The Great Grid Upgrade

Sea Link

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Volume 9: Examination Submissions

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Contents

Table of Tables

1. Introduction

1.1 Purpose of the Technical Note

1.1.1 This technical note has been developed to provide supporting information for the Applicant's conclusion regarding the level of significance of the reported intra project cumulative effects.

1.1.2 During ISH1 the Applicant was asked whether the significant adverse intra-project effects reported would be moderate or major. The Applicant took this matter away to consider if there was a way in which the levels of significance could be better defined, or at least indicative levels provided.

1.1.3 The Applicant undertook a separate exercise to see if it was possible to provide more definition regarding the level of significance of the effects reported in **6.2.2.12 Part 2 Suffolk Chapter 12 Suffolk Onshore Scheme Intra Project Cumulative Effects [APP-059].** This was focused on the potential significant intra project cumulative effects on residential receptors.

1.1.4 The outcomes of this separate exercise were included in evidence presented by the Applicant at ISH2. The Applicant explained the further work that had been undertaken to review the potential significant intra project effects reported in the **Application Documents 6.2.2.12 Part 2 Suffolk Chapter 12 Suffolk Onshore Scheme Intra-Project Cumulative Effects [APP-059]** and **6.2.3.12 Part 3 Kent Chapter 12 Kent Onshore Scheme Intra-Project Cumulative Effects [APP-072]**.

1.1.5 The findings of this additional work were that no individual property was considered likely to experience a significant effect on residential amenity. As such the Applicant stated that if significant effects did occur (and it is considered unlikely that they would), they were likely to be moderate rather than major.

1.1.6 A commitment was made to provide further information about the approach the Applicant took when undertaking this separate exercise. This was requested as Action Point 111 as set out in the ExA document **Action Points arising from Issue Specific Hearing 2 (ISH2) on environmental issues held on Wednesday 28 January to Friday 30 January 2026 [EV6-033].**

1.1.7 During ISH3 the Applicant provided similar evidence regarding the other potentially significant effects that were reported in **Application Documents 6.2.2.12 Part 2 Suffolk Chapter 12 Suffolk Onshore Scheme Intra-Project Cumulative Effects [APP-059]** and **6.2.3.12 Part 3 Kent Chapter 12 Kent Onshore Scheme Intra-Project Cumulative Effects [APP-072]**. These were effects on transport and road users and users of PRoW (including recreational users of PRoW). Again, these potential significant effects were considered to be moderate rather than major.

1.1.8 Based upon feedback from the councils and also the ExA at ISH3, it was clear that further information about how this additional assessment work was undertaken and more detail about the findings, would provide additional reassurance regarding the Applicant's position that these significant effects, if they were to occur, would be moderate at most.

2. Residential Amenity

2.1 Original Assessment

2.1.1 The potential for significant effects on residential amenity was identified in both the Suffolk and Kent intra-project cumulative effects assessments.

2.1.2 The assessments considered several contributing factors, which were visual amenity, traffic and transport, noise and vibration and health and wellbeing. It is important to note that these individual assessments were not undertaken for each residential property that could be potentially affected. The approach to each topic is discussed further below:

- Effects on visual amenity were judged using representative viewpoints (identified within the Landscape and Visual Impact Assessment (LVIA)) as a proxy. It would clearly be disproportionate to identify a viewpoint for each property; the assessment must be based upon representative viewpoints, with consideration given to the potential for similar effects to occur for nearby residents.
- For noise effects the cumulative assessment was based upon the residential properties that had been considered as noise sensitive receptors (NSRs) within the noise and vibration chapter, noting these were representative receptors, and not all properties within 300 m (the study area for noise effects) were assessed individually. However, these properties were selected because they were considered to represent the most likely affected properties, typically due to their proximity to the Proposed Project.
- For traffic and transport, the sensitivity of construction routes was a contributing factor in determining the sensitivity of routes. Consideration was given to the assessment findings for Severance, Pedestrian Delay, Non-Motorised User Amenity, Fear & Intimidation, Driver Delay, Road Safety and Hazardous/ Large Loads on various routes where noise and visual effects were also likely. It was therefore assumed that any properties accessed off these routes would experience a similar effect.
- The health and wellbeing assessment considered effects on residential properties (in terms of physical changes or disruptions to residential communities) within the study area during the construction phase that would affect the social environment or community cohesion based upon the other types of effect set out above. As such the assessment of health and wellbeing is a form of cumulative effects assessment.

2.1.3 The noise, traffic and transport and health and wellbeing topics had reported effects that were minor at most. It was only the visual assessment of representative viewpoints for which moderate and major residual effects were identified.

2.1.4 It is important to note that just because the effects of one of the contributing factors is significant (the moderate and major visual effects) it does not necessarily mean that any intra-project cumulative effect will automatically be significant. There must be an overall worsening of amenity impact as a result of the combined effect when added together.

2.1.5 Because of the uncertainty generated by the lack of individual assessment of each individual property, and the fact that two of the contributing topic assessments were strongly influenced by professional judgement (visual and health and wellbeing) the

assessment team took the precautionary view that there was the potential for significant cumulative effects to result from the Proposed Project. This potential significant effect on the amenity of Residential Receptors was reported in the associated chapters.

2.2 Further review of effects on Residential Receptors

2.2.1 During ISH1 the Applicant was asked if the significant effects reported in respect of residential receptors were considered to be moderate or major. Based upon the uncertainty set out above, the Applicant responded to say that differentiating between moderate and major was not necessary or possible, however it was agreed that the Applicant would give further consideration to ways in which such a differentiation may be able to be made.

2.2.2 The Applicant organised an internal workshop with the topic leads that contributed to the assessment of intra-project cumulative effects. The purpose of the workshop was to undertake a qualitative exercise, bringing together professional expertise to provide greater granularity of the spread of effects. It was agreed that the only way to to try to differentiate between moderate and major effects was to gain a better understanding of the potential cumulative effects at each individual property. Assessment of each individual property in proximity to a development is not required for the purposes of EIA. This is because EIA considers public rather than private interests; this is the reason representative viewpoints are from publicly accessible locations and not all residential properties within 300 m of the Proposed Project are assessed for noise effects. However, the challenge with this approach is precisely the lack of granularity for individual properties, which means that professional judgements would need to be made for most properties.

2.2.3 In order to undertake the exercise, it was necessary to identify a suitable study area. Of the three individual impact types (visual, traffic and noise) the smallest study area was that of noise and vibration, which extends 300 m from the Order Limits of the Proposed Project. This was selected as the study area for the exercise because outside of this there was no potential for significant noise impacts to result from construction works; outside of this area only visual and traffic effects could occur and it was considered less likely that amenity effects would result from just these two topics. As such this study area was considered sufficient to ensure that the exercise was proportionate to the task.

2.2.4 Once this buffer was created in the project WebGIS, all residential properties within the buffer were identified and included in a separate layer. This layer was created with editable fields for each property so that topic leads could provide narrative against each.

2.2.5 In total consideration was given to 442 properties in Suffolk and 528 properties in Kent.

2.2.6 Each of the single topic leads for the contributing topics (visual, traffic and noise) was then tasked with reviewing each individual residential receptor to consider what level of effect may be experienced. Below is a summary of the key factors considered by each of the topic leads.

Visual effects

2.2.7 The assessment of potential visual effects on receptors within residential properties was based on several factors including:

- the likely sensitivity (value and susceptibility) of the residential receptor within the property to visual effects;

- the presence of intervening vegetation between the Proposed Project and the receptor;
- the presence of intervening built form between the Proposed Project and the receptor;
- the duration of effects in a particular location (for example the short duration of works at Benhall Bridge were taken into account); and
- the likely degree and scale of change to the composition of the view.

Traffic effects

2.2.8 Factors taken into account in assessing the potential for effects were relatively simple because they were dependent upon whether a particular residential property was accessed from one of the construction routes and, if they were, what the reported effects were for that route in terms of Severance, Pedestrian Delay, Non-Motorised User Amenity, Fear & Intimidation, Driver Delay, Road Safety and Hazardous/ Large Loads.

Noise Effects

2.2.9 Factors taken into consideration in assessing the potential for noise effects at each property included the location of the residential property to the Proposed Project, phase of the Proposed Project, duration and time of the impact, effect on the representative baseline acoustic levels, and embedded and additional mitigation to reduce unmitigated impacts.

Health and Wellbeing effects

2.2.10 As highlighted previously, the assessment of health and wellbeing effects on social environment or community cohesion in settlements is undertaken by considering the cumulative amenity effects that could result from the contributing topic impacts, which in this case are the visual, traffic and noise effects identified above. This requires professional judgement as it considers the combination of different effects when concluding on the overall amenity impact and how this might affect the social environment and community cohesion. This exercise would not typically be applied to individual properties, given the assessment is considering the local population rather than individuals.

Overall Amenity effect on Residential Properties

2.2.11 The overall effect on amenity for residential properties aligns with the assessment of Health and Wellbeing effects given that the assessment takes all of the same factors into account.

Assessment Conclusions

2.2.12 Of the 442 properties considered in Suffolk, 94 were predicted to experience a minor (not significant) effect and the remaining 348 were predicted to experience a negligible (not significant) effect at most.

2.2.13 Of the 528 properties considered in Kent, 90 were predicted to experience a minor effect (not significant) and 438 were predicted to experience a negligible effect (not significant) at most.

2.2.14 The number of residential properties affected under each degree of significance is set out in Table 2.1 below.

Table 2.1 Number of residential properties affected under each degree of significance

Location	Negligible	Minor	Moderate	Major	Total
Suffolk Onshore Scheme	348	94	0	0	442
Kent Onshore Scheme	438	90	0	0	528

3. Transport and Road Users

3.1 Original Assessment

3.1.1 The original assessment reported several road links and junctions where it was anticipated that there could be significant intra project cumulative effects on the amenity for road users during construction and decommissioning, and during operation. All these links and junctions were in Suffolk, with no significant effects reported in Kent.

3.1.2 The road links/junctions considered likely to be affected significantly (intra project cumulative effects) were the following:

- A12 (south of the A1094);
- B1121 Main Road (south of Saxmundham);
- A1094;
- B1069;
- A12/A1094 junction;
- B1121 Main Road/ B1121 Church Hill junction; and
- A1094/B1069 junction.

3.1.3 These amenity effects were considered to arise during construction as a result of visual, traffic and transport, noise and health and wellbeing effects, though during operation no traffic and transport or noise effects would occur.

3.2 Further review of effects on transport and road users

3.2.1 Consideration has been given to the potential intra-project cumulative effects on each individual route and junction identified as possibly experiencing a significant effect during construction and decommissioning and operation. A summary of this review is included in Table 3.1 below.

Table 3.1 Review of individual road links and junctions

Users of Road/Link	Stage	Visual Effects	Traffic and Transport Effects	Noise Effects (NMU Only)	Health and Wellbeing Effects	Likely significance of Intra Project Cumulative Effect
A12 (south of the A1094)	Construction / Decommissioning	Negligible	Minor	Negligible	Minor	Minor
	Operation	Negligible			Not applicable as only visual effects remain	Not applicable as only visual effects remain
B1121 Main Road (south of Saxmundham)	Construction / Decommissioning	Moderate	Minor	Negligible/ No change	Minor	Minor to Moderate
	Operation	Moderate			Not applicable as only visual effects remain	Not applicable as only visual effects remain
A1094	Construction / Decommissioning	Minor	Minor	Negligible	Minor	Minor
	Operation	Negligible			Not applicable as only visual effects remain	Not applicable as only visual effects remain
B1069	Construction / Decommissioning	Negligible	Minor	N/A	Minor	Negligible to Minor
	Operation	Negligible			Not applicable as only visual effects remain	Not applicable as only visual effects remain
A12/A1094 junction	Construction / Decommissioning	Negligible	Minor	Negligible	Minor	Negligible to Minor
	Operation	Negligible			Not applicable as only visual effects remain	Not applicable as only visual effects remain
B1121 Main Road/ B1121 Church Hill junction	Construction / Decommissioning	Minor	Minor	Negligible/ No change	Minor	Minor
	Operation	Minor			Not applicable as only visual effects remain	Not applicable as only visual effects remain
A1094/B1069 junction	Construction / Decommissioning	Negligible	Minor	Negligible	Minor	Negligible to Minor

Users of Road/Link	Stage	Visual Effects	Traffic and Transport Effects	Noise Effects (NMU Only)	Health and Wellbeing Effects	Likely significance of Intra Project Cumulative Effect
	Operation	Negligible			Not applicable as only visual effects remain	Not applicable as only visual effects remain
Wolf Way Cycling Route	Construction / Decommissioning	Minor/ Moderate		Minor	Minor	Minor to Moderate on a short section
	Operation	Minor/ Moderate			Not applicable as only visual effects remain	Not applicable as only visual effects remain
Suffolk Coastal Cycling Route	Construction / Decommissioning	Negligible/ Minor/ Moderate		Negligible	Minor	Minor to Moderate on a short section
	Operation	Negligible/ Minor/ Moderate			Not applicable as only visual effects remain	Not applicable as only visual effects remain

4. PRoW Users

4.1 Original Assessment

4.1.1 The original assessment reported one PRoW in Suffolk (Bridleway 491/010/0) and two PRoWs in Kent (The Saxon Shore Way/EE42 and footpath TE37) for which it was predicted that users may experience a significant intra-project cumulative amenity effect. These effects were only applicable to the construction and decommissioning stages, with no significant effects during operation identified.

4.1.2 This assessment required the application of professional judgement when combining the different sources of amenity impact to conclude on the level of significance likely to be experienced by PRoW users. Another factor considered was the availability of alternative routes nearby that would be unaffected by the works.

4.2 Further review of effects on PRoW users

4.2.1 In order to determine if these significant effects were likely to be moderate or major, consideration was given to several additional factors:

- The length of the section of PRoW affected, including the additional length introduced by temporary diversion;
- The length of time diversions would be in place;
- Whether the diversions are temporary or permanent; and
- Additional mitigation committed to since the assessment was undertaken, including the commitment to ensuring PRoW users always have priority, and the additional measures requested by Suffolk County Council (see Appendix A)a.i.Appendix A.

4.2.2 Based upon these considerations the potential level of significant effect has been reviewed as set out in Table 4.1 on the following page.

Table 4.1 Potential level of significance for PRoW effects

PRoW	Diversion details	HGV Access across PRoW?	Visual Effects	Traffic and Transport effects	Socio-Economic Effects	Intra–Project Effects	Significance of Intra Project Cumulative Effect
Bridleway 491/010/0. Located between the substation and converter station.	A local diversion would need to be in place for a maximum duration of four weeks The section of route temporarily closed would be 75 m. The temporary diversion would be 142 m long which is 67 m longer than the section temporarily closed	Yes – around 20 HGVs per hour reducing to 4 per hour. However there would be pedestrian priority at the crossing.	Major	Minor	Minor	**Significant** but only under Scenario 2 where National Grid builds the Friston (Kiln Lane) substation.	The majority of Bridleway 491/010/0 would only be affected visually. A very short section of the bridleway would be temporarily closed and diverted to allow for cable installation works and although used as an access route for construction traffic, priority will be given to users of the PRoW. With the inclusion of the additional mitigation commitments, it is considered that the intra-project cumulative effects on amenity for PRoW users would be **moderate** at most.
The Saxon Shore Way/ EE42 south of the River Stour	Four short sections of the route would need to be temporarily diverted for four weeks during construction to allow for construction of the overhead line works. Working west to east these are: A 46 m section would be temporarily closed with a 54 m diversion (8 m longer) A 66 m section would be temporarily closed with a 69 m diversion (3 m longer) A 23 m section temporarily closed with a 25 m diversion (2 m longer) A 30 m section temporarily closed with a 40 m diversion (10 m longer)	Minimal number related to the overhead line works	Moderate	–Minor (PRoW EE42)	Minor	**Significant** – but only for users of the Saxon Shore Way.	The majority of the Saxon Shore Way in the vicinity of the works would only be affected visually. Four very short sections of the route would be temporarily closed and diverted. The total length of route temporarily closed would be 165 m, which would be subject to an overall diversion length of 188 m, giving a total increase in journey length of 23 m. With the inclusion of the additional mitigation commitments, it is considered that the intra-project cumulative effects on amenity for PRoW users would be **moderate** at most.
Footpath TE37 along Cottington Lane	A local diversion of a 60 m section of the PRoW would be required for the duration of construction. The diversion would be immediately to the north of Cottington Lane to ensure there is separation between PRoW users and construction traffic using the lane.	Yes - but parallel to the route, not across it.	Major	Minor	Negligible	**Significant**	The majority of TE37 would not require closure or diversion. The visual assessment considers the entire length of the route which runs parallel to construction access, but only a 60 m section would need to be diverted. Given the very short length that would need to be diverted, the fact that the route will be restored post construction, and the additional PRoW mitigation commitments, it is considered that any potential significant intra-project effect on amenity for users would be **moderate**.

5. Conclusion

5.1.1 This technical note was prepared in response to requests for further information about the likely level of significance of intra-project cumulative effects that had been reported as 'significant' in **Application Documents 6.2.2.12 Part 2 Suffolk Chapter 12 Suffolk Onshore Scheme Intra-Project Cumulative Effects [APP-059]** and **Application Document 6.2.3.12 Part 3 Kent Chapter 12 Kent Onshore Scheme Intra-Project Cumulative Effects [APP-072]**.

5.1.2 The technical note builds upon the information provided in response to Action Point 111 as set out in **Application Document 9.90 (A) Applicant's Response to Action Points from Compulsory Acquisition Hearing 1 (CAH1) and Issue Specific Hearing 2 (ISH2)**.

5.1.3 In addition to providing more information to support the response to Action Point 111 regarding residential amenity, similar information is now provided for PRoW users and Transport and Road users, for which significant intra-project cumulative effects had also been predicted.

5.1.4 For all three receptor types, it is the Applicant's view that if intra-project cumulative effects do occur, they are likely to be moderate at most.

Appendix A Additional PRoW Mitigation Commitments

- Where a PRoW crosses the haul road, the surface will be firm, smooth, level, and free draining with no loose stones or voids on the surface. This may require additional work to the type 1 surface such as compacting fines (4 or 6mm to dust aggregate) to fill voids.
- No steps or gradients will be introduced which could deter wheeled users (1 in 20 is accepted standard). The crossing will be maintained in a safe and fit condition for use by pedestrians, wheeled users, cyclists, and equestrians (as appropriate) all year round, to the reasonable satisfaction of the Highway Authority.
- Use of signage (including Give Way signs) to ensure that haul road users are aware of the potential for PRoW users to cross their path and PRoW users are aware that they are approaching a construction interface with the associated hazards.
- Use of gates that give priority to users of PRoW at all times other than when there is a vehicle in the process of crossing the PRoW when PRoW users approach.
- A speed restriction to 10 mph along the haul road/ construction roads in the vicinity (circa 20 m) of the PRoW (speed limit on the remainder of the haul road will be 30 mph).
- Information regarding the presence of the PRoW and the potential for PRoW users will be included in the Method Statements, such that vehicle and plant operators will be mindful always for members of the public (hikers, dog walkers, horse riders, cyclists etc).
- No-reversing restrictions will be in place at locations where construction traffic interact with PRoW.
- Stopping/parking of vehicles and mobile plant will not be permitted at locations where construction traffic interact with PRoW.
- Temporary fencing to be installed along the length of the working width, with gaps in the fencing to allow access along the PRoWs. Signage will be in place so that users can quickly identify the continuation of the route across the haul road.
- Information regarding these measures will be a compulsory part of the induction training for drivers
- The surface of each PRoW where it crosses the construction road will be kept in a safe and fit condition at all times for all legal users. The PRoW will be maintained to a standard agreed with SCC as Local Highway Authority; and
- The positioning of site notices will be carefully considered to keep sign clutter to a minimum and to collate information on route closures where appropriate. Signs will be carefully worded with clear, uncomplicated information showing maps that the public would be familiar with (e.g. OS maps with topography context) to give them confidence that their walk or ride will still be possible, albeit with a minor diversion.

PRoW Reinstatement:

- A pre-construction and post-construction survey of the PRoW (surface condition and street furniture) affected will be undertaken by an experienced surveyor. The results of these surveys will be shared with SCC.
- A qualified Agricultural Liaison Officer (ALO) will be employed to ensure that information on existing land conditions is obtained, recorded, and verified during the PRoW surveys.
- The ALO will act as the point of contact for the restoration of the PRoW.

- The pre-condition and post-construction surveys will include a photographic record with accompanying map and table listing:
  - Date record taken, Map reference, Reference and type of PRoW, Overview description of PROW, giving average width, surface type, general condition, Highlighting any defects in current condition such as wet areas, pre-existing surface damage such as ruts, compaction, or obstructions Note any other vehicle use (farm or private vehicle use).

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