movement.⁵⁷ In Ecology Solutions' opinion, this approach is flawed. The A12 comprises a single carriageway road, with shallow, sloping kerbs. While it may pose a challenge to the movement of newts and other wildlife to other habitats, the A12 does not possess the characteristics to render it a complete barrier (e.g. a busy dual carriageway with 90 degree kerbs and gully pots). In light of this, the fact Suffolk is a stronghold for Great Crested Newts and pond 92 is located particularly close to the NPR site boundary, the Applicant should have assessed these waterbodies to inform the baseline; and
 - (ii) as it was unable to secure access to carry out assessments, the Applicant has assumed that ponds 79-82 support a medium meta-population of Great Crested

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⁵⁷ Paragraphs 1.4.33 - 1.4.34, Appendix 7A Ecological Baseline and Method Statements (**EXL APP-364**).

Newts. This assumption is based on aquatic survey data from a single pond (pond 78) that is now 5 plus years old and the fact a 2019 eDNA survey identified pond 101 (to the north of the NPR site) as being capable of supporting Great Crested Newts. This assumption is not robust and carries significant risk, particularly as the Applicant has assumed the meta-population is distributed across six ponds and would therefore be "less vulnerable to habitat change than similar-sized populations based on single breeding ponds". ⁵⁸ Indeed, the reality could be the exact opposite i.e. the entire population of Great Crested Newts only utilities pond 78 (as well as pond 101 to the north), the upshot being losses to habitat would be of even greater importance to the population.

Figure 12: Newt survey areas⁵⁹



- (b) **Little Nursery Wood**: The value attributed to Little Nursery Wood by the Applicant located to the immediate west of NPR site is inconsistent.
 - (i) On the one hand Amec in in its 2011 Phase 1 survey⁶⁰ advised that Little Nursery Wood "is thought to be a remnant of ancient semi natural woodland, due to the mature broadleaved tree stands and varied ancient woodland indictor ground flora". Yet, notwithstanding this conclusion from 2011, in Appendix 7A, the Applicant advises: "Little Nursery Wood is not recorded on the ancient woodland inventory and

⁵⁸ Paragraph 7.6.13, Volume 3 Northern Park and Ride Chapter 7 Terrestrial Ecology and Ornithology (EXL APP-363).

⁵⁹ Figure 7.4: Northern Park and Ride at Darsham Great Crested Newt Surveys, Volume 3 Northern Park and Ride Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statement Annex 7A.1: Figures 7.1 - 7.9 (EXL APP-365)..

⁶⁰ Paragraph 4.1.2, Annex 7A.3, Volume 3 Northern Park and Ride Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statements (**EXL APP-364**)

is therefore likely to be recently relative origin".⁶¹ There are also significant discrepancies between the description of the woodland within Appendix 7A⁶² and the 2020 Ecology Survey report.⁶³

(ii) As detailed above, the findings of the Applicant's updated habitat survey work as detailed in the 2020 Ecology Survey Report,⁶⁴ does not accord with the earlier descriptions of vegetation types and species composition within Little Nursery Wood. Cumulatively, these inconsistencies undermine the credibility of the Applicant's baseline assessment.

YR

3.8 To inform estate management, the HHE has undertaken ecological surveys within the estate in the area local to Cockfield Hall; there is evidence of protected species in the local area including water voles, otters and aquatic invertebrates in the River Yox to the west of Cockfield Hall, and great crested newts to the north of Cockfield Hall. Newt fencing has been erected close to Cockfield Hall to prevent Great Crested Newts from entering an area identified for consented works (this will be seen on the ExA's ASI on 10 June 2021). Within the wider estate, reptiles including grass snakes, adders and slow worms have also been observed by estate workers; bats are also frequently sighted. Therefore, to inform a robust assessment, the Applicant should have undertaken comprehensive survey work with regard to the best practice guidelines, which they have not done.

Sandy Stilt Puffball

- 3.9 The Applicant has essentially ignored the fact that the YR site is adjacent to RNR 197, which is a non-statutory designated site of ecological importance because of the presence of the Sandy Stilt Puffball fungus. Sandy Stilt Puffball has statutory protection under Schedule 8 of the Wildlife and Countryside Act 1981 and is also a Suffolk priority species.
 - (a) No assessment within the YR site boundary
 - (i) Notwithstanding the fact the area within the YR site is suitable for Sandy Stilt Puffball fungus and the site is immediately adjacent to RNR 197, it seems that the Applicant made no attempt to survey the site adequately to ascertain whether it supports this protected species. In fact, no updated ecological survey work has been undertaken in 2020 at the YR site, either in respect of Sandy Stilt Puffball or indeed any other protected or notable species. Accordingly, Sandy Stilt Puffball may be present within the YR site boundary.
 - (ii) If Sandy Stilt Puffball is present, construction of the YR would entail the direct and permanent loss of a protected and notable species.
 - (iii) The absence of any baseline information means it is impossible to ascertain whether the development proposals are likely to result in potential impacts to this protected species.

(b) Impact on RNR 197

(i) While some consideration has been afforded to potential impact pathways that could affect RNR 197 during the construction period, it seems there has been no assessment of direct impacts arising from potential encroachment of machinery and

⁶¹ Paragraph 1.5.12, Appendix 7A Ecological Baseline and Method Statements (**EXL APP-364**) .

⁶² Paragraph 1.4.20, Appendix 7A Ecological Baseline and Method Statements (EXL APP-364).

⁶³ Paragraph 4.1.2. Additional Ecology Baseline Survey Report Part 1 of 2, Northern Park and Ride Survey Report 2020 (**EXL AS-036**).

⁶⁴ Additional Ecology Baseline Survey Report Part 1 of 2, Northern Park and Ride Survey Report 2020 (EXL AS-036).

personnel and therefore whether any specific avoidance or mitigation is required. It is also unclear whether there will be any buffer zone between RNR 197 and the proposed roundabout during the construction phase.

(ii) The Applicant has also incorrectly concluded in its Dust Risk Assessment that "effects on ecological receptors are screened out as there are no sensitive habitats within 500m of the proposed development site". 65 Clearly given the proximity of RNR 197 to the YR site this statement is manifestly wrong and specific assessment in relation to potential for effects to arise from dust should therefore have been undertaken.

Roosting bats

- 3.10 Without detailed survey work, it remain unknown whether the YR supports roosting bats.
- 3.11 The bat roost assessment identified two dead trees with potential to support roosting bats, with roosting features located on the eastern aspects (the location of which is shown circled black on **Figure 13**). Notwithstanding this conclusion, no further survey work has been undertaken by the Applicant on the basis access was not granted. This approach is lacking for the following reasons:
 - (a) it is understood that these trees will be lost to facilitate the proposed development;
 - (b) land immediately to the south, east and west could have been accessed by surveyors;
 - (c) while tree climbing assessment surveys might not have been possible, other methods of assessment remained available (such as evening emergence and dawn re-entry surveys);
 - (d) detailed hedgerow survey works were undertaken to the north of these trees, yet the location of the hedgerows appear equally inaccessible.⁶⁶

Figure 13: Bat tree assessment, YR67



3.12 The Applicant has instead advised that tree surveys "to determine evidence of use as roosts would be undertaken sufficiently in advance of tree-felling to enable licence application(s) to be

⁶⁵ Paragraph 1.1.1, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 5 Air Quality Appendix 5A Dust Risk Assessment for Yoxford Roundabout (**EXL APP-488**).

Annex 7A.3, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statement (EXL APP-495), Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statement Annex 7A1: Figures 7.1 - 7.5 (EXL APP-496).
 Figure 7.5: Bat Trees Assessment Results For Yoxford Junction, Volume 7 Yoxford Roundabout and Other Highway

⁶⁷ Figure 7.5: Bat Trees Assessment Results For Yoxford Junction, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statement Annex 7A1: Figures 7.1 - 7.5 (EXL APP-496).

submitted to Natural England and develop an appropriate mitigation strategy, if required."⁶⁸ Proposing to undertake survey works prior to commencement to ascertain the presence or absence of an European Protected Species is clearly at odds with the judgment in *Cornwall Waste Forum v Secretary of State CLG* [2012] EWCA CIV 379. It also impedes the proper assessment of the likely effects arising from the YR proposals.

Reptiles

In Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statement (**EXL APP-495**) the Applicant advises that the YR is of limited value for reptiles given the habitats present, but as with the NPR site, it is equally apparent that some elements of the YR site provide suitable habitat. Yet, as with the NRP site, specific survey work has not been undertaken to ascertain whether common reptiles are present at the YR site.

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⁶⁸ Paragraph 7.4.42, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 7 Terrestrial Ecology and Ornithology Appendix 7A Ecological Baseline and Method Statement (**EXL APP-494**).

4 Heritage

Overview

- 4.1 While the HHE accepts that the completed nuclear power station is unlikely to have a material impact on the significance of heritage assets forming part of the HHE, the construction phase (including additional HGV and bus movements) and associated development, such as the YR and NPR, will cause such harm.
- 4.2 In Savills' professional opinion the Applicant has failed to adequately assess:
 - (a) the significance of heritage assets located on the HHE, including the Cockfield Hall complex of buildings (the **Cockfield Hall complex**);
 - (b) group value i.e. the extent to which the exterior of a building contributes to the architectural or historic interest of any group of buildings of which it forms part;
 - (c) the significance of heritage assets within the Yoxford Conservation Area, which includes the Cockfield Hall complex; and,
 - (d) the contribution of setting, being the surroundings in which a heritage asset is experienced.
- 4.3 The Applicant's determination of harm has therefore not been properly made and, in most instances, impacts have been grossly underestimated. In particular, the impact of the 12 year construction phase on heritage assets and their settings has not been properly assessed. These are grave omissions, not least since the Applicant's approach does not assist the Secretary of State in discharging his duties under Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010 (as amended) (the **2010 Regulations**), namely:
 - (a) in deciding an application which affects a listed building or its setting, to have regard to the desirability of preserving the listed building or its setting or any features of special architectural or historic interest which it possesses;
 - (b) in deciding an application relating to a conservation area, to have regard to the desirability of preserving or enhancing the character or appearance of that area.

4.4 The Cockfield Hall complex

Background

4.5 The Cockfield Hall complex, which forms part of the HHE, is comprised of 11 listed buildings and structures shown on **Figure 14**.

Figure 14: Heritage Assets Map



	Asset name	Grade
1	Cockfield Hall	I
2	The Gatehouse	II*
3	Gateway 20m WNW of Gatehouse (including adjoining wall)	II
4	Dovecote	II
5	Gateway immediately south ease of coach house and barn (including adjoining wall)	II
6	Coach house and barn	II
7	Gateway immediately north-west of coach house and barn including adjoining walling	II
8	Dairy range	II
9	Walling to north and west of Gatehouse	II
10	The Lodge	II
11	Cockfield Hall Lodge	II

(A larger version of Fig 14 and a fuller description of these assets 1 -11 can be found at **Appendix** 6)

- 4.6 A selection of photographs depicting the Cockfield Hall complex is included at **Figure 15**.
- 4.7 The Cockfield Hall complex is a cohesive whole. The layout of the principal Hall and associated buildings means that the setting is particularly dynamic and it is clear that the group value of the buildings elevates the interest considerably. The eastern elevation of the Grade I Hall, which faces the A12 (see **Figure 15**; **photograph 1**; **Figure 18**; **photographs 1**, **3 and 4**) and views from the Hall in this direction, are an important element of the building's setting (see **Figure 18**; **photographs 1 and 2**).
- 4.8 A summary of the historical development of each of the above heritage assets (individually and as a group) is appended to this Written Representation as **Appendix 7**.

Figure 15: The Cockfield Hall complex (selected photographs)



Photograph 1: View of Cockfield Hall from the A12 showing its parkland setting







Photograph 3: Main hall east elevation



Photograph 4: Gate lodge



Photograph 5: View of northern gateway and dovecote



Photograph 6: Gateway



Photograph 7: Gateway and wall

Source: Photographs taken by Savills and NRF (2021)

4.9 The Cockfield Hall complex also falls within with Yoxford Conservation Area (see **Figure 16**). The approximate location of the Cockfield Hall complex is shown for indicative purposes only edged in green.

Figure 16: Yoxford Conservation Area⁶⁹



Exclusion from assessment

- 4.10 The Applicant advises that "[t]o inform the development of the scope of the assessment of effects arising through change to setting, heritage assets which could be subject to significant adverse effects were considered in the Settings Assessment Scoping Report Volume 1, Annex 6L.1 and agreed with Historic England, SCCAS and ESC."70 The Applicant has, however, inexplicably excluded Cockfield Hall from further assessment in connection with the NPR and the YR. The decision not to assess Cockfield Hall, the experiential qualities of its setting and the contribution of its setting to the significance of the Hall is flawed and either needs to be corrected by the Applicant or justified given the Secretary of State is under a duty to have regard to the desirability of preserving listed buildings or their settings⁷¹ and the fact that:
 - (a) Cockfield Hall is a Grade I listed building. Please see above for further details regarding the other buildings and structures forming part of the Cockfield Hall complex;
 - (b) Cockfield Hall falls clearly within the 500m study area for the YR (see area circled green on **Figure 17**);

⁶⁹ Ref 9.27, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (**EXL APP-499**).

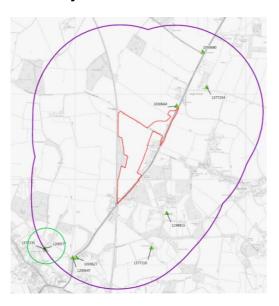
⁷⁰ Paragraph 9.3.12, Volume 3 Northern Park and Ride Chapter 9 Terrestrial Historic Environment (**EXL APP-368**).

⁷¹ Regulation 3(1) of the 2010 Regulations.

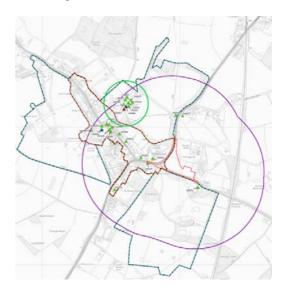
- (c) Cockfield Hall is located on the very edge of the 1 km study area for the NPR (see the area circled green on Figure 17) and includes a number of curtilage listed buildings located within the relevant assessment area. In fact, the Applicant only considered two heritage assets (Oak Hall LB II 1030664 and LB II 1198815) worthy of assessment by reason of potential indirect effects in connection with the NPR. To scope the designated assets identified within the study area out of further assessment based on supposed direct and indirect effects is clearly a flawed methodology and fails to take proper account of the wider array of assets' significance. It follows that harm cannot be properly determined.
- (d) increased traffic in connection with the NPR and the YR is likely to affect the setting of heritage assets such as Cockfield Hall and the rest of the complex.

Figure 17: Study areas

NPR study area⁷²



YR study area⁷³



Failure to assess setting correctly

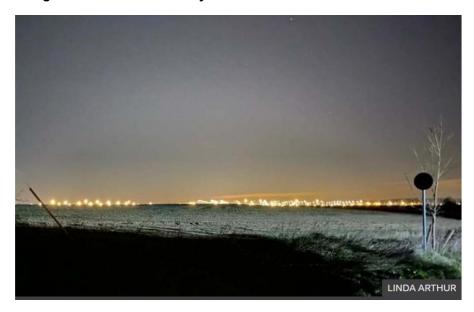
- 4.11 Under Regulation 3(1) of the 2010 Regulations the Secretary of State in deciding an application which affects a listed building must have regard to the desirability of preserving "the listed building or its setting or any features of special architectural or historic interest…" (emphasis added).
- 4.12 Notwithstanding the above, the Applicant has failed to properly assess the importance of setting. In particular, the assessment of impacts associated with the YR has not adequately captured the contribution of setting to the significance of the range of listed buildings comprising the Cockfield Hall complex, and especially not the setting of the Grade I listed Cockfield Hall. Without an adequate understanding of the contribution of setting, the assertions of the impact assessments are not reliable.

⁷² Figure 9.1: Designated Heritage Assets, Volume 3 Northern Park and Ride Chapter 9 Terrestrial Historic Environment Figures 9.1 - 9.3 (**EXL APP-370**).

⁷³ Figure 9.1: Designated Heritage Assets, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment Figures 9.1 - 9.4 (**EXL APP-501**).

- 4.13 Examples of the Applicant's inadequate assessment of setting include:
 - (a) the Grade I listed Cockfield Hall was excluded from the impact assessment of the YR and NPR, despite the high status of the listing and the potential for impacts to the asset's setting and significance. In this regard, we note that the Applicant's impact assessments for the NPR and the YR make no reference to the impact of light pollution on the Cockfield Hall complex and its setting. This is an omission given the design of the YR includes lighting columns⁷⁴ and the YR is clearly visible from the top floor of Cockfield Hall. The vista towards the YR at present comprises a greenfield site and green highway verge, the highway itself in relatively unobtrusive in views; the views towards the YR are experienced as part of the Hall's parkland setting. The NPR also includes lighting columns.⁷⁵ Please see **Figure 18**, being a photograph of Sevington inland border facility, which illustrates how artificial lighting may have a wide reaching impact. In failing to adequately address the wider experiential qualities of setting and the contribution it makes to significance, the Applicant has exposed a glaring flaw in their methodology, rendering their conclusions unreliable;

Figure 18: Sevington inland border facility⁷⁶



- (b) the Applicant has failed to assess the impact of increased traffic arising from the NPR and the YR on heritage assets located along the A12 in particular the Cockfield Hall complex, which is adjacent to the YR. As detailed above in the Transport section of this Written Representation, traffic along the A12 is set to increase. This is significant, particularly since the Cockfield Hall complex is clearly visible from the A12. As discussed in the appended summary of historical developments of the Cockfield Hall complex, the Hall was situated in parkland and agricultural surrounds, with the route now defined by the A12 only coming into existence in the late 18th century. The parking setting of the Hall and complex generally is an important element of the special historic interest of the assets. In Savills' opinion it is clear that increased levels of traffic associated with both the YR and the NPR will alter the setting of this valuable complex of buildings, much of which dates from the 16th and 17th centuries. This change is considered to be an adverse one, clearly resulting in a level of harm to the buildings' individual and collective significance;
- (c) in assessing impacts on Cockfield Hall Lodge (a building located immediately adjacent to the A12 and one of only two buildings forming part of the Cockfield Hall complex assessed

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⁷⁴ Paragraph 2.4.19, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 2 Description of Yoxford Roundabout and Other Highway Improvements (**EXL APP-480**).

⁷⁵ Paragraph 2.2.53, Volume 3 Northern Park and Ride Chapter 2 Description of the Northern Park and Ride (**EXL APP-350**).

⁷⁶ Photograph by Linda Arthur, "Brexit lorry park 'ruins night sky' for Kent residents", BBC News.

by the Applicant – see Asset 11 on **Figure 14**) the Applicant has erroneously focused on the lodge's physical relationship with the A12, rather than its functional and historic relationship with the Cockfield Hall complex. By failing to assess the setting properly, the Applicant undermines a proper assessment of the asset's significance and the potential impact of change to the setting and significance of that asset. The Applicant's assessment also fails to address changes to setting in connection with traffic. For example, it concludes:

- (i) "there are no committed development(s) or forecasted changes that would materially alter the baseline conditions during the construction and operation phases of the proposed Yoxford roundabout;"⁷⁷
- (ii) "the setting of Cockfield Hall Lodge would be affected only by increased traffic volumes, although this change would not be of sufficient magnitude to give rise to any change to the historic understanding of the asset as a gate lodge adjacent to a main road and no change to significance is anticipated" 78

In Savills' opinion the above conclusions are not accurate assessments of the actual impacts to Cockfield Hall Lodge and there would undoubtedly be some level of harm to its setting and in turn to the setting of the Cockfield Hall complex.

Figure 19: Cockfield Hall complex and the A12⁷⁹





Photograph 1: View of the A12 from Cockfield Hall

Photograph 2: View of the A12 from Cockfield Hall

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⁷⁷ Paragraphs 9.4.55 and 9.4.56, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (**EXL APP-499**).

⁷⁸ Paragraph 9.4.118, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (**EXL APP-499**).

⁷⁹ Photographs taken by Savills and NRF (2021)





Photograph 3: View of Cockfield Hall from the Photograph 4: View of the Cockfield Hall from the A12 boundary of the YR works on the A12

Yoxford Conservation Area

- 4.14 As part of the Project (most notably the YR) falls within the Yoxford Conservation Area, the Secretary of State in determining the Application must have regard to "the desirability of preserving or enhancing the character or appearance of that area" (emphasis added).80
- 4.15 In Savills' opinion there are a number of flaws with the Applicant's assessment of the impact of the Project on the Yoxford Conservation Area. The upshot being that the information provided by the Applicant does not allow the Secretary of State to discharge his duty under Regulation 3 properly.

Establishing the baseline position: the A12

- 4.16 In assessing the impact of the Project on Yoxford Conservation Area, the Applicant records that "[t]he rural setting of the Conservation Area makes a positive contribution to its heritage significance, although the noise and visibility of traffic on the A12 is a detracting element. The A12, however, also contributes positively to the character of the Conservation Area by defining the form and growth of the village. This contribution is particularly clear to the western boundary of the site where the settlement and Conservation Area boundary are defined by the present route of the A12"81 (emphasis added).
 - The Applicant's assertion that the A12 contributes positively to the character of the (a) Conservation Area by defining the form and growth of the village is not supported by any historic mapping data or reasoned analysis. It also does not reflect the findings of the Yoxford Conservation Area Appraisal, which notes that the heavy traffic associated with the A12 "continues to have a negative impact upon the setting of a number of key listed buildings".82
 - (b) A more reasonable assessment in Savills' view is that the way in which the route now comprising the A12 defines one boundary of the Conservation Area is at most of minor interest, (particularly since that route only emerged in the late 18th century). In truth, the

⁸⁰ Regulation 3(2) of the 2010 Regulations.

⁸¹ Paragraph 9.4.40, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (EXL APP-499).

⁸² Page 91, Ref 9.27, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (EXL APP-499)...

- A12 now has a very clear adverse impact on the Conservation Area by reason of associated noise and visibility of traffic. This conclusion is supported by the fact a considerable proportion of the Conservation Area is located to the east of the A12.
- (c) The Applicant's assessment also downplays the fact that the road already has an adverse impact on the character and appearance of the Conservation Area, and that an increase in traffic associated with the Project will exacerbate this negative impact considerably.
- (d) Given the above, the suggestion that the A12 contributes positively to the Conservation Area simply is not credible or tenable.

Inadequacies and inconsistencies in assessment

- 4.17 **Failure to assess Cockfield Hall**. In assessing the impact of the Project on the Yoxford Conservation Area, the Applicant considered the following heritage assets located on the eastern side of the Yoxford Village: The Gables (LB 1030627); Satis House (LB 1200636); Old School Cottages (LB 1030626); White Lodge; The White House (LB 1377237); Rookery Park (YOX 013); Rookery Cottages (LB 1200791); Cockfield Hall Park (YOX 006); and Cockfield Hall Lodge (LB 1200647).⁸³ The latter two assets Cockfield Hall Park and Cockfield Hall Lodge form part of the Cockfield Hall complex. Yet remarkably Cockfield Hall was not included in the list of assets to be scoped further. This is despite Cockfield Hall's status and proximity to the YR and the fact it falls within the relevant assessment area. This is a hugely significant omission.
- 4.18 Distinction in value between core and outer parts of the Conservation Area. Without justification the Applicant has sought to draw a distinction in value between the core and outer parts of the Conservation Area. For example, in Paragraph 9.4.72 of Volume 7 Yoxford Roundabout and Other Highway Improvements, Chapter 9 Terrestrial Historic Environment, the Applicant found that the "proposed works would affect neither architectural nor archaeological interests of the Conservation Area, and any loss of historic interest resulting from short-term temporary change on the periphery of the Conservation Area, would not be discernible from the core of the Conservation Area, would be limited"84. While in theory such a distinction might be appropriate, in the present case it is not, the Applicant's conclusions are reached without any reference to the Yoxford Conservation Area Appraisal and are not supported by reasoned justification based on the relevant character and appearance of the different areas. Extensions to the Yoxford Conservation Area boundary to include the wider parkland elements (including Cockfield Hall) in February 2020 underscore the value placed in situating the village within parkland setting, and these elements should not be separated so wilfully in properly determining the Conservation Area's character and appearance, and the special interest it affords to the asset. The approach adopted by the Applicant is in direct conflict with the judgement of the High Court in R (Irving) v Mid-Sussex DC [2016] EWHC 1529. As that decision made clear, harm to the character and appearance of a part of a Conservation Area results in a harm to the Conservation Area as a whole, and conflicts with the duty to preserve and enhance it.
- Assessment of construction phase. In terms of assessing impacts during the construction phase, the Applicant finds that any impact on the Conservation Area in connection with the construction of the YR would be "temporary and short term" resulting in "very low magnitude impact, giving rise to a minor adverse effect which would be not significant". In the Applicant's classification of effects in Table 9.5, Chapter 9, Volume 7, Yoxford Roundabout and Other Highway Improvements they have admitted that the YR works will be clearly visible and intrusive, but because of the short construction timeframe for the YR works, have stated that these give rise to a minor effect of very low magnitude. A "very low magnitude" assessment is disputed. At paragraph 9.4.73, the Applicant has repeated that the works assessed have a very low magnitude effect, which using their methodology assesses the impact on the Yoxford Conservation Area as

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⁸³ Paragraph 9.4.37, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (**EXL APP-499**).

⁸⁴ Paragraph 9.4.72, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (**EXL APP-499**).

not significant. A more robust assessment, however, would have determined a higher magnitude of effect, and determined therefore an adverse effect of significance. The significance of such an effect is underscored by the statutory duty in Regulation 3(2). The Applicant's attempt to disregard such an effect is utterly unjustified. The Applicant's classification methodology has been designed, it would appear, to diminish the magnitude of effects, leading to assessments of no harm or limited harm to significance that are erroneous and unjustified.

- 4.20 **Assessment of operational phase**. With regard to the operational phase and any impacts on the Conservation Area:
 - (a) the Applicant again seeks to categorise the A12 as a positive factor to the Conservation Area, while downplaying the impacts arising from increased traffic. Specifically, at paragraph 9.4.96 of Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (EXL APP-499) the Applicant notes: "The proposed roundabout would move the A12/B1122 junction to the northeast, outside the Conservation Area. Consequently, any adverse change would arise as the result of the perception of increased traffic movements through the village, which could affect the perception of the village as a historic settlement, as the two major roads which meet at Yoxford are central to understanding its historic form and function";85
 - (b) the Applicant dismisses the very real change to the setting of the conservation area associated with the operational YR noting at paragraph 9.4.97: "Once the proposed Yoxford roundabout is operational, during the peak construction period of the Sizewell C Project, there would be an increase in traffic movements along the A12 and A1120 (as set out in the Transport Assessment (Doc Ref. 8.5)). These would not be sufficient to give rise to a qualitative change in the perception of the Conservation Area as occupying the junction between two key routes" (emphasis added)⁸⁶. In Savills' opinion the Applicant's disregard for the impacts brought about by the increase in traffic in this sensitive conservation area evidences the inherently flawed methodology and execution of the Applicant's heritage impact assessment;
 - (c) the Applicant is inconsistent in its assessment of the impact of the operational YR. For example, in assessing the effects on:
 - (i) Rookery Park, the Applicant found that there would be a "discernible increase in traffic along the B1122, although this would not affect the historic interest of the parkland, as it would be perceived as a continuation of the use of an existing transport route"87. This assessment in Savills' opinion is completely inadequate in terms of where the significance of the asset lies and how change to the setting can affect that significance. Savills' view is that the discernible increase in traffic would result in an unacceptable level of harm to Rookery Park;
 - (ii) Cockfield Hall Park (part of the setting of Cockfield Hall), the Applicant found that increased traffic "would not be sufficient to give rise to a discernible qualitative change in the setting of Cockfield Hall Park that would affect its historic or architectural interest and no change to significance is anticipated"88. Savills again disagrees with the Applicant: the increased traffic would be discernible (as was the case with Rookery Park and Cottages). For this reason, the Applicant's assessment

⁸⁵ Paragraph 9.4.96, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (**EXL APP-499**).

⁸⁶ Paragraph 9.4.97, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (**EXL APP-499**).

⁸⁷ Paragraph 9.4.109, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (**EXL APP-499**).

⁸⁸ Paragraph 9.4.115, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (**EXL APP-499**).

of significance and impacts for Cockfield Hall Park can be regarded as incomplete. The conclusions cannot therefore be regarded as valid;

(iii) Cockfield Hall Lodge, the Applicant's assessment was cursory at best. Please see above for details.

The Applicant concedes at paragraph 9.4.95 "the operation of the proposed roundabout would affect the eastern boundary of the Conservation Area through the perceptible presence of the new roundabout and associated infrastructure." This is followed at paragraph 9.4.99 with: "Changes associated with the operation of the proposed Yoxford roundabout during the main development site construction would give rise to limited harm to the heritage significance of the asset. This would be a medium-term impact of a very low magnitude resulting in a minor adverse effect which would not be significant." Again, the assertion of a 'very low magnitude' effect disregards the real degree of effect, which professional judgement should place at least in the range of low to medium magnitude, which when applied to the Applicant's rubric of Table 9.5 gives rise to moderate or major effects, which in the Applicant's methodology should be considered significant.

- 4.21 **Assessment of setting**⁸⁹. The Applicant's assessment of the impact of the Project on the setting of the Conservation Area is lacking. For example:
 - (a) the Applicant describes Cockfield Hall Park as "an area of non-designated parkland within the 2020 extension to the Yoxford Conservation Area boundary. This area has been identified as a designed landscape of historical and aesthetic significance, providing the rationale for the expansion of the Yoxford Conservation Area to include the entire parkland (Ref 9.27). The parkland is considered in this assessment to be a heritage asset of medium heritage significance in addition to its contribution to the conservation area. The setting contributes primarily by affording of views into agricultural land to the north and northwest, contributing to the designed scheme and placing the parkland into a regionally distinctive rural context. While the presence of the A12 is important to understanding the historic values of the parkland, the volume of traffic detracts through noise and visual intrusion." 90 In Savills' opinion the above statement fails to have proper regard to the contribution of this parkland to the setting of the Conservation Area and the nature of the impact the proposals and associated traffic increase will bring about;
 - (b) see the comments above at Paragraph 4.13(c) of this Written Representation regarding Cockfield Hall Lodge and the Applicant's primary focus on the asset's physical relationship with the A12.

The wider HHE

4.22 The HHE has invested in the estate considerably over the years, including the Grade I Heveningham Hall, but also into the numerous buildings associated with the estate's traditional use as a working farm (see **Appendix 8** Heveningham Hall Estate Heritage Assets Map). This investment has in many instances secured the long-term future of these structures, as well as returned a sense of the unified operation and relation of the estate as a whole. This contrasts the position of many other substantial country estates which have struggled to manage the upkeep of such ancillary buildings as the profitability of farming has markedly reduced over the last century. As such, the setting of the various designated assets can be assumed to comprise much more than just their immediate surroundings, and the experiential qualities of the open parkland and agricultural land is an important aspect of the setting of the heritage assets. Furthermore, the

⁸⁹ Harm to the significance of a Conservation Area may arise as a result of harm to its setting, and attracts considerable importance and weight (see NPPF 194).

⁹⁰ Paragraph 9.4.53, Volume 7 Yoxford Roundabout and Other Highway Improvements Chapter 9 Terrestrial Historic Environment (**EXL APP-499**).

- rejuvenation and viability of the HHE buildings have been predicated on the peaceful ambience of the countryside as a principal attraction for guests to the HHE.
- 4.23 As detailed above, the Applicant's assessments of the YR and NPR have failed to take into account impacts on significance arising from changes to the setting of heritage assets comprising the HHE. The adverse impact of 12 years of construction traffic, and the associated new physical impositions of the YR and NPR should not be dismissed without proper consideration for the harm arising to a variety of heritage assets on the wider HHE.
- 4.24 In addition, the impacts arising from such drastic increases in local traffic and the physical changes to accommodate the YR and NPR will have clear consequences in the appeal of the rented accommodation on the HHE, thereby creating risks for the ongoing viability of this business which had done much to restore the quality of estate buildings and landscape to its former glory.

5 How the HHE's concerns can be addressed

- Whilst the HHE is objects to the Order, it is confident that a number of its concerns might be avoided or appropriately mitigated via amendment to the Order and the section 106 agreement required in connection with the Project. To this end, it has included at Schedule 1 (Proposed amendments to the Order) to these Written Representations a number of proposed amendments to the draft Order, along with detailed commentary on the rationale behind the proposed drafting. In summary, these changes relate to the following:
 - (a) amendments to definition of Works No 9 to make a distinction between hard and soft landscaping works, since some soft landscaping is to be retained, and make it clear that restoration works do not require removal;
 - (b) if changes are required to the CoCP then these are to be in accordance with the principles in the CoCP; be necessary, desirable or reflect good practice; and not give rise to effects materially different from those assessed in the environmental statement;
 - (c) the ecology monitoring plan should monitor the YR works;
 - (d) detailed design approval is required for the Associated Development site;
 - (e) detailed design approval is required for the highway works;
 - (f) the Applicant should be required to replace landscape planting that dies within 10 years of planting given the length of the construction phase, this should include planting at the YR;
 - (g) detailed design approval is required for the reinstatement works;
 - (h) a detailed landscaping scheme should be submitted and approved;
 - an management, maintenance and operational plan should be submitted and approved for the NPR, SPR and FMF;
 - (j) detailed scheme to be submitted and approved for the post construction (operational phase) configuration of the YR; and
 - (k) if protected species are found that have not previously been assessed, and no mitigation is identified in the environmental statement, then there is a requirement for a protection and mitigation plan to be submitted and approved.
- 5.2 The HHE has also included with these Written Representations at Schedule 2 (Section 106 obligations proposed by the HHE) proposed drafting for a number of section 106 obligations that address the following points, as well as detailed reasons for the proposed amendments:
 - (a) greater discretion for the Councils in relation to making payments to third parties without the need for a Deed of Covenant to be completed;
 - (b) ability for third parties to enforce obligations directly where appropriate;
 - (c) where the Councils have committed to spend s.106 financial contributions e.g. pursuant to a contract, the monies should not be categorised as "unspent" and liable to be returned to the Applicant;
 - (d) with a construction period of 12 years, the period after which financial contributions should be returned to the Applicant should be at least 10 years;
 - (e) use of dispute resolution clause rather than deemed consenting provisions;

- (f) requirement for a Heritage Mitigation Contribution;
- (g) applicant should use "best endeavours" to deliver "Key Environmental Mitigation";
- (h) Terrestrial Ecology Monitoring and Mitigation Plan should include the Associated Developments;
- (i) Ecology Working Group's remit should cover ecological overview of the Associated Development sites; and
- (j) requirement for a Level Crossings Contribution.

PART 2

THE WIDER PROJECT

1 Overview

- 1.1 In addition to the specific concerns regarding off-site associated development included at Part 1 to this Written Representation, the HHE has identified a number of issues or queries concerning the wider Project. These comments are summarised in the table below and relate primarily to:
 - (a) transport, particularly the Applicant's Visum traffic modelling; the tidal movement of workers; proposed HGV and distribution, as well as lack of information about AlLs in connection with the Project;
 - (b) flaws with the Applicant's assessment of air quality effects and recreational effects in the Shadow HRA. Ecology Solutions, the Applicant's ecological advisor, has also identified several issues with the proposed compensatory measures for marsh harriers proposed by the Applicant.

2 Transport

Topic	Detail	Comment
Visum Traffic modelling	In Table 3, the sum of the workers shown in the second column is not 580 but 531 and this should be clarified/ corrected ⁹¹ ;	Comments and queries are included to the left.
	In Table 5, the NPR is predicted to be used by 1,221 workers of the main site – there were 1,230 in the Gravity model (Table 2 of App 7A) and a total of 1,419 workers (there were 1,429) ⁹² ;	
	Table 6 suggests that a total of 970 vehicle trips (of workers of the main development site) are predicted to the NPR, while Table 2 of the Gravity Model (App 7A) seems to suggest 1,158 vehicles; which one is correct ⁹³ ?	
	Table 8 and Table 9 set out the assumptions in relation to lead time for arrival trips to the main site and lag time for departure trips from the main site, respectively; why does Table 9 not include an allowance for waiting for the bus (like in Table 8)94?	

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 ⁹¹ Table 3: Associated development operational worker shift profiles (on page 468) in the Transport Assessment Appendices 2A
 7B Appendix 7B: Sizewell C Visum Model Traffic Input Calculations (EXL APP-603).

⁹² Table 5: 24-hour home-to-work person trips – peak construction (on page 470) in the Transport Assessment Appendices 2A - 7B Appendix 7B: Sizewell C Visum Model Traffic Input Calculations (**EXL APP-603**).

 ⁹³ Table 6: 24-hour home-to-work vehicle trips – peak construction (on page 471) in the Transport Assessment Appendices 2A - 7B Appendix 7B: Sizewell C Visum Model Traffic Input Calculations (EXL APP-603).
 ⁹⁴ Table 8: Lead time for arrival trips – peak construction and Table 9: Lag time for departure trips – peak construction (on page

Table 8: Lead time for arrival trips – peak construction and Table 9: Lag time for departure trips – peak construction (on page 472) in the Transport Assessment Appendices 2A - 7B Appendix 7B: Sizewell C Visum Model Traffic Input Calculations (EXL APP-603).

Topic	Detail	Comment
	The same consideration applies to Table 3295;	
	The car park accumulation during peak construction was estimated through the profiles of the arrivals and of the departures, assuming, however, the 'base level' of occupancy during the quietest hour of the day (the profile is shown in the following graph); how was the 69 cars base level calculated for the NPR at Darsham (Table 13 – between 02:00 and 03:00) ⁹⁶ ?	
	Did the Visum model include the "busiest day" or the "typical day" HGV figures during the peak construction scenario?	
	Why are no bus journeys shown in some hours of Table 26, for example between 09:00 and 13:00, including the column of the NPR at Darsham? Does it mean no buses are going to run during those hours ⁹⁷ ?	
Workforce	The TA and associated reports (including the CWTP) estimate that the peak construction workforce for the Project will be 7,900 workers at the Main Development Site, with a further 600 associated development staff undertaking	In some cases shift times overlap. The Applicant should consider rearranging shifts to avoid any overlap of arrivals and departures to create a flatter profile across the day.
	non-construction related roles at the onsite and off-site associated development sites (e.g. security, maintenance, catering etc.). 580 of the 600 associated development staff are expected to work at the Main Development Site and 20 are expected to work at the Northern and Southern Park and Ride facilities and the freight management facility. These workers will fall into two categories: homebased workers already resident in the local area and non-home-based workers who do not live locally and would find accommodation during the construction phase.	The Applicant should clarify whether the shift patterns set out in Appendix 7B of the TA are to be employed or if these patterns were only used to identify a worst case scenario for modelling purposes. The Applicant should also endeavour to stagger arrivals and departures as much as possible, especially during peak hours.
	Table 1 of the Technical Note at Appendix 7B (Sizewell C Visum Traffic Model) to the	

Table 32: Lag time for departure trips – early years (on page 488) in the Transport Assessment Appendices 2A - 7B Appendix 7B: Sizewell C Visum Model Traffic Input Calculations (EXL APP-603).
 Table 13: Car park accumulation – peak construction (on page 475) in the Transport Assessment Appendices 2A - 7B Appendix 7B: Sizewell C Visum Model Traffic Input Calculations (EXL APP-603).
 Table 26: – Frequencies of proposed bus services – peak construction (on page 485) in the Transport Assessment Appendices 2A - 7B Appendix 7B: Sizewell C Visum Model Traffic Input Calculations (EXL APP-603).
 Paragraph 1.2.1, Construction Worker Travel Plan (CWTP) (EXL APP-609)..

Topic	Detail	Comment
	TA identifies four worker shifts: early shift; late shift; office shift; and, night shift ⁹⁹ .	
Tidal movements	3000 workers are predicted to live at the on-site campus or in caravans. 100 Accordingly, it seems reasonable to expect significant vehicle movements every Monday morning and Friday evening.	It is unclear that the significant tidal movement of workers arriving and departing each week has been adequately captured in the Applicant's trip generation and subsequent modelling. The Applicant should quantify the impact of the development during a Monday morning and a Friday evening, when significant movements of workers living at the on-site campus and in caravans (a total of 3,000) are to be expected. The impact associated with these weekly tidal movements may well be greater than those assessed in the TA or the TA Addendum.
HGV movements	The TA Addendum predicts 500 HGV movements (250 deliveries) on a typical day (previously 650) and a maximum of 700 (350 deliveries) during the busiest period (previously 1,000) ¹⁰¹ . In terms of predicted HGV routes identified in the CTMP in the area around Yoxford and the A12, HGVs are predicted to use the A12 and the B1122 in both pre- and post- Sizewell Link Road scenarios, save in the post-Link Road scenario HGVS from the South are predicted to take the Sizewell Link Road. Yet, based on submitted drawings, HGVs appear to use the B1122 even East of the new link road (via a roundabout), with the Sizewell Link Road (some 800m east of the YR). The TA Addendum predicts the following HGV distribution used for traffic modelling purposes: North (15%) and South (85%). 102	The Applicant should clarify the actual HGV route on the B1122 is required. The Applicant should provide the evidence behind its HGV distribution assumptions.
AlLs	Despite the temporary and permanent beach landing facilities, some AILs are still expected on the road network, given the over-runnable areas at a number of junctions (such as the YR).	More details about the AIL, including management and safety implications are required to fully assess the impact. A Road Safety Audit is requested. Better usage of the beach landing facilities

 ⁹⁹ Table 1: Peak construction worker shift profile (on page 467) in the Transport Assessment Appendices 2A - 7B Appendix 7B:
 Sizewell C Visum Model Traffic Input Calculations (EXL APP-603).
 ¹⁰⁰ Table 1: Workforce Profile (on page 448) in the Transport Assessment Appendices 2A - 7B Appendix 7A: Sizewell C Gravity

Model (EXL APP-603),

Paragraph 4.4.3, Transport Assessment Addendum (EXL AS-266).
 Paragraph 8.4.5, Transport Assessment Addendum (EXL AS-266).

Topic	Detail	Comment
	It would have been expected that some swept path analysis drawings at key locations would have been prepared and submitted as part of the DCO.	, ,

3 **Ecology**

Topic	Detail	Comment
Shadow HRA: Air Quality Effects	It is unclear how the receptor locations subject to dispersion modelling for each of the European designated sites have been identified. In most cases only a single receptor location has been selected 103, yet a number of European designated sites are located close to multiple roads. While the criteria used to identify the affected road network is included in Volume 2 Main Development Site Chapter 12 Air Quality Appendices 12A – 12B (EXL APP-213 104), it remains unclear in a geographical sense precisely which road have been identified and scoped in for the purpose of the assessment. The Applicant's dispersion modelling seems to focus on receptor locations located close to the main development site. This is inadequate given the Project (including any off-site associated development) will have ramifications for the wider transport network. It is unclear that the Applicant has considered this.	In the absence of detail, there is a risk that the locations selected by the Applicant for dispersion modelling work do not adequately cover the potential pathways for an effect to arise to designated sites via road traffic emissions. Consequently, the conclusions reached in respect of effects upon European designated sites may underestimate the significance of any ecological effect arising as a result of air quality impacts, or indeed overlook the potential for effects to arise at other key locations.
	Ammonia A review of the original and revised Transport Emissions Assessments ¹⁰⁵ show that while the Applicant has considered NOx, nitrogen deposition and acid deposition (in relation to European designated sites), no consideration has been afforded to the deposition of ammonia (NH3). This	Given that ammonia has been specifically identified by IAQM as a key contributor to nitrogen deposition arising from road traffic emissions, the Applicant should carry out further work to quantify the level of ammonia deposition associated with the Project, and in turn the extent to which this could result in an increase in nitrogen deposition at the European designated

 ¹⁰³ Volume 2 Main Development Site Chapter 12 Air Quality Figures 12.1 - 12.2 (EXL APP-215).
 104 Volume 2 Main Development Site Chapter 12 Air Quality Appendices 12A - 12B (EXL APP-213).
 105 Volume 2 Main Development Site Chapter 12 Air Quality Appendices 12A - 12B (EXL APP-213), Volume 3 Environmental Statement Addendum Appendices Chapter 2 Main Development Site Appendices 2.7.A-C Air Quality (EXL AS-205).

Topic	Detail	Comment
	conflicts with guidance issued by the Institute of Air Quality Management (IAQM) that "road transport is a source of ammonia, albeit it a small source compared to agriculture at a national level" and therefore "consideration should be given to it and its contribution to local nitrogen deposition".	sites. In the absence of this information, there remains uncertainty as to the extent to which nitrogen deposition could occur via road traffic emissions.
	Geographical consideration of Air Quality Effects Updated figures in the Transport Emissions Assessment 106 show an increase in more than 1% of the relevant critical load or level for NOx concentration, nutrient nitrogen deposition and acid deposition 107. The Applicant has not, however, carried out any further dispersion modelling or other detailed work to assist in quantifying the potential for an effect in ecological terms. Indeed, the Applicant has gone so far as to advise: "In these cases [where the 1% screening threshold is exceeded] it is important to acknowledge that this value is only representative of the portion of the site immediately adjacent to the road. It is also important to acknowledge that predicted pollutant concentrations with the proposed development in 2023 are lower than those predicted for the ecological sites as they currently exist". 108	No attempt appears to have been made to quantify or model the geographical extent to which exceedance of the relevant critical loads and levels could affect the designated sites, and in turn how this relates to the qualifying features for which they have been designated. This falls far short of the approach set out by Natural England in their guidance entitled "Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations". The conclusion that effects would only be relevant to "the portion of the site immediately adjacent to the road" therefore appears to be based entirely on subjective opinion, as opposed to any objective scientific evidence.
	Shadow HRA: In combination assessment Despite the fact dispersion modelling shows the threshold for a potential effect has been exceeded in a number of cases, save for a brief reference and table in the Transport Emissions Assessment and Air Quality Chapter of	Failure to consider in combination effects would mean that the assessment is fundamentally flawed, such that the conclusions presented in the assessment cannot be relied upon. see <i>Wealden DC v Secretary of State CLG</i> [2017] EWHC 351 (Admin).

¹⁰⁶ Volume 3 Environmental Statement Addendum Appendices Chapter 2 Main Development Site Appendices 2.7.A-C Air Quality (EXL AS-205).

¹⁰⁷ Table 1.21: Maximum modelled total NOx at each ecological site for each modelled scenario (on page 59), Table 22: Maximum modelled total nutrient nitrogen deposition at each ecological site for each modelled scenario (on page 62), Table 23: Maximum modelled total acid deposition at each ecological site for each modelled scenario (on page 65) in the Volume 3 Environmental Statement Addendum Appendices Chapter 2 Main Development Site Appendices 2.7.A-C Air Quality Appendix 12B: Transport Emissions Assessment (**EXL AS-205**).

108 Paragraph 1.3.25, Volume 2 Main Development Site Chapter 12 Air Quality Appendices 12A – 12B (**EXL APP-213**),

Topic	Detail	Comment
	the ES, ¹⁰⁹ it seems the Applicant has not given any consideration to the potential for adverse ecological effects to arise to designated sites as a result of traffic emissions. No reference has been made to the relevant Local Plan(s) and the extent to which this could result in a change to road traffic movements (and therefore emissions).	
Shadow HRA: Recreational Effects	Given qualifying features for a number of the European designated sites are sensitive to potential recreational effects (both habitats and species), it is critical to ensure an up-to-date baseline is established to ensure any assessment of potential effects is robust. The Applicant's visitor survey work was, however, undertaken in 2014/2015. Accordingly, there is clearly scope for existing visitor behaviour to have changed in the last 6-7 years. This not only extends to the current level of visitor pressure associated with European designated sites, but also to the likely behaviour of visitors who are (due to the Project) unable to access areas that they currently utilise for informal recreation, whether they comprise designated sites of nature conservation interest or not. The Applicant also seems to have focused solely on the Project. This is a material oversight given the need for the scheme to consider effects both alone and in combination with other plans and projects.	The assessment undertaken in respect of recreational effects upon European designated sites is not supported by the best available scientific evidence, with little to no consideration of the potential for any in combination effects to arise. Whilst the Draft S106 identifies potential mitigation measures to address recreational effects upon European designated sites, it remains clear that the assessment of potential effects which are likely to arise is inadequate; indeed, reference is made to developing two Recreational Monitoring Plans, which would effectively form this part of the Shadow Habitats Regulations Assessment and determine the scope and nature of any avoidance and mitigation measures which will be required. As a result, at the present time the ExA does not have sufficient information to enable proper consideration of whether an effect on integrity could arise due to the proposals, alone or in combination with other plans and projects, in discharging their duty as the Competent Authority under the Habitats Regulations.
Marsh Harrier Compensatory Measures	Given the finding that an adverse effect on the integrity of Minsmere-Walberswick SPA and Ramsar site cannot be excluded or avoided, 110 compensatory measures are required in accordance with Regulations 64 and 68 of The Conservation of Habitats and Species Regulations 2017 (the Habitats Regulation).	The Applicant has not yet provided sufficient information to evidence that the proposed compensatory measures for marsh harriers will in fact work, as required by Regulation 68 of the Habitats Regulations to ensure the overall coherence of Natura 2000 is protected.

 ¹⁰⁹ Volume 2 Main Development Site Chapter 12 Air Quality (EXL APP-213), Volume 2 Main Development Site Chapter 12 Air Quality Appendices 12A – 12B (EXL APP-213),
 110 Paragraph 11.3.6, Shadow Habitats Regulations Assessment Volume 1 Screening and Appropriate Assessment Part 1 of 5.

Topic	Detail	Comment
	Ecology Solutions has the following reservations about the Applicant's proposed compensatory measures for foraging marsh harriers:	
	While part of the compensatory habitat is located within the Order limits, the balance lies outside the boundary. Accordingly, there is reasonable scientific doubt as to whether the compensatory habitat can ultimately be secured and delivered;	
	as Figure 2.2.14 ¹¹² is indicative and the ES Addendum and Shadow HRA Addendum are scant on details regarding the design and layout of compensatory habitat, uncertainty remains as to the adequacy of the proposed measures;	
	save for references that flood mitigation and wetland habitats would be "constructed very early in the construction phase to ensure no ongoing construction disturbance to foraging marsh harriers the following summer", 113 no information has been provided about when the new habitats would be functional and effective. This means there is doubt as to whether the compensatory habitat would provide an alternative foraging resource of high enough quality to compensate for loss of foraging opportunities when needed;	
	the majority of the compensatory habitat is comprised of terrestrial habitat (e.g. tussocky grassland, hedgerows and scrub). Only limited wetland is proposed. ¹¹⁴ This brings	

Shadow Habitats Regulations Assessment Volume 4: Compensatory Measures Appendix A: Plan of the Proposed Compensatory Habitat (**EXL APP-152**), Figure 2.2.14: Indicative Sketch of Flood Mitigation Area and Wet Woodland Habitat, Volume 2 Environmental Statement Addendum Figures Chapter 2 Main Development Site

Part 1 of 4 (**EXL AS-190**).

112 Figure 2.2.14: Indicative Sketch of Flood Mitigation Area and Wet Woodland Habitat, Volume 2 Environmental Statement Addendum Figures Chapter 2 Main Development Site
Part 1 of 4 (EXL AS-190).

113 Paragraph 2.2.124, Volume 1 Environmental Statement Addendum Chapter 2 Main Development Site (EXL AS-181).

¹¹⁴ Shadow Habitats Regulations Assessment Volume 4: Compensatory Measures Appendix A: Plan of the Proposed Compensatory Habitat (EXL APP-152).

Topic	Detail	Comment
	into doubt the suitability of the Applicant's proposals;	
	approximately 100 hectares of grazing marsh and reedbed habit may become unavailable to marsh harriers in connection with the Project. 115 Yet, the compensatory measures proposed by the Applicant comprise 48.7 hectares of primarily terrestrial habitat (less than half of the area to be lost and not wetland); 116	
	the Applicant does not appear to consider what would happen should monitoring find that the adopted compensatory measures are ineffective. Reactive actions could include delaying construction works, changes to the creation and management of habitats within the compensatory area or undertaking to deliver more compensatory habitat (with additional monitoring).	

¹¹⁵ Paragraph 3.4.5, Shadow Habitats Regulations Assessment Volume 4: Compensatory Measures Appendix A: Plan of the Proposed Compensatory Habitat (**EXL APP-152**). ¹¹⁶ Paragraph 2.1.1, Shadow Habitats Regulations Assessment Volume 4: Compensatory Measures Appendix A: Plan of the Proposed Compensatory Habitat (**EXL APP-152**).

4 Conclusion

- 4.1 The HHE's objection to NNB Generation Company (SZC) Limited's (the Applicant's) application concerns ecology, transport and heritage. The HHE has significant concerns regarding the impact of the Project on the HHE's estate and the Suffolk region more generally, especially during the construction phase. In particular, the HHE is concerned about elements of off-site associated development forming part of the Project, specifically the NPR and YR. Part of the HHE is located south of the NPR site, while another part of the HHE falls within land required temporarily to facilitate the YR. The Cockfield Hall complex is in close proximity to the YR.
- 4.2 Key issues are summarised below.

4.3 Transport

- (a) concerns in respect of the NPR relate to (1) the site selection and location for the NPR; (2) the risks associated with increased use of Darsham level crossing; and, (3) the size of the NPR:
- (b) concerns in respect of the YR relate to (1) the Applicant's junction capacity modelling for the YR; (2) the traffic modelling for Yoxford and Darsham; and, (3) the design of the YR. The YR is consequently considered over-engineered.

4.4 Ecology

- (a) flaws with the Applicant's approach to identifying the baseline position at the NPR and Little Nursery Wood. Most of the survey data is inadequate and out of date. There are issues with the assessments undertaken. These issues and inconsistencies undermine confidence in the Applicant's overall assessment;
- (b) with regard to the YR, the Applicant has effectively ignored the proximity of Roadside Nature Reserve 197. The Applicant has also failed to properly survey for roosting bats and reptiles. These omissions undermine a proper understanding of the baseline position and the Applicant's ultimate findings.

4.5 Heritage

- (a) there is a very real risk that the construction phase (including additional HGV and bus movements) and associated development, such as the YR and NPR, will cause harm to significance of heritage assets within the HHE estate. Permanent harm may also be caused by the YR post construction.
- (b) The Applicant has failed to adequately assess: the significance of heritage assets located on the HHE, including (i) the Cockfield Hall complex; (ii) the significance of heritage assets within the Yoxford Conservation Area; and (iii) the contribution of setting.

The Applicant's determination of harm has not been properly made and impacts have been grossly underestimated. In particular, the impact of the 12 year construction phase on heritage assets and their settings has not been properly assessed.

The HHE considers that some of the concerns it has raised are capable of being adequately addressed by (i) amendments to the draft Order, principally the Requirements; and (ii) the draft s.106 agreement. Other issues require further assessment by the Applicant, scheme design work, and amendments to application documents including the environmental statement. At present, the ExA can have no confidence that the Project as designed has been properly assessed, that the scheme design has been sufficiently optioneered and stress tested to ensure that impacts are minimised, nor that such mitigation as is relied upon in the environmental statement will be delivered, nor that the mitigation offered is adequate to mitigate the Projects' impacts once properly assessed.

Schedule 1

PROPOSED AMENDMENTS TO THE ORDER

The Heveningham Hall Estate (**HHE**) requests the following amendments and additions to the Draft DCO. These relate to Associated Development, namely the Northern Park and Ride (**NPR**) and the Yoxford Roundabout (**YR**). Parts of the HHE, including the Grade I listed Cockfield Hall are proximate to the NPR and YR.

In this document the original text of the draft DCO is shown as "black text", proposed deletions are shown struck through in "red text" and proposed insertions are shown as underlined "blue text".

Schedule 1 Part 1

Work No. 9

The location of the below works is shown on sheet no. 15 of the Works Plans.

- (a) A temporary park and ride facility, to include—
 - (iii) <u>soft</u> landscape works, including the provision of ecological habitat; <u>hard landscape</u> works, including hardstanding, and vehicle, motorcycle and bicycle parking areas;
 - (vii) perimeter and internal fencing, signage, secured entrance gates, barriers and ecological fencing; and
 - (viii) demolition / removal of any temporary all structures, and all hard landscape works and any temporary soft landscape works; and
 - (ix) restoration works.

Reason for amendments:

Work No 9 relates to the NPR. The Associated Development Design Principles do not make clear what works are proposed for "demolition / removal" as part of the "restoration works". There is no "Design Principle" for the restoration works. Requirement 24 refers to "Work No. 9 ... must be demolished" and the land "restored to a condition suitable for agricultural use". Requirement 24 therefore suggests that everything planted or erected at the NPR is to be "demolished". However, the NPR Removal and Reinstatement Plan, Drawing No. SZC-SZ0701-XX-000-DRW-100162 Rev 01 (for approval) includes a note that "enhanced hedgerows" on Willow Marsh Lane and the southern boundary are "to be retained" as well as "retained and enhanced trees and shrubs", and "retained and enhanced other vegetation". The HHE agrees that some of the soft landscaping works e.g. "supplementary hedgerows will be planted along the eastern and northern site boundaries to infill existing gaps" should not be demolished / removed. A distinction therefore needs to be drawn in the definition of "Work No. 9" between the hard landscaping works, all of which are understood to be removed, and temporary soft landscaping works that are to be removed, with the remainder of soft landscaping works to be retained. HHE do not understand that are any structures to be retained.

The Promoter is requested to clearly identify the soft landscaping works that are to be removed, and those that are to be retained, and confirm that there are no structures to be retained as part of the NPR's restoration.

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¹¹⁷ Associated Development Design Principles, page 6, NPR (Darsham) Table 3.1, Landscape Design Principles, Para 6

"Restoration works" have been moved into separate sub-paragraph (ix) otherwise sub-paragraph (viii) lacks clarity as it would read "demolition / removal ... of restoration works", suggesting that once the restoration works have been completed at the NPR that these are to be removed.

Schedule 2

REQUIREMENT 2: Project wide: Code of Construction Practice

The construction and removal and reinstatement of the authorised development must be carried out in general accordance with the Code of Construction Practice, unless changes are otherwise agreed by the local planning authority provided that any such changes must—

(a) be in accordance with the principles set out in the code of construction practice; and

(b) be necessary or desirable to reflect a change or update in legislation, guidance or good practice, or confined to a specific location of the authorised development.

Reason for amendments:

The inclusion of the word "general" provides too much flexibility for the Promoter. They should carry out works "in accordance" with the CoCP so that there is confidence that the environmental mitigation included in the CoCP is delivered. If changes are made to the CoCP for sound operational reasons then it is important that the principles in and protection provided by the CoCP is delivered.

There is precedent for a similar Requirement to Requirement 2 as amended, see for example Requirement 5 of The Southampton to London Pipeline Development Consent Order 2020.

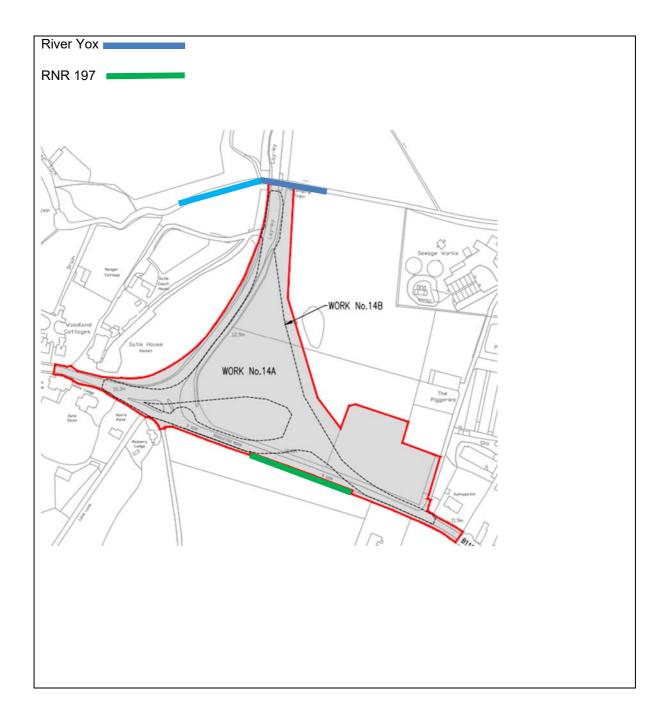
REQUIREMENT 4: Project wide: Terrestrial ecology monitoring plan

(1) No development must commence in respect of Work Nos. 1A (main development site), 3 (accommodation campus), 4 (rail), 9 (northern park and ride) and 10 (southern park and ride) and 14 (yoxford roundabout) until a terrestrial ecology monitoring plan for that work reflecting the monitoring included in the Environmental Statement has been submitted to and approved by the local planning authority. (2) The terrestrial ecological monitoring plan must include an implementation timetable and must be carried out as approved.

Reason for amendments:

Immediately adjacent to the boundary of the YR works there are ecologically important features, including Roadside Nature Reserve 197 and the River Yox. RNR 197 includes a legally protected species, namely the Sandy Stilt Puffball fungus, included in Schedule 8 of the Wildlife and Countryside Act 1981.

An extract from Works Plans Sheet 24 is shown below with these features marked for reference.



REQUIREMENT 20: Associated Development Sites: Buildings and Structures Detailed Design Approval

(1) Work No. 9 (northern park and ride), Work No. 10 (southern park and ride) and Work No. 13 (freight management facility) must not be commenced until the detailed design of that Associated Development has been submitted to and approved by the local planning authority. The submission shall be in accordance with the relevant plans set out in Schedule 6 (Parameter Plans) and Schedule 7 (Approved Plans), and shall include a statement of compliance demonstrating how the relevant sections of the Associated Development Design Principles have been incorporated into the relevant building, structure or works for that Associated Development work has been submitted to and approved by the local planning authority. The details submitted for each Associated Development must include details of the following where these are relevant to that component—

- (a) stockpiles (during construction and site restoration only), embankments and bunds including locations, maximum heights of 4 metres for stockpiles and 3 metres for bunds, profiles, fencing, seeding, covering and planting proposals;
- (b) hard landscaping, cycle tracks, footpaths including location, surfacing, and details of bypass separators, oil filters and petrol interceptors for car-park run-off;
- (c) surface and foul drainage including SuDS measures; package treatment plant type, location, filters, and management and maintenance proposals;
- (d) bicycle, motorcycle and vehicle parking confirming number of spaces provided consistent with the maximum number referred to in the Transport Assessment (including any Addenda) for the relevant Associated Development including (i) the location and quantum of electrical charging points, (ii) cycle shelters, (iii) the location of accessible spaces, (iv) and pick-up only spaces;
- (e) built development siting, scale, appearance and layout (including external materials and finishes, sustainable energy measures, sprinkler systems, and accessibility measures), the heights of buildings shall not exceed 4 metres;
- (f) location and quantum of bin stores;
- (g) site levels and finished floor levels;
- (h) estate roads including bus lanes and pedestrian only routes;
- (i) screening measures for built development;
- (j) external lighting scheme including: (i) location, (ii) heights, (iii) lux levels, (iv) types of fittings and shields to limit light spill, (v) details of central management system, and controls such as sensors and timing devices; (vi) the scheme shall demonstrate how impacts on ecology (particularly nocturnal species) and light pollution has been minimised; (vii) demonstration that the light levels are the minimum required for security and safety purposes; (viii) the setting of a threshold for light levels, including how this will be monitored and how this will be used to inform a requirement for change on ecological grounds; (ix) demonstration that the artificial light emissions are consistent with the assessed effects of artificial lighting in the environmental statement, (x) temporary lighting during construction;
- (k) means of enclosure including boundary and security fencing, entrance barriers, acoustic fencing, ecological fencing, and temporary fencing during construction;
- (I) CCTV and other security measures including a security booth and barrier at the site entrance, and a security building;
- (m) entrances and exit points to/from the public highway including roundabout and junction designs;
- (n) gas mitigation measures;
- (o) any temporary site notices or advertisements;
- (p) mechanical services plant including details of acoustic housing and noise emissions;
- (q) sustainability measures including energy, recycling, and on site generation;
- (r) location of litter bins;
- (s) services including gas, electricity, water and telecommunications; and
- (t) canopies and screen and search facilities.

(2) Work No. 9 (northern park and ride), Work No. 10 (southern park and ride) and Work No. 13 (freight management facility) must be carried out in accordance with (i) the relevant plans set out in Schedule 6 (Parameter Plans) and Schedule 7 (Approved Plans), and (ii) in general accordance with the relevant sections of the Associated Development Design Principles, and (iii) details approved pursuant to paragraph (1) above, save to the extent that alternative plans or details relating to siting, scale or appearance the matters set out at paragraph 1 above are submitted to and approved by the local planning authority.

(3) Any alternative plans or details referred to in paragraph (2), <u>must include and conform with the requirements set out in paragraph (1) above.</u> <u>must be in accordance with the relevant plans set out in Schedule 6 (Parameter Plans), and in general accordance with the relevant sections of the Associated Development Design Principles.</u>

Reason for amendments:

The Associated Development Design Principles are inadequate on their own to control the Associated Development; the local planning authority needs to ensure that the detailed design adequately mitigates the Associated Developments in accordance with the conclusions of the environmental statement and minimises environmental harm.

The Promoter's Explanatory Memorandum states:

"The requirements closely relate to the mitigation set out in the Environmental Statement and ensure that the mitigation relied upon for conclusions of the Environmental Impact Assessment is secured."

The Associated Development Design Principles do not provide a sufficient level of certainty that this will be the case and provide too much flexibility for the Promoter to "value engineer" the design. For example, in relation to the NPR, pages 5 and 6, Table 3.1:

- Under Building Design Principles, para 5 it states "Buildings will be screened as far as possible". Screened with what? Corrugated sheet metal would "screen" the buildings but would be neither appropriate nor mitigate visual harm. Is the screening proposed a planted screen, such as a green wall, or is it another built structure? It is not clear.
- Under Building Design Principles, there is no indication as to what the internal layout and facilities provided within the buildings will be. The health and welfare of workers would require sufficient bathroom facilities, and there is a need to ensure that other areas of the site are not being used as "ad hoc" bathroom facilities causing ecological harm due to inadequate provision. There is also a need to ensure that the buildings are accessible to all, and to ensure that there are no facilities that would unnecessarily encourage dwell time e.g. a bar /restaurant to the detriment of neighbouring residential amenity.
- Under Landscape Design Principles, paras 6 and 7 it states that "supplementary" and "new" hedgerows are to be planted. General design principle No. 6, Table 2.1, page 3 advises that the species used will be "native species", but there is no further information. There are many plants that are "native species" to the UK, but not all would be appropriate in a hedgerow, and provide "ecological mitigation and visual screening" 118. The Landscape Masterplan provides no further detail.

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¹¹⁸ Associated Development Design Principles, page 6, NPR, Landscape design principles, para 7

It is therefore important that the LPA approve the detail of these Associated Developments. This needs to comply with the Associated Development Design Principles and details provided in other application documents such as Mitigations Route Map, but also go into a further level of detail, as would be normal at a detailed design stage, where a development has only been designed in outline, and a "design code" document has to be complied with. The list of details required to be submitted at (a) through to (t) are taken directly from the Associated Development Design Principles document, as would be usual for developments of this scale and duration.

It is inappropriate for works to be carried out in "general accordance" with approved documents. Works should be carried out "in accordance" with the approved document, so that there is confidence that the environmental mitigation included in the approved document is delivered.

There is precedent for a similar Requirement to Requirement 20 as amended, see for example Requirement 8 of The Northampton Gateway Rail Freight Interchange Order 2019, Requirement 5 of The West Burton C (Gas Fired Generating Station) Order 2020, and Requirement 5 of The Immingham Open Cycle Gas Turbine Order 2020.

REQUIREMENT 22: Highway works

(1) Prior to the commencement of highway works relating to Work Nos. 9(b) (highway works related to northern park and ride), 10(b) (highway works related to southern park and ride), 11 (two village bypass), 12 (sizewell link road), 13(b) (highway works related to freight management facility), 14, 15, 16 and 17 (yoxford roundabout and other highway improvements) the full detailed design of the highway works in accordance with (i) Schedule 6 (Parameter Plans), (ii) the relevant plans set out in Schedule 7 (Approved Plans), (iii) the relevant sections of the Associated Development Design Principles, and (iv) (in respect of Work No. 11 and Work No. 12) within the vertical limits of deviation specified in article 4 of this Order, shall be submitted to and approved by the local planning authority (following consultation with Suffolk County Council or any successor authority). Where the highway works include lighting, details to be submitted shall include:

- (a) location;
- (b) heights;
- (c) lux levels;
- (d) types of fittings and shields to limit light spill;
- (e) details of controls such as sensors and timing devices;
- (f) demonstration of how impacts on ecology (particularly nocturnal species) and light pollution has been minimised;
- (g) demonstration that the light levels are the minimum required for highway safety purposes;
- (h) demonstration that the artificial light emissions are consistent with the assessed effects of artificial lighting in the environmental statement; and
- (i) temporary lighting during construction.
- (42) Work Nos. 9(b) (highway works related to northern park and ride), 10(b) (highway works related to southern park and ride), 11 (two village bypass), 12 (sizewell link road), 13(b) (highway works related to freight management facility), 14, 15, 16 and 17 (yoxford roundabout and other highway improvements) must be carried out in accordance with the details approved pursuant to paragraph 1 above, relevant plans set out in Schedule 7 (Approved Plans) and in general accordance with the relevant sections of the Associated Development Design Principles, save to the extent alternative plans or details are

submitted to and approved by the local planning authority (following consultation with Suffolk County Council or any successor authority).

(23) Any revised plans or details referred to in paragraph (42), must <u>include and conform with the requirements set out in paragraph (1) above</u>, be in general accordance with the relevant sections of the Associated Development Design Principles and (in respect of Work No. 11 and Work No. 12) within the vertical limits of deviation specified in article 4 of this Order.

(34) No changes to existing finished ground levels or surface water drainage are permitted in respect of Work Nos. 9(b), 10(b), 11, 12, 13(b), 14, 15, 16 and 17, unless shown on the relevant plans set out in Schedule 7 (Approved Plans) or approved by the local planning authority pursuant to paragraphs (42) and (23) above.

Reason for amendments:

The plans "for approval" submitted to date that show works within the publicly maintainable highway, have only been designed to an AiP / general arrangement level of detail. It is therefore suggested that a Requirement is phrased to require approval of the detailed design. Detrimental effects on ecology and heritage can occur as a consequence of artificial lighting and it is therefore important for artificial lighting details to be carefully scrutinised.

REQUIREMENT 23: Associated developments: Landscape planting

If any tree or shrub is removed, dies or becomes seriously damaged or diseased within five ten years of planting as part of Work No. 9, 10, 11, 12 or 13, or 14 it must be replaced with suitable replacement plants or trees to the specification referred to in the approved landscaping scheme (Requirement [26] and Associated Developments Design Principles during the next available planting season.

Reason for amendments:

The construction period is 12 years, and the landscaping, particularly in relation to the Associated Development, that is only required for the construction phase is essential for mitigating the impact of these developments, by providing visual screening, ecological mitigation, and noise attenuation. If there is only a requirement to replace failed landscaping for up to 5 years then for over half of the construction period Associated Development could be without the required level of mitigation in place.

In relation to Work No.14 this has been included because the landscaping at YR provides an important function in mitigating the impact of the works on neighbouring residential amenity, and protecting ecology, and if it were to fail during the construction period (when the YR would be most intensively used) then it ought to be replaced.

REQUIREMENT 24: Associated development sites: Removal and reinstatement

(1) Six months prior to the completion of the SZC construction works, there shall be submitted to the local planning authority for approval a reinstatement scheme in respect of Work No. 9 (northern park and ride), Work No. 10(a) (southern park and ride), Work No. 13(a) (freight management facility), Work No. 4B (green rail route), and Work No. 4D (rail spur). The reinstatement scheme must include the following:

- (a) details of soft landscaping to be retained;
- (b) details of any other parts of the authorised works to be retained including the reason for the retention;

(c) in respect of the parts of the Associated Development sites that are agricultural land, the scheme shall include the register of land condition¹¹⁹, detailing soil, topography, drainage, boundary treatments, and agricultural land grade prior to the commencement of the authorised works on the relevant Associated Development site;

(d) proposals for returning the parts of the Associated Development sites that are agricultural land to at least the condition and grade that is recorded in the register of land condition for that Associated Development site;

- (e) details of land form and contours;
- (f) proposals for landscaping, planting, seeding or turfing;
- (g) proposals for boundary treatments;
- (h) proposals for site drainage;
- (i) details relating to the capping or removal of services for water, gas, electricity, and telecommunications;
- (j) details of the physical condition of the replaced soil profile to at least 1.2m below final ground level;
- (k) (i) a Preliminary Risk Assessment which identifies potential contaminants associated with the authorised works, a conceptual site model indicating potential sources, pathways and receptors; (ii) a Ground Investigation Scheme, based on (i) above, to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site; (iii) the results of the Ground Investigation in (ii) above and an associated risk assessment including appropriate interpretation and an updated conceptual site model; (iv) a remediation and verification strategy including an options appraisal reflecting (iii) above, which shall provide details of the data that shall be collected in order to demonstrate that the works set out in the remediation and verification strategy are complete and identifying requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action [if any];
- (I) programme for demolition, remediation, and restoration to a condition suitable for agricultural use (consistent with paragraph 1(d) above);
- (m) details of any imported topsoil / inert fill;
- (n) in respect of the parts of the Associated Development sites that are highway / roads / tracks, the scheme shall include proposals for returning the relevant parts of the Associated Development sites to the condition and layout prior to the commencement of the authorised works on the relevant Associated Development site (unless improvements to the condition and layout are agreed by the local planning authority); and
- (o) If any tree or shrub is removed, dies or becomes seriously damaged or diseased within five years of planting as part of a reinstatement scheme then it must be replaced with suitable replacement plants or trees to the specification referred to in the reinstatement scheme during the next available planting season.
- (2) Within 12 months of the completion of the SZC construction works, Work No. 9 (northern park and ride including highway works), Work No. 10(a) (southern park and ride), Work No. 13(a) (freight management facility), Work No. 4B (green rail route), and Work No. 4D (rail spur) must be demolished removed in accordance with the details approved under paragraph (1) above.

 $^{^{\}rm 119}$ Referred to at page 43 of the CoCP, Table 9.1.

(23) All materials resulting from the demolition of the above Works must be removed from the relevant site, and the land restored to a condition suitable for agricultural use (consistent with the details approved pursuant to paragraph 1(d) above), or restored to the highway / roads / tracks (consistent with the details approved pursuant to paragraph 1(n) above);

(4) Within 1 month of completion of the reinstatement scheme, a verification report demonstrating completion of the works set out in the reinstatement scheme approved pursuant to paragraph (1) above, including specifically completion of the works set out in the approved remediation and verification strategy (consistent with the details approved pursuant to paragraph 1(k) above) shall be submitted to the local planning authority for approval. The report shall include results of sampling and monitoring carried out in accordance with the approved remediation and verification strategy to demonstrate that the site remediation criteria have been met.

Reason for amendments:

There is a vast difference between returning the land to a condition where it is suitable to grow crops (as is the case at present with the NPR) and returning it to a condition suitable for e.g. a facility where caged hens are kept. It is necessary to provide clarity on what condition the land is to be restored to.

It is necessary to understand clearly what works are to be demolished and what works are to remain. The landscape masterplan for the NPR suggests that certain landscaping is to be retained, whereas this Requirement suggests that the totality of the works are to be demolished.

Whilst the CoCP controls how reinstatement works are to be carried out, it does not detail what reinstatement works will be required in connection with each Associated Development site, and what condition the Associated Development sites will be left in post reinstatement. Given that there is divergence between the different documents, it is necessary for clarity to be provided and for the LPA to be satisfied that reinstatement measures are appropriate and complete.

The amendments at (k) ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the reinstatement works can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors.

There is precedent for a similar Requirement, see for example Requirement 8 of The Northampton Gateway Rail Freight Interchange Order 2019, Requirement 24 of The West Burton C (Gas Fired Generating Station) Order 2020.

PROPOSED NEW REQUIREMENT [26]: Provision of Landscaping

(1) Work No. 9 (northern park and ride), Work No. 10 (southern park and ride), Work No. 13 (freight management facility) and Work No. 14 (yoxford roundabout) must not be commenced until a landscaping scheme for that component has been submitted to and approved by the local planning authority. The landscaping scheme for each Associated Development must include details of all proposed soft landscaping works, including—

(a) location; number; species; size/maturity of specimens to achieve as a minimum screen planting of 800mm high at the end of year 1 and 4.8 m high at the end of year 10; hedgerows of 450mm high at the end of year 1 and 3 m high at the end of year 10; layout; method of trees' support; plant protection measures; and planting density of any proposed planting;

(b) details of buffer zone planting;

(c) details of enhancement proposals in relation to retained landscaping;

(d) in relation to the Northern Park and Ride proposals for native tree and shrub/hedgerow planting to provide continuous cover on the western boundary of the Northern Park and Ride site of not less than 3 metres depth;

(e) cultivation, importation of materials and other operations to ensure plant establishment;

(f) details of existing trees to be retained, with measures for their protection during the construction period in accordance with British Standard 5837:2012, "Trees in relation to Design, Demolition and Construction Recommendations", and to include a schedule of remedial tree works to be carried out in accordance with British Standard 3998:2010, "Tree Work Recommendations", prior to construction commencing;

- (g) details of ecological mitigation;
- (h) implementation timetable; and
- (i) maintenance and management proposals.
- (2) Work No. 9 (northern park and ride), Work No. 10 (southern park and ride), Work No. 13 (freight management facility) and Work No. 14 (yoxford roundabout) must carried out in accordance with the landscaping scheme approved pursuant to paragraph (1) above to a reasonable standard in accordance with the relevant recommendations of appropriate British Standards or other recognised codes of good practice, save to the extent that an alternative scheme (or details forming part of a scheme) is submitted to and approved by the local planning authority.
- (3) Any alternative scheme or details referred to in paragraph (2), must include and conform with the requirements set out in paragraph (1) above.

Reason for amendments:

Soft landscaping is a key component of the environmental mitigation proposed, and it is therefore important that there is sufficient certainty about what will be delivered, when it will be delivered, and that it will be appropriately managed and maintained. The landscaping at the YR, and some of the landscaping at the NPR is to be permanently retained.

There is precedent for a similar Requirement, see for example Requirement 10 of The Northampton Gateway Rail Freight Interchange Order 2019, Requirement 5 of The A1 Birtley to Coal House Development Consent Order 2021, and Requirement 5 of The A38 Derby Junctions Development Consent Order 2021.

REQUIREMENT [27]: management, maintenance and operational plan

(1) Work No. 9 (northern park and ride), Work No. 10 (southern park and ride) and Work No. 13 (freight management facility) must not be commenced until a plan detailing the management, maintenance and operation of that Associated Development has been submitted to and approved by the local planning authority. The submission shall be in accordance with (i) the relevant plans set out in Schedule 6 (Parameter Plans) and (Schedule 7 (Approved Plans), (ii) the relevant sections of the Associated Development Design Principles for that Associated Development. The details submitted for each Associated Development must include the following—

- (a) proposals for the maintenance of the external appearance of the built development;
- (b) proposals for maintenance of the grounds including cleaning and litter picking / litter control;
- (c) management of anti-social behaviour;
- (d) no playing of recorded or live music;
- (e) measures to discourage dwell time by users of the Associated Development;
- (f) measures to control external noise including vehicle alarms;

- (g) no engine idling;
- (h) no tannoy or PA systems;
- (i) <u>no catering facilities beyond vending machines and water stations, or any other welfare</u> facilities beyond toilet facilities and waiting rooms;
- (i) no showers;
- (k) <u>no catering vans, or mobile catering;</u>
- (I) <u>no sale of goods (save for vending machines) or services;</u>
- (m) security access control measures;
- (n) no public access;
- (o) no parking or storage of camper vans / caravans / motorhomes or boats, and no sleeping in vehicles;
- (p) <u>hours of operation during construction and operation of the Associated Development with non-operational hours consistent with the environmental statement for the relevant Associated Development¹²⁰;</u>
- (q) <u>maximum daily vehicle movements during construction and operation consistent with the environmental statement for the relevant Associated Development, including monitoring proposals to ensure maximum numbers are not exceeded;</u>
- (r) <u>24/7 security presence with manned and monitored CCTV and assisted recognition technology for personnel and vehicles;</u>
- (s) parking permit scheme proposals for issue of permits, recording, controlling and monitoring;
- (t) pedestrian access measures;
- (u) no vehicle maintenance (save for emergencies);
- (v) <u>no generators (except for use in emergencies);</u>
- (w) cold weather measures for vehicular and pedestrian areas; and
- (x) <u>no materials storage (save during construction and site restoration, and save in respect of</u> earth bunding removed during construction and to be re-used during restoration).

(2) Work No. 9 (northern park and ride), Work No. 10 (southern park and ride) and Work No. 13 (freight management facility) must be managed, maintained, and operated in accordance with the plan approved pursuant to paragraph (1) above, save to the extent that an alternative plan (or details forming part of a plan) is submitted to and approved by the local planning authority.

(3) Any alternative plan or details referred to in paragraph (2), must include and conform with the requirements set out in paragraph (1) above.

Reason for amendments:

The Requirement is for a management, maintenance and operational plan. This is vitally important, the NPR, SPR, and FMF need to be well run and well managed. There is no commitment in any of the application documents to such a plan. It is only if such a plan is in place that is capable of being enforced that the environmental effects of the Associated Developments will be effectively mitigated as well as these can be, and avoid unnecessary harm to neighbouring residential amenity, heritage, landscape, and ecology.

There is precedent for a similar Requirement, see for example Requirement 10 of The Wheelabrator Kemsley K3 Generating Station Order 2021.

 120 The construction hours for the NPR are at para 2.4.3, Vol 3, Chapter 2 of the ES, and the operational hours of the NPR are at para 2.5.3, Vol 3, Chapter 2 of the ES.

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REQUIREMENT [28]: Yoxford roundabout

- (1) Six months prior to the completion of the SZC construction works, there shall be submitted to the local planning authority for approval (following consultation with Suffolk County Council or any successor authority) a scheme in respect of Work No. 14 (yoxford roundabout) for its operational phase configuration. The scheme must include the following:
- (a) the removal of the abnormal indivisible loads route;
- (b) <u>a reduction in the diameter of the roundabout 121; the size of roundabout required in the operational phase shall be based on assessed operational need and modelling;</u>
- (c) <u>a landscaping scheme for the land no longer required for the roundabout, but which will remain</u> highway land:
- (d) <u>an operational phase lighting scheme demonstrating that the light levels are the minimum required for highway safety purposes;</u>
- (e) an assessment of ecological effects and ecological protection during the works;
- (f) an assessment of heritage effects;
- (g) <u>habitat creation and enhancement measures; and</u>
- (h) <u>a programme for the completion of the works.</u>
- (2) The operational phase configuration of Work No. 14 (yoxford roundabout), must be carried out in accordance with (i) the scheme approved pursuant to paragraph (1) above, save to the extent that an alternative scheme is submitted to and approved by the local planning authority (following consultation with Suffolk County Council or any successor authority), and (ii) the Code of Construction Practice.
- (3) Any alternative scheme referred to in paragraph (2), must include and conform with the requirements set out in paragraph (1) above.

Reason for amendments:

The HHE have submitted evidence demonstrating that the YR is over-sized / over-engineered even for the construction phase. The YR has a significant detrimental visual impact on the significance of the Grade I listed Cockfield Hall and the collection of listed buildings around it that together have significant group value (the **Cockfield Hall Complex**).

Given that the requirement for the over-sized YR in the operational phase must be significantly less than in the construction phase, if the size of the YR can be justified in the construction phase on general public benefit arguments, it is much less clear that there is justification for the detrimental visual impact on the Cockfield Hall Complex in the operational phase, when the need for such a large roundabout (55m Inscribed Circle Diameter) must be very limited.

It is the HHE's submission that the on-going visual harm to the significance of the Cockfield Hall Complex from the YR cannot be justified in the operational phase, and that the impacts on the Cockfield Hall Complex must be appropriately mitigated by a reduction in the size of the YR and the landscaping of the YR site.

This approach would give effect to the duty in Regulation 3 of the Infrastructure Planning (Decisions) Regulations 2010.

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¹²¹ The principle should be that in the rare case that a large load is required to pass through the YR in the operational phase, that the landscaped areas could be used, and any damage occasioned to the landscaping repaired thereafter.

REQUIREMENT [29]: Protected species

- (1) No part of the authorised development is to commence until, for that part, final pre-construction survey work has been carried out to confirm whether European or nationally protected species are present on any of the land affected or likely to be affected by any part of the relevant works, or in any of the trees and shrubs to be lopped or felled as part of the relevant works.
- (2) Following pre-construction survey work or at any time when carrying out the authorised development, where—
- (a) a protected species is shown to be present, or where there is a reasonable likelihood of it being present this shall be reported immediately to the Ecological Clerk of Works;
- (b) application of the relevant assessment methods used in the environmental statement show that a significant effect is likely to occur which was not previously identified in the environmental statement; and
- (c) that effect is not addressed by any prior approved scheme of protection and mitigation established in accordance with this paragraph, the relevant parts of the relevant works must cease until a scheme of protection and mitigation measures has been submitted to and approved in writing by the Secretary of State.
- (3) The undertaker must consult with Natural England on the scheme referred to in subparagraph (2) prior to submission to the Secretary of State for approval, except where a suitably qualified and experienced ecologist, holding where relevant and appropriate a licence relating to the species in question, determines that the relevant works do not require a protected species licence.
- (4) The relevant works under sub-paragraph (2) must be carried out in accordance with the approved scheme, unless otherwise agreed by the Secretary of State after consultation with Natural England, and under any necessary licences. Construction in the area specified in the approved scheme must not commence or recommence (as the case may be) until any necessary licences are obtained to enable mitigation measures to be implemented.

Reason for amendments:

The HHE has raised concerns about the adequacy of ecological assessment work undertaken as part of the environmental statement. Survey data is out of date and some species, such as reptiles, have not been surveyed at all in connection with the NPR and YR. There is considerable scope for the baseline to have changed. This Requirement has been drafted to address the possibility of previously unidentified protected species being discovered prior to and during the carrying out of the authorised works and to ensure that suitable mitigation measures are implemented.

An "Ecological Clerk of Works" is referred to in the CoCP.

There is precedent for a similar Requirement, see for example Requirement 13 of The Southampton to London Pipeline Development Consent Order 2020, Requirement 7 of The A1 Birtley to Coal House Development Consent Order 2021, and Requirement 10 of The A38 Derby Junctions Development Consent Order 2021.

REQUIREMENT [30]: Environmental Statement Compliance

- (1) The authorised works shall be carried out in accordance with the mitigation measures set out in the Environmental Statement unless otherwise provided for in any of the Requirements or any agreement entered into pursuant to section 106 of the Town and Country Planning Act 1990 and unless otherwise agreed by the local planning authority.
- (2) The undertaker shall prepare a table of all mitigation measures relating to the authorised works which demonstrates compliance. The mitigation measures table shall be submitted to the local planning authority at no less than 3 monthly intervals from the commencement of the authorised works to the completion of the authorised works including completion of all reinstatement works (Requirement 24) and the Yoxford Roundabout operational configuration works (Requirement [28]).

Reason for amendments:

To ensure that the authorised works are carried out in accordance with the principles of mitigation set out in the environmental statement in order to minimise the environmental effects of the authorised works. It gives the LPA the required visibility and confidence that the mitigation measures are being adhered to, and makes it simpler for breaches to be identified and enforcement action taken in the event of non-compliance. The Promoter's Explanatory Memorandum states:

"It is important that the securing mechanisms for the mitigation are clear and understandable to a multitude of parties who will be responsible for compliance."

This Requirement ensures that that objective is met.

The Promoter's Explanatory Memorandum states at paragraph 10.12:

"Mitigation measures for the project are contained within specific control documents, which are then secured by requirement, or Section 106 Agreement. The control documents include the mitigation measures that the undertaker will be committed to. This approach has sought to provide a clear and logical set of control measures that the teams and contractors who are implementing them can implement, along with providing a clear and enforceable set of controls that the discharging authority and stakeholders can apply during the course of construction."

Whilst this might be the intention, it is far from clear that between the Requirements and s.106 agreement that these secure compliance with all of the "control documents". In any event, the "control documents" do not cover all of the mitigation measures referred to and relied upon in the environmental statement. Paragraph 10.14 of the Explanatory Memorandum lists the "control documents", these include:

- Construction method statement: the CMS is not referred to at all in the draft s.106 agreement; and in the Requirements (see Requirement 8) compliance in only required with the CMS in very limited circumstances, namely temporary works carried out in connection with Work No.1.
- Outline Landscape and Ecology Management Plan: the OLEMP is not referred to at all in the s.106; and in the Requirements (see Requirement 14) there is a requirement to prepare a management plan in "general accordance" with the OLEMP only.

Schedule 2

SECTION 106 OBLIGATIONS PROPOSED BY THE HHE

The Heveningham Hall Estate (**HHE**) requests the following amendments and additions to the Draft section 106 agreement. These principally relate to Associated Development, namely the Northern Park and Ride (**NPR**) and the Yoxford Roundabout (**YR**). Parts of the HHE, including the Grade I listed Cockfield Hall are proximate to the NPR and YR. The HHE reserves the right to make further comments on any subsequent drafts of the section 106 agreement.

The comments in this document all relate to the "Deed of Development Consent Obligations" (the **s.106**) internally dated "Draft 6 May 2021" forming Appendix 1 of the draft s.111 deed and uploaded to the PINS website on 14 May 2021.

In this document the original text of the s.106 is shown as "black text", proposed deletions are shown struck through in "red text" and proposed insertions are shown as underlined "blue text".

Clause	Clause					
Payments to Third Parties (clause 15)	The mechanism is too restrictive. The Councils should have the discretion to pay out funds if satisfied that these will be spent in accordance with the terms of the s.106. For small unincorporated community groups it may not be possible, or may be difficult for a Deed of Covenant in the terms drafted to be entered into. It is noted that this was also an issue raised by the ExA. The wording at clause 15.3.3 should be revised to read: "if no Deed of Covenant has been entered into within [•] Working Days of the date when the payment was due to be paid, SZC Co and the East Suffolk Council, West Suffolk Council or Suffolk County Council (as relevant) shall meet to determine either (i) the exercise of their discretion to make the payment to the third party if the third party has demonstrated to their satisfaction that the payment will be spent on the intended objects; or (ii) the alternative delivery of the relevant mitigation; or (iii) an alternative form of mitigation.					
Rights of Third Parties (clause 20)	Consider a carve out for particular obligations to allow direct enforcement. In the s.106 Explanatory Memorandum it is stated as follows indicating that third parties will be involved in negotiating obligations that directly affect them; they should therefore have the facility to enforce those same obligations: " we would like to be clear with Interested Parties that the negotiation of such agreements must take place solely between SZC Co. and the three relevant Councils, with the exception of cases where a particular Interested Party is expressly referenced in the draft s106 Agreement in relation to particular obligations." The wording should be revised to read:					

"Save as set out below, Lit is not intended that any person who is not a party to this Deed shall have any right under the Contracts (Rights of Third Parties) Act 1999 to enforce any term of this Deed. [add list of relevant obligations and enforcing parties]"

Schedule 1 - Councils' General Obligations

Para 4.1

5 years is too short for the repayment of unspent funds; for a project with a construction period of 12 years it would be appropriate for the funds to be returned if unspent within 10 years from the date of payment.

The obligation should be extended so that if funds have been committed for expenditure but not yet spent then these do not need to be returned, for example, if a contract has been entered into but the date of payment under the contract has not yet occurred then it would be unacceptable for the Councils to have to return the funds in those circumstances.

The wording should be revised to read:

".... remains unspent <u>or uncommitted for expenditure</u> within <u>5-10</u> years of the date that the amount was paid by SZC Co, then the Councils"

This same comment applies in relation to the Deed of Covenant at para 6.1 which simply refers to the return of "unspent monies". The time period for repayment is currently left blank, but should mirror the time period in Sched 1 para 4.1.

Para 6

Default approval provisions are rarely acceptable. The dispute resolution provision at clause 8 should be engaged to reach a decision. The s.106 obligations that require approval/consent from the Councils contain key environmental mitigation, and it is important that there is sufficient scrutiny to ensure that the conclusions of the environmental statement are being achieved. The wording should be revised to read:

"... and in the event of the relevant Council failing to respond within the relevant decision period (or longer period as agreed) that then SZC Co may utilise Clause (Resolution of Disputes) to obtain a decision in relation to the relevant matter proceed with the Project on the basis that such matter, scheme or measure has been approved by the relevant Council.

Schedule 8 - Heritage

Para 1.1

The HHE's evidence is that there is harm to the setting of a very considerable number of designated and non-designated heritage assets due to the quantum, type and duration of construction traffic that will pass these assets during the construction period on the identified HGV and AIL construction routes both pre and post the construction of the SLR and TVB. It is likely to be impractical to provide individual mitigation for each of these assets, (although in some instances additional screening or noise attenuation measures may be realistic), however it is possible to provide compensation for the heritage harm. The HHE's case is that a Heritage Fund should be established from which monies can be drawn down for identified and approved heritage projects that will benefit the heritage assets or historic settlements affected by the Project's construction traffic, and compensate for the effect of construction traffic, and heritage harm.

A definition should be inserted as follows:

"Heritage Mitigation Contribution" means the sum of $\mathfrak{L}[\cdot]$ to be paid and applied in accordance with paragraph 4;

Schedule 14 includes a "Sizewell C Community Fund" (the **Fund**) and provides for the administration of the Fund. The quantum is unknown. The HHE suggest that the "Heritage Mitigation Contribution" forms a ring-fenced pot within that wider Fund, provided that the objects of the "Suffolk Community Foundation" (**SCF**), who administer the Fund, are wide enough to cover the objects of the Heritage Mitigation Contribution. There is no visibility on the purposes of the SCF charity in

the s.106. This will need to be checked. The HHE reserve the right to provide alternative drafting (to para 4 below) if the SCF's purposes are not sufficiently wide.

The amount of the Heritage Mitigation Contribution is to be determined by the ExA or agreed with SZC Co. The HHE reserve the right to suggest an appropriate figure.

Paragraph 4 should be worded as follows:

"4. HERITAGE MITIGATION CONTRIBUTION

4.1 SZC Co shall pay the Heritage Mitigation Contribution to the Suffolk Community Foundation on or before Commencement; such amount is to be applied by Suffolk Community Foundation in accordance with the terms of the Deed of Transfer and relevant Administration Agreement for the purpose of mitigating the effects on heritage assets from construction traffic associated with the Project.

4.2 Paragraph 2.2 of Schedule 14 shall apply to the Heritage Mitigation Contribution, and reference therein to the "first instalment of the Sizewell C Community Fund" shall instead be taken to be a reference to the "Heritage Mitigation Contribution" and reference therein to paragraph 2.3.1 shall be taken to be a reference to paragraph 4.1 above. The following words in paragraph 2.2 of Schedule 14 are not relevant to the Heritage Mitigation Contribution and should be ignored in relation to the Heritage Mitigation Contribution "Thereafter SZC Co shall enter into a Deed of Transfer and (if necessary) an Administration Agreement in respect of each subsequent instalment of the Sizewell C Community Fund to be paid by SZC Co to the Suffolk Community Foundation pursuant to paragraph 2.3."

4.3 Paragraphs 2.4 to 2.10 of Schedule 14 shall apply to the Heritage Mitigation Contribution, save that paragraphs 2.5.6, 2.5.8, 2.5.10, and the post-script following paragraph 2.5.10 shall not apply. The maximum liability sum in paragraph 2.10 shall be deemed to include the Heritage Mitigation Contribution."

Schedule 9 - In	Schedule 9 – Implementation Plan				
Para 1	The "Key Environmental Mitigation" refers to the "Park and Rides" (sic should be Park and Ride Sites) and "Yoxford Roundabout". The latter is not a defined term, and the former just refers to land edged red on a plan annexed to the deed. However, it is not clear from the s.106 drafting that the works to deliver these facilities will include the necessary mitigations for these facilities themselves. Schedule 9 just relates to delivery of the facilities as mitigation for the Main Site and nothing to do with their management or operation. See the HHE's amends to the DCO and Requirements that ensure the necessary mitigations for these facilities are delivered, and that these are managed and operated so as to minimise environmental harm.				
Para 2.1	SZC Co should use "best endeavours", not "reasonable endeavours" to carry out and complete "Key Environmental Mitigation" otherwise the LPA can have no confidence that the assessed effects of the environmental statement will be achieved. The wording should be revised to read: "SZC Co shall use reasonable best endeavours to carry out and complete the Key Environmental Mitigation in accordance with the Implementation Plan."				

Schedule 11 - Natural Environment

Para 1.1	It is unclear what is to be covered in the "Terrestrial Ecology Monitoring and Mitigation Plan" (TEMMP), and whether this covers the Associated Developments or not. The HHE submit that it should due to the presence of sensitive habitats adjacent to the NPR and YR in particular.
	Footnote 29 on page 73 states "The scope of the Environment Review Group's role is subject to ongoing discussions with stakeholders in relation to the terrestrial ecology plans in development. Further details are intended to be included at Deadline 3."
	The HHE reserves its position to comment further when the scope of the TEMMP becomes clear.
Para 11	Para 11.4.1 provides that the remit of the Ecology Working Group (EWG) is to "review monitoring undertaken in accordance with the TEMMP".
	There are no references in para 11 to the EWG having any overview or involvement in the Associated Development sites. The EWG's scope should cover ecological overview of these sites. This could come through the TEMMP (see row above) or be included by direct reference in para 11.

Schedule 16 –	Transport
Para 1.1	The HHE have highlighted safety concerns in relation to the Darsham Level Crossing and its already high risk rating¹²²; the +10.3% increase in HGV construction traffic travelling through the crossing raises what TPA describes as a "fundamental highway safety issue". The TA Addendum acknowledges that the increased use of trains as part of SZC Co's revised transport strategy may require "Network Rail to undertake improvements to level crossings on the East Suffolk line, in line with their duties as infrastructure manager, to mitigate the risk to level crossing users arising from more frequent services" (emphasis added). The HHE suggest mitigation measures / improvements to Darsham and Middleton level crossings may be required, once a proper assessment has been undertaken. The terms of reference of the Community Safety Working Group do not obviously include recommending upgrades to level crossings if there are safety concerns, nor does there obviously appear to be a fund from which monies could be drawn down to make necessary safety improvements if required. The HHE suggests that a new definition is added: "The Level Crossings Contribution" means the cost of designing and implementing improvements to level crossings on the East Suffolk Line affected by the Project including but not limited to the Darsham and Middleton level crossings up to a maximum cost of £[•] (if required), to be used by Suffolk County Council (in consultation with Network Rail) for upgrades or improvements to the level crossings:"
Para 4.1	The HHE suggests the addition of: "4.1.5 provide a review of the level crossings on the East Suffolk Line affected by the Project including but not limited to the Darsham and Middleton level crossings
	(following consultation with Network Rail), with the report to include recommendations for any upgrades or improvements to the level crossings."

 $^{^{122}}$ See Paragraph 2.5(d) of the HHE'S Written Representation. 123 Paragraph 4.2.6 of the TA Addendum.

Para 9	The HHE suggests the addition of a new para 9:
	"LEVEL CROSSING CONTRIBUTION
	SZC Co will pay the Level Crossing Contribution to Suffolk County Council within 20 Working Days of any report presented to the Community Safety Working Group pursuant to paragraph 4.1.5 above that recommends any upgrades to the level crossings."

Appendix 1 Credentials

1 TPA Capability Statement

- 1.1 Founded in 1997 and with professionally qualified staff in offices in Bristol, Cambridge, London, Manchester, Oxford, and Welwyn Garden City, Transport Planning Associates provides consultancy services to private and public sector organisations on the transport infrastructure and services issues arising from the development of land for a variety of uses, and on strategic transport planning, sustainable travel planning, and the design and specification of new and improved transport infrastructure.
- 1.2 We are currently, or have recently been, active on a broad portfolio of projects from single dwellings and constrained urban developments to mixed-use sustainable urban extensions and strategic rail freight interchanges requiring extensive multi-modal micro-simulation modelling and the implementation of wide-ranging packages of mitigation, including improvements to existing transport infrastructure, new grade separated junctions on the Strategic Road Network, new rail crossings, and the provision of new bus services, travel plans and personalised travel planning.
- 1.3 We work with local planning and highway authorities, strategic highway authorities, stakeholders and our clients' multi-disciplinary project teams to deliver forward looking transport solutions that help to integrate new development with existing communities.
- 1.4 Our directors have given evidence to Select Committees of both houses of Parliament, public inquiries and hearings held in respect of planning appeals, the High Court, examining panels in respect of applications for Development Consent Orders, and examinations in public in respect of development plan documents.

2 Ecology Solutions Capability Statement

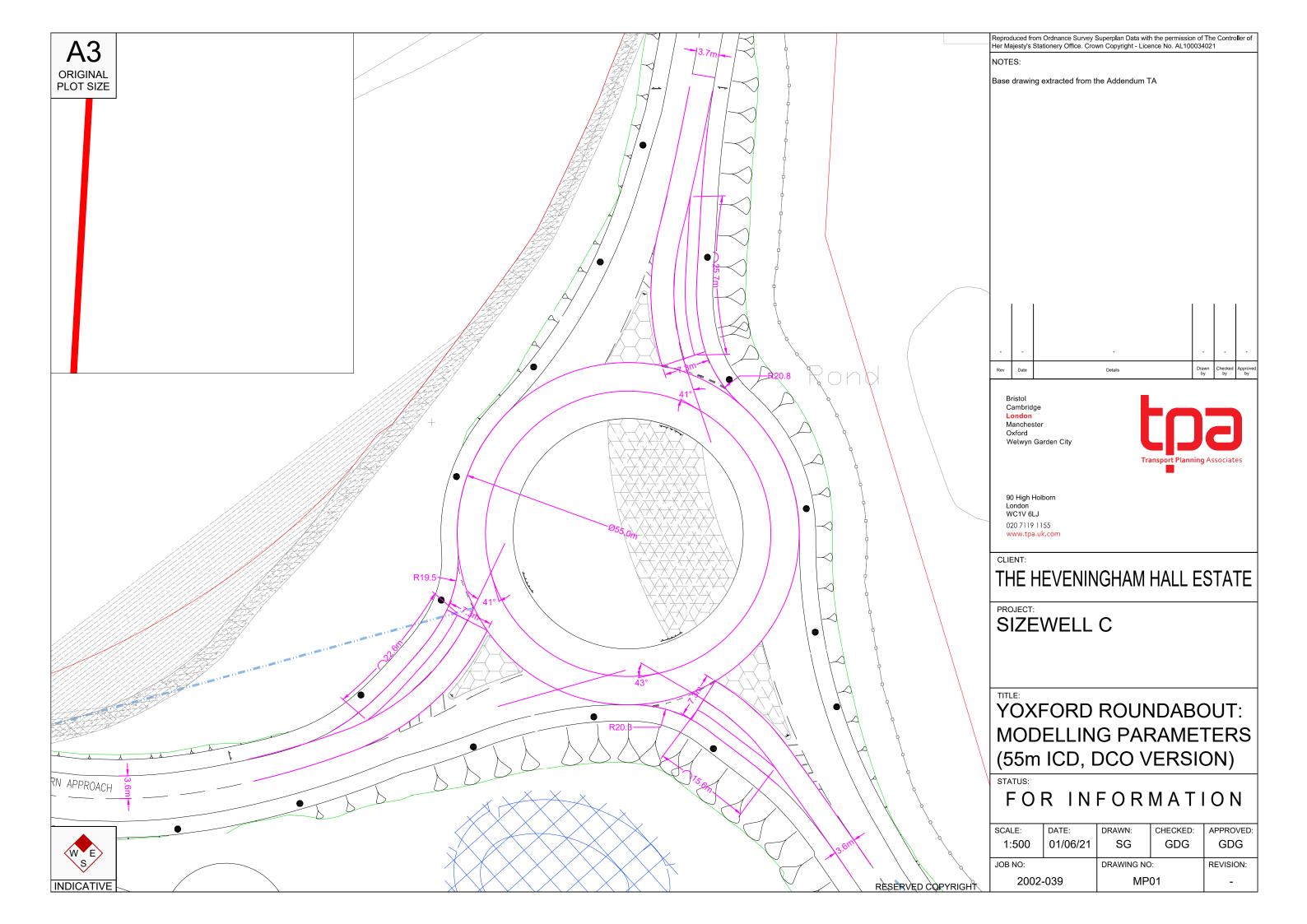
2.1 Simon Taber BSc (Hons) MSc MCIEEM is a Director at Ecology Solutions Limited, the leading ecological consultancy practice providing specialist advice and services. Simon has extensive experience of all areas of ecological survey and assessment work, with particular expertise in relation to ecological legislation, guidance and case law, notably the Habitats Regulations and associated guidance from Europe. Simon has been involved with numerous planning inquiries, including giving evidence as an Expert Witness and providing expert guidance to Counsel. His work regularly involves the development and delivery of mitigation strategies in respect of designated sites, habitats and protected species throughout the UK. He has extensive experience of negotiating with statutory authorities and key consultees to secure robust and deliverable mitigation, whilst ensuring that the key interests of the client are safeguarded throughout. In terms of technical skills, Simon has extensive experience of Phase 1 and protected species survey and mitigation in relation to development. Simon holds Natural England Class Licences in respect of Great Crested Newts, bats and Dormice, and has devised and implemented complex mitigation solutions for a wide range of protected species.

3 Savills Capability Statement

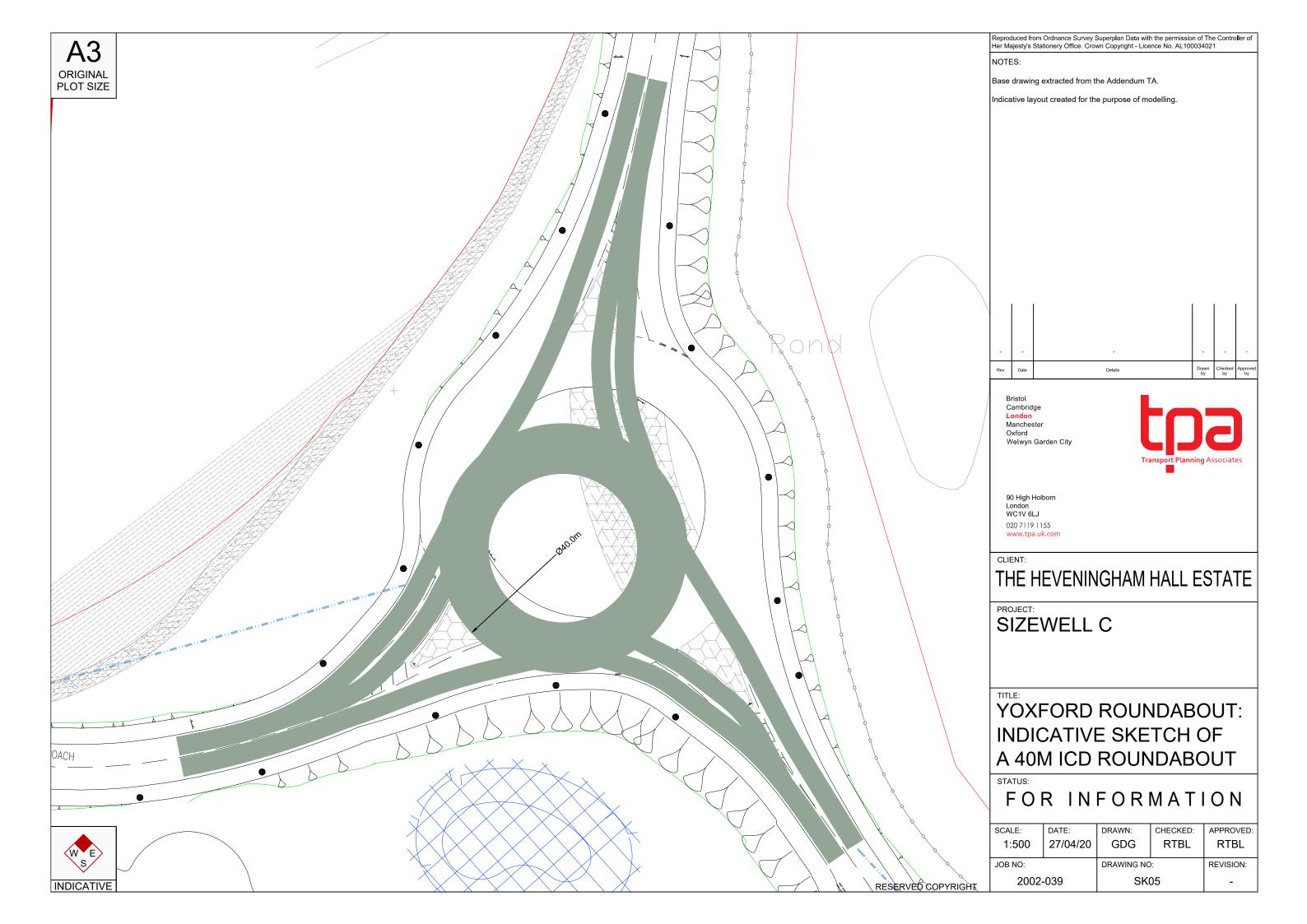
- 3.1 This report has been prepared by Sean McEntee and Jason Clemons. Sean is a Senior Consultant in the Savills Heritage and Townscape team. He holds the degrees of Bachelor of Architectural Studies and Master of Arts (with distinction) in Urban Conservation. He is also a PhD candidate in architectural history at the University of Edinburgh.
- 3.2 Jason is Head of Savills Heritage and Townscape. He holds a first degree (Bachelor of Arts) in Planning Studies and a postgraduate degree (Master of Arts) in Urban Design from the Oxford Polytechnic, and a postgraduate degree (Master of Science) in Historic Building Conservation from Oxford Brookes University. He has over twenty-five years of professional experience in the field of planning and conservation gained in the public and private sectors, and has appeared as an expert witness at a number of public inquiries. He has been a full Member of the Royal Town

Planning Institute since May 1994 and a founding and full Member of the Institute of Historic Building Conservation since 1997, having formerly been an active.

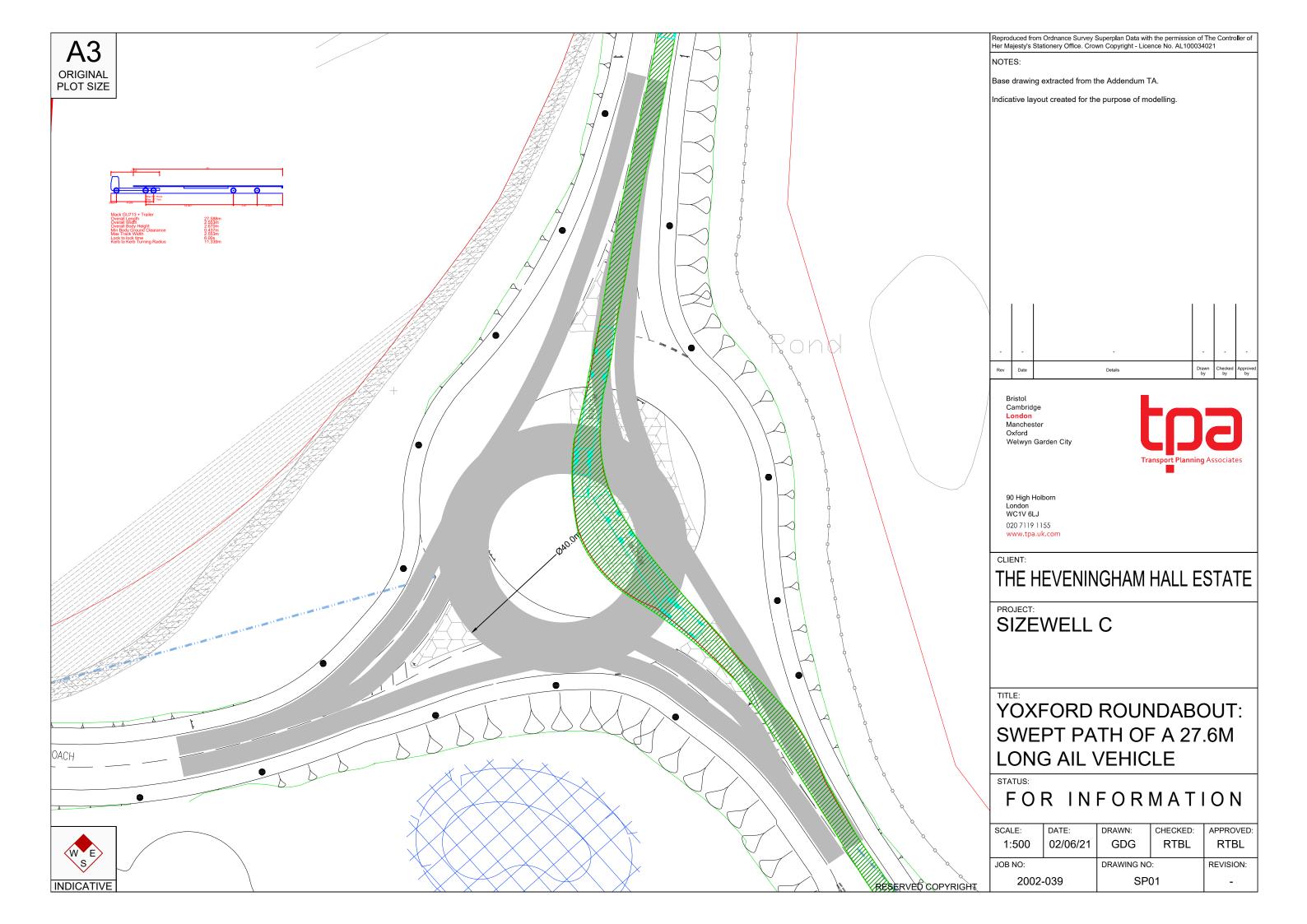
Appendix 2
Yoxford Roundabout: Modelling Parameters (55m ICD, DCO Version)



Appendix 3 Yoxford Roundabout: Indicative Sketch of a 40m ICD Roundabout



Appendix 4 Yoxford Roundabout: Swept Path of a 27.6m Long AlL Vehicle



Appendix 5
CIEEM (2019). Advice Note on the Lifespan of Ecological Reports and Surveys. April 2019

ADVICE NOTE

CIEEM

ON THE LIFESPAN OF ECOLOGICAL REPORTS & SURVEYS

APRIL 2019

It is important that planning decisions are based on up-to-date ecological reports and survey data. However, it is difficult to set a specific timeframe over which reports or survey data should be considered valid, as this will vary in different circumstances. In some cases there will be specific guidance on this (such as for the age of data which may be used to support an EPS licence application). In circumstances where such advice does not already exist, CIEEM provides the general advice set out below.

For some projects the time taken between commencing the scoping or design and submitting a planning application can be several years, and this can result in the early ecology surveys becoming out-of-date (based on the advice set out below); this can lead to additional costs for developers associated with updating survey data. Nevertheless, there are considerable advantages associated with undertaking surveys early during the scoping or design phases of a project.

Ecological consultants should give careful consideration to which, if any, surveys need to be updated; design their data collection in a way which maximises the benefits of early surveys whilst minimising the costs to developers; and provide clarity on the likely lifespan of surveys in their reports.

AGE OF DATA

REPORT / SURVEY VALIDITY

Less than 12 months

Likely to be valid in most cases.

12-18 months

Likely to be valid in most cases with the following exceptions:

- Where a site may offer existing or new features which could be utilised by a mobile species within a short timeframe (see scenario 1 example);
- Where a mobile species is present on site or in the wider area, and can create new features of relevance to the assessment (see scenario 2 example);
- Where country-specific or species-specific guidance dictates otherwise.

Report authors should highlight where they consider it likely to be necessary to update surveys within a timeframe of less than 18 months.

18 months to 3 years

A professional ecologist will need to undertake a site visit and may also need to update desk study information (effectively updating the Preliminary Ecological Appraisal) and then review the validity of the report, based on the factors listed below. Some or all of the other ecological surveys may need to be updated. The professional ecologist will need to issue a clear statement, with appropriate justification, on:

- The validity of the report;
- Which, if any, of the surveys need to be updated; and
- The appropriate scope, timing and methods for the update survey(s).

The likelihood of surveys needing to be updated increases with time, and is greater for mobile species or in circumstances where the habitat or its management has changed significantly since the surveys were undertaken. Factors to be considered include (but are not limited to):

- Whether the site supports, or may support, a mobile species which could have moved on to site, or changed its distribution within a site (see scenario 1&2 examples);
- Whether there have been significant changes to the habitats present (and/or the ecological conditions/functions/ecosystem functioning upon which they are dependent) since the surveys were undertaken, including through changes to site management (see scenario 3 example);
- Whether the local distribution of a species in the wider area around a site has changed (or knowledge of it increased), increasing the likelihood of its presence (see scenario 4 example).

More than 3 years

The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated (subject to an assessment by a professional ecologist, as described above).





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EXAMPLE SCENARIOS

1

- Trees or buildings on site have been surveyed for evidence of bat roosts and none were found; new roosts may be present, and trees or buildings may have developed new features which were not previously present. An update bat roost survey is likely to be required.
- One or more potential otter resting sites have been identified, although there was no evidence of use at the time of the survey; such features may have been used by otters during the intervening period. An update otter survey is likely to be required.

2

 A badger survey confirmed the presence of badgers on site; new setts may have been excavated within the site. An update badger survey is likely to be required.

3

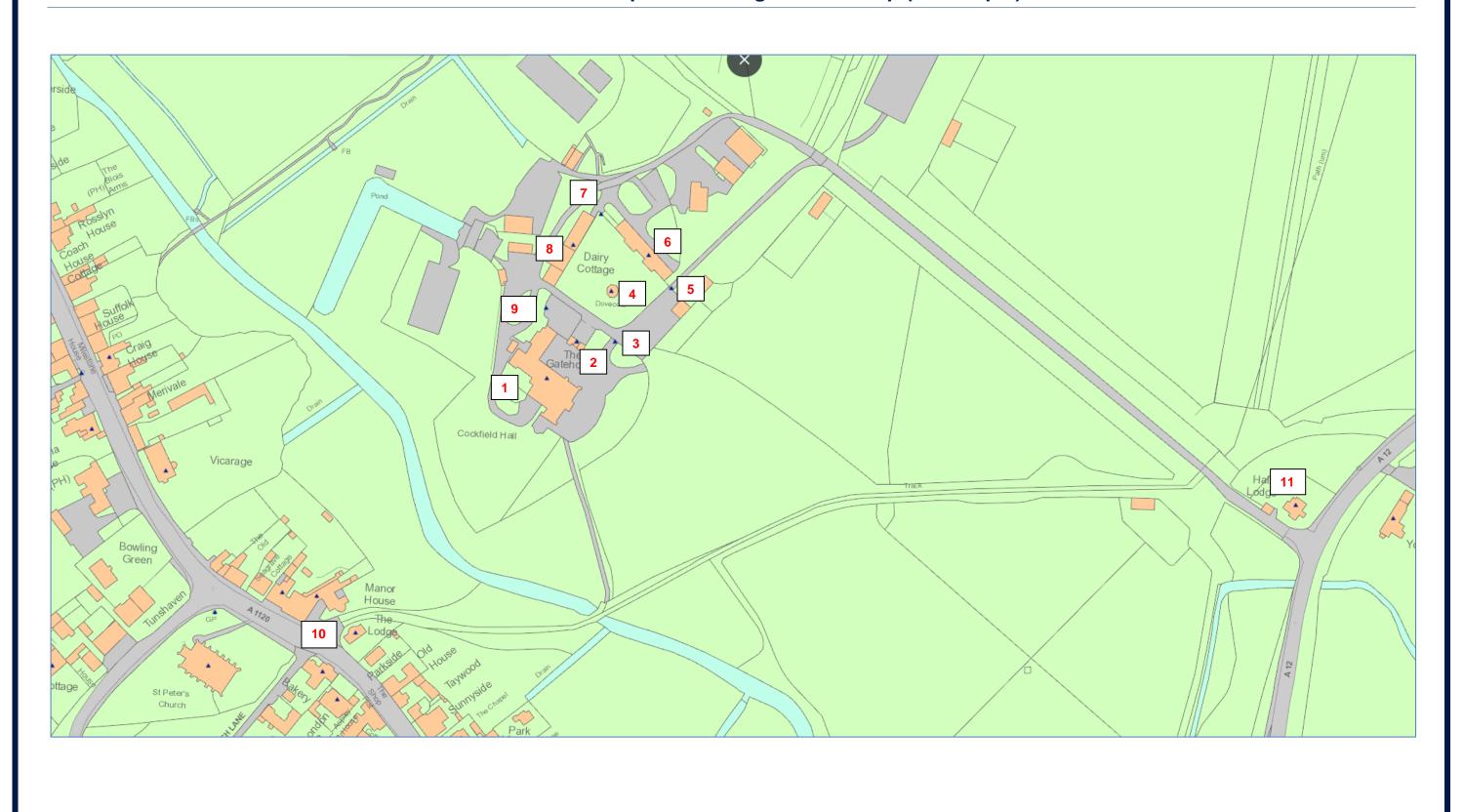
• An area of grassland was heavily grazed by cattle at the time of the original survey and was considered to be unsuitable for reptiles, although slow-worms were known to be present in the wider area; grazing has since ceased and the grassland has been cut once annually, which has encouraged the development of a tussocky sward which provides suitable habitat for slow-worms. A reptile survey is now likely to be required

4

 A water vole survey confirmed their absence from the site but identified them as present in the wider area surrounding it; a recovery project is underway in the local area through a mink control programme, which is encouraging the spread of water voles.

Appendix 6
A larger version of Fig 14 and a description of the Cockfield Hall Complex heritage assets 1-11

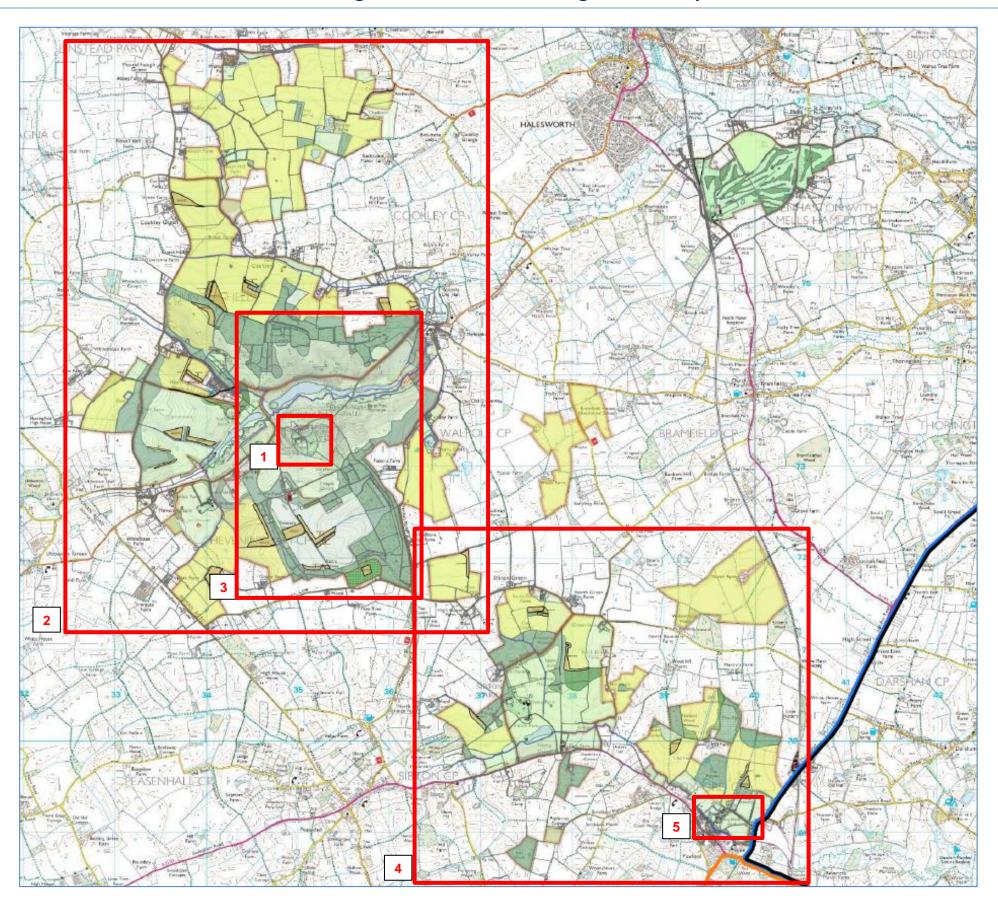
Cockfield Hall Complex – Heritage Assets Map (sub map 4)

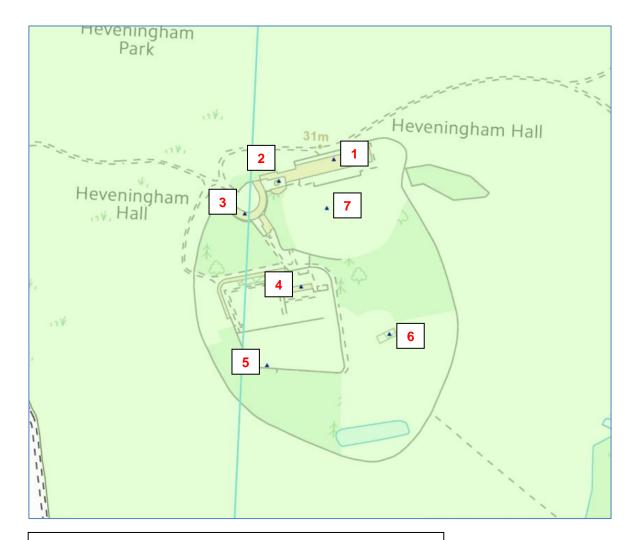


Ref. No. on map	Asset name	Historic England List UID	Description	Grade	Date listed
1	Cockfield Hall	1030621	Former Manor House. North Wing mid-16 th century, remainder of house rebuilt circa 1613, main range altered late 18 th century and early-mid 19 th century including addition of third floor.	I	25 Oct 1951
2	The Gatehouse	1300688	Mid-16 th century gatehouse to Cockfield Hall. Two storeys, symmetrical façade to north with a ground floor window to each side of entrance arch. Interior has original panelling and fireplace.	*	25 Oct 1951
3	Gateway 20m WNW of Gatehouse (including adjoining walling)	1030623	Early-mid 19 th century red brick and plaintiles gateway in Neo Tudor style. Three-centre moulded entrance arch with hoodmould over. Moulded brick pinnacles and crowstepped gables.	II	25 Oct 1951
4	Dovecote	1030622	Mid-19 th century dovecote, red brick and plaintiles. Octagonal with brick buttresses. Pinnacles and a crenellated parapet.	II	25 Oct 1951
5	Gateway immediately south east of coach house and barn, (including adjoining wall)	1377235	Mid-16 th century gateway, upper parts restored. Red brick with traces of plasterwork, plaintiles. Three-centre moulded entrance arch with square hood mould over. Moulded brick pinnacles and crowstepped gables.	II	25 Oct 1951
6	Coach house and barn	1200577	Early-mid 19 th century coach house and barn, red brick and plaintiles. Neo Tudor style. A single long range of 36m with symmetrical south façade towards Cockfield Hall. Moulded brick pinnacles, crowstepped gables and crenelated parapet.	II	25 Oct 1951
7	Gateway immediately north- west of coach house and barn, including adjoining walling	1200607	Early-mid 19 th century red brick and plaintiles gateway in Neo Tudor style. Three-centre moulded entrance arch with hoodmould over. Moulded brick pinnacles and crowstepped gables.	II	25 Oct 1951
8	Dairy range	1377274	Part former stabling, part residential (dairy cottage), part general storage including game larder. Probably 16 th century, with later alteration. Timber framed, mostly plastered except east façade to courtyard. A single long range of 40m.	II	25 Oct 1951
9	Walling to north and west of Gatehouse	1200596	Walling enclosing an irregular shapped garden area between the north wing of Cockfield Hall and the Gatehouse. Mostly 16 th century.	II	25 Oct 1951
10	The Lodge	1030591	Lodge to Cockfield Hall, early 19 th century. One of a pair, sympathetic style to Cockfield Hall and adjacent GII mid-19 th century Manor House (List UID 1200712) to which other lodge is attached.	II	27 Jul 1984
11	Cockfield Hall Lodge	1200647	Early 19th century Lodge to Cockfield Hall. Roughcast render, thatched roof in Cottage Ornee style.	II	27 Jul 1984

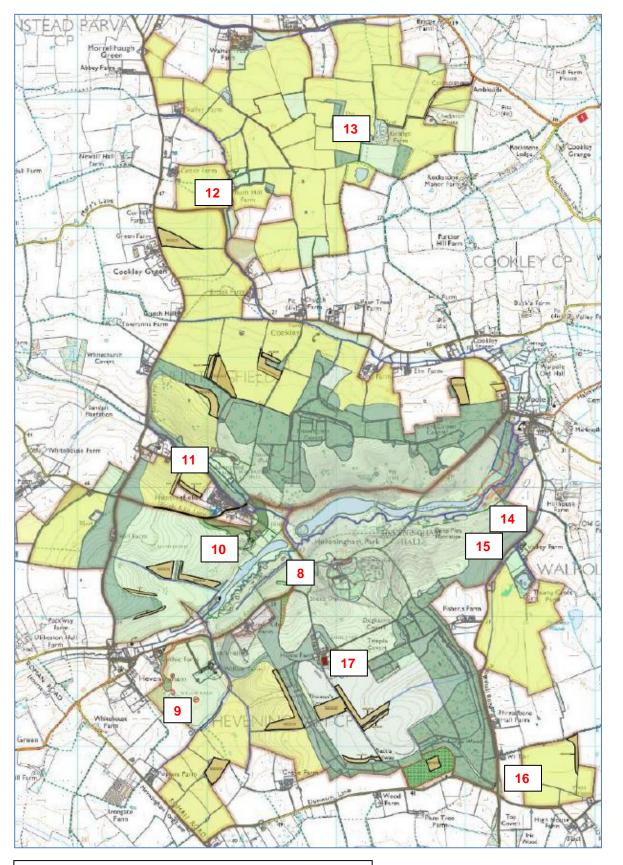
Appendix 7
A summary of the historical development of each of relevant heritage assets

Heveningham Hall Estate – Heritage Assets Maps

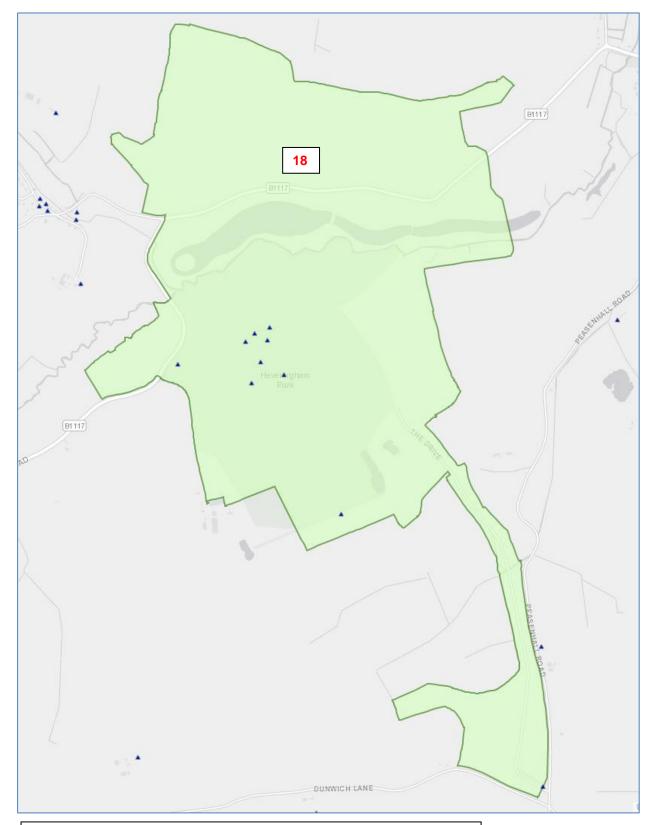




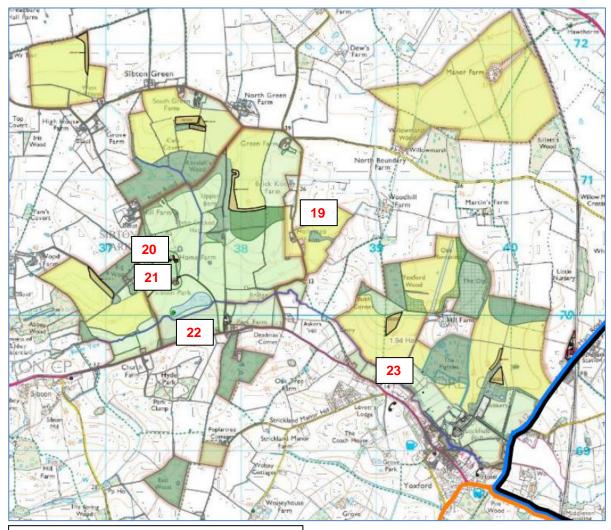
1. Heveningham Hall immediate surrounds sub-map



2. Heveningham Hall wider surrounds sub-map



3. Heveningham Hall Grade II * Registered Park and Garden



4. Sibton Park and Yoxford sub-map



5. Cockfield Hall complex sub-map (covered in separate document)

Ref. No. on map	Asset name	Historic England List UID	Description	Grade	Date listed
1	Heveningham Hall	1183040	Mansion. 1778-80, incorporating original early 18 th century house, by Sir Robert Taylor for Sir Gerald Vanneck. Interiors 1781-4 by James Wyatt.	I	25 Oct 1951
2	Game larder to Heveningham Hall	1183048	Mid to late 19 th century game larder. Yellow brick, stone banding and slated roof. Hexagonal on plan.	II	19 Mar 1985
3	Heveningham Hall Stables	1377318	Stable block to Heveningham Hall. Late 18 th century with mid-20 th century alterations. Attributed to Capability Brown. Single storey, red brick with glazed pantile roof. Horseshoe-shape in plan.	II	25 Oct 1951
4	Store in kitchen garden at Heveningham Hall	1030470	Early 19 th century garden store in north-east corner of kitchen garden. Colour-washed red-brick with rendered south elevation. Single storey.	II	25 Sep 1983
5	Walls of kitchen garden at Heveningham Hall	1183055	Walled kitchen garden some 40m west of the Orangery. Red brick. The walls enclose an area of 1.166 hectares, and are reputedly built from bricks salvaged from house demolished in 1703. Divided east-west by early 19 th century serpentine wall approx. 90m in length.	II	25 Sep 1983
6	Heveningham Hall Orangery	1377319	Orangery, circa 1790, by James Wyatt. Brick and stucco, lined in imitation ashlar except on façade. Single storey with symmetrical 9 bay façade, Bays divided by composite pilasters, semi-circular portico carried on four detached and 2 three-quarter engaged columns.	1	25 Oct 1951
7	Garden terrace walling immediately south of Heveningham Hall	1030469	A stretch of walling enclosing a formal garden area immediately to the south of Heveningham Hall, dated 1879. White brick with some stucco work.	II	19 Mar 1985
8	Icehouse 350m west-south-west of Heveningham Hall	1030471	Early 19 th century icehouse with 20 th century repairs. Brick dome of 3m diameter. Half buried with thatch roof.	II	19 Mar 1985
9	Willow Farmhouse	1030468	Farmhouse – late 16 th / early 17 th century. 20 th century additions.	Ш	25 Oct 1951
10	Valley Farmhouse	1183189	Farmhouse – early 17 th century main range to rear with (likely) 16 th century cross-wing. Front range added 1770. Timber framed and plastered.	II	19 Mar 1985
11	Huntingfield Hall	1183111	Farmhouse, on the site of the manor house. Late 18 th century, possibly by James Wyatt. Two storeys, red brick, pantiled roof. Symmetrical façade in Gothick style, end bays set forward as turrets.	11*	25 Oct 1951
12	Bush Hill Farmhouse	1030492	Farmhouse 16 th /17 th century, in two sections of different height, the lower section probably the earlier. Timber framed and plastered, some colour-washed brick casing, pantiled roof.	II	19 Mar 1985

13*	Chediston Grange	1377323	Farmhouse, now divided into two dwellings. 17 th century core, considerably altered circa 1860. Timber framed core, entirely encased in mid-19 th century pale yellow brick, plaintiled roof with crest tiles.	II	25 Oct 1951
			*Scheduled Monument of moated site also occupies this site. List UID 1007678, first listed 11 May 1994. The Chediston Grange moated site is recorded as surviving well and retaining valuable archaeological information.		
14	The Old Thatch	1030449	Cottage – 16 th century. Timber framed and plastered, half-hipped thatched roof. Single storey and attic, three cell form.	II	19 Mar 1985
15	Valley Farmhouse	1183308	Farmhouse. 16 th /17 th century, in two or three phases. L shape plan with cross wing set forward to the left hand side. Timber framed and plastered, plaintiled roof. Two storeys and attic. Three cell main range.	II	19 Mar 1985
16	Heveningham Hall Gate Lodges	1030800	Gateway to Heveningham Hall, with flanking pair of gate lodges. Dated 1787 on Coade Stone embellishment, probably by James Wyatt. Ashlar gate piers, wrought iron gate with matching railings. Lodges in stucco on brick, pyramidal roof, single storey square plan.	*	07 Dec 1966
17	Temple 900m south-south-east of Heveningham Hall	1284243	Small garden building in the form of a covered seat, designed as a landscape feature. Late 18 th century, probably by James Wyatt. Two ionic columns and two corner pilasters support an enriched pediment.	II*	24 Jul 1970
18	Heveningham Hall Registered Park and Garden	1000494	Late 18 th century pleasure ground and landscape park for which Lancelot Brown prepared plans in 1782 and James Wyatt designed garden buildings.	II*	01 Jun 1984
19	Holly Tree Farmhouse	1377259	Farmhouse, early 17 th century main range with 16 th century (or possibly earlier) wing to right hand side. Timber framed, mainly cement render. Two storeys and attic.	II	27 Jul 1984
20	Sibton Park Stables	1030798	Stables to Sibton park, circa 1830. Red brick with white brick facing to the courtyard and the gable ends, roof part slated, part pantiled. Single storey, main block with flanking wings enclosing a courtyard, with walling and cast iron gates on the fourth side.	II	25 Oct 1951
21	Sibton Park	1198019	Large country house, 1827. Stuccon on brick, lined in imitation of ashlar, slated roof. Two storeys and attics. Symmetrical three-bay entrance façade flanked by paired giant pilasters with further pairs of pilasters each side of the entrance bay. Massive two-storey semi-circular portico on four unfluted giant ionic columns, entablature continued along the main façade.	*	25 Oct 1951
22	Park Lodge	1198140	Lodge to Sibton Park, circa 1830. White brick, roof of fishscale slates. Single storey, picturesque style. Three-light casement windows with intersecting tracery, flat brick arches with hood moulds over.	II	21 Dec 1984
23	Keepers Cottage Cockfield Hall	1030624	Gamekeeper's lodge to Cockfield Hall, circa 1835. Red brick, thatched roof, single storey. Cottage Ornee style.	II	27 Jul 1984

Appendix 8 Heveningham Hall Estate Heritage Assets Map

Application by NNB Generation Company (SZC) Limited for an Order granting Development Consent for The Sizewell C Project

Representations to The Sizewell C Project (the DCO) on Heritage Matters

CHAPTER 3: The Historic Environment, Heritage Assets and their Significance



On behalf of the Heveningham Hall Estate



Project: The application by NNB Generation Company (SZC) Limited (the Applicant) for an Order granting Development Consent for The Sizewell C Project (the DCO).

Client: The Heveningham Hall Estate

Job Number:

File Origin: Z:\London Jobs\Heritage team jobs\2. National\Suffolk\Sizewell C\Reports

Document Checking:

Prepared by: Sean McEntee, Signed:

Senior Heritage Consultant,

Heritage and Townscape

Checked by: Jason Clemons, IHBC, MRTPI Signed:

Director, Head of Heritage and Townscape

Heritage and Townscape

3.0 The Historic Environment, Heritage Assets and their Significance

3.1 Introduction

- 3.1.1 The following section provides a brief summary of the historical development and significance of each of the heritage assets identified above and in the gazetteer of assets in Appendix 4. These assets are considered individually or as a group, with research compiled from sources as listed in the References and drawing on previous studies where they exist.
- 3.1.2 Understanding the history and context of the relevant heritage assets is important to establish their significance, as well as the contribution that their setting makes to that significance. As explained above, Historic England guidance on the setting of heritage assets advises that while this matter is primarily a visual assessment, there are other factors, such as historical associations and relationships that define settings and contribute to significance. This section assesses the buildings collectively in relation to the general Principles of Selection for Listed Buildings, Historic England guidance; and their setting (as outlined in Section 2.6).
- 3.1.3 The listed buildings which are assessed for their significance and setting are set-out below, with the Yoxford Conservation Area also assessed within this section.
- 3.1.4 Baseline conditions were established through consideration of the historic environment within the vicinity of the Site and a desk-based review of existing sources of publicly accessible primary and synthesised information, comprising:
 - National heritage datasets including The National Heritage List for England (NHLE),
 - Images of England, and Britain from Above;
 - Heritage Gateway, accessed online 26 February 2021;
 - Yoxford Conservation Area Appraisal (adopted February 2019),
 - Historic manuscripts and maps available online.

3.1.5 All of the identified heritage assets, the area of proposed works referred to above and their surrounds were visited during May 2021 to inform the understanding of the assets and their setting.

3.2 Heveningham Hall Estate

History and development

- 3.2.1 The Heveningham family held the manor of Heveningham from the early years of the 13th century, and Saxton's 1575 map records the park in the current location.
- 3.2.2 In 1653 William Heveningham built a new manor house on the site of the present Hall. The estate remained within the family until circa 1700 when it was purchased by John Bence, who rebuilt the old manor house in 1714 and laid out a formal wilderness garden with allées and vistas. Bence died in 1719, the land then passing through the hands of George Dashwood and Joseph Damer before being purchased by Sir Joshua Vanneck, the first Baron Huntingfield in 1752.
- 3.2.3 Sir Joshua acquired further land, including Huntingfield park to the north-west, which was incorporated in the Heveningham parkland. Sir Joshua's son Gerald inherited the estate in 1777 and immediately commissioned Sir Robert Taylor to rebuild the Hall, followed by James Wyatt three years later to complete the east facade and to undertake the interiors. Lancelot Brown (1716-83) produced plans to embellish the landscape park in 1782. Although not all of Brown's proposals were implemented he did, in addition to the park, provide plans for the design of the stable block, the pleasure grounds and part of the kitchen garden.
- 3.2.4 During the same period Wyatt contributed the Orangery, the Temple and the south lodges. During the middle years of the 19th century, the garden on the south front was remodelled in contemporary style but the Hall and park remained unaltered.
- 3.2.5 During the first half of the 20th century the Hall fell into disrepair, made worse by a fire in 1947. Following her inheritance of the estate in 1965 Margite Wheeler offered the Hall to the nation. It was purchased in 1970 and managed by the National Trust for the DoE until sold to a private owner in 1981. A second fire in 1984 gutted the east wing and following the owner's death in 1991 the estate

was left in the hands of the receiver. After years of uncertainty the Hall and historic park were purchased by private owners and a programme of extensive restoration has been underway, including the completion of many of Brown's proposals and the addition of a new south garden to replace the formal Victorian terraces.

Heritage assets located within the Estate

3.2.6 For ease of reference in this study, assets comprising the Heveningham Hall complex have been considered together with principal points of interest highlighted as required. The assets are mapped and listed within a gazetteer at Appendix 4.

Significance

- 3.2.7 Architectural and artistic interest: Heveningham Hall (listed grade I) sits west of centre of the registered parkland area, just below the highest point of the site, with fine views from the north front over the Blyth valley. It is an imposing two-and-a-half-storey mansion in the Palladian style. The main, north front is composed of a central block with arcaded ground floor and eight giant Corinthian columns above, topped by a sculpted parapet. Flanking wings to east and west also have arcaded ground floors. Each consists of a five-bay recessed section, finished with pedimented ends decorated with four giant columns each. The whole is constructed of brick and stucco with Coade stone details and a lead roof. The Hall was designed and built by Sir Robert Taylor in 1778, incorporating at its core part of the earlier house dating from 1714. The interior of the Hall was completed by James Wyatt from 1780 onwards.
- 3.2.8 The central entrance hall has a tunnel- vaulted ceiling enriched with stucco decoration and a screen of 4 scagliola columns at each end and scagliola pilasters against the walls; this room is considered to be the finest surviving example of Wyatt's interior design. The main state rooms are to the left of the hall: the dining room (restored after a fire in 1949) and saloon have very fine Adam-type decoration both in stucco and in painted relief (by Biagio Rebecca); Etruscan room also with painted decoration. Well staircase behind hall with painted cast iron balustrade incorporating lead medallions and mahogany handrail. Immediately to the right of the hall is the morning room with a plainer barrel-shaped ceiling and the print room decorated with 18th century prints. The east wing, containing the

library and drawing room, was gutted by fire in June 1984. The interiors have been restored sensitively under the present ownership, evidencing a strong conservation led approach.

- 3.2.9 Immediately to the west of the Hall, in an enclosed courtyard, sits the Game Larder (listed grade II), a mid-18th century hexagonal brick and slate building. The horseshoe-shape stable courtyard, also mid-18th century with mid-20th century alterations, lies west of this, linked to the Hall by single-storey working ranges added during the early to mid-20th century. The stables (listed grade II) are single-storey, red-brick buildings with glazed pantile roofs, to the designs of Capability Brown. The entrance is from the north and archways lead east to the Game Larder and Hall and north towards the kitchen garden. The eastern arch has a clock face and the northern arch a sundial.
- 3.2.10 The kitchen garden lies within the pleasure grounds 100m south of the west corner of the Hall. The high, red-brick walls enclose an area of circa 1ha, divided into two compartments by a serpentine wall. A single-storey brick and rendered bothy (listed grade II) lies in the north-west corner. It has a pantile roof and fluted boarding along the gutter line. The pool, the basic cruciform path layout, the bothy and some of the glass ranges all date from the early to mid-18th century (shown as existing on Brown's survey drawing of the garden dated 1781). The outer walls (listed grade II) were built at the beginning of the 18th century for John Bence and the dividing serpentine wall added by the time Brown completed his survey. A range of storage buildings have been added to the outside of the north-west and west walls in the late 20th century.
- 3.2.11 The architectural interest of Heveningham Hall, as set out above, possesses a **very high** level of architectural interest, as too do the Orangery (Wyatt), stable buildings (Capability Brown) and other buildings listed separately in the gazetteer.
- 3.2.12 Given the range of 18th century elements that have been retained in an outstanding condition in many instances, and suitably restored where damaged by the building's two fires in the 20th century, Heveningham Hall possesses a **very high** degree of artistic interest. The Orangery, as a design executed under Wyatt's direction is also noted for its high level of artistic interest.
- 3.2.13 Historic interest: As demonstrated in the earlier narrative on the historic development of the

Heveningham Hall Estate, there is a great number of former owners, residents and architects which accord the property great associative historic interest, as well as the importance of the estate as a defining feature in the local history of the area. The historic interest is considered to be **very high**.

- 3.2.14 Archaeological interest: The archaeological potential of the site is considered to be moderate to high, based upon relevant HER.
- 3.2.15 Group value: The listed buildings forming the complex surrounding the main hall itself, as well as those in the wider surrounds of the Heveningham Hall Estate speak to the historic and functional relationship of the Estate, and this group value elevates the interest they have in their own right. The experience of the Estate is a truly dynamic one, and the relationship of the buildings to one another is an important factor in the experiential qualities of setting and significance of these heritage assets.
- 3.2.16 Setting: The parkland setting of The Heveningham Hall buildings contributes to the significance of the buildings, foremost as a designed element attributed to Capability Brown the foremost landscape designer of the Georgian period. The parkland and wider agricultural and woodland setting speaks to the original rural and bucolic surrounds in which the Hall would have originally been experienced.
- 3.2.17 Summary of significance: The significance of the buildings is derived from the special architectural and historic interest as outlined above, and the Grade I listing of the main Hall building is testament to the fact it is considered to meet the threshold for the highest possible grading for a listed building.

3.3 Cockfield Hall

History and development

- 3.3.1 Cockfield Hall takes its name from the Cokefeud Family, established there at the beginning of the 14th century, with the present Hall dating partly from the 16th century.
- The hall and estate were purchased from Sir John Fastolf by John Hopton (c.1405-1478), who in c. 1430 somewhat unexpectedly inherited various estates including that of Westwood (Blythburgh Lodge), near Walberswick in Suffolk, where he made his home.

- 3.3.3 His great-grandson Sir Arthur Hopton, who accompanied Henry VIII at the Field of the Cloth of Gold, is thought to have been the builder of Cockfield Hall in its Tudor brick form, including the part now forming the north wing, and the Gatehouse. This work is assumed to date to around 1520, as Sir Arthur was still principally resident in Blythburgh in 1524. King Henry VIII passed Cockfield Hall in his progress from Westminster to Norwich in summer of 1541.
- 3.3.4 Sir Arthur's son and successor Sir Owen Hopton married Anne, elder daughter and heir of Sir Edward Echyngham of Barsham, Suffolk. As Lieutenant of the Tower of London, from c. 1569, he was ordered in October 1567 by Queen Elizabeth to take into custody at Cockfield Lady Catherine Grey, sister of Lady Jane Grey and granddaughter of Mary Tudor. She died there a year later and was buried in the Cockfield Chapel in Yoxford Church. Sir Owen died in 1595, and his widow spent her last years at the home of her daughter Anne Pope, Countess of Downe, at Wroxton, Oxfordshire.
- 3.3.5 Arthur Hopton (died 1607), son of Sir Owen Hopton, sold the estate of Cockfield Hall in 1597 to Robert Brooke (died 1601), Sheriff of London 1590-91, whose grandfather Reginald Brooke had previously settled in Suffolk. His son Sir Robert Brooke (1572-1646) became Sheriff of Suffolk in 1614 and sat as MP for Dunwich in 1624, 1625 and 1628. For Sir Robert the elder, the main manor house was rebuilt around 1613, while preserving as its north wing part of the mansion built by Sir Arthur Hopton: and despite various alterations, rebuildings and repairs, Sir Robert Brooke's building remains part of the present Cockfield Hall.
- 3.3.6 Robert and Elizabeth Brooke resided at Cockfield Hall from 1630, and Sir Robert, a member of the parliamentarian Suffolk county committee during the English Civil War, died and was buried at Yoxford in 1646. He left his estate to his son (Sir) Robert (1637-1669), but it was partly tied up with a jointure to Elizabeth, Lady Brooke, who lived at Cockfield Hall until her death in 1683, when she also was buried at Yoxford church. The younger Sir Robert married Anne, daughter of Sir Henry Mildmay, and lived mainly at his residence in Wanstead, Essex, but sat as MP for Aldeburgh in 1660 and 1661-69.
- 3.3.7 Martha Brooke, daughter of the elder Sir Robert and Elizabeth, Lady Brooke, married Sir William Blois, but died in 1657. After Lady Brooke died in 1683, and her unmarried daughter Mary in 1693, Cockfield Hall passed to Martha's son, Sir Charles Blois, 1st Baronet, who took up residence at

Cockfield in 1686. From there on, the house remained in the ownership of the Blois family until 1997. The main part of the house had sash windows installed in the 18th century and in 1896 the Victorian Great Hall was created on the site of the original Tudor Hall in the Jacobean style.

3.3.8 The Estate is now incorporated with the Heveningham Hall Estate Wilderness Reserve offering rural holiday accommodation.

Heritage assets comprising the Cockfield Hall complex

3.3.9 For ease of reference in this study, assets comprising the Cockfield Hall complex have been considered together with principal points of interest highlighted as required. The assets are mapped and listed within a gazetteer at Appendix 4.

Significance

- 3.3.10 Architectural and artistic interest: The architecture of the main hall is typical of the period, but as there are limited surviving homes of this age and status across the country, the interest is elevated. The relationship between the circa 16th century elements of the main hall and gatehouse, and carried on to the wider arrangement of curtilage buildings (listed in their own right) creates a dynamic assemblage which is of great importance, the group value of which is an important consideration. Artistic interest is considered to be high. The architectural interest is considered to be **very high**.
- 3.3.11 Historic interest: As demonstrated in the earlier narrative on the historic development of the Cockfield Hall Estate, there is a great number of former owners and residents which accord the property great associative historic interest. The historic interest is considered to be **very high**.
- 3.3.12 Archaeological interest: The archaeological potential of the site is considered to be moderate to high, based upon relevant HER.
- 3.3.13 Group Value: The Principles of Selection defines this as 'the extent to which the exterior of the building contributes to the architectural or historic interest of any group of buildings of which it forms part'. This is an important consideration for the Cockfield Hall complex as there is a clear architectural unity between these buildings, as well as the historic and functional relationship they have. The group value

- elevates the special interest of The Cockfield Hall complex of buildings.
- 3.3.14 This group value is acknowledged in the Historic England list description.
- 3.3.15 Setting: The parkland setting of The Cockfield Hall buildings contributes to the significance of the buildings, foremost as an element which speaks to the original rural and bucolic surrounds in which the Hall would have originally been experienced.
- 3.3.16 Summary of significance: The significance of the buildings is derived from the special architectural and historic interest as outlined above, and the Grade I listing of the Cockfield Hall building is testament to the fact it is considered to meet the threshold for the highest possible grading for a listed building.

3.4 Yoxford Conservation Area

3.4.1 The Yoxford Conservation Area was first designated by East Suffolk County Council in 1973, and redesignated by Suffolk Coastal District Council in 1991. Boundary changes to include the three surrounding historic designed landscapes of Cockfield Hall, Grove Park / Yoxford Place, and The Rookery were made in February 2020.

Historic development of the area

- 3.4.2 Neolithic and Bronze Age remains have been found within the parish and evidence of an iron age settlement has been identified on the pasture land east of the A12. An Iron Age antler weaving comb has been found during sewage works on the bank of the River Yox and part of a terret ring (chariot fitting). A Roman settlement is believed to have existed in the vicinity of the village.
- 3.4.3 Anglo Saxon finds have been recorded to the east of the village close to the remains of the early medieval Cistercian Abbey at Sibton. The parish was listed in the Domesday survey of 1086 variously as 'Gokesford' and 'Lokesfort', held prior to 1066 by Manni and Norman respectively. The first holding included woodland for 30 pigs and 20 acres of meadow, the second a further 5 acres of meadow.
- 3.4.4 It is possible that an early settlement lay a small distance to the north of the present village along the

former trading route known as the Erlesway where it met an old route to Bramfield. Both of these old roads were stopped c1794.

- 3.4.5 Cockfield Hall takes its name from the Cockfeud family who succeeded to the lordship of the manor in 1359. The manor however, significantly predates their lordship as it is described in the Domesday survey. The landscape feature presently referred to as a moat within the Hall's grounds was probably created from a series of medieval fish ponds called 'The Stew' which were located to the west of the manor House. The real moat surrounding the house itself has been long filled in. Documentary sources including a document held by the College of Arms suggest that the original moat separated the inner and outer courts of the manor house.
- 3.4.6 Yoxford Manor House itself is known to have been falling into ruin by the late fifteenth century; it was never rebuilt. It probably stood in isolation some distance from the church. The earliest identified surviving buildings in Yoxford are timber framed structures dating from the mid and later sixteenth century. Most of these have however, since been refronted. Many of these structures appear to have been originally orientated east-west and then probably in the eighteenth century reorientated to face north-south when they were given new façades to the High Street.
- 3.4.7 In 1785 the main Ipswich to Great Yarmouth turnpike was opened. It formed a catalyst for the growth of Yoxford through passing trade, with its proximity to the turnpike crossroads. The previously small village grew to a population of 1272 by the mid nineteenth century, with around 27 trades represented. The agricultural boom years of the Napoleonic Wars saw the creation in their present form of the parks surrounding the village at Cockfield Hall, The Rookery, and The Grove, together with the smaller but nevertheless significant designed landscapes at Satis House and Yoxford Place.
- 3.4.8 In 1794, the Erlesway, a once important trading route, which ran east-west through Cockfield Hall park parallel to the present High Street was closed as part of a programme of improvements and extensions to the Halls Park. The park as it exists today is very much a creation of the Napoleonic War period. Other routes through what became the park were also closed. The river was also straightened and at some places diverted into new channels.

- 3.4.9 In the nineteenth century two Methodist Chapels were built within the village for the Wesleyans (1833-35), together with a Primitive Methodist chapel of c1856. Attempts were also made to repair the decaying fabric of the parish church c1802, and in 1837 a north aisle was added to the design of the London architect Henry Roberts. Saint Peter's was considerably restored in 1868 by the talented Diocesan architect Richard Makilwaine Phipson.
- 3.4.10 The construction of the Ipswich to Lowestoft railway in the 1850s with a station at nearby Darsham saw a progressive waning of the road and coaching trade.
- 3.4.11 In the mid-nineteenth century the village had its own gas works and a small factory producing bottles of mineral and soda water. A Mechanics Institute with reading room and a small library was formed in what is now Milestone House, and a children's home was established at Hope House. A fire engine had also been installed in a former hearse house opposite the parish church by the late nineteenth century.
- 3.4.12 With farm work on the surrounding large estates becoming mechanised and labour moving to larger industrialising towns, the population of Yoxford slowly declined. Today around 1,000 people live in the village.
- 3.4.13 Cockfield Hall was damaged in an air raid in 1942 and its rear section subsequently demolished. The larger houses in the village were requisitioned by the military during World War Two and many were in poor repair by the time they were returned to their owners. Cockfield Hall was used as a Navy training establishment for coding and signals. Satis House and Elmsley were used by the army. All of the larger estates surrounding the village changed hands in the twentieth century, starting with The Rookery in 1914. The last major change of longstanding owners came when the Blois family sold Cockfield Hall in 1997.

Summary of special interest

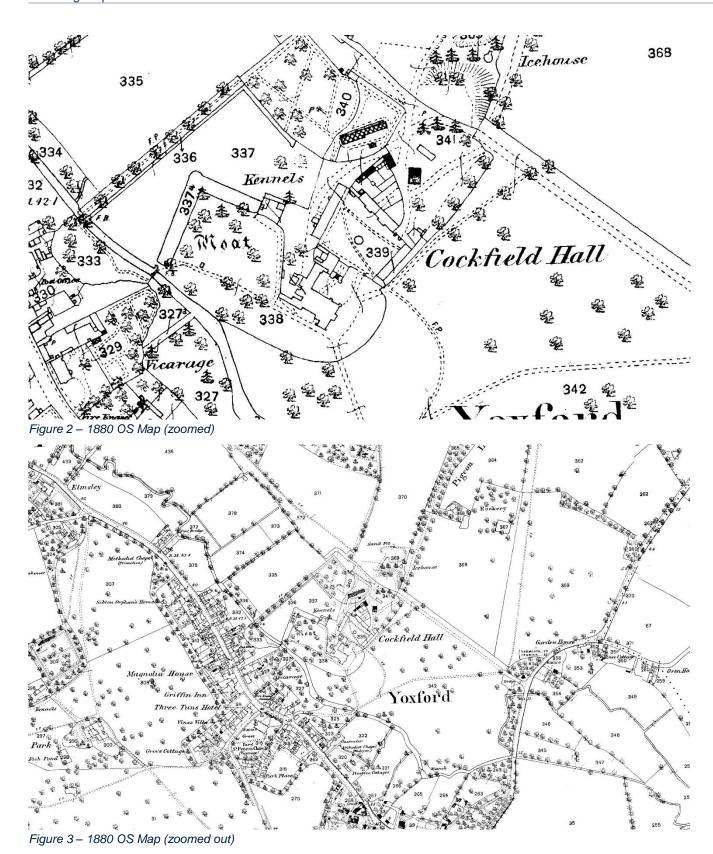
3.4.14 Yoxford was a prosperous trading and communication centre in the later eighteenth, and early

- nineteenth centuries when many of its houses were either rebuilt or remodelled. Their façades are elegantly designed and carefully detailed. Yoxford's essentially late Georgian character has to a great extent been preserved, and is a key marker of the special interest of the conservation area.
- 3.4.15 The village is framed by three fine country houses and their parks which play an important role in defining the wider character and appearance of the conservation area. All the parks retain their mansions, garden, and subsidiary buildings, and large numbers of mature parkland trees. There are now very few settlements in the United Kingdom which retain all of their major houses and parks with this degree of intactness.
- 3.4.16 Within the Conservation Area are several large landscaped gardens. Many retain eighteenth or early nineteenth century brick walls and mature trees and make a strong contribution to both the character of the Conservation Area and the setting of its listed buildings.

4.0 Appendix 1: Historic mapping



Figure 1 – 1840 Tithe Map, showing early formation of A12 route at right of image, conforming to field boundaries, before progressive straightening



Heveningham Hall Estate

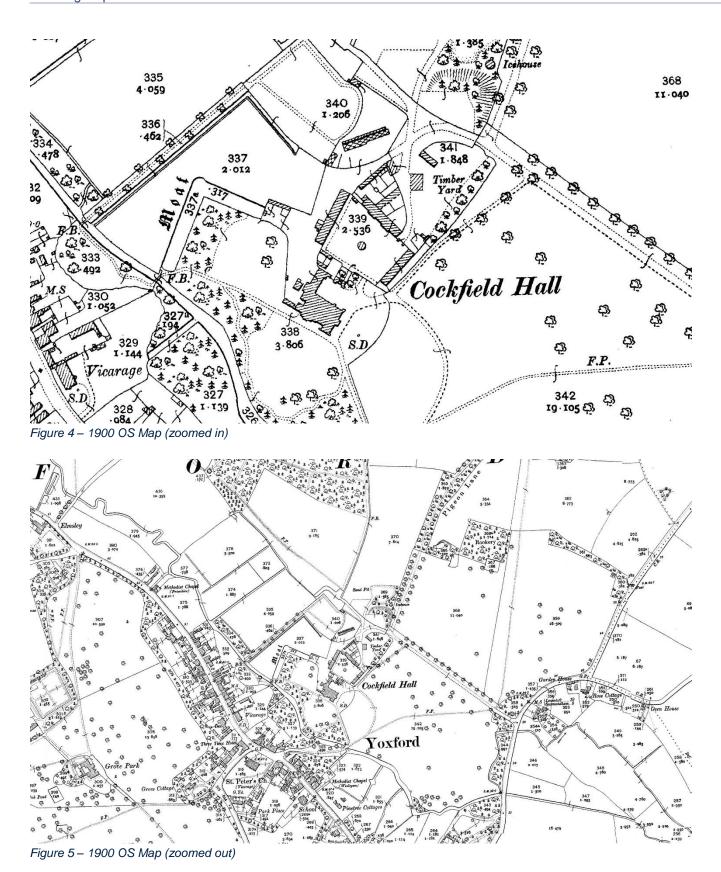




Figure 7 – 1940 OS Map

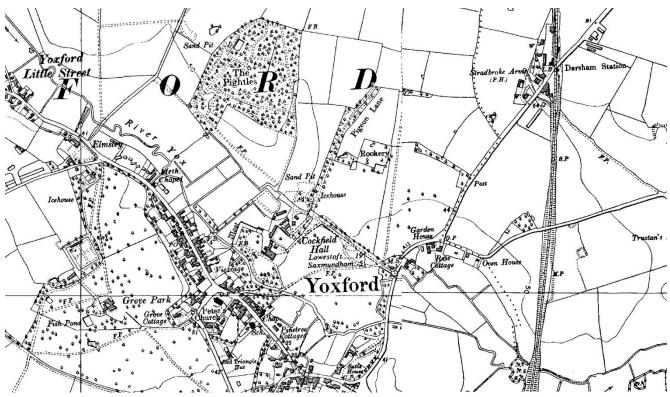
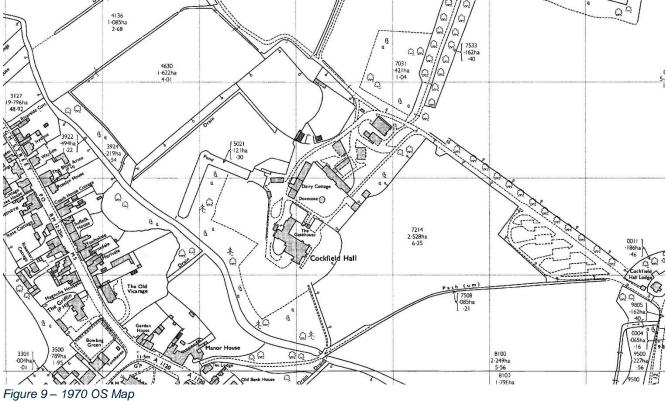


Figure 8 – 1950 OS Map



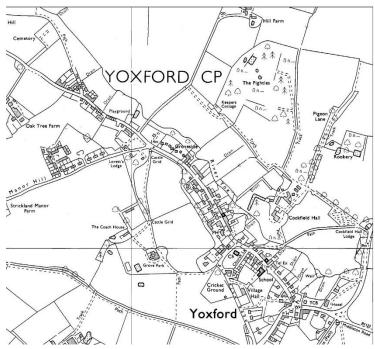


Figure 10 – 1990 OS Map





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Appendix 9

Gravity Model (Appendix 7A of the TA) and Visum Traffic Model (Appendix 7B of the TA – with additions/amendments in Appendix 7A of the TA Addendum)

Comments in this Appendix have been prepared by TPA.

1. Gravity Model Technical Note

- 1.1. This Technical Note, produced by WSP with the advice of Quod on socio-economic matters, sets out the methodology used to predict the distribution and mode split of the Sizewell C workforce, before, during and after the peak construction period. It represents a revised version of the one issued as part of the original TA in May 2020.
- 1.2. Some specific comments and requests for clarifications, referring to the content of the TA, are provided as follows:
 - it is not clear how Table 1 Workforce Profile was derived; particularly, 3,000 workers are anticipated to live in the on-site campus or in a caravan these are not distributed in the gravity model; as they represent 35% of the total workforce (7,900+600), if these 3,000 workers on site are then going to be less, there is the risk of having underestimated the number of drivers:
 - car occupancy values of 1.10 and 1.54 were employed for Home-Based and Non-Home-Based workers, respectively (this latter value based on values observed at Hinkley Point C):
 - the NP&R at Darsham is predicted to be used by 1,230 workers of the main site in 1,158 vehicles15 (an average occupancy of 1.06; we would have expected an average occupancy between 1.10 and 1.54, not less this should be clarified);
 - we note that the P&Rs are predicted to be used by 1,854 Home-Based and 948 Non-Home-Based workers;
 - we note that 124, excluding the workers in the campus / caravan:
 - o 27% would drive:
 - 25% would use the southern P&R ("SP&R");
 - $_{\odot}~$ 26% would use the NP&R (887 Home-Based and 542 Non-Home-Based this is a total of 1,429 workers); and
 - o 23% would use direct bus or rail.
- 1.3. In the TA Addendum, a number of adjustments were made to the peak construction gravity model as follows:
 - Knodishall area removed from the 'bus catchment' and those workers are instead assumed to drive directly the main development site;
 - Workers assumed to use direct rail at DCO, now assumed to drive to the northern park and ride site;
 - Workers not living within the catchment of a bus stop on the Lowestoft route, assumed to use the northern park and ride site;
 - Workers living within the catchment of a bus stop on the Ipswich route, assumed at DCO to drive to the southern park and ride site, now assumed to use the Ipswich direct bus service; and

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 $^{^{124}\ \}S 5.2.6$ of the Technical Note at Appendix 7A of the Transport Assessment (Doc Ref 8.5)

- Additional direct bus route proposed to serve Melton/Woodbridge, leaving/joining the A12 at Ufford thus avoiding the congested section at Woodbridge. This removes a number of cars which were assumed at DCO to drive to the southern park and ride site.
- 1.4. SZC Co. should provide clarification on the queries raised in this section. We consider that this Technical Note and the assumptions therein set out represent a central part of the transport strategy, as it contains the main inputs to the models.
- 1.5. SZC Co. should therefore provide the Planning and Highway Authorities, key stakeholders and the local communities with credible reassurance that the impact assessment relies on solid and flawless assumptions and models – otherwise the reliability of the whole assessment is to be questioned.

2. Visum Traffic Model Technical Note

- 2.1. This Technical Note (App 7B of the TA), produced by WSP, sets out the input to the Visum model and its underlying assumptions. The review has given rise to the following specific queries:
 - In Tables 3 and 4, the sum of the workers shown in the second column is not 580 but 531 and this should be clarified/ corrected;
 - In Table 5, the NP&R is predicted to be used by 1,221 workers of the main site there were 1,230 in the Gravity model (Table 2 of App 7A) and a total of 1,419 workers (there were 1,429);
 - Table 6 suggests that a total of 970 vehicle trips (of workers of the main development site) are predicted to the NP&R, while Table 2 of the Gravity Model (App 7A) seems to suggest 1,158 vehicles; which one is correct?
 - Table 8 and Table 9 set out the assumptions in relation to lead time for arrival trips to the main site and lag time for departure trips from the main site, respectively; why does Table 9 not include an allowance for waiting for the bus (like in Table 8)?
 - The same consideration applies to Table 32;
 - The car park accumulation during peak construction was estimated through the profiles of the arrivals and of the departures, assuming, however, the `base level` of occupancy during the quietest hour of the day (the profile is shown in the following graph); how was the 69 cars base level calculated for the NP&R at Darsham (Table 13 between 02:00 and 03:00)?
 - Did the Visum model include the "busiest day" or the "typical day" HGV figures during the peak construction scenario?
 - Why are no bus journeys shown in some hours of Table 26, for example between 09:00 and 13:00, including the column of the NP&R at Darsham? Does it mean no buses are going to run during those hours?
- 2.2. Similarly to the previous section, SZC Co. should provide clarification on the queries raised on this Technical Note. We consider that this Technical Note and the assumptions therein set out represent another central part of the transport strategy, as it contains the main inputs to the models.
- 2.3. SZC Co. should therefore provide the Planning and Highway Authorities, key stakeholders and the local communities with credible reassurance that the impact assessment relies on solid and flawless assumptions and models otherwise the whole assessment is to be questioned.
- 2.4. We have already commented on the missing modelling on a Monday morning and Friday evenings, when significant movements of workers are to be expected.