9. Noise and Vibration

Introduction

9.1. This chapter, which was prepared by Waterman, presents an assessment of the likely noise and vibration effects of the Development. CVs for the competent experts responsible for preparing this chapter are provided in **Appendix 1.2**, **ES Volume 2**.

9.2. This chapter provides a description of the methods used in the assessment. This is followed by a description of the relevant baseline conditions of the Application Site and surrounding area, together with an assessment of the likely significant effects of the Development during operational phase. Mitigation measures are identified where appropriate to avoid, reduce or offset any adverse effects identified and / or enhance likely beneficial effects. Taking account of the mitigation measures, the nature and significance of the likely residual effects are described.

9.3. Assessment of the construction phase of the Development has been scoped out as this phase is complete and further construction operations associated with the operation of the IBF are not anticipated. Further to this, IBF operations do not include significant sources of vibration. Vibration arising from HGV movements on a road is no different to that already experienced by the surrounding receptors. If the road is in good condition, vibration arising from discontinuities on the road surface should not be a problem. On this basis operational vibration is scoped out of the assessment.

9.4. The chapter is accompanied by the following appendices, provided in **ES Volume 2**:

- **Appendix 9.1:** Glossary of Acoustic Terminology;
- **Appendix 9.2**: Noise Legislation, Policy & Guidance;
- **Appendix 9.3:** Baseline Environmental Conditions;
- **Appendix 9.4:** Consultation;
- **Appendix 9.5:** Operational Noise Assessment; and
- **Appendix 9.6:** Road Traffic Noise Assessment.

9.5. This chapter is supported by the following figures:

- **Figure 9.1:** Noise Monitoring and Sensitive Receptor Locations;
- **Figure 9.2:** Daytime Operational Noise Contour Plot (Highest Average Hourly HGVs);
- **Figure 9.3:** Night-time Operational Noise Contour Plot (Highest Average Hourly HGVs); and
- **Figure 9.4:** Night-time Operational Noise Contour Plot (Maximum Hourly HGVs).

Legislation, Planning Policy and Guidance

9.6. The following comprises a summary of the key legislation, policy and guidance of relevance to this assessment. Further information is provided in **Appendix 9.2**.

Legislation

9.7. The chapter takes into account the following relevant legislation:

- Control of Pollution Act, 1974[1]; and
- Environmental Protection Act, 1990[2].

Planning Policy and Guidance

9.8. The chapter takes into account the following national and local planning policy and guidance:

- National Planning Policy Framework (December 2024): Chapter 15 'Conserving and enhancing the natural environment', paragraph 198 and 200[3];
- National Planning Practice Guidance - 'Noise': paragraphs 001 to 014: Reference ID 30-001-20190722 to 30-014-20190722, Revision Date July 2019[4];
- Noise Policy Statement For England (NPSE) (2010)[5]; and
- Noise Technical Guidance Note (2022)[6].

Other Policy and Guidance

9.9. The chapter also takes into account the following additional noise and vibration policy, standards and guidelines:

- Calculation of Road Traffic Noise, (1988)[7];
- Design Manual for Roads and Bridges, 'LA 111 Sustainability and Environmental Appraisal. Noise and Vibration [8];
- Institute of Environmental Management and Assessment (October 2014). 'Guidelines for Environmental Noise Impact Assessment'.[9]
- BS 4142:2014+A1:2019 – 'Methods for Rating and Assessing Industrial and Commercial Sound'[10].
- BS 8233:2014 – 'Guidance on Sound Insulation and Noise Reduction for Buildings'[11].
- World Health Organisation – 'Guidelines for Community Noise' (1999)[12].
- WHO – 'Night Noise Guideline for Europe' (2009)[13].
- WHO Environmental Noise Guidelines for the European Region, (2018)[14].

Assessment Methodology and Significance Criteria

Assessment Methodology

Establishing Baseline Conditions

9.10. The baseline year of 2022 was selected for two reasons, firstly it would not be influenced by the effects of Covid where traffic volume reduced and secondly because Junction 10a and associated slips and roads were fully operational. Baseline conditions in 2022 'without IBF' have been established through use of CadnaA noise modelling software. Given road traffic noise is the dominant source, traffic data on the surrounding roads for the baseline year of 2022 'without IBF' have been input into the 3D noise model to allow prediction of noise levels at the nearest sensitive receptors to the Application Site from this source. Noise contribution from the railway lines to the south (CTRL – channel tunnel rail link) of the Application Site is also included within the noise

model, quantified through noise measurements in 2024, which are assumed to be representative of 2022 rail noise emissions.

9.11. A baseline noise survey was conducted in November 2024 to establish current prevailing and background sound levels. Comparison between predicted 2022 baseline ambient noise levels (dB $L_{Aeq,T}$) using CadnaA 3D noise modelling software and the measured ambient noise levels in November 2024 have been used to derive baseline 2022 background sound levels (dB L_{A90}). Full details regarding baseline environmental noise conditions are presented in **Appendix 9.3**.

9.12. The baseline approach was agreed in principle with Environmental Health at Ashford Borough Council (ABC), with further details within the 'Assumptions, Exclusions and Limitations', and 'Baseline' sections later within this Chapter. Consultation details are presented in **Appendix 9.4**.

Assessment Methodology

Predicting Effects

9.13. The level of effect has been assessed based on the magnitude of change or absolute level of noise due to IBF operations and the sensitivity of the affected receptor. **Table 9.1** presents the assigned receptor sensitivity:

Table 9-1: Receptor Sensitivity

Receptor sensitivity	Receptor type
High	Residential, school, hospital
Medium	Office, commercial
Low	Industrial
Negligible	No receptors within 800m*

Note: * This has been adopted from BREEAM POL 05 'Reduction of noise pollution'[15] and is considered to be a conservative approach.

9.14. The magnitude of the predicted change in or absolute level of noise arising from the operational phase of the Development are classified having regard to Noise Policy Statement for England's (NPSE) 'Effect Levels' and the noise exposure levels presented within Planning Policy Guidance-Noise[16], and are presented as **Table 9.2**.

Table 9-2: Magnitude in Predicted Change / Absolute Level

Magnitude	Description
Large	Significant Observed Adverse Effect Level (SOAEL)
Medium	Above LOAEL but below SOAEL
Small	Lowest Observed Adverse Effect Level (LOAEL)
None / Negligible	No Observed Effect Level (NOEL)

9.15. The effect levels are defined as follows:

- NOEL – No Observed Effect Level: Level below which no effect on health and quality of life due to noise can be detected;
- LOAEL – Lowest Observed Adverse Effect Level: Level above which adverse effects on health and quality of life can be detected;
- SOAEL – Significant Observed Adverse Effect Level: Level above which significant adverse effects on health and quality of life occur.

9.16. Magnitude of change / absolute level as a result of the Development, is considered within the range of large, medium, small and negligible.

9.17. Consideration is given to the scale and duration (e.g. permanent, intermittent) and the extent of the Development when considering the level of effect.

9.18. The matrix outlined in **Table 9.3** coupled with the requirements of NPSE and relevant British Standards, guidance and policy, have been used to determine the level of the effect. The predicted level of effect is based upon the consideration of magnitude of change (or absolute level) and sensitivity of the resource/receptor.

Table 9-3: Level of Effect

Receptor Sensitivity	**Magnitude**			
	Large (SOAEL or above)	Medium (between LOAEL and SOAEL)	Small (LOAEL)	None & Negligible (NOAEL)
High	Major	Moderate to Major	Minor to Moderate	Negligible
Medium	Moderate to Major	Moderate	Minor	Negligible
Low	Minor to Moderate	Minor	Negligible to Minor	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

9.19. Whilst **Table 9.3** provides ranges, the level of effect is confirmed as a single level and not a range, informed by professional judgement. For each effect, it has been concluded whether the effect is 'beneficial' or 'adverse'. A statement is also made as to whether the level of effect is 'Significant' or 'Not Significant', again based on professional judgement.

9.20. Further explanation of the significance criteria are presented below:

- **Major effect**: where the Development is likely to cause a considerable change from the baseline conditions or large exceedance of the threshold level and the receptor has limited adaptability, tolerance or recoverability or is of the highest sensitivity. This effect is considered to be 'Significant';
- **Moderate effect**: where the Development is likely to cause either a considerable change from the baseline conditions or medium exceedance of the threshold level at a receptor which has a degree of adaptability, tolerance or recoverability or a less than considerable change at a receptor that has limited adaptability, tolerance or recoverability. This effect is considered more likely to be 'Significant' but will be subject to professional judgement;

- **Minor effect**: where the Development is likely to cause a small, but noticeable change from the baseline conditions or small exceedance of the threshold level on a receptor which has limited adaptability, tolerance or recoverability or is of the highest sensitivity; or where the Development is likely to cause a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change or/and can recover from the change. This effect is considered less likely to be 'Significant' but will be subject to professional judgement; and
- **Negligible**: where the Development is unlikely to cause a noticeable change or threshold level is satisfied at a receptor, despite its level of sensitivity or there is a considerable change at a receptor which is not considered sensitive to a change. This effect is 'Not Significant'.

9.21. Generally, level of effects that are determined to be Moderate or greater are assessed as significant, but it is ultimately dependent on professional judgement which takes account of site specifics, duration as well as the magnitude of change and sensitivity of the receptor(s).

Complete and Operational Development

Fixed External, Building Services Plant & Break-Out Noise From Sheds (Units)

9.22. BS 4142:2014+A1:2019[17] '*Methods for rating and assessing industrial and commercial sound'*, provides an assessment and rating method to assess the potential impact from a range of commercial and industrial noise sources, including; fixed external and building services plant and break-out noise from commercial buildings, namely inspection sheds (within which checking of goods occurs). This also includes noise from standby generators.

9.23. The measured or predicted noise level from the source in question, the 'specific sound level' ($L_{Aeq,T}$), immediately outside dwellings is compared with the 'background sound level' ($L_{A90,T}$) in the absence of IBF noise. Where the sound contains certain acoustic features at the assessment location (e.g. tones, impulses, intermittency etc.), then a scaled character correction is added to the specific sound level to obtain the 'rating level' ($L_{Ar,Tr}$). The greater the difference the greater the magnitude, not taking 'context' into account. 'Context' partially overlaps with significance of effect as it takes account of the sensitivity of the receptor. Further to this, 'context' also takes account of the level and nature of the sound and inherent design measures (such as acoustic barriers, strategic layout, sound insulation of inspection units and acoustic features of fixed external and building services plant to reduce noise).

On-Site HGV Movements, Loading/Unloading Goods Externally, Refrigerated HGVs

9.24. Due to the nature of noise from external operational sources, such as HGV movements around the IBF site, loading/unloading of goods and materials external to the inspection sheds, and refrigerated vehicles hooked up, these are assessed in accordance with BS4142. Regard is also given to the change in prevailing noise levels to provide context.

Road Traffic Noise

9.25. Road traffic noise has been calculated using the calculation methodology of Calculation of Road Traffic Noise[18]. This has been used to predict the dB $L_{A10,18\ hour}$ Basic Noise Levels (BNL) for the year of permanent operation 2026, with and without the Development.

9.26. The calculations use the 18-hr Average Annual Weekday Traffic (AAWT) flow, % HGV composition and average vehicle speed for each road link provided by the transport consultants (Waterman). The magnitude of the change in road traffic noise was evaluated by considering the estimated change in the $L_{A10,18\ hour}$ road traffic noise level on the local highway network as a result of the complete and operational Development.

Significance Criteria

Complete and Operational Development

Fixed External, Building Services Plant, Break-Out Noise (Sheds) & External Operations

9.27. **Table 9.4** presents the magnitude of noise emissions from fixed external plant, building services and external operational noise. This takes account of guidance within BS4142 and expectations of ABC as detailed in their Technical Guidance Note on Noise[19].

9.28. ABC's general expectation with regard to noise from fixed plant and industry is that *"Rating sound level should not exceed the representative L_{A90} background sound level at any time. Furthermore in order to prevent gradually creeping background levels over time it is expected that the unrated 'Specific' sound level does not exceed 10dB below the representative L_{A90} background sound level at any time."*

9.29. The Technical Guidance provides further clarification in that this standard is applied for all fixed plant, including permanent backup generators and other systems which may only run for part of the time. It further states that, "*In exceptional cases it may be possible to deviate from this standard, such as where;*

- *The existing background level is very low (below 30dB L_{A90})*
- *It is impossible to achieve the required standard despite using all reasonable means of mitigation AND there is no significant adverse effect from the plant."*

Table 9-4: Magnitude of Fixed Plant and Building Services Noise Emissions (without context)

Magnitude	**Rating Level dB $L_{Ar,Tr}$ (without context) Compared to Background Sound Level (L_{A90})**	**Definition**
None	Rating Level ≤ L_{A90} - 10	ABCs preference
Negligible (low[1])	Rating Level ≤ L_{A90}	The rating level is not of concern. ≤NOEL.
Small	Rating Level ≤ L_{A90}+5dB	The rating level is undesirable but of limited concern. >NOEL ≤LOAEL.
Medium	Rating Level > L_{A90}+5dB	The rating level gives rise to some concern but is likely to be tolerable depending on scale, duration and period of operation (day/night). >LOAEL <SOAEL.

Magnitude	Rating Level dB $L_{Ar,Tr}$ (without context) Compared to Background Sound Level (L_{A90})	Definition
Large	Rating Level ≥ L_{A90}+10dB	The rating level gives rise to serious concern and it should be considered unacceptable. ≥SOAEL.

Note: [1] Terminology derived from BS4142.

9.30. For external operational noise, such as on-site vehicle movements, loading/unloading external to Shed 5 area, together with noise from refrigerated vehicles when hooked up, a comparative noise assessment is also undertaken to provide context to the predicted specific sound level. **Table 9.5** presents the magnitude of the change in the prevailing noise level due to general operational noise.

Table 9-5: Magnitude of Change in Prevailing Noise Level

Change in prevailing noise level (dB)	Magnitude
0	None
>0 to <3	Negligible
3 to <5	Small
5 to <10	Medium
≥ 10	Large

Road Traffic Noise

9.31. Road traffic noise has been quantified using the calculation methodology of Calculation of Road Traffic Noise[20]. This has been used to predict the dB $L_{A10,18\ hour}$ Basic Noise Levels (BNL) for the assessment year 2026, with and without the Development.

9.32. The calculations use the 18-hr Average Annual Weekday Traffic (AAWT) flow, % HGV composition and average vehicle speed for each road link provided by the transport consultants Waterman. The magnitude of the change in road traffic noise was evaluated by considering the estimated change in the $L_{A10,18\ hour}$ road traffic noise level on the local highway network as a result of the complete and operational Development. The DMRB LA 111 provides magnitude criteria for short-term changes in operational road traffic noise levels which are reproduced in **Table 9.6**.

Table 9-6: Magnitude of Change in Road Traffic Noise

Magnitude	Short-Term Change Road Traffic Noise Level (dB)
Negligible	<1.0
Small	1.0 to 2.9
Medium	3.0 to 4.9
Large	≥5.0

Assumptions, Exclusions and Limitations

9.33. General assumptions and limitations which apply to all technical chapters are set out in **Chapter 2: EIA Methodology**. The following assumptions and limitations are relevant to the noise and vibration assessment.

Construction Noise & Vibration

9.34. Assessment of noise and vibration from construction works has been scoped out of the assessment as the Development is already built and no further construction is proposed.

Fixed External and Building Services Plant

9.35. Observed noise emissions from existing fixed external and building services plant (not including standby generators), were considered to be not significant compared to that arising from 'external operational' noise such as HGV movements around the Site. A qualitative assessment of noise from these sources (excluding standby generators) has therefore been undertaken. Based on observations during the noise survey quantifying key IBF sources, this is considered to have a medium to high degree of robustness.

9.36. Noise from standby generators is based on the sound power of the plant. Prediction of noise from this source, at sensitive receptors, has been predicted using CadnaA noise modelling software through development of a 3D noise model. Noise levels are calculated using ISO 9613[21] methodology. On this basis the predicted noise levels at receptor locations are considered to have a high degree of robustness.

External Operational Noise

9.37. Noise from external operations are based on measurement and quantification of key sources at the IBF. The dominant source is considered to be movement of HGVs around the IBF site. Key IBF noise sources have been input into a 3D CadnaA noise model of the Application Site to allow prediction of external operational noise at sensitive receptor locations.

9.38. The movement of HGVs in/out and around the IBF site per hour are based on recorded data (provided by the Applicant) between from January 2024 to November 2024. Assessment is based on the highest average hourly movement during the day and night-time period. Assessment has also been undertaken based on the maximum hourly recorded value during the day and night-time period which is considered to be representative of worst-case. The assumption is that HGV movements over the night-time hourly period are equally distributed for assessment purpose, which is considered reasonable. The split of HGV movements across the IBF site are based on

recorded data provided to Waterman from HMRC. On this basis the predicted noise level at the receptor location is considered to have a high degree of robustness.

Operational Vibration

9.39. The operational phase of the Development does not introduce activities that would give rise to vibration. On this basis, assessment of operational vibration has been scoped out of the assessment.

Road Traffic Noise

9.40. Change in road traffic noise is based on forecast traffic data and industry standard calculation and assessment methodology. On this basis it is considered to have a high degree of robustness.

Consultation

9.41. The Environmental Health at ABC was consulted to agree the assessment methodology. Relevant Correspondence is included in **Appendix 9.3**. This included agreeing the noise monitoring locations for the baseline survey, together with the appropriate standards to apply to the assessment.

9.42. Consultation regarding the methodology for the noise and vibration assessment was undertaken via the EIA scoping consultation process. The key points raised in these consultation responses, together with a commentary regarding how they have been addressed, are summarised in **Table 9-7**.

Table 9-7: Issues raised in the EIA Scoping Opinion

Summary of Key Issue	How has this been addressed	Where is this addressed in the ES
One of the road measurements should be along the A2070 slip road onto the M20 and the other should be along the dual carriageway portion, near Church Road (para 5.5.3)	Noise measurements in November 2024 were undertaken at 4 key locations adjacent to key roads and rail. These were agreed in advance with Environmental Health. This did not include the slip road onto the M20 which would be dominated by road traffic noise from the M20 itself which has a large traffic volume. Two of the four measurement locations included near the A2070 north of the IBF and A2070 west of the IBF site. The purpose of the baseline survey conducted in November 2024 was to allow comparison with the predicted 2022 baseline noise levels using CadnaA noise modelling software without IBF traffic and operations. At location LT4, it was also used to quantify rail	**Appendix 9.3** Environmental Baseline Conditions.

Summary of Key Issue	How has this been addressed	Where is this addressed in the ES
	noise. Where the predicted 2022 baseline was lower than the measured November 2024 noise level, then the measured noise levels across all the noise indices were reduced by the differential to establish baseline 2022 background sound levels. Where the predicted 2022 baseline noise level was above the measured November 2024 level, no adjustments were made to the measured noise levels. It is against the derived noise levels that the assessment was undertaken.	
There is a risk that the 2022 traffic flows and the road noise survey results will not align and therefore the model will not be sufficiently calibrated. Should this occur, the ES must provide a third check and the justification of this would need to be provided (para 5.5.3)	The 2022 traffic flow data without IBF operational are not expected to align with the noise measurements conducted in November 2024, which depending on their location, may include contribution from IBF road traffic noise and/or IBF operational noise. This is why the November 2024 measured noise levels were adjusted so as to be reflective of 2022 baseline conditions. The measured noise levels in November 2024 were adjusted by the differential with the predicted 2022 baseline noise levels using CadnaA noise modelling software, where the predicted 2022 baseline level were below the measured November 2024 levels. This allowed derivation of background sound levels, which CadnaA noise modelling software does not predict. The use of CadnaA noise modelling software to predict noise from road traffic noise and other sources, even where these sources are not yet in existence is standard industry practice. CadnaA noise modelling software using CRTN methodology for road traffic noise and ISO9613 for other sources.	**Appendix 9.3** Environmental Baseline Conditions
Clarify, within the ES, how the 2022 traffic flows have been	The 2022 baseline conditions were predicted using CadnaA	**Paragraph 9.47**.

Summary of Key Issue	How has this been addressed	Where is this addressed in the ES
calculated and demonstrate how the baseline data avoids inclusion of traffic associated with the IBF (para 5.5.4)	noise modelling software. For road traffic noise, this was based on 2022 forecast traffic data on the surrounding road network excluding IBF traffic data provided by the transport consultants (Waterman). On this basis it does not include traffic associated with the IBF.	
Kent County Council Public Rights of Way (PRoW) & Access Service have requested appropriate consideration of Public Rights of Way users (para 5.5.11)	A qualitative assessment has been undertaken based on high level review of 2022 baseline conditions, Extrium Noise Maps, measured noise levels in November 2024 and predicted typical IBF operational noise levels at PRoW locations.	Paragraphs 9.52 and 9.80.

Summary of Construction-related Effects

9.43. As the IBF is already built and operational, construction impacts were scoped out of the ES. However, in response to the EIA Scoping Request, ABC requested a summary of construction effects within each relevant ES chapter.

9.44. The findings of the noise and vibration assessment, set out within the March 2022 SDO may be summarised as:

Temporary noise and vibration may affect nearby residences during construction, but significant impacts are not expected. Activities include hardstanding construction, retention works, biodiversity enhancements, and material stockpiling/re-landscaping. Raised structures will be limited to site offices, shelters, and inspection sheds, with noise barriers installed via auger methods.

Re-landscaping noise from dumper trucks and excavators will be low and last about two months. With receptors 10m–300m from the site and 100m from stockpiles, significant effects are unlikely.

A CMP, incorporating best practices (BS 5228-1), will minimise noise and vibration. Work will occur 08:00–18:00 on weekdays and 08:00–13:00 on Saturdays; out-of-hours work requires prior approval.

Stockpiling will be positioned early to create a noise barrier. With these measures, no significant noise or vibration effects are anticipated, so a quantitative assessment is unnecessary.

Baseline Conditions

Baseline Conditions 2022

9.45. Baseline conditions in 2022 without the IBF have been derived from prediction of road traffic noise levels using CadnaA noise modelling software based on forecast traffic data (18-hour AAWT, %HGV, speed (kph)) for the year 2022 on the surrounding road network provided by the transport consultants, Waterman. The predicted $L_{A10,18\text{-hour}}$ noise level, using CRTN calculation

methodology, has then been converted into a daytime noise level (dB $L_{Aeq,16h}$) using Transport Research Laboratory (TRL)[22] methodology (Method 3).

9.46. Baseline 2022 night-time road traffic noise levels have been derived from the differential between the day and night-time measured noise levels of the A2070 north of the IBF site. The measured diurnal variation of this source was considered to provide a more accurate indication of the differential between the day and night-time road traffic noise levels rather than using TRL methodology (Method 3).

9.47. Baseline conditions in 2022 of rail noise without IBF (day dB $L_{Aeq,16\ hour}$ and night dB $L_{Aeq,8\ hour}$) have been estimated based on noise measurements conducted in November 2024. The dominant source at the measurement location was noted to be rail noise, having clear line of sight of the railway line (approximately 50m to the nearest railhead) and distant from IBF operations, (approximately 245m from the site access road). This source was input into the 3D CadnaA noise model and calibrated to the measured day and night-time noise levels at monitoring location LT4.

9.48. Predicted CadnaA road traffic noise converted to dB $L_{Aeq,T}$ and that from rail have been combined to predict the overall baseline 2022 noise levels at the four baseline monitoring locations. The predicted 2022 ambient noise levels (dB $L_{Aeq,T}$) using CadnaA modelling software have then been compared against the 2024 measured noise levels. Full details of this and the 2024 baseline survey are presented in **Appendix 9.3**.

9.49. During both the day and night-time periods the 2022 predicted baseline noise levels are comparable to the 2024 measured noise levels. To allow derivation of the other baseline 2022 noise parameters, such as background sound level (dB L_{A90}), where the measured 2024 noise level exceeds the predicted 2022 noise level, the measured noise levels of all the noise indices have been reduced by the exceedance level difference. **Table 9.8** presents the derived 2022 baseline noise levels which have been used as a basis for assessment. Full details of the derivation of 2022 baseline noise levels are presented in **Appendix 9.3**.

Table 9-8: Derived 2022 Baseline Noise Levels

ID	Description	Period	L_{Aeq}[1]	L_{AFmax}[2]	L_{A10}[3]	L_{A90}[4]
LT1	A2070 – North of IBF	Day	65	76	67	61
		Night	60	73	62	51
LT2	A2070 – West of IBF	Day[5]	68	81	71	64
		Night	62	78	63	44
LT3	Church Road	Day[5]	54	71	55	51
		Night	48	60	49	41
LT4	Rail – South of IBF	Day	58	79	53	50
		Night	49	66	47	42

Note: 1 Logarithmic average. 2 90th Percentile. 3 Arithmetic average of survey period. 4 Modal value. 5 Measured 2024 noise level reduced by level difference between 2022 CadnaA dB LAeq,T predicted noise level where 2024 dB LAeq,T measured level is greater.

9.50. Baseline 2022 noise levels at receptor locations have been predicted using CadnaA noise modelling software. Derivation of the background sound level at receptor locations has been determined through the level difference with the 2022 baseline ambient noise levels ($L_{Aeq,T}$) at the nearest noise monitoring location (**Table 9.8**). Full details are presented in **Appendix 9.3**.

Sensitive Receptors

9.51. A number of sensitive receptors have been identified, following the baseline review, as set out in **Table 9.9**. The location of these sensitive receptors is shown in **Figure 9.1**.

Table 9-9: Sensitive Receptors

ID	SR	Type	Distance Site Boundary (m)	Direction	Sensitivity
R1	Lagonda Lodge	Residential	65	Northeast	High
R2	St Mary's Church	Place of Worship	50	West	High
R3	Court Lodge Farm	Residential	120	West	High
R4	The Old Rectory	Residential	60	Southwest	High
R5	Sunnybank	Residential	30	Southwest	High
R6	Ashdown	Residential	20	Southwest	High
R7	The Paddocks	Residential	30	Southwest	High
R8	Orchard Cottage	Residential	50	Southwest	High
R9	Unnamed (Church Rd)	Residential	25	South	High
R10	Bridge Cottage	Residential	30	South	High
R11	Imber	Residential	100	South	High
R12	Downsview	Residential	350	Northeast	High
R13	17 Nightingale Close	Residential	160	West	High
R14	16 Nightingale Close	Residential	145	West	High
R15	15 Nightingale Close	Residential	145	West	High
R16	14 Nightingale Close	Residential	145	West	High
R17	13 Nightingale Close	Residential	145	West	High
R18	12 Nightingale Close	Residential	160	West	High
R19	11 Nightingale Close	Residential	160	West	High
R20	Kenistone	Residential	165	Northeast	High
R21	Caloundra	Residential	195	Northeast	High

9.52. Consideration has also been given to the potential effect of IBF operational noise on the public right of ways (PRoW) located within the vicinity of the Application Site; namely AE672, AE673 Public Bridleways and AE639, AE340, AE344 public footpaths[23]. .

Assessment of Likely Significant Operational Effects

Embedded Mitigation and Design Features (Inherent Mitigation)

9.53. The Development includes a number of acoustic fences and earth bunds, (as illustrated on drawings 419419-MMD-01-DR-C-0302 Rev P03 and 419419-MMD-01-MO-DR-C-0603 Rev P05), to reduce noise emissions from the site. These features have been taken into account within the assessment of likely significant effects prior to the assessment of likely residual effects.

Operational Effects

Fixed External and Building Services Plant

9.54. Noise from fixed external and building services plant observed during the site visit were considered to be not significant compared with that arising from 'operational noise', namely movement of HGVs around the Site. This was due to the absolute noise levels, distance attenuation from source to receptor and intervening screening.

9.55. Noise from standby generators have been predicted at receptor locations using CadnaA noise modelling software, noise measurements undertaken by Mott MacDonald acoustic consultants and Manufacturers' noise data for generators of the same specification in terms of kVA and kW. Full details are presented in Appendix 9.5.

9.56. **Table 9.10** presents a summary of the predicted standby generator noise levels at receptor locations, daytime BS4142 assessment results together with the predicted change in the 2022 baseline daytime noise levels.

Table 9-10: Daytime Noise Assessment of Standby Generators

Sensitive Receptor	BS4142 Day Rating Level dB LAr,Tr	Level Difference BS4142 Rating Level minus Background	Magnitude	Predicted Change in Ambient Noise Level	Level of Effect
R1 Lagonda Lodge	27.7	-32.7	None	0.0	Negligible
R2 St Mary's Church	42.8	-12.9	None	0.1	Negligible
R3 Court Lodge Farm	37.8	-20.7	None	0.0	Negligible
R4 The Old Rectory	40.6	-14.9	None	0.1	Negligible
R5 Sunnybank	41.9	-10.7	None	0.2	Negligible
R6 Ashdown	37.4	-14.6	None	0.1	Negligible
R7 The Paddocks	34.7	-17.9	None	0.0	Negligible
R8 Orchard Cottage	34.3	-20.8	None	0.0	Negligible
R9 Unknown Church Rd	34.7	-21.8	None	0.0	Negligible
R10 Bridge Cottage	30.9	-19.3	None	0.0	Negligible
R11 Imber	27.9	-22.8	None	0.0	Negligible
R12 Downsview	24.0	-34.3	None	0.0	Negligible
R13 17 Nightingale Close	32.3	-20.4	None	0.0	Negligible

Sensitive Receptor	BS4142 Day Rating Level dB LAr,Tr	Level Difference BS4142 Rating Level minus Background	Magnitude	Predicted Change in Ambient Noise Level	Level of Effect
R14 16 Nightingale Close	32.8	-23.6	None	0.0	Negligible
R15 15 Nightingale Close	33.2	-24.8	None	0.0	Negligible
R16 14 Nightingale Close	33.3	-23.2	None	0.0	Negligible
R17 13 Nightingale Close	35.9	-23.4	None	0.0	Negligible
R18 12 Nightingale Close	31.4	-27.3	None	0.0	Negligible
R19 11 Nightingale Close	31.4	-29	None	0.0	Negligible
R20 Kenistone	26.5	-34.8	None	0.0	Negligible
R21 Caloundra	26.2	-33.6	None	0.0	Negligible

9.57. At all receptor locations, during the daytime period when standby generators are operational the predicted level of effect at all receptors is negligible. The is due to distance attenuation, baseline 2022 ambient and background noise levels during the daytime period. Full details are presented in **Appendix 9.5**.

9.58. **Table 9.11** presents a summary of the predicted standby generator noise levels at receptor locations, night-time BS4142 assessment results together with the predicted change in the 2022 baseline night-time noise levels.

Table 9-11: Night-Time Noise Assessment of Standby Generators

Sensitive Receptor	BS4142 Night Rating Level dB LAr,Tr	Level Difference BS4142 Rating Level minus Background	Magnitude	Predicted Change in Ambient Noise Level	2022 Baseline dB LAeq	Level of Effect
R1 Lagonda Lodge	27.7	-22.2	None	0.0	58.9	Negligible
R2 St Mary's Church	Not Applicable					
R3 Court Lodge Farm	41.8	1.4	small	0.0	58.0	Negligible
R4 The Old Rectory	42.6	-3.9	Negligible	0.2	53.4	Negligible
R5 Sunnybank	45.9	2.5	Small	0.6	50.4	Negligible / Minor Adverse
R6 Ashdown	39.4	-3.2	Negligible	0.3	49.6	Negligible
R7 The Paddocks	36.7	-5.3	Negligible	0.2	49.0	Negligible
R8 Orchard Cottage	36.3	-7.2	Negligible	0.1	50.4	Negligible
R9 Unknown Church Rd	34.7	-10	None	0.1	51.7	Negligible
R10 Bridge Cottage	30.9	-12.6	None	0.0	50.7	Negligible
R11 Imber	27.9	-15.5	None	0.0	50.6	Negligible
R12 Downsview	24.0	-24.1	None	0.0	56.8	Negligible
R13 17 Nightingale Close	36.3	1.7	Small	0.0	52.2	Negligible
R14 16 Nightingale Close	34.8	-3.5	Negligible	0.0	55.9	Negligible

Sensitive Receptor	BS4142 Night Rating Level dB LAr,Tr	Level Difference BS4142 Rating Level minus Background	Magnitude	Predicted Change in Ambient Noise Level	2022 Baseline dB LAeq	Level of Effect
R15 15 Nightingale Close	35.2	-4.7	Negligible	0.0	57.5	Negligible
R16 14 Nightingale Close	35.3	-3.1	Negligible	0.0	56.0	Negligible
R17 13 Nightingale Close	37.9	-3.3	Negligible	0.0	58.8	Negligible
R18 12 Nightingale Close	33.4	-7.2	Negligible	0.0	58.2	Negligible
R19 11 Nightingale Close	33.4	-7.2	Negligible	0.0	58.2	Negligible
R20 Kenistone	26.5	-24.7	None	0.0	59.9	Negligible
R21 Caloundra	26.2	-24.9	None	0.0	59.8	Negligible

9.59. At all receptor locations except R5 Sunnybank, during the night-time period when standby generators are operational the predicted level of effect at all receptors is negligible. The is due to distance attenuation, baseline 2022 ambient and background noise levels during the night-time period. At R5 Sunnybank the assessment indicated that there is the potential for some minor adverse effects. However, when account is taken of the absolute specific predicted noise level of 42dB $L_{Aeq,15min}$ and ambient noise level of 50dB $L_{Aeq,8h}$, and that residents would be indoors, on balance this is considered acceptable. Full details are presented **Appendix 9.5**.

9.60. In light of the results and that this source is daytime testing only, and would only operate for an extended period during the night-time period should there be a power outage, no further mitigation is proposed.

Operational Noise

9.61. Key sources of operational noise were identified and quantified through measurement during the survey undertaken at the IBF site on Thursday 21 November 2024 and input into the 3D CadnaA noise model based on the measured spectrum data.

9.62. The dominant operational source was noted to be HGV movements around the site (speed limit 10 mph). Noise from TRUs (Transport Refrigerated Units) hooked up were also quantified and input into the noise model as well as noise from external mobile plant in the inspection sheds.

9.63. Two assessments have been undertaken with regard to operational noise based on data recorded at the IBF between January 2024 and November 2024:

- Highest hourly average HGV movements (99 HGVs/hr day, 66 HGV/hr night); and
- Maximum hourly HGV movements (219 HGVs/hr day, 162 HGV/hr night).

9.64. For assessment purposes, it is assumed that hourly HGV movements are equally distributed over the 1-hour period during the night-time period.

9.65. Full details of the average hourly and maximum hourly HGV movements together with details of the noise source survey are presented in **Appendix 9.5**.

9.66. Operational noise levels have been predicted at the sensitive receptor locations and assessed using both BS4142 and change in 2022 baseline ambient noise level. With regard to BS4142, based on the source noise measurements and predicted levels at receptor locations, the

operational noise level from predominantly HGV movements is not considered to be tonal (BS4142 Annex C) but at some receptor locations is likely to be discernible against the residual ambient noise climate. On this basis a +3dB rating penalty has been applied to the predicted operational noise level for the BS4142 assessment. Full details are presented in **Appendix 9.5**.

Highest Average Hourly HGV Movements

9.67. **Table 9.12** presents the assessment of daytime operational noise based on the highest average hourly HGV movements. Full assessment details are presented in **Appendix 9.5**. **Figure 9.2** presents the predicted operational noise levels during the daytime period based on the highest average hourly HGV movements.

9.68. During the daytime period the BS4142 magnitude of level difference between Rating Level and derived 2022 baseline background sound levels is predominantly negligible to none. The predicted change in the ambient noise level, based on predicted 2022 baseline noise level at receptor location (road+rail) combined, with predicted Development operational noise is negligible (refer to **Appendix 9.5**). Taking both these results into account the level of effect at receptor locations is considered to be **negligible** and therefore **not significant** (refer to **Table 9.12**).

Table 9-12: Day Operational Noise Assessment (Highest Hourly Average HGVs)

Sensitive Receptor	BS4142 Day Rating Level dB LAr,Tr	Level Difference BS4142 Rating Level minus Background	Magnitude	Predicted Change in Ambient Noise Level	Level of Effect
R1 Lagonda Lodge	52.0	-8.4	Negligible	0.1	Negligible
R2 St Mary's Church	50.2	-5.5	Negligible	0.2	Negligible
R3 Court Lodge Farm	45.3	-13.2	None	0.0	Negligible
R4 The Old Rectory	46.8	-8.7	Negligible	0.1	Negligible
R5 Sunnybank	46.6	-6.0	Negligible	0.3	Negligible
R6 Ashdown	44.7	-7.3	Negligible	0.2	Negligible
R7 The Paddocks	44.2	-8.4	Negligible	0.2	Negligible
R8 Orchard Cottage	43.9	-11.2	None	0.1	Negligible
R9 Unknown Church Rd	46.5	-10.0	None	0.1	Negligible
R10 Bridge Cottage	48.5	-1.7	Negligible	0.2	Negligible
R11 Imber	44.5	-6.2	Negligible	0.1	Negligible
R12 Downsview	46.7	-11.6	None	0.1	Negligible
R13 17 Nightingale Close	40.8	-11.9	None	0.0	Negligible
R14 16 Nightingale Close	43.5	-12.9	None	0.0	Negligible
R15 15 Nightingale Close	44.2	-13.8	None	0.0	Negligible
R16 14 Nightingale Close	43.6	-12.9	None	0.0	Negligible
R17 13 Nightingale Close	43.8	-15.5	None	0.0	Negligible
R18 12 Nightingale Close	43.1	-15.6	None	0.0	Negligible
R19 11 Nightingale Close	43.1	-17.3	None	0.0	Negligible
R20 Kenistone	49.6	-11.7	None	0.1	Negligible

Sensitive Receptor	BS4142 Day Rating Level dB LAr,Tr	Level Difference BS4142 Rating Level minus Background	Magnitude	Predicted Change in Ambient Noise Level	Level of Effect
R21 Caloundra	49.0	-10.8	None	0.1	Negligible

9.69. **Table 9.13** presents the assessment of night-time operational noise based on the highest average hourly HGV movements. **Figure 9.3** presents the predicted operational noise levels during the night-time period based on the highest average hourly HGV movements. Full assessment details are presented in **Appendix 9.5**.

9.70. During the night-time period the BS4142 magnitude of level difference between Rating Level and derived 2022 baseline background sound levels is predominantly small. Exception to this is at R13 (17 Nightingale Close) where level difference of medium magnitude is predicted. The predicted change in the ambient noise level, based on predicted 2022 baseline noise level at receptor locations (road+rail) combined with predicted Development operational noise is negligible at all locations except R10 (Bridge Cottage) where a small increase in the night-time ambient noise level is predicted.

Table 9-13: Night-time Assessment of Operational Noise (Highest Average Hourly HGVs)

Sensitive Receptor	BS4142 Night Rating Level dB LAr,Tr	Level Difference BS4142 Rating Level minus Background	Magnitude	Predicted Change in Ambient Noise Level	2022 Baseline dB LAeq	Level of Effect
R1 Lagonda Lodge	51.8	1.6	Small	0.4	58.9	Negligible
R2 St Mary's Church	Not Applicable					
R3 Court Lodge Farm	44.7	4.3	Small	0.1	58.0	Negligible
R4 The Old Rectory	46.1	-0.4	Negligible	0.4	53.4	Negligible
R5 Sunnybank	45.8	2.4	Small	0.7	50.4	Negligible / Minor Adverse
R6 Ashdown	44.2	1.6	Small	0.6	49.6	Negligible / Minor Adverse
R7 The Paddocks	43.7	1.7	Small	0.6	49.0	Negligible / Minor Adverse
R8 Orchard Cottage	43.4	-0.1	Negligible	0.4	50.4	Negligible
R9 Unknown Church Rd	46.0	1.3	Small	0.5	51.7	Negligible / Minor Adverse
R10 Bridge Cottage	48.3	4.8	Small	1.1	50.7	Minor Adverse
R11 Imber	44.3	0.9	Small	0.5	50.6	Negligible / Minor Adverse
R12 Downsview	46.5	-1.6	Negligible	0.2	56.8	Negligible

Sensitive Receptor	BS4142 Night Rating Level dB LAr,Tr	Level Difference BS4142 Rating Level minus Background	Magnitude	Predicted Change in Ambient Noise Level	2022 Baseline dB LAeq	Level of Effect
R13 17 Nightingale Close	40.3	5.7	Medium	0.1	52.2	Negligible
R14 16 Nightingale Close	42.9	4.6	Small	0.1	55.9	Negligible
R15 15 Nightingale Close	43.6	3.7	Small	0.1	57.5	Negligible
R16 14 Nightingale Close	43.0	4.6	Small	0.1	56.0	Negligible
R17 13 Nightingale Close	43.1	1.9	Small	0.1	58.8	Negligible
R18 12 Nightingale Close	42.5	1.9	Small	0.1	58.2	Negligible
R19 11 Nightingale Close	42.5	1.9	Small	0.1	58.2	Negligible
R20 Kenistone	49.4	-1.8	Negligible	0.2	59.9	Negligible
R21 Caloundra	48.8	-2.3	Negligible	0.2	59.8	Negligible

9.71. At R10 (Bridge Cottage) the predicted specific sound level is 45.3dB $L_{Aeq,15min}$ compared to a baseline 2022 ambient noise level of 50.7dB $L_{Aeq,8h}$. When context is taken into account the level of effect is considered to be **local**, **permanent, intermittent**, **direct**, **minor adverse**.

9.72. At R13 (17 Nightingale Close) the predicted specific sound level is 37.3dB $L_{Aeq,15min}$ compared to a baseline 2022 ambient noise level of 52.2dB $L_{Aeq,8h}$. When context is taken into account the level of effect is considered to be **negligible**.

9.73. All adverse effects are local, direct and considered to be intermittent, given the assessment is based on the highest average hourly HGV movements during both the day and night-time periods. At other periods the movement of HGVs is lower, especially during the night-time period when compared to HGV movements between 06:00-07:00. Taking account of the predicted change in ambient noise level, absolute predicted noise level and predicted level of effect – no moderate or major adverse effects- secondary or enhanced mitigation is not proposed.

Maximum Hourly HGV Movements

9.74. This section assesses the maximum hourly HGV movements and is therefore considered to be worst case in terms of operational noise emissions. **Table 9.14** presents the daytime operational noise assessment.

9.75. During the daytime period the BS4142 magnitude of level difference between Rating Level and derived 2022 baseline background sound levels is none to negligible. The predicted change in the ambient noise level, based on predicted 2022 baseline noise level at receptor location (road+rail) combined with predicted Development operational noise is negligible. Taking both these results into account, the level of effect at receptor locations is considered to be **negligible** and therefore **not significant**.

Table 9-14: Day Operational Noise Assessment (Max Hourly Average HGVs)

Sensitive Receptor	BS4142 Day Rating Level dB LAr,Tr	Level Difference BS4142 Rating Level minus Background	Magnitude	Predicted Change in Ambient Noise Level	Level of Effect
R1 Lagonda Lodge	52.9	-7.5	Negligible	0.2	Negligible
R2 St Mary's Church	52.6	-3.1	Negligible	0.4	Negligible
R3 Court Lodge Farm	47.6	-10.9	None	0.1	Negligible
R4 The Old Rectory	48.9	-6.6	Negligible	0.2	Negligible
R5 Sunnybank	48.9	-3.7	Negligible	0.4	Negligible
R6 Ashdown	46.7	-5.3	Negligible	0.3	Negligible
R7 The Paddocks	46.1	-6.5	Negligible	0.2	Negligible
R8 Orchard Cottage	45.7	-9.4	Negligible	0.1	Negligible
R9 Unknown Church Rd	48.1	-8.4	Negligible	0.2	Negligible
R10 Bridge Cottage	49.8	-0.4	Negligible	0.3	Negligible
R11 Imber	45.9	-4.8	Negligible	0.1	Negligible
R12 Downsview	47.7	-10.6	None	0.1	Negligible
R13 17 Nightingale Close	42.9	-9.8	Negligible	0.1	Negligible
R14 16 Nightingale Close	45.4	-11.0	None	0.1	Negligible
R15 15 Nightingale Close	46.1	-11.9	None	0.0	Negligible
R16 14 Nightingale Close	45.6	-10.9	None	0.1	Negligible
R17 13 Nightingale Close	45.9	-13.4	None	0.0	Negligible
R18 12 Nightingale Close	45.1	-13.6	None	0.0	Negligible
R19 11 Nightingale Close	45.1	-15.3	None	0.0	Negligible
R20 Kenistone	50.3	-11.0	None	0.1	Negligible
R21 Caloundra	49.8	-10.0	None	0.1	Negligible

9.76. **Table 9.15** presents the night-time assessment of operational noise based on maximum hourly HGV movements.

9.77. During the night-time period the BS4142 magnitude of level difference between Rating Level and derived 2022 baseline background sound levels is predominantly small to medium.

9.78. The predicted change in the ambient noise level, based on predicted 2022 baseline noise level at receptor location (road+rail) combined with predicted Development operational noise is predominantly negligible with a small increase predicted at R5 (Sunnybank) and R10 (Bridge Cottage).

9.79. Taking both these results into account, together with the absolute level of the specific sound level and predicted baseline 2022 baseline ambient noise level, the level of effect ranges from **negligible** to **local, permanent, direct, intermittent minor adverse**. Taking account of the predicted change in ambient noise level, absolute predicted noise level and predicted level of effect – no moderate or major adverse effects- secondary or enhanced mitigation is not proposed.

Table 9-15: Night-time Assessment of Operational Noise (Max Hourly HGVs)

Sensitive Receptor	BS4142 Night Rating Level dB $L_{Ar,Tr}$	Level Difference BS4142 Rating Level minus Background	Magnitude	Predicted Change in Ambient Noise Level	2022 Baseline dB L_{Aeq}	Level of Effect
R1 Lagonda Lodge	52.6	2.4	Small	0.5	58.9	Negligible
R2 St Mary's Church	Not Applicable					
R3 Court Lodge Farm	47.1	6.7	Medium	0.2	58.0	Negligible
R4 The Old Rectory	48.3	1.8	Small	0.6	53.4	Negligible / Minor Adverse
R5 Sunnybank	48.2	4.8	Small	1.2	50.4	Minor Adverse
R6 Ashdown	46.2	3.6	Small	0.9	49.6	Negligible / Minor Adverse
R7 The Paddocks	45.6	3.6	Small	0.9	49.0	Negligible / Minor Adverse
R8 Orchard Cottage	45.3	1.8	Small	0.6	50.4	Negligible / Minor Adverse
R9 Unknown Church Rd	47.6	2.9	Small	0.8	51.7	Negligible / Minor Adverse
R10 Bridge Cottage	49.5	6.0	Medium	1.4	50.7	Minor Adverse
R11 Imber	45.7	2.3	Small	0.7	50.6	Negligible / Minor Adverse
R12 Downsview	47.4	-0.7	Negligible	0.2	56.8	Negligible
R13 17 Nightingale Close	42.4	7.8	Medium	0.2	52.2	Negligible
R14 16 Nightingale Close	44.9	6.6	Medium	0.2	55.9	Negligible
R15 15 Nightingale Close	45.5	5.6	Medium	0.1	57.5	Negligible
R16 14 Nightingale Close	45.0	6.6	Medium	0.2	56.0	Negligible
R17 13 Nightingale Close	45.3	4.1	Small	0.1	58.8	Negligible
R18 12 Nightingale Close	44.6	4.0	Small	0.1	58.2	Negligible
R19 11 Nightingale Close	44.6	4.0	Medium	0.1	58.2	Minor Adverse
R20 Kenistone	50.0	-1.2	Negligible	0.2	59.9	Negligible
R21 Caloundra	49.5	-1.6	Negligible	0.2	59.8	Negligible

9.80. It should be noted that the predicted night-time operational effects are based on maximum hourly HGV movements during the night-time period, which based on recorded data occurs between 06:00 and 07:00. Based on recorded data operational noise levels during the night-time period will predominantly be significantly lower than presented in **Table 9.15**.

9.81. Taking account of the predicted change in ambient noise level, absolute predicted noise level and predicted level of effect – no moderate or major adverse effects- secondary or enhanced mitigation is not proposed.

Road Traffic Noise

9.82. The magnitude of the predicted change in road traffic noise with Development in 2026, compared to without Development for the same year (DMRB short-term assessment) is less than 1dB for all road links, except A2070 east of IBF access junction, and therefore **negligible**, as is the level of effect (**not significant)**. On the A2070 east of the IBF access junction, the predicted change in road traffic noise with Development is small being less than 2dB, as presented in **Table 9.16**. This has the potential to adversely affect properties located on Kingsford Street facing the M20 and M20 Junction 10 east bound off slip (R1 (Lagonda Lodge), R20 (Kenistone) and R21 (Caloundra)). Full calculation details are presented in **Appendix 9.6**.

Table 9-16: Assessment of Road Traffic Noise Significant Effects

ID	Road Link	2026 No Development dB $L_{A10,18\ BNL}$	2026 With Development dB $L_{A10,18h\ BNL}$	Level Difference & Magnitude	Effect Level for Receptor
6	A2070 E of Sevington HGV EB (access jnc)	68.7	70.6	1.9 Small	Minor Adverse
6	A2070 E of Sevington HGV WB (access jnc)	70.5	72.0	1.5 Small	Minor Adverse

9.83. As already stated, the dominant noise incident on these properties is considered to be from the M20 located to the north. Specific road traffic data for the M20 did not form part of the road traffic noise assessment due to the high volume of traffic on the M20 rendering potential effects from change in road traffic noise as negligible. Based on Department for Transport (DfT) traffic data the traffic volume on this section of the M20 (junction 9 to 10) in 2022 was 50,7032 with 16.9% HGVs, which would result in a Basic Noise Level of 82dB $L_{A10,18h}$ (at 10m from road edge). The sensitive receptors (R1, R20 and R21) are located approximately 55 to 85m horizontal distances from the M20 which would result in M20 noise levels ranging from 7 to 9dB lower from distance propagation. However, the M20 runs in cutting, therefore there will be some screening from the M20 itself, lowering levels further. On review of Extrium Noise Maps[24] the daytime noise level at these properties is within the 60-65dB $L_{Aeq,16h}$ noise band.

9.84. CadnaA noise modelling software has been used to predict the road traffic noise levels at receptors R1, R20 and R21, from Link 6 (A2070 East of Sevington Access) based on 2026 With Development forecast traffic volume (18-hour AAWT) speed and %HGVs together with contribution from the surrounding road network and M20 based on 2022 DfT data. **Table 9-17** presents the predicted road traffic noise levels from road links 6, M20 and overall predicted road traffic noise levels at a height of 1.5m above ground level. The results illustrate the significant contribution from the M20 at these sensitive receptors compared to the A2070 east of the IBF access. On this basis, although a small increase in road traffic noise is predicted on the A2070 east of the IBF access, this is unlikely to be fully realised at these receptors due to the significant

contribution from the M20. The predicted **local**, **permanent**, **direct**, **minor adverse** effect in the BNL for the A2070 east of the IBF is considered to be **not significant**.

Table 9-17: CadnaA Precited Road Traffic Noise Levels 2026 With Development

SR ID	Name	2026 With Development Link 6 dB $L_{A10,18h}$	2026 With Development M20 dB $L_{A10,18h}$	Overall Predicted Noise Level dB $L_{A10,18h}$	Effect Level for Receptor	Significance
R1	Lagonda Lodge	58.8	63.7	65.1	Minor Adverse	Not Significant
R20	Kenistone	48.9	62.6	62.7	Negligible	Not Significant
R21	Caloundra	37.4	61.4	61.6	Negligible	Not Significant

Public Rights of Way (PRoW)

9.85. There are a number of PRoW (bridleways and footpaths) located the west, south and east of the Site. From study from Extrium Noise Maps and the 2020 baseline noise model, the PRoW are already exposed to transportation noise exceeding 50dB(A) and in some areas 55dB(A) during the daytime period. Under typical IBF operating conditions and based on the noise survey data conducted in November 2024 when the IBF was operating, noise along the majority of PRoW routes will not be significantly affected by IBF operational noise due to inherent mitigation and contribution from existing road and rail sources. Areas where increases in prevailing noise levels on PRoW may at times occur are on bridleways AE672 and AE673 south and east of the IBF off Highfield Lane. Under typical operating conditions this is predicted not to exceed 60dB(A) which, for transient users, should be acceptable. It is also noted that the bridleways at their closest distance are approximately 15 metres from the IBF internal access road which provides a separation buffer. Qualitatively the level of operational noise effects on PRoW are considered to be **negligible** to **direct, local, permanent, intermittent, minor** adverse.

Mitigation and Enhancement Measures and Likely Residual Operational Effects

Other Mitigation and Enhancement Measures

Fixed External Plant & Building Services

9.86. No enhanced mitigation is proposed for the existing fixed external and building services plant.

9.87. No enhanced mitigation is proposed for the standby generators.

Operational Noise

9.88. No enhanced mitigation is proposed for operational noise.

Road Traffic Noise

9.89. Mitigation is not proposed for changes in road traffic noise due to the Development. Residual effects remain unchanged, being **negligible** on all road links except the A2070 east of IBF access where **local, permanent, direct, minor adverse** effects are predicted. The significance of this effect on the closest sensitive receptors to this road link, namely R1 (Lagonda Lodge), R20 (Kenistone) and R21 (Caloundra) is **not significant** due to the contribution from the M20, as evidence from CadnaA noise modelling software.

Summary of Likely Significant Operational Effects

9.90. **Table 9-18** summarises the likely significant effects, identified mitigation measures and the likely residual effects identified within this Chapter.

Table 9-18: Summary of Likely Significant Operational Effects

Issue	Likely Significant Effect	Mitigation Measures	Likely Residual Effect
Operational: Existing Fixed External & Building Services Plant	**Negligible**	None Proposed	**Negligible**
Operational: Standby Generators	**Daytime - Negligible Night-Time Negligible** to **local, permanent, intermittent, direct minor adverse effect. Not significant.**	None Proposed.	**Daytime - Negligible Night-Time Negligible** to **local, permanent, intermittent, direct minor adverse effect. Not significant.**
Operational – HGV movements, electric hook ups and Shed 5 operations.	**Negligible** to **local**, **permanent**, **intermittent**, **direct minor adverse** effect.	None Proposed	**Negligible** to **local**, **permanent**, **intermittent**, **direct minor adverse** effect.
Operational – Future fixed external plant	**Negligible**	Assumed inherent mitigation to satisfy planning condition.	**Negligible**
Road Traffic Noise	**Negligible** to **local**, **permanent**, **direct minor adverse** effect. **Not significant.**	None proposed**.**	**Negligible** to **local**, **permanent**, **direct minor adverse** effect. **Not significant**.
PRoW	**Negligible** to **local**, **permanent**, **direct, intermittent minor adverse** effect. **Not significant.**	None proposed.	**Negligible** to **local**, **permanent**, **direct, intermittent minor adverse** effect. **Not significant.**

Monitoring

9.91. Monitoring is not proposed except for the investigation on receipt of complaint.

Assessment of Future Effects

Evolution of the Baseline

9.92. Should the Development not be granted full planning consent by 31 December 2025, all infrastructure except drainage and road infrastructure would be removed from within the Application Site, and the Site reinstated (as required under the SDO), leaving only areas of hardstanding in the once operational plots, together with the internal estate roads, drainage infrastructure and sustainable urban drainage (SuDS), landscaping and areas of open space.

9.93. If full planning permission for the Development is not granted, it is anticipated that a scheme, similar to the previous outline permission, could be implemented at the Application Site. As such, it is reasonable to assume that baseline conditions, outside the redline boundary, would be expected to increase gradually overtime due to the natural Tempro growth in road traffic on the surrounding local roads, as indicated by the transport consultants. The extent of this is however likely to be minimal and not discernible in 2026 as evidenced by the road traffic noise assessment with and without development 2026, in particular as cumulative schemes have not come on line by this time period.

9.94. Within the Application Site, noise levels are dominated by transport noise, road and rail. Similar to locations outside the Application Site, prevailing levels are anticipated to increase slightly due to Tempro growth in road traffic on the surrounding local roads. In the short-term however (2026) this is expected to be minimal and unlikely to be discernible.

Cumulative Effects Assessment

Fixed External Plant & Building Services Noise

9.95. Type 2 cumulative residual effects are not anticipated from fixed external plant and building services noise. All cumulative schemes will be subject to the same standard planning condition based upon the guidance provided in BS 4142: 2014+A1:2019. As such, noise from fixed plant and building services noise from all committed and pending developments and the Development would be **negligible (not significant)**.

Operational Noise

9.96. It is considered that all of the Cumulative Schemes are too distant from Sensitive Receptors to cause significant Type 2 cumulative residual effects in terms of operational noise, with the exception of Cumulative Scheme 2a (18/00098/AS) which comprises of mixed residential and commercial development on land a Waterbrook Park, Ashford, Kent.

9.97. The noise assessment in support of application 18/00098/AS predicts an increase in ambient night-time noise levels at Orchard Cottage (NSR 1), which is R8 for the IBF assessment. An increase of +3dB is reported during the night-time period from 51dB $L_{Aeq,T}$ to 54dB $L_{Aeq,T}$, with Development Specific Sound Level predicted to be 50dB $L_{Aeq,T}$, as reported in a letter from Grant Acoustics dated 25th June 2018 in response to EHO's queries. Assessment of IBF operational noise predicted a night-time operational noise level of 42.7dB $L_{Aeq,15min}$ based on maximum night-time HGV hourly movements, compared to a derived 2022 baseline ambient night-time noise level

of 50.4dB $L_{Aeq,T}$. The cumulative effect of both the Development and Cumulative scheme would be an additional increase of less than 0.5dB in the ambient noise level which is considered to be negligible.

Road Traffic Noise

9.98. The road traffic noise assessment does not include committed developments as none of the cumulative schemes would be built out and operational in 2026. The forecast traffic data for 2026 is based on 2024 traffic count data and includes Tempro growth factor, which therefore takes into account local 'developments'. On this basis Type 2 cumulative effects are not anticipated to occur based on the road traffic noise assessment undertaken (2026 with and without IBF).

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