The Great Grid Upgrade

Sea Link

Sea Link

Volume 9: Examination Submissions

Document 9.26: Traffic and Transport Cumulative Assessment (Suffolk)

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1. Introduction

1.1 Background

1.1.1 This Technical Note (TN) has been prepared at the request of Suffolk County Council (SCC) Highways, to provide further details on the approach to and findings of the Traffic and Transport cumulative assessment of the Suffolk Onshore Scheme element of the Sea Link Project (the 'Proposed Project'), as presented within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**.

1.1.2 This TN considers the comments raised by SCC as part of their Relevant Representation (RR) submitted to the Planning Inspectorate (PINS) dated 29 May 2025 and follows a Traffic and Transport Thematic Meeting held on 6 August 2025. The TN is designed to allow SCC (as well as other stakeholders) to take a more informed view of the impact of cumulative construction traffic considering the Proposed Project and a number of local major development projects.

1.1.3 The focus of SCC's feedback on the Traffic and Transport cumulative assessment within Suffolk relates to the following schemes where the potential for significant cumulative effects (when combined with the Proposed Project) could arise, and which therefore form the focus for this TN:

- Sizewell C – main development site (peak construction phase originally expected to be in 2028, based on a circa 11-year construction programme between 2023 and 2034; however, as construction commenced in January 2024, the peak could potentially move to 2029);
- East Anglia ONE North (EA1N) and East Anglia TWO (EA2) Offshore Windfarms (construction commenced in mid-2025, with an expected construction programme of three years, with indicative peak years of 2026 (Month 14) for light construction vehicle movements and 2028 (Month 34) for HGV movements, based on the information presented in the EA1N/ EA2 ES); and
- LionLink Offshore Interconnector (construction expected to commence in 2028, circa two years after the commencement of the Proposed Project, giving an indicative peak year of 2030).

1.1.4 The peak construction phase for the Proposed Project in Suffolk is expected to occur in 2028, with some alternative localised peaks in 2027 and 2029 associated with different access points. The peak construction phases for each cumulative scheme, as set out above, are expected to be staggered (between 2026 and 2030) and are therefore highly unlikely to all fully overlap. Therefore, and as demonstrated within this TN, the duration of any potential effects of overlapping peak construction activity (third party scheme and the Proposed Project) will be limited to a few consecutive months (short-term) at most or avoided altogether. Furthermore, the Applicant has produced **Application Document 7.10 Coordination Document [APP-363]** which describes how Sea Link has approached, and will continue to approach, coordination with other projects with the aim of reducing cumulative impacts on the environment and local communities. Several opportunities are listed in paragraph 7.4.2 of **Application Document 7.10 Coordination Document [APP-363]** to reduce construction sites, materials and traffic.

It is in the Applicant's interests to ensure that a coordinated approach with third party schemes takes place to ensure efficiency and delivery of the Proposed Project.

1.1.5 Whilst this TN focuses on the cumulative assessment work in Suffolk given the specific feedback this has received from Suffolk County Council, a Traffic and Transport cumulative assessment of the Kent Onshore Scheme element of the Proposed Project has also been undertaken for Kent, which is presented within **Application Document 6.2.3.13 Part 3 Kent Chapter 13 Kent Onshore Scheme Inter-Project Cumulative Effects [APP-073]**. It is considered that some of the principles outlined in Sections 2 and 6 of this TN also apply to the cumulative assessment within Kent.

1.2 Application Documents

1.2.1 The following application documents either relate to or inform the Traffic and Transport cumulative assessment of the Suffolk Onshore Scheme (see **Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project [APP-045]** for details of the Proposed Project within Suffolk):

- **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]** – Section 7.9 Assessment of Impacts and Likely Significant Effects;
- **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** – Table 13.31 Traffic and Transport CEA;
- **Application Document 6.3.1.5.A ES Appendix 1.5.A Cumulative Effects Assessment Methodologies [APP-091]** – Section 1.5 Inter Project Cumulative Effects; and
- **Application Document 6.3.2.7.A ES Appendix 2.7.A Transport Assessment Note [APP-122]** – Section 9 Committed Developments.

1.2.2 **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** concluded the following in Paragraph 13.4.9 with respect to cumulative traffic within Suffolk:

- No significant cumulative effects are expected on Traffic and Transport receptors as a result of construction traffic associated with the Suffolk Onshore Scheme when combined with construction/ operational traffic associated with each of the other developments in isolation.
- No significant cumulative effects are expected when considering construction/ operational traffic associated with all committed developments combined on the same basis, given that the peak construction phases for each scheme are highly unlikely to fully overlap.
- No additional mitigation is expected to be required to that already outlined within **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]** and **Application Document 7.5.1.1 Outline Construction Traffic Management and Travel Plan – Suffolk [APP-337]**.

1.3 Further Consultation

1.3.1 This TN follows a Traffic and Transport thematic meeting which was held with SCC and East Suffolk Council (ESC) on 6 August 2025. The relevant presentation slides on the

cumulative assessment, as presented by AECOM during the meeting, are included in Appendix A. References to receptor S-RJ6 have since been corrected from B1121 Main Road/ B1119 Church Hill junction to B1121 Main Road/ B1121 Church Hill junction (as this was an error on the slides). The B1121 Main Road/ B1121 Church Hill junction (receptor S-RJ6) is situated to the south of Saxmundham, whereas the B1121 Main Road/ B1119 Church Hill signalised junction (receptor S-RJ7) is located within Saxmundham.

1.3.2 Following the meeting it was agreed that further information should be provided on the potential durations and overlaps of the peak construction phases of the Proposed Project and other schemes, and on the approach for additional mitigation, should this be needed to mitigate the potential for cumulative effects. The TN is designed to further explore the findings of **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**.

1.4 Report Structure

1.4.1 The remainder of this TN is structured as follows:

- Section 2 – Cumulative assessment methodology;
- Section 3 – Further review of the Traffic and Transport cumulative assessment findings for Sizewell C;
- Section 4 – Further review of the Traffic and Transport cumulative assessment findings for East Anglia ONE North and East Anglia TWO Offshore Windfarms;
- Section 5 – Further review of the Traffic and Transport cumulative assessment findings for LionLink Offshore Interconnector;
- Section 6 – Additional considerations relating to construction programme overlaps, durations of effect and additional coordination and mitigation; and
- Section 7 – Summary.

2. Cumulative Assessment Methodology

2.1 Approach

2.1.1 A summary of the methodology which was adopted to identify peak traffic flows for each cumulative scheme and to inform the Traffic and Transport cumulative assessment within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** is set out in Plate 2.1.

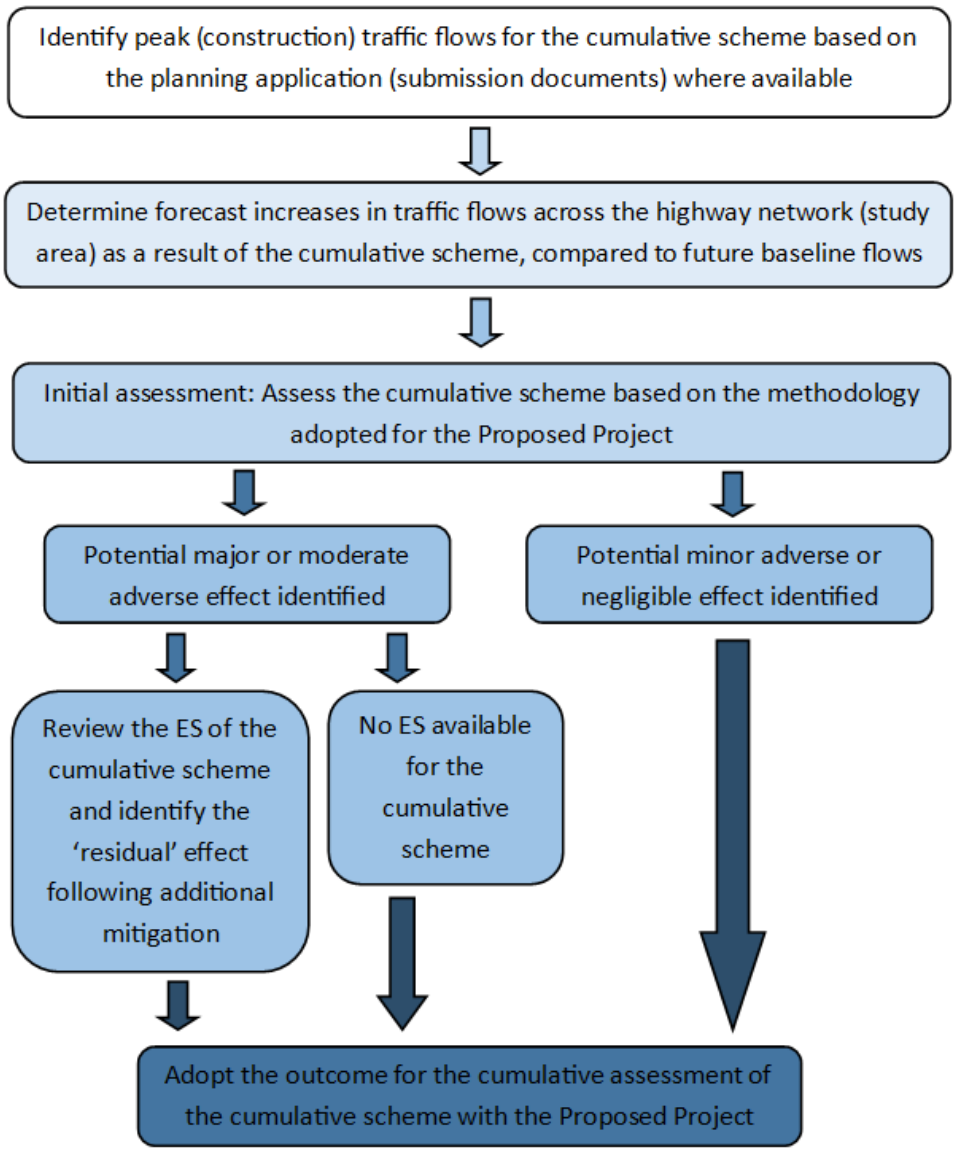

Plate 2.1 Cumulative Assessment Methodology (Individual Schemes)

2.1.2 The cumulative assessment considered the peak construction traffic flows for Sizewell C, EA1N, EA2 and LionLink. These were then assessed in combination with peak construction traffic for the Proposed Project – on the worst-case assumption that these would overlap. The peak construction traffic flows identified for Sizewell C, EA1N, EA2 and LionLink across the study area are set out in Appendix B.

2.2 Parameters

2.2.1 The Traffic and Transport cumulative assessment was based on the same highway receptors, assessment criteria and thresholds as adopted within **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]** for the assessment of the Proposed Project. Therefore, the potential impacts of each cumulative scheme on the surrounding highway network were considered in terms of severance, pedestrian delay, non-motorised user amenity, fear and intimidation, driver delay, road safety and hazardous/large loads.

2.2.2 The cumulative assessment included the following time periods based on the future baseline traffic flows identified for these periods within **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**:

- Weekday AM and PM 'Shoulder' Peaks: 7am-8am and 6pm-7pm;
- Weekday AM and PM Network Peaks: 8am-9am and 5pm-6pm; and
- Weekday 12-hour period (7am-7pm) and Daily 24-hour period.

2.2.3 To provide a robust assessment, the weekday AM and PM peak traffic flows associated with each cumulative scheme were assessed against future Baseline traffic flows for both the respective 'shoulder' and network peaks (see above). The daily traffic flows associated with each cumulative scheme were assessed against future Baseline traffic flows for both the weekday 12-hour period and daily 24-hour period.

2.3 Assessment

2.3.1 The assessment of cumulative effects is based on the approach set out in **Application Document 6.3.1.5.A ES Appendix 1.5.A Cumulative Effects Assessment Methodologies [APP-091]**. A summary of the cumulative assessment matrix is set out in Table 2.1.

Table 2.1 Cumulative Assessment Matrix

Significance for Development 1 (Proposed Project)	Significance for Development 2 (Cumulative Scheme)	Cumulative Effect Possibility/ Likelihood	Likely Significance of Cumulative Effect
Major	Major	Yes – Likely	Likely to be Major
Major	Moderate	Yes – Likely	Likely to be Major
Major	Minor	Yes – though unlikely	Considered on a case-by-case basis, applying professional judgement.
Major	Negligible	No	N/A
Moderate	Moderate	Yes – Likely	Considered on a case-by-case basis, applying professional judgement. The overall effect may be considered to remain Moderate or become Major.
Moderate	Minor	Yes – though unlikely	Considered on a case-by-case basis, applying professional judgement. It is likely that the effect will remain Moderate, however there is some potential for a Major cumulative effect to occur.
Moderate	Negligible	No	N/A
Minor	Minor	Yes – though unlikely	Considered on a case-by-case basis, applying professional judgement. It is possible that a Moderate cumulative effect (significant) could occur but is more likely that the effect would remain Minor.
Minor	Negligible	No	N/A
Negligible	Negligible	No	N/A

2.3.2 The approach adopted within **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**, determines that effects classified as either Negligible or Minor are not significant, whereas effects classified as Moderate or Major effect are potentially significant.

2.3.3 A key consideration for the cumulative assessment, which forms the foundation for this TN (as well as the original Inter-Project Cumulative Assessment work), is that if the Proposed Project is expected to result in a Negligible effect for a given receptor and assessment, then there is considered to be no potential for a cumulative effect to arise when combined with other projects, including when combined with all cumulative schemes. This is a widely used and accepted approach taken in cumulative effects assessment.

2.3.4 This review focuses on the durations over which certain potential cumulative effects could occur when combined with other projects, to determine their likely significance. Duration of effect is a consideration identified in paragraph 1.27 of the Institute of Environmental Management and Assessment (IEMA) Guidelines for the Environmental Assessment of Traffic and Movement (2023).

3. Sizewell C

3.1 Approach

3.1.1 The approach to the cumulative assessment of Sizewell C is set out within Section 9.2 of **Application Document 6.3.2.7.A ES Appendix 2.7.A Transport Assessment Note [APP-122]**. The main development site for Sizewell C comprises permanent facilities for the operation of the power station as well temporary facilities to help facilitate the construction of the development, as well as road alterations, ecological mitigation areas, accommodation and recreational facilities. Sizewell C is located circa 2 km to the north of the Order Limits for the Proposed Project (Suffolk Onshore Scheme).

3.1.2 A robust cumulative assessment was carried out for the Sizewell C – main development site (ID1) within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** by considering additional vehicle trips associated with the peak construction phase including other elements of Sizewell C such as the Northern park and ride and the Southern park and ride. This represented traffic flows during the busiest day of the peak construction phase (2028) of Sizewell C, based on a circa 11-year construction programme.

3.1.3 The tables set out within this section are based on the parts of the highway network which both the Proposed Project and Sizewell C are expected to use i.e. shared receptors.

3.2 Cumulative Assessment

Consideration of Sizewell C ES following Initial Assessment (Potential Significant Effects)

3.2.1 Where a potential significant (Major or Moderate) adverse effect was identified for Sizewell C without committed/legally binding mitigation based on an initial assessment (following the steps identified in Plate 2.1), Table 10.38: Summary of Residual Transport Effects of the Sizewell C ES (EDF Energy, 2020) was then reviewed, to identify the residual transport effect for the relevant receptor and assessment, following the application of Sizewell C's committed mitigation. This ensured that the findings for Sizewell C adopted as part of the cumulative assessment for the Proposed Project were consistent with those reported within the Sizewell C ES. Excluding any additional mitigation committed to by Sizewell C would not be a realistic assessment given the application of the mitigation is legally binding when this is committed to in certified documents.

3.2.2 The receptors and assessment criteria, where the residual transport effects reported in the Sizewell C ES were adopted, are set out in Table 3.1. The applicable receptor references are provided within brackets for the Proposed Project and Sizewell C. The road link and road junction receptors for the Proposed Project are also shown geographically on **Application Document 6.4.2.7 ES Figures Suffolk Traffic and Transport [APP-234]** for reference.

Table 3.1 Cumulative Assessment of the Proposed Project and Sizewell C based on the Residual Effects reported in the Sizewell C ES

Shared Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Residual Effect from Sizewell C (as reported in Sizewell C ES)	Assessment of Cumulative Effects
A12 (south of A1094)	Road Safety	Minor adverse (S-RL1)	Negligible (23 & 24)	None
A12 (between B1121 Main Road junctions)	Road Safety	Negligible (S-RL3)	Negligible (78)	None
A12 (north of B1121 Main Road northern junction)	Road Safety and Hazardous/ Large Loads	Negligible (S-RL4)	Minor adverse (57, 58 & 59)	None
B1119 Church Hill (east of B1121 Main Road signalised junction)	Severance	Negligible (S-RL7)	Minor adverse (12b)	None
	Pedestrian Delay and Road Safety	Negligible (S-RL7)	Negligible (12b)	None
B1122 Leiston Road (between A1094 Aldeburgh Road and Aldringham Lane)	Severance, Pedestrian Delay and Road Safety	Negligible (S-RL13)	Negligible (10, 66 & 74)	None
A12/A1094 Junction	Road Safety	Minor adverse (S-RJ1)	Negligible (22)	None
A12/B1119 Junction	Road Safety and Hazardous/ Large Loads	Negligible (S-RJ3)	Negligible (21)	None
A12/B1122 Junction	Road Safety	Negligible (S-RJ5)	Negligible (13)	None

3.2.3 In line with the Cumulative Effects Assessment (CEA) methodology adopted for the Proposed Project (see Table 2.1), because in all cases above either one or both of the projects report a Negligible effect, there is not expected to be any potential for significant cumulative effects to result from the Proposed Project and Sizewell C for the receptors and assessments identified. This is in line with the cumulative effects reported within Table 13.31 of **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13**

Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060], which only included receptors where potential effects could arise.

Additional Findings of the Initial Assessment (Not Significant Effects)

3.2.4 The cumulative traffic assessment adopted the findings of the initial assessment based on the traffic flows for the peak construction phase of Sizewell C (prior to additional mitigation) where a 'not significant' (Minor adverse or Negligible) effect was identified, given that these effects would remain 'not significant' with the inclusion of Sizewell C's committed mitigation (therefore, a review of the Sizewell C ES was not considered to be necessary in this instance). As set out above, where a Negligible effect was identified for Sizewell C, then no cumulative effects were expected when combined with the Proposed Project (or vice-versa), as set out within **Application Document 6.3.1.5.A ES Appendix 1.5.A Cumulative Effects Assessment Methodologies [APP-091]**.

3.2.5 The potential for cumulative effects to arise as a result of construction traffic associated with both the Proposed Project and Sizewell C – main development site (ID1), was reported in Table 13.31 of **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**, and is set out in Table 3.2 for the assessed road links and road junctions.

Table 3.2 Cumulative Assessment of the Proposed Project and Sizewell C (Excluding Sizewell C Additional Mitigation)

Shared Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Potential Effect from Sizewell C (Excluding Additional Mitigation)	Assessment of Cumulative Effects
A12, south of A1094 (S-RL1 in the Sea Link ES)	Fear and Intimidation	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)
A1094, between A12 and B1069 Snape Road (S-RL10 in the Sea Link ES)	Severance and Pedestrian Delay	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)
B1121 Main Road/ B1121 Church Hill Junction (S-RJ6 in the Sea Link ES)	Severance and Pedestrian Delay	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)

3.2.6 The assessment of cumulative effects for the Proposed Project and Sizewell C is expected to be either Minor (not significant) or Moderate (potentially significant) for several receptors as summarised in Table 3.2. It was concluded that these cumulative effects are more likely to be Minor and not significant within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**, on the basis that the effect of each individual development is Minor, and the peak construction phases are unlikely to overlap. Further details have been provided below to inform this conclusion, including following a further review of Sizewell C's residual effects.

Further Consideration of Sizewell C ES following Initial Assessment

3.2.7 Following the above, Table 10.38: Summary of Residual Transport Effects of the Sizewell C ES (EDF Energy, 2020) has been reviewed once again, to identify the residual transport effects for the relevant receptors and assessments identified in Table 3.2, following the application of Sizewell C's committed additional mitigation. The results of the cumulative assessment when combined with the Proposed Project have then been updated, as presented in Table 3.3.

Table 3.3 Updated Cumulative Assessment of the Proposed Project and Sizewell C based on the Residual Effects reported in the Sizewell C ES

Shared Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Residual Effect from Sizewell C (as reported in Sizewell C ES)	Assessment of Cumulative Effects
A12 (south of A1094)	Fear and Intimidation	Minor adverse (S-RL1)	Minor beneficial (23 & 24)	No potential for significant cumulative effects
A1094 (between A12 and B1069 Snape Road)	Severance and Pedestrian Delay	Minor adverse (S-RL10)	Negligible (9 & 39)	No potential for significant cumulative effects
B1121 Main Road/ B1121 Church Hill junction	Severance	Minor adverse (S-RJ6)	Minor adverse (12c)	Minor/ Moderate (unlikely to be significant)
	Pedestrian Delay	Minor adverse (S-RJ6)	Negligible (12c)	No potential for significant cumulative effects

3.2.8 The cumulative assessment in Table 3.3 above summarises that, when considering Sizewell C's residual effects, there is only expected to be the potential for a cumulative effect to arise at the B1121 Main Road / B1121 Church Hill junction (to the south of

Saxmundham) in terms of severance. A further review of this has been carried out in the next section of this TN. Otherwise, the cumulative effect for the other receptors / assessment types is more likely to be Negligible and not significant. This therefore supports the findings presented within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** that the potential Minor / Moderate cumulative effects identified previously in Table 3.2 are more likely to be Minor and therefore not significant.

3.3 Further Examination of the Potential for Significant Cumulative Effects

3.3.1 The proposed construction programme for the Proposed Project is approximately 60 months, and variability across this timeline has been considered based on anticipated construction trip forecasts provided by the Front-End Engineering Design (FEED) engineers, to identify the potential duration of a given cumulative effect and to help determine whether this is more likely to be Minor (not significant) or Moderate (potentially significant). Furthermore, average construction traffic levels have been considered across the entire construction programme to provide additional context.

B1121 Main Road / B1121 Church Hill Junction (S-RJ6) – Severance

3.3.2 The potential cumulative effect on severance at the B1121 Main Road / B1121 Church Hill junction to the south of Saxmundham has been examined further, to consider the possible duration over which this effect could be experienced.

3.3.3 Construction vehicles associated with the Proposed Project will pass through the B1121 Main Road / B1121 Church Hill junction when travelling to / from accesses S-BM09 and S-BM12. There would need to be a Negligible effect on this receptor as a result of the Proposed Project, to be confident that there would be no potential for a significant cumulative effect with other projects. A Negligible effect would be concluded where a negligible magnitude of change occurred as a result of the Proposed Project, as whilst a medium sensitivity has been assigned to this receptor for the assessment of severance, this is the lowest magnitude of change that can be achieved.

3.3.4 The approach for determining the magnitude of change for severance is set out within **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**. It is considered that compared to the busiest (assessed) day of the Proposed Project, there would need to be 30% fewer total construction vehicles and 47% fewer HGVs (for the relevant accesses) to result in a negligible magnitude of change for severance as follows:

- The increase in total vehicles (compared to baseline traffic flows) would be less than 30% for all time periods;
- There would be no HGVs during the weekday AM and PM development peak hours (7am-8am and 6pm-7pm) and fewer than 30 total vehicles (including HGVs) during the weekday AM and PM network peak hours (8am-9am and 5pm-6pm), as well as the Saturday lunchtime period (12pm-1pm);
- The increase in daily HGVs (compared to baseline traffic flows) would be less than 90% for the 12-hour weekday and 24-hour day. Whilst this initially results in a medium magnitude of change for severance, this is downgraded to a small

magnitude of change when considering the very low baseline (104 HGVs over a 24-hour period) in accordance with Paragraph 7.4.38 of **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**. This is then considered to be negligible in consideration of the following:

- A maximum of 11 HGVs would pass through the B1121 Main Road / B1121 Church Hill junction per hour as a result of the Proposed Project, with all HGVs travelling straight ahead (not turning at the junction). This represents less than one additional HGV every five minutes.
- A continuous footway only runs along the western side of the B1121 Main Road at this location. Therefore, pedestrians are only expected to cross the carriageway to access the bus stop on the eastern side of the carriageway (served by Bus Route 521, operating with one service per hour).

3.3.5 Forecast construction traffic levels for the Proposed Project are only expected to exceed the above negligible levels of change for a maximum period of five consecutive months during the construction programme (for this receptor) as shown by Plate 3.1 for total vehicles and Plate 3.2 for HGV movements. Average construction levels also fall well within negligible levels of change as can be seen from the graphs.

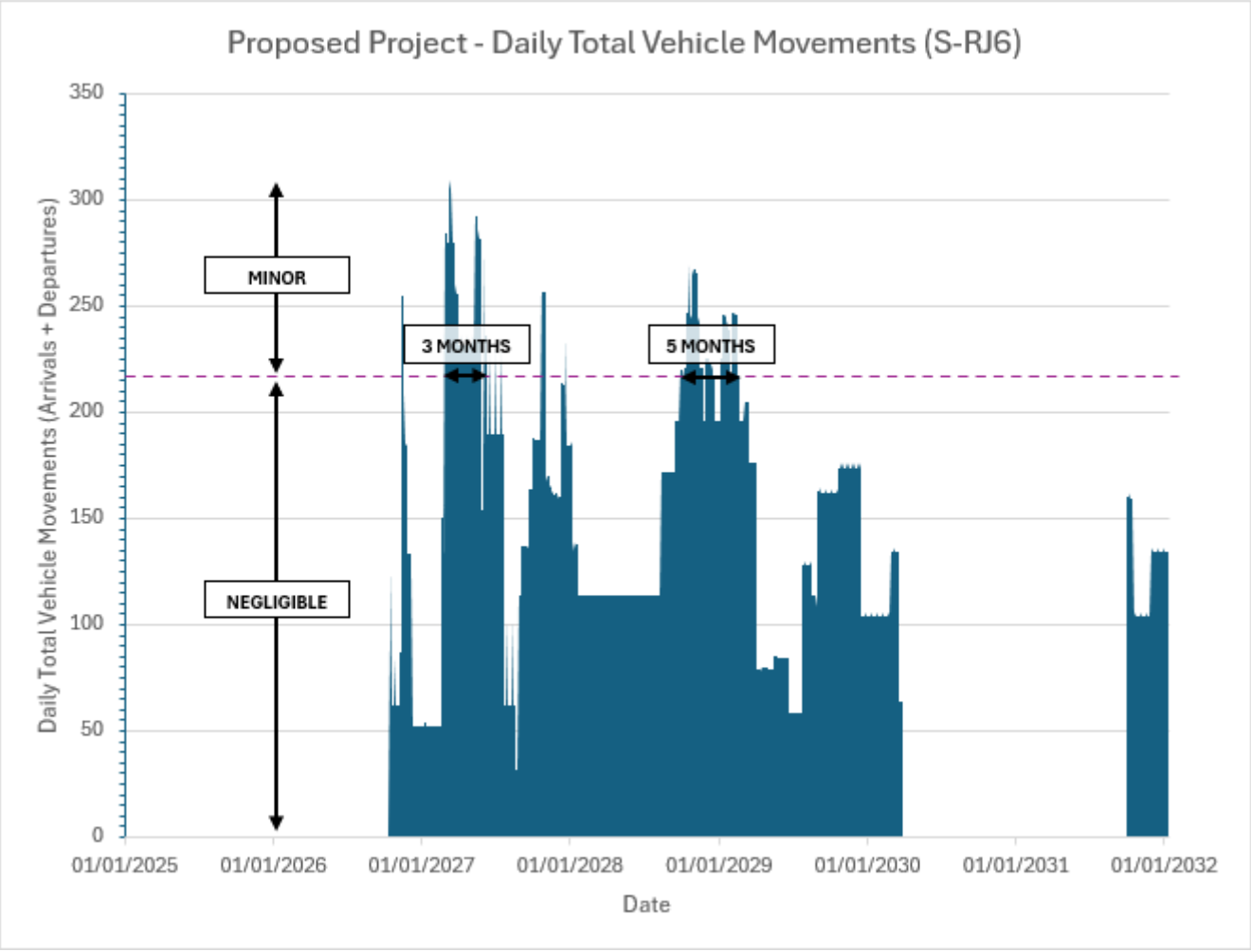

Plate 3.1 Potential Maximum Duration of Minor / Moderate Cumulative Effect with Sizewell C (S-RJ6, Severance, Total Vehicles)

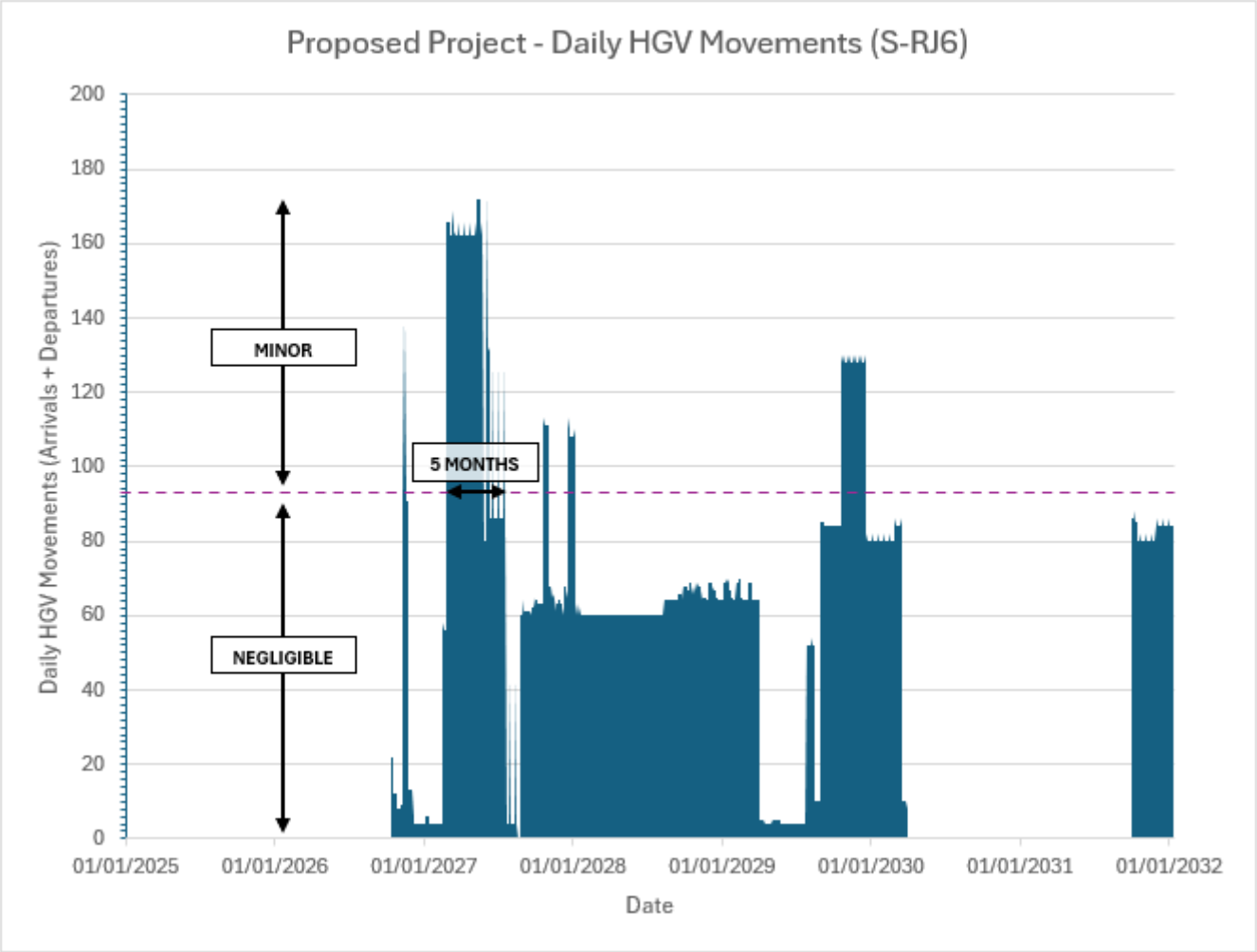

Plate 3.2 Potential Maximum Duration of Minor / Moderate Cumulative Effect with Sizewell C (S-RJ6, Severance, HGVs)

3.3.6 In view of the above, it is considered that a Minor/ Moderate cumulative effect (marginally exceeding Negligible based on total vehicles) could persist for up to five consecutive months if peak construction traffic levels for the Proposed Project and Sizewell C overlapped precisely. However, this duration will be shorter if the construction peaks of the two projects were off-set, or if the construction peak for Sizewell C ends up being shorter than five months at this time and location. There would be no potential for a significant cumulative effect based on average (rather than peak) traffic levels for the Proposed Project, given this would result in a Negligible effect for the Proposed Project. In view of this and the short-term duration of any potential temporary impacts, it is considered that the cumulative effect is more likely to be Minor and not significant overall, with a Negligible cumulative effect being experienced for the majority of the construction programme.

3.3.7 The above supports the findings presented within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** that the Minor / Moderate cumulative effects which have previously been identified, including for the B1121 Main Road / B1121 Church Hill junction to the south of Saxmundham, are more likely to be Minor and not significant.

4. EA1N and EA2

4.1 Approach

4.1.1 The approaches to the cumulative assessments of EA1N (ID5) and EA2 (ID6) are set out within Sections 9.3 and 9.4 of **Application Document 6.3.2.7.A ES Appendix 2.7.A Transport Assessment Note [APP-122]**. The findings for EA1N and EA2 are identical and these two cumulative schemes have therefore been examined together (below) to avoid repetition.

4.1.2 EA1N comprises a proposed 208 km^2 wind farm developed by Scottish Power Renewables (SPR) consisting of 67 turbines with a combined electricity generation capacity of 800 MW, an extension of the existing East Anglia ONE array. It is part of the East Anglia Hub which includes three arrays off the coast of Suffolk. EA1N makes landfall on the East Suffolk coast and a cable route then runs to two SPR substations which then connect into the Friston Substation. EA1N shares parts of the Order Limits with the Proposed Project (Suffolk Onshore Scheme).

4.1.3 EA2 comprises a proposed 255 km^2 wind farm developed by SPR consisting of 75 turbines with a combined electricity generation capacity of 900 MW. The EA2 landfall, cable route and substation proposals are identical to EA1N. EA2 shares parts of the Order Limits with the Proposed Project (Suffolk Onshore Scheme).

4.1.4 A robust cumulative assessment was carried out for EA1N (ID5) and EA2 (ID6) within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**, by considering additional vehicle trips associated with the peak construction phase and assuming that all staff vehicles / non-HGVs will arrive during a single hour in the morning and will depart during a single hour in the evening (these were then assessed against the respective shoulder and network peak hours). This represented traffic flows during the busiest month of the three-year construction programme e.g. this could now be as late as 2028 on the basis that construction commenced in mid-2025.

4.1.5 The tables set out within this section are based on the parts of the highway network which both the Proposed Project and EA1N / EA2 will be expected to use i.e. shared receptors.

4.2 Cumulative Assessment

Consideration of EA1N / EA2 ES following Initial Assessment (Potential Significant Effects)

4.2.1 Where a potential significant (Major or Moderate) adverse effect was identified for EA1N and EA2 without mitigation based on an initial assessment (following the steps identified in Plate 2.1), Table 26.33: Potential Impacts Identified for Traffic and Transport of the EA1N ES (Scottish Power Renewables, 2019) and the EA2 ES (Scottish Power Renewables, 2019) were then reviewed, to identify the residual transport effect for the relevant receptor and assessment, following the application of EA1N's / EA2's committed mitigation. Excluding any additional mitigation committed to by EA1N / EA2

would not be a realistic assessment given the application of the mitigation is legally binding when this is committed to in certified documents.

4.2.2 The receptors and assessment criteria, where the residual transport effects reported in the EA1N / EA2 ES were adopted, are set out Table 4.1. The applicable receptor references are provided within brackets for the Proposed Project and EA1N / EA2. The road link and road junction receptors for the Proposed Project are also shown geographically on **Application Document 6.4.2.7 ES Figures Suffolk Traffic and Transport [APP-234]** for reference.

Table 4.1 Cumulative Assessment of the Proposed Project and EA1N / EA2 based on the Residual Effects reported in the EA1N / EA2 ES

Shared Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Residual Effect from either EA1N or EA2 (as reported in EA1N / EA2 ES)	Assessment of Cumulative Effects
A1094 (between A12 and B1069 Snape Road)	Severance	Minor adverse (S-RL10)	Negligible/ Minor adverse (Link 6)	Minor/ Moderate (unlikely to be significant)
	Pedestrian Delay	Minor adverse (S-RL10)	Negligible/ Minor adverse* (Link 6)	Minor/ Moderate (unlikely to be significant)
B1069 Snape Road (between A1094 Aldeburgh Road and Aldringham Lane)	Road Safety	Negligible (S-RL12)	Negligible (Link 9)	None

*based on severance, in absence of a pedestrian delay assessment

4.2.3 The assessment of cumulative effects for the Proposed Project and EA1N / EA2 is expected to be either Minor (not significant) or Moderate (potentially significant) for the A1094 (between the A12 and B1069 Snape Road) in terms of severance and pedestrian delay as reported within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**. It was concluded that these cumulative effects are more likely to be Minor and not significant within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**, on the basis that the effect of each individual development is Minor at most, and the peak construction phases are unlikely to overlap. Further details have been provided below to inform this conclusion.

Additional Findings of the Initial Assessment (Not Significant Effects)

4.2.4 The cumulative traffic assessment adopted the findings of the initial assessment based on the traffic flows for the peak construction phase of EA1N / EA2 (prior to additional mitigation) where a 'not significant' (Minor adverse or Negligible) effect was identified, given that these effects would remain 'not significant' with the inclusion of EA1N / EA2's committed mitigation (therefore, a review of the EA1N / EA2 ES was not considered to be necessary in this instance). Where a Negligible effect was identified for EA1N / EA2, then no cumulative effects were expected when combined with the Proposed Project (or vice-versa), as set out within **Application Document 6.3.1.5.A ES Appendix 1.5.A Cumulative Effects Assessment Methodologies [APP-091]**.

4.2.5 The potential for cumulative effects to arise as a result of construction traffic associated with both the Proposed Project and EA1N (ID5), as well as both the Proposed Project and EA2 (ID6), as reported in Table 13.31 of **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**, is set out in Table 4.2 for the assessed road links and road junctions. Again, the findings for the Proposed Project with EA1N are identical to the findings for the Proposed Project with EA2, and these have been examined together to avoid repetition.

Table 4.2 Cumulative Assessment of the Proposed Project and EA1N / EA2 (Excluding EA1N / EA2 Additional Mitigation)

Shared Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Potential Effect from either EA1N or EA2 (Excluding Additional Mitigation)	Assessment of Cumulative Effects
A12, south of A1094 (S-RL1 in the Sea Link ES)	Road Safety	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)
A1094, between A12 and B1069 Snape Road (S-RL10 in the Sea Link ES)	Severance and Pedestrian Delay	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)
B1069 Snape Road, between A1094 Aldeburgh Road and Aldringham Lane (S-RL12 in the Sea Link ES)	Severance, Pedestrian Delay and Driver Delay	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)

Shared Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Potential Effect from either EA1N or EA2 (Excluding Additional Mitigation)	Assessment of Cumulative Effects
A12/ A1094 Junction (S-RJ1 in the Sea Link ES)	Road Safety	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)

4.2.6 The assessment of cumulative effects for the Proposed Project and EA1N / EA2 is expected to be either Minor (not significant) or Moderate (potentially significant) for several receptors as shown in Table 4.2. It was concluded that these cumulative effects are more likely to be Minor and not significant within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**, on the basis that the effect of each individual development is Minor, and the peak construction phases are unlikely to overlap. Further details have been provided below to inform this conclusion, including following a further review of EA1N's / EA2's residual effects.

Further Consideration of EA1N / EA2 ES following Initial Assessment

4.2.7 Following the above, Table 26.33 Potential Impacts Identified for Traffic and Transport of the EA1N ES (Scottish Power Renewables, 2019) and EA2 ES (Scottish Power Renewables, 2019) has been reviewed once again, to identify the residual transport effects for the relevant receptors and assessments identified in Table 4.2, following the application of EA1N's / EA2's committed additional mitigation. The results of the cumulative assessment when combined with the Proposed Project have then been updated, as presented in Table 4.3.

Table 4.3 Updated Cumulative Assessment of the Proposed Project and EA1N / EA2 based on the Residual Effects reported in the EA1N / EA2 ES

Shared Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Residual Effect from either EA1N or EA2 (as reported in EA1N / EA2 ES)	Assessment of Cumulative Effects
A12 (south of A1094)	Road Safety	Minor adverse (S-RL1)	Minor adverse (Link 3)	Minor/ Moderate (unlikely to be significant)

Shared Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Residual Effect from either EA1N or EA2 (as reported in EA1N / EA2 ES)	Assessment of Cumulative Effects
A1094 (between A12 and B1069 Snape Road)	Severance and Pedestrian Delay	Minor adverse (S-RL10)	Negligible/ Minor adverse (Link 6)	Minor/ Moderate (unlikely to be significant)
B1069 Snape Road (between A1094 Aldeburgh Road and Aldringham Lane)	Severance and Pedestrian Delay	Minor adverse (S-RL12)	Negligible/ Minor adverse (Link 9)	Minor/ Moderate (unlikely to be significant)
	Driver Delay	Minor adverse (S-RL12)	Negligible (Link 9)	None
A12/ A1094 Junction	Road Safety	Minor adverse (S-RJ1)	Minor adverse (Links 2, 3 and 6)	Minor/ Moderate (unlikely to be significant)

4.2.8 The above shows that the results within Table 4.2 and Table 4.3 are almost identical, except for the B1069 Snape Road (between A1094 Aldeburgh Road and Aldringham Lane) where no cumulative effect has been identified for the assessment of driver delay. A further review of potential significant effects for the remaining receptors and assessment types has been carried out in the following section of this TN.

4.3 Further Examination of the Potential for Significant Cumulative Effects

4.3.1 As before, variability across the construction programme has been considered based on anticipated construction trip forecasts provided by the FEED engineers, to identify the potential duration of a given cumulative effect and to help determine the likely significance.

A12 South of A1094 (S-RL1) and A12/ A1094 Junction (S-RJ1) – Road Safety

4.3.2 The potential cumulative effect on road safety for the A12 to the south of the A1094, as well as the A12 / A1094 junction has been examined further, to consider the potential duration over which this effect could be experienced.

4.3.3 Construction vehicles associated with the Proposed Project will route along the A12 when travelling to / from all accesses. There would need to be a Negligible effect on the A12 to the south of the A1094 and the A12 / A1094 junction as a result of the Proposed Project, to be confident that there would be no potential for a significant cumulative effect with other projects. A Negligible effect would be concluded where a negligible magnitude of change occurred as a result of the Proposed Project, as whilst a high

sensitivity has been assigned to these receptors for the assessment of road safety, this is the lowest magnitude of change that can be achieved.

4.3.4 The approach for determining the magnitude of change for road safety is set out within **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**. It is considered that compared to the busiest (assessed) day of the Proposed Project, that there would need to be 33% fewer total construction vehicles on the A12 (south of the A1094) and 41% fewer total construction vehicles at the A12/ A1094 junction to result in a negligible magnitude of change for these receptors in terms of road safety as follows:

- The increase in total vehicles (including HGVs) would be below 30 vehicles during the weekday AM and PM network peak hours (8am-9am and 5pm-6pm), as well as the Saturday lunchtime period (12pm-1pm);
- The increase in total vehicles (compared to baseline traffic flows) would be less than 30% for the weekday AM and PM development peak hours (7am-8am and 6pm-7pm), with no HGVs at these times;
- Whilst there would be an increase of more than 10% HGVs during the 12-hour weekday and 24-hour daily scenarios, the increase in total vehicles would be less than 30% at these times; and
- Therefore, a negligible magnitude of change is considered to be appropriate (which has been determined on a case-by-case basis as per the methodology), given that the majority of time periods are classified as negligible, with only one of the thresholds being exceeded for the daily time periods.

4.3.5 Forecast construction traffic levels for the Proposed Project are only expected to exceed the above negligible levels of change for a maximum period of four consecutive months during the construction programme (for the receptors identified), as shown in Plate 4.1. Average construction levels also fall well within negligible levels of change as can be seen from the graph.

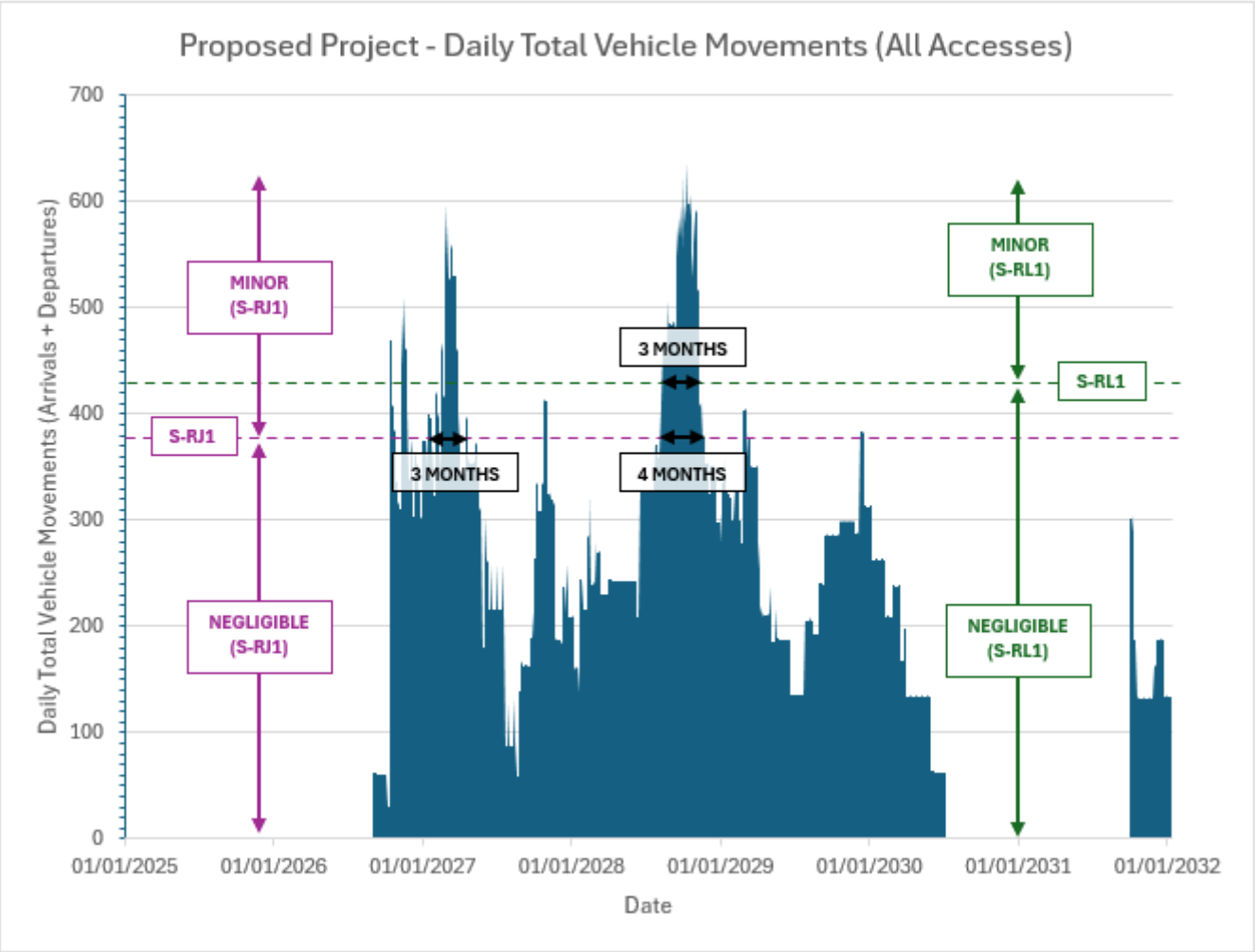

Plate 4.1 Potential Maximum Duration of Minor / Moderate Cumulative Effect with EA1N / EA2 (S-RL1 and S-RJ1, Road Safety, Total Vehicles)

4.3.6 In view of the above, it is considered that a Minor / Moderate cumulative effect (marginally exceeding Negligible) could persist for up to four consecutive months if peak construction traffic levels for the Proposed Project and EA1N or EA2 overlapped exactly. However, this duration will be shorter if the construction peaks of the Proposed Project and EA1N / EA2 were off-set, or if the construction peak for EA1N / EA2 ends up being shorter than four months at these times and locations. There would be no potential for a significant cumulative effect based on average (rather than peak) traffic levels for the Proposed Project, given this would result in a Negligible effect for the Proposed Project. In view of this and the short-term duration of any potential temporary impacts, it is considered that the cumulative effect is more likely to be Minor and not significant overall, with a Negligible cumulative effect being experienced for the majority of the construction programme.

4.3.7 Further to the above, Sizewell C's proposed A12 / A1094 roundabout (which will be delivered as part of the Two-Village bypass scheme) is expected to result in a significant reduction in the number of collisions at this junction, as identified by Paragraph 10.3.48 of the Consolidated Transport Assessment for Sizewell C (EDF Energy, 2021). The proposed roundabout has also been subject to a Stage 1 Road Safety Audit (RSA) and the accepted recommendations will be addressed at detailed design, which includes providing adequate signage on the A12 in advance of the

roundabout, so that the location of the roundabout is made clear to drivers. The wider Two-Village bypass scheme will also significantly reduce the volume of traffic passing through Farnham and Stratford St Andrew, both during and after the construction of Sizewell C, bringing long-term benefits to the local community. As such, the two village bypass scheme and A12 / A1094 roundabout are expected to bring overall benefits in terms of road safety and network capacity.

4.3.8 The above supports the findings presented within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** that the Minor / Moderate cumulative effects which have previously been identified, including for the A12 (south of A1094) and the A12/ A1094 junction, are more likely to be Minor and not significant.

A1094 between A12 and B1069 Snape Road (S-RL10) – Severance and Pedestrian Delay

4.3.9 The potential cumulative effect on severance and pedestrian delay for the A1094 (between the A12 and B1069 Snape Road) has been examined further, to consider the potential duration over which this effect could be experienced.

4.3.10 Construction vehicles associated with the Proposed Project would route along the A1094 when travelling to/ from the majority of the accesses, including S-BM03 and S-BM04 on the B1069 Snape Road, S-BM01 and S-BM02 on B1122 Leiston Road, S-BM11 on B1121 Saxmundham Road, S-BM10 on A1094 Aldeburgh Road and S-BM13 on Thorpe Road. There would need to be a Negligible effect on the A1094 as a result of the Proposed Project, to be confident that there would be no potential for a significant cumulative effect with other projects. A Negligible effect would be concluded where a negligible magnitude of change occurred as a result of the Proposed Project, as whilst a medium sensitivity level has been assigned to this receptor for the assessments of severance and pedestrian delay, this is the lowest magnitude of change that can be achieved.

4.3.11 The approach for determining the magnitude of change for severance and pedestrian delay is set out within **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**. It is considered that compared to the busiest (assessed) day of the Proposed Project, that there would need to be 16% fewer total construction vehicles and 56% fewer HGVs to result in a negligible magnitude of change for this receptor in terms of severance and pedestrian delay as follows:

- The increase in total vehicles (including HGVs) would be below 30 vehicles during the weekday AM and PM network peak hours (8am-9am and 5pm-6pm), as well as the Saturday lunchtime period (12pm-1pm);
- The increase in total vehicles (compared to baseline traffic flows) would be less than 30% for the weekday AM and PM development peak hours (7am-8am and 6pm-7pm), with no HGVs at these times; and
- The increase in daily HGVs (compared to baseline traffic flows) would be less than 40% for the 12-hour weekday and 24-hour day. Whilst this initially results in a small magnitude of change for severance and pedestrian delay, this is downgraded to a negligible magnitude of change when considering the very low baseline (200 HGVs over a 24-hour period) in accordance with Paragraph 7.4.38 of **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**.

4.3.12 Forecast construction traffic levels for the Proposed Project are only expected to exceed the above negligible levels of change for a maximum period of six consecutive months during the construction programme (for this receptor), as a result of HGVs, as shown in Plate 4.2 below. Average construction levels also fall well within negligible levels of change as can be seen from the graph.

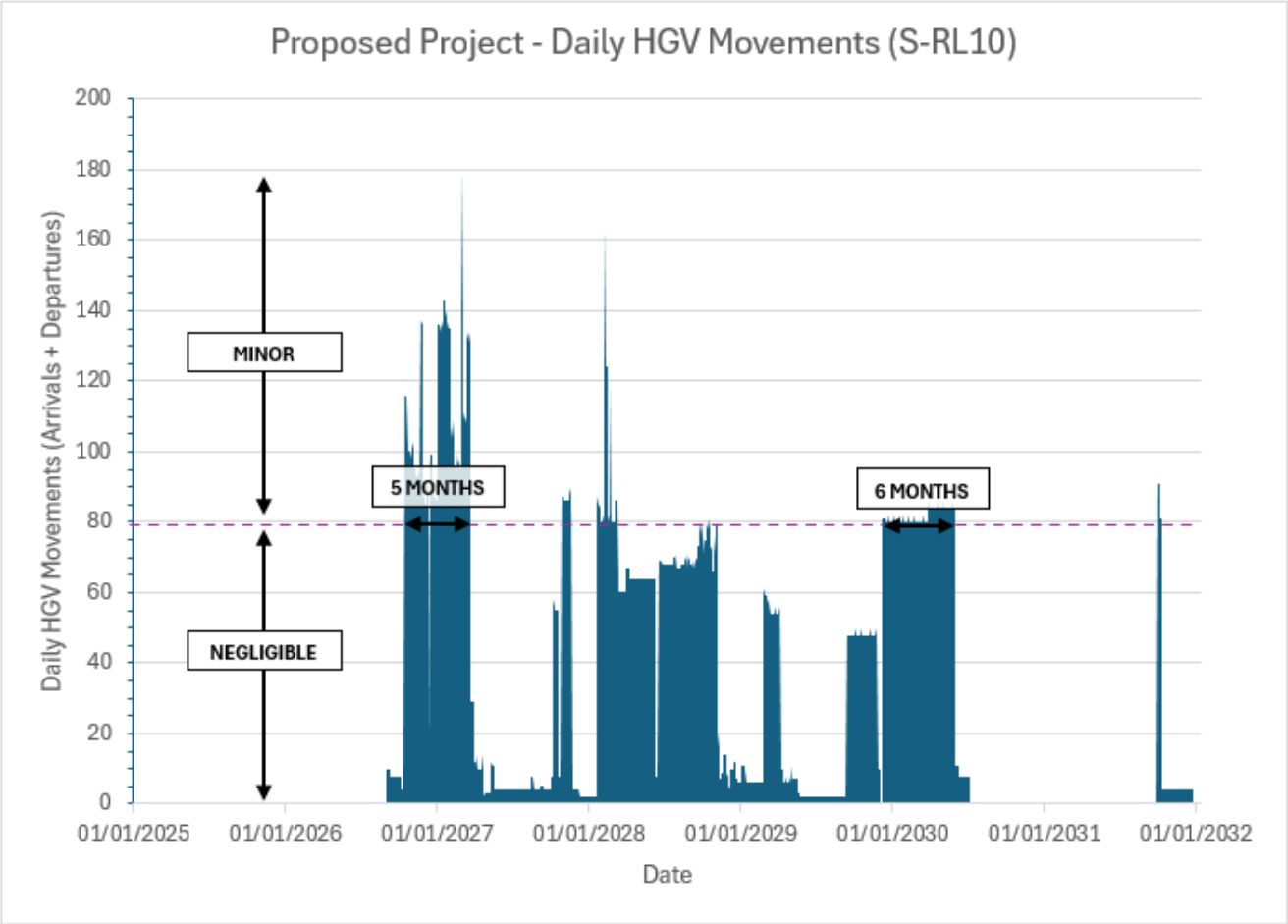

Plate 4.2 Potential Maximum Duration of Minor / Moderate Cumulative Effect with EA1N / EA2 (S-RL10, Severance and Pedestrian Delay, HGVs)

4.3.13 In view of the above, it is considered that a Minor / Moderate cumulative effect (marginally exceeding Negligible) could persist for up to six consecutive months if peak construction traffic levels for the Proposed Project and EA1N or EA2 overlapped precisely. However, this duration will be shorter if the construction peaks of the Proposed Project and EA1N / EA2 were off-set, or if the construction peak for EA1N / EA2 ends up being shorter than six months at this time and location. There would be no potential for a significant cumulative effect based on average (rather than peak) traffic levels for the Proposed Project, given this would result in a Negligible effect for the Proposed Project. In view of this and the short-term duration of any potential temporary impacts, it is considered that the cumulative effect is more likely to be Minor and not significant overall, with a Negligible cumulative effect being experienced for the majority of the construction programme.

4.3.14 The above supports the findings within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** that the Minor / Moderate cumulative effects which have previously been identified,

including for the A1094 between the A12 and B1069 Snape Road, are more likely to be Minor and not significant.

B1069 Snape Road between A1094 Aldeburgh Road and Aldringham Lane (S-RL12) – Severance and Pedestrian Delay

4.3.15 The potential cumulative effect on severance and pedestrian delay for the B1069 Snape Road (between the A1094 Aldeburgh Road and Aldringham Lane) has been examined further, to consider the potential duration over which this effect could be experienced.

4.3.16 Construction vehicles associated with the Proposed Project would route along the B1069 Snape Road when travelling to / from accesses S-BM03 and S-BM04 on the B1069 Snape Road. There would need to be a Negligible effect on the B1069 Snape Road as a result of the Proposed Project, to be confident that there would be no potential for a significant cumulative effect with other projects. A Negligible effect would be concluded where a small or negligible magnitude of change occurred, given that a low sensitivity level has been assigned to this receptor for the assessments of severance and pedestrian delay.

4.3.17 The approach for determining the magnitude of change for severance and pedestrian delay is set out within **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**. It is considered that compared to the busiest (assessed) day of the Proposed Project, that there would need to be 4% fewer total construction vehicles and 22% fewer HGVs to result in a small magnitude of change for this receptor in terms of severance and pedestrian delay as follows:

- The increase in total vehicles (including HGVs) would be below 30 vehicles during the weekday AM and PM network peak hours (8am-9am and 5pm-6pm), as well as the Saturday lunchtime period (12pm-1pm);
- The increase in total vehicles (compared to baseline traffic flows) would be less than 60% for the weekday AM and PM development peak hours (7am-8am and 6pm-7pm), with no HGVs at these times; and
- The increase in daily HGVs (compared to baseline traffic flows) would be less than 90% for the 12-hour weekday and 24-hour day. Whilst this initially results in a medium magnitude of change for severance and pedestrian delay, this is downgraded to a small magnitude of change when considering the very low baseline (173 HGVs over a 24-hour period) in accordance with Paragraph 7.4.38 of **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**.

4.3.18 Forecast construction traffic levels for the Proposed Project are only expected to exceed the above levels for a period of less than one month during the construction programme (for this receptor), as shown in Plate 4.3 for HGVs. Average construction levels also fall well within these levels as can be seen from the graph.

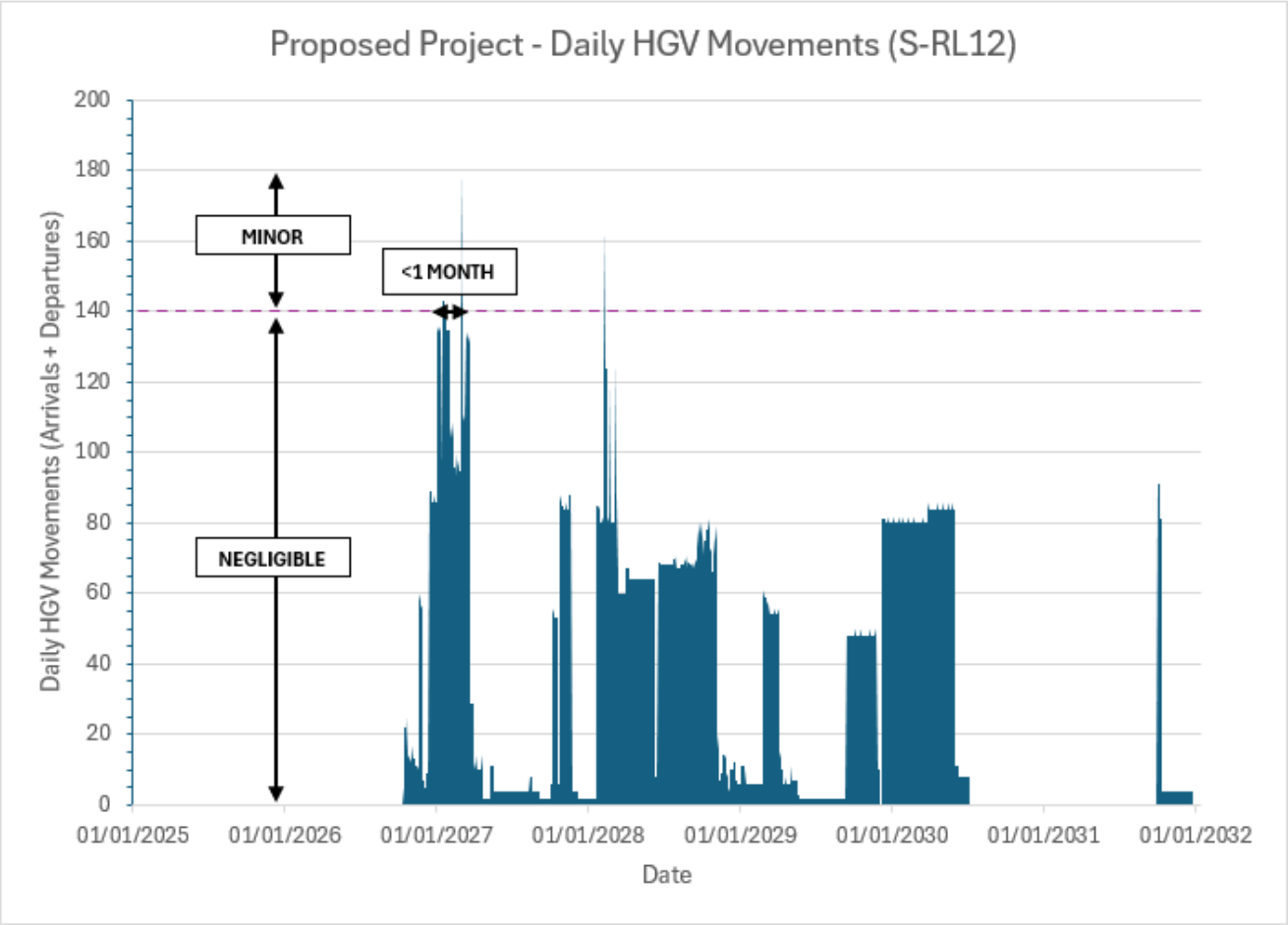

Plate 4.3 Potential Maximum Duration of Minor / Moderate Cumulative Effect with EA1N / EA2 (S-RL12, Severance and Pedestrian Delay, HGVs)

4.3.19 In view of the above, it is considered that a Minor / Moderate cumulative effect could persist for up to one month if peak construction traffic levels for the Proposed Project and EA1N or EA2 overlapped precisely. However, this effect will be avoided altogether if the construction peaks of the Proposed Project and EA1N / EA2 were off-set. There would be no potential for a significant cumulative effect based on average (rather than peak) traffic levels for the Proposed Project, as the average levels only ever result in a Negligible effect for the Proposed Project alone. In view of this and the short-term duration of any potential temporary impacts, it is considered that the cumulative effect is more likely to be Minor and not significant overall, with a Negligible cumulative effect being experienced for the majority of the construction programme.

4.3.20 The above supports the findings within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** that the Minor / Moderate cumulative effects which have previously been identified, including for the B1069 Snape Road (between the A1094 Aldeburgh Road and Aldringham Lane), are more likely to be Minor and not significant.

5. LionLink

5.1 Approach

5.1.1 The approach to the cumulative assessment of the LionLink Offshore Interconnector (ID287) is set out within Section 9.8 of **Application Document 6.3.2.7.A ES Appendix 2.7.A Transport Assessment Note [APP-122]**. LionLink comprises a 1.8 GW Multi-Purpose Interconnector connecting the Netherlands and the UK developed by National Grid Ventures (NGV), to increase transfer in offshore wind electricity generation and to improve grid capacity in both countries. LionLink shares parts of the Order Limits with the Proposed Project (Suffolk Onshore Scheme).

5.1.2 In the absence of construction traffic numbers for LionLink, a robust cumulative assessment was carried out for LionLink within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** by assuming traffic numbers would be be the same as the peak construction traffic forecasts for the construction of the Saxmundham Converter Station as part of the Proposed Project, given that a converter station of a similar scale will be needed for LionLink. This approach allowed a cumulative assessment to be carried out, in the absence of any details on forecast construction vehicle trips for the LionLink Offshore Interconnector (ID287) itself, given that neither the PEIR nor the ES had been published for this development prior to the DCO submission. It should therefore be highlighted that the LionLink traffic flows that have been adopted to inform the cumulative assessment have not been supplied by, or agreed with, NGV.

5.1.3 The tables set out within this section are based on the parts of the highway network which both the Proposed Project and LionLink would be expected to use i.e. shared receptors.

5.2 Cumulative Assessment

5.2.1 The potential for cumulative effects to arise as a result of construction traffic associated with both the Proposed Project and the LionLink Offshore Interconnector (ID287), as reported in Table 13.31 of **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**, is set out in Table 5.1 for the assessed highway links and junctions. The findings of the assessment for the Proposed Project and LionLink are identical, given that the same peak construction traffic flows have been adopted. These are also based on the residual effects of the Proposed Project, and therefore the residual effects of LionLink as a proxy, on the assumption that similar mitigation will be adopted and legally secured for both projects. The road link and road junction receptors for the Proposed Project are also shown geographically on **Application Document 6.4.2.7 ES Figures Suffolk Traffic and Transport [APP-234]** for reference.

Table 5.1 Cumulative Assessment of the Proposed Project and LionLink

Shared Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Residual Effect from LionLink	Assessment of Cumulative Effects
A12, south of A1094 (S-RL1 in the Sea Link ES)	Road Safety	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)
B1121 Main Road, east of A12 (S-RL5 in the Sea Link ES)	Severance and Pedestrian Delay	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)
A12/ A1094 Junction (S-RJ1 in the Sea Link ES)	Road Safety	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)
B1121 Main Road/ B1121 Church Hill Junction (S-RJ6 in the Sea Link ES)	Severance and Pedestrian Delay	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)

5.2.2 The assessment of cumulative effects for the Proposed Project and LionLink is expected to be either Minor (not significant) or Moderate (potentially significant) for several receptors as shown in Table 5.1. It was concluded that these cumulative effects are more likely to be Minor and not significant within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]**, on the basis that the effect of each individual development is Minor, and the peak construction phases are unlikely to overlap (note: LionLink is currently expected to come forward two years later than the Proposed Project). Further details have been provided below to inform this conclusion, including following a further review of the likely programmes for the Proposed Project and LionLink.

5.3 Further Examination of the Potential for Significant Cumulative Effects

5.3.1 As before, variability across the construction programme has been considered based on anticipated construction trip forecasts provided by the FEED engineers, to identify the potential duration of a given cumulative effect and to help determine the likely significance.

A12 South of A1094 (S-RL1) and A12/ A1094 Junction (S-RJ1) – Road Safety

5.3.2 The potential cumulative effect on road safety for the A12 to the south of the A1094, as well as the A12 / A1094 junction as a result of the Proposed Project and other cumulative schemes has been examined previously as part of the review of EA1N / EA2 (see Section 4 and Plate 4.1). Forecast construction traffic levels for the Proposed Project are only expected to exceed negligible levels of change on these receptors for a maximum period of four consecutive months during the construction programme. Average construction levels also fall well within negligible levels of change.

5.3.3 In view of the above, it is considered that a Minor / Moderate cumulative effect could persist for up to four consecutive months if peak construction traffic levels for the Proposed Project and LionLink overlapped exactly. However, if LionLink were to come forward two years later than the Proposed Project (as currently planned) then this Minor / Moderate cumulative effect at the A12 / A1094 junction is only expected to be experienced for 35 days, further reducing to just five days at the A12 to the south of the A1094 as shown inPlate 5.1 and Plate 5.2 respectively, reducing the likelihood of significant effects arising. There would be no potential for a significant cumulative effect based on average (rather than peak) traffic levels for the Proposed Project as the Proposed project 'alone' would only result in a Negligible effect.

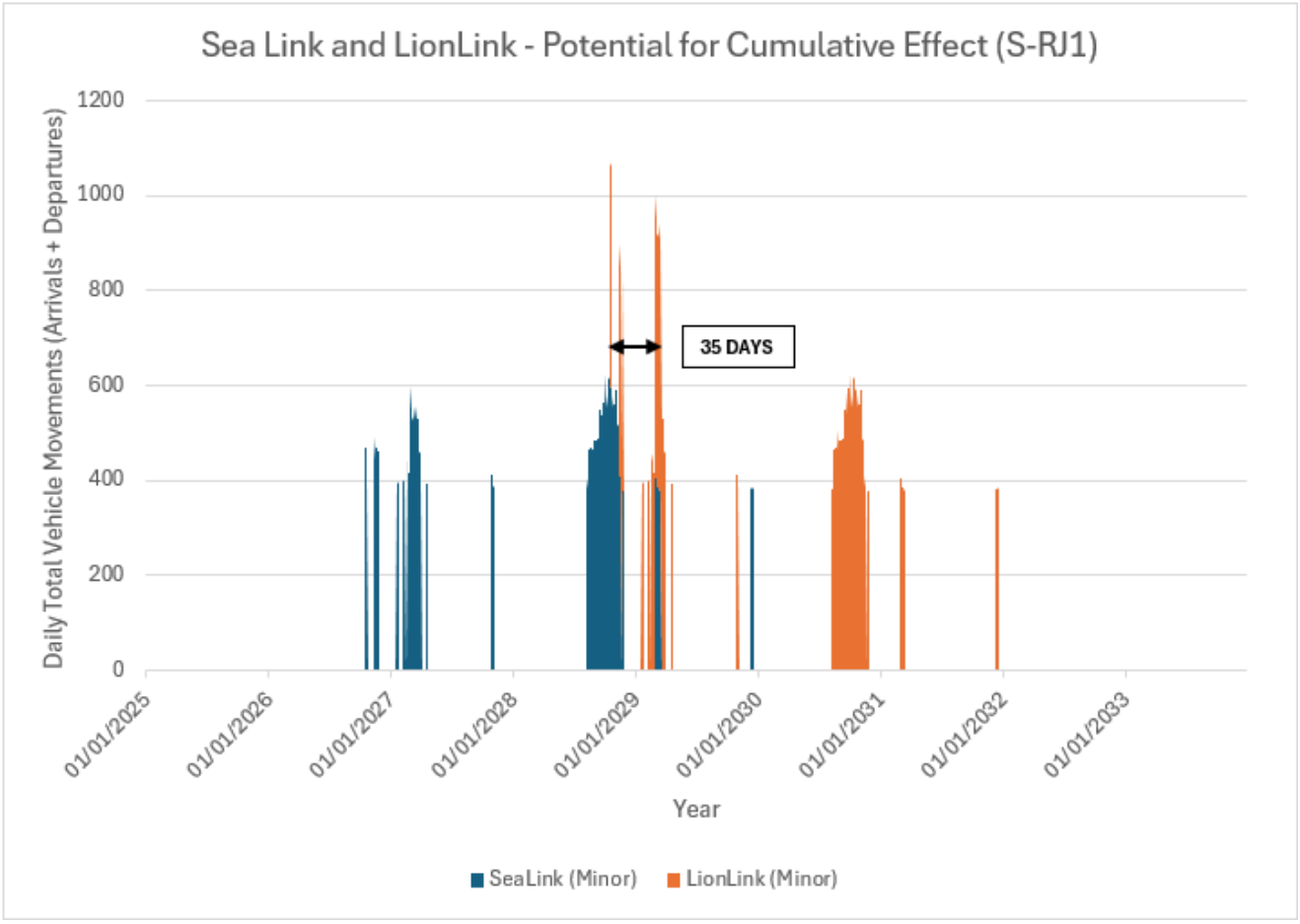

Plate 5.1 Potential Maximum Duration of Minor / Moderate Cumulative Effect with LionLink (S-RJ1, Road Safety, Total Vehicles)

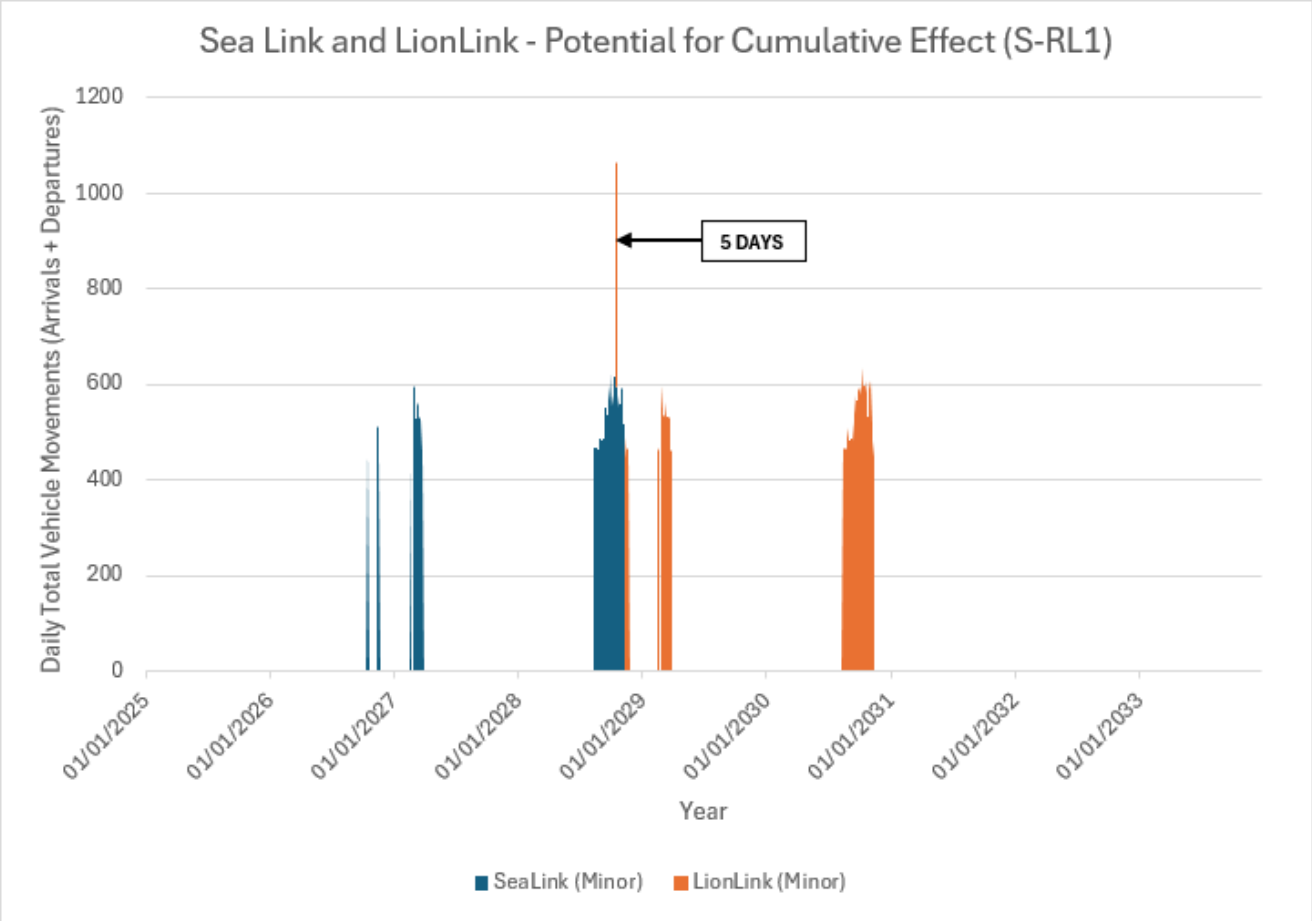

Plate 5.2 Potential Maximum Duration of Minor / Moderate Cumulative Effect with LionLink (S-RL1, Road Safety, Total Vehicles)

5.3.4 In view of this and the short-term duration of any potential temporary impacts, it is considered that the cumulative effect is more likely to be Minor and not significant overall, with a Negligible cumulative effect being experienced for the majority of the construction programme.

5.3.5 As previously identified, Sizewell C's proposed A12 / A1094 roundabout (which will be delivered as part of the Two-Village bypass scheme) is expected to result in a significant reduction in the number of collisions at this junction, as identified by Paragraph 10.3.48 of the Consolidated Transport Assessment for Sizewell C (EDF Energy, 2021). The Two-Village bypass scheme and A12 / A1094 roundabout are expected to bring overall benefits in terms of road safety and network capacity.

5.3.6 The above supports the findings within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** that the Minor / Moderate cumulative effects which have previously been identified, including for the A12 (south of A1094) and the A12 / A1094 junction, are more likely to be Minor and not significant.

B1121 Main Road, east of A12 (S-RL5) and B1121 Main Road / B1121 Church Hill Junction (S-RJ6) – Severance and Pedestrian Delay

5.3.7 The potential cumulative effect on severance (and therefore pedestrian delay given the same assessment criteria) at the B1121 Main Road/ B1121 Church Hill junction to the south of Saxmundham as a result of the Proposed Project and other cumulative schemes has been examined previously as part of the review of Sizewell C (see Section 3, Plate 3.1 and Plate 3.2).

5.3.8 The potential cumulative effect on severance and pedestrian delay on the B1121 Main Road (east of the A12) has been examined further below, to consider the potential duration over which this effect could be experienced.

5.3.9 Construction vehicles associated with the Proposed Project will pass along the B1121 Main Road when travelling to / from accesses S-BM09 and S-BM12. There would need to be a Negligible effect on this receptor as a result of the Proposed Project, to be confident that there would be no significant cumulative effect with other projects. A Negligible effect would be concluded where a small or negligible magnitude of change occurred, given that a low sensitivity level has been assigned to this receptor for the assessments of severance and pedestrian delay.

5.3.10 The approach for determining the magnitude of change for severance and pedestrian delay is set out within **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**. It is considered that compared to the busiest (assessed) day of the Proposed Project, that there would need to be 45% fewer HGVs (for the relevant accesses) to result in a small magnitude of change for severance and pedestrian delay due to the following:

- The increase in total vehicles (compared to baseline traffic flows) would be less than 60% for all time periods;
- There would be no HGVs during the weekday AM and PM development peak hours (7am-8am and 6pm-7pm) and fewer than 30 total vehicles (including HGVs) during the weekday AM and PM network peak hours (8am-9am and 5pm-6pm), as well as the Saturday lunchtime period (12pm-1pm); and
- The increase in daily HGVs (compared to baseline traffic flows) would be less than 90% for the 12-hour weekday and 24-hour day. Whilst this initially results in a medium magnitude of change for severance and pedestrian delay, this is downgraded to a small magnitude of change when considering the very low baseline (108 HGVs over a 24-hour period) in accordance with Paragraph 7.4.38 of **Application Document 6.2.2.7 Part 2 Suffolk Chapter 7 Traffic and Transport [APP-054]**.

5.3.11 Forecast construction traffic levels for the Proposed Project are only expected to exceed the above levels for a maximum period of five consecutive months during the construction programme (for this receptor). Average construction levels also fall well within negligible levels. This is the same conclusion as previously reported for the review of the B1121 Main Road / B1121 Church Hill junction to the south of Saxmundham (see Section 3).

5.3.12 In view of the above, it is considered that a Minor / Moderate cumulative effect could persist for up to five months if peak construction traffic levels for the Proposed Project and LionLink overlapped precisely. However, if LionLink were to come forward two

years later than the Proposed Project (as currently planned) then this Minor / Moderate cumulative effect along the B1121 Main Road and at the B1121 Main Road/ B1121 Church Hill junction is only expected to be experienced for just eleven days as a result of HGVs, as shown in Plate 5.3, reducing the likelihood of significant effects arising. There would be no potential for a significant cumulative effect based on average (rather than peak) traffic levels for the Proposed Project, given this would result in a Negligible effect for the Proposed Project.

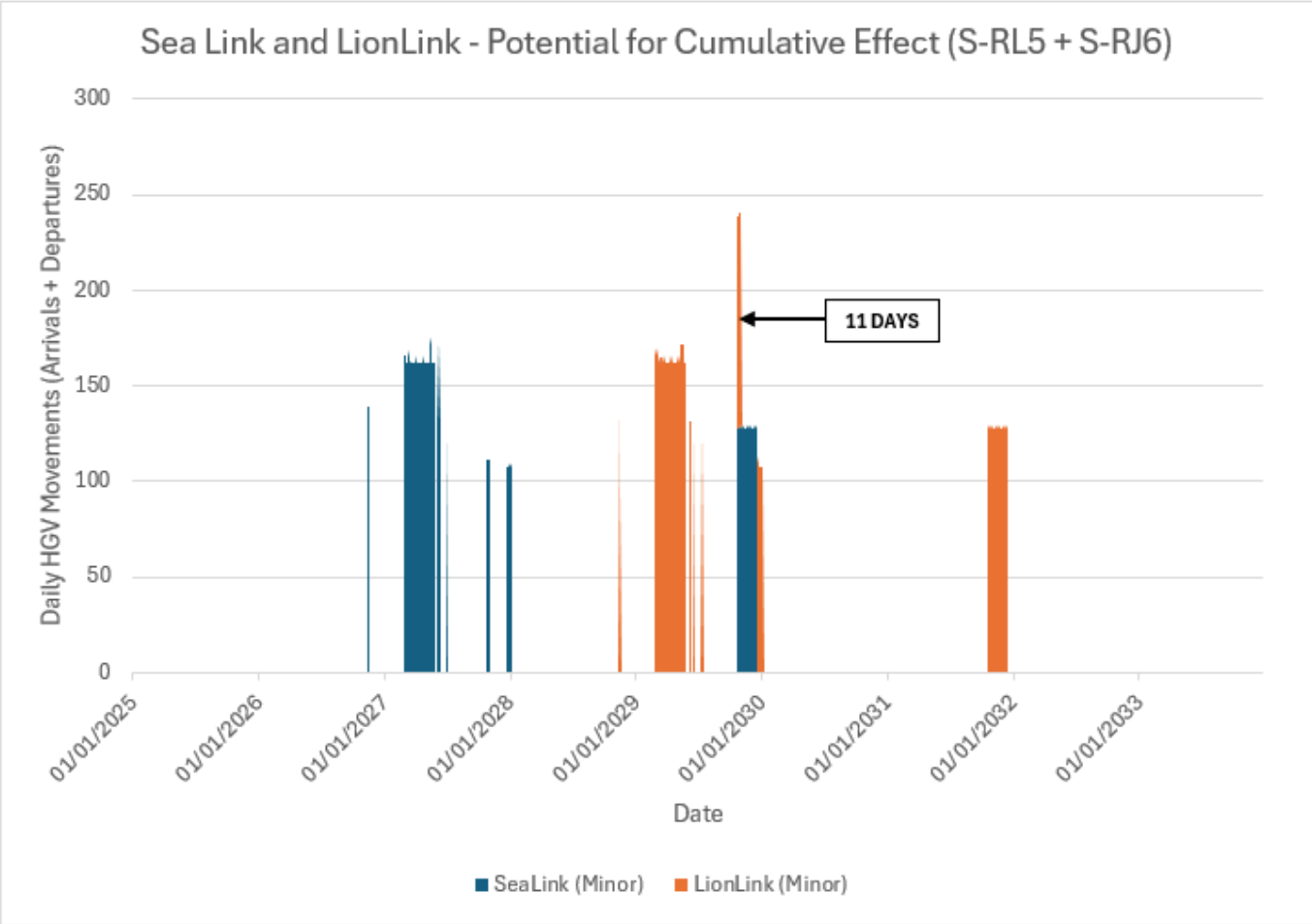

Plate 5.3 Potential Maximum Duration of Minor / Moderate Cumulative Effect with LionLink (S-RL5 and S-RJ6, Severance and Pedestrian Delay, HGVs)

5.3.13 In view of this and the short-term duration of any potential temporary impacts, it is considered that the cumulative effect is more likely to be Minor and not significant overall, with a Negligible cumulative effect being experienced for the majority of the construction programme.

5.3.14 The above supports the findings within **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** that the Minor / Moderate cumulative effects which have previously been identified, including for the B1121 Main Road and the B1121 Main Road/ B1121 Church Hill junction to the south of Saxmundham, are more likely to be Minor and not significant.

6. Additional Considerations

6.1 Construction Programme Overlaps

6.1.1 The original cumulative assessment was based on the peak day of the Proposed Project in terms of construction traffic, combined with the peak construction period for other cumulative schemes. This therefore adopted the worst-case scenario of construction peaks overlapping precisely resulting in a robust assessment.

6.1.2 The previous sections of this TN have considered variability across the construction programme for the Proposed Project, to identify the potential duration of a given cumulative effect with other cumulative schemes, to help determine the likely significance. This section provides some additional considerations with respect to the construction programmes of the other projects which have been reviewed within this TN.

6.1.3 This shows that if construction programmes for other projects were off-set from that of the Proposed Project, then it is likely that the durations of any potential effects will be shorter or potentially avoided altogether. For example, for LionLink, a two-year off-set reduces potential impacts from several months to several days.

6.1.4 It should be acknowledged that it is not possible to control the programmes of other schemes and therefore the durations of potential cumulative effects as a result of these other schemes. Therefore, to offer a worst-case approach, the potential durations over which a particular effect could be experienced has been based on the construction traffic forecasts for the Proposed Project, on the assumption that the construction peaks of other projects would fully overlap at these times (which is highly unlikely to occur in reality).

6.1.5 Notwithstanding the above, the Applicant produced **Application Document 7.10 Coordination Document [APP-363]** for the DCO submission which describes how the Applicant has approached, and will continue to approach, coordination with other projects with the aim of reducing the impact on the environment and local communities. Further details are provided within Section 6.3 of this TN. This includes a commitment to employing a Traffic Coordinator who, as well as coordinating the traffic movements for the Proposed Project, will work with the Traffic Coordinators for the other projects, to coordinate traffic between projects wherever possible (this will be secured as part of **Application Document 7.5.1.1 Outline Construction Traffic Management and Travel Plan – Suffolk [APP-337]**).

Sizewell C

6.1.6 As set out in Section 3 of this TN, for Sizewell C it is considered that there could be the potential for a ‘Minor/ Moderate’ cumulative effect to arise between the Proposed Project and Sizewell C in early 2027 or late 2028 / early 2029 based on Plate 3.1 and Plate 3.2 for the Proposed Project. The peak construction year for Sizewell C was originally identified as 2028 (EDF Energy, 2020), based on construction commencing in 2023. It is understood that the construction of Sizewell C commenced one year later in 2024 (Sizewell C, 2025) and it is therefore assumed that the peak construction year may have similarly moved on by one year to 2029.

6.1.7 Therefore, based on the information previously presented, there could be the potential for a 'Minor / Moderate' cumulative effect (marginally exceeding 'Negligible' based on total vehicles) to arise for up to five consecutive months in late 2028 / early 2029 for a single receptor (B1121 Main Road/ B1121 Church Hill Junction (S-RJ6) to the south of Saxmundham) for a single type of effect (severance). This was, on balance, considered to be Minor and not significant overall (see Section 3) due to the short-term duration of any potential temporary impacts. A Negligible cumulative effect is anticipated to occur for the rest of the construction programme.

East Anglia 2 (EA2) Offshore Windfarm

6.1.8 As set out in Section 4 of this TN for EA1N / EA2, it is considered that there could be the potential for a 'Minor/ Moderate' cumulative effect (marginally exceeding Negligible) to arise between the Proposed Project and EA1N / EA2 in late 2026 / early 2027, late 2028 or early 2030 based on Plate 4.1, Plate 4.2 and Plate 4.3 for the Proposed Project. The length of the construction programme for EA1N / EA2 was originally identified as three years, with peak construction during Month 14 for HGVs and Month 34 for Light Commercial Vehicles (Scottish Power Renewables, 2019). It is understood that the construction of access points to accommodate the construction of the temporary haul road commenced in mid-2025 (Scottish Power Ltd., 2024) and that peak construction may therefore occur in late 2026 (i.e. Month 14) or early 2028 (i.e. Month 34).

6.1.9 Therefore, based on the information previously presented, there could be the potential for a 'Minor / Moderate' cumulative effect to arise for five consecutive months in late 2026/ early 2027 for a single receptor (A1094 between A12 and B1069 Snape Road (S-RL10)) in terms of severance and pedestrian delay. This was, on balance, considered to be Minor and not significant overall (see Section 4) due to the short-term duration of any potential temporary impacts. A Negligible cumulative effect is anticipated to occur for the rest of the construction programme.

LionLink

6.1.10 As set out in Section 5 of this TN for LionLink, it is currently expected that LionLink will come forward two years later than the Proposed Project with an indicative peak year of 2030, resulting in minimal overlaps between the peak construction phases of each project and reducing the duration of any potentially significant cumulative effects.

6.1.11 There is expected to be very limited potential for significant cumulative effects between the Proposed Project and LionLink on this basis, with these only being potentially experienced for a matter of days in terms of road safety (two receptors) and severance/ pedestrian delay (two receptors). A Negligible cumulative effect is anticipated to occur for the rest of the programme.

6.2 Duration of Effect – Worked Example based on Hypothetical Projects and Scenarios

6.2.1 As discussed during the Traffic and Transport thematic meeting with SCC and ESC on 6 August 2025, there will be a trade-off between the potential duration of a cumulative effect and the overall magnitude of change from Baseline conditions, which should be considered when determining the likely significance.

6.2.2 As identified previously, whilst it is possible to identify variations in construction traffic levels across the construction programme for the Proposed Project, this level of

granularity is not available for other cumulative schemes particularly when considering specific receptors. The assessment work has therefore been based on the construction peaks of other projects and does not consider variability and reduced levels of construction traffic across the remainder of the construction programmes of these other projects.

6.2.3 In view of the above, a worked (hypothetical) example reviewing several potential scenarios is set out within Appendix C, to consider variations in construction traffic activity across multiple projects and the trade-off between the potential duration of a cumulative effect and the overall magnitude of change from Baseline conditions depending on when these projects come forward, relative to each other.

6.2.4 The cumulative assessment of the Proposed Project with each cumulative scheme as reported in **Application Document 6.2.2.13 Part 2 Suffolk Chapter 13 Suffolk Onshore Scheme Inter-Project Cumulative Effects [APP-060]** has been designed to closely match the worst-case approach reflected by Scenario 1, where a greater degree of overlap has been assumed between the Proposed Project and each cumulative scheme, resulting in robust conclusions. It is considered that whilst there could be the potential for significant cumulative effects under this scenario, that any Minor / Moderate cumulative effects would only be experienced for a limited time (short-term, a few consecutive months) and a Negligible cumulative effect would be experienced for the remainder of the construction programme. Therefore, due to short temporary duration of any adverse impacts, the residual effect cannot be considered as significant (duration of effect is a consideration identified in paragraph 1.27 of the 2023 IEMA Guidelines for the Environmental Assessment of Traffic and Movement).

6.2.5 When considering all schemes combined, cumulative effects are expected to be reduced for a given project if this comes forward earlier or later than other cumulative schemes combined. The ability to achieve this outcome is not directly within the control of the Applicant for the Proposed Project, given that Sizewell C and EA1N / EA2 have commenced earlier that the Proposed Project, and that LionLink is expected to commence later. Therefore, to help mitigate this scenario (e.g. Scenario 1b), it is considered that Scenario 2b (reducing the overlap between peaks) is more likely to be achievable than Scenario 1c (reprogramming the works earlier or later), so that each project can continue to be delivered as planned following additional coordination (see Section 6.3 below). It would not be viable to delay the programme of the Proposed Project to avoid other cumulative schemes, given that the Proposed Project has been identified by the National Energy System Operator as an ‘essential’ project that needs to be operational by the end of 2030, and is classed as a critical national priority in NPS EN-1. This would also more closely align the Proposed Project with LionLink, increasing the potential for cumulative effects with this scheme.

6.2.6 It is acknowledged that SCC Highways prefers Scenario 3 (as confirmed during the meeting on 6 August 2025), which would result in reduced cumulative effects, albeit increasing the overall period of potential disruption. This has been confirmed by the review of the Proposed Project and LionLink, where the two-year stagger between projects is expected to reduce the potential for cumulative effects. However, for the reasons set out above, it is not possible to delay construction of the Proposed Project in this manner.

6.3 Additional Coordination and Mitigation

6.3.1 For the DCO submission the Applicant produced **Application Document 7.10 Coordination Document [APP-363]** which describes how the Applicant has approached coordination with other projects with the aim of reducing the impact on the environment and local communities. Section 7 of the document sets out potential opportunities for coordination during project delivery. Opportunities that could reduce cumulative traffic numbers and associated effects, as identified with paragraph 7.4.2 of **Application Document 7.10 Coordination Document [APP-363]**, include:

- Opportunities for a coordinated delivery of the SPR and Sea Link works at Friston Substation. This is a likely scenario. This would deliver a shorter overall construction period, a single site set-up and site removal and reinstatement, and fewer overall vehicle movements minimising the disruption of the projects on local communities and other sensitive receptors.
- Opportunities for National Grid, NGV and/or SPR to share temporary construction areas and accesses during the delivery of Friston substation, the cable stretches, and at the converter station site, to reduce construction duration, land take, and impacts associated with reinstating and reestablishing construction sites for different projects.
- Opportunities for National Grid, NGV and/or SPR to take over certain temporary construction areas and accesses to reduce the impacts of reinstating and reestablishing construction sites for different projects.
- Opportunities for National Grid to retain aggregate and other material on-site to reduce the traffic movements required to import material to future NGV projects.
- Opportunities to share facilities being implemented by SZC as part of the Sizewell C works, which may reduce traffic movements and other construction impacts arising from Sea Link.

6.3.2 The potential opportunities that are set out in this section reflect the outcome of the extensive engagement and coordination with other developers undertaken by National Grid throughout all stages of the Sea Link development process.

6.3.3 The Applicant remains committed to ongoing engagement with the other projects identified in **Application Document 7.10 Coordination Document [APP-363]** to secure these coordination opportunities and to explore further opportunities for coordination. The outcomes of the cumulative assessment recognise the mitigation legally secured by other cumulative schemes, as well as the Proposed Project.

6.3.4 As identified in Section 6.2, it is considered that potential cumulative effects may be able to be mitigated by seeking to manage construction peaks of the Proposed Project within overlapping construction programmes. It will, however, not be possible for the Proposed Project to mitigate the cumulative impacts of other projects alone; it is only possible for the Applicant to control and mitigate potential effects resulting from the Proposed Project as part of the DCO Application, though noting the commitment to ongoing coordination with other projects.

7. Summary

7.1.1 This Technical Note (TN) has been prepared at the request of Suffolk County Council (SCC) Highways, to provide further details on the approach to and findings of the Traffic and Transport inter-project cumulative assessment of the Suffolk Onshore Scheme element of the Proposed Project. The TN focuses on the cumulative schemes of Sizewell C, East Anglia ONE North (EA1N) Offshore Windfarm, East Anglia TWO (EA2) Offshore Windfarm, and LionLink Offshore Interconnector, where the potential for significant cumulative effects (when combined with the Proposed Project) could arise.

7.1.2 The TN describes the methodology that has been adopted to assess the potential cumulative effects of the Proposed Project when combined with cumulative schemes, from a Traffic and Transport perspective. It details the approach to identifying peak traffic flows and the parameters used for the Traffic and Transport cumulative assessment, including the cumulative assessment matrix to categorise the significance of potential effects. The assessment considers impacts on highway receptors, including severance, pedestrian delay, fear and intimidation, driver delay and road safety, based on forecast traffic flows across various time periods. A key consideration which forms the foundation to the cumulative assessment is that if the Proposed Project is expected to result in a Negligible effect for a given receptor and assessment, then there is no potential for a cumulative effect to arise when combined with other projects.

7.1.3 The cumulative assessment of the Proposed Project with Sizewell C, EA1N / EA2 Offshore Windfarms and LionLink, reviews potential traffic impacts during the peak construction phase of each of these projects including the residual transport effects presented within the associated Environmental Statements for these schemes (where available) to provide a more realistic assessment by considering their committed mitigation. For LionLink, in the absence of construction traffic numbers, the cumulative assessment was carried out by assuming traffic generation would be the same as the peak construction traffic forecasts for the construction of the Saxmundham Converter Station as part of the Proposed Project, given the scale of the converter stations is likely to be similar. This approach allowed a cumulative assessment to be carried out, given that neither the PEIR nor the ES had been published for this development at the time of the assessment. The updated assessments also consider the duration over which any potential significant effects could be experienced, following a more detailed review of construction programmes.

7.1.4 The assessments conclude that no significant cumulative effects on Traffic and Transport receptors are expected as a result of construction traffic associated with the Proposed Project when combined with construction / operational traffic associated with third party committed developments. This conclusion is made on the basis that the peak construction phases for each scheme are planned to be staggered (between 2026 and 2030) and are therefore highly unlikely to all fully overlap. It is in the Proposed Project's (and third party projects') interest, in terms of both efficiency and delivery need, to keep to programme and minimise the potential for peak construction activity to overlap with other schemes. The duration of any potential effects of overlapping peak construction activity (third party scheme and the Proposed Project) will be limited to a few consecutive months and due to short-term temporary duration of any potential adverse impacts, the residual effect cannot therefore be considered as significant (duration of effect is a consideration identified in paragraph 1.27 of the 2023 IEMA Guidelines for

the Environmental Assessment of Traffic and Movement). In addition, there would be no potential for a significant cumulative effect based on average (rather than peak) traffic levels for the Proposed Project, with the Proposed Project alone having only a Negligible effect. Overall, the findings are considered to support the original Traffic and Transport inter-project cumulative assessment of the Proposed Project combined with other schemes.

7.1.5 The TN reviews additional factors such as construction programme overlaps, duration of effects, and coordination efforts to mitigate potential cumulative effects. This includes a worked example of hypothetical projects / scenarios to review the trade-off between the potential duration of a cumulative effect, the overall magnitude of change and the likely significance of this cumulative effect. It was considered that staggered construction peaks would reduce the duration of any Minor to Moderate cumulative effects, helping to mitigate potential impacts and increasing the likelihood of any cumulative effects being Minor and not significant. This highlights the importance of ongoing engagement with other projects to minimise environmental and community effects, such as by off-setting construction schedules where feasible.

7.1.6 The Applicant has submitted Application Document 7.10 Coordination Document [APP-363] which describes how the Sea Link project has approached coordination with other projects with the aim of reducing the impact on the environment and local communities. It is in the Applicant's interests to ensure that a coordinated approach with third party schemes takes place to ensure efficiency and delivery of the Proposed Project. For example, there is the opportunity to share accesses and temporary construction areas during the delivery of the substation and storing material on site for future projects to reduce cumulative construction vehicle trips.

7.1.7 Notwithstanding the above, it should be acknowledged that it would not be viable to delay the construction of the Proposed Project to avoid other cumulative schemes, given that the Proposed Project has been identified by the National Energy System Operator as an 'essential' project that needs to be operational by the end of 2030 and is classed as a critical national priority in NPS EN-1. It would also not be viable for the Proposed Project to mitigate the cumulative impacts of other projects alone; it is only possible for the Applicant to control and mitigate potential effects resulting from the Proposed Project as part of the DCO Application.

7.1.8 In conclusion, this TN further informs the original findings on the cumulative assessment work in consideration of comments raised by stakeholders in their Relevant Representations. The Applicant is committed to ongoing engagement with other projects to identify potential opportunities for coordination during project delivery and to minimise potential highway impacts, and the potential for significant cumulative effects as a result of the Proposed Project and other cumulative schemes. No additional mitigation is expected to be required to that already outlined within the DCO Application for the Proposed Project based on the Traffic and Transport cumulative assessment of the Proposed Project combined with other projects.

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Appendix A Presentation Slides

Sea Link
National Grid Electricity Transmission

Traffic and Transport Thematic Meeting

6th August 2025

Contents

05

Cumulative traffic impacts and assessment

Cumulative traffic impacts and assessment

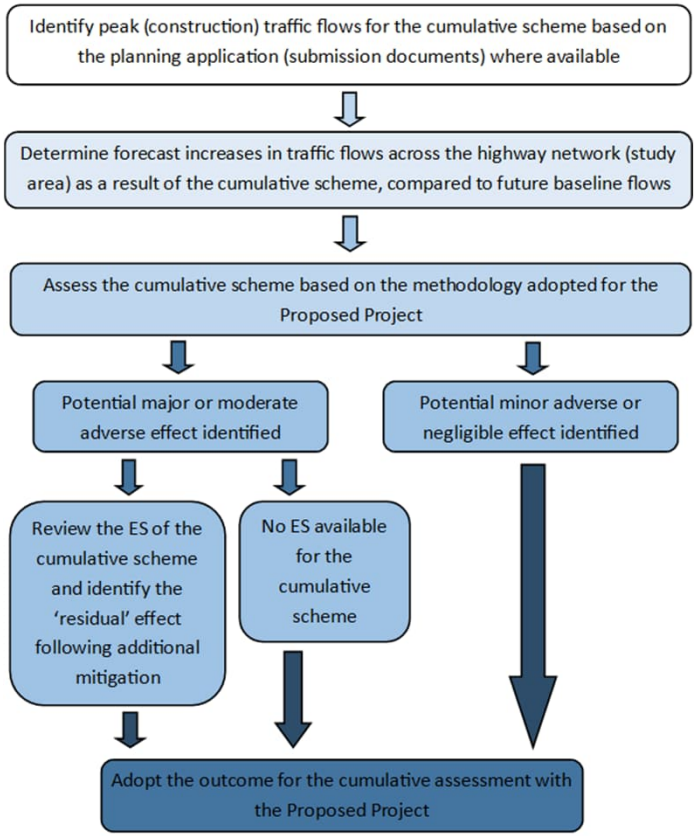
- SCC's main points of clarification:
  - SCC Highways believes that the Sea Link project could result in cumulative effects (notwithstanding the findings within the Inter-Project Cumulative Effects chapter)
  - Whilst the cumulative assessment considers the potential overlap of peak construction phases, the 'sequential' impacts of projects coming forward at different times should also be considered
  - Additional mitigation to resolve any potential cumulative effects that may materialise should be considered

Cumulative traffic impacts and assessment

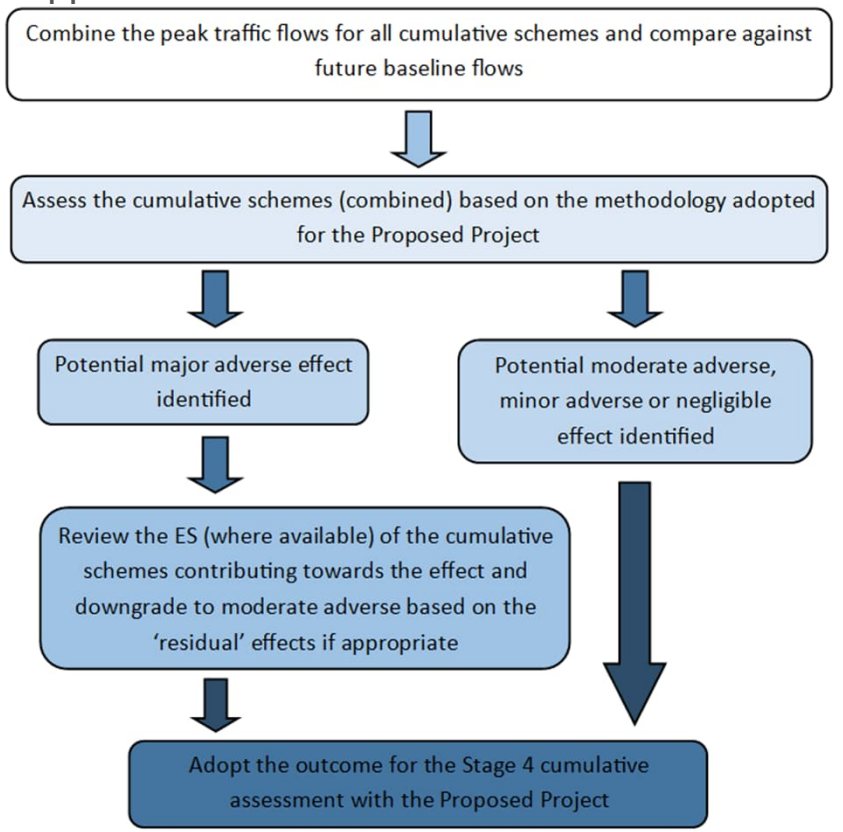
- Applicant's current position:
  - >25 committed/ proposed third-party developments have been considered including Sizewell C, LionLink, East Anglia ONE North and East Anglia TWO Offshore Windfarms
  - The Strategic Road Network including the A12 corridor between the A14 and Lowestoft has been considered within the Transport Assessment Note
  - The cumulative assessment of Sizewell C includes construction traffic during the peak construction phase for Sizewell C (2028, busiest day)
  - Peak construction traffic for each cumulative scheme has been combined with peak construction traffic for Sea Link, on the worst-case assumption that these would overlap
  - However, construction peaks are unlikely to overlap and would be short in duration (temporary) for Sea Link
  - No significant cumulative effects are therefore forecasted
  - National Grid has produced APP-363 7.10 Coordination Document to minimise environmental and local community effects of Sea Link in combination with other projects.

Cumulative traffic impacts and assessment

- Approach for individual schemes:



- Approach for all schemes combined:



Cumulative traffic impacts and assessment

- The findings for any cumulative schemes without an ES were based on the initial assessment of peak traffic flows for that scheme
- LionLink traffic flows were estimated using forecasts for Sea Link (converter station), in the absence of LionLink information at the time of submission
- The cumulative assessment included the following time periods based on the future baseline traffic flows for these periods:
  - Weekday AM and PM ‘Shoulder’ Peaks: 7am-8am and 6pm-7pm
  - Weekday AM and PM Network Peaks: 8am-9am & 5pm-6pm
  - Weekday 12-hour period (7am-7pm) and Daily 24-hour period.
- For robustness, the AM and PM peak traffic flows for each cumulative scheme were assessed against future baseline traffic flows for both the respective ‘shoulder’ and network peaks
- The daily traffic flows were assessed against future baseline traffic flows for both the weekday 12-hour period and daily 24-hour period.

Cumulative Assessment Matrix

	Significance for Development 1	Significance for Development 2	Cumulative Effect Possible/ Likely	Likely Significance of cumulative effect
	Major	Major	Yes – Likely	Likely to be major
	Major	Moderate	Yes – Likely	Likely to be major
	Major	Minor	Yes – Unlikely	Considered on a case-by-case basis, applying professional judgement.
	Major	Negligible	No	N/A
	Moderate	Moderate	Yes – Likely	Considered on a case-by-case basis, applying professional judgement. The overall effect may be considered to remain moderate or become major.
	Moderate	Minor	Yes – Unlikely	Considered on a case-by-case basis, applying professional judgement. It is likely that the effect will remain moderate, however there is some potential for a major cumulative effect to occur.
	Moderate	Negligible	No	N/A
	Minor	Minor	Yes – Unlikely	Considered on a case-by-case basis, applying professional judgement. It is possible that a moderate cumulative effect (significant) could occur but is more likely that the effect would remain minor.
	Minor	Negligible	No	N/A
	Negligible	Negligible	No	N/A

Cumulative traffic impacts and assessment (Sizewell C)

- Sizewell C is a major scheme which has been assessed (construction phase)
- The original cumulative assessment (without Sizewell C additional mitigation) identified the following potential significant cumulative effects:

Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Potential Effect from Sizewell C (No Additional Mitigation)	Original Assessment of Cumulative Effects
A12, south of A1094 (S-RL1)	Fear and Intimidation	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)
A1094, between A12 and B1069 Snape Road (S-RL10)	Severance and Pedestrian Delay	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)
B1121 Main Road/ B1121 Church Hill junction (S-RJ6)	Severance and Pedestrian Delay	Minor adverse	Minor adverse	Minor/ Moderate (unlikely to be significant)

Cumulative traffic impacts and assessment (Sizewell C)

- The cumulative assessment has been updated to consider Sizewell C's residual effects following additional mitigation, for the same receptors/ assessments as previously listed:

Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Residual Effect from Sizewell C	Updated Assessment of Cumulative Effects
A12 (south of A1094)	Fear and Intimidation	Minor adverse (S-RL1)	Minor beneficial (23 & 24)	None
A1094 (between A12 and B1069 Snape Road)	Severance	Minor adverse (S-RL10)	Negligible (9 & 39)	None
	Pedestrian Delay	Minor adverse (S-RL10)	Negligible (9 & 39)	None
B1121 Main Road/ B1121 Church Hill junction	Severance	Minor adverse (S-RJ6)	Minor adverse (12)	Minor/ Moderate (max. 9 months, unlikely to be significant)
	Pedestrian Delay	Minor adverse (S-RJ6)	Negligible (12)	None

Cumulative traffic impacts and assessment (SPR)

- East Anglia ONE North and East Anglia TWO are two major Scottish Power Renewables (SPR) schemes which have been assessed (construction phase)
- SPR's residual effects for the receptors and assessments where potential significant cumulative effects were originally identified are as follows (durations have also been added):

Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Residual Effect from either EA1N or EA2	Updated Assessment of Cumulative Effects
A12 (south of A1094)	Road Safety	Minor adverse (S-RL1)	Minor adverse (Link 3)	Minor/ Moderate (max. 9 months, unlikely to be significant)
A1094 (between A12 and B1069 Snape Road)	Severance and Pedestrian Delay	Minor adverse (S-RL10)	Negligible/ Minor adverse (Link 6)	Minor/ Moderate (max. 3 months, unlikely to be significant)
B1069 Snape Road (between A1094 Aldeburgh Road and Aldringham Lane)	Severance and Pedestrian Delay	Minor adverse (S-RL12)	Negligible/ Minor adverse (Link 9)	Minor/ Moderate (max. 1 month, unlikely to be significant)
	Driver Delay	Minor adverse (S-RL12)	Negligible (Link 9)	None
A12/ A1094 Junction	Road Safety	Minor adverse (S-RJ1)	Minor adverse (Links 2, 3 and 6)	Minor/ Moderate (max. 9 months, unlikely to be significant)

Cumulative traffic impacts and assessment (LionLink)

- LionLink is a major scheme which has been assessed (construction phase)
- The original cumulative assessment identified the following potential significant cumulative effects (durations have since been reviewed and added):

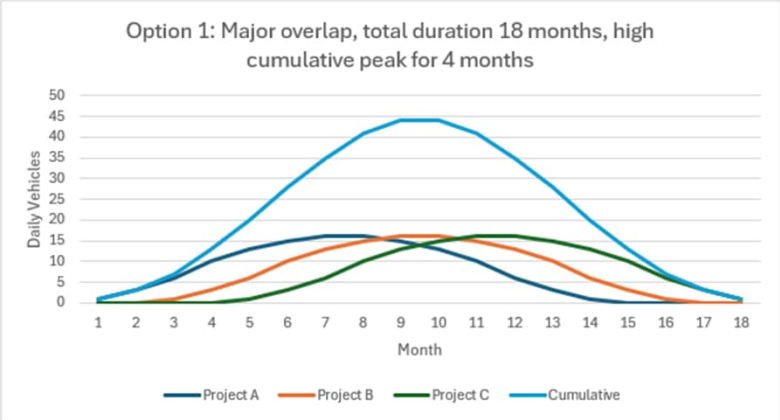
Road Link/ Junction Receptor	Assessment Criteria	Residual Effect from the Proposed Project	Effect from LionLink	Original Assessment of Cumulative Effects
S-RL1 (A12, south of A1094)	Road Safety	Minor adverse	Minor adverse	Minor/ Moderate (max. 9 months, unlikely to be significant)
S-RL5 (B1121 Main Road, east of A12)	Severance and Pedestrian Delay	Minor adverse	Minor adverse	Minor/ Moderate (max. 7 months, unlikely to be significant)
S-RJ1 (A12/ A1094 Junction)	Road Safety	Minor adverse	Minor adverse	Minor/ Moderate (max. 9 months, unlikely to be significant)
S-RJ6 (B1121 Main Road/ B1121 Church Hill junction)	Severance and Pedestrian Delay	Minor adverse	Minor adverse	Minor/ Moderate (max. 9 months, unlikely to be significant)

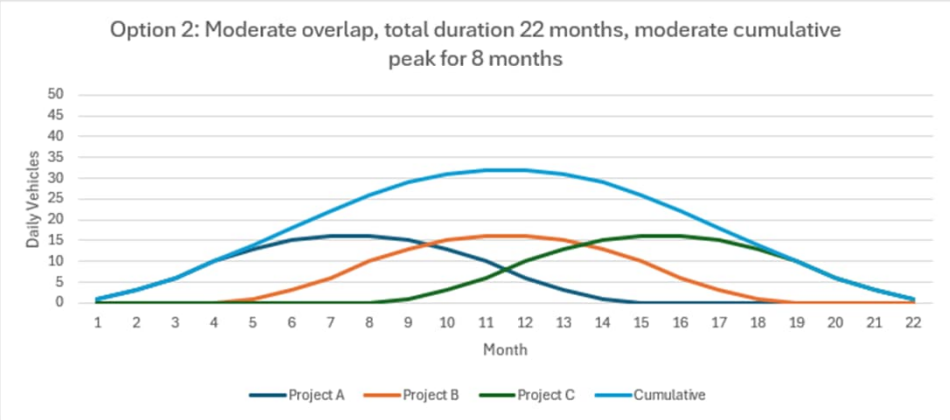
Cumulative Effects – Duration of Impact

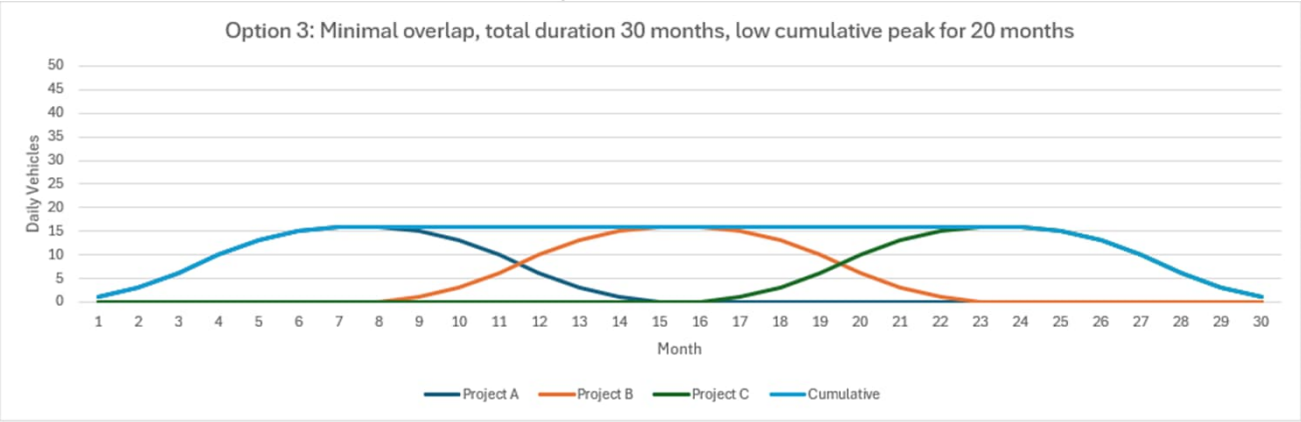
- The potential for a cumulative effect is only expected to arise for a few receptors and assessment types, when considering Sea Link with Sizewell C, SPR and LionLink
- Based on the previous Tables, a Minor/ Moderate cumulative effect could persist for up to 9 months if programmes overlapped exactly (otherwise the duration would be less)
- A Negligible cumulative effect (Negligible for Sea Link + Minor for the projects) will otherwise occur for the remainder of the 60-month Sea Link programme
- There would always be a Negligible cumulative effect for the identified receptors/ assessments based on average traffic levels for Sea Link, rather than peak traffic levels
- It is therefore considered that a Minor cumulative effect (not significant) is more likely to be experienced given the short durations of any impacts
- This validates the findings that significant cumulative effects as a result of the Sea Link and other NSIPs are unlikely to occur.

Cumulative Effects – Magnitude v Duration

- Illustrated examples of magnitude v duration (sequential) impacts







Summary

- Sea Link is not expected to result in significant cumulative effects when combined with other projects
- The cumulative assessment is robust, based on the construction peak for each scheme
- Any potential impacts would be short in duration and no cumulative effects are forecasted based on average traffic levels for Sea Link
- Some overlap is inevitable due to the length of the construction phase (3-8 years) for each scheme
- Trade-off between magnitude and duration i.e. a greater combined impact for a shorter duration (if peaks overlap) v a lower combined impact for a longer duration (if peaks avoid each other)
- Avoiding the former will result in the latter, the graphs illustrate this
- Co-ordination should be carried out to review construction programmes, the likelihood/ duration of peak construction phases overlapping, and to consider additional mitigation if necessary
- As per SCC comments, if additional mitigation were required, this should be agreed with EDF, SPR and National Grid Ventures, and apportioned appropriately. A Joint CTMP could secure this.
- Sea Link cannot provide mitigation alone to reduce cumulative effects with other projects
- Construction should not be compromised by re-programming or delaying works to avoid the peak construction phases of other projects.

Appendix B Cumulative Scheme Peak Traffic Flows

Cumulative Schemes - Sizewell C - Peak Construction Traffic Flows

Ref	Receptor Type	Receptor	AM Peak		PM Peak		Daily (12hr/24hr)	
			HGVs	Total	HGVs	Total	HGVs	Total
S-RL1	Road Link	A12 (south of A1094)	20	90	8	90	173	1,900
S-RL2	Road Link	A12 (between A1094 & B1121 Main Rd south junction)	17	80	7	80	155	1,700
S-RL3	Road Link	A12 (between B1121 Main Road junctions)	17	80	5	60	137	1,500
S-RL4	Road Link	A12 (north of B1121 Main Road northern junction)	17	80	14	170	291	3,200
S-RL5	Road Link	B1121 Main Road (east of A12)	0	0	3	30	27	300
S-RL6	Road Link	B1121 Main Road (south of B1119 Church Street)	0	0	3	30	27	300
S-RL7	Road Link	B1119 Church Street (east of B1121 Main Road)	7	30	5	60	91	1,000
S-RL8	Road Link	B1121 Aldeburgh Road (between A1094 and B1121 Saxmundham Road)						
S-RL9	Road Link	B1121 Saxmundham Road (north of Grove Road)						
S-RL10	Road Link	A1094 (between A12 and B1069 Snape Road)	4	20	5	60	73	800
S-RL11	Road Link	A1094 Aldeburgh Road (between B1069 Snape Road and B1122 Leiston Road)						
S-RL12	Road Link	B1069 Snape Road (between A1094 Aldeburgh Road and Aldringham Lane)	4	20	5	60	73	800
S-RL13	Road Link	B1122 Leiston Road (between A1094 Aldeburgh Road and Aldringham Lane)	4	20	6	70	73	800
S-RJ1	Road Junction	A12/A1094 Junction	20	90	8	90	173	1,900
S-RJ2	Road Junction	A12/B1121 (South) Junction	17	80	7	80	155	1,700
S-RJ3	Road Junction	A12/B1119 Junction	17	80	5	60	137	1,500
S-RJ4	Road Junction	A12/B1121 (North) Junction	17	80	5	60	137	1,500
S-RJ5	Road Junction	A12/B1122 Junction	17	80	14	170	291	3,200
S-RJ6	Road Junction	B1121 Main Road/B1121 Church Hill Junction	0	0	3	30	27	300
S-RJ7	Road Junction	B1121 Main Road/B1119 Church Hill Signalised Junction	0	0	3	30	27	300
S-RJ8	Road Junction	B1121 Saxmundham Road/Grove Road/Mill Road Junction						
S-RJ9	Road Junction	A1094 Aldeburgh Road/B1121 Aldeburgh Road Junction	4	20	5	60	73	800
S-RJ10	Road Junction	A1094 Aldeburgh Road/B1069 Snape Road Junction	4	20	5	60	73	800
S-RJ11	Road Junction	A1094/B1122 Leiston Road/Church Farm Road Roundabout	4	20	6	70	73	800
S-RJ12	Road Junction	B1122 Aldeburgh Road/B1353 Aldringham Lane Junction	4	20	6	70	73	800
S-RJ13	Road Junction	B1069 Leiston Road/B1353 Aldringham Lane Junction	4	20	7	80	86	950
S-RJ14	Road Junction	A1094/Sternfield Road/Church Road Junction	4	20	5	60	73	800

Cumulative Schemes - East Anglia 1 North (EA1N) - Peak Construction Traffic Flows

Ref	Receptor Type	Receptor	AM Peak		PM Peak		Daily (12hr/24hr)	
			HGVs	Total	HGVs	Total	HGVs	Total
S-RL1	Road Link	A12 (south of A1094)		74		74	210	357
S-RL2	Road Link	A12 (between A1094 & B1121 Main Rd south junction)		38		38	210	285
S-RL3	Road Link	A12 (between B1121 Main Road junctions)		38		38	210	285
S-RL4	Road Link	A12 (north of B1121 Main Road northern junction)		70		70	210	349
S-RL5	Road Link	B1121 Main Road (east of A12)		34		34	0	67
S-RL6	Road Link	B1121 Main Road (south of B1119 Church Street)		34		34	0	67
S-RL7	Road Link	B1119 Church Street (east of B1121 Main Road)						
S-RL8	Road Link	B1121 Aldeburgh Road (between A1094 and B1121 Saxmundham Road)		19		19	0	37
S-RL9	Road Link	B1121 Saxmundham Road (north of Grove Road)		34		34	0	67
S-RL10	Road Link	A1094 (between A12 and B1069 Snape Road)		67		67	205	339
S-RL11	Road Link	A1094 Aldeburgh Road (between B1069 Snape Road and B1122 Leiston Road)		31		31	7	69
S-RL12	Road Link	B1069 Snape Road (between A1094 Aldeburgh Road and Aldringham Lane)		156		156	213	524
S-RL13	Road Link	B1122 Leiston Road (between A1094 Aldeburgh Road and Aldringham Lane)		31		31	7	69
S-RJ1	Road Junction	A12/A1094 Junction		74		74	210	357
S-RJ2	Road Junction	A12/B1121 (South) Junction		38		38	210	285
S-RJ3	Road Junction	A12/B1119 Junction		38		38	210	285
S-RJ4	Road Junction	A12/B1121 (North) Junction		38		38	210	285
S-RJ5	Road Junction	A12/B1122 Junction		70		70	210	349
S-RJ6	Road Junction	B1121 Main Road/B1121 Church Hill Junction		34		34	0	67
S-RJ7	Road Junction	B1121 Main Road/B1119 Church Hill Signalised Junction						
S-RJ8	Road Junction	B1121 Saxmundham Road/Grove Road/Mill Road Junction		19		19	0	37
S-RJ9	Road Junction	A1094 Aldeburgh Road/B1121 Aldeburgh Road Junction		67		67	205	339
S-RJ10	Road Junction	A1094 Aldeburgh Road/B1069 Snape Road Junction		90		90	213	392
S-RJ11	Road Junction	A1094/B1122 Leiston Road/Church Farm Road Roundabout		31		31	7	69
S-RJ12	Road Junction	B1122 Aldeburgh Road/B1353 Aldringham Lane Junction						
S-RJ13	Road Junction	B1069 Leiston Road/B1353 Aldringham Lane Junction		66		66	0	132
S-RJ14	Road Junction	A1094/Sternfield Road/Church Road Junction		67		67	205	339

Cumulative Schemes - East Anglia 2 (EA2) - Peak Construction Traffic Flows

Ref	Receptor Type	Receptor	AM Peak		PM Peak		Daily (12hr/24hr)	
			HGVs	Total	HGVs	Total	HGVs	Total
S-RL1	Road Link	A12 (south of A1094)		74		74	210	357
S-RL2	Road Link	A12 (between A1094 & B1121 Main Rd south junction)		38		38	210	285
S-RL3	Road Link	A12 (between B1121 Main Road junctions)		38		38	210	285
S-RL4	Road Link	A12 (north of B1121 Main Road northern junction)		70		70	210	349
S-RL5	Road Link	B1121 Main Road (east of A12)		34		34	0	67
S-RL6	Road Link	B1121 Main Road (south of B1119 Church Street)		34		34	0	67
S-RL7	Road Link	B1119 Church Street (east of B1121 Main Road)						
S-RL8	Road Link	B1121 Aldeburgh Road (between A1094 and B1121 Saxmundham Road)		19		19	0	37
S-RL9	Road Link	B1121 Saxmundham Road (north of Grove Road)		34		34	0	67
S-RL10	Road Link	A1094 (between A12 and B1069 Snape Road)		67		67	205	339
S-RL11	Road Link	A1094 Aldeburgh Road (between B1069 Snape Road and B1122 Leiston Road)		31		31	7	69
S-RL12	Road Link	B1069 Snape Road (between A1094 Aldeburgh Road and Aldringham Lane)		156		156	213	524
S-RL13	Road Link	B1122 Leiston Road (between A1094 Aldeburgh Road and Aldringham Lane)		31		31	7	69
S-RJ1	Road Junction	A12/A1094 Junction		74		74	210	357
S-RJ2	Road Junction	A12/B1121 (South) Junction		38		38	210	285
S-RJ3	Road Junction	A12/B1119 Junction		38		38	210	285
S-RJ4	Road Junction	A12/B1121 (North) Junction		38		38	210	285
S-RJ5	Road Junction	A12/B1122 Junction		70		70	210	349
S-RJ6	Road Junction	B1121 Main Road/B1121 Church Hill Junction		34		34	0	67
S-RJ7	Road Junction	B1121 Main Road/B1119 Church Hill Signalised Junction						
S-RJ8	Road Junction	B1121 Saxmundham Road/Grove Road/Mill Road Junction		19		19	0	37
S-RJ9	Road Junction	A1094 Aldeburgh Road/B1121 Aldeburgh Road Junction		67		67	205	339
S-RJ10	Road Junction	A1094 Aldeburgh Road/B1069 Snape Road Junction		90		90	213	392
S-RJ11	Road Junction	A1094/B1122 Leiston Road/Church Farm Road Roundabout		31		31	7	69
S-RJ12	Road Junction	B1122 Aldeburgh Road/B1353 Aldringham Lane Junction						
S-RJ13	Road Junction	B1069 Leiston Road/B1353 Aldringham Lane Junction		66		66	0	132
S-RJ14	Road Junction	A1094/Sternfield Road/Church Road Junction		67		67	205	339

Cumulative Schemes - LionLink - Peak Construction Traffic Flows

Ref	Receptor Type	Receptor	AM Peak		PM Peak		Daily (12hr/24hr)	
			HGVs	Total	HGVs	Total	HGVs	Total
S-RL1	Road Link	A12 (south of A1094)	0	68	0	67	150	235
S-RL2	Road Link	A12 (between A1094 & B1121 Main Rd south junction)	0	68	0	67	150	235
S-RL3	Road Link	A12 (between B1121 Main Road junctions)	0	54	0	53	88	155
S-RL4	Road Link	A12 (north of B1121 Main Road northern junction)	0	54	0	53	88	155
S-RL5	Road Link	B1121 Main Road (east of A12)	0	107	0	106	176	310
S-RL6	Road Link	B1121 Main Road (south of B1119 Church Street)						
S-RL7	Road Link	B1119 Church Street (east of B1121 Main Road)						
S-RL8	Road Link	B1121 Aldeburgh Road (between A1094 and B1121 Saxmundham Road)						
S-RL9	Road Link	B1121 Saxmundham Road (north of Grove Road)						
S-RL10	Road Link	A1094 (between A12 and B1069 Snape Road)						
S-RL11	Road Link	A1094 Aldeburgh Road (between B1069 Snape Road and B1122 Leiston Road)						
S-RL12	Road Link	B1069 Snape Road (between A1094 Aldeburgh Road and Aldringham Lane)						
S-RL13	Road Link	B1122 Leiston Road (between A1094 Aldeburgh Road and Aldringham Lane)						
S-RJ1	Road Junction	A12/A1094 Junction	0	68	0	67	150	235
S-RJ2	Road Junction	A12/B1121 (South) Junction	0	107	0	106	176	310
S-RJ3	Road Junction	A12/B1119 Junction	0	54	0	53	88	155
S-RJ4	Road Junction	A12/B1121 (North) Junction	0	54	0	53	88	155
S-RJ5	Road Junction	A12/B1122 Junction	0	54	0	53	88	155
S-RJ6	Road Junction	B1121 Main Road/B1121 Church Hill Junction	0	107	0	106	176	310
S-RJ7	Road Junction	B1121 Main Road/B1119 Church Hill Signalised Junction						
S-RJ8	Road Junction	B1121 Saxmundham Road/Grove Road/Mill Road Junction						
S-RJ9	Road Junction	A1094 Aldeburgh Road/B1121 Aldeburgh Road Junction						
S-RJ10	Road Junction	A1094 Aldeburgh Road/B1069 Snape Road Junction						
S-RJ11	Road Junction	A1094/B1122 Leiston Road/Church Farm Road Roundabout						
S-RJ12	Road Junction	B1122 Aldeburgh Road/B1353 Aldringham Lane Junction						
S-RJ13	Road Junction	B1069 Leiston Road/B1353 Aldringham Lane Junction						
S-RJ14	Road Junction	A1094/Sternfield Road/Church Road Junction						

Appendix C Duration of Effect – Worked Example based on Hypothetical Projects and Scenarios

C.1.1 This worked (hypothetical) example reviews several potential scenarios, to consider variations in construction traffic activity across multiple projects and the trade-off between the potential duration of a cumulative effect and the overall magnitude of change from Baseline conditions depending on when these projects come forward, relative to each other.

C.1.2 It should be acknowledged that this is a worked example only and does not directly relate to the Proposed Project or the cumulative assessment that has been carried out. The term 'example project' is used to identify the hypothetical project upon which the cumulative assessment example is based, when considering the example project with other hypothetical cumulative schemes.

C.1.3 The following scenarios have been considered:

- Scenario 1 – Large degree of overlap between projects, 6 months off-set between schemes with construction programmes of 45 months;
- Scenario 2 – Medium degree of overlap between projects, 12 months off-set between schemes with construction programmes of 45 months; and
- Scenario 3 – Small degree of overlap between projects, 24 months off-set between schemes with construction programmes of 45 months.

C.1.4 Within each of the above scenarios, three sub-scenarios have been examined as follows:

- A) Two schemes, with the example project followed by one cumulative scheme;
- B) Three schemes, with the example project in the middle of two cumulative schemes i.e. with one starting before and one starting after; and
- C) Three schemes, with the example project following the two cumulative schemes (note, this option would have the same outcome as the example project being before the other two schemes).

C.1.5 For the purposes of this example, each scheme has been assumed to have the same profile of construction vehicle trips over a 45-month programme, with a maximum of 320 vehicles per day. The following thresholds have been adopted to identify magnitude of change, for the example project and for each cumulative scheme including sub-scenarios B) and C) where traffic flows for two cumulative schemes have been combined:

- Negligible magnitude: Below 200 vehicles per day;
- Small magnitude: Between 200-349 vehicles per day i.e. upper threshold of 350 vehicles;

- Medium magnitude: Between 350-499 vehicles per day i.e. upper threshold of 500 vehicles; and
- Large magnitude: 500 or more vehicles per day.

C.1.6 The above results in each scheme (including the example project) having a negligible or small magnitude of change in isolation, whereas multiple cumulative schemes combined could potentially result in a medium or large magnitude of change.

C.1.7 The following potential cumulative effects have then been identified on the graphs, in keeping with the CEA methodology / matrix identified in Table 2.1:

- 1a) Negligible: The example project is Negligible (based on a negligible magnitude of change), so there is no potential for cumulative effects with other schemes;
- 1b) Negligible: The cumulative scheme and / or the cumulative schemes combined are Negligible (based on a negligible magnitude of change which is the lowest category that can be achieved), so there is no potential for cumulative effects with the example project;
- 2) Minor / Moderate: Both the example project and the cumulative scheme and / or the cumulative schemes combined are Minor (based on small magnitudes of change);
- 3) Moderate / Major: The example project is Minor (based on a small magnitude of change) and the cumulative schemes combined are Moderate (based on a medium magnitude of change); and
- 4) Major: The example project is Minor (based on a small magnitude of change) and the cumulative schemes combined are Major (based on a large magnitude of change).

C.1.8 The results of this hypothetical exercise are presented below. The information presented in this worked example does not directly relate to the Proposed Project or the cumulative assessment, but is designed to identify potential scenarios that could arise, to inform the conclusions of this TN.

C.1.9 It should be noted that potential cumulative effects have been identified based on the potential effect of the example project, when combined with the potential effect(s) of the cumulative scheme(s), based on the CEA methodology set out in Table 2.1. Whilst a large overall magnitude of change (500 or more vehicles per day) may arise as a result of multiple schemes combined, the potential cumulative effect would nonetheless be Minor / Moderate if both the example project, and the cumulative project(s) are expected to be Minor in isolation.

Scenario 1 – Large Degree of Overlap

C.1.10 The graphs for Scenarios 1a, 1b and 1c are presented in Plate C.1, Plate C.2 and Plate C.3 respectively. An overall summary of the results in terms of significance levels and durations is provided after all three scenarios have been presented.

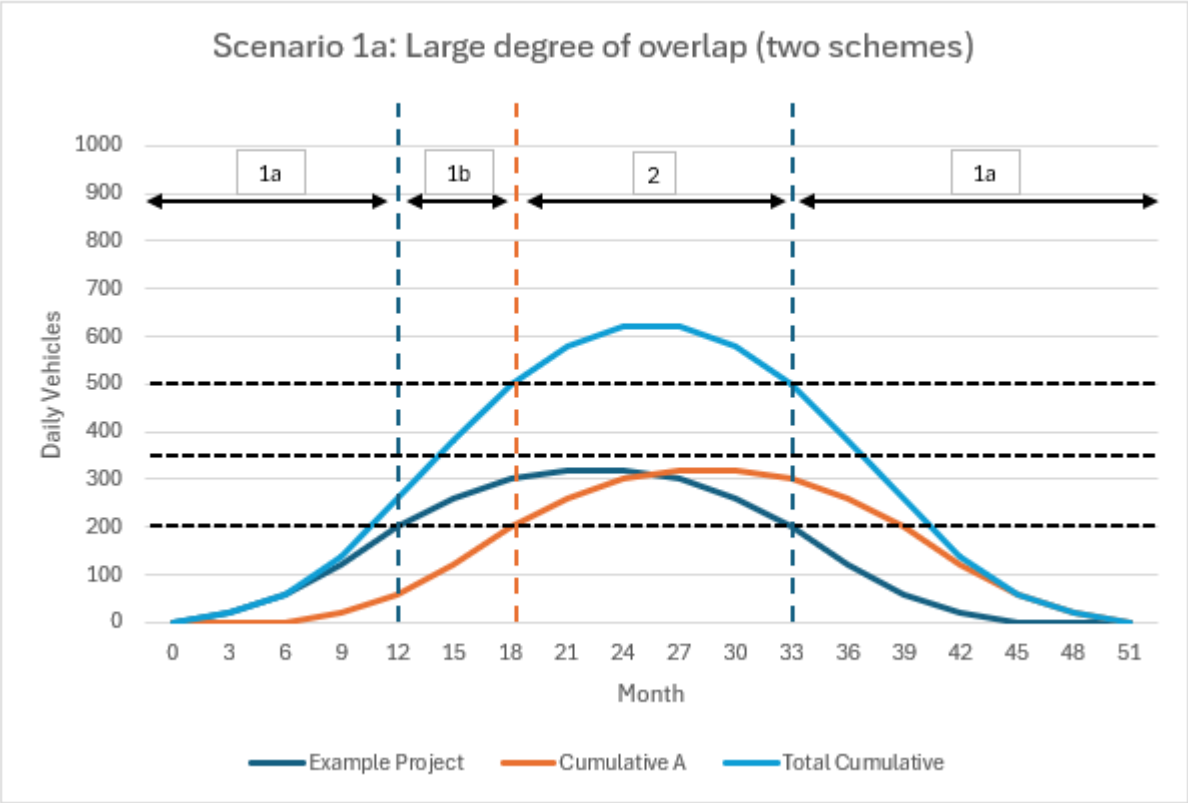


Plate C.1 Scenario 1a – Large Overlap, Two Schemes

C.1.11 The above shows that a Negligible cumulative effect (1a or 1b) is expected for the majority of the time (36 months), with a Minor / Moderate cumulative effect (2) expected to occur for 15 months when the peak construction phases of the two projects are close to overlapping. Whilst there could be the potential for a significant cumulative effect under this scenario, the Minor / Moderate cumulative effect would only be experienced for 30% of the time and a Negligible cumulative effect would be experienced for 70% of the time. Therefore, on balance it is considered that a Minor (not significant) cumulative effect would arise overall, particularly as the example project is Minor at its peak.

C.1.12 It is acknowledged that the total increase in vehicles exceeds 500 vehicles at peak times, which therefore represents a large magnitude of change (cumulatively). However, the potential cumulative effect is considered to be Minor / Moderate when combining the potential effect of the example project (Minor) with the potential effect of the cumulative scheme (Minor).

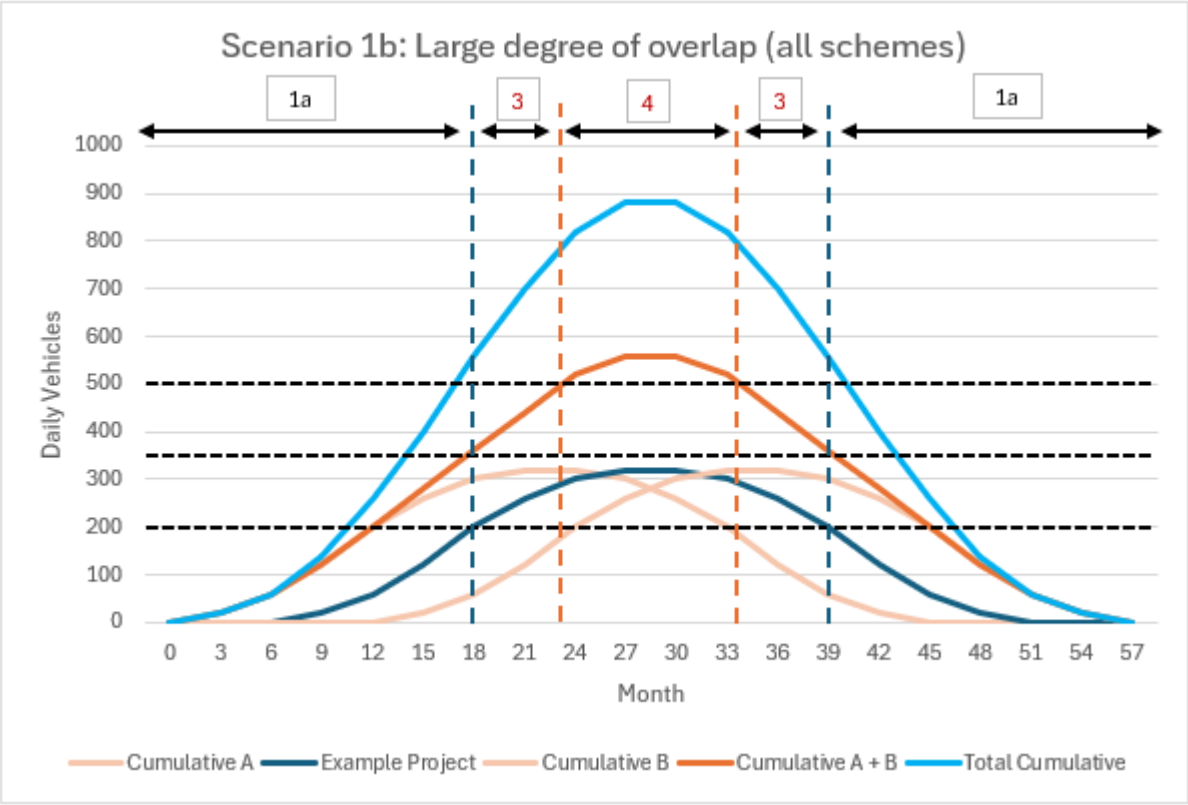


Plate C.2 Scenario 1b – Large Overlap, Three Schemes with Example Project in the Middle

C.1.13 The analysis shows that a Negligible cumulative effect (1a) is expected for the majority of the time (36 months), with a Moderate (3) or Major (4) cumulative effect expected to occur for 21 months when the peak construction phases of the three projects are close to overlapping. Therefore, potential significant cumulative effects may arise under this scenario. Coordination should be carried out between the projects to mitigate potential impacts by off-setting construction peaks where possible.

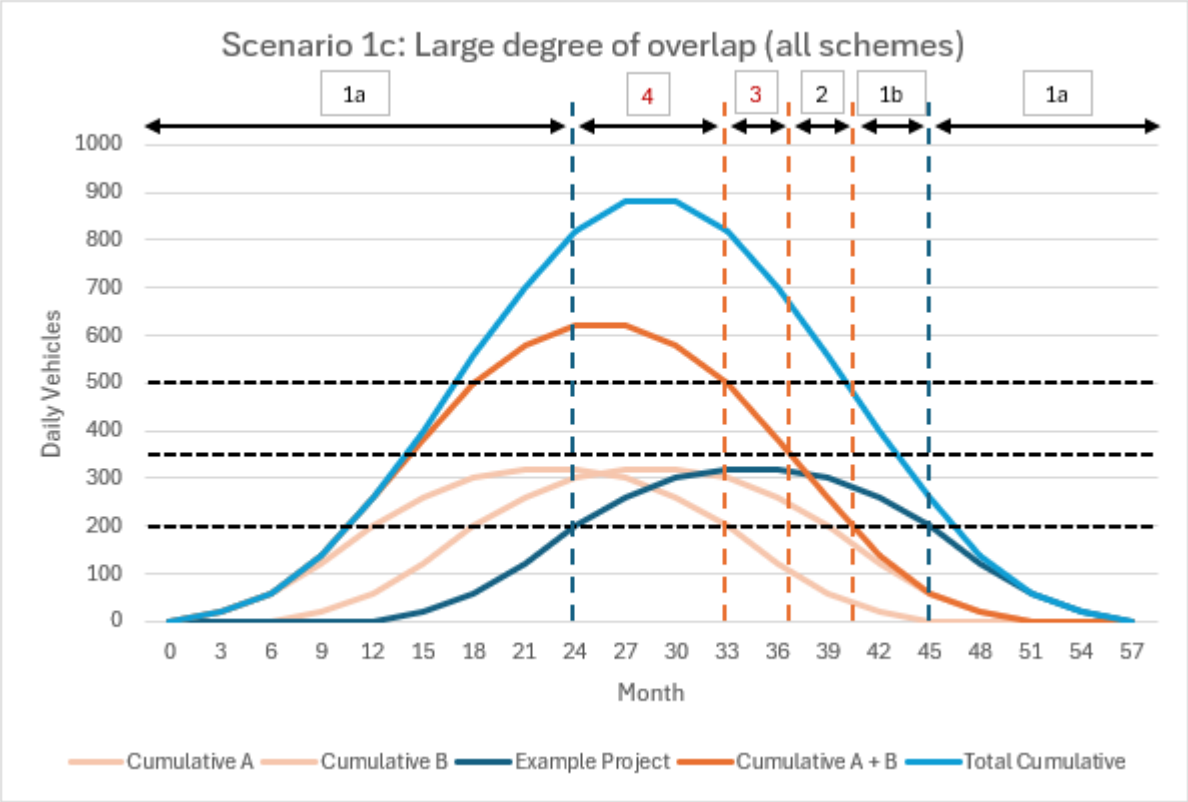


Plate C.3 Scenario 1c – Large Overlap, Three Schemes with Example Project at the End

C.1.14 The above shows that a Negligible cumulative effect (1a or 1b) is expected for the majority of the time (40 months), with a Minor / Moderate cumulative effect (2) anticipated to occur for four months. A Moderate (3) or Major (4) cumulative effect is expected to occur for 13 months when the peak construction phases of the three projects are close to overlapping. Therefore again, potential significant cumulative effects may arise under this scenario, but by repositioning the timing of the example project to later (or conversely earlier) in the programme, potential cumulative effects contributed to by the example project are reduced by 8 months compared to Scenario 1b. It is acknowledged that total cumulative traffic flows are the same as Scenario 1b, but effects contributed to by the example project are lower as there is a greater off-set from the traffic flows of the two cumulative schemes combined. Again, coordination should be carried out between the projects to mitigate potential impacts by off-setting construction peaks where possible, however the example project is likely to have less influence than the two cumulative projects.

Scenario 2 – Moderate Degree of Overlap

C.1.15 The Graphs for Scenarios 2a, 2b and 2c are presented in Plate C.4, Plate C.5 and Plate C.6 respectively. A summary of the results in terms of significance levels and durations is provided after all three scenarios have been presented.

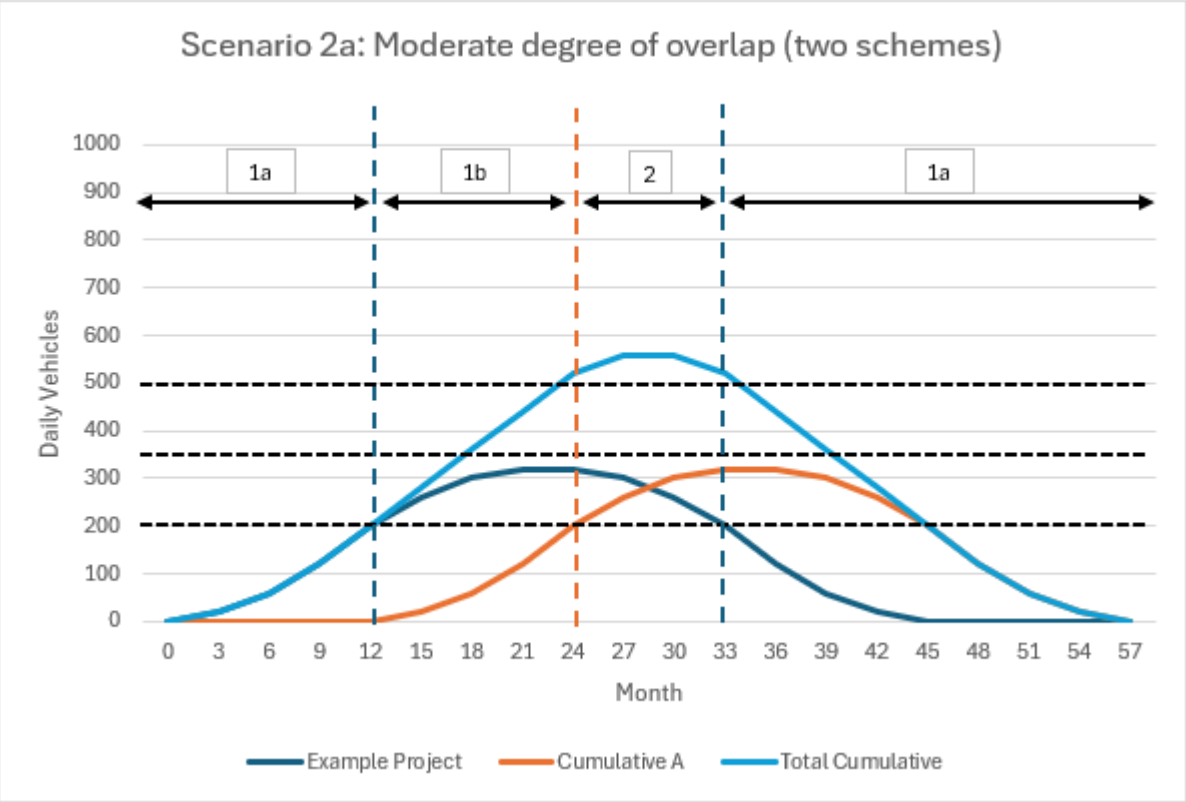


Plate C.4 Scenario 2a – Moderate Overlap, Two Schemes

C.1.16 The analysis shows that a Negligible cumulative effect (1a or 1b) is expected for the majority of the time (48 months), with a Minor / Moderate cumulative effect (2) expected to occur for nine months when the peak construction phases of the two projects are close to overlapping. Whilst there could be the potential for a significant cumulative effect under this scenario, the Minor / Moderate cumulative effect would only be experienced for 15% of the time and a Negligible cumulative effect would be experienced for 85% of the time. Therefore, on balance it is considered that a Minor (not significant) cumulative effect would arise, particularly as the example project is Minor at its peak. By increasing the stagger between the construction programmes, the total duration of the combined schemes has increased by six months when compared to Scenario 1a.

C.1.17 As set out earlier for Scenario 1a, it is acknowledged that the total increase in vehicles exceeds 500 vehicles at peak times, which therefore represents a large magnitude of change (cumulatively). However, the potential cumulative effect is considered to be Minor / Moderate when combining the potential effect of the example project (Minor) with the potential effect of the cumulative scheme (Minor).

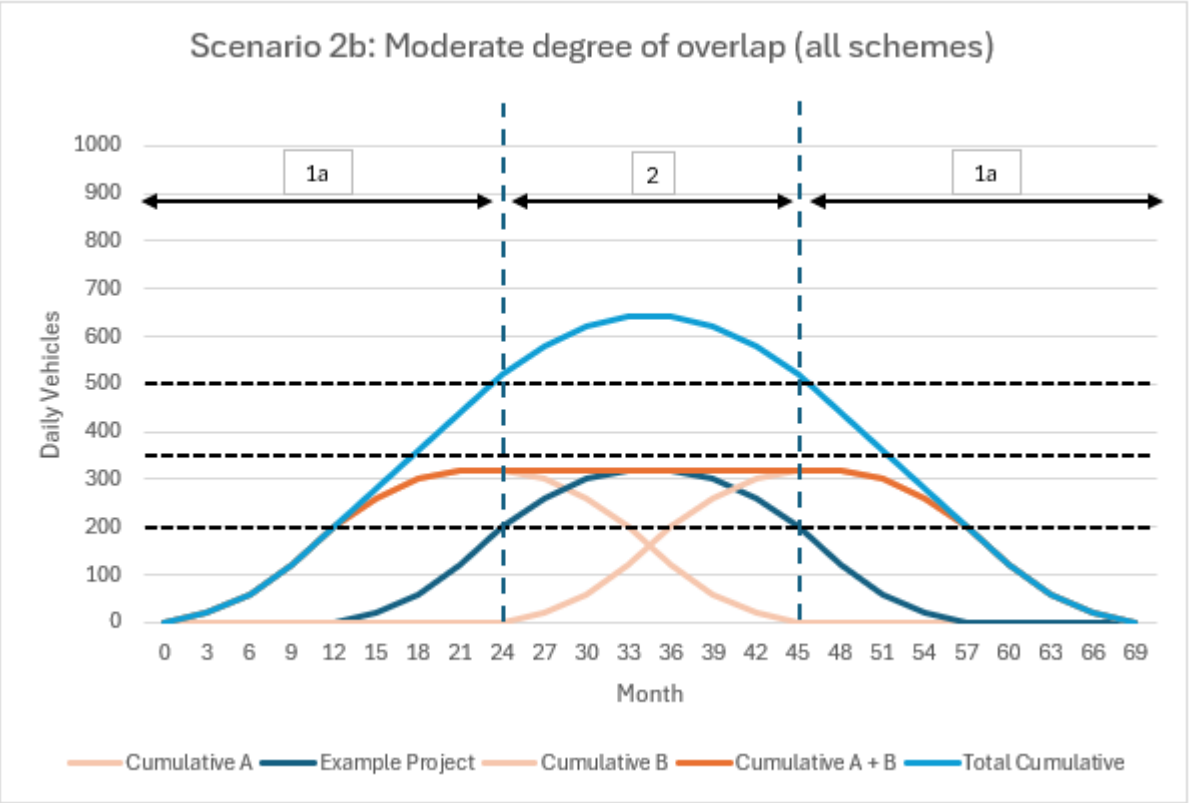


Plate C.5 Scenario 2b – Moderate Overlap, Three Schemes with Example Project in the Middle

C.1.18 The above shows that a Negligible cumulative effect (1a or 1b) is expected for the majority of the time (48 months), with a Minor / Moderate cumulative effect (2) expected to occur for 21 months when the peak construction phases of the three projects are close to overlapping. Whilst there could be the potential for a significant cumulative effect under this scenario, the Minor / Moderate cumulative effect would only be experienced for 30% of the time and a Negligible cumulative effect would be experienced for 70% of the time. Therefore, on balance it is considered that a Minor (not significant) cumulative effect would arise, particularly as the example project is Minor at its peak. This is a similar outcome to Scenario 1a for the assessment of the example project with a single cumulative scheme, when there is a greater overlap in the construction programmes. By increasing the stagger between the construction programmes, the total duration of the combined schemes has increased by 12 months when compared to Scenario 1b.

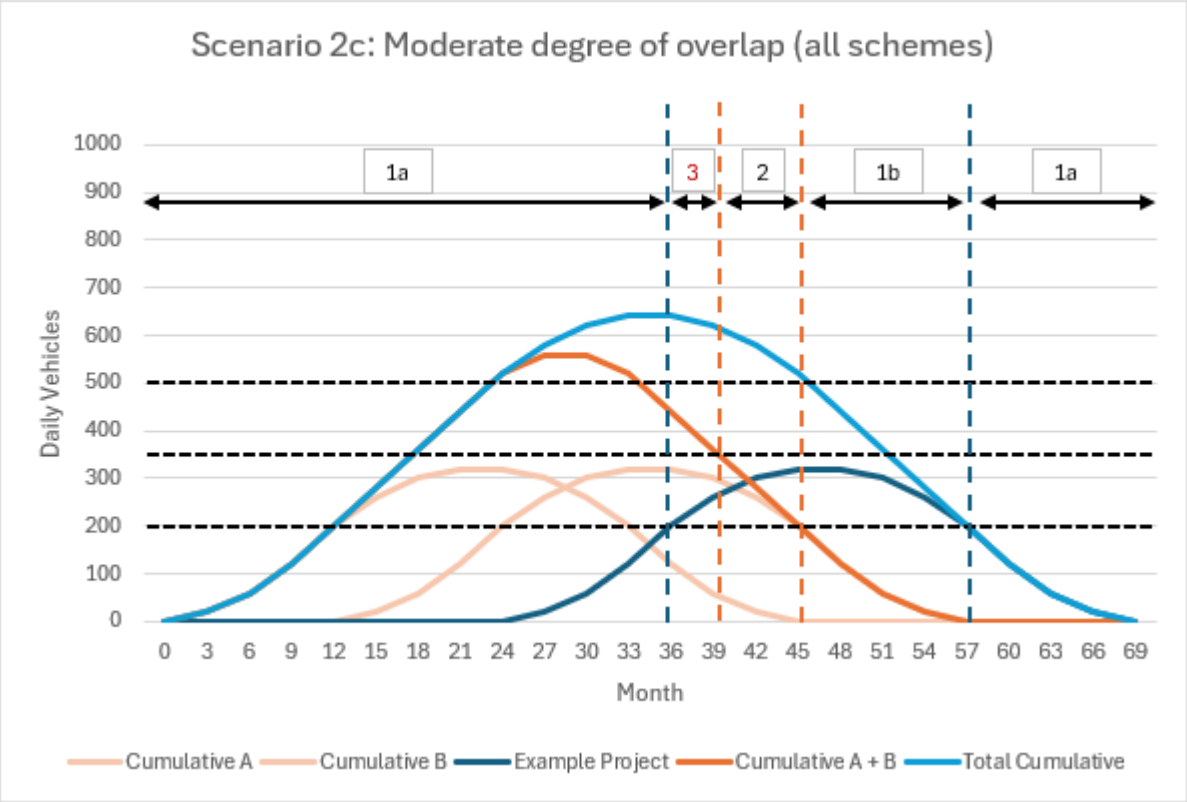


Plate C.6 Scenario 2c – Moderate Overlap, Three Schemes with Example Project at the End

C.1.19 The analysis shows that a Negligible cumulative effect (1a or 1b) is expected for the majority of the time (60 months), with a Minor / Moderate cumulative effect (2) expected to occur for six months. A Moderate (3) cumulative effect is expected to occur for three months when the construction phases of the three projects overlap, including the construction peak for one of the cumulative schemes. Therefore again, potential significant cumulative effects may arise under this scenario, but by repositioning the timing of the example project to later (or conversely earlier) in the programme, potential cumulative effects attributed to the example project are reduced by 12 months compared to Scenario 2b. It is acknowledged that total cumulative traffic flows are the same as Scenario 2b, but effects attributed to the example project are lower as there is a greater off-set from the traffic flows of the two cumulative schemes combined.

Scenario 3 – Small Degree of Overlap

C.1.20 The Graphs for Scenarios 3a, 3b and 3c are presented in Plate C.7, Plate C.8 and Plate C.9 respectively. A summary of the results in terms of significance levels and durations is provided after all three scenarios have been presented.

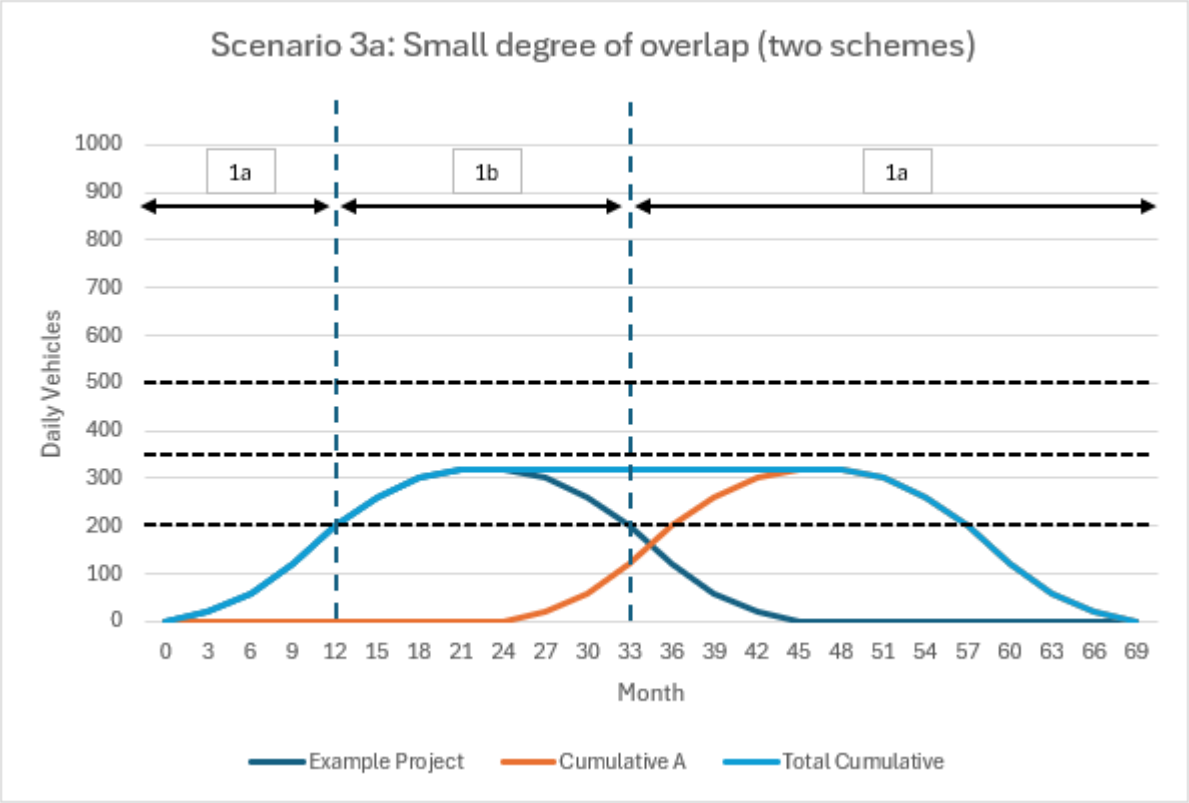


Plate C.7 Scenario 3a – Small Overlap, Two Schemes

C.1.21 The above shows that a Negligible cumulative effect (1a or 1b) is expected for the entire duration. However, by increasing the stagger between the construction programmes, the total duration of construction traffic associated with the combined schemes has increased by 18 months compared to Scenario 1a and by 12 months compared to Scenario 2a.

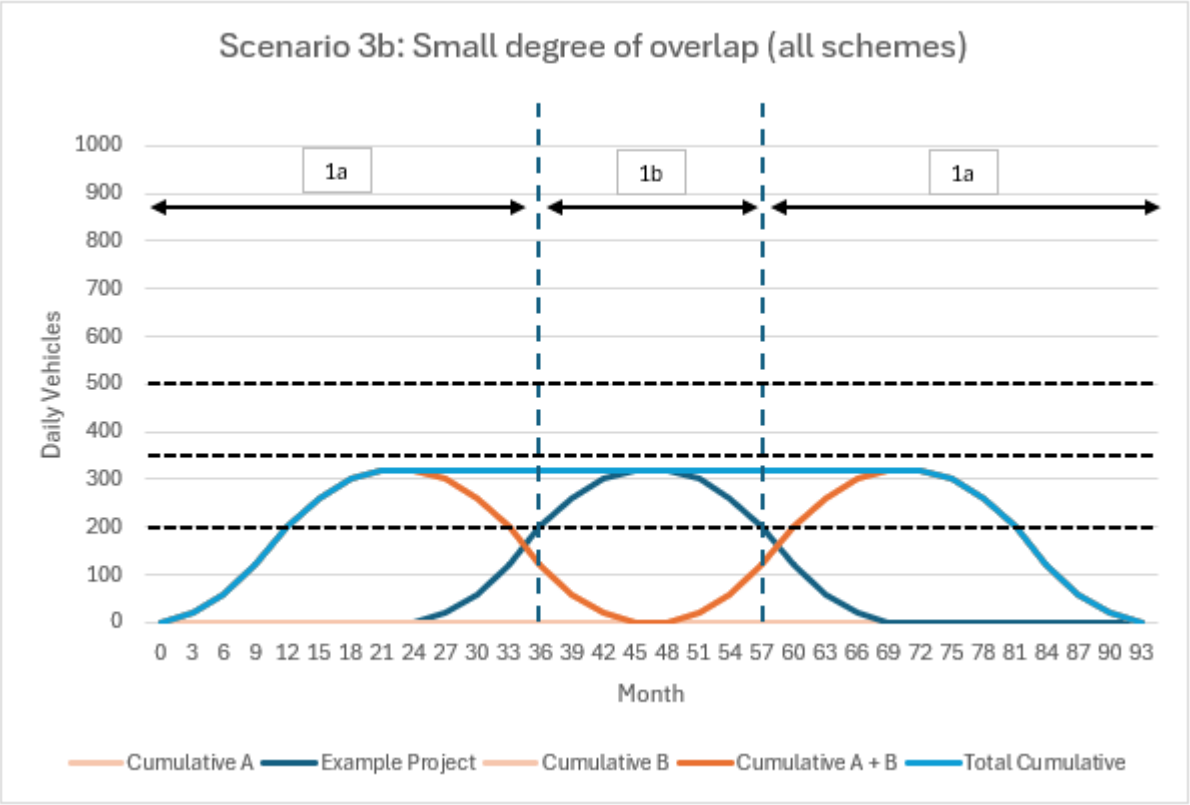


Plate C.8 Scenario 3b – Small Overlap, Three Schemes with Example Project in the Middle

C.1.22 The analysis shows that a Negligible cumulative effect (1a or 1b) is expected for the entire duration. However, by increasing the stagger between the construction programmes, the total duration of construction traffic associated with the combined schemes has increased by 36 months compared to Scenario 1a and by 24 months compared to Scenario 2a.

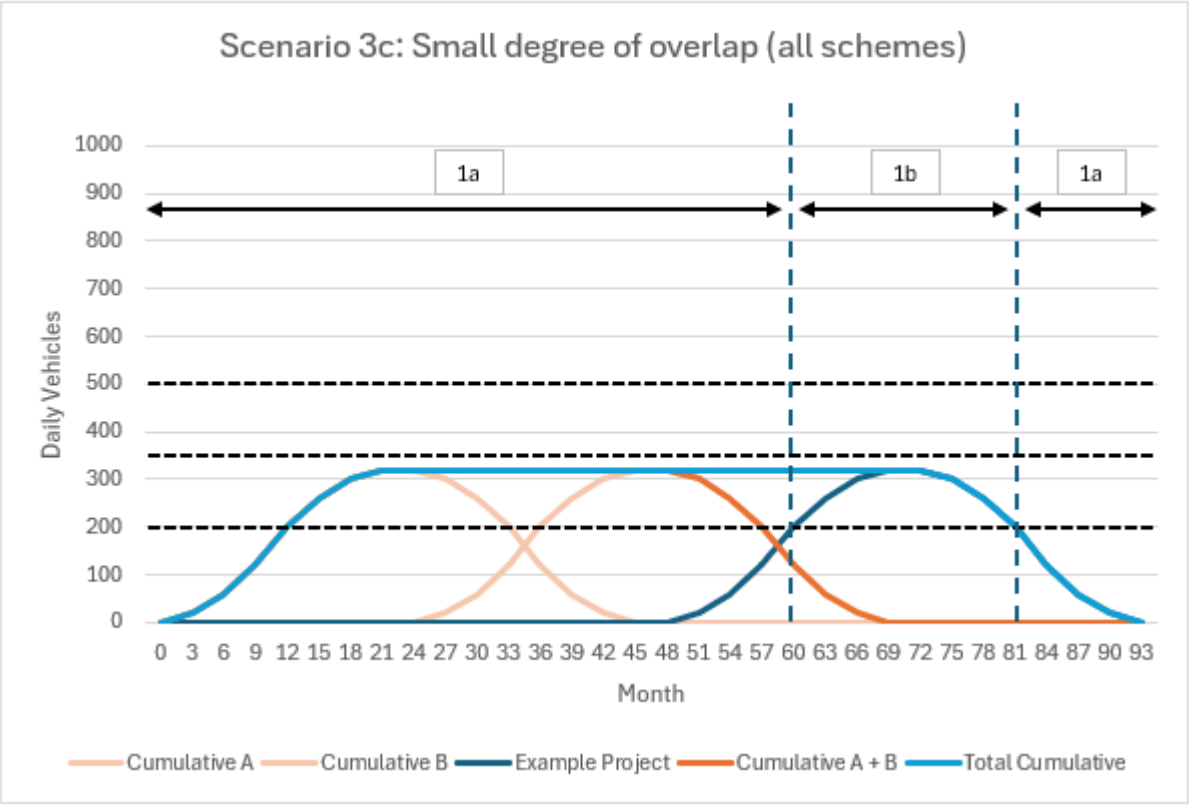


Plate C.9 Scenario 3c – Small Overlap, Three Schemes with Example Project at the End

C.1.23 The above shows that a Negligible cumulative effect (1a or 1b) is expected for the entire duration. Due to the extent of the stagger between the three schemes, the findings are identical to Scenario 3b, which suggests that no additional benefit can be achieved by staggering the construction works any further.

Summary

C.1.24 Table C.1 summarises the hypothetical scenarios presented in this chapter of the TN.

Table C.1 Summary of Worked (Hypothetical) Example on Duration of Effect

Scenario	Combined Programme Length (Months)	Duration of Effect (Months)		
		Negligible (not significant)	Minor/ Moderate (potentially significant)	Moderate/ Major (significant)
1a	51	36	15	0
2a	57	48	9	0
3a	69	69	0	0
1b	57	36	0	21
2b	69	48	21	0
3b	93	93	0	0
1c	57	40	4	13
2c	69	60	6	3
3c	93	93	0	0

C.1.25 As originally stated, there will be a trade-off between the potential duration of a cumulative effect, the overall magnitude of change and the likely significance of this cumulative effect. The worked example shows that Scenario 1 would be the shortest in duration with some potential for significant cumulative effects, whereas Scenario 2 would be longer in duration with less potential for significant cumulative effects, and Scenario 3 would be considerably longer in duration with no potential significant cumulative effects. Scenario 3 would extend the overall programme of ongoing construction activity by 36 months (three years) compared to Scenario 1, therefore whilst the magnitude of change would be lower, any potential disruption relating to construction traffic would be experienced for a longer duration.

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