SEVINGTON
INLAND BORDER FACILITY

Department for Environment, Food & Rural Affairs

HM Revenue & Customs

Department for Transport

Environmental Statement

Volume 2: Appendices (Chapter 9)

Appendix 9.1

Glossary of Acoustic Terminology

Appendix 9.1: Glossary of Acoustic Terminology

AAWT-18h	Annual Average Week Day Traffic over the time period 0600-0000. Only includes Monday to Friday data.
Ambient sound	The totally encompassing sound in a given situation at a given time, usually composed of sound from all sources near and far.
Assessment period	The period in a day over which assessments are made.
A-weighting	A frequency weighting applied to measured or predicted sounds levels in order to compensate for the non-linearity of human hearing.
Background noise	Background noise is the term used to describe the noise measured in the absence of the noise under investigation. It is described as the average of the minimum noise levels measured on a sound level meter and is measured statistically as the A-weighted noise level exceeded for ninety percent of a sample period. This is represented as the L_{90} noise level (see below).
Background Sound Level dB $L_{A90,T}$	A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T, measured using time weighting F and quoted to the nearest whole number of decibels.
Broadband	Containing the full range of frequencies.
C_{TR}	An adjustment to the Rw scale to take account of the lower performance against a typical spectrum of road traffic noise dominated by low frequencies.
Decibel [dB]	The level of noise is measured objectively using a Sound Level Meter. This instrument has been specifically developed to mimic the operation of the human ear. The human ear responds to minute pressure variations in the air. These pressure variations can be likened to the ripples on the surface of water but of course cannot be seen. The pressure variations in the air cause the eardrum to vibrate and this is heard as sound in the brain. The stronger the pressure variations, the louder the sound that is heard. The range of pressure variations associated with everyday living may span over a range of a million to one. On the top range may be the sound of a jet engine and on the bottom of the range may be the sound of a pin dropping. Instead of expressing pressure in units ranging from a million to one, it is found convenient to condense this range to a scale 0 to 120 and give it the units of decibels. The following are examples of the decibel readings of every day sounds: Four engine jet aircraft at 100m 120 dB Riveting of steel plate at 10m 105 dB Pneumatic drill at 10m 90 dB Circular wood saw at 10m 80 dB Heavy road traffic at 10m 75 dB Telephone bell at 10m 65 dB Male speech, average at 10m 50 dB Whisper at 10m 25 dB Threshold of hearing, 1000 Hz 0 dB
dB(A): A-weighted decibels	The ear is not as effective in hearing low frequency sounds as it is hearing high frequency sounds. That is, low frequency sounds of the same dB level are not heard as loud as high frequency sounds. The sound level meter replicates the human response of the ear by using an electronic filter which is called the 'A' filter. A sound level measured with this filter switched on is denoted as dB(A). Practically all noise is measured using the A filter. The sound pressure level in dB(A) gives a close indication of the subjective loudness of the noise.
$D_{ne,w}$	Weighted element normalised level difference.
Façade Noise Level	A noise level measured or predicted at the façade of a building, typically at a distance of 1m, containing a contribution made up of reflections from the façade itself (+3 dB).
Free Field Noise Level	A noise level measured or predicted which is unaffected by reflections, generally taken as being 3m from any reflecting surface excepting the ground.
L_{Amax} noise level	This is the maximum noise level recorded over the measurement period.

L_{Amin} noise level	This is the lowest level during the measurement period.
$L_{Aeq,T}$ noise level	This is the 'equivalent continuous A-weighted sound pressure level, in decibels' and is defined in British Standard 7445 as the 'value of the A-weighted sound pressure level of a continuous, steady sound that, within a specified time interval, T, has the same mean square sound pressure as a sound under consideration whose level varies with time'. It is a unit commonly used to describe construction noise, noise from industrial premises and is the most suitable unit for the description of other forms of environmental noise.
L_{A90} noise level	This is the noise level that is exceeded for 90% of the measurement period and gives an indication of the noise level during quieter periods. It is often referred to as the background noise level and is used in the assessment of disturbance from industrial noise.
L_{A10} noise level	This is the noise level which is achieved for 10% of the monitoring period and is often used to describe road traffic noise.
PPV	Ground vibration is measured in terms of Peak Particle Velocity (PPV) with units in mm/s. It should be noted that the PPV refers to the movement within the ground of molecular particles and not surface movement. The displacement value in mm refers to the movement of particles at the surface (surface movement).
Rating Level, dB $L_{Ar,Tr}$	Specific sound level plus any adjustment for the characteristic features of the sound.
Residual Sound	Ambient sound remaining at the assessment location when the specific sound source is supressed to such a degree that it does not contribute to the ambient sound source.
Sound Reduction Index (R)	The sound reduction index is a single-number rating of the sound reduction through a wall or other building element. Since the sound reduction may be different at different frequencies, test measurements are subjected to a standard procedure which yields a single number that is about equal to the average sound reduction in the middle of the human hearing range.
Specific Sound Level, $LA_{eq,Tr}$	Equivalent continuous A-weighted sound pressure level produced by the specific sound source at the assessment location over a given time interval T.
Weighted Sound Reduction Index dB R_w	Single number rating used to describe the laboratory airborne sound insulation properties of a material or building element over a range of frequencies, typically 100-3150Hz.

Appendix 9.2

Noise Legislation, Policy & Guidance

Appendix 9.2: Noise & Vibration Legislation, Policy and Guidance

The following legislation, policy and guidance has informed the assessment of noise and vibration effects within the Noise & Vibration Chapter.

Legislation

Control of Pollution Act, 1974

Part III of the Control of Pollution Act 1974[1] (CoPA) is dedicated to noise and is specifically concerned with noise pollution including codes of practise and encouraging Best Practicable Means (BPM) for noise reduction.

Section 60 governs noise emissions from Construction Sites enabling Local Authorities to set restrictions, such as operational hours and noise limits, upon the construction to foster reasonably practicable noise minimisation.

Section 61 enables construction sites to submit construction plans and noise minimisation steps for approval.

Section 62 pertains to noise in the street, specifically limiting loudspeaker use in the street to between the hours of 8am to 9pm and completely banning loudspeaker operation in the street for commercial advertisement purposes.

Section 68 governs noise emissions from plant or machinery in much the same way as Section 60, enabling Local Authorities to set restrictions or require mitigation strategies for plant and machinery connected to construction or factories.

Environmental Protection Act (1990).

Part 3 of the Environmental Protection Act 1990[2] (EPA 1990) imposes a duty on every local authority to inspect its area for statutory nuisances and to take reasonable steps to investigate any complaints of statutory nuisance that it receives. If a statutory nuisance is deemed to exist then a notice will be served requiring the abatement of the nuisance and this notice shall include a list of steps that should be taken to reduce the nuisance. It covers noise from premises or from vehicles, equipment or machinery in the street. Noise also includes vibration.

Part 3, S79 (9) states "*noise emitted from premises so as to be prejudicial to health or a nuisance*;"

Part 3, S79 (ga) states "*noise that is prejudicial to health or a nuisance and is emitted from or caused by a vehicle, machinery or equipment in a street*."

For the issue to count as a statutory nuisance it must do one of the following:

- Unreasonably and substantially interfere with the use or enjoyment of a home or other premises;
- Injure health or be likely to injure health.

If the council consider a statutory nuisance is happening or will happen in the future they must serve an abatement notice to stop or restrict the noise. The notice is served on either the person responsible or the owner/occupier of the premises.

Council can also serve a notice on people carrying out construction or demolition works and tell them how the work should be carried out to avoid a potential statutory noise nuisance. The notice can specify; a noise level, a plant or machinery that can be used, the hours when work can be done and

[1] Secretary of State (1974). 'Control of Pollution Act 1974'. Available at https://www.legislation.gov.uk/ukpga/1974/40

[2] Secretary of State (1990) '*Environmental Protection Act*'. Available at https://www.legislation.gov.uk/ukpga/1990/43/part/III

steps that need to be taken to minimise noise. Those failing to comply with the notice can be prosecuted and fined an unlimited amount, with further fines for each day that they fail to comply.

Planning Policy

National Planning Policy Framework (2024)

The National Planning Policy Framework[3] (NPPF) promotes '*good design*' as part of '*sustainable development*' and advocates '*preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of …….noise pollution…*'

Paragraph 198 of NPPF states '*Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:*

a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;

b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason;'

Paragraph 200 of the NPPF introduces the '*Agent of change principle*'. '*Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.*'

The NPPF reflects advice within Noise Policy Statement for England (NPSE) in that they promote the avoidance of significant adverse impacts and reduction of other adverse impacts on health and quality of life; set within the context of the Government's policy on sustainable development.

Noise Policy Statement for England (2010)

Published in 2010 by the Department for Environment, Food and Rural Affairs, the Noise Policy Statement for England[4] (NPSE) lists three noise policy aims:

Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- Avoid significant adverse impacts on health and quality of life;
- Mitigate and minimise adverse impacts on health and quality of life; and
- Where possible, contribute to the improvement of health and quality of life.

It sets out the long-term vision of government noise policy as to *"Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development."*
The 'Explanatory Note' within the NPSE provides further guidance on defining 'significant adverse effects' and 'adverse effects' using the concepts:

- No Observed Effect Level (NOEL) - the level below which no effect can be detected. Below this level no detectable effect on health and quality of life due to noise can be established;

[3] Ministry of Housing, Communities and Local Government. (December 2024) National Planning Policy Framework. HMSO. Available at https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf
[4] Department for Environmental Food and Rural Affairs (March 2010). 'Noise Policy Statement for England' (NPSE). Available at https://www.gov.uk/government/publications/noise-policy-statement-for-england

- Lowest Observable Adverse Effect Level (LOAEL) - the level above which adverse effects on health and quality of life can be detected; and
- Significant Observed Adverse Effect Level (SOAEL) - the level above which significant adverse effects on health and quality of life occur.

The three aims can therefore be interpreted as follows:

- The first aim is to avoid noise levels above the SOAEL;
- The second aim considers situations where noise levels are between the LOAEL and SOAEL. In such circumstances, all reasonable steps should be taken to mitigate and minimise the effects. However, this does not mean that such adverse effects cannot occur; and
- The third aim considers situations where noise levels are between the LOAEL and NOEL. In these circumstances, where possible, reductions in noise levels should be sought through the pro-active management of noise.

The NPPF and the NPSE provide the concepts for defining various levels of effect, but do not translate these into actual noise levels against which a proposed development can be assessed as acceptable, acceptable with various degrees of mitigation, or unacceptable. It is for individual Local Authorities to interpret the concepts in the NPPF and NPSE and translate them into noise level criteria to be applied in their area.

Local Policy

The Adopted Ashford Local Plan 2030

The Adopted Ashford Local Plan 2030[5] (Ashford Borough Council, 2019) does not contain any specific policies pertaining to noise or the Development Site.

Noise Technical Guidance Note (Ashford Borough Council, August 2022)

The Noise Technical Guidance Note provides information on all issues of noise and planning. It details expected standards for various types of development. All expected standards detailed within this guidance aim to comply with the:

- Noise Policy Statement for England
- National Planning Policy Framework
- National Planning Practice Guidance, and
- Ashford Borough Council Local Plan 2030

Noise from Fixed Plant and Industry

The methodology of BS4142: should be followed in full when assessing the impacts from the following noise sources:

· sound from industrial and manufacturing processes;

· sound from fixed installations which comprise mechanical and electrical plant and equipment;

· sound from the loading and unloading of goods and materials at industrial and/or commercial premises; and

· sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks or trains on or around an industrial and/or commercial site.

Expectation №2 In order to avoid recommendations against the grant of planning permission the assessment Rating sound level should not exceed the representative LA90 background sound level at any time. Furthermore in order to prevent gradually creeping background levels over time it is expected

[5] Ashford Borough Council, (February 2019), "*The Ashford Local Plan 2030*" Adopted February 2019: Ashford Borough Council adopted-ashford-local-plan-2030.pdf

that the unrated 'Specific' sound level does not exceed 10dB below the representative LA90 background sound level at any time. The 'Specific', 'Rating' and 'Background' sound levels shall be calculated in full accordance with BS4142:2014+A1:2009.

The same standard is applied for all fixed plant, including permanent backup generators and other systems which may only run for part of the time. In exceptional cases it may be possible to deviate from this standard, such as where; · The existing background level is very low (below 30dB LA90) · 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.

Guidance

The following guidance has informed the assessment of noise and vibration effects within this Chapter.

Calculation of Road Traffic Noise[6] (1988)

The technical memorandum Calculation of Road Traffic Noise (CRTN) (1988) provides methods for the calculation of road traffic noise levels, taking into account factors such as distance between the road and the receptor, road configuration, ground cover, screening, angle of view, reflection from facades and traffic flow, speed and composition. The noise parameter calculated used for assessment purpose is the Basic Noise Level (BNL) which is the L_{A10}-18 hour based on the 18-hour Annual Average Weekday Traffic (18hr-AAWT) at a distance of 10m from the road edge with the source 3.5m roadside and 0.5m above ground level.

Design Manual for Roads and Bridges (DMRB) LA111[7] Noise and Vibration (2020)

This document sets out the requirements for assessing and reporting the effects of highways noise and vibration from construction, operation and maintenance projects. It states "*The construction, operation and maintenance of highway projects can lead to changes in noise and vibration levels in the surrounding environment*." It further states "*This document sets out the requirements for noise and vibration assessments from road projects, applying a proportionate and consistent approach using best practice and ensuring compliance with relevant legislation*."

Although specific to highway projects the noise criteria for changes in noise level can be used as a basis for the assessment of changes in road traffic noise due to changes in traffic volume, percentage HGV and speed and therefore magnitude.

Guideline For Environmental Noise Impact Assessment[8] (2014)

The IEMA guidelines address the key principles of noise impact assessment and states "they are applicable to all development proposals where noise effects are likely to occur."

It provides advice on how to scope a noise assessment; issues to be considered when defining the baseline noise environment, prediction of changes in noise levels as a result of implementing development proposals; and definition and evaluation of the significance of the effect of changes in noise levels "*for use only where the assessment is undertaken within an EIA*."

Planning Policy Guidance - Noise

Planning Policy Guidance Noise[9] is a web-based resource on the NPPF and provides advice on planning and noise. It provides a hierarchy of noise exposure effects although a specific noise level is not assigned. The hierarchy table of noise exposure is reproduced below.

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[6] DoT (1988). 'Calculation of Road Traffic Noise'. HMSO. Available on line at https://www.ashford.gov.uk/media/jw3nbvq1/adopted-ashford-local-plan-2030.pdf

[7] Highways England (2020). Design Manual for Roads and Bridges, 'LA 111 Sustainability and Environmental Appraisal. Noise and Vibration' – Version 2. Crown Copyright Available at https://www.standardsforhighways.co.uk/dmrb/search/cc8cfcf7-c235-4052-8d32-d5398796b364

[8] Institute of Environmental Management and Assessment (October 2014). 'Guidelines for Environmental Noise Impact Assessment'

[9] Noise - GOV.UK (www.gov.uk) https://www.gov.uk/guidance/noise--2

PPG-Noise: Noise Exposure Hierarchy Table[10]

Response	Examples of outcomes	Increasing effect level	Action
No Observed Effect Level			
Not present	No Effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

10 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/820957/noise_exposure_hierarchy.pdf

BS 4142 – 'Methods for Rating and Assessing Industrial and Commercial Sound' (2019)

BS 4142[11] is used in the assessment of sound of an industrial and/or commercial nature. The standard provides an objective method for rating the likelihood of adverse impacts on nearby NSRs, having regard to the context in which a sound occurs. BS 4142 states:

"Adverse impacts include, but are not limited to, annoyance and sleep disturbance. Not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact."

BS 8233 – 'Guidance on Sound Insulation and Noise Reduction for Buildings' (2014)

BS 8233[12] builds on the World Health Organisation (WHO) guidelines, providing guidance for the control of noise in and around both new and refurbished buildings. BS 8233 recommends internal ambient noise criteria for a range of indoor spaces including residential land uses. The indoor ambient noise levels for unoccupied spaces relevant to this assessment are presented in **Table 8.2.1**.

BS 8233 Guideline Noise Levels for Residential Spaces

Property Type	Location	Daytime $L_{Aeq,16hr}$ (07:00 to 23:00)	Night-Time $L_{Aeq,8hr}$ (23:00 to 07:00)
Resting	Living room	35dB	n/a
Dining	Dining room/ area	40dB	n/a
Sleeping (daytime resting)	Bedroom	35dB	30dB

Unlike the previous version, BS 8233:2014 does not provide recommendations in relation to maximum noise levels in residential bedrooms at night from individual noise events such as vehicle or aircraft movements. Instead, it advises:

"Regular individual noise events…can cause sleep disturbance. A guideline value may be set in terms of SEL (Sound Exposure Level) or $L_{Amax,F}$ depending on the character and number of events per night. Sporadic noise events could require separate values."

World Health Organisation – 'Guidelines for Community Noise' (1999)

This WHO Guidelines for Community Noise[13] document provides guidance of a similar nature to BS 8233, although it places more emphasis on the potential health effects associated with noise. Specifically, the document recommends internal and external noise levels that will provide an acoustic environment that is conducive to uninterrupted speech and sleep. Daytime noise limits aim to prevent the majority of the population being moderately or seriously annoyed by noise. Night-time noise limits are intended to ensure a good night's sleep.

WHO – 'Night Noise Guideline for Europe' (2009)

Based on review of scientific evidence, Night Noise Guidelines[14] (NNG) for Europe recommends an Lnight outside of 40 dB should be the target to protect the public, including the most vulnerable groups such as children, the chronically ill and the elderly. Lnight,outside value of 55 dB is recommended as an interim target for the countries where the NNG cannot be achieved in the short term for various reasons, and where policy-makers choose to adopt a stepwise approach. These guidelines are applicable to the Member States of the European Region, and may be considered as an extension to, as well as an update of, the previous WHO Guidelines for community noise (1999).

WHO Environmental Noise Guidelines for the European Region, (2018)

WHO Environmental Noise Guideline for the European Region[15] which provides advice based on the health effects of noise taking account of research done since the publishing of Guidelines for

[11] BSI (2019) BS4142:2014+A1:2019 'Methods for Rating and Assessing Industrial and Commercial Sound'. BSI.
[12] BSI (2014) BS8233:2014 'Guidance on sound insulation and noise reduction for buildings'. BSI
[13] World Health Organisation (WHO) (1999); 'Guidelines for Community Noise', WHO, Geneva.
[14] World Health Organisation (WHO) (2009); 'Night Noise Guidelines for Europe'', WHO.
[15] WHO. (2018); *'Environmental Noise Guidelines for the European Region'. WHO.*

Community Noise and Night Noise Guideline for Europe. It recommends environmental noise guideline values based on individual transportation sources (road, rail and air) in terms of the Lden and Lnight parameters. Although the 2018 WHO Environmental Noise Guidelines for the European Region supersedes the WHO's Guidelines for Community Noise and compliments WHO's Night Noise Guidelines for Europe, it recommends that all the indoor guideline values within Guidelines for Community Noise should remain valid. Notwithstanding this, the latest WHO guidance on external noise levels is yet to be transported into UK standards, policy or guidance.

Appendix 9.3

Baseline Environmental Conditions

Appendix 9.3: Environmental Baseline Conditions

Prevailing environmental noise conditions, established through survey in November 2024 has been used to determine baseline conditions in 2020 without contribution from the IBF.

The measured baseline conditions in November 2024 at four long-term noise logger locations have been compared to predicted noise levels using CadnaA noise modelling software.

The calculated noise levels using a 3D CadnaA noise model comprised prediction of road traffic noise levels in terms of the LA10,18-hour noise index, from the surrounding road network. The forecast 2022 18-hour AAWT traffic volume, %HGVs and speed (kph) input into the noise model were provided by transport engineers (Waterman). The LA10,18-hour noise index was converted to a daytime dB $L_{Aeq,16h}$ value using Transport Research Laboratory (TRL) Method 3 algorithm. The noise level (dB $L_{Aeq,8h}$) during the night-time period was inferred from the noise level differential between the day and night-time period at LT1 rather than applying TRL Method 3 algorithm which is generally underpredicts noise during this time period. The predicted 2022 road traffic noise level were saved as one variant of the CadnaA noise model.

The measured noise level at LT4 was considered to be representative of 2022 rail noise. This source was input into the 2022 baseline CadnaA noise model as another variant and calibrated to the measured day and night-time noise levels.

Table 9.3.1 presents the predicted 2022 baseline noise levels using CadnaA (road+rail) together with the measured 2024 noise levels and differential.

Table 9.3.1: CadnaA Predicted 2022 Baseline Noise Levels v 2024 Measured Noise Levels

Location	CadnaA 2022 Predicted Baseline Noise Levels			Measured Noise Level 2024 dB $L_{Aeq,16h}$ DAY	Difference [Measured *minus* CadnaA)
	Road TRL Conversion dB $L_{Aeq,16h}$ DAY	Rail dB $L_{Aeq,16h}$ Day	Combined Road & Rail dB $L_{Aeq,16h}$ DAY		
LT1 – A2070	67.1	32.1	67.1	64.5	-2.5
LT2 – A2070	68.2	37.4	68.2	68.5	0.3
LT3 – Church Road	52.7	48.7	54.2	55.1	0.9
LT4 - Rail	50.7	58	58.7	58.0	-0.8
Location	**Road Conversion dB $L_{Aeq,8h}$ NIGHT**	**Rail dB $L_{Aeq,8h}$ NIGHT**	**Combined Road & Rail dB $L_{Aeq,8h}$ NIGHT**	**Measured Noise Level 2024 dB $L_{Aeq,8h}$ NIGHT**	**Difference [Measured *minus* CadnaA]**
LT1 – A2070	62.1	23.1	62.1	64.5	2.5
LT2 – A2070	63.2	28.4	63.2	68.5	5.3
LT3 – Church Road	47.7	39.7	48.4	55.1	6.7
LT4 - Rail	45.7	49	50.7	58.0	7.3

During both the day and night-time periods the 2022 predicted baseline ambient noise levels are comparable to the 2024 measured noise levels, indicating the significant contribution from the surrounding road network and rail to the south. To allow derivation of the other baseline 2022 noise parameters, such as background sound level (dB LA90), where the measured 2024 noise level exceeds the predicted 2022

noise level (differential is positive), the measured noise levels are reduced by the level difference. **Table 9.3.2** presents the derived 2022 baseline noise levels which have been used as a basis for assessment.

Table 9.3.2: 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.

Table 9.3.3 presents the predicted 2022 baseline ambient noise levels at sensitive receptor location together with the derived background sound levels. The background sound levels have been derived by applying the level difference in the ambient noise level (dB LAeq) between the sensitive receptor and the nearest noise logger

Table 9.3.3: CadnaA Predicted 2022 Baseline Ambient Noise Levels & Derived Background Sound Levels

ID	SR	2022 Predicted Daytime Ambient Noise Level dB $L_{Aeq,16h}$	Derived 2022 Daytime Background Sound Level dB L_{A90}	Predicted Night-Time Ambient Noise Level dB $L_{Aeq,8h}$	Derived 2022 Night-Time Background Sound Level dB L_{A90}
R1	Lagonda Lodge	63.9	60.4	58.9	50.2
R2	St Mary's Church	60.2	55.7	55.1	37.5
R3	Court Lodge Farm	63.0	58.5	58.0	40.4
R4	The Old Rectory	58.6	55.5	53.4	46.5
R5	Sunnybank	55.7	52.6	50.4	43.4
R6	Ashdown	55.1	52.0	49.6	42.6
R7	The Paddocks	55.7	52.6	49.0	42.0
R8	Orchard Cottage	58.2	55.1	50.4	43.5
R9	Unnamed (Church Rd)	59.6	56.5	51.7	44.7
R10	Bridge Cottage	58.2	50.2	50.7	43.5
R11	Imber	58.7	50.7	50.6	43.4
R12	Downsview	61.8	58.3	56.8	48.1
R13	17 Nightingale Close	57.2	52.7	52.2	34.6
R14	16 Nightingale Close	60.9	56.4	55.9	38.3
R15	15 Nightingale Close	62.5	58.0	57.5	39.9
R16	14 Nightingale Close	61.0	56.5	56.0	38.4

ID	SR	2022 Predicted Daytime Ambient Noise Level dB $L_{Aeq,16h}$	Derived 2022 Daytime Background Sound Level dB L_{A90}	Predicted Night-Time Ambient Noise Level dB $L_{Aeq,8h}$	Derived 2022 Night-Time Background Sound Level dB L_{A90}
R17	13 Nightingale Close	63.8	59.3	58.8	41.2
R18	12 Nightingale Close	63.2	58.7	58.2	40.6
R19	11 Nightingale Close	64.9	60.4	58.2	40.6
R20	Kenistone	64.8	61.3	59.9	51.2
R21	Caloundra	63.3	59.8	59.8	51.1

Table 9.3.4 presents the equipment detail used for the baseline noise survey undertaken from Wednesday 21st November to Monday 25th November 2024. The equipment was field calibrated before and on completion of the survey with no significant drift. **Figure 9.1** illustrates location of the noise monitoring locations.

Table 9.3.4: Equipment Detail

Location	Description	Serial Number	Date of Last Calibration
LT1 A2070 Northern Boundary IBF	Rion NL-52 Type 1 Sound Level Meter	464685	25/9/2023 Certificate Number 1506621-2
	Rion NH-25 Pre-amplifier	648810	
	Rion UC-59 Microphone	08735	
LT2 A2070 West IBF	Rion NL-52 Type 1 Sound Level Meter	464686	25/9/2023 Certificate Number 1506621-1
	Rion NH-25 Pre-amplifier	64811	
	Rion UC-59 Microphone	08748	
LT3 Church Road SW IBF	Rion NL-52 Type 1 Sound Level Meter	654029	25/9/2023 Certificate Number 1506621-5
	Rion NH-25 Pre-amplifier	54074	
	Rion UC-59 Microphone	12354	
LT4 Railway Line Southern IBF Tango Area Boundary	Rion NL-52 Type 1 Sound Level Meter	976157	25/9/2023 Certificate Number 1506621-4
	Rion NH-25 Pre-amplifier	76274	
	Rion UC-59 Microphone	12050	
All	Acoustic Calibrator Rion NC-75	35270122	17/9/2024 Certificate Number 1509857-1

Table 9.3.5 presents What3Words location of each monitoring location together with a descripton of the observed noise climate.

Table 9.3.5: Monitoring Locations & Description of Observed Noise Climate

Location	What3Words	Description of Noise Climate
LT1	Short.pouting.compress	Dominant source noted to be road traffic noise from the A2070
LT2	Shaky.giving.donor	Dominant source noted to be road traffic noise from the A2070
LT3	Event.sock.gained	Dominant source was mixed comprising of distant road traffic noise and rail noise
LT4	Fumes.laptop.count	Dominant source noted to be rail noise.

A mobile weather station (Davis Vantage Vue Weather Station) was installed at a central but exposed location within the IBF site (What3Words location: Clips.point.rubble) for the duration of the noise survey. The location of the weather station is illustrated on **Figure 9.1**.

Weather conditions recorded from Wednesday 20th November 2024 to 23:00 on Friday 22nd November were suitable for noise measurements, with no rain and wind speed not exceeding 5 m/s. On the night of Friday 22nd November 2024 between 04:15 and 06:20 some rain ws recorded. Noise data sets during this time period were removed from subsequent analysis. Wind direction varied, being predominantly NW on Wednesday 20th November, variable (ENE/NE/WNW) on Thursday 21st November, NW to W on Friday 22nd November and SW or Monday 25th November 2024.

Weather conditions throughout Saturday 23rd November 2024 from 07:00 and Sunday 24th November 2024 until 07:00 on Monday 25th November 2024 were predominantly unsuitable for valid noise measurements. On this basis data sets during this time period were not included for assessment and derivation of 2022 baseline noise conditions.

Table 9.3.6 presents a summary of the measured data at the 4 noise monitoring locations and **Figures 9.3.1 to 9.3.4** presents time history plots for noise and weather data.

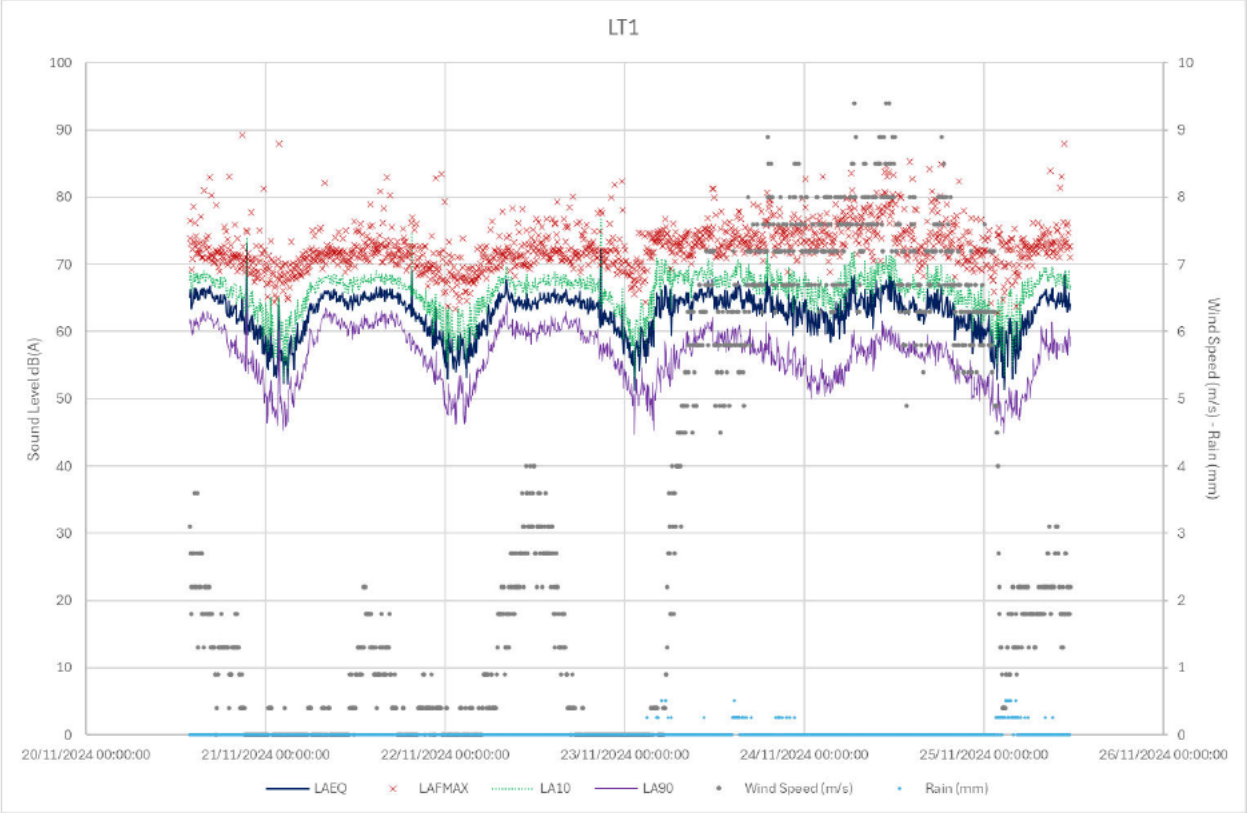
Table 9.3.6: Summary of Measured Baseline Noise Levels November 2024

Location	Period	dB L_{Aeq}	dB L_{AFmax} 90th perc	dB L_{A10}	dB $L_{A90, ave}$	dB $L_{A90, mode}$	L_{A90} range
LT1	Day	65	76	67	60	61	52-66
	Night	60	73	62	52	51	45-61
LT2	Day	69	81	71	62	64	49-69
	Night	62	78	63	48	44	37-62
LT3	Day	55	72	56	51	52	44-56
	Night	48	60	49	43	41	37-53
LT4	Day	58	79	53	49	50	42-61
	Night	49	66	47	43	42	33-52

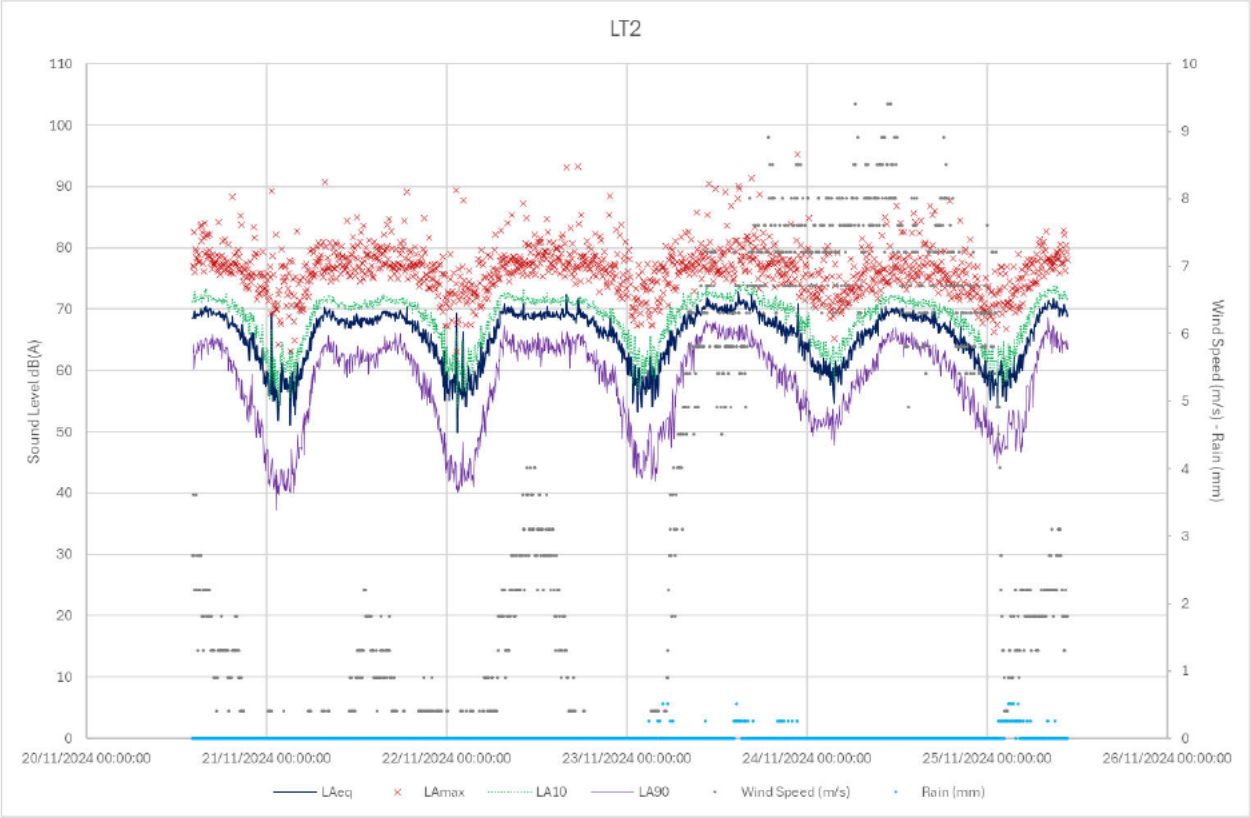
As evidenced by the time history graphs, all monitoring locations exhibited typical diurnal variation with lower noise levels during the night-time period when transport levels and human activity reduce.

At monitoring loction LT4, the time history trace clearly illustrates regular spikes due to train events. At LT4 there is no railside barrier. The spikes in noise levels are illustrated at LT3, which is also exposed to rail noise, but adjacent to this section of the railway line is a rail side barrier.

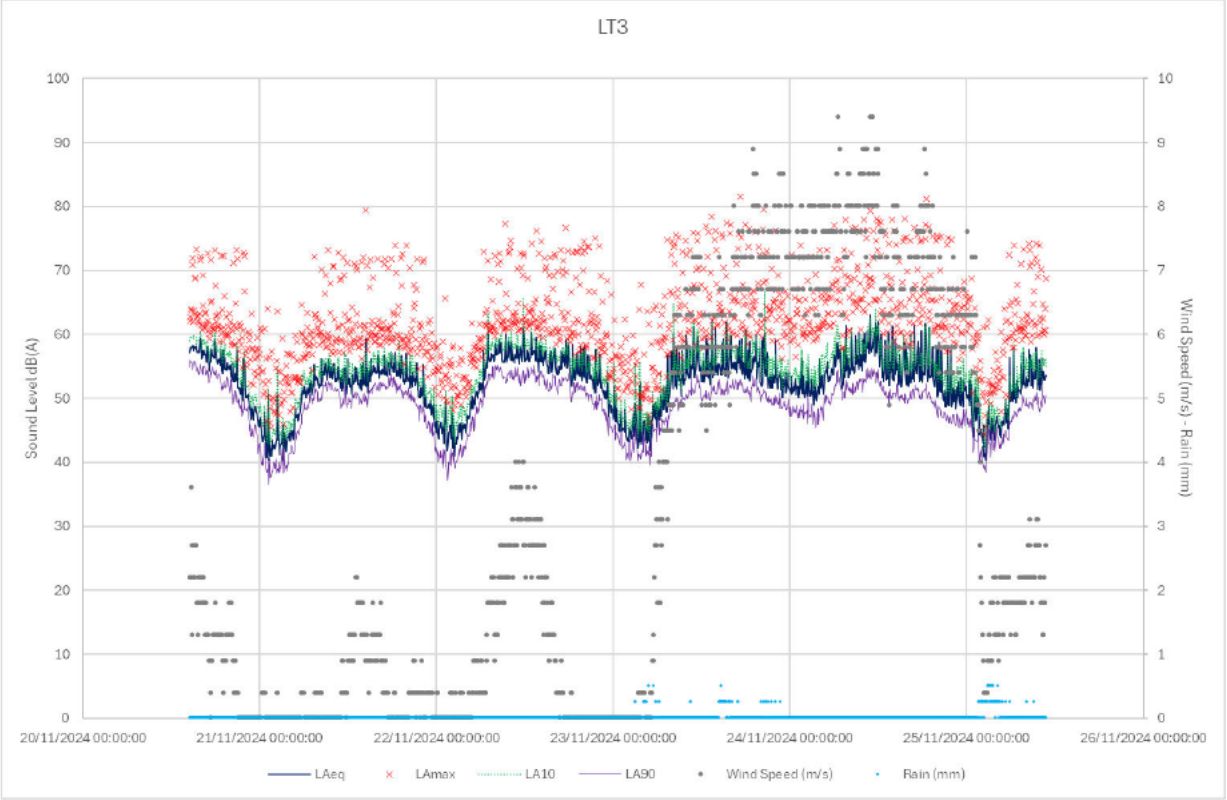
Graph 9.3.1: LT1 A2070 Northern Boundary of IBF



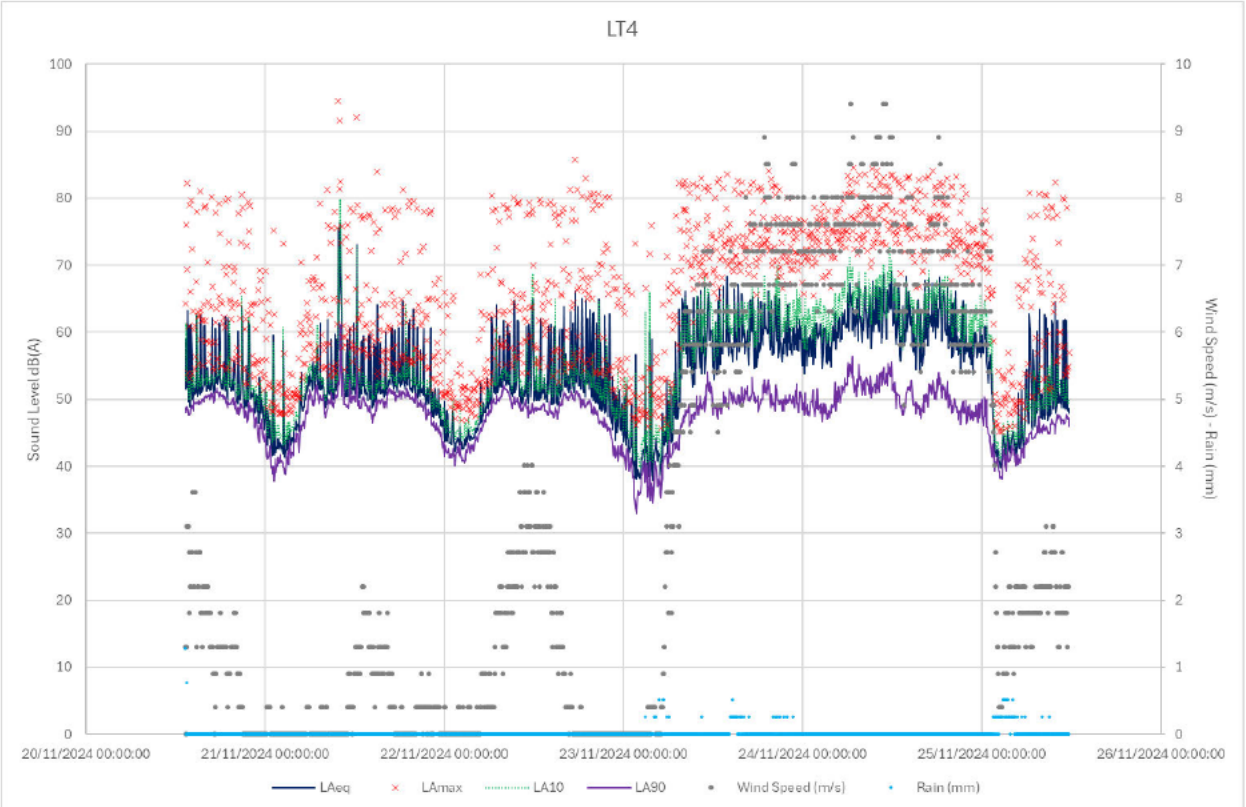
Graph 9.3.2: LT2 A2070 West of IBF



Graph 9.3.3: LT3 Church Road



Graph 9.3.3: LT4 IBF Southern Border (Tango) With Railway Line



Appendix 9.4

Consultation

Appendix 9.4: Consultation

From: [redacted]
Sent: 28 October 2024 10:56
To: [redacted]
Cc: [redacted]
Subject: RE: Sevington IBF, Ashford - Noise Assessment - Noise Surveys & Noise Measurements

Thanks for the clarification.

We have no specific comments to the proposal.

The only one issue that did arise during 2021/2022 was low frequency noise seemingly from the site affecting the below two properties. Although measurements were taken, and investigation was undertaken by an acoustic consultant on behalf of the site operator, no specific source was established and the noise issue appeared to resolve itself shortly after. We received no further correspondence on action that may or may not have been undertaken on site. We thought however that you might like to be aware of these issues as they may arise as part of any subsequent planning consent.

[redacted]

Thanks

[redacted]

[redacted]

Team Leader – Environmental Protection & Licensing

Ashford Borough Council

From: [redacted]
Sent: 28 October 2024 10:35
To: [redacted]
Cc: [redacted]
Subject: RE: Sevington IBF, Ashford - Noise Assessment - Noise Surveys & Noise Measurements

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Good morning [redacted],

Purpose of the Assessment

The IBF, Ashford has temporary planning permission until 31st December 2025. The noise assessment is to accompany the application for the IBF to operate permanently. The assessment of IBF operational noise on the surrounding sensitive receptors is based on comparison with derived prevailing baseline noise levels prior to or without contribution from the IBF.

The previous noise assessment in support of the temporary application for the IBF did not include a baseline noise survey. This work was undertaken by Mott MacDonald. They predicted baseline noise levels pre IBF based on traffic data on the surrounding road network. Mott MacDonald undertook noise measurements during the construction phase of the IBF to check that agreed construction noise levels were not exceeded.

So as you have stated in your email, this work is to assess IBF operational noise post development, which currently has temporary planning permission to operate, against baseline (pre-construction) conditions. This noise assessment will be submitted as part of its planning application to operate permanently.

Measurement Locations LT1 to LT3

The purpose of noise measurements at these locations is to allow a calibration check of the **new** baseline noise model in support of its application to operate permanently. Due to Covid and build-out and operation of Junction 10a of the M20 and associated roads, a baseline year of 2022 will be used for the noise assessment. Road traffic data for the year 2022 (excluding IBF traffic) will be input into the baseline noise model.

As stated above, no baseline noise measurements were previously undertaken, only noise measurements during the construction phase of the IBF. Baseline conditions (pre IBF) were previously predicted based on road traffic data and using 3D noise modelling software. Waterman are using the same approach but for a different baseline year – 2022 for reasons explained above. To check noise levels and propagation of noise from the roads are as

expected in the noise model noise measurements are proposed (LT1 and LT2). This also includes noise measurements of rail noise (LT3) so that this may be quantified.

To answer you question LT1-LT3 are not the original measurement locations as no baseline noise measurements were previously undertaken. The purpose of these is to allow a calibration ck of the new 2022 baseline noise model to be used in the assessment of the IBF planning application for permanent operation.

In addition to measurements at LT1-LT3 to inform baseline conditions, noise measurements of Key IBF sources will be undertaken. This data will be input into the 'with IBF Development' noise model. This will be reflective of actual operations whereas the previous noise model by Mott MacDonald was indicative based on information provided prior to build-out of the IBF.

Please do call me or email back if you require further explanation to allow you to provide a response to the email request.

Thanks in advance and kind regards.

[redacted]

From: [redacted]
Sent: 28 October 2024 09:26
To: [redacted]
Cc [redacted]
Subject: RE: Sevington IBF, Ashford - Noise Assessment - Noise Surveys & Noise Measurements

Thanks for your email.

Sorry – I couldn't quite pick out the purposes of this assessment. Just to confirm is this to assess actual noise impacts (post development) when compared to the pre-construction model?

Could you clarify if LT1-3 are the original measurement locations, and needed to compare against the prior modelling?

Thanks

[redacted]

[redacted] | Chartered Environmental Health Practitioner | MCIEH CEnvH

Team Leader – Environmental Protection & Licensing

Ashford Borough Council

From: [redacted]
Sent: 25 October 2024 14:47
To: [redacted]
Cc: [redacted]
Subject: Sevington IBF, Ashford - Noise Assessment - Noise Surveys & Noise Measurements

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If you have clicked the link or entered credentials into a website you are not sure of, you must let IT know as soon as possible.

Dear [redacted],

Operational Noise Assessment of IBF, Ashford – Noise Surveys & Noise Measurements

I have been given your contact details as the person to consult with regarding our proposed noise surveys and noise measurements to assist with our assessment.

The previous assessment, pre build out of the IBF, was a desk-based assessment undertaken by Mott MacDonalds. They predicted prevailing baseline noise levels at the nearest sensitive receptors using a 3D noise model and traffic data on the surrounding road network.

As you are aware the IBF Ashford is already built-out and operational. Establishing baseline environmental noise conditions without IBF contribution will therefore be done through noise modelling (CadnaA). The dominant noise at the Site and surrounds is road traffic noise. Traffic data for the baseline year 2022 (without IBF traffic) will be input into the 3D noise model to allow prediction of baseline noise levels at the surrounding sensitive receptors.

To allow calibration of the noise model we propose to conduct unattended noise measurements at two locations facing the A2070 for a period covering the weekday and weekend periods. In addition to this it is proposed to conduct the same at the IBF boundary with the railway line to the south to determine the contribution from this source. The image below indicates the proposed locations of the unattended environmental noise loggers to allow calibration of the 3D 2022 baseline noise model. These locations may be subject to change depending site conditions, security and access issues when on site.

In addition to the above, to inform the assessment of operational noise from the IBF, on-site noise measurements of key sources, such as by-pass measurements of refrigerated and non-refrigerated HGVs, noise measurements of refrigerated HGVs within parking bays and fixed external plant. The quantified noise from key IBF noise sources will be input into the 'with development' noise model to allow prediction of IBF operational noise at the surrounding sensitive receptors.

Could you please let me know if you agree in principle to the proposed noise surveys to assist with calibration of the 2022 baseline noise model and the noise measurement of key IBF sources.

Thanks in advance for you assistance in dealing with this matter.

Kind regards

[redacted]

Associate Director

Waterman Infrastructure & Environment Ltd

[redacted]

Appendix 9.5

Operational Noise Assessment

Appendix 9.5: Operational Noise Assessment

Noise measurements of key operational noise sources on the existing IBF site were conducted on Thursday 21st November 2024.

Table 9.5.1 presents the equipment used to take the noise measurements.

Table 9.5.1: Equipment Detail of Source Noise Measurements

Location	Description	Serial Number	Date of Last Calibration
R9 01, R9 02, R9 03, R9 04a, R9 04b, R9 04c, R9 06a, R9 06c, R9 06d, R9 06e, R9 07	Rion NL-52 Type 1 Sound Level Meter	01043379	14/03/2023 Certificate Number TCRT23-1239
	Rion NH-25 Pre-amplifier	43591	
	Rion UC-59 Microphone	10129	
R10 05a1, R10 05a2, R10 05b, R10 05d, R10 10	Rion NL-52 Type 1 Sound Level Meter	01143565	02/02/2023 Certificate Number TCRT23/1080
	Rion NH-25 Pre-amplifier	43407	
	Rion UC-59 Microphone	06864	
R11 08	Rion NL-52 Type 1 Sound Level Meter	00810563	02/01/2024 Certificate Number TCRT24/1004
	Rion NH-25 Pre-amplifier	11106	
	Rion UC-59 Microphone	19954	
N1 01, N1 06	Norsonic 140 Type 1 Sound Level Meter	1406408	04/12/2025 Certificate Number 1507311-1
	1209 - Pre-amplifier	20690	
	1225 Microphone	355496	
All Locations	Acoustic Calibrator Cirrus CR:513A	029778	29/05/2024 Certificate Number TCRT24/1399

Table 9.5.2 presents a summary of the measured source noise levels.

Table 9.5.2: Summary of Measured Source Noise Levels

IBF sources index	Meter	Measurement Number	Cadna Measurement ID	LAeq (log avg)	Duration (s)	LAFmax (arithmetic average)	LA90 (arithmetic average)	Distance (m)	Observational Details
1	NORS	1058	N1 01	67.8	690	74.4	59.8	6.4	Direct measurement of HGVs entering Site. Background noise made up of road traffic noise from M20 and A2070
1	R9	0101	R9 01	65.2	1440	72.8	58.4	5.3	Direct measurement of HGVs exiting Site. Mix of idling and driving through without stopping due to traffic lights system. Background noise levels made up of distant road traffic noise from M20 and A2070
2	R9	0201	R9 02	64.6	630	70.1	58.1	6.1	Direct measurement of HGVs travelling through Swim Lanes for processing. Mix of idling and driving through without stopping. Background noise levels made up of distant road traffic noise from M20 and A2070
3	R9	0301	R9 03	60.5	2180	65.4	54.9	10.0	Direct measurement of HGVs travelling through access road. Background noise levels made up of road traffic noise from M20 and A2070
4	R9	0401	R9 04a	69.0	799	76.9	60.0	Within near field of area source	Measurement of average noise levels within IBF area. HGV noise consists of arriving and leaving the area, reverse alarms and idling.
4	R9	0402	R9 04b	66.5	1472	77.4	58.3	37.8	Direct measurement of HGVs driving over temporary drainage covering works. Noise from this activity consisted of HGVs driving onto and dropping from a ramp causing a high noise level, instantaneous thud. Background noise levels consisted of noise from IBF central area and distant road traffic noise from M20 and A2070
4	R9	0403	R9 04c	69.7	158	77.9	63.6	Within near field of area source	Measurement of average noise levels within IBF area. HGV noise consists of arriving and leaving the area, reverse alarms and idling.
5	R10	0501_1	R10 05a1	62.4	8520	67.9	53.8	22.8	Dominant noise source at this location is HGVs coming round access road. Activity from Shed 5 also noticeable (22.7m horizontal distance away from noise sensor), however was occasional and negligible against background noise levels which were made up of road traffic noise from M20 and A2070.
5	R10	0501_2	R10 05a2	70.2	2138	73.0	69.1	3.81	Direct measurement of scissor lift which is used as part of Shed 5 operations.
5	R10	0502	R10 05b	70.4	403	73.3	69.7	3.81	Direct measurement of scissor lift which is used as part of Shed 5 operations.
5	R10	0504	R10 05d	64.5	784	74.3	57.8	11	Direct measurement of HGVs travelling through access road. Background noise levels made up of road traffic noise from M20 and A2070

IBF sources index	Meter	Measurement Number	Cadna Measurement ID	LAeq (log avg)	Duration (s)	LAFmax (arithmetic average)	LA90 (arithmetic average)	Distance (m)	Observational Details
6	NORS	1145	N1 06	72.7	63	74.0	60.9	4.6	Direct measurement of rear of refrigerant truck (noise coming from grill at top of vehicle). Refrigerant vehicles exhibited on/off characteristics with noise from grill. Noise measurements were made while noise from grill was occurring
6	R9	0600	R9 06a	66.2	7	72.9	62.6	4.6	Direct measurement of rear of refrigerant truck (noise coming from grill at top of vehicle). Refrigerant vehicles exhibited on/off characteristics with noise from grill. Noise measurements were made while noise from grill was occurring
6	R9	0603	R9 06c	73.3	84	76.5	63.8	4.6	Direct measurement of rear of refrigerant truck (noise coming from grill at top of vehicle). Refrigerant vehicles exhibited on/off characteristics with noise from grill. Noise measurements were made while noise from grill was occurring
6	R9	0604	R9 06d	70.5	122	71.6	70.0	4.6	Direct measurement of rear of refrigerant truck (noise coming from grill at top of vehicle). Refrigerant vehicles exhibited on/off characteristics with noise from grill. Noise measurements were made while noise from grill was occurring
6	R9	0605	R9 06e	55.7	31	61.7	51.6	2.3	Direct measurement of rear of refrigerant truck (noise coming from grill at top of vehicle). Refrigerant vehicles exhibited on/off characteristics with noise from grill. Noise measurements were made while noise from grill was occurring
7	R9	0701	R9 07	67.5	74	70.3	62.9	4.6	Direct measurement of rear of refrigerant truck (noise coming from grill at top of vehicle). Refrigerant vehicles exhibited on/off characteristics with noise from grill. Noise measurements were made while noise from grill was occurring
8	R11	0502	R11 08	60.5	10252	67.4	51.0	11.2	Direct measurement of HGVs travelling through access road. Background noise levels made up of road traffic noise from M20 and A2070
10	R10	1001	R10 10	57.0	1078	65.2	52.5	2.25	Direct measurement of cars entering and leaving the car park. Background noise levels made up of distant road traffic noise from M20 and A2070

The quantified source noise measurements were input into a 3D CadnaA noise model of the IBF site.

With regard to HGV movements assessments were based on the highest average hourly HGV movements and also on the maximum hourly HGV movements as presented in **Table 9.5.3**. This information was provided by Sodexo based on recorded data between January 2024 to November 2024.

Table 9.5.3: Recorded Hourly HGV Movements Between January to November 2024.

Hour	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00
Day	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles
Average	69	72	69	72	71	83	84	94	98	99	86	83	74	60	39	29
Highest	170	185	180	163	186	187	219	204	175	204	167	185	173	168	94	74

Hour	23:00	00:00	01:00	02:00	03:00	04:00	05:00	06:00
Night	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles	No. of Vehicles
Average	20	19	17	21	26	38	48	66
Highest	45	43	39	59	89	102	123	162

Movement of HGVs across the IBF site are understood to be as follows:

1. HGVs enter site turn left and go to swim lanes for processing.
2. After swim lanes some HGVs (approximately 23%) go to BCP area; Transport Refrigerated Units (TRUs) hookup, others HGVs park up, HGVs leave Site.
3. Most HGVs (approximately 77%) go to IBF HMRC area, Transport Refrigerated Units hook up, others park up.
4. Some of HGVs who go to IBF area products are checked (Shed 5 area).
5. Following IBF area, HGVs leave exit the area on to the access road and exit the site.

Based on recorded data by Sodexo, 5% of HGVs between November 2023 and November 2024 that visited Sevington IBF were temp controlled. On this basis 5% of hourly HGVs have been assumed to be TRUs.

Highest Average Hourly HGV Movements

Table 9.5.4 presents the BS4142 magnitude of level difference between the Rating Level and derived 2022 background sound level, based on the highest average hourly HGV movements of 99 during the daytime period (recorded between 16:00-17:00).

Table 9.5.4: Day BS4142 Magnitude of Level Difference (Highest Average Hourly HGVs)

Sensitive Receptor	Day Specific Sound Level dB $L_{Aeq,1h}$	Day Rating Level dB $L_{Ar,Tr}$	Derived Background Sound Level dB L_{A90}	Day Diff	Magnitude
R1 Lagonda Lodge	49.0	52.0	60.4	-8.4	Negligible
R2 St Mary's Church	47.2	50.2	55.7	-5.5	Negligible
R3 Court Lodge Farm	42.3	45.3	58.5	-13.2	None
R4 The Old Rectory	43.8	46.8	55.5	-8.7	Negligible
R5 Sunnybank	43.6	46.6	52.6	-6.0	Negligible
R6 Ashdown	41.7	44.7	52.0	-7.3	Negligible
R7 The Paddocks	41.2	44.2	52.6	-8.4	Negligible
R8 Orchard Cottage	40.9	43.9	55.1	-11.2	None
R9 Unknown Church Rd	43.5	46.5	56.5	-10.0	None
R10 Bridge Cottage	45.5	48.5	50.2	-1.7	Negligible
R11 Imber	41.5	44.5	50.7	-6.2	Negligible

Sensitive Receptor	Day Specific Sound Level dB $L_{Aeq,1h}$	Day Rating Level dB $L_{Ar,Tr}$	Derived Background Sound Level dB L_{A90}	Day Diff	Magnitude
R12 Downsview	43.7	46.7	58.3	-11.6	None
R13 17 Nightingale Close	37.8	40.8	52.7	-11.9	None
R14 16 Nightingale Close	40.5	43.5	56.4	-12.9	None
R15 15 Nightingale Close	41.2	44.2	58.0	-13.8	None
R16 14 Nightingale Close	40.6	43.6	56.5	-12.9	None
R17 13 Nightingale Close	40.8	43.8	59.3	-15.5	None
R18 12 Nightingale Close	40.1	43.1	58.7	-15.6	None
R19 11 Nightingale Close	40.1	43.1	60.4	-17.3	None
R20 Kenistone	46.6	49.6	61.3	-11.7	None
R21 Caloundra	46.0	49.0	59.8	-10.8	None

Table 9.5.5 presents the predicted change in the baseline 2022 daytime ambient noise level with Development operational noise.

Table 9.5.5: Predicted Change In Daytime Ambient Noise Level (Highest Average Hourly HGVs)

Sensitive Receptor	Day Specific Sound Level dB $L_{Aeq,1h}$	Predicted 2022 Ambient Noise Level dB $L_{Aeq,8h}$	Combined Noise Level dB $L_{Aeq,T}$	Change in Ambient	Magnitude
R1 Lagonda Lodge	49.0	63.9	64.0	0.1	Negligible
R2 St Mary's Church	47.2	60.2	60.4	0.2	Negligible
R3 Court Lodge Farm	42.3	63.0	63.1	0.0	Negligible
R4 The Old Rectory	43.8	58.6	58.8	0.1	Negligible
R5 Sunnybank	43.6	55.7	56.0	0.3	Negligible
R6 Ashdown	41.7	55.1	55.3	0.2	Negligible
R7 The Paddocks	41.2	55.7	55.9	0.2	Negligible
R8 Orchard Cottage	40.9	58.2	58.3	0.1	Negligible
R9 Unknown Church Rd	43.5	59.6	59.7	0.1	Negligible
R10 Bridge Cottage	45.5	58.2	58.4	0.2	Negligible
R11 Imber	41.5	58.7	58.8	0.1	Negligible
R12 Downsview	43.7	61.8	61.9	0.1	Negligible
R13 17 Nightingale Close	37.8	57.2	57.3	0.0	Negligible
R14 16 Nightingale Close	40.5	60.9	61.0	0.0	Negligible
R15 15 Nightingale Close	41.2	62.5	62.5	0.0	Negligible
R16 14 Nightingale Close	40.6	61.0	61.0	0.0	Negligible
R17 13 Nightingale Close	40.8	63.8	63.8	0.0	Negligible
R18 12 Nightingale Close	40.1	63.2	63.2	0.0	Negligible
R19 11 Nightingale Close	40.1	64.9	64.9	0.0	Negligible
R20 Kenistone	46.6	64.8	64.9	0.1	Negligible
R21 Caloundra	46.0	63.3	63.4	0.1	Negligible

Table 9.5.6 presents the BS4142 magnitude of level difference between the Rating Level and derived 2022 background sound level, based on the maximum average hourly HGV movements of 66 during the night-time period (recorded between 06:00-07:00).

Table 9.5.6: Night-time BS4142 Magnitude of Level Difference (Highest Average Hourly HGVs)

Sensitive Receptor	Night Specific Sound Level dB $L_{Aeq,15min}$	Night Rating Level dB LAr,Tr	Derived Background Sound Level dB LA90	Night Diff	Magnitude
R1 Lagonda Lodge	48.8	51.8	50.2	1.6	Small
R2 St Mary's Church			Not Applicable		
R3 Court Lodge Farm	41.7	44.7	40.4	4.3	Small
R4 The Old Rectory	43.1	46.1	46.5	-0.4	Negligible
R5 Sunnybank	42.8	45.8	43.4	2.4	Small
R6 Ashdown	41.2	44.2	42.6	1.6	Small
R7 The Paddocks	40.7	43.7	42.0	1.7	Small
R8 Orchard Cottage	40.4	43.4	43.5	-0.1	Negligible
R9 Unknown Church Rd	43.0	46.0	44.7	1.3	Small
R10 Bridge Cottage	45.3	48.3	43.5	4.8	Small
R11 Imber	41.3	44.3	43.4	0.9	Small
R12 Downsview	43.5	46.5	48.1	-1.6	Negligible
R13 17 Nightingale Close	37.3	40.3	34.6	5.7	Medium
R14 16 Nightingale Close	39.9	42.9	38.3	4.6	Small
R15 15 Nightingale Close	40.6	43.6	39.9	3.7	Small
R16 14 Nightingale Close	40.0	43.0	38.4	4.6	Small
R17 13 Nightingale Close	40.1	43.1	41.2	1.9	Small
R18 12 Nightingale Close	39.5	42.5	40.6	1.9	Small
R19 11 Nightingale Close	39.5	42.5	40.6	1.9	Small
R20 Kenistone	46.4	49.4	51.2	-1.8	Negligible
R21 Caloundra	45.8	48.8	51.1	-2.3	Negligible

Table 9.5.7 presents the predicted change in the 2022 baseline ambient noise level during the night-time period.

Table 9.5.7: Predicted Change In Night-time Ambient Noise Level (Highest Average Hourly HGVs)

Sensitive Receptor	Night Specific Sound Level dB $L_{Aeq,15}$ min	Predicted 2022 Ambient Noise Level dB $L_{Aeq,8h}$	Combined Noise Level dB $L_{Aeq,T}$	Change in Ambient	Magnitude
R1 Lagonda Lodge	48.8	58.9	59.3	0.4	Negligible
R2 St Mary's Church	Not Applicable				
R3 Court Lodge Farm	41.7	58.0	58.1	0.1	Negligible
R4 The Old Rectory	43.1	53.4	53.8	0.4	Negligible
R5 Sunnybank	42.8	50.4	51.1	0.7	Negligible
R6 Ashdown	41.2	49.6	50.2	0.6	Negligible
R7 The Paddocks	40.7	49.0	49.6	0.6	Negligible
R8 Orchard Cottage	40.4	50.4	50.8	0.4	Negligible
R9 Unknown Church Rd	43	51.7	52.3	0.5	Negligible

Sensitive Receptor	Night Specific Sound Level dB $L_{Aeq,15}$ min	Predicted 2022 Ambient Noise Level dB $L_{Aeq,8h}$	Combined Noise Level dB $L_{Aeq,T}$	Change in Ambient	Magnitude
R10 Bridge Cottage	45.3	50.7	51.8	1.1	Small
R11 Imber	41.3	50.6	51.1	0.5	Negligible
R12 Downsview	43.5	56.8	57.0	0.2	Negligible
R13 17 Nightingale Close	37.3	52.2	52.3	0.1	Negligible
R14 16 Nightingale Close	39.9	55.9	56.0	0.1	Negligible
R15 15 Nightingale Close	40.6	57.5	57.6	0.1	Negligible
R16 14 Nightingale Close	40	56.0	56.1	0.1	Negligible
R17 13 Nightingale Close	40.1	58.8	58.9	0.1	Negligible
R18 12 Nightingale Close	39.5	58.2	58.3	0.1	Negligible
R19 11 Nightingale Close	39.5	58.2	58.3	0.1	Negligible
R20 Kenistone	46.4	59.9	60.1	0.2	Negligible
R21 Caloundra	45.8	59.8	60.0	0.2	Negligible

Maximum Hourly HGV Movements

Table 9.5.8 presents the BS4142 magnitude of level difference between the Rating Level and derived 2022 background sound level, based on the maximum recorded hourly HGV movements of 219 during the daytime period (recorded between 13:00-14:00).

Table 9.5.8: Day BS4142 Magnitude of Level Difference (Max Hourly HGVs)

Sensitive Receptor	Day Specific Sound Level dB LAeq,1h	Day Rating Level dB LAr,Tr	Derived Background Sound Level dB LA90	Day Diff	Magnitude
R1 Lagonda Lodge	49.9	52.9	60.4	-7.5	Negligible
R2 St Mary's Church	49.6	52.6	55.7	-3.1	Negligible
R3 Court Lodge Farm	44.6	47.6	58.5	-10.9	None
R4 The Old Rectory	45.9	48.9	55.5	-6.6	Negligible
R5 Sunnybank	45.9	48.9	52.6	-3.7	Negligible
R6 Ashdown	43.7	46.7	52.0	-5.3	Negligible
R7 The Paddocks	43.1	46.1	52.6	-6.5	Negligible
R8 Orchard Cottage	42.7	45.7	55.1	-9.4	Negligible
R9 Unknown Church Rd	45.1	48.1	56.5	-8.4	Negligible
R10 Bridge Cottage	46.8	49.8	50.2	-0.4	Negligible
R11 Imber	42.9	45.9	50.7	-4.8	Negligible
R12 Downsview	44.7	47.7	58.3	-10.6	None
R13 17 Nightingale Close	39.9	42.9	52.7	-9.8	Negligible
R14 16 Nightingale Close	42.4	45.4	56.4	-11.0	None
R15 15 Nightingale Close	43.1	46.1	58.0	-11.9	None
R16 14 Nightingale Close	42.6	45.6	56.5	-10.9	None
R17 13 Nightingale Close	42.9	45.9	59.3	-13.4	None
R18 12 Nightingale Close	42.1	45.1	58.7	-13.6	None
R19 11 Nightingale Close	42.1	45.1	60.4	-15.3	None
R20 Kenistone	47.3	50.3	61.3	-11.0	None

Sensitive Receptor	Day Specific Sound Level dB LAeq,1h	Day Rating Level dB LAr,Tr	Derived Background Sound Level dB LA90	Day Diff	Magnitude
R21 Caloundra	46.8	49.8	59.8	-10.0	None

Table 9.5.9 presents the predicted change in the 2022 baseline ambient noise level with Development operational noise based on maximum hourly HGV movements of 219.

Table 9.5.9: Change In Daytime Ambient Noise Level (Max Average Hourly HGVs)

Sensitive Receptor	Day Specific Sound Level dB $L_{Aeq,1h}$	Predicted 2022 Ambient Noise Level dB $L_{Aeq,16h}$	Combined Noise Level dB $L_{Aeq,T}$	Change in Ambient	Magnitude
R1 Lagonda Lodge	49.9	63.9	64.1	0.2	Negligible
R2 St Mary's Church	49.6	60.2	60.5	0.4	Negligible
R3 Court Lodge Farm	44.6	63.0	63.1	0.1	Negligible
R4 The Old Rectory	45.9	58.6	58.8	0.2	Negligible
R5 Sunnybank	45.9	55.7	56.1	0.4	Negligible
R6 Ashdown	43.7	55.1	55.4	0.3	Negligible
R7 The Paddocks	43.1	55.7	56.0	0.2	Negligible
R8 Orchard Cottage	42.7	58.2	58.3	0.1	Negligible
R9 Unknown Church Rd	45.1	59.6	59.8	0.2	Negligible
R10 Bridge Cottage	46.8	58.2	58.5	0.3	Negligible
R11 Imber	42.9	58.7	58.8	0.1	Negligible
R12 Downsview	44.7	61.8	61.9	0.1	Negligible
R13 17 Nightingale Close	39.9	57.2	57.3	0.1	Negligible
R14 16 Nightingale Close	42.4	60.9	61.0	0.1	Negligible
R15 15 Nightingale Close	43.1	62.5	62.6	0.0	Negligible
R16 14 Nightingale Close	42.6	61.0	61.1	0.1	Negligible
R17 13 Nightingale Close	42.9	63.8	63.8	0.0	Negligible
R18 12 Nightingale Close	42.1	63.2	63.2	0.0	Negligible
R19 11 Nightingale Close	42.1	64.9	64.9	0.0	Negligible
R20 Kenistone	47.3	64.8	64.9	0.1	Negligible
R21 Caloundra	46.8	63.3	63.4	0.1	Negligible

Table 9.5.10 presents the BS4142 magnitude of level difference between the night-time predicted Rating Level and baseline 2022 background sound level based on the maximum hourly HGV movements of 162 (recorded between 06:00-07:00). **Table 9.5.11** presents the predicted change in the baseline 2022 ambient noise level.

Table 9.5.10: Night-Time BS4142 Magnitude of Level Difference (Max Hourly HGVs)

Sensitive Receptor	Night Specific Sound Level dB $L_{Aeq,15min}$	Night Rating Level dB LAr,Tr	Derived Background Sound Level dB LA90	Night Diff	Magnitude
R1 Lagonda Lodge	49.6	52.6	50.2	2.4	Small
R2 St Mary's Church	Not Applicable				
R3 Court Lodge Farm	44.1	47.1	40.4	6.7	Medium
R4 The Old Rectory	45.3	48.3	46.5	1.8	Small
R5 Sunnybank	45.2	48.2	43.4	4.8	Small
R6 Ashdown	43.2	46.2	42.6	3.6	Small
R7 The Paddocks	42.6	45.6	42.0	3.6	Small
R8 Orchard Cottage	42.3	45.3	43.5	1.8	Small
R9 Unknown Church Rd	44.6	47.6	44.7	2.9	Small
R10 Bridge Cottage	46.5	49.5	43.5	6.0	Medium
R11 Imber	42.7	45.7	43.4	2.3	Small
R12 Downsview	44.4	47.4	48.1	-0.7	Negligible
R13 17 Nightingale Close	39.4	42.4	34.6	7.8	Medium
R14 16 Nightingale Close	41.9	44.9	38.3	6.6	Medium
R15 15 Nightingale Close	42.5	45.5	39.9	5.6	Medium
R16 14 Nightingale Close	42.0	45.0	38.4	6.6	Medium
R17 13 Nightingale Close	42.3	45.3	41.2	4.1	Small
R18 12 Nightingale Close	41.6	44.6	40.6	4.0	Small
R19 11 Nightingale Close	41.6	44.6	40.6	4.0	Small
R20 Kenistone	47.0	50.0	51.2	-1.2	Negligible
R21 Caloundra	46.5	49.5	51.1	-1.6	Negligible

Table 9.5.11: Change In Night-time Ambient Noise Level (Max Average Hourly HGVs)

Sensitive Receptor	Night Specific Sound Level dB $L_{Aeq,15\ min}$	Predicted 2022 Ambient Noise Level dB $L_{Aeq,8h}$	Combined Noise Level dB $L_{Aeq,T}$	Change in Ambient	Magnitude
R1 Lagonda Lodge	49.6	58.9	59.4	0.5	Negligible
R2 St Mary's Church	Not Applicable				
R3 Court Lodge Farm	44.1	58.0	58.2	0.2	Negligible
R4 The Old Rectory	45.3	53.4	54.1	0.6	Negligible
R5 Sunnybank	45.2	50.4	51.5	1.2	Small
R6 Ashdown	43.2	49.6	50.5	0.9	Negligible
R7 The Paddocks	42.6	49.0	49.9	0.9	Negligible
R8 Orchard Cottage	42.3	50.4	51.0	0.6	Negligible
R9 Unknown Church Rd	44.6	51.7	52.5	0.8	Negligible
R10 Bridge Cottage	46.5	50.7	52.1	1.4	Small
R11 Imber	42.7	50.6	51.2	0.7	Negligible
R12 Downsview	44.4	56.8	57.0	0.2	Negligible
R13 17 Nightingale Close	39.4	52.2	52.4	0.2	Negligible
R14 16 Nightingale Close	41.9	55.9	56.1	0.2	Negligible
R15 15 Nightingale Close	42.5	57.5	57.6	0.1	Negligible
R16 14 Nightingale Close	42	56.0	56.2	0.2	Negligible
R17 13 Nightingale Close	42.3	58.8	58.9	0.1	Negligible
R18 12 Nightingale Close	41.6	58.2	58.3	0.1	Negligible
R19 11 Nightingale Close	41.6	58.2	58.3	0.1	Negligible
R20 Kenistone	47	59.9	60.1	0.2	Negligible
R21 Caloundra	46.5	59.8	60.0	0.2	Negligible

Standby Generators Operational Noise Assessment

There are 3 standby generators on the IBF site. These are run tested once per month and black tested once a year. Table 9.5.12 presents the measured noise levels undertaken by Mott Mac Donald together with Manufacturers' data for plant of comparable specification. The reason for including the latter is that a noise measurement at 1m from the generator is likely to be in the near field and potentially underestimate the sound power level from the generator, in particular from the exhaust which is at the top of the generator.

It is understood that all of the generators are contained within a soundproof canopy, exhaust is fitted with silencer and air inlet and outlet are via acoustic louvres.

Table 9.5.12: Standby Generator Noise Measurements & Comparable Manufacturers' Data

Site	Sevington				
Generator	Sound Level dBA			Sound Power Level dB(A)	
	Inside	Outside	Ambient	Predicted From Outside Noise Measurement	Based On Comparable Manufacturers' Data dB(A)
Generator 5 SP3-4 900 kVA / 720 KW	101.6	75.4	54.5	83	93 Cummins 900kVA/720 kW (height 2.58m, length 5.77m, width 2.2m) https://ade-power.co.uk/generators/cummins/c900d5-s
Generator 3 SP1-2 330 KVA / 264 KW	97.2	68.6	54.5	77	97 Pramac 330 kVA/264kW (height 2.283m, length 3.950m, width 1.44m) https://www.lawnandpower.co.uk/product/pramac-gsw330i-330kva-diesel-generator-with-iveco-engine-3-phase-1500rpm/
Generator 8 SP5 138 KVA / 110 KW	92.5	65.3	52.2	73	97 Pramac 138 kVA/110kW (height 1.77m, length 3.4m, width 1.25m) https://www.lawnandpower.co.uk/product/pramac-gsw145i-138kva-diesel-generator-with-iveco-engine-3-phase/

CadnaA noise modelling software has been used to predict generator noise levels at receptor locations.

Table 9.5.13 presents the predicted change in the baseline 2022 daytime noise levels when generators are operational.

Table 9.5.13: Change In Daytime Ambient Noise Level – Generator Noise

Sensitive Receptor	Day Specific Generator Sound Level dB $L_{Aeq,1h}$	Predicted 2022 Ambient Noise Level dB $L_{Aeq,16h}$	Combined Noise Level dB $L_{Aeq,T}$	Change in Ambient	Magnitude
R1 Lagonda Lodge	27.7	63.9	63.9	0.0	Negligible
R2 St Mary's Church	42.8	60.2	60.3	0.1	Negligible
R3 Court Lodge Farm	37.8	63.0	63.0	0.0	Negligible
R4 The Old Rectory	40.6	58.6	58.7	0.1	Negligible
R5 Sunnybank	41.9	55.7	55.9	0.2	Negligible
R6 Ashdown	37.4	55.1	55.2	0.1	Negligible
R7 The Paddocks	34.7	55.7	55.7	0.0	Negligible
R8 Orchard Cottage	34.3	58.2	58.2	0.0	Negligible
R9 Unknown Church Rd	34.7	59.6	59.6	0.0	Negligible
R10 Bridge Cottage	30.9	58.2	58.2	0.0	Negligible
R11 Imber	27.9	58.7	58.7	0.0	Negligible
R12 Downsview	24.0	61.8	61.8	0.0	Negligible
R13 17 Nightingale Close	32.3	57.2	57.2	0.0	Negligible
R14 16 Nightingale Close	32.8	60.9	60.9	0.0	Negligible
R15 15 Nightingale Close	33.2	62.5	62.5	0.0	Negligible
R16 14 Nightingale Close	33.3	61.0	61.0	0.0	Negligible
R17 13 Nightingale Close	35.9	63.8	63.8	0.0	Negligible
R18 12 Nightingale Close	31.4	63.2	63.2	0.0	Negligible
R19 11 Nightingale Close	31.4	64.9	64.9	0.0	Negligible
R20 Kenistone	26.5	64.8	64.8	0.0	Negligible
R21 Caloundra	26.2	63.3	63.3	0.0	Negligible

Table 9.5.14 presents the daytime BS4142 assessment for standby generator noise. Where the Specific Sound Level of generator noise at receptor location is 10dB or more below background zero rating penalty is added. During the daytime period noise from generators at receptor locations are predicted to have negligible effects.

Table 9.5.14 presents the BS4142 daytime assessment of generator noise.

Sensitive Receptor	Day Specific Generator Sound Level dB $L_{Aeq,1h}$	Day Rating Level dB $L_{Ar,Tr}$	Derived Background Sound Level dB LA90	Day Diff	Magnitude
R1 Lagonda Lodge	27.7	27.7	60.4	-32.7	None
R2 St Mary's Church	42.8	42.8	55.7	-12.9	None
R3 Court Lodge Farm	37.8	37.8	58.5	-20.7	None
R4 The Old Rectory	40.6	40.6	55.5	-14.9	None
R5 Sunnybank	41.9	41.9	52.6	-10.7	None
R6 Ashdown	37.4	37.4	52.0	-14.6	None
R7 The Paddocks	34.7	34.7	52.6	-17.9	None
R8 Orchard Cottage	34.3	34.3	55.1	-20.8	None
R9 Unknown Church Rd	34.7	34.7	56.5	-21.8	None
R10 Bridge Cottage	30.9	30.9	50.2	-19.3	None
R11 Imber	27.9	27.9	50.7	-22.8	None
R12 Downsview	24.0	24.0	58.3	-34.3	None
R13 17 Nightingale Close	32.3	32.3	52.7	-20.4	None
R14 16 Nightingale Close	32.8	32.8	56.4	-23.6	None
R15 15 Nightingale Close	33.2	33.2	58.0	-24.8	None
R16 14 Nightingale Close	33.3	33.3	56.5	-23.2	None
R17 13 Nightingale Close	35.9	35.9	59.3	-23.4	None
R18 12 Nightingale Close	31.4	31.4	58.7	-27.3	None
R19 11 Nightingale Close	31.4	31.4	60.4	-29	None
R20 Kenistone	26.5	26.5	61.3	-34.8	None
R21 Caloundra	26.2	26.2	59.8	-33.6	None

Table 9.5.15 presents the predicted change in the baseline 2022 night-time noise levels when generators are operational. At all receptors the predicted change in 2022 baseline night-time ambient noise level is negligible.

Table 9.5.15: Change In Night-Time Ambient Noise Level – Generator Noise

Sensitive Receptor	Day Specific Generator Sound Level dB $L_{Aeq,15min}$	Predicted 2022 Ambient Noise Level dB $L_{Aeq,8h}$	Combined Noise Level dB $L_{Aeq,T}$	Change in Ambient	Magnitude
R1 Lagonda Lodge	27.7	58.9	58.9	0.0	Negligible
R2 St Mary's Church	Not Applicable				
R3 Court Lodge Farm	37.8	58.0	58.0	0.0	Negligible
R4 The Old Rectory	40.6	53.4	53.6	0.2	Negligible
R5 Sunnybank	41.9	50.4	51.0	0.6	Negligible
R6 Ashdown	37.4	49.6	49.9	0.3	Negligible
R7 The Paddocks	34.7	49.0	49.2	0.2	Negligible
R8 Orchard Cottage	34.3	50.4	50.5	0.1	Negligible
R9 Unknown Church Rd	34.7	51.7	51.8	0.1	Negligible
R10 Bridge Cottage	30.9	50.7	50.7	0.0	Negligible
R11 Imber	27.9	50.6	50.6	0.0	Negligible
R12 Downsview	24.0	56.8	56.8	0.0	Negligible
R13 17 Nightingale Close	32.3	52.2	52.2	0.0	Negligible
R14 16 Nightingale Close	32.8	55.9	55.9	0.0	Negligible
R15 15 Nightingale Close	33.2	57.5	57.5	0.0	Negligible
R16 14 Nightingale Close	33.3	56.0	56.0	0.0	Negligible
R17 13 Nightingale Close	35.9	58.8	58.8	0.0	Negligible
R18 12 Nightingale Close	31.4	58.2	58.2	0.0	Negligible
R19 11 Nightingale Close	31.4	58.2	58.2	0.0	Negligible
R20 Kenistone	26.5	59.9	59.9	0.0	Negligible
R21 Caloundra	26.2	59.8	59.8	0.0	Negligible

Table 9.5.16 presents the night-time BS4142 assessment for generator noise. Where the Specific Sound Level of generator noise at receptor location is 10dB or more below background zero rating penalty is added. Where generator noise is within 5 to 10dB of the derived background sound level +2dB rating penalty is added to take account of potential tonality of the sound source (low frequency noise) being just perceptible at receptor location. Where generator noise is within 5dB of the derived background sound level +4dB rating penalty is added to take account of potential to be clearly perceptible at receptor location. Due to separation distance and predicted SSL, and 2022 baseline ambient noise levels, generator noise is not anticipated to be highly perceptible at any of the receptor locations.

Table 9.5.16: Night-Time BS4142 – Generator Noise

Sensitive Receptor	Night Generator Specific Sound Level dB $L_{Aeq,15min}$	Night Rating Level dB $L_{Ar,Tr}$	Derived Background Sound Level dB LA90	Night Diff	Magnitude
R1 Lagonda Lodge	27.7	27.7	50.2	-22.5	None
R2 St Mary's Church	Not Applicable				
R3 Court Lodge Farm	37.8	41.8	40.4	1.4	Small
R4 The Old Rectory	40.6	42.6	46.5	-3.9	Negligible
R5 Sunnybank	41.9	45.9	43.4	2.5	Small
R6 Ashdown	37.4	39.4	42.6	-3.2	Negligible
R7 The Paddocks	34.7	36.7	42	-5.3	Negligible
R8 Orchard Cottage	34.3	36.3	43.5	-7.2	Negligible
R9 Unknown Church Rd	34.7	34.7	44.7	-10	None
R10 Bridge Cottage	30.9	30.9	43.5	-12.6	None
R11 Imber	27.9	27.9	43.4	-15.5	None
R12 Downsview	24.0	24.0	48.1	-24.1	None
R13 17 Nightingale Close	32.3	36.3	34.6	1.7	Small
R14 16 Nightingale Close	32.8	34.8	38.3	-3.5	Negligible
R15 15 Nightingale Close	33.2	35.2	39.9	-4.7	Negligible
R16 14 Nightingale Close	33.3	35.3	38.4	-3.1	Negligible
R17 13 Nightingale Close	35.9	37.9	41.2	-3.3	Negligible
R18 12 Nightingale Close	31.4	33.4	40.6	-7.2	Negligible
R19 11 Nightingale Close	31.4	33.4	40.6	-7.2	Negligible
R20 Kenistone	26.5	26.5	51.2	-24.7	None
R21 Caloundra	26.2	26.2	51.1	-24.9	None

When account is taken of prevailing ambient noise levels as well as background sound levels, at all locations except R5 Sunnybank, the effect of standby generator noise is predicted to be negligible. At R5 Sunnybank there is the potential for some minor adverse effects, although this is considered to be not significant given residents would be indoor and accounting for the overall predicted specific sound level in relation to prevailing ambient and background sound levels.

Appendix 9.6

Road Traffic Noise Assessment

Appendix 9.6: Road Traffic Noise Assessment

The magnitude of the Short-Term change in road traffic noise (year of assessment with and without Development 2026) are presented. The magnitude of change has been derived from advice contained within Design Manual for Road and Bridges (DMRB), LA 111 Noise and Vibration.

Table 9.6.1 presents the magnitude of change in road traffic noise based on a short-term assessment.

Table 9.6.1: Magnitude of Change in Road Traffic Noise

Change in Noise Level Short Term Assessment	Magnitude of Change
0.0 – 0.9	Low/Negligible
1.0 – 2.9	Small
3.0 – 4.9	Medium
≥5	Large

Both with and without Development traffic data.

Table 9.6.2: Operational Development Traffic Noise Assessment 2026 (Short-Term Assessment)

		Assessment of L_{A10} 18-hour Basic Noise Levels at 10m from Road									
Road		2026 Without Development			2026 With Development			% Flow Change			
		% HGV	Speed kph	Flow	% HGV	Speed kph	Flow		2026 Without	2026 With	Change
1	A292 Hythe Road SB (NW of M20 J10 RBT)	2.2	64	5452	2.2	64	5464	0.2	65.0	65.0	0.0
1	A292 Hythe Road NBB (NW of M20 J10 RBT)	6.5	42	14792	6.5	42	14917	0.8	68.6	68.6	0.0
2	A2070 Kennington Road SB (N of M20 J10)	3.9	20	9038	4.2	20	9065	0.3	65.5	65.7	0.2
2	A2070 Kennington Road NB (N of M20 J10)	2.3	82	6431	2.8	82	6437	0.1	68.5	68.6	0.1

		Assessment of L_{A10} 18-hour Basic Noise Levels at 10m from Road									
Road		2026 Without Development			2026 With Development			% Flow Change			
		% HGV	Speed kph	Flow	% HGV	Speed kph	Flow		2026 Without	2026 With	Change
3	A20 Exit from M20 J10 EB	4.1	64	7214	3.6	64	7217	0.0	66.7	66.6	-0.1
3	A20 Approach from M20 J10 WB	5.9	34	16180	5.0	34	16188	0.1	68.4	68.1	-0.3
4	A2070 Bad Munstereifel Road NB (between RBT south of M20 J10)	5.2	57	14768	6.2	57	14929	1.1	69.4	69.7	0.3
4	A2070 Bad Munstereifel Road SB (between RBT south of M20 J10)	8.1	51	12696	8.3	51	12753	0.4	69.0	69.1	0.1
5	A20 East of Tesco RBT EB	4.9	61	6001	5.0	61	6003	0.0	65.8	65.9	0.0
5	A20 East of Tesco RBT WB (proxy)	3.5	64	3945	3.6	64	3954	0.2	63.9	64.0	0.0
6	A2070 E of Sevington HGV EB (access jnc)	12.0	51	9819	21.7	49	10797	10.0	68.7	70.6	1.9
6	A2070 E of Sevington HGV WB (access jnc)	12.1	64	11695	19.7	64	12661	8.3	70.5	72.0	1.5
7	A2070 W of Sevington HGV WB (access jun)	12.1	59	11681	8.5	59	11870	1.6	70.0	69.4	-0.6
7	A2070 W of Sevington HGV EB (access jun) **[no data provided]**										
8	A2070 Bad Munstereifel Road (E of Barrey Rd Jnc) EB	6.8	54	20426	6.7	54	20446	0.1	71.0	70.9	0.0
8	A2070 Bad Munstereifel Road (SW of A2070 3-arm RBT) WB	6.1	54	13520	5.0	54	13604	0.6	69.0	68.7	-0.3
8	LT-slip at A2070 3-arm RBT (S of RBT from A2070E to A2070W)	7.7	57	7539	10.3	57	7615	1.0	67.1	67.7	0.6
9	A2070 Bad Munsterifel Road EB (E of junc/w Waterbrook Ave)	7.6	56	21287	8.0	56	21407	0.6	71.5	71.6	0.1