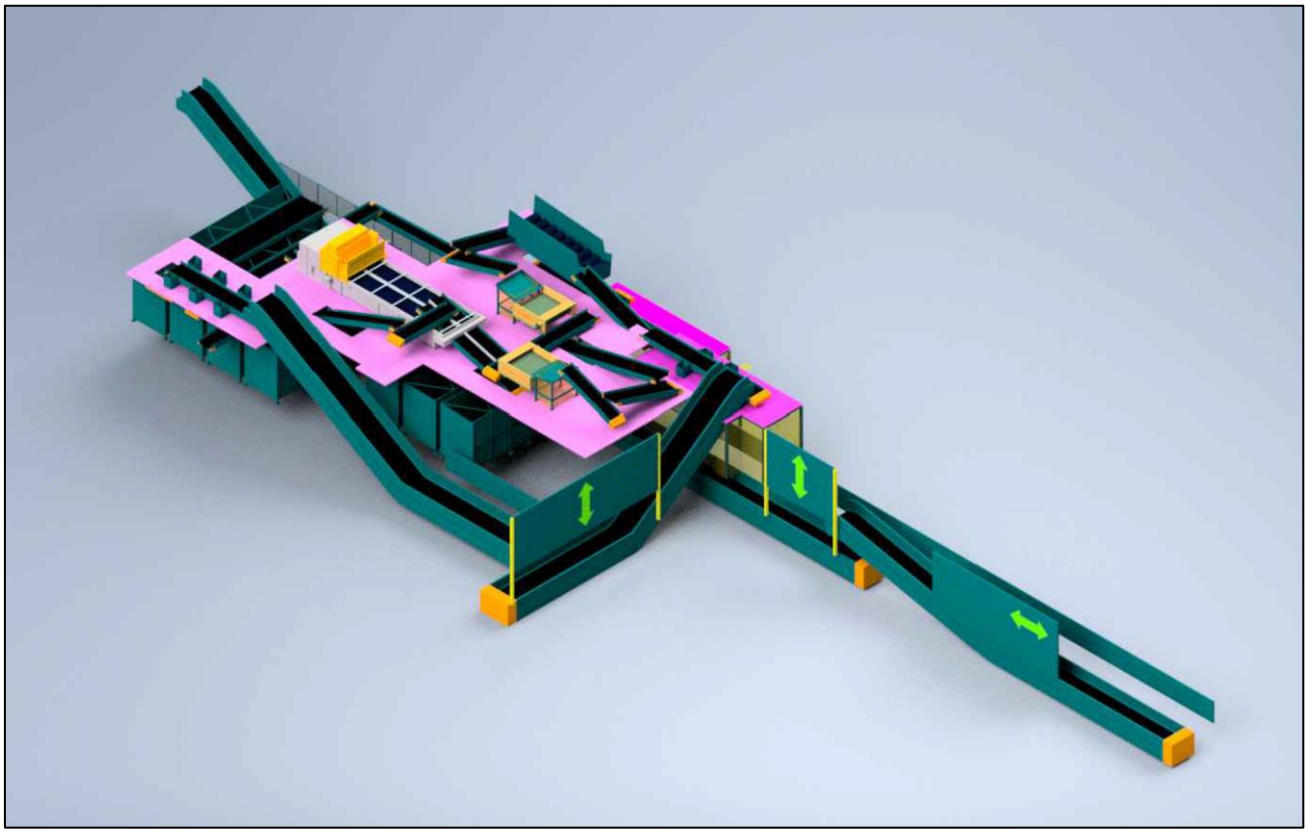
SUEZ Hallenbeagle Permit Application

Noise Assessment

784-B049984



SUEZ Recycling and Recovery UK

29 November 2023

Document prepared on behalf of Tetra Tech Group Limited. Registered in England number: 6595608

TETRA TECH

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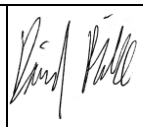
Revision:	0	**Prepared by:**	David Fink Environmental Consultant	
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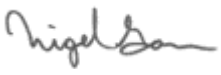
Status:	First Issue	**Approved By:**	Nigel Mann Environmental Consultant	
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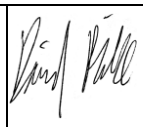
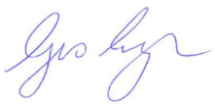
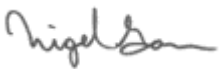
Revision:	1	**Prepared by:**	David Fink Environmental Consultant	
Date:	20/11/2023	**Checked by:**	Gus Egan Environmental Consultant	
Status:	First Issue	**Approved By:**	Nigel Mann Environmental Consultant	
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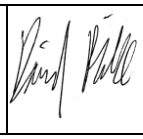
Revision:	2	**Prepared by:**	David Fink Environmental Consultant	

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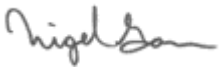
Status:	Second Issue	**Approved By:**	Nigel Mann Environmental Consultant	
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1.0 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

This report presents the finding of a noise assessment undertaken on behalf of Suez Recycling and Recovery UK, to support an Environment Agency Permit application for a new Refuse Transfer Station and Materials Recycling Facility at Plot 1 Cornwall Business Park East, Scorrier, TR16 5EN. The proposed site has obtained previous conditional planning approval PA22/08886.

On-site measurements of the site operations and baseline measurements at nearby sensitive receptors have been undertaken and supplemented using the 2022 Environmental Statement produced for planning purposes. Predictions of operational noise at existing receptors have been made using CadnaA noise modelling software, incorporating ISO 9613-2 methodology calculations.

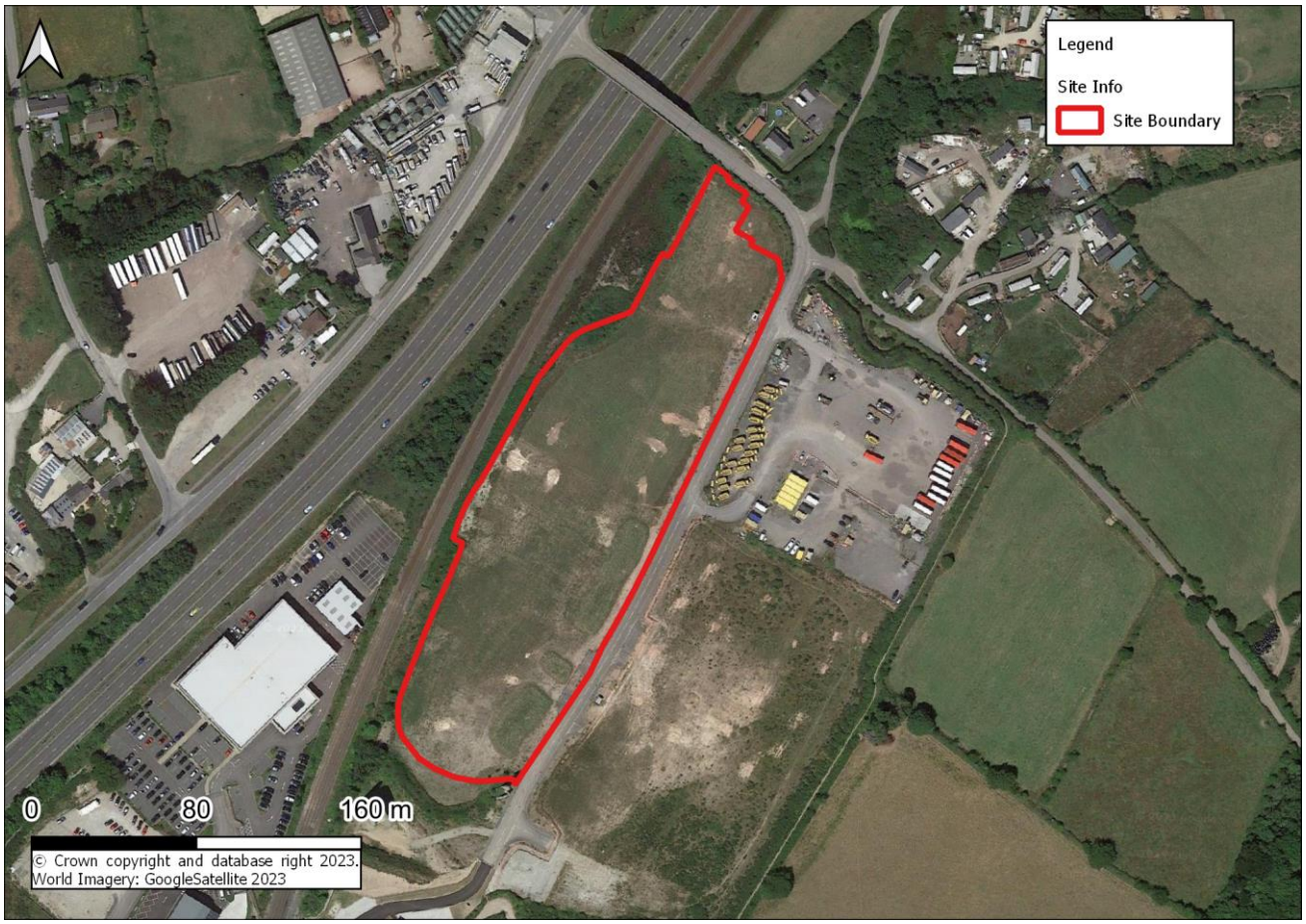
This assessment has been undertaken in accordance with the Noise and Vibration Management: Environmental Permits guidance, published by the Environment Agency in January 2022. This report is therefore suitable to accompany an application for an Environmental Permit to Environment Agency.

A list of acoustic terminology and abbreviations used in this report is provided in Appendix A and Report Conditions are presented in Appendix B.

1.2 SITE LOCATION

The site is located at Cornwall Business Park East, Scorrier and is predominantly surrounded by a mix of commercial and industrial units. The site is bordered to the west by the Cornish Main Line with the A30 Blackwater Bypass beyond. The nearest residential receptors are located on Sawmills Lane immediately to the north and north-east of the site. The approximate OS reference for the site is SW 72746 44762. The location of the site is illustrated on Figure 1.1 below.

Figure 1.1 Site Location



1.3 ACOUSTIC CONSULTANTS' QUALIFICATIONS AND PROFESSIONAL MEMBERSHIPS

The lead project Acoustic Consultant is David Fink. The report has been checked by Gus Egan and verified by Nigel Mann. Relevant qualifications, membership and experience are summarised in Table 1.1 below.

Table 1.1: Acoustic Consultants' Qualifications & Experience

Name	Education	Experience in Undertaking Noise Assessments (Start date of working in noise & acoustics)	Attained Associate Membership of the Institute of Acoustics (date)	Attained Membership of the Institute of Acoustics (date)
David Fink	BEng 2016	Mar 2017	Jul 2017	-
Gus Egan	BSc 2011 MSc 2016 PgDip 2019	Jun 2017	Feb 2021	~
Nigel Mann	BSc 1997 MSc 1999 PgDip 2001	Nov 1998	Nov 2001	Jul 2005

2.0 ASSESSMENT CRITERIA

2.1 OPERATIONAL NOISE – BS 4142:2014 ASSESSMENT CRITERIA

BS 4142:2014+A1:2019 '*Methods for Rating and Assessing Industrial and Commercial Sound*' establishes methodology for assessing the likely effects of sound of an industrial and/or commercial nature on people inside or outside a premises used for residential purposes. In particular, the standard states the following with regard to comparison of incident sound levels in comparison to representative background noise levels:

'a) Typically, the greater the difference, the greater the magnitude of the impact.

b) A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.

c) A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.

d) The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.'

In addition to noise levels the significance of the impact depends on the individuals affected and to the acoustic features present which may be assessed subjectively or objectively as appropriate. Section 9 of BS4142:2014 recommends that correction factors be applied to the specific noise level if the noise contains certain acoustic features such as:

- tonality;
- impulsivity;
- other sound characteristics which are readily distinctive; and
- intermittency.

2.2 NOISE AND VIBRATION MANAGEMENT: ENVIRONMENTAL PERMITS

Environmental permits have conditions that require operators to control pollution – this includes controlling noise and vibration.

The Environment Agency have produced a guidance to help holders and potential holders of permits to apply for, vary, and comply with their permits.

The guidance covers:

- how the environment agencies will assess noise from certain industrial processes
- what the law says you must do to manage noise and vibration
- advice on how to manage noise – in particular, how to carry out a noise impact assessment and what operators should include in a noise management plan.

Once the need for a Noise Impact Assessment has been identified the assessment process should follow these four steps:

- Desktop Risk Assessment
- Off-Site Monitoring Survey
- Source Assessment
- Best Available Techniques (BAT) or appropriate measures justification

The desktop risk assessment has already been undertaken and the need for further assessment of noise has been identified. Therefore, the contents of this report will highlight the work undertaken to address steps 2 to 4 required for the Noise Impact Assessment. This report has been structured with reference to the guidance contained herein.

Table 2.1 below considers the guidance of noise impact levels in relation to the document *Noise and Vibration Management: Environmental Permits* dated 31st January 2022. It provides the effect levels at sensitive receptors in relation to the closest corresponding BS 4142:2014+A1:2019 criteria for each defined level. A description of the level and the actions required dependant on the level is also included.

Table 2.1: Level of Noise Impact Criteria and Actions

Effect Level	Corresponding BS 4142 Criteria	Description / Actions
No noise, or barely audible or detectable noise	The closest Corresponding BS 4142 descriptor is 'low impact or no impact'	This level of noise means that no action is needed beyond basic appropriate measures or Best Available Techniques (BAT). Low impact does not mean there is no pollution. However, if correctly assessed as low impact under BS 4142, the environment agencies may decide that taking action to minimise noise is a low priority.
Audible or detectable noise	The closest corresponding BS 4142 descriptor is 'adverse impact' (following consideration of the context).	This level of noise means that noise pollution is being (or is likely to be) caused at a receptor. At this level there is a duty is to use appropriate measures to prevent or, where that is not practicable, minimise noise. You are not in breach if appropriate measures are used. There is a need to rigorously demonstrate that appropriate measures are being used.
Unacceptable level of audible or detectable noise	The closest corresponding BS 4142 descriptor is 'significant adverse impact' (following consideration of the context).	This level of noise means that significant pollution is being, or is likely to be, caused at a receptor (regardless of whether you are taking appropriate measures). You must take further action or you may have to reduce or stop operations. The environment agencies will not issue a permit if you are likely to be operating at this level.

3.0 ASSESSMENT METHODOLOGY

3.1 SITE OPERATING TIMES

Section 21 In the approved planning permission dated 19th April 2023 the Proposed Development would operate within the following hours:

- Materials Recycling Facility (MRF), Refuse Transfer Station (RTS) and Baler Building / Covered Bale Storage to operate between 07:00 and 21:00 hours Monday to Friday and between 07:00 and 13:00 hours to Saturday.
- Fleet of logistics vehicles (i.e. RCVs) arriving at site around 04:00 hours and exit from 04:15 hours Monday to Saturday.

It is predicted that no more than 18 movements will occur during the worst-case daytime hour, and no more than 11 movements will occur during the worst-case night-time 15-minute period.

3.2 NOISE MODELLING METHODOLOGY

Three-dimensional noise modelling has been undertaken based on the monitoring data to predict noise levels at a number of locations both horizontally and vertically. CADNA noise modelling software has been used. This model is based on ISO 9613-2 noise propagation methodology and allows for detailed prediction of noise levels to be undertaken for large numbers of receptor points and different noise emission scenarios both horizontally and vertically. The modelling software calculates noise levels based on the emission parameters and spatial settings that are entered. Input data and model settings as given in the table below have been used.

Table 3.1: Modelling Parameters Sources and Input Data

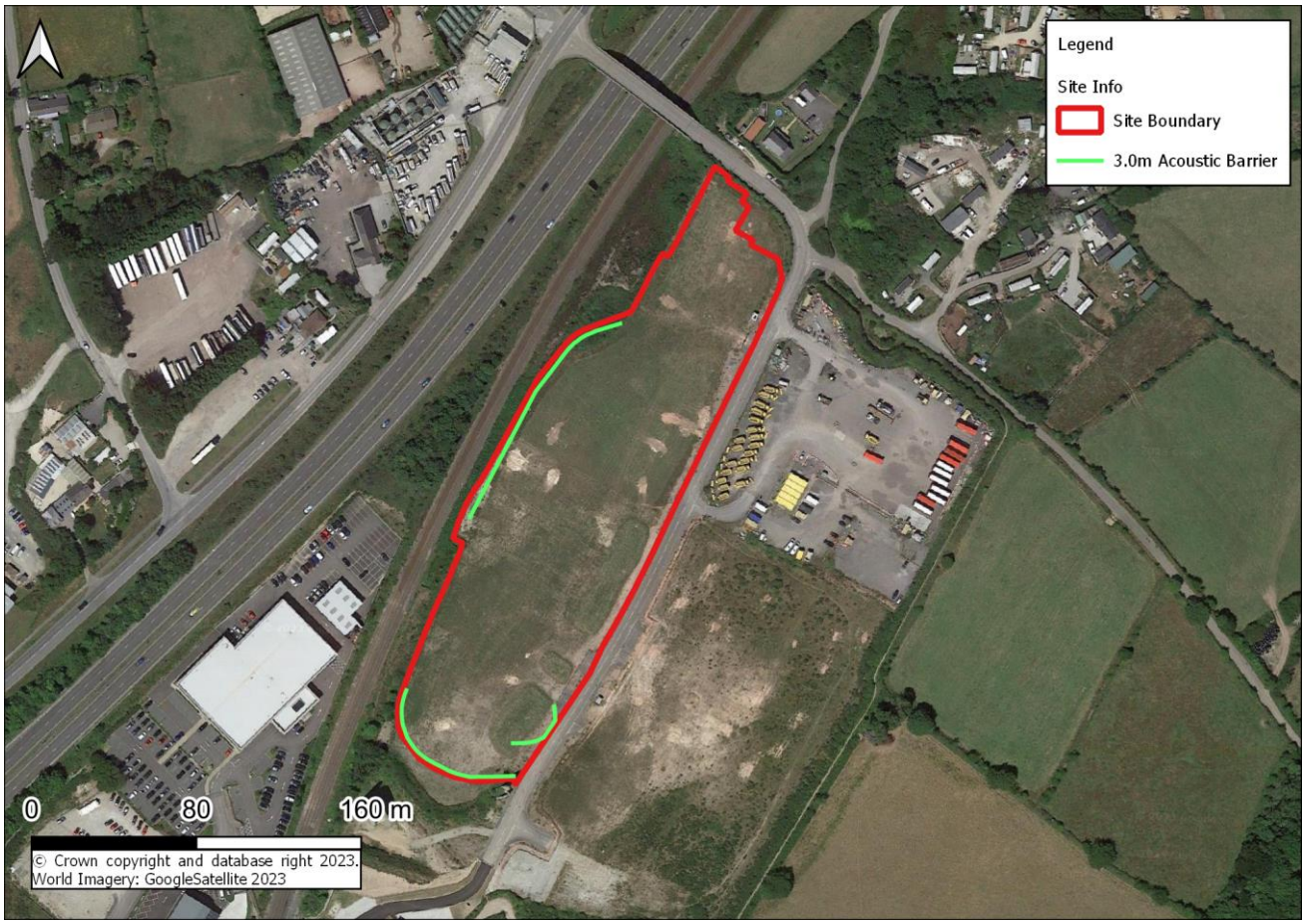
Parameter	Source	Details
Horizontal distances – around site	Ordnance Survey	Ordnance Survey
Ground levels – around site	Ordnance Survey	LIDAR 2m DTM
Building heights – around site	Tetra Tech Observations	8 m height for two storey residential properties, and 4 m for Bungalows.
Receptor positions	Tetra Tech	Free-field, height of 1.5 m for ground floor, 4 m for first floor properties.
Order of Reflections	Environment Agency	Number of Reflections Used: 3
Ground Absorption	Tt	Standard Ground Absorption (G=0.5) Roads, parking areas and all areas within Site Boundary are reflecting (G=0)
Proposed Plans	Clarkebond Engineering Consultants	Model Title: PROPOSED SITE LAYOUT HALLENBEAGLE Dated: Sep 2022

It is acknowledged that a number of the values of parameters chosen will affect the overall noise levels presented in this report. However, it should be noted that the values used, as identified above, are worst-case.

3.3 INTRINSIC MITIGATION

The site design contains intrinsic mitigation measures in the form of 3.0m high acoustic barriers along the western and southern site extents. The locations of the intrinsic barriers are presented within Figure 3.1. These barriers are to be of a solid construction with a minimum surface density of 20kg/m^3.

Figure 3.1 Acoustic Barrier Locations



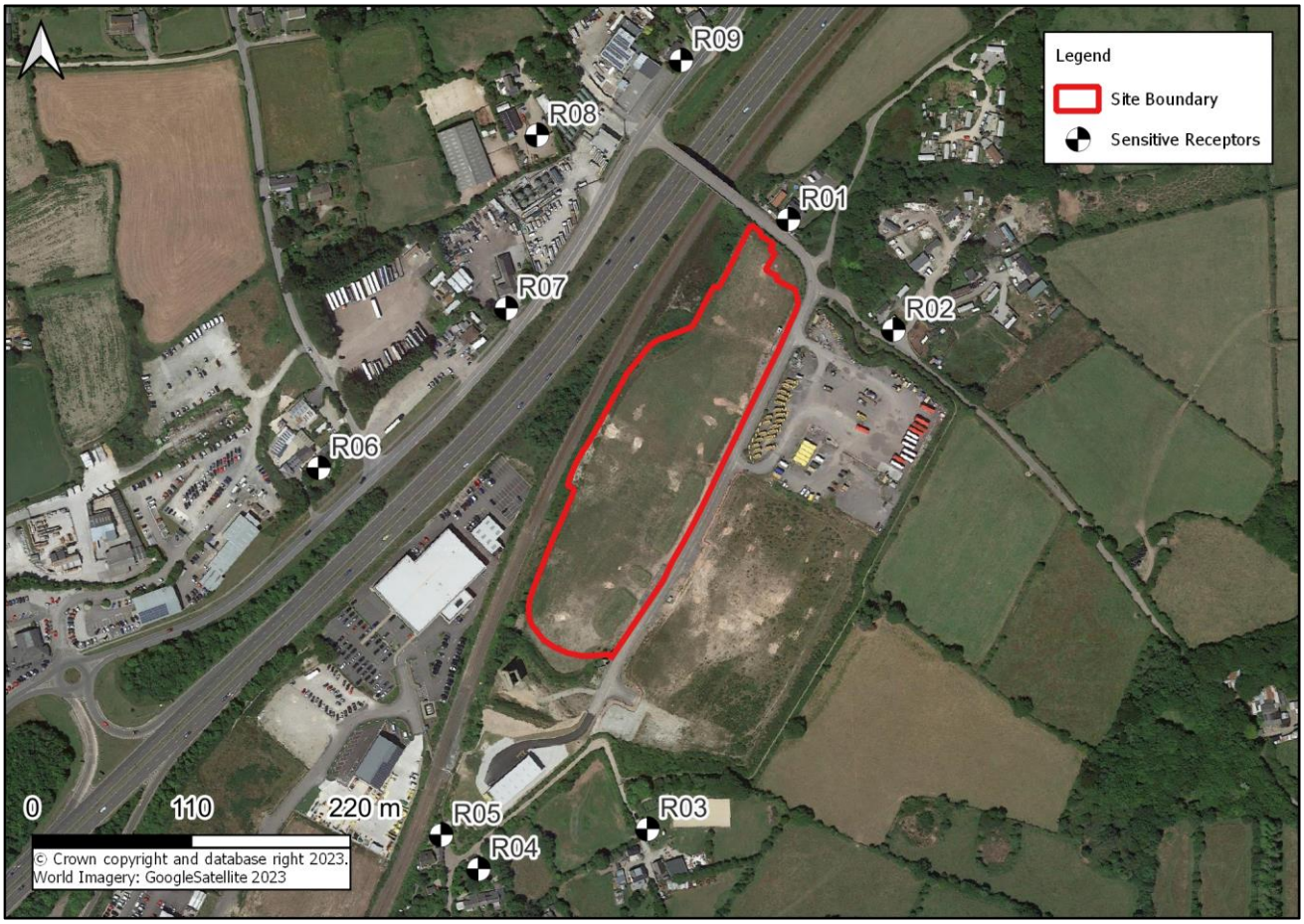
3.4 RECEPTOR LOCATIONS

Table 3.2 presents the receptor locations that have been selected to represent the residential properties that have potential to be impacted, due to their proximity to the subject site. The locations of the receptors are illustrated in Figure 3.2 below.

Table 3.2: Sensitive Receptor Locations

Ref.	Description	Distance from Redline Boundary (m)	Height of Receptor (m)	OS Coordinates
R01	Sawmills Cottage	<10	4.0	172803, 44945
R02	High Winds Travellers Site	58	1.5	172876, 44868
R03	Hallenbeagle Farm	114	4.0	172705, 44523
R04	3 Hallenbeagle Cottages	144	4.0	172588, 44495
R05	Railway Cottage	133	4.0	172563, 44519
R06	Token Cottage	174	4.0	172478, 44773
R07	The Bungalow	94	1.5	172595, 44867
R08	Pelerin House	141	4.0	172608, 44883
R09	Mill House	108	4.0	172629, 45003

Figure 3.2 Sensitive Receptor Locations



3.5 MODEL INPUT DATA

3.5.1 Proposed Waste Processor

Source data used to represent the proposed waste processing & baling equipment within this assessment was collected by Tetra Tech at an existing SUEZ site in Taunton, Somerset. The octave band spectrum data collected within the noise source survey are presented within Table 3.3.

Table 3.3: Waste Processor Noise Data

Equipment	Monitoring Distance (m)	Octave Band Sound Pressure Levels (Hz)								Sound Power Level (dB(A))
		63	125	250	500	1K	2K	4K	8K	
MRF equipment	N/A	68.0	72.5	76.2	76.5	77.4	74.4	71.2	66.0	97.9
Baler	3.0	69.7	66.6	74.8	75.5	75.6	72.3	68.4	60.0	92.0

All sound pressure levels in dBA re: 2x 10^{-5} Pa

3.5.2 Other Operational Noise Input Data

In addition to the measured data reproduced above, noise data for proposed HGV and Waste Management vehicles has been implemented within the model, based upon measurements obtained during noise source surveys at comparable refuse transfer stations. Noise levels included within the assessment model are summarized within Table 3.4 below.

Table 3.4: Summary of Operational Noise Input Data

Description	Measurement Distance (m)	Octave Band (Hz) Sound Pressure Level								Sound Power Level (dB(A))
		63	125	250	500	1k	2k	4k	8k	
Waste Shovel	5	84.2	87.4	81.2	77.4	82.1	82.9	79.4	74.0	108.4
Waste Truck Tipping	10	85.0	74.0	78.0	73.0	73.0	74.0	67.0	63.0	107.0
HGV Movements*	10	55.8	50.6	49.5	50.7	48.2	48.9	65.1	48.6	96.5

All sound pressure levels in dBA re: 2x 10^{-5} Pa
*Maximum movement level applied to Line (Moving Point) source to simulate HGV Movement along route.

3.5.3 Rating Penalties

To account for characteristics of the proposed noise sources that may be subjectively identifiable against the existing noise environment, rating penalties have been applied to sources within the noise model in accordance with methodology guidance presented within Section 9 of BS4142:2014+A1:2019. A summary of sources to which rating penalties have been applied and the corresponding magnitude of penalty is presented within Table 3.5.

Table 3.5: Summary of Rating Penalties

Source ID	Penalty Applied	Justification
HGV Loading/Unloading	+3dB	Penalty of 3dB applied to account for impulsivity just perceptible at the noise receptor.
Baler Storage Area	+3dB	Penalty of 3dB applied to account for impulsivity to account for internal shovelling of waste bales.
MRF and RTS Area	+3dB	Penalty of 3dB applied to account for impulsivity to account for internal shovelling of waste.

3.5.4 Noise Breakout from Internal Sources

To calculate breakout from internal sources within the Baler Room and MRF/RTS Room, sound reduction indices (SRIs) have been applied to vertical area and area sources surrounding the building facades and ceilings respectively. These indices are based upon manufacturer data for proposed elements and measurements on similar waste transfer sites and are predicted to be in state of good repair due to the new-build nature of the scheme. The Sound Reduction Indices have then been adjusted to equal overall Sound Reduction values as determined within the initial planning application for the site. As it is assumed that operations unloading bales from the Baler Room to HGVs will require doors to be open, no sound reduction has been applied to Baler room doors.

Table 3.6: Building Element Sound Reduction Indices

Building Element	Octave Band Sound Reduction Indices (Hz)								Sound Reduction (Rw)
	63	125	250	500	1K	2K	4K	8K	
Baler Room Walls & Roof	13.0	17.0	31.0	41.0	45.0	52.0	65.0	65.0*	40
MRF/RTS Walls & Roof (South & East Walls Only)	13.0	17.0	31.0	41.0	45.0	52.0	65.0	65.0*	40
MRF/RTS West Wall	16.0	17.0	20.0	24.0	27.0	23.0	40.0	40.0*	25
Steel Roller Shutter Door	1.0	4.0	7.0	7.0	8.0	12.0	15.0	15.0*	10

All sound pressure levels in dBA re: 2×10^{-5} Pa
*Sound Reduction at 8kHz not provided by manufacturer, assumption equivalent to 4kHz is considered to be worst-case.

4.0 NOISE SURVEY

For the purposes of this assessment, the noise monitoring survey undertaken to fulfil planning requirements has been used to determine representative background noise levels. The survey was undertaken by Noise & Vibration Consultants Ltd. from Saturday 19th of March to Monday 21st of March 2022. Details for the equipment used for the survey are reproduced below:

Cirrus CR:1710	Real-Time Analyser	s/n	G066350
Norsonic NOR-118	Real-Time Analyser	s/n	31992
Norsonic NOR-140	Real-Time Analyser	s/n	1405418
Cirrus 171A	Integrating Sound Level Meter	s/n	G061253
Cirrus CR:513A	Electronic Calibrator	s/n	031523

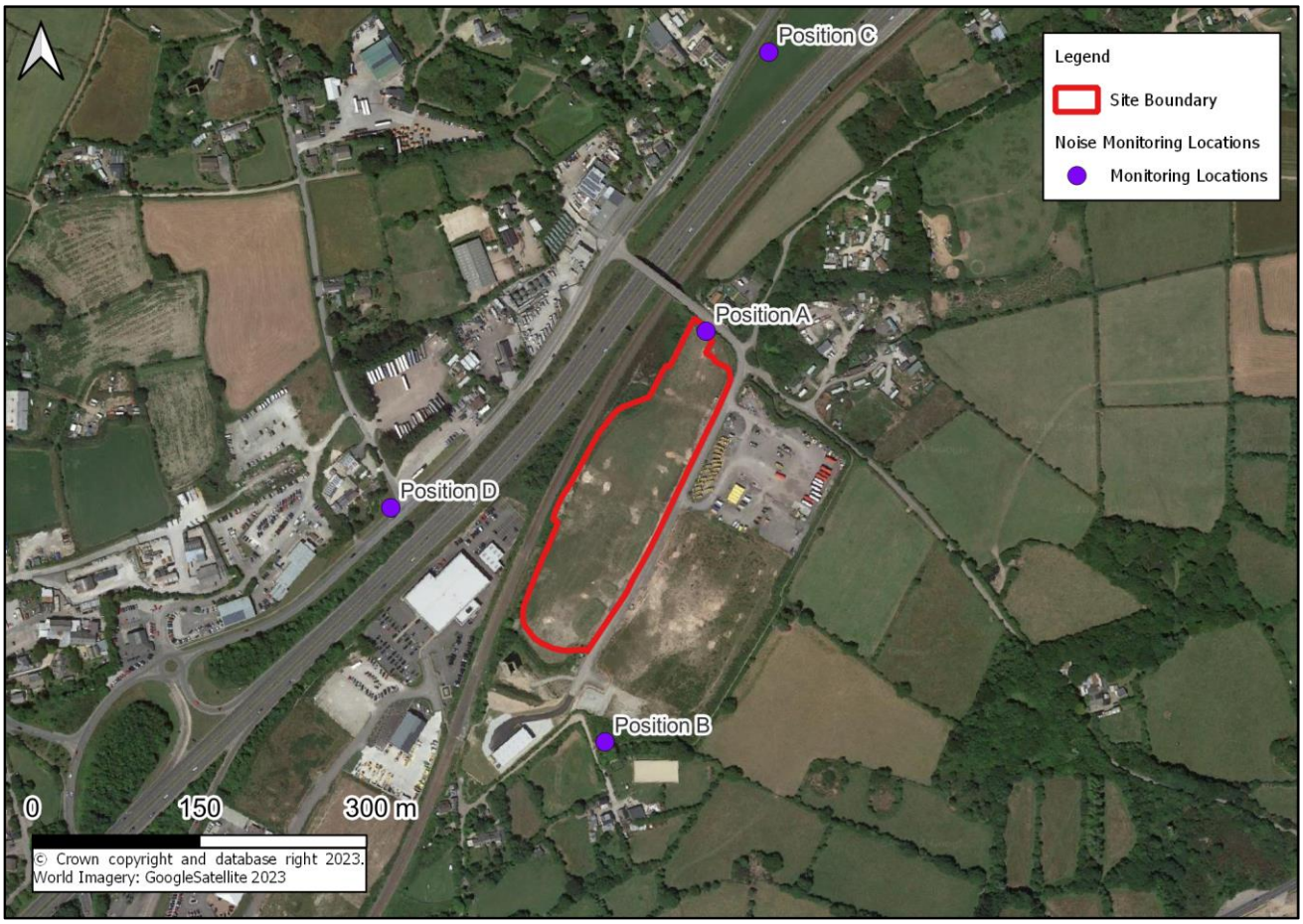
Full details of the equipment used (including relevant calibration checks), weather conditions, and survey methodology are available within the Environmental Statement chapter and relevant Appendices, reproduced within Appendix C.

The attended baseline monitoring survey was undertaken at four locations (as specified in Table 4.1 and shown in Figure 4.1 below) during day, evening and night-time periods representative of the proposed operational hours of the subject site.

Table 4.1 Noise Monitoring Locations

Ref	Description
Position A	North of Site, adjacent to Hallenbeagle Bridge Road
Position B	Southeast of Site, north of Hallenbeagle Farm
Position C	North of Site, off Blackwater Road
Position D	West of site, off Blackwater Road

Figure 4.1: Noise Monitoring Locations



4.1 NOISE SURVEY RESULTS

The dominant noise sources found in the area were generally dominated road traffic noise from the A30 Blackwater Bypass and intermittent train movements.

Ambient and background noise levels are usually described using the L_{Aeq} index (a form of energy average) and the L_{A90} index (i.e. the level exceeded for 90% of the measurement period) respectively. Road traffic noise is generally described using the L_{A10} index (i.e. the level exceeded for 10% of the measurement period). The presented $L_{Aeq,T}$ is the logarithmic average across the surveyed period, while the $L_{A10,T}$/$L_{A90,T}$ are arithmetic average noise levels respectively.

The results of the statistical and frequency measurements conducted during the baseline noise survey are summarised below in Table 4.2. All values are sound pressure levels in dB (re: 2 x 10^{-5} Pa).

Table 4.2: Results of Baseline Noise Monitoring Survey (Average Levels)

Location	Duration (T)	Monitoring Date and Times	Monitoring Period	$L_{Aeq,T}$ (dB)	$L_{Amax,T}$ (dB)	$L_{A10,T}$ (dB)	$L_{A90,T}$ (dB)
Position A	8 Hours	19/03/2022 15:00 – 23:00	Weekend Daytime	58.5	90.0	59.9	54.6
	8 Hours	19/03/2022 23:00 – 07:00	Weekend Night-Time	48.7	72.2	51.8	40.9
	8 Hours	20/03/2022 07:00 – 15:00	Weekend Daytime	57.8	87.8	58.8	53.8
	8 Hours	20/03/2022 15:00 – 23:00	Weekend Daytime	56.6	90.3	58.0	52.5
	8 Hours	20/03/2022 23:00 – 07:00	Weekend Night-Time	49.8	75.6	51.9	44.9
	8 Hours	21/03/2022 07:00 – 15:00	Weekday Daytime	58.6	88.6	58.7	53.9
	3.5 Hours	21/03/2022 15:00 – 18:30	Weekday Daytime	59.6	90.9	59.8	54.7
Position B	7 Hours	19/03/2022 16:00 – 23:00	Weekend Daytime	51.5	52.5	52.5	47.9
	8 Hours	19/03/2022 23:00 – 07:00	Weekend Night-Time	46.1	83.6	46.2	38.4
	8 Hours	20/03/2022 07:00 – 15:00	Weekend Daytime	49.7	76.3	50.9	46.1
	8 Hours	20/03/2022 15:00 – 23:00	Weekend Daytime	49.3	83.0	49.9	44.7
	8 Hours	20/03/2022 23:00 – 07:00	Weekend Night-Time	43.7	68.9	46.3	38.7
	8 Hours	21/03/2022 07:00 – 15:00	Weekday Daytime	50.9	84.0	51.0	46.7
	3.25 Hours	21/03/2022 15:00 – 18:30	Weekday Daytime	52.5	89.7	52.2	47.4
Position C	4.25 Hours	19/03/2022 18:30 – 22:45	Weekend Daytime	44.8	82.3	46.8	41.8
	8 Hours	19/03/2022 23:00 – 07:00	Weekend Night-Time	58.9	84.2	61.6	44.9
	8 Hours	20/03/2022 07:00 – 15:00	Weekend Daytime	69.8	95.5	72.0	62.2
	8 Hours	20/03/2022 15:00 – 23:00	Weekend Daytime	69.0	93.1	71.3	61.9
	8 Hours	20/03/2022 23:00 – 07:00	Weekend Night-Time	60.7	86.9	62.9	52.1
	8 Hours	21/03/2022 07:00 – 15:00	Weekday Daytime	70.4	91.1	73.8	63.4
	3.75 Hours	21/03/2022 15:00 – 18:45	Weekday Daytime	70.2	73.6	63.5	86.7

Location	Duration (T)	Monitoring Date and Times	Monitoring Period	$L_{Aeq,T}$ (dB)	$L_{Amax,T}$ (dB)	$L_{A10,T}$ (dB)	$L_{A90,T}$ (dB)
Position D	1 Hour	20/03/2022 09:45 – 10:45	Weekend Daytime	65.3	80.4	67.6	60.7
	1 Hour	20/03/2022 12:45 – 13:45	Weekend Daytime	64.0	93.4	65.9	60.4
	1 Hour	20/03/2022 20:15 – 21:15	Weekend Daytime	62.7	76.8	65.3	56.1
	1 Hour	20/03/2022 23:15 – 00:15	Weekend Night-time	54.4	82.2	56.0	35.8
	1 Hour	20/03/2022 16:00 – 17:00	Weekend Daytime	56.8	76.8	58.2	55.5
All values are sound pressure levels in dB re: 2x 10^{-5} Pa							

4.2 REPRESENTATIVE BACKGROUND LEVELS

Using the data collected during the baseline survey, representative background noise levels have been derived for all receptor locations presented in Figure 4.1. Table 4.3 presents the representative background noise levels considered appropriate for the existing sensitive receptors within the area. Background noise levels have been identified using a modal analysis of representative operational hours. Full details of the 15-minute background noise levels are provided within the Environmental Statement chapter and relevant Appendices, reproduced within Appendix C.

Table 4.3: Representative Background Noise Levels (All Receptors)

Receptors	Monitoring Location	Time Period	Representative Background Noise Level ($L_{A90,T}$ dB)
R01, R02	Position A	Daytime (07:00 – 23:00)	55.0
		Night-time (04:00 – 07:00)	49.0
R03, R04, R05	Position B	Daytime (07:00 – 23:00)	47.0
		Night-time (23:00 – 07:00)	42.0
R06, R07, R08, R09	Position C	Daytime (07:00 – 23:00)	64.0
		Night-time (23:00 – 07:00)	56.0

The representative noise levels presented in Table 4.3 have been used to inform the assessment presented in Section 5.0.

5.0 ASSESSMENT OF EFFECTS

5.1 OPERATIONAL NOISE ASSESSMENT

This assessment compares the predicted noise levels from the proposed SUEZ site with the measured existing average daytime and night-time background noise levels (L_{A90}) at the closest existing residential receptors.

Table 5.1 presents the differences between the background noise level and noise Rating Level associated with the daytime and night-time (04:00-07:00) operation for the proposed site inclusive of the new noise sources.

Noise Rating corrections have been applied to specific operations as per Section 3.4.3 and have therefore not been applied to predicted specific sound levels.

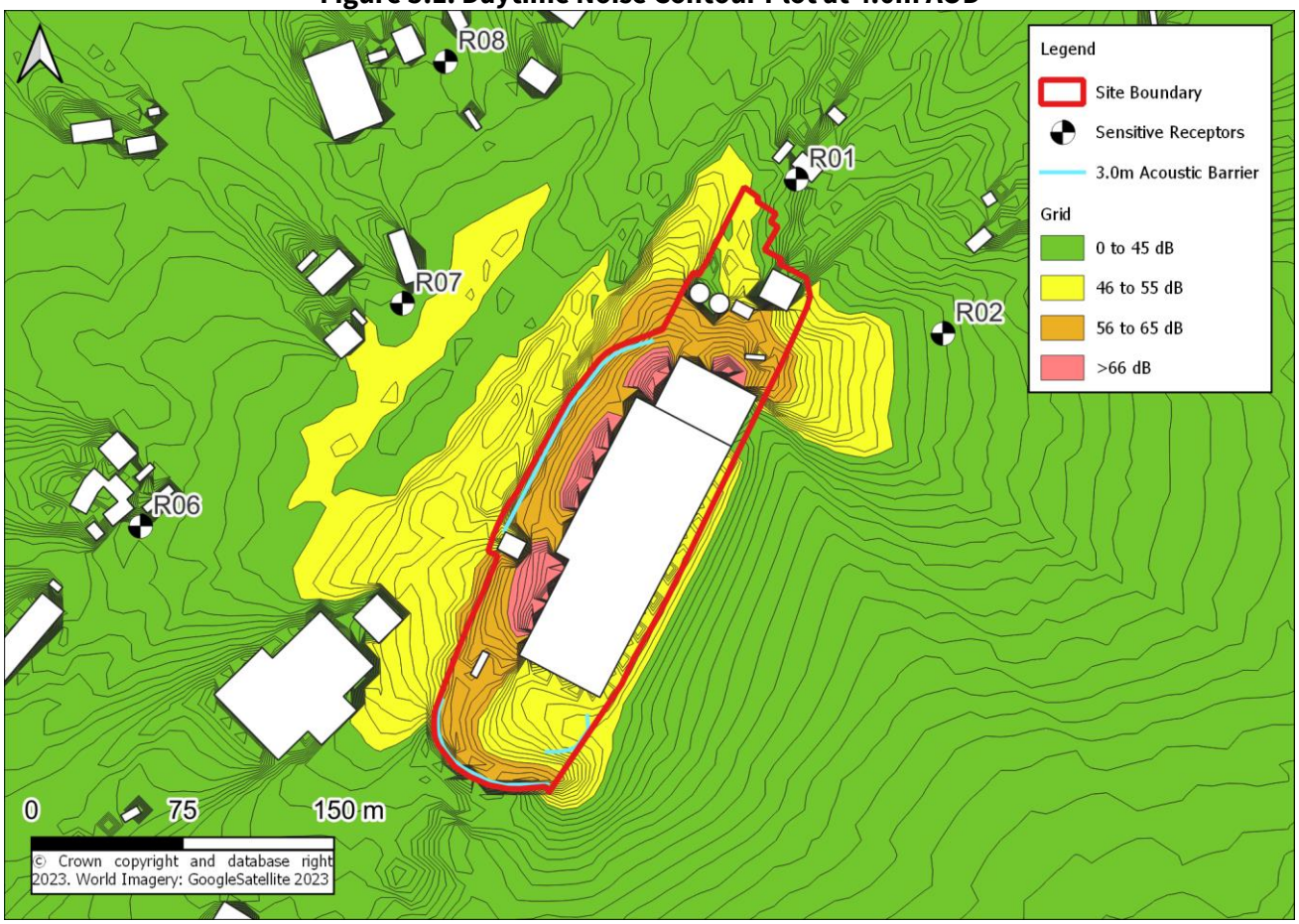
Table 5.1: Proposed Operational Noise Assessment

Ref	Representative Background L_{A90} dB		Noise Rating Level ($L_{A,Tr}$) dB		Difference between Background and Rating Level dB	
	Daytime	Night-Time	Daytime	Night-Time	Daytime	Night-Time
R01	55	49	42	44	-13	-5
R02	55	49	39	41	-16	-8
R03	47	42	32	34	-15	-8
R04	47	42	27	28	-20	-14
R05	47	42	38	38	-9	-4
R06	64	56	42	43	-22	-14
R07	64	56	45	46	-19	-10
R08	64	56	42	43	-22	-13
R09	64	56	41	41	-23	-15

All values are sound pressure levels in dBA re: 2x 10^{-5} Pa. All calculations used to derive the above table (including averaging of background noise levels and predicted source noise levels) have been undertaken to 1 decimal place to avoid perpetuation of rounding errors. However, in accordance with BS4142 para 8.6 the levels are expressed as integers (with 0.5 dB being rounded up). This may mean that the arithmetic's in the above table may appear to be up to 1 dB incorrect due to this rounding.

As presented within Table 5.1, proposed noise rating levels are predicted to be no greater than 4dB below existing background noise levels. With reference to the operational noise criteria described in Section 2.2 of this report, a *Rating Level* of equal to background or below is an indication of a Low Impact in relation to BS 4142. This would equate to a no noise, or barely audible or detectable noise level with regards to the level of noise impact descriptors taken from Table 2.1 and that no further mitigation measures are required beyond measures incorporated within the design, basic appropriate measures and/or Best Available Techniques (BAT). Daytime noise levels are presented illustratively within Figure 5.1 overleaf.

Figure 5.1: Daytime Noise Contour Plot at 4.0m AOD



5.2 STATEMENT OF UNCERTAINTY

Despite sound measurement systems precision of 0.1dB, all measurements of environmental sound or specific components identified within this report are subject to uncertainty. All noise measurements include elements of intrinsic uncertainty in the measured value, the magnitude and significance of which usually depends upon many factors. The most obvious factor for measurements undertaken for this assessment is due to instrumentation, but this is minimised by a range of controls set out in Craven & Kerry's *'A Good Practice Guide on the Sources and Magnitude of Uncertainty Arising in the Practical Measurement of Environmental Noise'* (as referenced in BS4142: 2014) including:

- Use of Type 1 sound level analysers
- Bi-annual calibration of sound level analysers and annual calibration of calibrators
- Periodic cross-calibration with other calibrated analysers and monitoring of system's calibration characteristics
- On site calibration checks before and after measurements are taken
- Avoidance and control of interference due to electromagnetic sources, weather or other factors.

BS 4142 rating penalties include corrections for sound that is tonal, impulsive, intermittent, or has other characteristics that will tend to attract a listener's attention. The significance of these characteristics has been assessed by comparison of the specific and residual sound at the noise sensitive location(s). It is considered that any uncertainty within the subjective assessment of noise character has been suitably mitigated within this assessment by the use of suitably qualified surveyors and assessors.

6.0 CONCLUSIONS

This report presents the finding of a noise assessment undertaken on behalf of SUEZ in relation to obtaining an environmental permit at the Proposed Refuse Transfer Station and Materials Recycling Facility at Plot 1 Cornwall Business Park East, Scorrier, TR16 5EN. The site will be a waste sorting plant with activities occurring such as processing and baling of household waste. The assessment is focussed on both day and night-time operations in comparison to measured existing background noise levels.

Baseline measurements were undertaken at locations representative of nearby sensitive receptors to measure existing background noise levels. These background levels were used throughout the assessments to represent sound levels in the local area.

The assessments consider noise from the machinery and processes dealing with the waste, as well as the HGV's arriving, unloading and departing the site. Noise level rating corrections have been applied due to the nature of the activities on the site e.g., movement and unloading of waste.

Proposed daytime predicted Rating Level from the site operations is considered to be no greater than 9 dB below background noise levels at the receptors, which is an indication of Low Impact in relation to the BS4142 criteria. This low impact is in accordance with what the Environmental Agency consider a 'no noise or barely audible or detectable noise level' as it is the closest corresponding BS 4142 criteria and no further mitigation measures are required beyond basic appropriate measures or BAT.

Proposed night-time predicted Rating Level from the site operations is considered to be no greater than 4 dB below background noise levels at the receptors which is also an indication of a Low Impact in relation to the BS4142 criteria. This low impact would be considered a 'no noise or barely audible or detectable noise level 'as it is the closest corresponding BS 4142 criteria. Therefore, no further mitigation measures would be required beyond basic appropriate measures or BAT.

APPENDICES

APPENDIX A – ACOUSTIC TERMINOLOGY AND ABBREVIATIONS

Acoustic Terminology

dB — Sound levels from any source can be measured in frequency bands in order to provide detailed information about the spectral content of the noise, i.e. whether it is high-pitched, low-pitched, or with no distinct tonal character. These measurements are usually undertaken in octave or third octave frequency bands. If these values are summed logarithmically, a single dB figure is obtained. This is usually not very helpful as it simply describes the total amount of acoustic energy measured and does not take any account of the ear's ability to hear certain frequencies more readily than others.

dB(A) — Instead, the dBA figure is used, as this is found to relate better to the loudness of the sound heard. The dBA figure is obtained by subtracting an appropriate correction, which represents the variation in the ear's ability to hear different frequencies, from the individual octave or third octave band values, before summing them logarithmically. As a result the single dBA value provides a good representation of how loud a sound is.

L_{Aeq} — Since almost all sounds vary or fluctuate with time it is helpful, instead of having an instantaneous value to describe the noise event, to have an average of the total acoustic energy experienced over its duration. The $L_{Aeq,\ 07:00\ -\ 23:00}$ for example, describes the equivalent continuous noise level over the 16-hour period between 7 am and 11 pm. During this time period the L_{pA} at any particular time is likely to have been either greater or lower that the $L_{Aeq,\ 07:00\ -\ 23:00}$.

L_{Amin} — The L_{Amin} is the quietest instantaneous noise level. This is usually the quietest 125 milliseconds measured during any given period of time.

L_{Amax} — The L_{Amax} is the loudest instantaneous noise level. This is usually the loudest 125 milliseconds measured during any given period of time.

L_n — Another method of describing, with a single value, a noise level which varies over a given time period is, instead of considering the average amount of acoustic energy, to consider the length of time for which a particular noise level is exceeded. If a level of x dBA is exceeded for say. 6 minutes within one hour, then that level can be described as being exceeded for 10% of the total measurement period. This is denoted as the $L_{A10,\ 1\ hr}$ = x dB.

The L_{A10} index is often used in the description of road traffic noise, whilst the L_{A90}, the noise level exceeded for 90% of the measurement period, is the usual descriptor for underlying background noise. L_{A1} and L_{Amax} are common descriptors of construction noise.

R_w — The *weighted sound reduction index* determined using the above *measurement* procedure, but weighted in accordance with the procedures set down in BS EN ISO 717-1. Partitioning and building board manufacturers commonly use this index to describe the inherent sound insulation performance of their products.

Abbreviations

CADNA – Computer Aided Noise Abatement

DMRB – Design Manual for Roads and Bridges

HGV – Heavy Goods Vehicle

PPG – Planning Practice Guidance

UDP – Unitary Development Plan

UKAS – United Kingdom Accreditation Service

APPENDIX B – REPORT CONDITIONS

This Report has been prepared using reasonable skill and care for the sole benefit of SUEZ Recycling and Recovery UK ("the Client") for the proposed uses stated in the report by [Tetra Tech Limited] ("Tetra Tech"). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder's permission.

No liability is accepted, or warranty given for; unconfirmed data, third party documents and information supplied to Tetra Tech or for the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report. Tetra Tech does not purport to provide specialist legal, tax or accounting advice.

The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary, and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The "shelf life" of the Report will be determined by a number of factors including; its original purpose, the Client's instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

APPENDIX C – EXISTING BASELINE NOISE SURVEY

APPENDIX 9-2

NOISE INSTRUMENTATION & SURVEY DETAILS

Instrumentation

Manufacturer	*Description*	*Type*	*Calibration Due date*	*Serial No.*
Cirrus	Real time analyser	CR:1710	April 2022	G066350
Norsonic	Real time analyser	118	July 2022	31992
Norsonic	Real time analyser	140	February 2023	1405418
Cirrus	Integrating Sound Level Meter	171A	June 2022	G061253
Cirrus	Electronic Calibrator	CR: 513A	April 2022	031523

The noise meters used during the survey are precision grade type 1 meters to IEC 651 standard and accuracy.

Calibration Setting: 94dB

Meter Setting: Fast Response

Fieldwork Details:

Date of tests: Saturday 19th to Monday 21st March 2022

Monitoring Period: 15 contiguous minutes over a period of approximately 52 hours.

Calibration: Before and after: 94dB

Noise meters were mounted in a weatherproof box with extension lead to microphone mounted on a tripod fixed to a height of approximately 1.5m above ground level and fitted with a wind shield.

Instruments were calibrated before and after monitoring to calibration level of 94dB.

No drift in calibration was recorded.

Meteorological Conditions

Weather conditions were recorded during the baseline survey are detailed below using a Davis Vantage Vue weather station (DAV 6250).

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
19/03/2022	15:00	10.2	0	NE	774.4	0
19/03/2022	15:15	10.1	0	NE	774.5	0
19/03/2022	15:30	10	0	NE	774.4	0
19/03/2022	15:45	9.9	2.2	NE	774.4	0
19/03/2022	16:00	9.8	2.2	E	774.4	0
19/03/2022	16:15	9.4	2.2	ENE	774.1	0
19/03/2022	16:30	9.3	2.2	ENE	774.1	0
19/03/2022	16:45	9.3	2.2	E	774.2	0
19/03/2022	17:00	9.2	2.2	ENE	774.1	0
19/03/2022	17:15	9.1	2.2	E	774.2	0
19/03/2022	17:30	9.1	1.8	ENE	774.4	0
19/03/2022	17:45	8.9	1.8	ENE	774.4	0
19/03/2022	18:00	8.9	1.8	E	774.4	0
19/03/2022	18:15	8.9	1.8	ENE	774.4	0
19/03/2022	18:30	8.8	1.3	ENE	774.6	0
19/03/2022	18:45	8.7	1.3	ENE	774.5	0
19/03/2022	19:00	8.7	1.3	ENE	774.6	0
19/03/2022	19:15	8.5	0.9	ENE	774.7	0
19/03/2022	19:30	8.6	1.3	ENE	774.9	0
19/03/2022	19:45	8.6	1.3	ENE	774.9	0
19/03/2022	20:00	8.6	1.3	ENE	774.7	0
19/03/2022	20:15	8.7	1.3	ENE	774.8	0
19/03/2022	20:30	8.7	0.9	ENE	774.6	0
19/03/2022	20:45	8.8	0.9	ENE	774.6	0
19/03/2022	21:00	8.8	0.9	NE	774.6	0
19/03/2022	21:15	8.9	0.9	ENE	774.5	0
19/03/2022	21:30	8.9	0.9	ENE	774.5	0
19/03/2022	21:45	9.2	1.3	ENE	774.4	0
19/03/2022	22:00	9.3	1.3	ENE	774.3	0
19/03/2022	22:15	9.4	1.3	ENE	774.3	0
19/03/2022	22:30	9.5	1.3	E	774.2	0
19/03/2022	22:45	9.5	1.3	ENE	774.1	0
19/03/2022	23:00	9.5	1.3	ENE	774	0
19/03/2022	23:15	9.4	0.9	ENE	774	0
19/03/2022	23:30	9.3	1.3	ENE	773.9	0
19/03/2022	23:45	9.2	1.3	ENE	773.8	0
20/03/2022	00:00	9.2	1.8	ENE	773.7	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
20/03/2022	00:15	8.9	1.3	ENE	773.7	0
20/03/2022	00:30	8.8	1.3	E	773.6	0
20/03/2022	00:45	8.7	1.3	ENE	773.6	0
20/03/2022	01:00	8.6	0.9	ENE	773.5	0
20/03/2022	01:15	8.4	0.9	ENE	773.3	0
20/03/2022	01:30	8.4	1.3	ENE	773.3	0
20/03/2022	01:45	8.3	1.3	ENE	773	0
20/03/2022	02:00	8.2	1.3	ENE	772.9	0
20/03/2022	02:15	8.2	1.3	ENE	772.8	0
20/03/2022	02:30	8.2	1.3	E	772.8	0
20/03/2022	02:45	8.1	1.3	ENE	772.7	0
20/03/2022	03:00	8.1	0.9	ENE	772.7	0
20/03/2022	03:15	8.1	0.9	ENE	772.6	0
20/03/2022	03:30	8	0.9	ENE	772.5	0
20/03/2022	03:45	8	0.9	ENE	772.3	0
20/03/2022	04:00	7.9	0.9	ENE	772.3	0
20/03/2022	04:15	7.9	0.9	ENE	772.2	0
20/03/2022	04:30	7.8	0.9	ENE	772.3	0
20/03/2022	04:45	7.8	0.9	ENE	772.3	0
20/03/2022	05:00	7.7	0.9	ENE	772.3	0
20/03/2022	05:15	7.6	0.9	ENE	772.2	0
20/03/2022	05:30	7.6	0.9	E	772.1	0
20/03/2022	05:45	7.6	0.9	NE	772.1	0
20/03/2022	06:00	7.6	0.9	ENE	772.2	0
20/03/2022	06:15	7.4	0.9	ENE	772.2	0
20/03/2022	06:30	7.4	0.9	ENE	772.2	0
20/03/2022	06:45	7.4	0.9	ENE	772.3	0
20/03/2022	07:00	7.4	0.9	ENE	772.3	0
20/03/2022	07:15	7.6	0.9	ENE	772.3	0
20/03/2022	07:30	7.9	0.9	ENE	772.3	0
20/03/2022	07:45	8.1	0.9	E	772.3	0
20/03/2022	08:00	8.2	0.9	ENE	772.3	0
20/03/2022	08:15	8.5	0.9	ENE	772.4	0
20/03/2022	08:30	8.9	0.9	ENE	772.3	0
20/03/2022	08:45	9.1	1.3	ENE	772.4	0
20/03/2022	09:00	9.3	1.3	ENE	772.5	0
20/03/2022	09:15	9.8	1.3	ENE	772.5	0
20/03/2022	09:30	10.1	1.3	E	772.3	0
20/03/2022	09:45	10.5	1.3	ENE	772.3	0
20/03/2022	10:00	10.8	1.3	ENE	772.2	0
20/03/2022	10:15	11.2	1.8	E	772.2	0
20/03/2022	10:30	11.4	1.8	ENE	772.2	0
20/03/2022	10:45	11.7	1.8	E	772.2	0
20/03/2022	11:00	11.9	1.8	ENE	772.1	0
20/03/2022	11:15	11.9	1.8	ENE	772	0
20/03/2022	11:30	12.3	1.8	ENE	772.1	0
20/03/2022	11:45	11.9	1.8	E	772	0
20/03/2022	12:00	12.5	1.3	ENE	772.1	0
20/03/2022	12:15	12	1.3	ENE	772.1	0
20/03/2022	12:30	12.7	0.9	ENE	771.9	0
20/03/2022	12:45	12.8	1.3	ENE	772	0
20/03/2022	13:00	12.7	1.8	ENE	772.1	0
20/03/2022	13:15	13.1	1.3	ENE	772	0
20/03/2022	13:30	13.6	1.3	ENE	772	0
20/03/2022	13:45	13	1.8	ENE	771.9	0
20/03/2022	14:00	12.2	1.3	ENE	772	0
20/03/2022	14:15	12.1	1.8	ENE	772.1	0
20/03/2022	14:30	12.4	1.3	E	772	0
20/03/2022	14:45	12.1	1.3	E	772.1	0
20/03/2022	15:00	11.5	1.3	ENE	772	0
20/03/2022	15:15	10.8	1.8	ENE	772	0
20/03/2022	15:30	10.4	1.8	ENE	771.9	0
20/03/2022	15:45	10.2	1.8	E	771.9	0
20/03/2022	16:00	10.2	1.3	ENE	771.9	0
20/03/2022	16:15	10	1.8	ENE	771.8	0
20/03/2022	16:30	9.7	1.3	ENE	771.9	0
20/03/2022	16:45	9.4	1.3	ENE	771.9	0
20/03/2022	17:00	9.1	1.3	ENE	772	0
20/03/2022	17:15	8.8	1.3	ENE	772	0
20/03/2022	17:30	8.7	1.3	ENE	771.9	0
20/03/2022	17:45	8.7	1.3	ENE	771.9	0
20/03/2022	18:00	8.5	1.3	ENE	771.9	0
20/03/2022	18:15	8.3	0.9	ENE	771.8	0
20/03/2022	18:30	8.2	1.3	ENE	771.9	0
20/03/2022	18:45	8.1	0.9	E	771.9	0
20/03/2022	19:00	8.1	1.3	ENE	772	0
20/03/2022	19:15	7.9	1.3	ENE	772.1	0
20/03/2022	19:30	7.8	0.9	ENE	772	0
20/03/2022	19:45	7.8	0.9	ENE	771.9	0
20/03/2022	20:00	7.8	0.9	ENE	772	0
20/03/2022	20:15	7.8	0.9	ENE	772.1	0
20/03/2022	20:30	7.9	0.9	ENE	772.1	0
20/03/2022	20:45	7.9	0.9	ENE	772.1	0
20/03/2022	21:00	7.9	0.9	ENE	772.1	0
20/03/2022	21:15	7.9	0.9	ENE	772.2	0
20/03/2022	21:30	8	0.9	E	772.3	0
20/03/2022	21:45	8	0.9	E	772.2	0
20/03/2022	22:00	8	0.9	ENE	772.2	0
20/03/2022	22:15	8	0.9	ENE	772.1	0
20/03/2022	22:30	7.9	0.9	ENE	772.2	0
20/03/2022	22:45	8	0.9	ENE	772.3	0
20/03/2022	23:00	8.1	0.9	ENE	772.4	0
20/03/2022	23:15	8.1	0.4	ENE	772.3	0
20/03/2022	23:30	8.1	0.4	E	772.3	0
20/03/2022	23:45	8.2	0.4	ENE	772.2	0
21/03/2022	00:00	8.2	0.4	ENE	772.2	0

Date	Time	Temp Out	Wind Speed	Wind Dir	Bar	Rain
21/03/2022	00:15	8.2	0.9	ENE	772.1	0
21/03/2022	00:30	8.3	0.9	ENE	772	0
21/03/2022	00:45	8.3	0.4	ENE	772	0
21/03/2022	01:00	8.3	0.4	ENE	771.9	0
21/03/2022	01:15	8.4	0.9	ENE	771.8	0
21/03/2022	01:30	8.3	0.4	ENE	771.9	0
21/03/2022	01:45	8.3	0.4	ENE	771.7	0
21/03/2022	02:00	8.3	0.4	ENE	771.8	0
21/03/2022	02:15	8.2	0.4	ENE	771.7	0
21/03/2022	02:30	8.2	0.4	ENE	771.7	0
21/03/2022	02:45	8.1	0.4	ENE	771.6	0
21/03/2022	03:00	8.2	0.4	ENE	771.6	0
21/03/2022	03:15	8.3	0.9	ENE	771.4	0
21/03/2022	03:30	8.3	0.4	ENE	771.5	0
21/03/2022	03:45	8.3	0.4	ENE	771.4	0
21/03/2022	04:00	8.4	0.9	ENE	771.5	0
21/03/2022	04:15	8.3	0.4	ENE	771.7	0
21/03/2022	04:30	8.3	0.4	ENE	771.7	0
21/03/2022	04:45	8.3	0.4	ENE	771.7	0
21/03/2022	05:00	8.3	0.4	ENE	771.7	0
21/03/2022	05:15	8.2	0.4	ENE	771.6	0
21/03/2022	05:30	8.1	0.4	ENE	771.6	0
21/03/2022	05:45	7.9	0.4	ENE	771.7	0
21/03/2022	06:00	7.8	0.4	ENE	771.6	0
21/03/2022	06:15	7.9	0.4	E	771.6	0
21/03/2022	06:30	7.9	0.4	ENE	771.6	0
21/03/2022	06:45	8.1	0.4	ENE	771.6	0
21/03/2022	07:00	8.1	0.4	ENE	771.7	0
21/03/2022	07:15	8.2	0.4	ENE	771.8	0
21/03/2022	07:30	8.3	0.4	ENE	771.9	0
21/03/2022	07:45	8.6	0.9	E	771.9	0
21/03/2022	08:00	9.4	0.9	E	771.9	0
21/03/2022	08:15	10.1	0.9	E	772	0
21/03/2022	08:30	10.7	0.9	E	771.9	0
21/03/2022	08:45	11.4	0.9	ENE	771.9	0
21/03/2022	09:00	11.9	0.9	ENE	771.7	0
21/03/2022	09:15	12.4	0.9	NE	771.7	0
21/03/2022	09:30	12.5	1.3	E	771.7	0
21/03/2022	09:45	12.6	1.3	ENE	771.6	0
21/03/2022	10:00	12.9	1.3	ENE	771.6	0
21/03/2022	10:15	13.2	1.3	E	771.5	0
21/03/2022	10:30	13.3	1.3	ENE	771.7	0
21/03/2022	10:45	13.1	1.3	ENE	771.6	0
21/03/2022	11:00	13.3	0.9	ENE	771.8	0
21/03/2022	11:15	13.8	0.9	E	771.9	0
21/03/2022	11:30	14.1	0.9	ENE	771.9	0
21/03/2022	11:45	14.3	0.9	ENE	771.9	0
21/03/2022	12:00	15.1	0.9	NE	772	0
21/03/2022	12:15	14.4	1.3	ENE	772.1	0
21/03/2022	12:30	14.7	0.9	ENE	772	0
21/03/2022	12:45	15.5	0.9	ENE	771.9	0
21/03/2022	13:00	15.4	0.9	ENE	771.8	0
21/03/2022	13:15	15.7	0.9	ENE	771.7	0
21/03/2022	13:30	15.9	0.9	ENE	771.7	0
21/03/2022	13:45	16.2	0.9	ENE	771.8	0
21/03/2022	14:00	16	0.9	ENE	771.8	0
21/03/2022	14:15	15.9	0.9	NE	771.8	0
21/03/2022	14:30	15.8	0.9	ENE	771.7	0
21/03/2022	14:45	15.3	0.9	ENE	771.7	0
21/03/2022	15:00	15.6	0.9	NE	771.8	0
21/03/2022	15:15	15.2	0.9	ENE	771.7	0
21/03/2022	15:30	15.4	0.9	NE	771.6	0
21/03/2022	15:45	15.3	0.4	ENE	771.6	0
21/03/2022	16:00	15.1	0.9	NE	771.7	0
21/03/2022	16:15	14.3	0.9	ENE	771.5	0
21/03/2022	16:30	14.3	0.4	ENE	771.4	0
21/03/2022	16:45	13.8	0.9	ENE	771.5	0
21/03/2022	17:00	13.2	0.9	E	771.6	0
21/03/2022	17:15	12.4	0.9	ENE	771.6	0
21/03/2022	17:30	12.1	0.9	ENE	771.4	0
21/03/2022	17:45	11.6	0.9	ENE	771.4	0
21/03/2022	18:00	11	0.9	ENE	771.4	0
21/03/2022	18:15	10.9	1.3	W	771.4	0.25
21/03/2022	18:30	11.8	0	E	771.7	0
21/03/2022	18:45	12.8	0	ESE	769.5	0

APPENDIX 9-3

BACKGROUND SOUND SURVEY RESULTS

Noise Survey Results

Date: Saturday 19th March 2022 **TABLE 1**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position A - South of Sawmills Cottage**
Instrumentation: Cirrus 171 Real Time Analyser (G066350)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
15:00	15:00	63.8	64.7	58.5	85.5	Train Noise
15:15	15:00	61.7	63.6	57.8	78.8	Dominated by noise from the A30 road
15:30	15:00	60.9	62.6	57.5	72.6	
15:45	15:00	60.3	61.7	57.5	73.3	
16:00	15:00	60.6	62.1	57.9	74.6	
16:15	15:00	60.7	62.3	58.0	74.8	
16:30	15:00	60.5	62.0	57.6	72.6	
16:45	15:00	60.0	61.4	57.7	71.0	
17:00	15:00	60.3	62.1	57.1	70.8	
17:15	15:00	60.3	61.9	56.9	73.9	
17:30	15:00	59.6	61.2	56.8	70.5	
17:45	15:00	58.4	59.8	55.9	70.3	
18:00	15:00	58.2	60.0	54.9	69.6	
18:15	15:00	57.9	59.5	55.0	70.8	
18:30	15:00	58.3	59.6	54.2	74.8	
18:45	15:00	57.5	59.2	53.8	73.0	
19:00	15:00	58.0	59.1	53.1	77.9	
19:15	15:00	56.6	58.4	53.0	71.5	
19:30	15:00	56.8	58.1	52.6	73.6	
19:45	15:00	56.7	57.6	50.8	76.0	
20:00	15:00	54.5	56.7	49.5	68.3	
20:15	15:00	55.1	56.7	48.9	72.4	
20:30	15:00	54.5	56.7	49.3	70.3	
20:45	15:00	54.5	56.4	49.1	70.1	
21:00	15:00	53.8	55.7	49.0	71.6	
21:15	15:00	60.9	55.6	48.5	90.0	Train Noise
21:30	15:00	53.5	55.5	48.2	72.9	
21:45	15:00	57.0	56.6	47.5	79.8	
22:00	15:00	54.4	56.8	49.5	68.1	
22:15	15:00	54.0	56.5	49.8	63.1	
22:30	15:00	51.6	54.4	45.7	60.5	
22:45	15:00	51.6	54.5	46.0	62.8	
Average 1500-2300		58.5	59.9	54.6	61-90	

Noise Survey Results

Date: Saturday 19th - Sunday 20th March 2022
Location: Scorrier, Redruth **TABLE 2**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position A - South of Sawmills Cottage**
Instrumentation: Cirrus 171 Real Time Analyser (G066350)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
23:00	15:00	51.8	54.5	46.2	64.3	
23:15	15:00	51.4	54.6	45.3	64.3	
23:30	15:00	50.7	53.8	43.5	62.5	
23:45	15:00	50.3	53.4	43.3	66.8	
00:00	15:00	49.6	52.6	42.4	61.5	
00:15	15:00	51.8	53.0	43.0	72.2	
00:30	15:00	49.5	50.8	38.0	70.2	
00:45	15:00	47.3	51.2	34.2	59.8	
01:00	15:00	47.4	51.0	37.0	58.5	
01:15	15:00	45.0	48.8	34.3	58.3	
01:30	15:00	46.5	50.0	36.2	62.0	
01:45	15:00	48.6	51.4	38.9	66.2	
02:00	15:00	44.5	48.8	35.4	61.8	
02:15	15:00	46.7	49.5	35.3	69.6	
02:30	15:00	45.0	49.1	34.4	60.5	
02:45	15:00	45.5	49.9	34.4	57.2	
03:00	15:00	46.2	49.9	36.2	60.5	
03:15	15:00	43.3	47.4	33.1	56.2	
03:30	15:00	44.8	49.0	33.7	59.0	
03:45	15:00	45.0	48.6	34.9	61.4	
04:00	15:00	45.8	49.5	36.2	60.0	
04:15	15:00	44.9	49.6	33.5	56.1	
04:30	15:00	45.4	49.7	33.4	59.0	
04:45	15:00	45.5	49.3	34.1	58.9	
05:00	15:00	45.4	49.9	32.7	60.1	
05:15	15:00	45.9	49.3	38.1	57.7	
05:30	15:00	50.2	53.4	42.1	65.2	
05:45	15:00	50.0	53.3	41.0	63.0	
06:00	15:00	50.6	54.0	42.1	60.2	
06:15	15:00	51.7	54.4	45.5	65.3	
06:30	15:00	52.9	55.8	47.1	66.3	
06:45	15:00	52.4	54.2	46.2	70.8	
Average 2300-0700		48.7	51.8	40.9	56-72	
Average 1500-2300		58.5	59.9	54.6	61-90	

Noise Survey Results

Date: Sunday 20th March 2022
Location: Scorrier, Redruth **TABLE 3**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position A - South of Sawmills Cottage**
Instrumentation: Cirrus 171 Real Time Analyser (G066350)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
07:00	15:00	58.8	58.1	47.5	75.4	
07:15	15:00	54.3	55.7	48.8	74.1	
07:30	15:00	54.4	56.3	49.2	70.4	
07:45	15:00	53.4	55.3	49.7	67.4	
08:00	15:00	53.9	55.7	48.7	71.1	
08:15	15:00	54.9	57.0	51.1	67.0	
08:30	15:00	56.7	58.4	52.8	70.8	
08:45	15:00	57.5	58.9	53.3	75.6	
09:00	15:00	57.4	59.0	54.3	71.8	
09:15	15:00	61.5	59.7	54.9	87.8	
09:30	15:00	58.2	59.8	55.2	69.6	
09:45	15:00	58.4	59.5	54.5	74.7	
10:00	15:00	58.2	59.2	54.6	75.5	
10:15	15:00	58.4	59.9	55.1	69.8	
10:30	15:00	57.7	59.4	54.9	69.5	
10:45	15:00	58.8	59.9	55.9	73.1	
11:00	15:00	58.0	59.5	55.6	69.3	
11:15	15:00	58.2	59.7	55.5	72.2	
11:30	15:00	58.4	60.1	55.5	69.1	
11:45	15:00	59.0	60.6	56.4	71.2	
12:00	15:00	58.2	59.7	55.0	70.5	
12:15	15:00	57.4	59.0	55.1	66.2	
12:30	15:00	57.9	59.3	55.2	70.2	
12:45	15:00	57.3	58.4	54.1	71.3	
13:00	15:00	57.4	58.4	53.9	72.6	
13:15	15:00	57.8	59.2	55.2	68.4	
13:30	15:00	58.1	59.6	54.9	71.1	
13:45	15:00	58.7	60.1	55.8	70.2	
14:00	15:00	58.1	59.5	54.9	73.5	
14:15	15:00	57.4	58.8	54.6	70.0	
14:30	15:00	58.1	59.4	55.1	70.3	
14:45	15:00	58.2	59.7	55.3	70.5	
Average 0700-1500		57.8	58.8	53.8	66-88	

Noise Survey Results

Date: Sunday 20th March 2022 **TABLE 4**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position A - South of Sawmills Cottage**
Instrumentation: Cirrus 171 Real Time Analyser (G066350)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
15:00	15:00	58.8	60.4	55.6	72.3	
15:15	15:00	58.7	60.4	55.6	71.6	
15:30	15:00	58.8	60.4	55.7	70.3	
15:45	15:00	59.2	60.8	55.9	72.6	
16:00	15:00	58.8	60.3	56.1	73.9	
16:15	15:00	59.3	60.6	56.4	71.5	
16:30	15:00	59.3	61.2	55.7	69.8	
16:45	15:00	58.7	60.4	56.1	69.2	
17:00	15:00	58.6	60.3	55.5	70.5	
17:15	15:00	57.5	59.3	54.5	67.6	
17:30	15:00	58.9	59.7	54.1	77.0	
17:45	15:00	55.9	57.9	52.6	62.1	
18:00	15:00	56.5	58.5	52.4	68.4	
18:15	15:00	56.2	57.7	52.3	72.3	
18:30	15:00	57.7	58.7	52.3	76.2	
18:45	15:00	55.7	57.5	51.8	70.9	
19:00	15:00	55.7	57.5	50.8	73.9	
19:15	15:00	55.9	57.4	50.2	72.1	
19:30	15:00	55.1	56.8	50.6	70.3	
19:45	15:00	60.8	56.7	50.0	90.3	
20:00	15:00	55.3	55.8	48.1	77.0	
20:15	15:00	52.5	54.6	48.6	66.1	
20:30	15:00	53.3	55.6	46.0	71.8	
20:45	15:00	53.0	55.3	46.4	69.2	
21:00	15:00	52.4	54.1	45.9	69.1	
21:15	15:00	53.3	54.3	46.6	75.5	
21:30	15:00	52.6	54.7	45.8	69.9	
21:45	15:00	50.3	52.5	42.9	67.6	
22:00	15:00	50.8	52.4	42.8	71.9	
22:15	15:00	50.1	52.4	41.1	71.5	
22:30	15:00	48.0	51.0	39.0	65.7	
22:45	15:00	46.8	50.7	35.7	60.1	
Average 1500-2300		56.6	58.0	52.5	60-90	

Noise Survey Results

Date: Sunday 20th - Monday 21st March 2022
Location: Scorrier, Redruth **TABLE 5**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position A - South of Sawmills Cottage**
Instrumentation: Cirrus 171 Real Time Analyser (G066350)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
23:00	15:00	46.1	49.9	35.1	59.4	
23:15	15:00	44.4	47.7	34.3	62.0	
23:30	15:00	45.3	49.4	34.3	58.2	
23:45	15:00	43.4	47.7	34.4	56.3	
00:00	15:00	43.3	47.1	32.0	56.6	
00:15	15:00	42.9	47.3	33.5	55.8	
00:30	15:00	43.5	47.7	33.6	58.1	
00:45	15:00	43.5	46.5	32.2	65.7	
01:00	15:00	41.3	45.4	32.7	54.0	
01:15	15:00	43.5	48.0	31.6	55.4	
01:30	15:00	41.7	45.7	33.3	55.2	
01:45	15:00	40.7	44.3	31.1	55.3	
02:00	15:00	41.5	44.8	30.1	57.1	
02:15	15:00	41.3	45.6	30.7	58.2	
02:30	15:00	41.8	46.2	31.5	58.1	
02:45	15:00	41.6	45.8	32.2	57.0	
03:00	15:00	42.7	46.8	31.6	58.2	
03:15	15:00	43.8	48.4	33.3	56.7	
03:30	15:00	43.8	47.9	33.1	56.2	
03:45	15:00	40.6	45.1	31.3	54.2	
04:00	15:00	47.3	49.4	35.1	69.2	
04:15	15:00	45.4	49.4	36.7	57.5	
04:30	15:00	47.5	50.9	39.6	57.4	
04:45	15:00	47.5	51.2	38.0	60.2	
05:00	15:00	48.9	52.3	40.8	58.9	
05:15	15:00	50.7	53.1	43.1	67.4	
05:30	15:00	52.7	54.9	47.9	67.4	
05:45	15:00	53.8	56.5	48.5	64.3	
06:00	15:00	55.6	57.3	50.3	70.4	
06:15	15:00	56.5	57.4	52.7	75.6	
06:30	15:00	57.0	58.0	53.6	72.1	
06:45	15:00	57.5	58.5	54.2	72.0	
Average 2300-0700		49.8	51.9	44.9	54-76	

Average 0700-2300	57.2	58.5	53.5	60-90	

0600-0700 hours	**56.7**	**57.8**	**52.9**	**70-76**
0400-0500 hours	**47**	**50.3**	**37.6**	**57-69**
0500-0600 hours	**51.9**	**54.5**	**46.1**	**59-67**
0400-0700 hours	**53.5**	**55.2**	**49**	**57-76**

Noise Survey Results

Date: Monday 21st March 2022
Location: Scorrier, Redruth **TABLE 6**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position A - South of Sawmills Cottage**
Instrumentation: Cirrus 171 Real Time Analyser (G066350)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
07:00	15:00	58.8	59.7	56.1	71.3	
07:15	15:00	59.3	60.0	56.6	74.0	
07:30	15:00	59.5	60.6	57.0	70.2	
07:45	15:00	59.3	60.1	57.0	72.8	
08:00	15:00	58.7	59.7	56.2	71.3	
08:15	15:00	59.8	60.9	56.8	77.3	
08:30	15:00	58.7	59.6	56.3	72.8	
08:45	15:00	58.4	59.4	55.3	74.5	
09:00	15:00	58.3	59.3	55.3	71.3	
09:15	15:00	57.7	58.9	54.7	70.6	
09:30	15:00	57.3	58.7	54.5	71.7	
09:45	15:00	57.2	57.9	54.5	75.9	
10:00	15:00	57.3	57.9	54.3	75.1	
10:15	15:00	57.7	58.8	54.4	72.3	
10:30	15:00	57.8	59.1	54.4	71.2	
10:45	15:00	56.7	57.8	53.4	69.6	
11:00	15:00	59.2	60.1	53.8	78.6	
11:15	15:00	57.7	58.4	53.8	74.3	
11:30	15:00	58.5	59.0	53.5	87.4	
11:45	15:00	55.9	56.5	51.5	78.1	
12:00	15:00	56.6	57.7	51.8	72.6	
12:15	15:00	60.3	56.8	51.4	87.8	
12:30	15:00	65.2	63.9	52.3	88.6	
12:45	15:00	58.9	58.6	51.8	82.2	
13:00	15:00	57.0	58.3	51.9	75.9	
13:15	15:00	55.4	56.4	51.9	72.8	
13:30	15:00	56.0	56.7	52.5	72.4	
13:45	15:00	57.9	56.5	51.9	82.3	
14:00	15:00	58.5	58.0	52.3	82.0	
14:15	15:00	57.3	57.9	52.9	80.4	
14:30	15:00	55.8	56.9	52.7	70.1	
14:45	15:00	58.0	58.8	52.9	77.8	
Average 0700-1500		58.6	58.7	53.9	70-89	

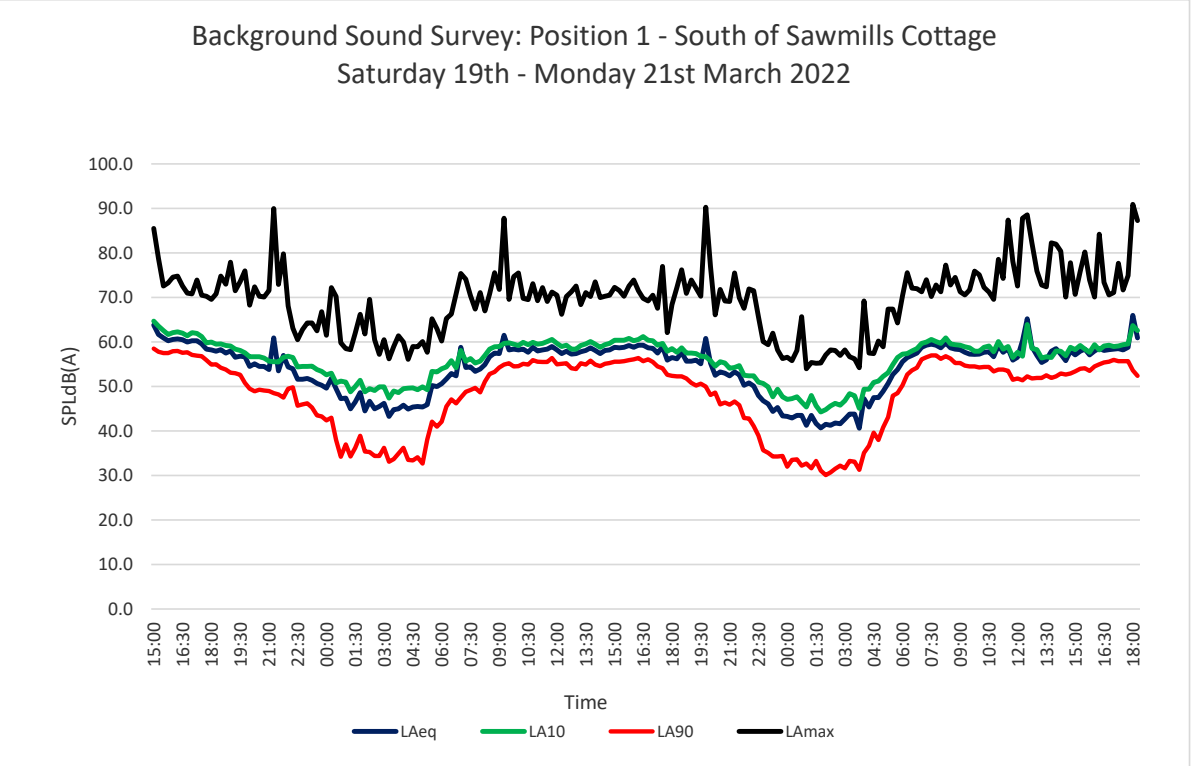
Noise Survey Results

Date: Monday 21st March 2022 **TABLE 7**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position A - South of Sawmills Cottage**
Instrumentation: Cirrus 171 Real Time Analyser (G066350)
Calibration: 94dB

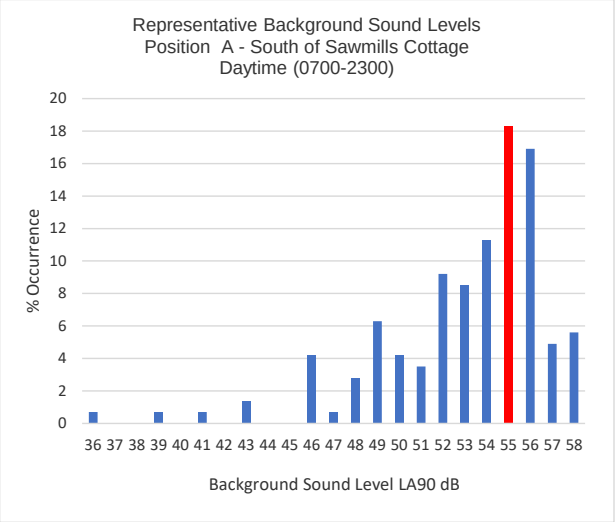
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
15:00	15:00	57.1	58.3	53.4	70.7	
15:15	15:00	57.9	59.2	54.0	75.8	
15:30	15:00	58.4	58.4	54.1	80.2	
15:45	15:00	57.1	57.7	53.5	73.9	
16:00	15:00	58.0	59.4	54.5	70.1	
16:15	15:00	58.6	58.2	55.0	84.2	
16:30	15:00	58.1	59.1	55.4	73.4	
16:45	15:00	58.3	59.3	55.6	70.6	
17:00	15:00	58.4	59.0	56.0	71.1	
17:15	15:00	58.5	59.1	55.7	77.7	
17:30	15:00	58.2	59.4	55.7	71.7	
17:45	15:00	58.8	59.6	55.7	74.9	
18:00	15:00	66.0	63.7	53.6	90.9	
18:15	15:00	60.9	62.6	52.4	87.3	
Average 1500-1830		59.6	59.8	54.7	70-91	

Overall Average	**49.3**	**51.8**	**43.4**	**54-76**	
Overall Average	**57.5**	**58.5**	**53.5**	**60-91**	

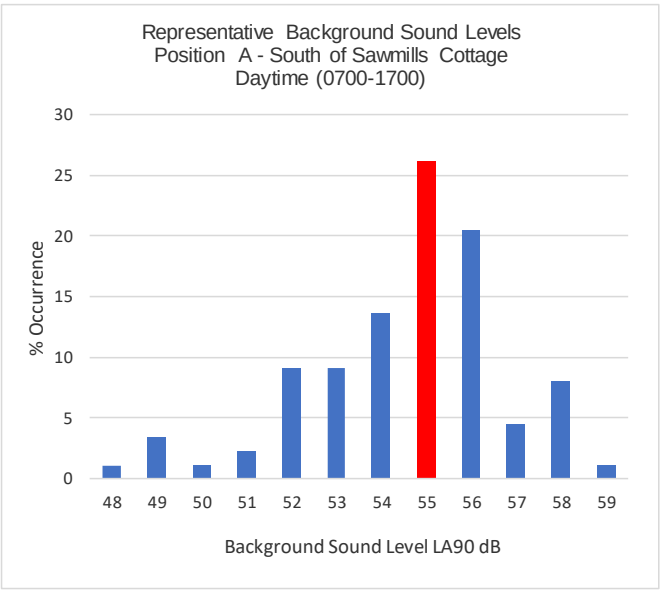
Average 0700-2100 hours Weekday	**58.4**	**58.9**	**54.4**	**70-89**	
Average 1500-1800 Saturday	**60.7**	**62.2**	**57.4**	**70-86**	
Average 0700-1800 Sunday	**58**	**59.3**	**54.6**	**62-88**	



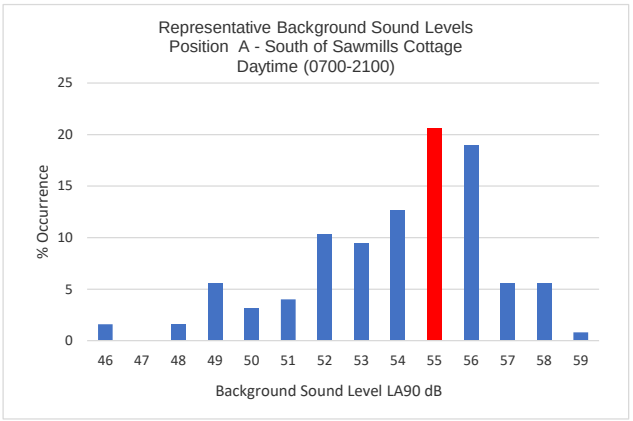
LA90	% Occurrence
36	0.7
37	0.0
38	0.0
39	0.7
40	0.0
41	0.7
42	0.0
43	1.4
44	0.0
45	0.0
46	4.2
47	0.7
48	2.8
49	6.3
50	4.2
51	3.5
52	9.2
53	8.5
54	11.3
55	**18.3**
56	16.9
57	4.9
58	5.6



LA90	% Occurrence
48	1.1
49	3.4
50	1.1
51	2.3
52	9.1
53	9.1
54	13.6
55	**26.1**
56	20.5
57	4.5
58	8.0
59	1.1



LA90	% Occurrence
46	1.6
47	0
48	1.6
49	5.6
50	3.2
51	4.0
52	10.3
53	9.5
54	12.7
55	**20.6**
56	19.0
57	5.6
58	5.6
59	0.8



Noise Survey Results

Date: Saturday 19th March 2022 **TABLE 8**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 2 - North of Halenbeagle Farm**
Instrumentation: Cirrus 171 Real Time Analyser (G061253)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
16:00	15:00	54.5	55.8	53.0	85.1	
16:15	15:00	55.2	56.3	51.9	80.4	
16:30	15:00	54.4	56.5	51.2	77.4	
16:45	15:00	53.3	55.1	50.9	64.3	
17:00	15:00	54.3	56.6	51.2	67.1	
17:15	15:00	59.7	56.5	50.6	81.5	
17:30	15:00	53.9	56.7	50.3	68.6	
17:45	15:00	52.2	53.2	50.1	72.0	
18:00	15:00	51.6	53.5	49.1	61.5	
18:15	15:00	50.0	51.2	48.3	62.0	
18:30	15:00	50.1	51.3	47.5	66.9	
18:45	15:00	52.5	55.9	47.3	66.2	
19:00	15:00	49.4	51.0	47.1	61.5	
19:15	15:00	48.8	50.4	46.1	65.1	
19:30	15:00	48.0	49.6	45.5	56.1	
19:45	15:00	47.9	49.4	45.9	54.7	
20:00	15:00	47.6	48.8	45.0	71.8	
20:15	15:00	46.0	47.5	43.7	58.0	
20:30	15:00	44.9	46.4	42.6	53.0	
20:45	15:00	45.8	47.9	43.1	53.4	
21:00	15:00	45.7	47.0	42.8	62.6	
21:15	15:00	45.3	47.1	42.6	57.3	
21:30	15:00	44.7	46.3	42.3	55.8	
21:45	15:00	45.2	47.1	42.3	59.4	
22:00	15:00	45.3	47.2	41.9	59.1	
22:15	15:00	45.9	47.5	43.3	55.3	
22:30	15:00	45.7	47.2	43.7	51.3	
22:45	15:00	43.9	45.8	41.2	57.0	
Average 1600-2300		51.5	52.5	47.9	51-85	

Noise Survey Results

Date: Saturday 19th - Sunday 20th March 2022
Location: Scorrier, Redruth **TABLE 9**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 2 - North of Halenbeagle Farm**
Instrumentation: Cirrus 171 Real Time Analyser (G061253)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
23:00	15:00	44.3	46.1	41.4	53.8	
23:15	15:00	43.8	45.4	41.5	54.0	
23:30	15:00	44.4	46.5	41.3	52.5	
23:45	15:00	44.2	46.7	40.8	53.7	
00:00	15:00	43.4	45.6	40.0	50.4	
00:15	15:00	42.1	44.5	38.2	51.1	
00:30	15:00	40.1	42.0	36.9	50.9	
00:45	15:00	39.9	42.6	35.1	50.5	
01:00	15:00	40.5	42.8	37.0	47.4	
01:15	15:00	38.8	41.2	35.3	51.3	
01:30	15:00	40.8	43.5	36.8	53.7	
01:45	15:00	42.1	44.8	38.1	51.6	
02:00	15:00	40.9	43.2	37.0	53.5	
02:15	15:00	41.8	43.8	37.4	58.4	
02:30	15:00	39.0	41.3	35.5	47.5	
02:45	15:00	38.9	41.1	35.5	48.1	
03:00	15:00	40.2	42.6	35.2	58.7	
03:15	15:00	37.1	39.2	35.4	50.9	
03:30	15:00	39.0	40.8	35.2	56.8	
03:45	15:00	38.3	40.6	34.6	47.3	
04:00	15:00	40.0	42.5	36.3	48.2	
04:15	15:00	39.5	42.0	34.4	55.1	
04:30	15:00	37.3	39.9	33.1	46.9	
04:45	15:00	38.9	41.3	34.6	47.9	
05:00	15:00	38.6	41.3	38.4	53.2	
05:15	15:00	39.2	41.3	39.6	52.9	
05:30	15:00	47.7	51.3	40.0	63.7	
05:45	15:00	49.3	53.1	40.1	63.9	
06:00	15:00	58.4	53.3	40.4	83.6	
06:15	15:00	48.0	49.8	40.5	67.6	
06:30	15:00	46.0	48.7	41.2	64.6	
06:45	15:00	47.1	49.3	40.7	63.5	
Average 2300-0700		46.1	46.2	38.4	47-84	
Average 1600-2300		54.1	55.3	47.9	51-85	

Noise Survey Results

Date: Sunday 20th March 2022
Location: Scorrier, Redruth **TABLE 10**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 2 - North of Halenbeagle Farm**
Instrumentation: Cirrus 171 Real Time Analyser (G061253)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
07:00	15:00	48.0	49.0	41.4	64.1	
07:15	15:00	47.3	47.8	41.9	65.6	
07:30	15:00	49.1	49.6	42.3	71.4	
07:45	15:00	47.8	48.8	43.0	64.4	
08:00	15:00	48.2	50.4	42.2	68.6	
08:15	15:00	47.9	50.4	43.8	64.3	
08:30	15:00	48.3	50.5	45.0	60.2	
08:45	15:00	48.9	51.0	45.6	65.2	
09:00	15:00	49.7	51.3	46.4	68.6	
09:15	15:00	51.4	52.9	46.8	72.8	
09:30	15:00	49.5	51.0	46.9	65.2	
09:45	15:00	48.8	50.3	46.7	63.0	
10:00	15:00	49.3	50.4	47.0	63.1	
10:15	15:00	50.8	52.0	46.8	72.4	
10:30	15:00	50.7	50.7	47.0	74.4	
10:45	15:00	49.6	50.6	47.1	66.9	
11:00	15:00	51.1	52.4	47.3	64.9	
11:15	15:00	49.8	50.5	46.8	76.3	
11:30	15:00	50.1	51.6	47.9	64.1	
11:45	15:00	50.9	52.1	48.5	72.8	
12:00	15:00	51.4	52.8	48.9	61.9	
12:15	15:00	49.9	51.2	47.2	65.5	
12:30	15:00	52.9	54.3	47.7	70.8	
12:45	15:00	49.5	51.3	47.0	67.8	
13:00	15:00	48.9	50.2	46.9	63.9	
13:15	15:00	49.2	50.2	47.0	68.8	
13:30	15:00	50.5	51.9	47.2	70.5	
13:45	15:00	48.7	50.0	46.9	61.5	
14:00	15:00	48.4	50.0	46.2	58.8	
14:15	15:00	49.3	50.5	46.8	72.8	
14:30	15:00	49.2	50.1	46.4	68.6	
14:45	15:00	49.9	52.0	47.1	61.9	
Average 0700-1500		49.7	50.9	46.1	59-76	

Noise Survey Results

Date: Sunday 20th March 2022 **TABLE 11**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 2 - North of Halenbeagle Farm**
Instrumentation: Cirrus 171 Real Time Analyser (G061253)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
15:00	15:00	50.0	51.3	47.3	65.2	
15:15	15:00	52.7	51.6	47.8	83.0	
15:30	15:00	50.9	52.5	48.4	65.9	
15:45	15:00	50.8	52.2	47.8	72.0	
16:00	15:00	50.5	52.0	48.1	66.4	
16:15	15:00	50.5	51.7	47.7	70.9	
16:30	15:00	51.6	53.8	47.9	64.8	
16:45	15:00	52.6	53.6	48.1	69.3	
17:00	15:00	52.4	54.0	47.7	70.6	
17:15	15:00	50.8	51.2	46.7	71.6	
17:30	15:00	48.7	49.9	45.6	73.5	
17:45	15:00	48.5	49.3	45.2	68.2	
18:00	15:00	58.5	56.4	44.7	80.5	
18:15	15:00	48.5	49.4	45.2	65.2	
18:30	15:00	49.5	51.3	44.9	68.0	
18:45	15:00	46.6	48.3	44.3	57.6	
19:00	15:00	45.9	47.5	43.4	52.9	
19:15	15:00	45.7	47.0	42.2	62.1	
19:30	15:00	45.3	46.9	42.5	54.6	
19:45	15:00	44.7	46.3	42.1	55.7	
20:00	15:00	43.6	45.3	41.2	53.3	
20:15	15:00	43.8	45.6	41.3	52.0	
20:30	15:00	43.4	45.4	40.1	51.4	
20:45	15:00	43.3	45.2	40.6	54.0	
21:00	15:00	43.6	44.9	39.8	61.2	
21:15	15:00	42.5	44.3	39.3	51.3	
21:30	15:00	42.1	44.1	39.4	49.9	
21:45	15:00	43.2	44.7	37.6	59.8	
22:00	15:00	40.5	42.5	37.6	53.4	
22:15	15:00	39.1	41.1	36.2	48.6	
22:30	15:00	38.7	40.9	35.4	48.1	
22:45	15:00	38.6	40.7	34.7	51.8	
Average 1500-2300		49.3	49.9	44.7	48-83	

Noise Survey Results

Date: Sunday 20th - Monday 21st March 2022
Location: Scorrier, Redruth **TABLE 12**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 2 - North of Halenbeagle Farm**
Instrumentation: Cirrus 171 Real Time Analyser (G061253)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
23:00	15:00	38.4	40.3	34.3	50.6	
23:15	15:00	36.1	38.7	33.1	45.6	
23:30	15:00	35.8	38.0	33.0	45.3	
23:45	15:00	35.6	37.8	33.2	49.0	
00:00	15:00	35.0	37.8	33.3	45.0	
00:15	15:00	35.1	37.3	33.2	49.1	
00:30	15:00	35.3	38.0	31.5	48.6	
00:45	15:00	35.4	37.7	32.6	45.0	
01:00	15:00	35.1	37.6	32.7	43.3	
01:15	15:00	34.2	36.7	32.5	42.1	
01:30	15:00	34.1	36.1	32.2	44.0	
01:45	15:00	33.4	35.9	30.5	45.6	
02:00	15:00	33.8	34.7	31.2	42.3	
02:15	15:00	35.6	36.2	32.4	41.2	
02:30	15:00	36.0	37.8	32.4	42.7	
02:45	15:00	36.1	36.8	33.4	46.9	
03:00	15:00	35.7	36.3	30.5	41.6	
03:15	15:00	35.4	38.1	30.2	46.4	
03:30	15:00	35.1	37.5	30.6	46.3	
03:45	15:00	34.6	36.8	32.2	53.3	
04:00	15:00	35.4	37.6	32.1	52.4	
04:15	15:00	37.0	39.3	32.8	50.5	
04:30	15:00	37.7	39.7	34.3	46.0	
04:45	15:00	38.9	41.2	34.5	54.5	
05:00	15:00	39.3	41.2	35.7	55.4	
05:15	15:00	44.4	44.9	37.5	62.5	
05:30	15:00	50.4	54.3	42.6	62.7	
05:45	15:00	52.5	56.6	43.5	67.0	
06:00	15:00	49.5	52.0	43.8	67.8	
06:15	15:00	49.8	50.2	45.0	68.9	
06:30	15:00	48.2	49.5	46.1	58.2	
06:45	15:00	49.8	50.9	47.0	64.0	
Average 2300-0700		43.7	46.3	38.7	41-69	
Average 0700-2300		49.5	50.5	45.7	48-83	

0600-0700 hours	**49.3**	**50.7**	**45.6**	**58-68**
0400-0500 hours	**37.4**	**39.6**	**33.5**	**46-55**
0500-0600 hours	**49**	**52.8**	**40.9**	**55-67**
0400-0700 hours	**47.6**	**50.2**	**42.3**	**46-69**

Noise Survey Results

Date: Monday 21st March 2022
Location: Scorrier, Redruth **TABLE 13**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 2 - North of Halenbeagle Farm**
Instrumentation: Cirrus 171 Real Time Analyser (G061253)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
07:00	15:00	55.0	53.1	47.6	84.0	
07:15	15:00	51.8	51.4	48.4	76.0	
07:30	15:00	51.4	52.3	49.2	62.9	
07:45	15:00	50.7	51.8	48.9	63.5	
08:00	15:00	52.1	53.4	48.8	72.1	
08:15	15:00	52.2	54.7	48.5	66.7	
08:30	15:00	50.8	52.4	48.3	66.3	
08:45	15:00	49.5	50.5	47.4	66.3	
09:00	15:00	49.2	50.3	47.6	61.9	
09:15	15:00	50.5	51.9	47.0	70.9	
09:30	15:00	49.0	50.6	46.9	62.4	
09:45	15:00	51.1	52.8	47.1	69.0	
10:00	15:00	52.3	52.6	47.3	78.6	
10:15	15:00	51.9	54.5	47.3	69.6	
10:30	15:00	50.9	51.7	47.1	73.5	
10:45	15:00	54.2	52.6	46.8	76.8	
11:00	15:00	57.1	53.2	46.7	76.8	
11:15	15:00	49.4	51.3	46.6	67.0	
11:30	15:00	50.1	51.6	46.2	71.5	
11:45	15:00	51.3	50.8	46.7	80.4	
12:00	15:00	48.4	49.9	45.6	67.1	
12:15	15:00	47.0	48.4	45.2	60.2	
12:30	15:00	48.4	49.5	45.1	70.3	
12:45	15:00	46.8	47.0	44.0	69.4	
13:00	15:00	46.2	47.5	44.2	58.6	
13:15	15:00	47.7	48.7	45.3	66.2	
13:30	15:00	49.0	49.8	45.9	69.9	
13:45	15:00	47.9	49.8	45.2	61.9	
14:00	15:00	48.5	49.2	45.5	70.4	
14:15	15:00	48.2	49.6	45.9	64.8	
14:30	15:00	48.1	49.7	46.1	57.9	
14:45	15:00	49.0	50.4	46.2	69.2	
Average 0700-1500		50.9	51.0	46.7	58-84	

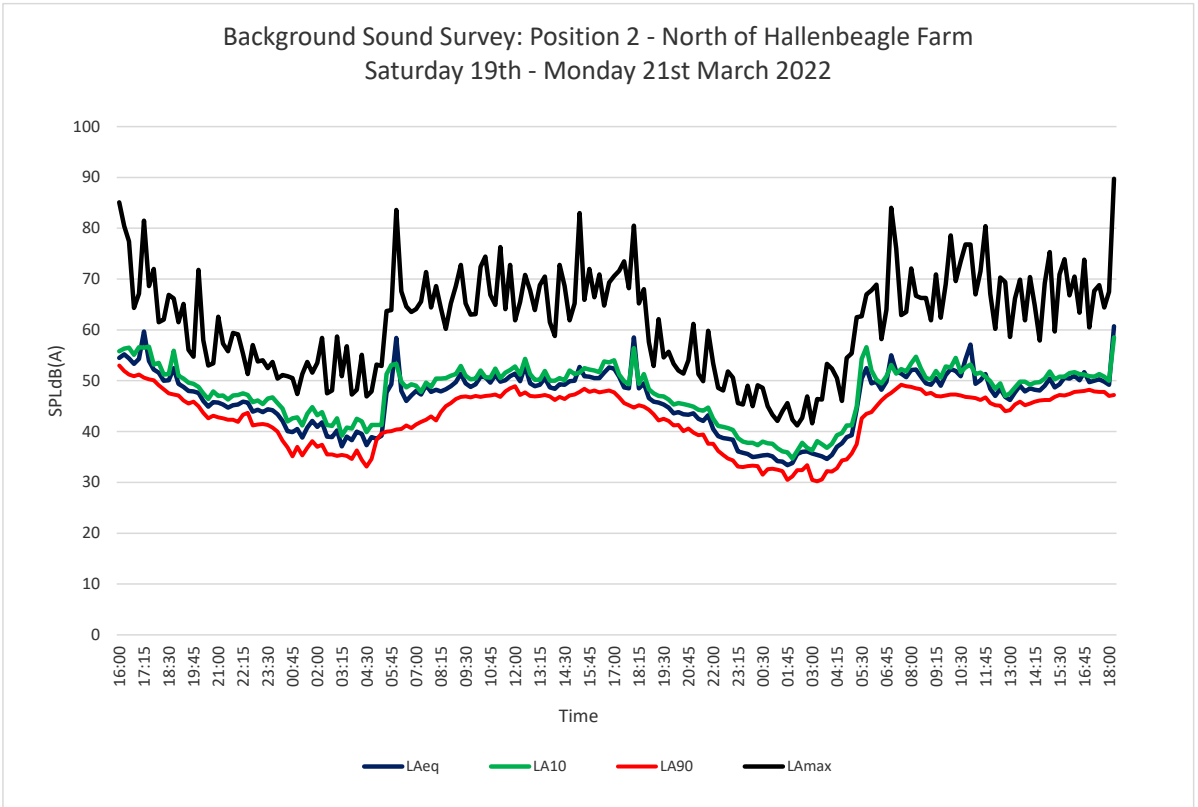
Noise Survey Results

Date: Monday 21st March 2022 **TABLE 14**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 2 - North of Halenbeagle Farm**
Instrumentation: Cirrus 171 Real Time Analyser (G061253)
Calibration: 94dB

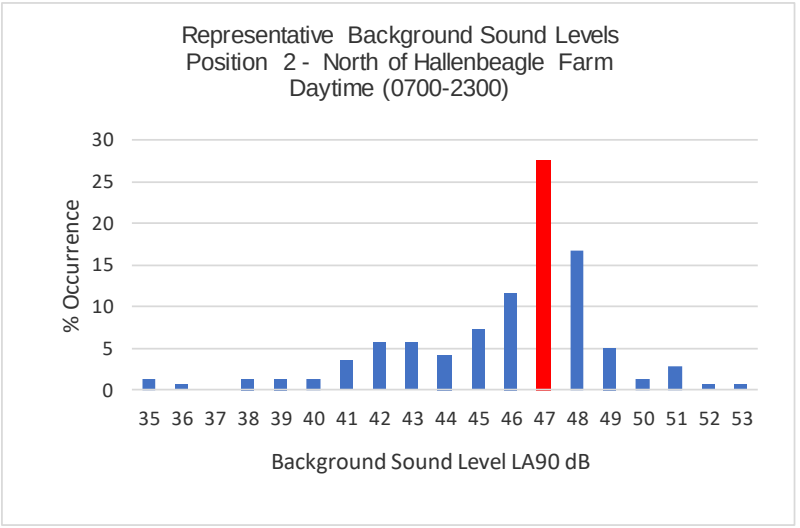
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
15:00	15:00	50.4	51.8	46.2	75.3	
15:15	15:00	48.7	50.3	46.8	59.7	
15:30	15:00	49.3	50.8	47.2	70.9	
15:45	15:00	50.6	50.8	47.1	73.9	
16:00	15:00	50.4	51.5	47.4	66.8	
16:15	15:00	51.0	51.7	47.8	70.5	
16:30	15:00	50.1	51.3	47.9	63.4	
16:45	15:00	51.7	51.2	48.0	73.8	
17:00	15:00	49.7	50.9	48.2	60.5	
17:15	15:00	50.0	50.8	47.9	67.7	
17:30	15:00	50.3	51.3	47.8	68.8	
17:45	15:00	49.8	50.8	47.8	64.4	
18:00	15:00	49.2	50.0	47.0	67.5	
18:15	15:00	60.7	58.5	47.2	89.7	
Average 1500-1830		52.5	52.2	47.4	60-90	

Overall Average	**45.1**	**46.3**	**38.6**	**41-84**	
Overall Average	**49.9**	**50.8**	**46.1**	**48-90**	

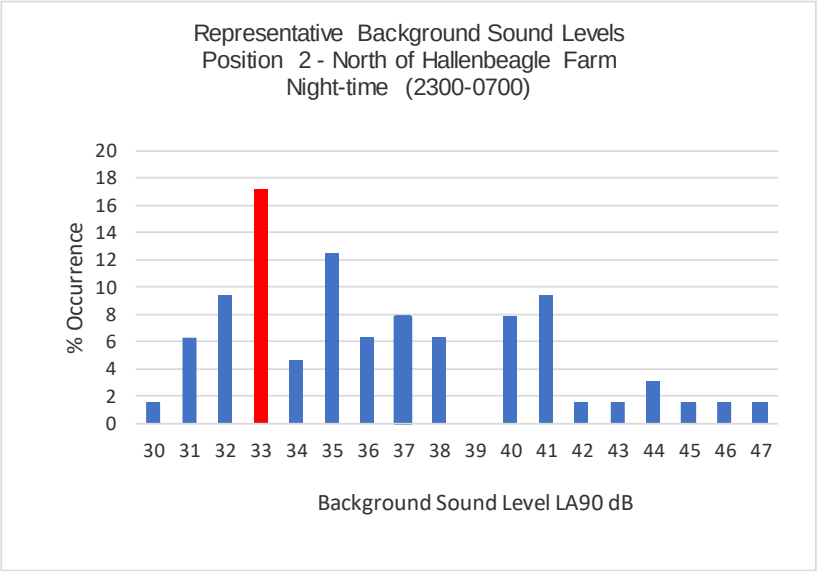
Average 0700-2100 hours Weekday	**50.7**	**51.3**	**47**	**54-84**	
Average 1600-1800 Saturday	**55.3**	**55.9**	**51.2**	**64-85**	
Average 0700-1800 Sunday	**50.1**	**51.3**	**46.7**	**58-84**	



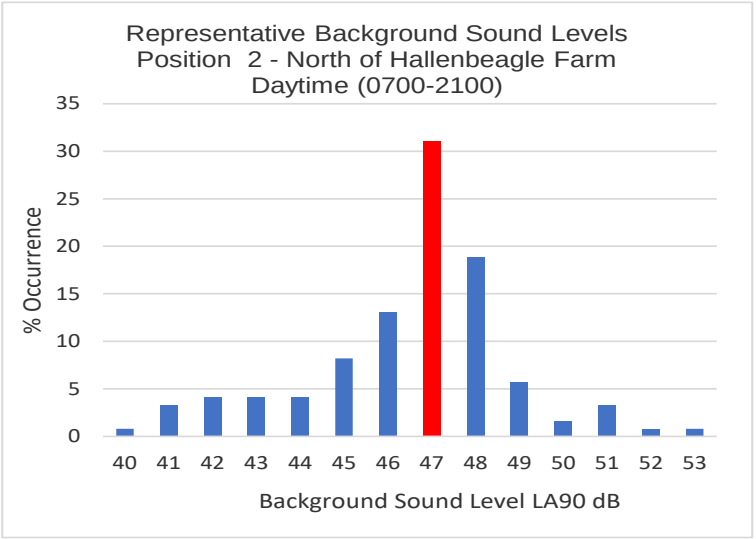
LA90	% Occurrence
35	1.4
36	0.7
37	0.0
38	1.4
39	1.4
40	1.4
41	3.6
42	5.8
43	5.8
44	4.3
45	7.2
46	11.6
47	**27.5**
48	16.7
49	5.1
50	1.4
51	2.9
52	0.7
53	0.7



LA90	% Occurrence
30	1.6
31	6.3
32	9.4
33	**17.2**
34	4.7
35	12.5
36	6.3
37	7.8
38	6.3
39	0
40	7.8
41	9.4
42	1.6
43	1.6
44	3.1
45	1.6
46	1.6
47	1.6



LA90	% Occurrence
40	0.8
41	3.3
42	4.1
43	4.1
44	4.1
45	8.2
46	13.1
47	**31.1**
48	18.9
49	5.7
50	1.6
51	3.3
52	0.8
53	0.8



Noise Survey Results

Date: Saturday 19th March 2022 **TABLE 15**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 3 - North of A30 (Blackwater Road)**
Instrumentation: Norsonic 118 Real Time Analyser (31992)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
18:30	15:00	68.6	70.5	64.1	76.1	
18:45	15:00	68.9	71.7	62.4	79.3	
19:00	15:00	68.5	71.7	60.4	78.3	
19:15	15:00	68.2	71.0	60.9	81.5	
19:30	15:00	67.0	70.0	60.4	76.7	
19:45	15:00	66.4	69.6	57.4	79.2	
20:00	15:00	66.4	69.0	56.0	82.3	
20:15	15:00	64.6	67.2	53.8	77.6	
20:30	15:00	64.7	67.8	56.1	78.8	
20:45	15:00	65.3	68.2	55.7	78.2	
21:00	15:00	64.6	67.4	54.6	77.8	
21:15	15:00	63.1	66.4	54.6	73.5	
21:30	15:00	64.3	67.3	54.7	77.8	
21:45	15:00	63.6	67.1	53.1	75.6	
22:00	15:00	64.5	67.6	55.8	77.7	
22:15	15:00	65.3	68.3	57.1	79.4	
22:30	15:00	63.4	66.2	52.0	78.5	
22:45	15:00	62.5	65.6	50.9	77.2	
Average 1830-2300		66.0	68.8	58.2	74-82	

Noise Survey Results

Date: Saturday 19th - Sunday 20th March 2022
Location: Scorrier, Redruth **TABLE 16**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 3 - North of A30 (Blackwater Road)**
Instrumentation: Norsonic 118 Real Time Analyser (31992)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
23:00	15:00	63.0	66.2	49.8	78.8	
23:15	15:00	62.8	65.6	50.5	76.5	
23:30	15:00	61.1	64.8	48.3	74.9	
23:45	15:00	60.9	64.5	48.4	73.5	
00:00	15:00	60.1	64.0	45.1	73.2	
00:15	15:00	59.3	62.8	45.7	75.7	
00:30	15:00	60.3	61.4	42.3	82.5	
00:45	15:00	57.5	60.8	39.7	73.5	
01:00	15:00	58.4	61.8	44.2	76.2	
01:15	15:00	54.7	58.7	39.4	68.1	
01:30	15:00	57.9	59.8	38.7	80.5	
01:45	15:00	58.7	61.7	41.6	76.2	
02:00	15:00	53.1	55.9	39.5	68.3	
02:15	15:00	54.0	57.6	39.3	68.1	
02:30	15:00	55.3	57.8	38.4	74.6	
02:45	15:00	58.5	58.9	36.5	81.7	
03:00	15:00	56.2	59.4	38.2	76.8	
03:15	15:00	54.0	56.0	37.1	75.0	
03:30	15:00	54.5	58.2	36.8	73.8	
03:45	15:00	53.7	57.1	40.2	68.3	
04:00	15:00	55.5	58.2	40.9	75.3	
04:15	15:00	53.8	57.4	40.2	68.2	
04:30	15:00	53.7	57.4	40.4	67.5	
04:45	15:00	57.5	58.5	41.2	78.3	
05:00	15:00	54.2	58.4	41.5	69.5	
05:15	15:00	57.0	58.6	41.3	77.1	
05:30	15:00	59.5	61.4	42.9	77.8	
05:45	15:00	58.3	61.0	42.5	76.6	
06:00	15:00	58.1	61.1	43.7	76.1	
06:15	15:00	63.2	63.9	49.3	84.2	
06:30	15:00	62.2	65.4	51.2	81.1	
06:45	15:00	62.7	64.2	49.5	82.1	
Average 2300-0700		58.9	61.6	44.9	68-84	
Average 1600-2300		44.8	46.8	41.8	74-82	

Noise Survey Results

Date: Sunday 20th March 2022
Location: Scorrier, Redruth **TABLE 17**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 3 - North of A30 (Blackwater Road)**
Instrumentation: Norsonic 118 Real Time Analyser (31992)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
07:00	15:00	62.6	64.8	52.2	78.8	
07:15	15:00	64.9	67.4	54.0	80.6	
07:30	15:00	64.4	67.2	55.8	77.3	
07:45	15:00	65.3	67.8	56.3	77.6	
08:00	15:00	65.7	68.4	55.4	78.2	
08:15	15:00	66.3	68.9	58.2	79.8	
08:30	15:00	68.3	71.0	60.0	79.3	
08:45	15:00	67.8	70.7	60.7	78.4	
09:00	15:00	69.3	72.4	62.4	81.4	
09:15	15:00	69.5	72.8	62.9	81.2	
09:30	15:00	72.1	73.5	63.7	94.4	
09:45	15:00	69.5	72.5	63.2	81.8	
10:00	15:00	70.0	72.8	63.5	84.1	
10:15	15:00	70.2	72.5	64.4	86.5	
10:30	15:00	70.3	73.7	64.3	81.0	
10:45	15:00	71.9	74.3	65.3	89.9	
11:00	15:00	70.7	73.4	65.6	83.7	
11:15	15:00	70.0	73.1	64.6	78.4	
11:30	15:00	70.8	74.0	64.9	84.9	
11:45	15:00	71.1	73.9	65.1	85.2	
12:00	15:00	72.7	73.8	64.6	95.5	
12:15	15:00	70.3	73.6	64.5	79.1	
12:30	15:00	69.8	73.3	64.3	77.7	
12:45	15:00	68.9	71.8	62.7	82.9	
13:00	15:00	70.3	73.1	63.5	89.6	
13:15	15:00	70.6	73.4	64.4	87.3	
13:30	15:00	70.6	73.5	64.2	85.6	
13:45	15:00	71.2	73.4	64.8	90.9	
14:00	15:00	70.1	73.9	63.4	78.2	
14:15	15:00	70.1	73.8	63.7	83.3	
14:30	15:00	70.2	73.2	63.3	85.7	
14:45	15:00	71.8	73.5	64.3	92.4	
Average 0700-1500		69.8	72.0	62.2	77-96	

Noise Survey Results

Date: Sunday 20th March 2022 **TABLE 18**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 3 - North of A30 (Blackwater Road)**
Instrumentation: Norsonic 118 Real Time Analyser (31992)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
15:00	15:00	69.8	73.3	63.3	79.2	
15:15	15:00	70.0	72.8	63.9	84.0	
15:30	15:00	70.1	72.8	63.5	85.4	
15:45	15:00	74.9	73.5	64.0	88.2	
16:00	15:00	69.9	72.4	64.7	85.2	
16:15	15:00	70.0	72.8	64.4	80.3	
16:30	15:00	74.7	72.8	64.0	86.0	
16:45	15:00	69.5	72.8	63.7	78.7	
17:00	15:00	69.5	72.1	63.2	86.0	
17:15	15:00	68.3	71.1	61.9	80.0	
17:30	15:00	68.3	71.5	61.8	79.0	
17:45	15:00	67.3	69.9	60.0	77.7	
18:00	15:00	70.4	70.6	59.8	93.1	
18:15	15:00	67.7	69.7	59.6	82.8	
18:30	15:00	67.1	69.6	59.2	81.8	
18:45	15:00	66.9	69.0	58.7	78.9	
19:00	15:00	65.7	68.6	57.2	77.1	
19:15	15:00	67.8	66.6	55.7	92.1	
19:30	15:00	66.6	67.3	56.3	85.7	
19:45	15:00	63.9	66.2	56.0	80.0	
20:00	15:00	66.5	66.8	54.6	89.0	
20:15	15:00	63.2	65.3	54.6	76.9	
20:30	15:00	63.0	65.8	52.0	80.1	
20:45	15:00	63.5	66.0	52.2	78.6	
21:00	15:00	63.5	65.7	52.0	78.0	
21:15	15:00	62.5	64.4	51.1	82.2	
21:30	15:00	62.2	64.6	51.6	79.1	
21:45	15:00	60.3	62.7	47.0	78.5	
22:00	15:00	61.7	63.1	49.2	77.8	
22:15	15:00	59.9	62.7	46.6	77.8	
22:30	15:00	59.4	61.2	45.5	78.6	
22:45	15:00	58.2	60.4	41.5	81.1	
Average 1500-2300		68.2	69.7	60.1	77-93	

Noise Survey Results

Date: Sunday 20th - Monday 21st March 2022
Location: Scorrier, Redruth **TABLE 19**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 3 - North of A30 (Blackwater Road)**
Instrumentation: Norsonic 118 Real Time Analyser (31992)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
23:00	15:00	57.0	60.7	38.0	74.5	
23:15	15:00	57.5	58.8	36.7	77.3	
23:30	15:00	58.1	60.5	36.5	76.5	
23:45	15:00	55.6	57.8	36.9	75.7	
00:00	15:00	56.2	58.2	36.6	77.4	
00:15	15:00	53.6	56.8	35.6	71.9	
00:30	15:00	55.1	56.8	34.5	75.0	
00:45	15:00	54.3	56.4	32.7	74.5	
01:00	15:00	53.3	54.0	33.0	73.7	
01:15	15:00	53.8	56.3	31.6	73.4	
01:30	15:00	50.5	54.3	32.2	65.1	
01:45	15:00	49.3	53.8	31.4	62.3	
02:00	15:00	48.2	51.7	31.2	60.9	
02:15	15:00	51.1	54.6	32.1	66.8	
02:30	15:00	50.5	53.8	31.7	66.2	
02:45	15:00	50.2	53.7	34.5	63.3	
03:00	15:00	49.4	53.4	32.9	62.4	
03:15	15:00	54.0	57.2	33.2	75.4	
03:30	15:00	53.1	56.0	34.8	72.1	
03:45	15:00	55.6	53.0	36.7	76.7	
04:00	15:00	55.5	57.3	41.2	76.5	
04:15	15:00	54.3	57.8	42.3	73.8	
04:30	15:00	58.0	60.0	43.1	80.0	
04:45	15:00	55.6	59.5	45.6	68.8	
05:00	15:00	58.8	60.7	45.6	80.5	
05:15	15:00	59.6	60.7	48.7	79.4	
05:30	15:00	62.1	63.8	51.9	79.4	
05:45	15:00	65.4	65.4	54.4	86.9	
06:00	15:00	66.2	68.1	55.1	81.7	
06:15	15:00	67.8	70.4	59.7	79.9	
06:30	15:00	67.2	70.1	61.5	79.1	
06:45	15:00	69.5	71.6	62.8	83.7	
Average 2300-0700		60.7	62.9	52.1	61-87	
Average 0700-2300		69.0	71.3	61.9	77-93	

0600-0700 hours	**67.8**	**70.2**	**60.5**	**79-84**
0400-0500 hours	**56**	**58.7**	**43.3**	**69-80**
0500-0600 hours	**62.2**	**63.1**	**51.3**	**79-87**
0400-0700 hours	**64.3**	**66.4**	**56.3**	**69-87**

Noise Survey Results

Date: Monday 21st March 2022
Location: Scorrier, Redruth **TABLE 20**
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 3 - North of A30 (Blackwater Road)**
Instrumentation: Norsonic 118 Real Time Analyser (31992)
Calibration: 94dB

Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
07:00	15:00	70.6	73.7	63.9	80.8	
07:15	15:00	71.4	74.6	65.2	84.5	
07:30	15:00	72.0	75.1	66.5	80.0	
07:45	15:00	72.1	75.7	65.8	83.3	
08:00	15:00	72.1	75.6	66.0	85.0	
08:15	15:00	72.0	75.1	65.3	90.4	
08:30	15:00	71.9	75.6	65.5	80.9	
08:45	15:00	71.8	75.4	65.0	81.6	
09:00	15:00	71.6	73.7	64.4	91.1	
09:15	15:00	70.4	74.1	64.1	79.9	
09:30	15:00	70.5	74.0	64.6	81.0	
09:45	15:00	70.9	74.5	64.1	83.2	
10:00	15:00	70.6	74.0	63.8	81.0	
10:15	15:00	70.2	73.8	63.4	80.6	
10:30	15:00	70.0	73.4	64.1	82.6	
10:45	15:00	70.2	73.4	63.7	81.2	
11:00	15:00	69.7	72.9	63.1	82.6	
11:15	15:00	70.7	74.0	63.1	85.8	
11:30	15:00	69.2	72.8	61.9	83.2	
11:45	15:00	70.7	73.8	62.6	90.0	
12:00	15:00	69.7	73.6	61.9	81.0	
12:15	15:00	69.8	72.9	62.2	85.5	
12:30	15:00	69.5	73.0	62.0	84.8	
12:45	15:00	68.6	72.5	60.8	83.7	
13:00	15:00	69.2	73.0	61.5	82.6	
13:15	15:00	69.1	72.8	60.7	82.1	
13:30	15:00	70.2	72.8	62.2	88.6	
13:45	15:00	68.7	72.5	60.5	81.9	
14:00	15:00	69.0	72.7	62.3	80.3	
14:15	15:00	69.9	73.6	62.6	82.2	
14:30	15:00	69.6	73.4	62.9	82.4	
14:45	15:00	69.7	73.6	62.8	80.6	
Average 0700-1500		70.4	73.8	63.4	80-91	

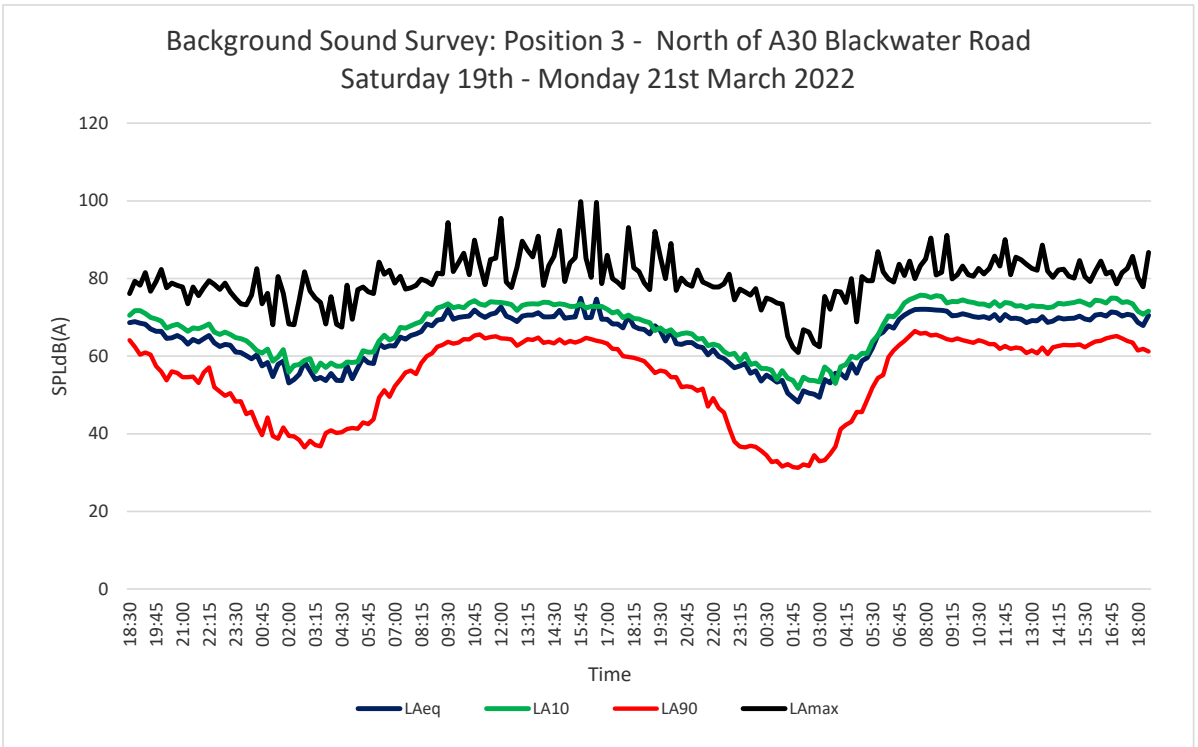
Noise Survey Results

Date: Monday 21st March 2022 **TABLE 21**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Position 3 - North of A30 (Blackwater Road)**
Instrumentation: Norsonic 118 Real Time Analyser (31992)
Calibration: 94dB

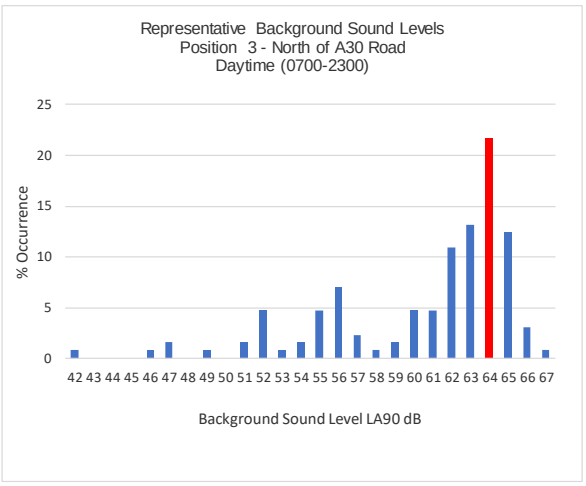
Start Time	Run Time (mins.)	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
15:00	15:00	69.8	73.8	62.8	80.1	
15:15	15:00	70.3	74.2	63.0	84.6	
15:30	15:00	69.6	73.7	62.3	80.5	
15:45	15:00	69.3	73.1	63.1	79.2	
16:00	15:00	70.6	74.4	63.8	81.9	
16:15	15:00	70.8	74.2	64.0	84.5	
16:30	15:00	70.3	73.7	64.6	81.2	
16:45	15:00	71.4	75.0	64.9	81.8	
17:00	15:00	71.2	74.9	65.2	78.6	
17:15	15:00	70.3	73.8	64.6	81.5	
17:30	15:00	70.8	74.0	63.9	82.6	
17:45	15:00	70.5	73.5	63.5	85.7	
18:00	15:00	68.7	71.6	61.5	80.3	
18:15	15:00	67.9	70.8	61.9	77.9	
18:30	15:00	70.5	71.6	61.2	86.7	
Average 1500-1845		70.2	73.6	63.5	60-90	

Overall Average	**59.9**	**62.3**	**49.9**	**41-84**	
Overall Average	**68.6**	**71.4**	**61.5**	**48-90**	

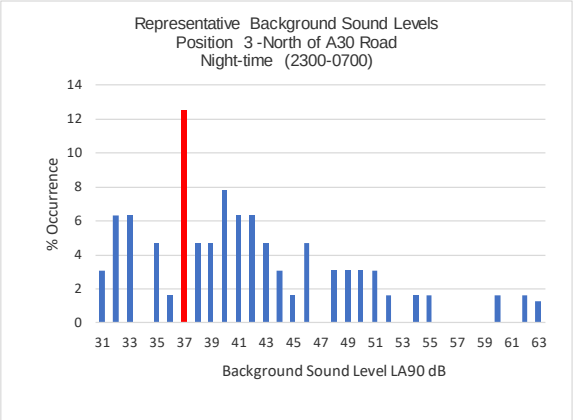
Average 0700-2100 hours Weekday	**70.4**	**73.9**	**63.7**	**78-91**	
Average 1600-1800 Sunday	**70.3**	**72**	**63.1**	**78-86**	
Average 0700-1800 Sunday	**69.9**	**72.3**	**63.1**	**77-93**	



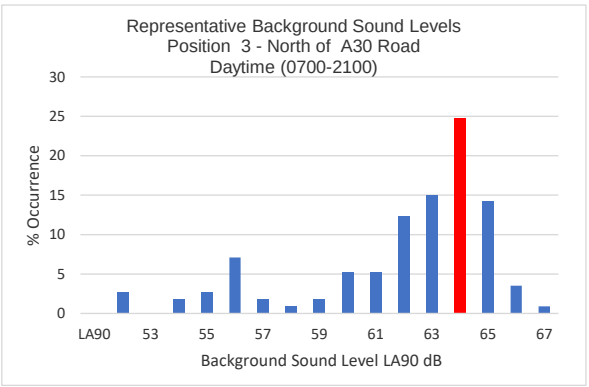
LA90	% Occurrence
42	0.8
43	0.0
44	0.0
45	0.0
46	0.8
47	1.6
48	0.0
49	0.8
50	0
51	1.6
52	4.7
53	0.8
54	1.6
55	4.7
56	7
57	2.3
58	0.8
59	1.6
60	4.7
61	4.7
62	10.9
63	13.2
64	**21.7**
65	12.4
66	3.1
67	0.8



LA90	% Occurrence
31	3.1
32	6.3
33	6.3
34	0.0
35	4.7
36	1.6
37	**12.5**
38	4.7
39	4.7
40	7.8
41	6.3
42	6.3
43	4.7
44	3.1
45	1.6
46	4.7
47	0
48	3.1
49	3.1
50	3.1
51	3.1
52	1.6
53	0
54	1.6
55	1.6
56	0
57	0
58	0
59	0
60	1.6
61	0
62	1.6
63	1.3



LA90	% Occurrence
52	2.7
53	0.0
54	1.8
55	2.7
56	7.1
57	1.8
58	0.9
59	1.8
60	5.3
61	5.3
62	12.4
63	15.0
64	**24.8**
65	14.2
66	3.5
67	0.9



Noise Survey Results

Date: Sunday 20th March 2022 **TABLE 22**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Roaming Measurements (west of A30) Blackwater Road**
Instrumentation: Norsonic 140 Real Time Analyser
Calibration: 94dB

Start Time	Time	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
09:45	15:00	64.8	66.9	59.8	77.4	Dominated by local road traffic & A30
10:00	15:00	65.2	67.3	60.2	78.8	Dominated by local road traffic & A30
10:15	15:00	64.6	67.0	59.9	80.4	Dominated by local road traffic & A30
10:30	15:00	66.5	69.1	62.4	77.0	Dominated by local road traffic & A30
Average		**65.3**	**67.6**	**60.7**	**77-80**	

Noise Survey Results

Date: Sunday 20th March 2022 **TABLE 23**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Roaming Measurements (west of A30) Blackwater Road**
Instrumentation: Norsonic 140 Real Time Analyser
Calibration: 94dB

Start Time	Time	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
12:45	15:00	64.1	66.2	59.9	76.4	Dominated by local road traffic & A30
13:00	15:00	64.5	65.5	61.4	93.4	Dominated by local road traffic & A30
13:15	15:00	63.9	66.2	60.2	80.0	Dominated by local road traffic & A30
13:30	15:00	63.5	65.7	60.2	72.1	Dominated by local road traffic & A30
Average		**64**	**65.9**	**60.4**	**72-93**	

Noise Survey Results

Date: Sunday 20th March 2022 **TABLE 24**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Roaming Measurements (west of A30) Blackwater Road**
Instrumentation: Norsonic 140 Real Time Analyser
Calibration: 94dB

Start Time	Time	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
20:15	15:00	63.0	65.6	56.2	76.8	Dominated by local road traffic & A30
20:30	15:00	62.9	64.7	56.7	75.3	Dominated by local road traffic & A30
20:45	15:00	62.5	64.9	55.5	74.6	Dominated by local road traffic & A30
21:00	15:00	62.6	66.2	56.1	74.0	Dominated by local road traffic & A30
Average		**62.7**	**65.3**	**56.1**	**74-77**	

Noise Survey Results

Date: Sunday 20th - Monday 21st March 2022 **TABLE 25**
Location: Scorrier, Redruth
Client: Suez
Project: MRF & RTS Development
Data: **Baseline Sound Survey: Roaming Measurements (west of A30) Blackwater Road**
Instrumentation: Norsonic 140 Real Time Analyser
Calibration: 94dB

Start Time	Time	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
23:15	15:00	54.9	55.9	36.1	66.0	Dominated by road traffic (A30)
23:30	15:00	56.1	58.0	36.0	82.2	Dominated by road traffic (A30)
23:45	15:00	52.8	54.6	35.4	61.9	Dominated by road traffic (A30)
00:00	15:00	53.0	54.9	36.0	63.6	Dominated by road traffic (A30)
Average		**54.4**	**56**	**35.8**	**62-82**	

Noise Survey Results

Date: Sunday 20th March 2022 **TABLE 26**

Location: Scorrier, Redruth

Client: Suez

Project: MRF & RTS Development

Data: **Baseline Sound Survey: Roaming Measurements adjacent to caravan park**

Instrumentation: Norsonic 140 Real Time Analyser

Calibration: 94dB

Start Time	Time	LAeq (dB)	LA10 (dB)	LA90 (dB)	LAmax (dB)	Observations
16:00	15:00	56.4	57.8	55.3	76.8	Dominated by local road traffic
16:15	15:00	57.2	58.5	55.6	75.3	Dominated by local road traffic
16:30	15:00	57.5	59.0	55.5	74.6	Dominated by local road traffic
16:45	15:00	56.3	57.6	55.7	74.0	Dominated by local road traffic
Average		**56.8**	**58.2**	**55.5**	**74-77**	