

Tritax Symmetry (Hinckley) Limited

HINCKLEY NATIONAL RAIL FREIGHT INTERCHANGE

The Hinckley National Rail Freight Interchange Development Consent Order

Project reference TR050007

Environmental Statement Volume 1: Main Statement

Appendix 5 - ES Chapter 10 Noise and Vibration Addendum

Document reference: 6.4.3

Revision: 01

December 2024

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
Regulation 5(2)(a)

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
Regulation 14

Chapter 10 ◆ Noise and Vibration

INTRODUCTION

- 10.1. This ES Addendum has been produced to provide an update to the Noise and Vibration ES Chapter prepared in January 2024 [REP4-039] to support the Development Consent Order (DCO) application for Hinckley National Rail Freight Interchange (TR050007).
- 10.2. Following submission of the application, receipt of the Examining Authority's Report and the Secretary of State's letter dated 10th September 2024, the Applicant has revisited the design of the road layout from Junction 2 into HNRFI, and the requirement for noise mitigation arising therefrom, in order to satisfactorily protect the amenity and equalities for the residents of Aston Firs Traveller Site, Smithy Lane, Sapcote. The Applicant has also revisited the design of highway mitigation in the village of Sapcote, and assessed the noise impacts from the Sapcote enhanced highway mitigation scheme.
- 10.3. The purpose of this ES Addendum is to identify the potential additional effects arising from the road realignment at nearby existing sensitive receptors. A comparison has been undertaken with the previous assessment undertaken in January 2024 to determine whether there are any material differences that require further consideration on the topic of noise and vibration. This addendum should therefore be read in conjunction with the previous ES Chapter (Chapter 10 Noise and vibration 6.1.10A Revision 08) [REP4-039].
- 10.4. This addendum identifies any new or altered significant effects which could arise from that presented in the original ES. Where the assessment has not changed it is referenced as such within this Addendum.

METHODOLOGY AND DATA SOURCES

Scoping opinion

- 10.5. No further consultation has been undertaken and the text within the ES remains valid.

Section 42 Consultation

- 10.6. No further consultation has been undertaken and the text within the ES remains valid.

Section 47 Consultation

- 10.7. No further consultation has been undertaken and the text within the ES remains valid.

Further Consultation with Blaby District Council and Hinckley & Bosworth Borough Council

- 10.8. Outside of formal Section 47 Consultation, Blaby District Council (BDC) and Hinckley & Bosworth Borough Council (HBBC) have been informally engaged on the aspects of this

addendum relating to matters relating to noise at Aston Firs Travellers Site and the highway mitigation in Sapcote.

Definition of the study area

10.9. There are no changes to the study area and the text within the ES remains valid.

Scope

10.10. There are no changes to the scope and the text within the ES remains valid.

Construction noise

10.11. There are no changes to the noise assessment methodology of construction noise and the text within the ES remains valid.

Construction Traffic

10.12. There are no changes to the noise assessment methodology of construction traffic and the text within the ES remains valid.

Construction vibration

Effects on humans

10.13. There are no changes to the vibration assessment methodology on humans and the text within the ES remains valid.

Effects on buildings

10.14. There are no changes to the vibration assessment methodology on buildings and the text within the ES remains valid.

Completed development assessment

Noise from fixed plant, equipment and noise break-out from buildings

10.15. There are no changes to the noise assessment methodology of fixed plant, equipment and noise break-out from buildings and the text within the ES remains valid.

Noise from HGV deliveries and service yard activities including the intermodal rail facility

10.16. There are no changes to the noise assessment methodology of HGV deliveries and service yard activities including the intermodal rail facility and the text within the ES remains valid.

Operational maximum noise levels

10.17. There are no changes to the noise assessment methodology of operational maximum noise levels and the text within the ES remains valid.

Noise from on-site rail movements

10.18. There are no changes to the noise assessment methodology of on-site rail movements and the text within the ES remains valid.

Noise from off-site rail movements

10.19. There are no changes to the noise assessment methodology of off-site rail movements and the text within the ES remains valid.

Vibration from off-site rail movements

10.20. There are no changes to the vibration assessment methodology of off-site rail movements and the text within the ES remains valid.

Development generated road traffic

10.21. There are no changes to the noise assessment methodology of development generated road traffic and the text within the ES remains valid.

Assessment of tranquillity

10.22. There are no changes to the noise assessment methodology of tranquillity and the text within the ES remains valid.

Assessment inputs

10.23. There are no changes to the assessment inputs and the text within the ES remains valid.

Identifying sensitive receptors

10.24. There are no changes to the identification of sensitive receptors and the text within the ES remains valid.

Receptor sensitivity

10.25. There are no changes to receptor sensitivity and the text within the ES remains valid.

Characterisation of effect**Significance of effects**

10.26. There are no changes to the significance of effects and the text within the ES remains valid.

Significance criteria

10.27. There are no changes to the significance criteria and the text within the ES remains valid.

Construction phase

10.28. There are no changes to the significance criteria for the construction phase and the text within the ES remains valid.

Operational phase

10.29. There are no changes to the significance criteria for the operational phase and the text within the ES remains valid.

Assumptions and limitations

10.30. There are no changes to the assumptions and limitations and the text within the ES remains valid.

RELEVANT LAW, POLICY AND GUIDANCE

National Planning Policy

10.31. The Revised National Networks National Policy Statement was designated by Parliament on 24 May 2024. However, the 2014 National Policy Statement remains the National Policy Statement which has effect in relation to the application and the Applicant notes that the SoS at para 22 of her letter of 10 September 2024 does not consider that the 2024 NNNPS should be given material weight in connection with the determination of the application.

10.32. There are no changes to National Planning Policy that require further consideration and the text within the ES remains valid.

Local Planning Policy

10.33. There are no changes to Local Planning Policy and the text within the ES remains valid.

Other Relevant Policy, Standards and Guidance

10.34. There are no changes to other relevant policy, standards and guidance and the text within the ES remains valid.

BASELINE CONDITIONS

Site context

10.35. There are no changes to the site context and the text within the ES remains valid.

Baseline noise and vibration survey

10.36. There are no changes to the baseline noise and vibration survey and the text within the ES remains valid.

Measurement Equipment

10.37. There are no changes to the measurement equipment and the text within the ES remains valid.

Meteorological Conditions

10.38. There are no changes to the meteorological conditions and the text within the ES remains valid.

Measurement results

10.39. There are no changes to the measurement results and the text within the ES remains valid.

Future baseline

10.40. There are no changes to the future baseline and the text within the ES remains valid.

Sensitivity of receptors

10.41. There are no changes to the sensitivity of receptors and the text within the ES remains valid.

POTENTIAL SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSALS***Embedded Mitigation******Demolition and Construction***

10.42. There are no changes to the embedded mitigation during the demolition and construction phase and the text within the ES remains valid.

Completed Development

10.43. There are no changes to the embedded mitigation for the completed development and the text within the ES remains valid.

Construction phase***Construction noise***

10.44. There are no changes to the construction phase noise assessment and the text within the ES remains valid.

Construction traffic

10.45. There are no changes to the construction phase traffic noise assessment and the text within the ES remains valid.

Construction vibration

10.46. There are no changes to the construction phase vibration assessment and the text within the ES remains valid.

Completed development***Noise model***

10.47. There are no changes to the noise model and the text within the ES remains valid.

Noise from HGV movements, loading/unloading operations and service yard areas, including SRFI operations

10.48. There are no changes to the assessment of noise from HGV movements, loading/unloading operations and service yard areas, including SRFI operations and the text within the ES remains valid.

Assessment of operational maximum noise levels

10.49. There are no changes to the assessment of operational maximum noise levels and the text within the ES remains valid.

Noise from fixed plant, equipment and break-out noise

10.50. There are no changes to the assessment of noise from fixed plant, equipment and break-out noise and the text within the ES remains valid.

Noise from off-site rail movements

10.51. There are no changes to the assessment of noise from off-site rail movements and the text within the ES remains valid.

Vibration from off-site rail movements

10.52. There are no changes to the assessment of vibration from off-site rail movements and the text within the ES remains valid.

Off-site road traffic noise impacts

10.53. There are no changes to the assessment of noise from off-site road traffic and the text within the ES remains valid.

Noise model

10.54. There are no changes to the noise model for off-site road traffic and the text within the ES remains valid.

Model calibration

10.55. There are no changes to the model calibration and the text within the ES remains valid.

*Assessment of impacts**Sapcote Enhancement Scheme*

- 10.56. Further to the assessment presented in Chapter 10 (Chapter 10 Noise and vibration 6.1.10A Revision 08) [REP4-039] of development generated road traffic, an additional assessment (Appendix C – Update to Development Generated Road Traffic Noise Assessment (REP4-132), doc ref 18.13.3 Revision 01; referred to hereafter as the ‘Additional Study’) was undertaken of road links which extended beyond the study area presented in Chapter 10. It was the Additional Study which included road links through Sapcote, in particular Hinckley Road (B4669) and Leicester Road (B4669).
- 10.57. Both the Chapter assessment and the Additional Study adopted the same methodology within the Chapter assessment (set out in Off-site road traffic noise impacts from paragraph 10.216 onwards) and predicted the likely change in noise level as a result of development generated traffic along the identified links for the short-term and long-term.
- 10.58. The calculation method detailed within Calculation of Road Traffic Noise (CRTN) was adopted for predicting the noise levels from road traffic, with and without the development generated traffic. The change between the ‘with’ and ‘without’ scenarios was assessed against the short-term and long-term criteria based on the principles set out in the Design Manual for Roads and Bridges LA111 Revision 2 (DMRB).
- 10.59. The results of the Additional Study indicated that for all links through Sapcote, the change in noise level in the short term and long term is less than 3dB at sensitive receptors adjacent to the B4669 through Sapcote. This indicates minor, adverse effects in the short-term and negligible adverse effects for the long-term, both of which are not significant.
- 10.60. As part of the Enhanced scheme, the carriageway will be marginally widened, by 1.5m to allow HGVs to give way to each other, when required. This widening will result in the edge of the carriageway being approximately 1m closer to receptors than the existing carriageway. For the majority of the time, traffic will flow freely and traffic will only be required to give way when an HGV is wanting to pass, and under these circumstances there would be an element of queuing.
- 10.61. The noise modelling and assessment of the Enhanced scheme has been undertaken using the same accepted methodology as the Chapter assessment and Additional study. While the calculation methodology detailed within CRTN, and the assessment methodology detailed within DMRB, does not specifically account for queuing traffic, the aim of CRTN is to permit prediction of road traffic noise in as many cases as possible covering both free and non-free flowing traffic.

- 10.62. The B4669 through Sapcote has previously (in line with the Additional Study) been modelled at a speed of 48km/h (30 mph) reflecting free flowing traffic. To represent a situation where there is queuing traffic, the speed has been reduced to 20km/h (12mph), which is the minimum speed permitted within the calculation methodology and is considered to represent these conditions. This has been applied for 100m either side of the Enhanced scheme to account for average queue lengths.
- 10.63. The queuing traffic and the widening of the road has been included within the noise model to determine the impact at receptors located adjacent to the Enhanced scheme to the south of the B4669, which are the receptors expected to be most affected by the changes, under both normal free flowing traffic conditions and queuing traffic. The results are shown below in **Table 10.1**.

Table 10.1: Increase in Short-Term and Long-Term Noise Levels on B4669 through Sapcote

Traffic Condition	Noise Level dB $L_{A10,18h}$	
	Increase in Noise Level Between Do-Something and Do-Minimum Opening Year	Increase in Noise Level Between Do-Something and Do-Minimum Future Year
Queuing Traffic	+1.0	+2.0
Free-flowing Traffic	+2.0	+3.0

- 10.64. The results of the noise modelling indicate that the proposals do not change the magnitude of impact in the short-term or long-term, from what has previously been stated within the Additional Study. Therefore, the effect remains as minor, adverse in the short-term and negligible adverse for the long-term, both of which are not significant.
- 10.65. Therefore, there are no changes to the previous assessment of effect for off-site road traffic.

Bus Stop in Sapcote

- 10.66. The bus stop, which is currently located near to the junction of Church Street and Leicester Road, is to be relocated further east along Leicester Road. There is no regular bus service through Sapcote, with only a school bus timetabled which stops to pick pupils up in the morning and drop them off in the afternoon, resulting in only two buses per day. The buses will only run on weekdays during term time and it is understood there is only one bus in the morning and one in the afternoon and the average stopping time is 90 seconds.

- 10.67. Given the buses will only be stationary for a short period of time and given the infrequency of the events (twice per weekday, term time only), it is considered unlikely that adverse noise impacts would be experienced at nearby receptors, and therefore no further assessment of this noise source is required.
- 10.68. There is potential for noise associated with groups of pupils gathering whilst waiting for the bus. However, they will only be waiting at the bus stop during the morning, and this is unlikely to be for significant periods of time, with passengers dissipating quickly in the afternoon once the bus drops them off. Furthermore, during these times, road traffic is likely to be at its busiest. Given this and the infrequent use of the bus stop, it is considered unlikely that significant adverse noise impacts would be experienced at adjacent receptors.

Summary

- 10.69. There are no changes to the summary for off-site road traffic and the text within the ES remains valid.

Noise on new and re-routed PRowS

- 10.70. There are no changes to the assessment of noise on new and re-routed PRowS and the text within the ES remains valid.

Assessment of tranquillity

- 10.71. There are no changes to the assessment of tranquillity and the text within the ES remains valid.

PROPOSED MITIGATION

Construction noise and vibration

- 10.72. There are no changes to the proposed mitigation of construction noise and vibration and the text within the ES remains valid.

Construction Traffic

- 10.73. There are no changes to the proposed mitigation of construction traffic and the text within the ES remains valid.

Completed development

Noise from HGV movements, loading/unloading operations and service yard areas, including SRFI operations

- 10.74. There are no changes to the proposed mitigation of noise from HGV movements, loading/unloading operations and service yard areas, including SRFI operations and the text within the ES remains valid. However, Figure 6.3.10.4 has been updated to include

acoustic barrier revisions in the vicinity of Aston Firs which are detailed later in this Addendum.

Gantry cranes

10.75. There are no changes to the proposed mitigation of gantry cranes and the text within the ES remains valid.

Assessment of operational maximum noise levels

10.76. There are no changes to the proposed mitigation of operational maximum noise levels and the text within the ES remains valid.

Noise from fixed plant, equipment and break-out noise

10.77. There are no changes to the mitigation of noise from fixed plant, equipment and break-out noise and the text within the ES remains valid.

Noise from off-site rail movements

10.78. There are no changes to the mitigation of noise from off-site rail movements and the text within the ES remains valid.

Vibration from off-site rail movements

10.79. There are no changes to the mitigation of vibration from off-site rail movements and the text within the ES remains valid.

Off-site road traffic noise impacts

A47 Link Road

10.80. As stated in paragraphs 10.226 to 10.234 of the original ES, the Proposed Development is likely to result in major or moderate adverse effects at seven receptors without mitigation in place. These receptors are located within the Aston Firs traveller's site, along Smithy Lane, nearest to Junction 2 of the M69; at Bridge Farm; and at the traveller's site along Leicester Road (B4668) on the opposite side of the highway to Hinckley Town Tennis Club.

10.81. In line with the NPSE, significant adverse impacts (i.e. noise levels above the SOAEL) should be avoided and adverse effects should be mitigated and minimised through the effective management and control of environmental noise, within the context of Government policy on sustainable development. Consequently, mitigation measures have been identified to minimise the adverse effects.

10.82. Note that significant forms of mitigation have been embedded within the design of the Proposed Development, based on iterative design development and recommendations made by the Applicant's acoustic consultants. The embedded mitigation incorporates earth bunds up to 5m in height on either side of the proposed A47 Link Road, where

feasible.

10.83. As stated in the original ES, the following additional mitigation measures have been proposed, which are shown on Figure 6.3.10.10A:

- A 3.5m high acoustic barrier has been incorporated into the 3D noise model along the north-eastern and south-eastern boundary of the traveller's site along Leicester Road (B4668) on the opposite side of the highway to Hinckley Town Tennis Club. This is proposed as a means of reducing noise from the proposed A47 Link Road.
- A 1.8m high acoustic barrier adjacent to the A47 to protect Burbage Common.

10.84. Following receipt of the Examining Authority's Report and the Secretary of State's letter dated 10th September 2024, the Applicant has updated the design of the road layout from Junction 2 into HNRFI, and the requirement for noise mitigation arising therefrom, in order to provide additional mitigation to satisfactorily protect the amenity of the residents of the Aston Firs Traveller Site.

10.85. For the Aston Firs Traveller Site, the original mitigation scheme comprised 4m and 6m high acoustic barriers along the Northern and Eastern boundaries of the site, close to the receptors at Aston Firs. It is noted that an acoustic barrier is most effective when it is located either near to the source or near to the receptor.

10.86. To address the concerns raised by the ExA with regards to the impacts arising to the amenity of Aston Firs residents from a section of the 6m high barrier, the Applicant has updated the design of the A47 link road and the associated mitigation. This updated design includes revising the alignment and level of A47 link road between junction 2 M69 and the first roundabout within HNRFI. The updated design now allows for the acoustic barrier to be sited closer to the road, providing more effective mitigation at the source. The acoustic barriers now comprise 4m barriers along the northern boundary, and 3m along the south-eastern boundary of Aston Firs. In the vicinity of Aston Firs, the barrier height has reduced to 3m, and now sits partially along the realigned link road (further from the receptors). To allow access to the bridleway and the crossing under the Link Road, the 3m high acoustic barrier adjacent to the Link Road terminates at the crossing, thus there is a small overlap in the barrier. However, there is a gap through which some noise can permeate. The changes are summarised below and are shown on Figure 6.3.10.10A;

- a 4m high acoustic barrier is proposed along the northern boundary, which is in line with that detailed in the Chapter assessment.
- 3m high acoustic barriers are proposed adjacent to the south-eastern boundary of Aston Firs, and adjacent to the western carriageway of the A47 Link Road and northern carriageway of the realigned B4669, as they both pass Aston Firs. These are reduced from 6m as originally proposed immediately adjacent to the Aston Firs boundary.

10.87. There is a 12m buffer zone between the boundary of the Aston Firs Traveller Site and the

proposed 3m high acoustic barrier where it is adjacent to the carriageway of the A47 Link Road. No structures will be built in this buffer zone to protect the visual amenity of residents of Aston Firs Traveller Site.

- 10.88. Cross sections showing the realigned road and acoustic barrier positions are shown in Drawing HRF-BWB-GEN-XX-CH-SK184-Aston Firs Acoustic Fence Cross Sections S2 P02.
- 10.89. These changes have been included within the noise model, and the noise assessment has been updated. The assessment predicts the likely change in noise level as a result of development generated traffic, particularly as a result of the A47 Link Road, in the vicinity of Aston Firs and considers the potential effect. The assessment considers the change in noise level in both the short term and the long term.
- 10.90. Updated noise contour maps have also been produced for receptors at Aston Firs, with mitigation, and are shown in Figures 6.3.10.11A and 6.3.10.13A for the short-term and long-term respectively. Noise contours have also been produced for the short-term and long-term scenarios to show the difference between the 'with' and 'without' development scenarios with mitigation in place. These are shown in Figures 6.3.10.12A for the short-term and 6.3.10.14A for the long-term. For completeness, noise contours have been produced showing the operational noise from the distribution warehouses and road traffic on the A47 link road at Aston Firs and are shown in Figure 10.15A.
- 10.91. The original ES assessment indicated that of the 123 properties located within the study area, 122 were predicted to experience a low, or negligible noise impact, or no change in both the short-term and the long-term as a result of operational road traffic noise. This is equivalent to a negligible to minor adverse direct, short-term and long-term effect, which is considered not significant. One receptor at Bridge Farm was predicted to experience a permanent, major adverse effect in the short-term and a moderate adverse effect in the long-term. However, the receptor at Bridge Farm is located further away from the realignment of the A47 and is unaffected by the changes and therefore the outcome is the same at this receptor.

Short-term effects on Aston Firs Travellers Site

- 10.92. The difference contours show that for the majority of the Aston Firs Traveller Site, the change in noise level is predicted to be up to +2.4dB in the with development scenario in the short-term. In accordance with the methodology detailed in the Chapter assessment, the magnitude of impact is likely to be low which will result in a minor, adverse effect, which is not significant, and is in line with the results of the assessment undertaken for the original ES.
- 10.93. There are some small areas close to the north-western and eastern boundaries where a difference of up to 4.0dB is predicted. However, there are no residential receptors located within these areas, so no residents will experience the change. It is also worth noting that some small areas in the south-eastern area of Aston Firs are predicted to experience a reduction in noise levels of up to -0.6dB. Future absolute noise levels are discussed in the Context section below.

Long-term effect on Aston Firs Travellers Site

- 10.94. The difference contours show that for the majority of the Aston Firs Traveller Site, the change in noise level is predicted to be up to +2.9dB in the with development scenario in the long-term. In accordance with the methodology detailed in the Chapter assessment, the magnitude of impact is likely to be very low which will result in a negligible, adverse effect, which is not significant.
- 10.95. There are some small areas close to the north-western and eastern boundaries where a difference of up to +4dB is predicted. However, there are no residential receptors located within these areas so no residents will experience the change. It is also worth noting that some small areas in the south-eastern area of Aston Firs are predicted to experience a reduction in noise levels of up to -1.0dB. Future absolute noise levels are discussed in the Context section below.

Context

- 10.96. In accordance with paragraph 10.54 of the Chapter assessment, the magnitude of impact can be modified through consideration of a combination of other contextual factors or local circumstances to determine final significance. These are discussed below.
- 10.97. The predicted increase in the noise level over the short-term at Aston Firs sits in the middle of the 'low' impact band. The predicted increase in the long-term sits at the top of the 'very low' impact band. The predicted level of change is considered marginal and would barely be perceptible to the human ear, with changes of 3dB only just perceptible under conditions 'in the field' (i.e. in practical or 'real world' conditions).
- 10.98. The absolute noise level at the worst-affected receptor at Aston Firs is 66dB $L_{A10,18h}$ for the short-term and 67dB $L_{A10,18h}$ for the long-term which are below the Significant Observed Adverse Effect Level (SOAEL) as defined in Design Manual for Roads and Bridges¹. Furthermore, the existing noise climate is dominated by road traffic noise and will continue be dominated by road traffic noise in the future should the Proposed Development be granted consent. Taking the above into account, no modification of the initial magnitude of impact is required. Overall, the magnitude of impact remains at 'low', which results in effects which are not significant, in both the short-term and long-term scenarios, which is in line with the conclusions stated in the original ES.

Summary

- 10.99. Government policy on noise is based on demonstrating how significant adverse effects have been avoided, and adverse effects have been mitigated and minimised in the context of Government Policy on sustainable development. Therefore, an assessment has been undertaken comparing the unmitigated impacts to the mitigated impacts to demonstrate the attenuation afforded by the proposed mitigation. This is shown in Table 10.1 below.

¹ Design Manual for Roads and Bridges (DMRB) LA111 Noise and Vibration Revision 2 (May 2020)

Table 10.1: Increase in Short-Term and Long-Term Noise Levels – With and Without Mitigation at Aston Firs

Noise Level Increase dB			
Short-term Increase Without Mitigation – Opening Year *	Short-term Increase With Mitigation – Opening Year	Long-term Increase Without Mitigation – Future Year *	Long-term Increase With Mitigation – Future Year
+4 to +7	+2.4	+4 to +8	+2.9
*There is a greater range for these scenarios without mitigation in place as can be seen by the contour maps in Figures 10.16 and 10.17.			

10.100. The results show that without mitigation in place, the resultant magnitude of impact would be up to high in the short-term and up to medium in the long-term. This would result in effects which are significant. With the revised mitigation scheme, the magnitude of impact is low, which results in effects which are not significant, in both the short-term and long-term scenarios. Therefore, the revised mitigation scheme is considered to comply with Government Policy on noise as set out in the NPS² and NPSE³ as well as protecting the amenity and equalities for the residents of Aston Firs Traveller Site.

Sapcote Enhanced Scheme

10.101. The applicant has proposed an ‘Enhanced’ scheme of traffic mitigation through the village of Sapcote, which seeks to address the additional concerns of the ExA. The main safety concern relates to there being insufficient room to pass and the potential overrunning of the narrow footways located on the north and south side of the B4669 by HGVs travelling through the village centre [ER 3.3.526]. It is also noted that the bus stop located on the narrow footways results in the congregation of school children and other pedestrians, both waiting for the bus and walking throughout the village [ER 3.3.531]. The ExA considered that the combination of the numbers of pedestrians in the area and the increased likelihood of HGVs coinciding and therefore overrunning on to the footways, would result in an unacceptable highway safety risk.

10.102. In this Enhanced scheme, the area outside the Co-op would become pedestrian only and the bus stop would be removed, with the zebra crossing, and wider northern footway

² National Policy Statement for National Networks (2014)

³ Department for Environment, Food and Rural Affairs (2010); Noise Policy Statement for England (NPSE)

unchanged. The Enhanced scheme would provide a length of narrower carriageway around New Road with cars and light vehicles able to pass each other but HGVs encouraged via signing and road markings to use the centre of the road, with oncoming vehicles informally giving way. The markings provided and narrower carriageway mean that large vehicles will be channelled away from the footways using an arrangement seen commonly on bridges with limited clearance where high vehicles must use the middle of the road.

- 10.103. The footway to the east of the Co-op on the south side of the B4669 would be widened to 2m minimum to allow space for users on the footway to pass each other.
- 10.104. In addition, a bus lay-by would be provided in the verge area to the east of New Road which allows westbound buses to wait off carriageway and allows passengers of buses to wait well away from the carriageway. The upgraded footway provides a safe route from the Co-op area to the relocated bus stop.
- 10.105. As part of the Enhanced scheme, the carriageway will be marginally widened by 1.5m to allow HGVs to give way to each other, when required. This widening will result in the edge of the carriageway being approximately 1m closer to receptors than the existing carriageway. For the majority of the time, traffic will flow freely and traffic will only be required to give way when an HGV is wanting to pass, and under these circumstances there would be an element of queuing.
- 10.106. The noise modelling and assessment of the Enhanced scheme has been undertaken using the same accepted methodology as the Chapter assessment and Additional study⁴. While the calculation methodology detailed within CRTN, and the assessment methodology detailed within DMRB, does not specifically account for queuing traffic, the aim of CRTN is to permit prediction of road traffic noise in as many cases as possible covering both free and non-free flowing traffic.
- 10.107. The B4669 through Sapcote has previously (in line with the Additional Study) been modelled at a speed of 48km/h (30 mph) reflecting free flowing traffic. To represent a situation where there is queuing traffic, the speed has been reduced to 20km/h (12mph), which is the minimum speed permitted within the calculation methodology and is considered to represent these conditions. This has been applied for 100m either side of the Enhanced scheme to account for average queue lengths.
- 10.108. The queuing traffic and the widening of the road has been included within the noise model to determine the impact at receptors located adjacent to the Enhanced Scheme to the south of the B4669, which are the receptors expected to be most affected by the changes, under both normal free flowing traffic conditions and queuing traffic. The results are shown below in Table 10.2.

⁴ Appendix C – Update to Development Generated Road Traffic Noise Assessment, doc ref 18.13.3 Revision 01

Table 10.2: Increase in Short-Term and Long-Term Noise

Traffic Conditions	Noise Level dB L _{A10,18h}	
	Increase in Noise Level Between Do-Something and Do-Minimum Opening Year	Increase in Noise Level Between Do-Something and Do-Minimum Future Year
Queuing Traffic	+1.0	+2.0
Free-flowing Traffic	+2.0	+3.0

10.109. The results of the noise modelling indicate that the proposals do not change the magnitude of impact in the short-term or long-term, from what has previously been stated within the Additional Study. Therefore, the effect remains as minor, adverse effect in the short-term and negligible adverse for the long-term, both of which are not significant.

Bus Stop

10.110. The bus stop, which is currently located near to the junction of Church Street and Leicester Road, is to be relocated further east along Leicester Road. There is no regular bus service through Sapcote, with only a school bus timetabled which stops to pick pupils up in the morning and drop them off in the afternoon, resulting in only two buses per day. The buses will only run on weekdays during term time only and it is understood there is only one bus in the morning and one in the afternoon and the average stopping time is 90 seconds.

10.111. Given the buses will only be stationary for a short period of time and given the infrequency of the events (twice per weekday, term time only), it is considered unlikely that adverse noise impacts would be experienced at nearby receptors, and therefore no further assessment of this noise source is required.

10.112. There is potential for noise associated with groups of pupils gathering whilst waiting for the bus. However, they will only be waiting at the bus stop during the morning, and this is unlikely to be for significant periods of time, with passengers dissipating quickly in the afternoon once the bus drops them off. Furthermore, during these times, road traffic is likely to be at its busiest. Given this and the infrequency use of the bus stop, it is considered unlikely that significant adverse noise impacts would be experienced at adjacent receptors.

Tranquillity

10.113. There are no changes to the mitigation of noise in relation to tranquillity and the text

within the ES remains valid.

RESIDUAL ENVIRONMENTAL EFFECTS

Construction phase

10.114. There are no changes to the residual effects for the construction phase and the text within the ES remains valid.

Completed development

Noise from HGV movements, loading/unloading operations and service yard areas, including SRFI operations

10.115. There are no changes to the residual effects of noise from HGV movements, loading/unloading operations and service yard areas, including SRFI operations and the text within the ES remains valid.

Noise from fixed plant, equipment and break-out noise

10.116. There are no changes to the residual effects of noise from fixed plant, equipment and break-out noise and the text within the ES remains valid.

Noise from off-site rail movements

10.117. There are no changes to the residual effects of noise from off-site rail movements and the text within the ES remains valid.

Vibration from off-site rail movements

10.118. There are no changes to the residual effects of vibration from off-site rail movements and the text within the ES remains valid.

Off-site road traffic noise impacts

10.119. There are no changes to the residual effects of noise from off-site road traffic noise impacts and the text within the ES remains valid.

Tranquillity

10.120. There are no changes to the residual effects on tranquillity and the text within the ES remains valid.

CUMULATIVE AND IN-COMBINATION EFFECTS

Construction phase

10.121. There are no changes to the cumulative and in-combination effects for the construction phase and the text within the ES remains valid.

Completed development

10.122. There are no changes to the cumulative and in-combination effects for the completed development and the text within the ES remains valid.

CLIMATE CHANGE

10.123. There are no changes to the impact on climate change and the text within the ES remains valid.

SUMMARY AND CONCLUSIONS

10.124. There are no changes to the summary and conclusions and the text within the ES remains valid.