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KNOWSLEY METROPOLITAN BOROUGH COUNCIL

HALEWOOD LUF

NOISE IMPACT ASSESSMENT

MARCH 2025

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KNOWSLEY METROPOLITAN BOROUGH COUNCIL

HALEWOOD LUF

NOISE IMPACT ASSESSMENT

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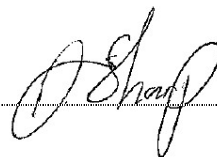
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EXECUTIVE SUMMARY

Purpose of this Report

This noise assessment report has been prepared to accompany a planning application for the assessment of noise from the proposed mini-Artificial Grass Pitches (AGP) and car park at Halewood Leisure Centre.

Assessment

The assessment has been undertaken in accordance with relevant standards, guidance, and policy and includes the assessment of:

- Absolute cumulative sound level from car park, mini-AGPs and 11v11 AGP training during daytime (07:00-23:00) mid-week period.
- Absolute cumulative sound level from car park, mini-AGP and 11v11 AGP matches during daytime (07:00-23:00) weekend period.
- Noise level change from cumulative sound level from car park, mini-AGP and 11v11 AGP training during daytime (07:00-23:00) mid-week period.
- Noise level change cumulative sound level from car park, mini-AGP and 11v11 AGP matches during daytime (07:00-23:00) weekend period.

A noise survey has been undertaken at four locations between the 15th and the 19th November 2024.

To inform the assessment, computer modelling has been undertaken and demonstrates predicted noise levels at the nearest sensitive receptors.

Findings

The noise assessment shows that the properties closet to the mini-AGP and car park at Halewood Leisure Centre require mitigation in the form of a 1.8m and 2.5m fences.

With this boundary mitigation in place, it is expected that the impact from the proposed development will be at the NOAEL threshold.

At this effect level noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Noise can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.

1 INTRODUCTION

1.1 Background

- 1.1.1 Wardell Armstrong (WA) has been instructed by Knowsley Metropolitan Borough Council to undertake a noise impact assessment to accompany a planning application for the re-development of the Halewood Leisure Centre, Halewood.

1.2 Site Location

- 1.2.1 Halewood Leisure Centre is located off Baileys Lane to the east, with dwellings to the north, south and west.

1.3 Proposed Development

- 1.3.1 The proposal includes the redevelopment of Halewood Leisure Centre. The proposals include landscaping and construction of open space/playing pitch facilities for the construction of new MUGA facilities at Halewood Leisure Centre.

1.4 Consultation

- 1.4.1 Consultation has been undertaken with Knowsley Borough Council (KBC) regarding the proposed methodology which included baseline survey locations, assessment approach, policy, standards and guidance to inform the assessment.
- 1.4.2 A response was received from the Local Planning Authority and the comments made by the Local Planning Authority have been reviewed and incorporated into the assessment where necessary.

2 ASSESSMENT METHODOLOGY

2.1 Policy, Standards and Guidance

2.1.1 The noise assessment considers noise at sensitive residential areas of the proposed development, specifically in terms of the potential impact of existing noise, in line with current guidance. The following legislative framework, Policy, Standards and Guidance.

Legislative Framework

2.1.2 The noise assessment has been undertaken in accordance with the following legislative framework:

- Planning Act 2008¹

National & Local Planning Policy

2.1.3 The noise assessment will be undertaken in accordance with the following policies:

- National Planning Policy Framework, 2024² (NPPF);
- Noise Policy Statement for England, 2010³ (NPSE); and
- Knowsley Local Plan Core Strategy, 2016⁴.

British Standards and Guidance

2.1.4 The noise assessment will consider the following current guidance and standards:

- Artificial Grass Pitch (AGP) Acoustics - Planning Implications Sport England 2015⁵
- Institute of Environmental Management and Assessment (IEMA) (2014) Guidelines for Environmental Noise Impact Assessment⁶

¹ Planning Act 2008. [online]. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents/made> [Accessed 16 February 2021].

² Ministry of Housing, Communities & Local Government (2023). National Planning Policy Framework. [online] Available at: <https://www.gov.uk/guidance/national-planning-policy-framework> [Accessed 19/12/2023].

³ Department for Environment, Food and Rural Affairs (2010). Noise Policy Statement for England (NPSE). [online] Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/69533/pb13750-noise-policy.pdf [Accessed 6/12/2023].

⁴ Knowsley Borough Council, 2016. Knowsley Local Plan: Core Strategy. [online] Available at: <https://localplanmaps.knowsley.gov.uk/documents/knowsley-local-plan-adopted-core-strategy.pdf>

⁵ Sport England (2015) Artificial Grass Pitch (AGP) Acoustics – Planning Implications <https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/agg-acoustics-planning-implications.pdf?VersionId=eORPBrK6irJ2FqVHWitOASeYu6U egt>

⁶ Institute of Environmental Management and Assessment (2014). Guidelines for Environmental Noise Impact Assessment. IEMA, London.

- British Standard 8233: 2014 Guidance on sound Insulation and noise reduction for buildings⁷ (BS 8233);
- World Health Organization (WHO) (1999) Guidelines for Community Noise⁸; and
- Planning Practice Guidance – Noise, 2019⁹ (PPG - Noise).

2.2 BS 8233:2014 - Guidance on sound Insulation and noise reduction for buildings

2.2.1 The criteria in accordance with BS 8233 for daytime, night-time and night-time maximum internal sound levels is reproduced in Table 1.

Table 1: Recommended Internal Ambient Noise Levels			
Activity	Location	07:00 – 23:00 Hrs	23:00 – 07:00 Hrs
Resting	Living Room	35 dB $L_{Aeq,16\text{ hr}}$	-
Dining	Dining Room/Area	40 dB $L_{Aeq,16\text{ hr}}$	-
Sleeping	Bedroom	35 dB $L_{Aeq,16\text{ hr}}$	30 dB $L_{Aeq,8\text{ hr}}$ 45 dB L_{AFmax}

2.2.2 External amenity areas have been assessed against the criteria stated in BS8233, which states that it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments.

2.2.3 For this assessment daytime hours are taken to be 07:00 to 23:00 hours and night-time hours to be 23:00 to 07:00 hours.

2.3 Artificial Grass Pitch (AGP) Acoustics - Planning Implications Sport England 2015

2.3.1 The criteria in accordance with the Sport England sound level criteria is reproduced in Table 2.

⁷ British Standards Institution (2014). BS 8223:2014, Guidance on sound insulation and noise reduction on buildings. BSI: London, UK

⁸ World Health Organization (1999). Guidelines for community noise. WHO, Geneva.

⁹ Ministry of Housing, Communities & Local Government. (2019). Planning Practice Guidance, Noise. (online). Available at: <https://www.gov.uk/guidance/noise->

Table 2: Recommended External Ambient Noise Levels	
Activity	Upper Noise Limit external to Residential Properties and Within External Living Area (dB L_{Aeq,1hr})
AGP activity	50

2.4 IEMA Guidelines for Environmental Noise Impact Assessment 2014

2.4.1 The criteria for long-term change in sound levels in accordance with the IEAMA guidelines for Environmental Noise Impact Assessment is reproduced in **Table 3**.

Table 3: Impact from the Change in Sound Levels	
Long-term Impact Classification	Sound Level Change dB L_{pAeqT} (Positive or negative) T = 16hr day or 8hr night
Negligible	≥1 dB and <3dB
Minor	≥3 dB and <5 dB
Moderate	≥5 dB and <10 dB
Major	≥10 dB

2.5 Assessment Criteria

2.5.1 To determine the impact in accordance with the NPSE, **Table 4** presents thresholds to describe the effect level regarding noise and its relationship to guidance documents.

Table 4: Assessment Criteria			
NPSE Impact Level	Absolute Internal Sound Level based on BS8233:2014, WHO 1999 and Sport England 2015	Noise Level Change based on IEMA 2014	Action
NOEL	<i>Living Rooms:</i> <35dB LAeq,16hr <i>Studies and Kitchen/Diners:</i> <40dB LAeq,16hr	<3dB change in sound level	No further action needed
NOAEL	<i>Bedrooms:</i> <30dB LAeq,8hr and <45dB LAfmax <i>Private gardens:</i> <50dB LAeq,16hr (NOEL) ≥50 to <55dB LAeq,16hr (NOAEL)	≥3 to <5dB change in sound level	No further action needed
LOAEL	<i>Living Rooms:</i> 35 - ≤40dB LAeq,16hr <i>Studies and Kitchen/Diners:</i> 40 - ≤45dB LAeq,16hr <i>Bedrooms:</i> 35 - ≤40dB LAeq,8hr and 45 - ≤50dB LAfmax <i>Private gardens:</i> 55 - ≤60dB LAeq,16hr	≥5 to <10dB change in sound level	Mitigate and reduce
SOAEL	<i>Living Rooms:</i> >40dB LAeq,16hr <i>Studies and Kitchen/Diners:</i> >45dB LAeq,16hr <i>Bedrooms:</i> >35dB LAeq,8hr and 50dB LAfmax <i>Private gardens:</i> >60dB LAeq,16hr	≥10dB change in sound level	Avoid

3 BASELINE CONDITIONS

3.1 Noise Survey

3.1.1 Between the 15th and 19th November 2024, WA carried out a noise survey at the proposed development site. Noise measurements were undertaken at six monitoring locations, which is representative of existing residential receptors and activity from the use of existing AGPs.

3.1.2 A-weighted¹⁰ L_{eq}¹¹ L₉₀¹² and maximum noise levels were measured to comply with the requirements of BS 8233. Additionally, A-weighted L₁₀¹³ noise levels sound pressure levels, were also measured. The measured noise levels are set out in full in **Appendix B**.

3.1.3 The details of the noise survey have been provided in **Table 5**.

Table 5: Details of Noise Survey			
Monitoring Location	Start Date & Time	End Date & Time	Co-ordinates (EPSG:27700)
LT1	15/11/2024 - 1300	19/11/2024 - 1145	345193,385240
LT2	15/11/2024 - 1530	19/11/2024 - 1230	345274,385039
LT3	15/11/2024 - 1430	19/11/2024 - 1015	345331,385270
LT4	15/11/2024 - 1430	19/11/2024 - 1015	345313,385207

3.1.4 The sound level meters were calibrated to a reference level of 94 dB at 1 kHz both before, and on completion of, the noise survey. No drift in the calibration over 0.5 dB during the survey was noted.

3.1.5 The noise monitoring locations are presented in Figure 1.

¹⁰ A' Weighting An electronic filter in a sound level meter which mimics the human ear's response to sounds at different frequencies under defined conditions

¹¹ L_{eq} Equivalent continuous noise level; the steady sound pressure which contains an equivalent quantity of sound energy as the time-varying sound pressure levels.

¹² L₉₀ The noise level which is exceeded for 90% of the measurement period.

¹³ L₁₀ The noise level which is exceeded for 10% of the measurement period.

Figure 1 – Noise Monitoring Locations



3.1.6 A summary of the sound level data measured at LT1 and LT2 is presented in Error! Reference source not found. and **Table 7**, respectively. The data is representative of the existing noise sensitive receptors.

Table 6: Summary of measured sound levels at LT1						
	Background Sound Level, dB LA90,T		Residual Sound Level, dB LAeq,T		Maximum Sound Level, dB LAfmax,T	
	Day	Night	Day	Night	Day	Night
Summary of weekday measured sound levels at LT1						
Range	20 - 74	19 - 52	21 - 81	21 - 54	32 - 111	31 - 71
25th %ile	24	19	37	21	54	36
Median	30	22	46	29	66	45
75th %ile	43	35	55	40	79	53
Arithmetic Avg	35	28	46	32	66	45
Log Avg	-	-	68	44	-	-
Summary of weekend measured sound levels at LT1						
Range	31 - 48	26 - 39	38 - 71	28 - 49	45 - 96	40 - 70
25th %ile	37	28	42	32	56	46
Median	39	32	44	38	59	51

Table 6: Summary of measured sound levels at LT1						
	Background Sound Level, dB LA90,T		Residual Sound Level, dB LAeq,T		Maximum Sound Level, dB LAfmax,T	
	Day	Night	Day	Night	Day	Night
75th %ile	41	35	46	39	64	58
Arithmetic Avg	39	32	45	37	61	52
Log Avg	-	-	54	40	-	-

Table 7: Summary of measured sound levels at LT2						
	Background Sound Level, dB LA90,T		Residual Sound Level, dB LAeq,T		Maximum Sound Level, dB LAfmax,T	
	Day	Night	Day	Night	Day	Night
Summary of weekday measured sound levels at LT2						
Range	36 - 54	35 - 54	39 - 56	38 - 63	47 - 71	43 - 68
25th %ile	39	37	42	40	54	49
Median	40	42	44	45	59	56
75th %ile	50	50	53	54	62	59
Arithmetic Avg	43	43	46	47	59	55
Log Avg	-	-	50	53	-	-
Summary of weekend measured sound levels at LT2						
Range	37 - 48	30 - 38	39 - 52	31 - 48	45 - 73	35 - 64
25th %ile	41	32	45	35	56	43
Median	42	34	46	38	59	50
75th %ile	43	36	48	41	63	54
Arithmetic Avg	42	34	46	38	60	49
Log Avg	-	-	47	40	-	-

3.1.7 Observations and detailed notes were made of the significant noise sources which contribute to each of the measured levels. The observations identified the following:

Road Traffic Noise: Road traffic noise from Baileys Ln and Barn Croft Rd audible at LT1-LT4.

Other: wind through trees and quiet birdsong audible at all locations.

3.1.8 A summary of the sound level data measured at LT3 and LT4 is presented in **Table 8** and **Table 9** respectively. The measurements are representative of noise from the existing activity on the AGPs.

Table 8: Summary of measured sound levels at LT3

	Background Sound Level, dB LA90,T		Residual Sound Level, dB LAeq,T		Maximum Sound Level, dB LAfmax,T	
	Day	Night	Day	Night	Day	Night
Range	39 - 58	33 - 53	46 - 74	37 - 56	56 - 98	48 - 71
25th %ile	44	35	50	41	62	56
Median	49	37	54	44	66	59
75th %ile	52	40	57	47	73	62
Arithmetic Avg	48	39	55	44	70	59
Log Avg	-	-	61	48	-	-

Table 9: Summary of measured sound levels at LT4

	Background Sound Level, dB LA90,T		Residual Sound Level, dB LAeq,T		Maximum Sound Level, dB LAfmax,T	
	Day	Night	Day	Night	Day	Night
Range	35 - 64	29 - 54	41 - 75	32 - 56	52 - 98	46 - 69
25th %ile	43	35	48	39	61	54
Median	45	37	51	42	66	57
75th %ile	52	39	59	46	80	61
Arithmetic Avg	47	38	54	43	71	57
Log Avg	-	-	63	48	-	-

3.2 Usages recorded

- 3.2.1 Data was provided by Halewood Leisure centre for the events on site during the assessment period.
- 3.2.2 During the week bookings predominantly started at 16:00 and ran until 20:00 with mainly external bookings, the likely use of these bookings is training or small-sided matches. On Friday the 15th and the 22nd football matches happened on site between 19:00 and 21:00 which likely contain spectators.
- 3.2.3 During the weekends, on Saturday 21:00 until 14:00 junior football league takes place on site, likely with spectators, and a football match 14:00 until 17:00, likely with spectators. On Sunday two football matches took place one at 09:00 until 12:00 and one 13:00 until 15:00, likely with spectators.
- 3.2.4 The audio recordings from all of the events consist of people shouting and whistles along with impact sounds from balls hitting sidings.

3.3 Determination of Representative Sound Levels

AGP Noise

3.3.1 The worst-case dB $L_{Aeq,1hour}$ level used for the assessment is 75 dBA and has been measured at LT3.

3.3.2 This level has been used to inform a computer noise model by calibrating an area source to the measured AGP noise levels.

Ambient noise at receptors

3.3.3 For daytime periods, the average measured dB $L_{Aeq,16\ hour}$ at LT1 and LT2 have been used.

3.3.4 For LT1, the representative weekday dB $L_{Aeq,16hour}$ level used for the assessment is 68 dB. For LT1, the representative weekend dB $L_{Aeq,16hour}$ level used for the assessment is 54 dB.

3.3.5 For LT2, the representative weekday dB $L_{Aeq,16hour}$ level used for the assessment is 50 dB. For LT1, the representative weekend dB $L_{Aeq,16hour}$ level used for the assessment is 47 dB.

3.3.6 These levels have been used as representative ambient levels for nearby ESRs.

4 NOISE MODELLING

4.1 Introduction

4.1.1 To predict sound levels at the nearest noise sensitive receptors, a noise model has been produced using SoundPLAN 9.1, a software package which implements the prediction methodology contained within ISO 9613-2:2024.

4.1.2 SoundPLAN modelling software utilises publicly available topography data and digital terrain mapping to generate a 3D environmental model.

4.2 Model Inputs

4.2.1 **Table 10** presents the model settings adopted.

Table 10: Model Settings	
Setting	Value
Orders of Reflection	3 – standard assumption
Global Ground Absorption	0.6 – assuming mixed ground
Layout	<i>Halewood Leisure Centre:</i> 70119719_WSP_LUD_HLC_DR_LA_0004
Building Heights	Assumed based on site observations <i>Dwelling houses – 2 storey 6m ground to eaves and 2m loft void, 8m overall.</i> <i>Leisure Centre building - 18m</i>
Existing Fences and Barriers	Assumed based on site observations <i>Solid brick wall to rear of Hornbeam Road – 1.8m</i>
Base mapping	Open Street Map
Terrain	DEFRA 1m x 1m LIDAR DTM dataset
Receivers	Ground floor receivers at 1.5m above ordinance datum – see Table for description of receiver locations
Sources	Artificial Grass Pitch and Car Park – see Table 2 for more information

Table 11: Existing Sensitive Receptor Locations	
Receptor	Description
ESR1	Properties on Hornbeam Road to the North of Halewood Leisure Centre
ESR2	Properties on Kempsey Way to the South of Halewood Leisure Centre

Table 12: Sound Power Levels used in Model						
Period	Octave Band Sound Power Level Hz, dB					
	63	125	250	500	1000	2000
Artificial Grass Pitch based on measurement on Sunday 17-Nov-24 between 13:00-14:00	86	87	91	100	104	96
Car Park – inclusive of car movements, engine start up and doors/boots opening and closing	104	106	91	90	87	86

- 4.2.2 The data for the worst-case hour used in **Table 12** above. The data was measured at Halewood Leisure Centre from the 1st half of a football match taking place on Sunday. This has been selected due to the low background levels to capture the highest proportion of specific noise for the worst case use recorded
- 4.2.3 The SoundPLAN predictions have allowed for a -3dB reduction assuming for a 50% on-time correction i.e. operational 8hrs out of a 16hr daytime

5 NOISE IMPACT ASSESSMENT

5.1.1 The impact assessment undertaken which include the following

- External change in noise level assessment
- Internal break-in assessment
- External amenity area assessment

5.1.2 The assessments have been carried out with no specific mitigation being incorporated into the design i.e. acoustic fence to allow for the best-case scenario to be tested.

5.2 External Change in Noise Level Assessment

5.2.1 An assessment of the change in the ambient noise level has been undertaken for weekday (Mon-Fri) and weekend periods (Sat & Sun) and compared to the assessment criteria in **Table 4** above.

5.2.2 **Table 113** and **Table 4** present the change in noise level during weekday and weekend periods for ESR1 and ESR2.

Table 13: Change in Noise Level during Weekday Periods (Mon-Fri)						
Receptor	Representative Monitoring Location	Measured dB L _{Aeq,16hr}	Predicted dB L _{Aeq,16hr}	Cumulative dB L _{Aeq,16hr}	Difference dB L _{Aeq,T}	Impact Threshold
ESR1	LT3	68	54	68	+0	NOEL
ESR2	LT4	50	52	54	+4	NOAEL

5.2.3 The assessment tables above show that during the weekday for ESR1 the change in noise level is less than +3dB which would equate to an affect level of NOEL. No further action is needed to mitigate noise at this effect level for these receptors.

5.2.4 The assessment tables above show that during the weekday for ESR2 the change in noise level is less than +5dB which would equate to an affect level of NOAEL. No further action is needed to mitigate noise at this effect level for these receptors.

Table 14: Change in Noise Level during Weekend Periods (Sat & Sun)						
Receptor	Representative Monitoring Location	Measured dB LAeq,16hr	Predicted dB LAeq,16hr	Cumulative dB LAeq,16hr	Difference dB LAeq,T	Impact Threshold
ESR1	LT3	54	54	57	+3	NOAEL
ESR2	LT4	47	52	53	+6	LOAEL

5.2.5 The assessment tables above show that during the weekend for ESR1 the change in noise level is less than +5 dB which would equate to an affect level of NOEL. No further action is needed to mitigate noise at this effect level for these receptors.

5.2.6 The assessment tables above show that during the weekend for ESR2 the change in noise level is less than +10 dB which would equate to an affect level of LOAEL. At this affect level it is recommended that the impact is mitigated and reduced to a minimum. Additional mitigation is therefore required.

5.3 Internal Break-in Assessment

5.3.1 An assessment of the expected break-in sound level has been undertaken and compared to the criteria in **Table 4** above. **Table 219 15** and **Table 16** present the results.

5.3.2 The internal break-in assessment has been based on either a window open or window closed scenario. The decision over whether an open or closed window is used is based on the existing ambient sound level.

5.3.3 Where the measured ambient sound level exceeds 48 dB LAeq,T a closed window is assumed, where it is less than 48 dB LAeq,T an open window is assumed. This is based on a 13 dB reduction to achieve internal level of 35 dB LAeq,T.

5.3.4 Where the window is closed a reduction of 30 dB from outside to inside is assumed which is based on a standard double-glazed unit, masonry brick wall and standard window trickle vent in the open position.

Table 15: Internal Break-in Assessment (Mon-Fri)					
Receptor	Existing Measured Sound Level LAeq,T	Cumulative Sound Level LAeq,T	Window Open or Window Closed	Internal Sound Level LAeq,T	Impact Level

ESR1	68	68	Closed	38	LOAEL
ESR2	50	54	Closed	24	NOEL/NOAEL

Table 16: Internal Break-in Assessment (Sat & Sun)					
Receptor	Existing Measured Sound Level $L_{Aeq,T}$	Cumulative Sound Level $L_{Aeq,T}$	Window Open or Window Closed	Internal Sound Level $L_{Aeq,T}$	Impact Level
ESR1	54	57	Closed	27	NOEL/NOAEL
ESR2	47	53	Open	40	LOAEL

5.3.5 The assessment tables above show that during the weekday for ESR2 during the weekday shows the internal level of 35dB $L_{Aeq,T}$ will not be exceeded, except for at ESR1. However, it should be noted that this is due to existing ambient noise levels and this internal level would be achieved without this development. Overall, the impact would be at the NOEL level. No further action is needed to mitigate noise at this effect level for these receptors.

5.3.6 The assessment tables above show that during the weekend for ESR1 during the internal level of 35dB $L_{Aeq,T}$ will not be exceeded. The impact would be at the NOEL level. No further action is needed to mitigate noise at this effect level for these receptors.

5.3.7 The assessment tables above show that during the weekend for ESR2 the internal level of 35dB $L_{Aeq,T}$ will be exceeded. The impact would be at the LOAEL. At this affect level it is recommended that the impact is mitigated and reduced to a minimum. Additional mitigation is therefore required.

5.4 External Amenity Area Assessment

5.4.1 An assessment of external noise levels by comparing a predicted sound levels from the cumulative use of the AGP and car parks has been undertaken. **Table 7** presents the results of the assessment.

Table 17: External Amenity Assessment (Weekday and Weekend)		

Receptor	Predicted Sound Level $L_{Aeq,T}$	Impact Level
ESR1	58	LOAEL
ESR2	52	NOAEL

5.5 Summary

5.5.1 A summary of the impact assessment is presented in **Table 6** and **Table 7**. Based on the summary additional mitigation is required for receptors ESR1, which is properties on Hornbeam Road to the North of Halewood Leisure Centre.

5.5.2 The recommended mitigation is presented in Section 6 along with an assessment of the affect level with this mitigation in place.

Table 6: Summary Impact Assessment Conclusion (Weekday)					
Receptor	Change In Noise Level Assessment	Internal Break-in Assessment	External Amenity Area Assessment	Overall	Additional Mitigation Needed
ESR1	NOEL	LOAEL	LOAEL	LOAEL	Yes
ESR2	NOAEL	NOEL/NOAEL	NOAEL	NOEL/NOAEL	No

Table 79: Summary Impact Assessment Conclusion (Weekend)					
Receptor	Change In Noise Level Assessment	Internal Break-in Assessment	External Amenity Area Assessment	Overall	Additional Mitigation Needed
ESR1	NOAEL	NOEL/NOAEL	LOAEL	NOEL/NOAEL	No
ESR2	LOAEL	LOAEL	NOAEL	LOAEL	Yes

6 MITIGATION

- 6.1.1 Mitigation is recommended to control noise levels from the car park and AGP at Receptors ESR1 and ESR2.
- 6.1.2 The recommended mitigation is that the existing acoustic fence is extended to include the mini-AGP pitches. Additionally, it is recommended that a 1.8 m acoustic fence along the southern boundary of the site. Drawing ST21181/0002/0001 presents the barrier location.
- 6.1.3 All barriers should be constructed of suitable material to achieve a surface mass of 10-15kg/m² and be either 1.8m or 2.5m above ground height across the entirety of the length.

7 ASSESSMENT OF RESIDUAL EFFECTS

7.1.1 The residual effect with the recommended mitigation in place is presented below for each of the assessments undertaken to demonstrate the effectiveness of the mitigation.

7.2 External Change in Noise Level Assessment

7.2.1 An assessment of the change in the ambient noise level has been undertaken for weekday (Mon-Fri) and weekend periods (Sat & Sun) and compared to the assessment criteria in **Table 4** above.

7.2.2 **Table 208** and **Table 219** present the change in noise level during weekday and weekend periods for ESR1 to ESR2.

Table 208: Change in Noise Level during Weekday Periods (Mon-Fri)						
Receptor	Representative Monitoring Location	Measured dB LAeq,16hr	Predicted dB LAeq,16hr	Cumulative dB LAeq,16hr	Difference dB LAeq,T	Effect Level
ESR1	LT1	49	50	52	+3	Reduction from SOAEL to NOAEL
ESR2	LT2	49	48	52	+3	Maintained NOAEL
ESR1	LT3	68	49	68	+0	Maintained NOEL
ESR2	LT4	50	48	52	+2	Maintained NOAEL

7.2.3 The assessment tables above show that during the weekday for all receptors the change in noise level is less than +5dB which would equate to a final affect level of NOEL or NOAEL.

Table 219: Change in Noise Level during Weekend Periods (Sat & Sun)						
Receptor	Representative Monitoring Location	Measured dB LAeq,16hr	Predicted dB LAeq,16hr	Cumulative dB LAeq,16hr	Difference dB LAeq,T	Impact Threshold
ESR1	LT3	54	49	55	+1	Maintained NOAEL
ESR2	LT4	47	48	51	+4	Reduction to NOAEL

7.2.4 The assessment tables above show that during the weekday for ESR1 and ESR2 the change in noise level is less than +5dB which would equate to a final affect level of NOAEL.

7.3 Internal Break-in Assessment

7.3.1 An assessment of the expected break-in sound level has been undertaken and compared to the criteria in **Table 4** above. **Table** and **Table** present the results.

7.3.2 The internal break-in assessment has been based on either a window open or window closed scenario. Ther decision over whether an open or closed window is used is based on the existing ambient sound level.

Table 22: Internal Break-in Assessment (Mon-Fri)					
Receptor	Existing Measured Sound Level $L_{Aeq,T}$	Cumulative Sound Level $L_{Aeq,T}$	Window Open or Window Closed	Internal Sound Level $L_{Aeq,T}$	Impact Level
ESR1	68	68	Closed	38	Maintained LOAEL
ESR2	50	52	Closed	22	Maintained NOEL/NOAEL

Table 23: Internal Break-in Assessment (Sat & Sun)					
Receptor	Existing Measured Sound Level $L_{Aeq,T}$	Cumulative Sound Level $L_{Aeq,T}$	Window Open or Window Closed	Internal Sound Level $L_{Aeq,T}$	Impact Level
ESR1	54	55	Closed	25	Maintained NOEL/NOAEL
ESR2	47	51	Open	38	Maintained LOAEL

7.3.3 The assessment tables above show that during the weekday for ESR2 the internal level of 35dB $L_{Aeq,T}$ will not be exceeded, but would for at ESR1. However, it should be noted that this is due to existing ambient noise levels and this internal level would be achieved without this development. The final impact effect level is NOEL.

7.3.4 The assessment tables above show that during the weekend for ESR1 during the internal level of 35dB $L_{Aeq,T}$ will not be exceeded. The final impact effect level is NOEL.

7.3.5 The assessment tables above show that during the weekend for ESR2 the internal level of 35dB $L_{Aeq,T}$ will be exceeded. The final impact effect level is LOAEL.

7.4 External Amenity Area Assessment

7.4.1 An assessment of external noise levels by comparing a predicted sound levels from the cumulative use of the AGP and car parks has been undertaken. **Table 104** presents the results of the assessment.

Table 104: External Amenity Assessment (Weekday and Weekend)

Receptor	Predicted Sound Level $L_{Aeq,T}$	Impact Level
ESR1	49	Reduction to NOEL
ESR2	48	Reduction to NOEL

7.5 Summary

7.5.1 A summary of the residual impact assessment is presented in **Table 115** and **Table 126** with the recommended mitigation in place.

7.5.2 With the mitigation in place the overall effect is at the No Observed Adverse Effect Level (NOAEL). At this effect level noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Noise can slightly affect the acoustic character of the area but not such that there is a change in the quality of life

Table 115: Summary Impact Assessment Conclusion (Weekday)				
Receptor	Change In Noise Level Assessment	Internal Break-in Assessment	External Amenity Area Assessment	Overall
ESR1	Maintained NOEL	Maintained LOAEL	Reduction to NOEL	Reduction to NOAEL
ESR2	Maintained NOAEL	Maintained NOEL/NOAEL	Reduction to NOEL	Maintained NOAEL

Table 126: Summary Impact Assessment Conclusion (Weekend)				
Receptor	Change In Noise Level Assessment	Internal Break-in Assessment	External Amenity Area Assessment	Overall
ESR1	Maintained NOAEL	Maintained NOEL/NOAEL	Reduction to NOEL	Maintained NOAEL
ESR2	Reduction to NOAEL	Maintained LOAEL	Reduction to NOEL	Reduction to NOAEL

8 CONCLUSION

- 8.1.1 Wardell Armstrong LLP has carried out a noise assessment for the proposed redevelopment of Halewood Leisure Centre and Grace Park. The assessment has been carried out to consider the potential impact of the proposed noise sources on the existing receptors.
- 8.1.2 The noise assessment shows that the properties closet to the proposed AGP at Grace Park and the mini-AGP and car park at Halewood Leisure Centre require mitigation in the form of a 1.8m and 2.5m fences. The location and extent of the fencing is shown in drawings ST21181/0002/0001
- 8.1.3 With the mitigation in place the overall effect is at the No Observed Adverse Effect Level (NOAEL).
- 8.1.4 At this effect level noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Noise can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.

APPENDICES

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
15/11/2024 15:00	47	61	44	49	58	54	43	42	45	35	30
15/11/2024 15:15	47	60	45	48	56	52	42	42	45	35	31
15/11/2024 15:30	47	58	45	48	55	52	42	40	45	35	32
15/11/2024 15:45	46	58	41	48	56	52	41	41	44	34	25
15/11/2024 16:00	46	67	42	47	54	51	50	41	43	34	25
15/11/2024 16:15	47	57	45	49	55	50	41	42	46	35	23
15/11/2024 16:30	47	59	45	48	55	51	41	41	45	34	23
15/11/2024 16:45	47	57	44	48	55	51	42	41	45	34	23
15/11/2024 17:00	46	61	45	48	55	51	43	41	44	35	27
15/11/2024 17:15	57	83	43	48	53	50	42	42	54	53	28
15/11/2024 17:30	44	54	42	45	53	50	40	39	42	32	22
15/11/2024 17:45	47	77	42	49	53	53	43	43	45	37	30
15/11/2024 18:00	51	84	42	46	52	49	42	50	49	38	29
15/11/2024 18:15	44	52	42	45	53	49	40	39	42	32	21
15/11/2024 18:30	44	55	41	46	55	52	40	39	42	33	25
15/11/2024 18:45	46	67	43	48	56	53	43	41	44	37	31
15/11/2024 19:00	45	69	43	46	52	53	42	40	42	35	32
15/11/2024 19:15	46	60	43	48	52	48	42	39	44	36	25
15/11/2024 19:30	46	60	43	49	53	49	43	40	44	36	25
15/11/2024 19:45	51	81	43	51	53	51	44	49	48	41	34
15/11/2024 20:00	54	75	46	55	58	55	51	52	51	44	33
15/11/2024 20:15	49	67	45	52	55	50	43	47	47	36	25

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
15/11/2024 20:30	49	70	44	52	57	53	44	47	47	38	27
15/11/2024 20:45	46	56	44	48	53	48	39	41	45	33	19
15/11/2024 21:00	46	62	43	48	53	49	48	42	44	31	18
15/11/2024 21:15	45	58	42	47	51	46	42	41	43	30	17
15/11/2024 21:30	48	61	43	51	54	50	45	44	46	33	19
15/11/2024 21:45	46	66	41	46	54	48	41	43	44	31	18
15/11/2024 22:00	46	59	39	49	50	48	44	44	43	30	17
15/11/2024 22:15	44	59	39	48	51	47	44	43	41	27	16
15/11/2024 22:30	45	65	41	46	55	50	43	43	42	29	16
15/11/2024 22:45	44	53	41	46	52	46	37	39	42	32	19
15/11/2024 23:00	44	52	42	45	52	46	36	38	42	32	17
15/11/2024 23:15	43	51	41	44	51	45	36	38	41	28	16
15/11/2024 23:30	41	50	39	43	51	45	35	37	40	27	16
15/11/2024 23:45	43	56	38	47	50	46	40	40	40	29	17
16/11/2024 00:00	38	48	36	39	49	44	34	34	36	24	16
16/11/2024 00:15	39	49	37	40	49	44	34	35	37	24	16
16/11/2024 00:30	38	46	36	40	48	43	34	34	36	24	16
16/11/2024 00:45	38	47	36	40	46	42	33	35	36	28	16
16/11/2024 01:00	41	52	35	45	51	47	38	38	39	27	17
16/11/2024 01:15	44	56	33	50	49	47	41	41	42	29	18
16/11/2024 01:30	37	47	34	39	47	43	32	34	36	24	17
16/11/2024 01:45	36	45	34	37	49	42	32	32	33	22	16

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
16/11/2024 02:00	36	43	34	37	48	42	31	32	33	22	17
16/11/2024 02:15	36	47	33	37	47	42	32	32	33	22	16
16/11/2024 02:30	36	44	34	37	47	42	32	32	33	22	17
16/11/2024 02:45	36	42	33	37	47	41	32	32	33	22	16
16/11/2024 03:00	36	46	34	38	46	42	33	33	33	22	16
16/11/2024 03:15	39	58	35	40	48	45	34	33	35	30	27
16/11/2024 03:30	40	56	35	42	49	44	34	34	38	31	24
16/11/2024 03:45	36	46	34	37	45	42	31	32	34	24	20
16/11/2024 04:00	37	53	35	39	47	42	34	33	35	23	25
16/11/2024 04:15	39	55	36	42	46	42	32	34	37	26	30
16/11/2024 04:30	39	52	36	41	48	44	35	34	36	25	29
16/11/2024 04:45	37	53	34	38	46	40	32	32	34	23	27
16/11/2024 05:00	37	45	35	39	48	42	34	33	35	24	19
16/11/2024 05:15	39	46	37	41	48	45	36	35	37	26	19
16/11/2024 05:30	39	47	37	41	48	43	35	35	37	27	20
16/11/2024 05:45	40	54	37	42	48	43	42	37	37	27	18
16/11/2024 06:00	41	61	38	44	51	46	41	39	38	28	22
16/11/2024 06:15	46	61	38	50	56	52	49	45	40	29	20
16/11/2024 06:30	44	59	38	48	56	52	46	43	40	29	20
16/11/2024 06:45	45	66	39	49	50	46	42	41	43	35	21
16/11/2024 07:00	46	58	39	51	54	51	45	44	43	33	26
16/11/2024 07:15	45	60	40	48	56	52	44	42	42	34	32

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
16/11/2024 07:30	45	58	41	47	55	51	44	42	41	34	29
16/11/2024 07:45	48	62	41	53	56	54	51	47	42	35	26
16/11/2024 08:00	42	53	39	44	54	49	39	38	40	31	23
16/11/2024 08:15	43	52	41	45	52	47	42	38	40	33	24
16/11/2024 08:30	45	57	42	47	54	49	43	41	42	36	28
16/11/2024 08:45	44	58	41	46	51	49	41	38	41	36	32
16/11/2024 09:00	44	63	40	47	51	49	43	40	40	37	32
16/11/2024 09:15	44	58	40	46	52	49	45	40	40	36	29
16/11/2024 09:30	44	57	40	47	53	47	41	38	41	37	32
16/11/2024 09:45	46	64	40	46	53	48	46	42	42	37	33
16/11/2024 10:00	45	60	39	47	51	49	47	42	39	35	31
16/11/2024 10:15	42	54	38	44	51	47	40	36	37	34	31
16/11/2024 10:30	42	57	37	45	51	47	42	36	38	34	29
16/11/2024 10:45	43	62	38	45	51	47	38	34	39	36	31
16/11/2024 11:00	42	56	38	44	51	47	39	33	39	34	30
16/11/2024 11:15	43	58	39	45	54	48	46	37	39	34	28
16/11/2024 11:30	42	57	39	45	49	47	41	36	39	34	28
16/11/2024 11:45	44	69	40	46	52	49	43	37	40	37	31
16/11/2024 12:00	44	55	42	46	53	49	43	40	41	35	30
16/11/2024 12:15	46	61	42	48	54	52	47	42	42	34	29
16/11/2024 12:30	55	89	42	48	51	50	45	46	54	40	31
16/11/2024 12:45	71	96	41	58	51	49	46	65	69	62	50

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
16/11/2024 13:00	61	90	41	53	50	46	41	58	60	46	37
16/11/2024 13:15	44	60	40	46	51	51	45	41	40	32	29
16/11/2024 13:30	43	58	39	44	49	47	41	39	40	32	25
16/11/2024 13:45	44	65	40	45	51	52	43	41	41	33	30
16/11/2024 14:00	47	67	40	48	59	52	48	42	43	36	28
16/11/2024 14:15	44	57	40	46	51	48	41	38	41	34	27
16/11/2024 14:30	45	59	41	48	53	52	46	41	41	35	31
16/11/2024 14:45	43	69	40	45	50	46	39	40	40	34	32
16/11/2024 15:00	46	65	40	47	53	49	43	43	43	34	30
16/11/2024 15:15	44	60	40	47	54	50	41	37	41	35	33
16/11/2024 15:30	45	62	40	47	52	49	41	38	42	37	31
16/11/2024 15:45	40	62	37	41	49	44	36	34	38	28	23
16/11/2024 16:00	41	56	37	43	51	45	39	37	38	28	20
16/11/2024 16:15	41	60	37	43	49	45	40	39	38	30	21
16/11/2024 16:30	42	63	37	43	52	46	39	38	40	28	19
16/11/2024 16:45	40	57	37	42	48	45	35	34	39	27	19
16/11/2024 17:00	41	50	38	42	48	43	37	36	39	28	20
16/11/2024 17:15	41	56	38	43	51	47	42	37	38	27	20
16/11/2024 17:30	41	56	37	45	49	45	45	38	38	27	18
16/11/2024 17:45	39	56	37	40	48	42	36	34	37	26	18
16/11/2024 18:00	40	51	37	42	48	43	39	36	38	27	19
16/11/2024 18:15	41	62	37	43	48	49	40	37	38	27	20

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
16/11/2024 18:30	44	64	38	44	53	49	45	43	40	27	19
16/11/2024 18:45	46	66	37	45	55	50	48	45	40	29	25
16/11/2024 19:00	44	69	39	47	49	49	45	42	39	31	29
16/11/2024 19:15	41	56	38	43	47	44	42	38	39	28	22
16/11/2024 19:30	43	59	38	47	48	53	45	41	38	29	20
16/11/2024 19:45	44	61	38	47	53	51	47	42	39	27	19
16/11/2024 20:00	40	54	37	43	48	45	41	37	37	27	18
16/11/2024 20:15	45	61	37	48	49	51	49	43	37	25	19
16/11/2024 20:30	40	66	36	41	46	43	41	34	38	26	21
16/11/2024 20:45	38	45	35	40	46	42	33	33	36	25	18
16/11/2024 21:00	45	60	35	48	45	41	35	35	40	39	39
16/11/2024 21:15	36	44	33	38	45	41	34	31	34	23	18
16/11/2024 21:30	42	64	34	45	46	46	45	39	36	31	30
16/11/2024 21:45	39	61	35	41	46	43	37	33	38	29	20
16/11/2024 22:00	38	50	34	41	50	45	37	34	35	26	20
16/11/2024 22:15	36	43	34	38	44	39	36	31	34	24	19
16/11/2024 22:30	37	47	34	39	45	40	33	33	35	26	19
16/11/2024 22:45	36	48	33	39	42	41	36	32	34	23	19
16/11/2024 23:00	35	51	33	37	44	39	31	31	34	23	18
16/11/2024 23:15	38	60	31	38	44	44	41	36	32	20	17
16/11/2024 23:30	35	50	32	37	42	38	31	31	33	22	18
16/11/2024 23:45	35	43	32	37	41	38	33	31	32	22	18

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
17/11/2024 00:00	34	45	31	36	44	38	30	30	31	21	19
17/11/2024 00:15	32	45	29	34	43	37	28	27	29	19	17
17/11/2024 00:30	32	45	29	33	41	37	31	26	29	19	16
17/11/2024 00:45	35	56	28	38	43	41	42	29	28	20	18
17/11/2024 01:00	30	42	27	31	38	34	26	25	28	18	16
17/11/2024 01:15	30	44	28	32	39	34	27	26	28	17	16
17/11/2024 01:30	32	40	30	33	39	35	28	28	29	17	16
17/11/2024 01:45	33	47	29	35	42	39	34	29	29	20	20
17/11/2024 02:00	29	56	27	30	40	33	27	26	27	16	16
17/11/2024 02:15	30	62	27	29	38	33	27	27	28	17	16
17/11/2024 02:30	32	44	28	35	41	36	29	28	29	19	19
17/11/2024 02:45	31	43	28	34	40	37	31	28	28	19	19
17/11/2024 03:00	28	48	26	30	37	33	26	24	25	16	16
17/11/2024 03:15	28	46	26	29	39	34	26	24	26	15	15
17/11/2024 03:30	40	67	27	32	41	49	47	32	28	16	21
17/11/2024 03:45	49	70	33	52	44	55	56	44	32	19	20
17/11/2024 04:00	31	46	28	34	39	37	29	28	29	16	16
17/11/2024 04:15	36	60	27	31	39	37	41	36	26	16	17
17/11/2024 04:30	38	58	27	39	40	41	43	40	27	17	17
17/11/2024 04:45	31	46	27	33	39	34	27	25	28	16	23
17/11/2024 05:00	48	69	27	50	43	51	56	46	28	16	25
17/11/2024 05:15	38	57	30	43	41	48	43	36	31	18	16

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
17/11/2024 05:30	39	58	33	42	43	41	44	37	33	21	27
17/11/2024 05:45	40	60	36	42	45	43	42	37	37	25	19
17/11/2024 06:00	43	62	37	46	50	49	46	41	38	26	22
17/11/2024 06:15	40	59	33	42	44	46	44	37	34	22	20
17/11/2024 06:30	41	58	32	44	50	47	45	39	33	27	25
17/11/2024 06:45	37	53	31	41	45	42	40	34	32	24	27
17/11/2024 07:00	41	65	32	43	52	47	41	35	36	33	30
17/11/2024 07:15	42	67	31	44	46	43	44	38	36	35	30
17/11/2024 07:30	44	66	35	48	55	51	48	42	35	34	30
17/11/2024 07:45	42	58	37	45	46	44	41	37	36	33	34
17/11/2024 08:00	47	61	39	50	54	50	48	42	41	40	39
17/11/2024 08:15	46	56	41	50	52	48	47	43	43	35	31
17/11/2024 08:30	46	53	44	47	51	49	42	41	44	34	27
17/11/2024 08:45	47	61	43	50	51	50	51	45	44	33	25
17/11/2024 09:00	47	63	42	50	52	52	50	46	42	34	28
17/11/2024 09:15	47	61	39	52	49	49	47	46	42	38	36
17/11/2024 09:30	44	62	37	46	52	50	46	42	38	31	29
17/11/2024 09:45	41	56	37	43	48	46	40	36	38	30	27
17/11/2024 10:00	45	58	40	48	53	49	47	43	41	33	28
17/11/2024 10:15	46	62	41	49	52	49	49	44	41	34	30
17/11/2024 10:30	45	58	40	48	50	48	46	41	42	33	25
17/11/2024 10:45	48	65	42	52	51	50	48	46	44	36	32

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
17/11/2024 11:00	45	61	41	48	50	49	47	44	41	32	28
17/11/2024 11:15	45	56	42	47	51	49	44	41	42	32	27
17/11/2024 11:30	46	61	43	49	55	50	44	41	43	36	34
17/11/2024 11:45	46	59	43	49	55	50	48	43	43	34	30
17/11/2024 12:00	49	60	45	52	55	51	48	44	45	40	39
17/11/2024 12:15	50	62	44	53	54	53	50	48	45	40	38
17/11/2024 12:30	49	58	44	51	52	49	44	43	44	41	40
17/11/2024 12:45	48	63	43	50	52	49	42	39	42	41	40
17/11/2024 13:00	47	59	42	51	51	47	41	38	44	41	38
17/11/2024 13:15	47	61	42	51	53	48	45	43	42	40	39
17/11/2024 13:30	49	72	41	52	53	48	46	44	47	37	32
17/11/2024 13:45	52	69	41	56	52	48	46	45	47	45	44
17/11/2024 14:00	55	68	47	58	57	53	47	46	50	48	47
17/11/2024 14:15	52	62	45	55	51	47	41	41	47	47	45
17/11/2024 14:30	46	62	42	48	50	47	48	41	41	37	37
17/11/2024 14:45	50	59	43	53	50	44	42	39	44	44	43
17/11/2024 15:00	47	59	42	50	50	44	43	40	40	41	40
17/11/2024 15:15	54	67	48	56	55	54	51	49	48	47	45
17/11/2024 15:30	51	62	41	54	51	44	39	38	44	45	44
17/11/2024 15:45	52	74	37	44	51	51	51	50	48	42	30
17/11/2024 16:00	43	59	38	46	50	50	46	42	38	28	23
17/11/2024 16:15	43	58	36	44	50	48	45	42	37	29	25

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
17/11/2024 16:30	42	58	37	45	50	47	44	41	37	28	23
17/11/2024 16:45	44	60	40	46	49	46	46	41	40	30	25
17/11/2024 17:00	43	51	41	45	49	45	41	38	42	31	22
17/11/2024 17:15	46	58	43	49	51	50	46	43	44	33	21
17/11/2024 17:30	45	59	42	46	49	48	44	42	43	32	20
17/11/2024 17:45	45	59	42	46	51	46	46	41	43	32	20
17/11/2024 18:00	46	63	42	46	50	46	44	44	44	33	20
17/11/2024 18:15	43	50	41	44	48	43	39	36	41	31	18
17/11/2024 18:30	43	56	40	44	50	50	43	36	40	31	24
17/11/2024 18:45	44	56	40	47	55	52	45	41	40	30	18
17/11/2024 19:00	42	55	40	44	49	46	40	37	40	33	20
17/11/2024 19:15	43	55	40	45	50	46	40	37	41	30	20
17/11/2024 19:30	44	57	41	47	49	53	45	40	41	29	19
17/11/2024 19:45	46	61	42	47	50	52	48	44	43	32	20
17/11/2024 20:00	45	56	42	47	49	46	42	40	44	32	20
17/11/2024 20:15	45	51	42	46	52	47	40	38	43	31	19
17/11/2024 20:30	46	55	43	48	50	48	45	41	44	32	20
17/11/2024 20:45	48	57	44	51	50	49	44	42	46	38	34
17/11/2024 21:00	52	60	47	54	49	46	43	41	47	46	45
17/11/2024 21:15	47	68	38	50	52	50	42	40	43	38	37
17/11/2024 21:30	47	64	39	49	50	50	48	46	42	30	24
17/11/2024 21:45	44	58	42	46	49	45	39	38	43	32	23

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
17/11/2024 22:00	47	55	44	49	50	47	41	40	45	35	21
17/11/2024 22:15	45	55	42	46	48	46	42	39	43	32	20
17/11/2024 22:30	42	50	40	44	47	44	38	36	40	32	29
17/11/2024 22:45	45	55	40	47	45	41	35	34	39	39	37
17/11/2024 23:00	43	61	36	44	47	45	45	42	38	28	24
17/11/2024 23:15	41	62	35	42	47	43	44	38	36	29	19
17/11/2024 23:30	40	55	35	43	45	44	39	39	37	27	19
17/11/2024 23:45	42	60	37	43	50	46	43	41	39	28	19
18/11/2024 00:00	39	46	36	40	47	43	35	33	37	26	20
18/11/2024 00:15	39	54	35	42	46	43	36	33	36	30	27
18/11/2024 00:30	35	43	33	36	46	42	33	29	33	22	17
18/11/2024 00:45	35	48	31	37	43	42	35	32	31	21	16
18/11/2024 01:00	33	45	28	37	41	35	27	24	29	26	25
18/11/2024 01:15	40	60	29	41	45	52	42	33	30	28	27
18/11/2024 01:30	37	46	32	39	41	41	30	31	34	28	27
18/11/2024 01:45	37	51	31	41	41	38	30	31	34	29	28
18/11/2024 02:00	34	47	31	36	43	36	29	30	32	19	17
18/11/2024 02:15	36	43	33	38	42	38	32	31	35	21	16
18/11/2024 02:30	33	49	28	35	40	35	28	28	31	19	16
18/11/2024 02:45	30	45	27	32	39	33	25	26	28	17	16
18/11/2024 03:00	34	46	29	36	41	37	34	29	31	19	17
18/11/2024 03:15	36	44	32	38	43	39	29	32	34	20	17

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
18/11/2024 03:30	38	47	35	40	43	41	35	33	37	22	16
18/11/2024 03:45	40	50	36	42	43	43	41	36	38	23	16
18/11/2024 04:00	39	45	36	41	45	40	31	34	38	25	18
18/11/2024 04:15	41	53	36	43	45	42	40	37	39	24	17
18/11/2024 04:30	40	51	37	42	44	41	32	34	38	23	32
18/11/2024 04:45	43	50	40	45	45	41	33	38	42	31	22
18/11/2024 05:00	46	53	44	48	47	44	43	41	45	36	23
18/11/2024 05:15	49	54	46	51	50	46	42	42	48	36	28
18/11/2024 05:30	51	57	49	53	53	49	44	46	50	37	19
18/11/2024 05:45	51	57	49	53	52	48	46	45	50	37	20
18/11/2024 06:00	53	58	50	55	52	51	48	47	52	39	28
18/11/2024 06:15	54	59	52	55	53	49	44	47	53	40	26
18/11/2024 06:30	54	62	52	56	52	49	44	49	54	40	27
18/11/2024 06:45	54	59	52	56	54	50	46	48	54	41	22
18/11/2024 07:00	56	62	54	58	54	50	45	49	55	43	29
18/11/2024 07:15	55	64	53	56	55	51	45	49	54	42	30
18/11/2024 07:30	57	73	52	56	58	56	55	54	54	42	23
18/11/2024 07:45	52	58	50	53	57	52	45	47	51	37	25
18/11/2024 08:00	55	70	51	55	58	60	53	52	52	38	28
18/11/2024 08:15	53	57	51	54	58	52	48	48	52	38	22
18/11/2024 08:30	54	60	53	56	59	54	49	49	53	39	22
18/11/2024 08:45	56	66	54	57	58	56	50	51	55	42	22

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
18/11/2024 09:00	56	65	54	57	58	55	50	51	55	42	23
18/11/2024 09:15	56	62	54	58	57	53	49	51	55	42	26
18/11/2024 09:30	58	74	53	57	61	58	56	56	55	43	25
18/11/2024 09:45	56	62	54	58	60	55	53	51	55	41	22
18/11/2024 10:00	53	69	49	54	58	55	51	52	51	35	22
18/11/2024 10:15	50	64	47	51	57	52	45	47	48	33	25
18/11/2024 10:30	50	66	44	51	57	54	50	49	46	31	20
18/11/2024 10:45	48	61	43	51	55	52	44	41	43	42	39
18/11/2024 11:00	53	75	44	49	57	59	56	51	47	38	26
18/11/2024 11:15	49	64	43	49	58	52	50	47	46	34	22
18/11/2024 11:30	54	71	44	54	57	61	61	52	46	35	25
18/11/2024 11:45	48	68	44	51	56	54	47	46	46	35	27
18/11/2024 12:00	48	60	43	51	57	57	51	45	44	32	24
18/11/2024 12:15	47	60	43	48	58	53	46	43	44	33	24
18/11/2024 12:30	51	68	44	52	58	55	50	48	47	39	28
18/11/2024 12:45	46	64	43	48	56	49	44	42	45	34	25
18/11/2024 13:00	48	59	45	49	56	50	44	43	46	35	24
18/11/2024 13:15	54	74	45	52	55	59	54	53	50	42	29
18/11/2024 13:30	51	68	46	51	56	56	49	49	48	40	26
18/11/2024 13:45	50	56	48	51	54	49	45	44	48	37	30
18/11/2024 14:00	52	64	50	54	55	52	50	47	51	40	31
18/11/2024 14:15	51	61	49	52	55	50	44	44	49	39	34

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
18/11/2024 14:30	52	65	48	54	59	55	51	48	49	39	36
18/11/2024 14:45	52	66	49	53	58	54	50	48	49	39	35
18/11/2024 15:00	52	69	50	54	58	53	47	48	51	41	33
18/11/2024 15:15	52	72	49	52	59	53	47	48	51	41	32
18/11/2024 15:30	58	77	51	58	59	62	61	55	54	46	33
18/11/2024 15:45	52	60	51	54	56	52	45	45	51	40	24
18/11/2024 16:00	55	69	53	56	56	54	52	51	54	42	25
18/11/2024 16:15	53	62	52	55	54	51	45	46	53	42	27
18/11/2024 16:30	53	60	52	54	54	51	46	47	52	42	31
18/11/2024 16:45	53	65	51	54	55	50	45	46	52	42	33
18/11/2024 17:00	53	60	52	55	55	51	44	46	52	43	36
18/11/2024 17:15	53	63	51	55	55	49	45	46	51	44	37
18/11/2024 17:30	54	63	52	55	57	53	47	48	52	45	38
18/11/2024 17:45	56	77	52	56	57	55	59	55	52	45	39
18/11/2024 18:00	53	64	52	54	55	55	47	46	51	44	39
18/11/2024 18:15	56	76	51	56	56	58	53	53	53	46	38
18/11/2024 18:30	54	67	51	56	55	52	48	48	52	45	39
18/11/2024 18:45	53	66	51	55	55	51	45	47	52	45	38
18/11/2024 19:00	52	64	49	54	55	51	46	46	50	43	36
18/11/2024 19:15	50	65	48	52	53	50	45	45	48	42	35
18/11/2024 19:30	52	66	49	55	55	50	44	46	50	44	37
18/11/2024 19:45	56	74	50	57	56	56	55	54	52	46	37

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
18/11/2024 20:00	51	66	48	52	56	51	44	45	49	42	35
18/11/2024 20:15	50	60	48	52	55	50	43	45	48	39	31
18/11/2024 20:30	49	62	47	51	54	49	42	45	48	38	30
18/11/2024 20:45	49	64	47	50	54	49	42	45	47	37	28
18/11/2024 21:00	49	55	47	50	54	48	42	45	47	36	28
18/11/2024 21:15	49	56	47	51	55	49	43	46	48	36	27
18/11/2024 21:30	49	54	47	51	55	50	44	46	47	35	26
18/11/2024 21:45	48	59	46	50	54	51	44	45	46	34	25
18/11/2024 22:00	48	54	46	50	53	48	43	44	47	35	26
18/11/2024 22:15	47	52	45	49	53	47	40	43	45	33	25
18/11/2024 22:30	48	57	46	50	55	49	44	45	47	35	26
18/11/2024 22:45	47	55	44	49	54	48	41	43	45	34	24
18/11/2024 23:00	46	53	44	48	53	47	41	43	45	33	23
18/11/2024 23:15	46	58	43	47	52	47	42	43	44	31	22
18/11/2024 23:30	49	55	45	51	53	48	41	44	48	36	24
18/11/2024 23:45	46	55	43	49	54	49	41	43	45	33	22
19/11/2024 00:00	44	50	41	46	53	47	39	40	42	28	18
19/11/2024 00:15	43	53	40	45	53	48	39	41	40	27	18
19/11/2024 00:30	43	54	40	45	53	49	40	41	41	27	17
19/11/2024 00:45	44	55	42	46	54	49	43	42	42	29	17
19/11/2024 01:00	43	54	41	45	56	50	40	40	41	27	16
19/11/2024 01:15	41	49	39	43	54	47	38	39	39	24	16

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
19/11/2024 01:30	40	49	38	43	52	46	37	38	38	23	15
19/11/2024 01:45	39	47	37	41	49	44	36	37	37	21	16
19/11/2024 02:00	41	50	39	43	50	46	37	38	38	23	15
19/11/2024 02:15	41	54	38	43	49	45	41	39	38	24	21
19/11/2024 02:30	41	49	39	43	49	44	36	38	38	26	30
19/11/2024 02:45	41	48	39	43	50	46	38	38	37	26	30
19/11/2024 03:00	40	47	38	42	51	44	37	38	37	24	22
19/11/2024 03:15	41	50	39	43	50	43	36	39	39	25	18
19/11/2024 03:30	41	51	38	43	52	44	36	38	39	25	17
19/11/2024 03:45	42	48	39	44	49	44	38	39	40	26	17
19/11/2024 04:00	41	48	39	43	51	43	34	38	39	25	16
19/11/2024 04:15	41	49	39	43	51	44	39	39	39	24	16
19/11/2024 04:30	43	52	40	44	50	44	36	40	41	27	15
19/11/2024 04:45	43	50	41	44	50	45	36	40	41	27	16
19/11/2024 05:00	46	53	43	48	50	44	39	43	45	30	17
19/11/2024 05:15	50	54	48	51	53	47	44	46	48	34	18
19/11/2024 05:30	49	57	48	51	53	48	45	46	48	33	18
19/11/2024 05:45	48	57	47	50	53	47	45	45	47	32	18
19/11/2024 06:00	49	55	48	51	53	46	41	46	48	32	17
19/11/2024 06:15	52	68	49	53	58	51	49	50	50	34	17
19/11/2024 06:30	53	64	51	55	55	50	50	50	51	34	17
19/11/2024 06:45	53	58	52	55	56	50	47	50	52	35	18

Table A.1 – Measured Sound Levels at LT1											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63Hz	125H z	250H z	500H z	1Khz	2KHZ	4KHz
19/11/2024 07:00	50	55	48	51	55	49	44	47	48	30	18
19/11/2024 07:15	47	55	44	50	56	50	47	45	45	29	19
19/11/2024 07:30	52	63	50	54	58	52	47	49	51	35	24
19/11/2024 07:45	55	75	50	54	58	52	52	51	54	39	27
19/11/2024 08:00	50	55	49	52	57	50	45	47	49	31	24
19/11/2024 08:15	51	62	48	53	58	52	51	48	49	35	26
19/11/2024 08:30	51	80	48	51	58	51	45	47	48	33	44
19/11/2024 08:45	53	67	50	53	59	54	50	51	51	34	21
19/11/2024 09:00	53	60	51	54	58	52	46	50	51	34	23
19/11/2024 09:15	51	62	50	53	58	52	50	49	50	30	20
19/11/2024 09:30	49	60	48	50	59	53	46	47	47	29	22
19/11/2024 09:45	49	59	48	51	58	52	44	47	47	30	26
19/11/2024 10:00	50	62	46	53	58	52	51	49	47	29	26
19/11/2024 10:15	51	66	46	51	57	56	49	50	48	37	26
19/11/2024 10:30	48	55	46	49	57	50	43	46	46	29	20
19/11/2024 10:45	47	61	45	48	59	52	46	46	43	28	19
19/11/2024 11:00	50	68	45	48	57	54	50	49	46	34	26
19/11/2024 11:15	45	61	43	47	57	51	45	43	42	27	19
19/11/2024 11:30	49	69	43	49	56	55	52	49	44	31	21
19/11/2024 11:45	46	67	43	47	56	50	46	45	43	29	27

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
15/11/2024 15:30	44	64	40	45	57	52	43	38	39	36	36
15/11/2024 15:45	47	66	42	47	57	50	44	43	43	40	35
15/11/2024 16:00	44	56	41	46	57	49	42	40	41	34	26
15/11/2024 16:15	44	61	40	44	56	52	49	38	38	34	26
15/11/2024 16:30	43	61	40	44	56	50	40	37	40	34	26
15/11/2024 16:45	43	54	40	44	55	47	41	39	40	34	25
15/11/2024 17:00	43	53	40	45	55	48	41	37	40	35	24
15/11/2024 17:15	43	52	40	45	56	50	43	38	39	33	24
15/11/2024 17:30	42	50	40	44	56	49	41	38	38	32	23
15/11/2024 17:45	45	62	39	45	54	47	40	42	41	37	28
15/11/2024 18:00	44	64	40	46	54	48	43	42	40	35	26
15/11/2024 18:15	44	60	41	45	57	49	41	40	41	35	26
15/11/2024 18:30	43	59	40	43	55	48	40	40	40	32	23
15/11/2024 18:45	42	49	41	43	56	47	41	38	39	31	21
15/11/2024 19:00	43	59	39	45	56	49	45	40	38	30	20
15/11/2024 19:15	42	58	40	43	55	50	42	39	38	31	21
15/11/2024 19:30	42	49	40	43	55	48	41	39	38	30	19
15/11/2024 19:45	41	52	38	43	54	47	43	38	37	29	19
15/11/2024 20:00	42	54	38	44	54	48	42	40	38	31	23
15/11/2024 20:15	53	71	41	55	61	54	52	52	48	42	32
15/11/2024 20:30	45	62	40	47	56	48	42	45	41	32	20
15/11/2024 20:45	45	60	39	49	55	48	43	45	41	34	24
15/11/2024 21:00	41	51	39	43	55	48	40	37	38	30	21
15/11/2024 21:15	42	55	37	42	53	48	44	39	37	29	19

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
15/11/2024 21:30	41	53	36	41	51	45	41	39	36	31	20
15/11/2024 21:45	42	54	37	44	53	48	45	40	37	27	16
15/11/2024 22:00	39	47	37	40	52	45	38	36	35	27	17
15/11/2024 22:15	42	56	36	46	52	47	44	42	36	27	21
15/11/2024 22:30	42	56	36	45	51	46	43	41	36	26	14
15/11/2024 22:45	40	50	36	41	52	46	40	38	35	25	14
15/11/2024 23:00	38	47	36	40	51	44	37	35	35	27	15
15/11/2024 23:15	38	51	36	39	52	45	36	34	35	27	17
15/11/2024 23:30	37	41	35	38	51	44	36	33	33	24	14
15/11/2024 23:45	40	62	34	38	51	44	38	38	35	31	24
16/11/2024 00:00	38	54	34	39	52	44	39	37	33	25	16
16/11/2024 00:15	35	50	32	36	50	43	34	30	31	25	16
16/11/2024 00:30	34	43	32	35	49	42	34	30	29	22	14
16/11/2024 00:45	35	46	32	36	50	44	34	31	30	23	14
16/11/2024 01:00	33	39	31	34	48	42	32	29	29	22	13
16/11/2024 01:15	35	41	31	38	49	42	36	31	30	23	15
16/11/2024 01:30	37	46	31	42	48	42	39	34	32	24	15
16/11/2024 01:45	32	44	30	34	48	40	32	29	28	20	13
16/11/2024 02:00	32	37	30	33	47	39	31	28	28	20	14
16/11/2024 02:15	32	43	31	33	47	40	31	29	28	21	15
16/11/2024 02:30	32	37	31	33	46	40	31	29	28	21	14
16/11/2024 02:45	32	41	30	34	47	40	32	29	28	20	14
16/11/2024 03:00	31	35	30	32	44	38	30	28	28	20	13
16/11/2024 03:15	33	40	31	35	47	42	34	30	29	20	15

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
16/11/2024 03:30	34	49	31	35	46	43	32	30	29	24	20
16/11/2024 03:45	34	48	30	36	46	39	32	29	30	25	24
16/11/2024 04:00	33	42	30	34	43	37	30	28	28	22	24
16/11/2024 04:15	33	44	31	35	45	40	33	30	28	21	20
16/11/2024 04:30	33	38	31	35	45	39	31	29	29	21	24
16/11/2024 04:45	35	45	32	37	45	42	35	30	30	24	21
16/11/2024 05:00	36	51	32	38	55	46	37	30	31	25	19
16/11/2024 05:15	38	53	32	40	57	48	40	32	31	26	21
16/11/2024 05:30	38	52	33	40	55	47	38	33	33	28	23
16/11/2024 05:45	39	51	34	41	57	48	40	34	33	27	21
16/11/2024 06:00	42	58	35	44	58	49	42	36	37	32	27
16/11/2024 06:15	41	53	36	44	57	49	43	38	35	29	22
16/11/2024 06:30	45	59	37	47	57	51	48	43	36	30	22
16/11/2024 06:45	43	58	37	46	58	50	45	40	38	32	24
16/11/2024 07:00	43	55	37	46	58	50	45	39	38	32	23
16/11/2024 07:15	43	56	38	46	57	49	43	39	39	35	30
16/11/2024 07:30	46	60	39	49	57	49	43	38	42	41	35
16/11/2024 07:45	45	57	40	48	58	50	45	42	40	38	31
16/11/2024 08:00	49	72	40	51	56	52	50	46	44	40	31
16/11/2024 08:15	43	54	40	45	58	50	42	38	39	33	26
16/11/2024 08:30	45	62	42	46	59	50	45	41	41	35	27
16/11/2024 08:45	47	62	42	49	58	51	44	41	42	41	31
16/11/2024 09:00	47	56	42	48	59	52	44	41	42	39	33
16/11/2024 09:15	48	57	45	51	58	54	45	44	45	41	35

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
16/11/2024 09:30	48	57	45	50	58	51	47	43	44	40	34
16/11/2024 09:45	48	57	44	52	56	49	42	43	45	41	33
16/11/2024 10:00	48	67	45	49	57	50	45	45	45	40	35
16/11/2024 10:15	48	60	45	50	59	52	47	45	44	40	33
16/11/2024 10:30	47	59	44	48	57	49	43	42	43	40	34
16/11/2024 10:45	47	57	43	49	56	48	44	42	43	39	31
16/11/2024 11:00	46	58	43	48	57	49	40	40	43	39	33
16/11/2024 11:15	47	58	44	49	57	49	42	41	44	40	33
16/11/2024 11:30	49	67	44	50	57	49	45	45	46	42	36
16/11/2024 11:45	47	59	44	49	55	49	42	42	44	39	32
16/11/2024 12:00	47	66	43	48	57	52	45	42	43	39	32
16/11/2024 12:15	45	53	43	47	57	49	43	40	41	37	30
16/11/2024 12:30	45	54	43	46	58	50	44	40	41	36	29
16/11/2024 12:45	47	57	43	49	59	52	47	43	42	37	29
16/11/2024 13:00	47	60	42	49	58	51	45	41	43	38	32
16/11/2024 13:15	50	71	42	46	55	47	40	38	45	45	40
16/11/2024 13:30	47	56	43	49	59	52	45	42	43	38	30
16/11/2024 13:45	48	66	44	51	62	53	45	44	45	40	29
16/11/2024 14:00	48	66	43	50	61	54	46	44	43	39	29
16/11/2024 14:15	49	70	43	49	60	55	50	47	44	39	30
16/11/2024 14:30	47	57	44	50	62	54	46	42	44	39	29
16/11/2024 14:45	48	60	43	52	59	53	48	44	45	39	29
16/11/2024 15:00	46	56	43	47	58	50	41	41	43	38	29
16/11/2024 15:15	45	53	42	47	55	48	41	41	42	36	27

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
16/11/2024 15:30	48	62	42	49	58	49	45	45	44	38	32
16/11/2024 15:45	48	58	43	51	57	51	44	44	45	39	30
16/11/2024 16:00	46	63	42	47	57	48	41	42	43	37	29
16/11/2024 16:15	47	65	43	49	58	49	43	43	45	39	29
16/11/2024 16:30	46	65	42	47	55	47	42	42	43	37	27
16/11/2024 16:45	46	59	42	49	55	47	42	42	44	37	22
16/11/2024 17:00	44	55	42	46	57	49	40	40	42	35	24
16/11/2024 17:15	48	62	43	50	60	52	44	44	45	39	27
16/11/2024 17:30	51	66	43	48	61	52	45	41	42	48	31
16/11/2024 17:45	47	59	43	49	55	49	45	43	44	38	24
16/11/2024 18:00	46	59	42	48	54	47	41	43	44	37	24
16/11/2024 18:15	46	60	42	47	56	49	43	43	43	35	25
16/11/2024 18:30	47	62	42	48	56	49	43	43	43	37	27
16/11/2024 18:45	48	67	43	50	57	52	49	47	44	36	25
16/11/2024 19:00	50	66	42	51	56	51	50	49	44	39	31
16/11/2024 19:15	49	69	43	49	60	52	46	46	46	38	28
16/11/2024 19:30	52	71	43	52	59	51	46	48	49	43	33
16/11/2024 19:45	50	73	43	52	56	53	46	49	46	40	31
16/11/2024 20:00	46	63	42	49	56	52	48	44	42	35	25
16/11/2024 20:15	46	62	41	48	58	50	44	42	43	37	25
16/11/2024 20:30	46	57	41	49	57	52	49	43	39	33	22
16/11/2024 20:45	44	58	40	45	55	48	41	40	42	35	22
16/11/2024 21:00	42	56	38	44	56	47	38	38	39	33	20
16/11/2024 21:15	47	60	40	51	61	52	44	42	42	39	35

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
16/11/2024 21:30	42	57	39	44	55	47	39	38	39	33	25
16/11/2024 21:45	48	64	40	51	64	56	48	44	43	38	30
16/11/2024 22:00	46	66	40	47	53	46	40	40	43	38	31
16/11/2024 22:15	42	53	39	44	55	47	38	38	39	34	25
16/11/2024 22:30	43	57	39	45	60	51	43	37	38	32	24
16/11/2024 22:45	46	65	40	48	59	50	43	44	42	36	25
16/11/2024 23:00	45	64	38	47	62	54	45	40	40	32	25
16/11/2024 23:15	43	57	38	45	61	51	43	38	38	32	25
16/11/2024 23:30	43	64	36	44	61	53	45	39	37	30	24
16/11/2024 23:45	43	55	37	46	61	52	45	38	37	31	23
17/11/2024 00:00	44	64	38	47	62	54	45	39	38	31	24
17/11/2024 00:15	43	54	37	46	60	51	43	38	37	30	23
17/11/2024 00:30	41	60	36	43	60	51	42	36	36	29	22
17/11/2024 00:45	39	46	36	41	54	45	37	35	36	27	19
17/11/2024 01:00	38	50	35	40	52	45	42	34	34	26	18
17/11/2024 01:15	38	52	35	39	52	44	34	33	34	28	21
17/11/2024 01:30	39	56	34	41	55	46	37	35	35	27	20
17/11/2024 01:45	38	51	34	38	55	46	38	33	33	24	17
17/11/2024 02:00	44	58	37	47	63	54	46	39	35	29	26
17/11/2024 02:15	38	48	35	39	52	45	36	34	34	24	19
17/11/2024 02:30	36	40	34	37	47	38	32	34	33	22	15
17/11/2024 02:45	41	58	34	43	60	51	43	36	34	28	26
17/11/2024 03:00	45	59	35	48	63	54	48	40	36	31	29
17/11/2024 03:15	36	45	34	38	47	40	33	34	33	22	15

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
17/11/2024 03:30	36	42	35	37	48	39	33	34	34	21	15
17/11/2024 03:45	36	41	33	37	46	38	31	33	33	21	17
17/11/2024 04:00	48	64	33	51	49	55	55	44	34	25	17
17/11/2024 04:15	36	50	33	38	45	38	38	34	31	23	17
17/11/2024 04:30	35	43	32	36	49	41	33	31	31	22	17
17/11/2024 04:45	42	58	35	45	51	45	45	42	33	23	20
17/11/2024 05:00	37	43	36	38	48	40	32	35	35	23	15
17/11/2024 05:15	48	63	36	50	49	51	54	46	35	24	15
17/11/2024 05:30	39	48	36	41	47	49	39	37	35	24	16
17/11/2024 05:45	41	57	36	43	47	42	45	39	35	26	19
17/11/2024 06:00	40	53	36	42	48	43	42	37	35	27	20
17/11/2024 06:15	43	54	37	46	50	48	46	41	36	27	20
17/11/2024 06:30	42	54	38	44	54	49	45	39	38	28	20
17/11/2024 06:45	44	55	40	46	51	46	46	41	39	29	21
17/11/2024 07:00	43	51	41	45	52	46	43	41	40	29	24
17/11/2024 07:15	43	55	40	45	51	43	42	40	40	33	28
17/11/2024 07:30	44	65	40	45	51	46	42	41	40	37	27
17/11/2024 07:45	46	56	41	49	52	48	49	44	40	34	28
17/11/2024 08:00	44	56	41	46	51	45	44	41	40	35	30
17/11/2024 08:15	44	59	40	45	52	46	43	40	40	34	32
17/11/2024 08:30	46	58	40	50	53	49	49	44	40	37	33
17/11/2024 08:45	42	52	40	44	53	46	42	40	39	31	27
17/11/2024 09:00	46	62	41	49	52	50	52	45	39	31	26
17/11/2024 09:15	48	62	42	50	54	51	51	47	40	32	30

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
17/11/2024 09:30	46	57	41	49	52	47	46	45	40	34	30
17/11/2024 09:45	47	59	43	48	54	50	48	44	42	37	29
17/11/2024 10:00	44	56	42	46	53	47	41	41	42	35	29
17/11/2024 10:15	47	60	43	48	55	48	48	44	43	36	34
17/11/2024 10:30	48	62	44	51	63	54	50	45	43	37	30
17/11/2024 10:45	47	59	43	50	56	49	48	44	43	38	28
17/11/2024 11:00	48	57	43	51	58	51	48	46	42	37	31
17/11/2024 11:15	46	55	42	48	54	49	46	43	42	35	29
17/11/2024 11:30	43	54	40	45	53	46	42	40	39	33	28
17/11/2024 11:45	47	58	43	49	58	51	46	43	43	38	32
17/11/2024 12:00	47	61	43	49	56	51	47	43	44	38	32
17/11/2024 12:15	49	61	44	52	66	56	50	45	44	40	35
17/11/2024 12:30	50	59	45	52	64	56	51	46	44	40	36
17/11/2024 12:45	49	62	46	52	58	52	47	46	45	42	38
17/11/2024 13:00	49	66	45	50	57	49	43	44	44	41	38
17/11/2024 13:15	48	60	45	50	56	48	41	41	45	41	35
17/11/2024 13:30	48	58	45	50	56	49	45	44	43	40	37
17/11/2024 13:45	46	54	44	48	55	48	42	42	43	38	32
17/11/2024 14:00	52	66	44	57	55	49	49	46	47	46	44
17/11/2024 14:15	52	70	45	54	55	49	44	46	48	46	44
17/11/2024 14:30	51	63	47	53	56	47	44	43	46	45	42
17/11/2024 14:45	48	57	46	49	56	49	44	43	44	41	36
17/11/2024 15:00	49	59	46	51	60	49	48	44	45	42	39
17/11/2024 15:15	48	57	46	50	59	49	45	43	44	41	38

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
17/11/2024 15:30	52	64	48	54	57	53	50	49	47	44	42
17/11/2024 15:45	50	59	47	52	57	49	43	44	46	44	41
17/11/2024 16:00	52	69	46	49	58	53	49	48	48	43	37
17/11/2024 16:15	48	59	45	50	56	51	47	44	44	39	34
17/11/2024 16:30	47	59	45	50	55	50	46	44	44	38	33
17/11/2024 16:45	47	57	44	49	55	50	45	44	43	38	31
17/11/2024 17:00	48	56	45	50	57	50	47	43	44	39	33
17/11/2024 17:15	49	55	46	50	56	49	45	44	46	39	33
17/11/2024 17:30	49	57	47	51	56	52	46	45	47	38	31
17/11/2024 17:45	49	57	47	50	55	50	45	44	47	39	28
17/11/2024 18:00	48	55	47	50	56	50	46	45	46	36	26
17/11/2024 18:15	50	62	48	50	56	50	47	47	48	36	27
17/11/2024 18:30	48	56	47	49	57	49	43	44	47	35	27
17/11/2024 18:45	48	54	47	50	56	52	44	43	46	36	27
17/11/2024 19:00	48	60	46	50	57	51	46	46	45	35	25
17/11/2024 19:15	47	59	44	48	55	49	45	46	43	31	24
17/11/2024 19:30	45	56	43	47	55	49	43	43	42	31	23
17/11/2024 19:45	45	57	43	46	54	53	46	42	42	30	22
17/11/2024 20:00	46	60	42	47	54	53	47	45	41	30	21
17/11/2024 20:15	43	49	42	45	53	46	42	40	41	30	21
17/11/2024 20:30	43	62	40	43	53	47	41	41	40	32	25
17/11/2024 20:45	43	54	40	44	53	48	44	40	39	29	22
17/11/2024 21:00	42	52	39	44	53	47	42	39	38	31	26
17/11/2024 21:15	50	61	46	53	52	47	45	43	44	44	44

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
17/11/2024 21:30	45	55	39	48	52	46	41	40	39	38	37
17/11/2024 21:45	44	57	37	46	52	50	46	43	37	30	28
17/11/2024 22:00	39	45	38	41	51	44	37	36	36	29	26
17/11/2024 22:15	41	45	39	42	51	44	40	38	38	29	24
17/11/2024 22:30	42	52	40	43	51	46	42	40	39	28	22
17/11/2024 22:45	41	45	39	42	50	45	38	38	38	28	24
17/11/2024 23:00	43	57	40	45	49	42	36	37	39	36	34
17/11/2024 23:15	42	58	37	42	51	45	41	41	37	31	27
17/11/2024 23:30	42	56	38	44	51	45	45	41	36	28	24
17/11/2024 23:45	41	53	38	43	50	43	39	40	37	28	23
18/11/2024 00:00	41	57	36	41	50	43	41	41	36	26	20
18/11/2024 00:15	38	43	36	39	49	43	35	35	35	25	20
18/11/2024 00:30	38	46	36	40	48	41	35	35	35	28	26
18/11/2024 00:45	36	42	34	38	47	39	32	33	33	24	20
18/11/2024 01:00	37	44	34	38	47	40	35	35	34	23	18
18/11/2024 01:15	37	46	35	40	48	39	32	34	34	27	23
18/11/2024 01:30	40	55	35	41	48	50	42	35	34	26	24
18/11/2024 01:45	39	52	36	41	46	42	33	35	36	28	27
18/11/2024 02:00	40	48	37	42	47	42	33	36	38	28	26
18/11/2024 02:15	39	46	37	41	48	41	33	36	37	25	22
18/11/2024 02:30	41	51	38	43	48	41	35	37	40	27	22
18/11/2024 02:45	39	48	35	41	46	39	32	34	37	26	20
18/11/2024 03:00	38	45	35	40	47	38	31	35	35	25	20
18/11/2024 03:15	42	59	36	42	48	42	39	39	38	31	32

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
18/11/2024 03:30	42	55	39	44	49	43	36	39	40	29	25
18/11/2024 03:45	44	62	40	44	48	43	39	42	42	31	27
18/11/2024 04:00	44	51	41	46	48	45	42	39	42	29	21
18/11/2024 04:15	45	55	42	47	49	42	35	39	44	31	20
18/11/2024 04:30	45	51	42	46	50	44	41	41	43	29	22
18/11/2024 04:45	44	50	41	46	50	43	35	39	43	29	22
18/11/2024 05:00	58	67	44	64	50	44	36	42	45	56	35
18/11/2024 05:15	63	68	49	66	51	46	43	43	47	62	40
18/11/2024 05:30	52	58	49	54	53	48	42	46	52	40	25
18/11/2024 05:45	54	60	52	55	56	50	45	48	52	41	26
18/11/2024 06:00	53	58	51	54	56	50	48	48	51	40	26
18/11/2024 06:15	54	59	52	56	55	51	47	49	53	41	26
18/11/2024 06:30	55	59	53	57	57	52	48	49	54	43	29
18/11/2024 06:45	56	62	54	57	56	51	45	51	55	44	28
18/11/2024 07:00	55	60	53	57	58	52	47	50	53	43	27
18/11/2024 07:15	56	61	54	57	58	51	47	51	54	45	32
18/11/2024 07:30	56	59	54	57	59	53	47	51	54	44	32
18/11/2024 07:45	56	71	53	57	60	55	53	53	54	44	32
18/11/2024 08:00	55	70	52	55	60	55	51	51	53	40	29
18/11/2024 08:15	55	68	51	56	60	60	53	52	52	40	34
18/11/2024 08:30	54	59	53	55	60	53	49	49	53	40	28
18/11/2024 08:45	55	61	53	56	61	54	49	51	53	41	28
18/11/2024 09:00	55	63	54	57	60	53	48	50	54	41	28
18/11/2024 09:15	55	59	54	57	60	55	50	51	54	42	28

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
18/11/2024 09:30	56	60	54	57	59	54	49	51	55	42	27
18/11/2024 09:45	57	73	53	56	62	57	55	55	54	42	29
18/11/2024 10:00	56	60	54	57	61	55	51	51	54	42	29
18/11/2024 10:15	54	65	50	54	60	55	52	52	51	36	26
18/11/2024 10:30	50	57	48	51	58	51	44	47	48	35	25
18/11/2024 10:45	51	64	46	52	60	55	53	50	47	35	28
18/11/2024 11:00	46	55	44	48	57	51	44	41	44	35	28
18/11/2024 11:15	53	73	45	50	60	58	56	50	47	38	30
18/11/2024 11:30	50	61	45	51	58	52	50	48	46	36	26
18/11/2024 11:45	54	69	44	54	58	59	60	51	46	41	33
18/11/2024 12:00	48	57	44	50	58	51	47	44	45	35	26
18/11/2024 12:15	49	59	44	52	58	56	52	45	44	35	27
18/11/2024 12:30	47	58	44	49	56	51	46	43	45	36	30
18/11/2024 12:45	51	68	45	52	57	52	51	48	47	41	35
18/11/2024 13:00	48	57	45	49	55	49	44	42	46	39	33
18/11/2024 13:15	48	57	46	50	56	50	44	44	47	37	28
18/11/2024 13:30	54	73	46	52	57	60	55	53	50	42	32
18/11/2024 13:45	52	67	46	52	59	56	50	49	48	41	29
18/11/2024 14:00	50	56	48	52	57	51	47	45	48	39	31
18/11/2024 14:15	51	62	49	52	57	52	50	47	49	40	32
18/11/2024 14:30	50	55	48	51	57	50	44	43	48	39	34
18/11/2024 14:45	51	64	48	53	59	54	52	48	48	40	34
18/11/2024 15:00	51	60	47	53	59	54	51	47	48	39	33
18/11/2024 15:15	52	65	49	54	60	53	47	48	50	41	36

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
18/11/2024 15:30	49	58	46	51	58	53	47	45	47	38	31
18/11/2024 15:45	57	75	48	57	61	61	60	54	52	47	38
18/11/2024 16:00	50	59	48	51	56	50	45	44	48	39	32
18/11/2024 16:15	53	67	49	54	59	54	52	50	50	39	29
18/11/2024 16:30	50	55	49	52	55	49	45	44	49	40	28
18/11/2024 16:45	51	59	49	52	55	50	45	46	49	39	30
18/11/2024 17:00	51	55	49	52	56	50	44	45	49	40	31
18/11/2024 17:15	51	57	49	52	56	49	43	45	49	41	35
18/11/2024 17:30	51	55	49	52	56	49	45	45	49	42	37
18/11/2024 17:45	51	56	50	53	56	51	45	47	49	42	37
18/11/2024 18:00	53	66	50	54	57	51	48	49	50	43	38
18/11/2024 18:15	53	65	50	54	59	57	55	50	49	44	39
18/11/2024 18:30	54	73	49	53	57	58	53	52	50	45	38
18/11/2024 18:45	51	55	49	52	57	50	44	46	49	43	37
18/11/2024 19:00	52	63	49	53	58	51	49	48	49	43	37
18/11/2024 19:15	51	62	49	53	59	52	46	47	48	43	37
18/11/2024 19:30	50	55	48	52	58	51	45	46	47	41	36
18/11/2024 19:45	51	59	48	52	61	54	47	46	47	42	37
18/11/2024 20:00	55	69	50	55	62	58	55	53	50	45	38
18/11/2024 20:15	51	60	50	53	61	54	48	47	48	43	38
18/11/2024 20:30	51	60	49	52	59	52	46	47	48	41	36
18/11/2024 20:45	50	56	48	52	58	51	45	47	47	40	35
18/11/2024 21:00	50	55	48	52	57	50	43	47	47	40	34
18/11/2024 21:15	51	60	48	52	57	50	43	47	47	42	36

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
18/11/2024 21:30	51	64	49	52	58	50	44	47	48	43	35
18/11/2024 21:45	50	54	48	52	57	50	46	47	47	39	33
18/11/2024 22:00	50	58	47	52	58	53	47	47	47	39	32
18/11/2024 22:15	50	55	48	51	58	53	47	46	47	39	32
18/11/2024 22:30	52	64	47	54	62	59	55	49	47	40	35
18/11/2024 22:45	51	67	47	53	61	59	54	48	47	38	32
18/11/2024 23:00	54	68	47	57	64	62	58	51	47	39	33
18/11/2024 23:15	52	64	47	56	63	60	56	50	46	36	31
18/11/2024 23:30	52	63	45	55	63	60	56	49	45	35	29
18/11/2024 23:45	50	58	47	53	61	57	51	47	47	38	30
19/11/2024 00:00	49	61	44	52	60	56	51	47	45	36	30
19/11/2024 00:15	48	60	42	51	60	55	51	45	42	32	25
19/11/2024 00:30	47	60	42	49	60	55	51	45	41	31	26
19/11/2024 00:45	46	56	41	48	59	54	48	43	41	30	24
19/11/2024 01:00	45	53	42	47	57	51	45	43	41	29	22
19/11/2024 01:15	44	54	42	46	56	49	43	42	41	29	22
19/11/2024 01:30	43	48	40	45	55	47	39	41	40	27	22
19/11/2024 01:45	42	51	39	44	52	45	37	40	39	24	20
19/11/2024 02:00	42	52	39	43	51	44	36	40	39	24	21
19/11/2024 02:15	43	50	40	44	52	45	37	40	40	25	20
19/11/2024 02:30	43	53	39	44	50	45	41	41	40	25	20
19/11/2024 02:45	43	49	39	45	51	44	36	41	40	26	25
19/11/2024 03:00	42	49	40	44	52	46	38	40	39	31	26
19/11/2024 03:15	42	49	40	44	51	44	37	40	39	31	22

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
19/11/2024 03:30	43	50	40	45	51	44	36	41	41	27	21
19/11/2024 03:45	42	50	39	44	51	44	36	40	40	27	20
19/11/2024 04:00	43	50	41	45	51	43	39	41	41	30	23
19/11/2024 04:15	43	50	41	45	51	43	35	41	41	29	21
19/11/2024 04:30	43	49	41	45	51	44	39	41	41	28	22
19/11/2024 04:45	44	51	42	46	52	43	37	42	42	29	21
19/11/2024 05:00	45	51	43	47	52	44	38	42	44	31	23
19/11/2024 05:15	47	53	44	49	52	43	39	44	45	33	25
19/11/2024 05:30	51	55	49	52	55	47	45	48	49	36	26
19/11/2024 05:45	51	55	50	52	56	48	46	48	49	37	29
19/11/2024 06:00	51	56	49	52	55	47	45	47	49	37	29
19/11/2024 06:15	51	55	49	53	56	46	43	48	49	36	28
19/11/2024 06:30	53	69	51	54	58	50	49	52	51	38	28
19/11/2024 06:45	55	61	53	56	59	51	51	53	53	39	28
19/11/2024 07:00	54	58	53	55	59	50	49	52	53	38	28
19/11/2024 07:15	52	59	51	54	58	50	46	50	51	37	28
19/11/2024 07:30	51	56	49	52	59	50	49	49	48	37	30
19/11/2024 07:45	54	60	51	55	61	52	50	51	52	39	29
19/11/2024 08:00	55	69	52	55	61	52	52	52	53	41	31
19/11/2024 08:15	53	56	52	54	61	51	47	51	51	38	29
19/11/2024 08:30	53	60	52	54	61	52	52	51	51	39	30
19/11/2024 08:45	58	81	52	55	61	51	48	52	54	52	42
19/11/2024 09:00	54	65	53	54	62	54	50	53	52	41	32
19/11/2024 09:15	54	62	53	55	61	52	49	52	52	40	33

Table A.2 – Measured Sound Levels at LT2											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
19/11/2024 09:30	53	61	52	54	61	53	51	51	51	37	28
19/11/2024 09:45	52	60	50	53	60	52	48	50	49	39	31
19/11/2024 10:00	52	59	50	53	60	53	46	50	49	38	31
19/11/2024 10:15	52	62	50	54	61	53	53	51	49	36	28
19/11/2024 10:30	53	66	50	52	60	54	50	51	49	40	33
19/11/2024 10:45	52	57	50	53	60	52	46	50	49	39	31
19/11/2024 11:00	50	55	49	52	61	53	48	49	47	37	29
19/11/2024 11:15	52	63	49	52	61	54	50	50	48	37	28
19/11/2024 11:30	51	57	49	51	60	52	47	49	48	38	28
19/11/2024 11:45	52	64	49	53	60	56	50	51	48	38	29
19/11/2024 12:00	51	61	49	51	60	52	50	50	47	37	28
19/11/2024 12:15	51	59	50	52	60	51	45	49	48	38	28

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
15/11/2024 14:30	53	72	49	56	61	56	54	49	50	44	36
15/11/2024 14:45	53	64	50	55	61	57	54	48	50	45	36
15/11/2024 15:00	53	60	49	55	61	56	54	48	50	44	34
15/11/2024 15:15	53	63	49	55	60	57	54	47	50	44	34
15/11/2024 15:30	53	67	50	55	60	56	54	47	50	45	34
15/11/2024 15:45	52	61	48	54	59	55	53	47	49	43	32
15/11/2024 16:00	53	64	49	55	60	56	54	46	49	44	34
15/11/2024 16:15	53	66	50	55	59	57	54	47	50	44	32

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
15/11/2024 16:30	52	61	48	54	58	54	53	46	49	44	37
15/11/2024 16:45	53	72	49	55	59	55	53	47	50	45	42
15/11/2024 17:00	54	68	51	57	60	56	53	48	52	46	40
15/11/2024 17:15	56	69	52	59	58	55	53	52	54	48	42
15/11/2024 17:30	58	74	52	61	58	56	53	55	55	49	44
15/11/2024 17:45	58	77	53	61	59	59	54	53	55	51	46
15/11/2024 18:00	58	78	52	61	58	57	53	51	56	49	43
15/11/2024 18:15	59	79	53	63	58	55	53	54	57	50	44
15/11/2024 18:30	64	87	54	66	61	62	56	58	61	54	53
15/11/2024 18:45	66	89	57	69	61	61	58	62	63	56	54
15/11/2024 19:00	66	95	53	67	64	65	58	61	63	57	58
15/11/2024 19:15	74	97	54	78	57	57	59	69	73	63	55
15/11/2024 19:30	73	91	56	78	58	58	60	69	72	63	56
15/11/2024 19:45	71	94	54	75	59	58	57	67	69	61	54
15/11/2024 20:00	72	93	55	76	61	58	58	66	70	62	53
15/11/2024 20:15	71	93	54	74	59	58	57	65	70	61	53
15/11/2024 20:30	66	88	48	69	57	54	56	62	64	57	50
15/11/2024 20:45	50	71	45	52	55	50	48	45	47	41	37
15/11/2024 21:00	47	57	43	50	54	49	48	44	44	37	27
15/11/2024 21:15	47	58	43	51	53	48	47	44	45	37	27
15/11/2024 21:30	49	61	45	52	55	51	49	47	46	38	27
15/11/2024 21:45	46	57	42	49	54	47	46	43	44	36	26
15/11/2024 22:00	48	65	41	51	54	49	47	46	45	36	26
15/11/2024 22:15	47	56	41	51	53	48	48	44	43	37	27

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
15/11/2024 22:30	46	59	42	50	54	48	47	43	43	36	26
15/11/2024 22:45	47	57	42	51	53	47	46	43	45	38	27
15/11/2024 23:00	47	62	43	50	54	48	46	43	45	39	28
15/11/2024 23:15	45	55	41	49	53	46	44	41	43	36	26
15/11/2024 23:30	44	54	39	48	52	45	43	39	41	35	26
15/11/2024 23:45	44	57	39	48	52	46	44	42	41	35	26
16/11/2024 00:00	43	56	37	46	52	46	42	38	40	34	25
16/11/2024 00:15	41	54	37	43	50	42	40	37	38	32	24
16/11/2024 00:30	42	52	37	46	51	45	42	37	39	32	25
16/11/2024 00:45	41	52	36	46	49	42	40	38	38	32	24
16/11/2024 01:00	42	55	35	47	51	45	42	40	38	30	24
16/11/2024 01:15	44	56	34	50	50	45	44	43	40	33	25
16/11/2024 01:30	39	56	34	42	49	42	38	37	36	30	24
16/11/2024 01:45	39	51	34	40	50	42	38	35	35	30	24
16/11/2024 02:00	37	48	34	38	49	43	37	35	33	25	23
16/11/2024 02:15	40	57	34	40	51	44	40	35	37	31	25
16/11/2024 02:30	39	55	34	39	49	43	39	35	36	30	24
16/11/2024 02:45	37	53	34	37	47	40	37	35	34	27	23
16/11/2024 03:00	38	51	35	39	49	42	38	35	34	28	24
16/11/2024 03:15	40	58	35	42	49	43	38	36	37	32	28
16/11/2024 03:30	41	58	35	44	49	42	38	37	38	32	27
16/11/2024 03:45	36	52	34	37	46	39	33	34	33	24	26
16/11/2024 04:00	38	51	35	39	48	43	37	36	35	28	28
16/11/2024 04:15	39	50	36	41	47	41	36	37	35	27	28

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
16/11/2024 04:30	40	54	36	42	48	42	39	36	37	31	29
16/11/2024 04:45	39	52	34	40	47	41	37	35	35	31	27
16/11/2024 05:00	42	55	35	46	50	47	43	37	38	33	29
16/11/2024 05:15	43	57	37	47	52	46	43	38	39	35	32
16/11/2024 05:30	45	57	38	49	51	47	45	39	42	37	34
16/11/2024 05:45	45	61	38	48	51	47	45	40	42	36	34
16/11/2024 06:00	45	59	39	49	53	49	46	41	42	37	31
16/11/2024 06:15	48	64	40	52	56	53	51	46	44	38	33
16/11/2024 06:30	47	58	39	50	56	52	48	44	42	36	32
16/11/2024 06:45	48	57	41	51	54	51	48	44	44	39	32
16/11/2024 07:00	49	63	42	52	55	52	49	45	45	40	33
16/11/2024 07:15	48	64	41	51	56	51	48	45	43	39	35
16/11/2024 07:30	52	78	43	52	56	52	49	44	45	49	38
16/11/2024 07:45	50	64	44	54	58	55	52	48	46	41	36
16/11/2024 08:00	50	66	43	54	58	57	51	44	47	43	37
16/11/2024 08:15	64	83	53	67	58	56	54	59	61	57	53
16/11/2024 08:30	70	92	60	74	58	56	58	63	68	64	59
16/11/2024 08:45	71	90	59	74	57	56	57	63	67	65	61
16/11/2024 09:00	69	89	59	73	57	55	56	63	66	62	60
16/11/2024 09:15	68	89	58	70	58	57	56	62	64	61	57
16/11/2024 09:30	67	92	57	70	58	57	57	63	63	61	57
16/11/2024 09:45	67	91	59	70	57	56	57	63	63	60	58
16/11/2024 10:00	70	95	57	70	58	57	56	62	68	62	59
16/11/2024 10:15	64	83	55	67	58	57	54	58	60	56	55

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
16/11/2024 10:30	67	91	55	68	57	56	56	61	64	60	58
16/11/2024 10:45	68	90	55	70	58	57	58	64	65	60	57
16/11/2024 11:00	66	90	57	68	59	58	54	56	62	59	56
16/11/2024 11:15	67	94	57	69	58	58	54	57	64	59	60
16/11/2024 11:30	65	81	56	69	57	55	53	55	63	58	56
16/11/2024 11:45	65	83	56	68	60	58	54	57	62	58	56
16/11/2024 12:00	65	89	56	67	59	57	54	55	61	57	58
16/11/2024 12:15	67	94	56	68	62	61	56	59	64	58	60
16/11/2024 12:30	67	86	58	70	58	58	54	58	63	60	58
16/11/2024 12:45	66	90	57	69	57	55	54	57	62	59	58
16/11/2024 13:00	68	87	58	70	57	56	54	59	64	62	59
16/11/2024 13:15	62	82	52	66	58	57	54	54	58	56	54
16/11/2024 13:30	60	88	50	61	57	59	54	54	57	52	51
16/11/2024 13:45	62	94	52	62	59	61	56	56	58	53	55
16/11/2024 14:00	69	93	55	72	58	57	57	65	67	60	56
16/11/2024 14:15	74	96	56	78	57	58	60	71	72	65	57
16/11/2024 14:30	73	93	56	77	59	59	59	69	71	65	59
16/11/2024 14:45	70	93	51	73	56	56	57	68	68	61	56
16/11/2024 15:00	72	94	54	75	58	57	59	69	70	63	58
16/11/2024 15:15	69	93	53	72	58	57	56	64	67	61	57
16/11/2024 15:30	74	98	55	76	58	60	59	69	71	66	59
16/11/2024 15:45	52	70	44	55	55	52	50	47	49	43	35
16/11/2024 16:00	52	62	45	55	57	52	51	46	49	44	33
16/11/2024 16:15	50	61	44	54	55	51	50	45	48	42	31

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
16/11/2024 16:30	51	63	43	55	55	50	50	46	49	43	31
16/11/2024 16:45	50	59	43	54	54	51	50	44	48	42	30
16/11/2024 17:00	52	65	44	54	55	51	50	46	49	43	32
16/11/2024 17:15	51	63	43	54	58	54	51	45	48	43	33
16/11/2024 17:30	52	63	45	55	55	51	51	46	50	44	32
16/11/2024 17:45	50	61	43	54	54	50	50	45	48	42	30
16/11/2024 18:00	51	66	44	54	55	51	50	46	48	43	31
16/11/2024 18:15	51	63	44	54	53	51	50	45	48	42	31
16/11/2024 18:30	51	66	44	55	56	54	52	48	48	42	30
16/11/2024 18:45	50	63	42	54	56	54	51	47	47	41	29
16/11/2024 19:00	52	82	43	54	55	55	52	49	49	43	33
16/11/2024 19:15	49	62	44	52	53	49	48	44	46	41	31
16/11/2024 19:30	50	66	43	54	53	54	49	46	47	42	31
16/11/2024 19:45	50	65	43	53	55	52	50	45	46	41	30
16/11/2024 20:00	50	65	42	53	54	51	49	44	47	42	31
16/11/2024 20:15	48	61	41	52	54	53	50	44	45	39	29
16/11/2024 20:30	49	70	41	52	52	49	48	43	46	41	33
16/11/2024 20:45	47	60	40	52	51	47	46	41	45	40	29
16/11/2024 21:00	48	62	40	52	51	47	46	43	45	41	33
16/11/2024 21:15	47	59	40	51	51	47	46	41	44	40	30
16/11/2024 21:30	49	64	41	53	52	50	49	44	46	42	33
16/11/2024 21:45	49	65	41	53	52	47	46	42	46	42	32
16/11/2024 22:00	46	60	40	51	52	47	44	41	43	39	30
16/11/2024 22:15	46	59	40	50	50	46	45	40	44	39	30

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
16/11/2024 22:30	49	65	40	52	51	47	46	43	46	41	31
16/11/2024 22:45	47	59	39	51	49	46	45	40	44	39	30
16/11/2024 23:00	48	71	39	51	51	47	45	40	45	42	34
16/11/2024 23:15	44	59	37	48	50	48	45	40	41	36	27
16/11/2024 23:30	45	61	38	49	49	46	46	41	42	37	28
16/11/2024 23:45	45	58	38	49	48	45	44	40	42	37	28
17/11/2024 00:00	45	59	37	49	49	46	43	40	42	36	27
17/11/2024 00:15	43	60	36	47	48	44	42	37	41	35	27
17/11/2024 00:30	45	65	36	48	47	47	44	38	42	38	28
17/11/2024 00:45	42	57	35	45	47	44	43	36	39	34	26
17/11/2024 01:00	41	57	34	43	45	41	39	35	38	33	25
17/11/2024 01:15	40	55	34	41	47	41	39	35	38	33	25
17/11/2024 01:30	41	59	35	43	46	41	39	35	38	33	25
17/11/2024 01:45	42	58	35	45	48	45	44	38	38	33	27
17/11/2024 02:00	39	55	35	40	47	42	40	35	36	30	25
17/11/2024 02:15	39	57	34	38	45	39	37	34	36	30	24
17/11/2024 02:30	39	56	34	41	46	41	39	35	36	30	25
17/11/2024 02:45	44	65	34	46	50	47	47	41	39	33	28
17/11/2024 03:00	41	56	34	43	45	41	40	35	38	32	25
17/11/2024 03:15	37	53	34	37	45	38	35	34	34	25	25
17/11/2024 03:30	42	63	34	42	45	49	45	36	38	33	28
17/11/2024 03:45	48	67	36	52	49	54	55	45	39	33	27
17/11/2024 04:00	37	51	33	37	44	38	35	34	34	26	24
17/11/2024 04:15	41	56	33	45	48	44	44	38	36	30	25

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
17/11/2024 04:30	41	60	34	42	46	42	44	42	35	28	24
17/11/2024 04:45	43	64	36	44	46	41	41	36	41	35	27
17/11/2024 05:00	49	69	36	53	50	51	55	46	40	35	28
17/11/2024 05:15	45	61	37	48	47	46	45	39	43	37	30
17/11/2024 05:30	47	66	38	50	48	44	46	40	44	39	33
17/11/2024 05:45	47	61	39	51	49	44	45	41	44	39	33
17/11/2024 06:00	46	60	40	50	51	49	48	42	42	37	33
17/11/2024 06:15	47	59	39	51	51	49	47	41	44	39	33
17/11/2024 06:30	48	65	39	53	54	48	48	42	45	40	32
17/11/2024 06:45	46	60	40	50	51	46	45	40	43	38	33
17/11/2024 07:00	48	65	41	52	54	49	46	41	45	41	35
17/11/2024 07:15	47	63	40	52	51	47	47	42	44	40	31
17/11/2024 07:30	49	67	41	53	56	51	50	45	45	42	35
17/11/2024 07:45	46	58	41	49	51	46	45	41	43	38	30
17/11/2024 08:00	49	63	42	53	55	49	51	44	45	41	35
17/11/2024 08:15	51	61	45	54	57	54	51	46	47	43	37
17/11/2024 08:30	55	81	47	58	57	57	52	51	53	46	43
17/11/2024 08:45	58	83	49	59	56	56	53	55	55	48	44
17/11/2024 09:00	66	89	51	69	56	55	56	63	63	56	57
17/11/2024 09:15	64	91	50	66	54	55	54	61	62	54	52
17/11/2024 09:30	64	90	50	65	58	58	55	61	62	55	50
17/11/2024 09:45	65	92	50	66	56	56	55	62	63	55	52
17/11/2024 10:00	65	86	53	68	57	56	56	62	62	55	50
17/11/2024 10:15	62	94	50	61	58	56	54	56	59	56	48

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
17/11/2024 10:30	69	92	52	71	58	57	57	65	67	60	52
17/11/2024 10:45	68	89	53	71	58	57	57	66	64	59	55
17/11/2024 11:00	68	88	53	71	56	55	57	65	64	59	57
17/11/2024 11:15	70	88	51	74	56	55	57	67	67	60	56
17/11/2024 11:30	68	89	52	71	58	57	57	66	65	58	53
17/11/2024 11:45	66	90	49	65	57	54	56	63	63	56	51
17/11/2024 12:00	53	66	49	55	58	56	54	48	49	45	39
17/11/2024 12:15	54	74	50	56	59	58	54	50	50	46	41
17/11/2024 12:30	54	74	49	56	57	55	52	49	50	46	41
17/11/2024 12:45	63	86	54	66	59	60	57	61	60	55	49
17/11/2024 13:00	76	95	58	80	58	56	59	68	75	66	59
17/11/2024 13:15	73	93	58	77	59	57	58	68	72	64	58
17/11/2024 13:30	76	97	58	79	59	58	61	70	74	67	60
17/11/2024 13:45	73	96	58	75	58	56	59	69	71	64	60
17/11/2024 14:00	75	95	60	79	59	58	59	72	72	66	60
17/11/2024 14:15	72	94	59	73	57	57	58	66	71	62	55
17/11/2024 14:30	65	86	51	68	57	57	57	62	63	57	54
17/11/2024 14:45	54	69	49	57	56	52	52	48	50	47	42
17/11/2024 15:00	53	67	47	56	55	51	51	47	49	46	40
17/11/2024 15:15	55	68	50	58	58	55	54	50	51	48	44
17/11/2024 15:30	54	66	48	57	58	52	52	48	50	47	43
17/11/2024 15:45	55	72	46	57	56	55	53	51	52	47	40
17/11/2024 16:00	54	63	48	57	56	54	52	48	50	46	39
17/11/2024 16:15	55	73	46	57	56	54	52	47	50	49	44

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
17/11/2024 16:30	53	63	46	57	56	52	52	47	50	46	37
17/11/2024 16:45	53	63	45	56	55	52	52	47	50	45	37
17/11/2024 17:00	53	64	46	56	55	51	51	47	50	46	37
17/11/2024 17:15	53	61	48	56	57	54	52	48	50	45	36
17/11/2024 17:30	53	61	47	56	56	55	51	47	50	45	35
17/11/2024 17:45	52	61	47	55	55	52	51	46	49	44	34
17/11/2024 18:00	53	66	48	56	56	52	51	48	50	44	34
17/11/2024 18:15	52	61	47	55	55	50	50	46	49	43	33
17/11/2024 18:30	52	61	48	55	55	52	50	46	50	45	34
17/11/2024 18:45	53	70	47	56	59	54	51	48	50	45	34
17/11/2024 19:00	52	67	47	55	54	51	51	48	49	44	34
17/11/2024 19:15	50	64	45	54	56	50	49	45	48	42	32
17/11/2024 19:30	50	69	45	53	53	55	50	45	47	41	31
17/11/2024 19:45	50	61	45	54	55	52	50	46	47	41	31
17/11/2024 20:00	50	62	46	54	53	49	48	44	48	43	33
17/11/2024 20:15	50	62	44	54	53	48	47	43	48	43	32
17/11/2024 20:30	50	61	45	53	54	50	48	44	47	41	31
17/11/2024 20:45	51	62	45	54	54	50	48	45	49	43	33
17/11/2024 21:00	51	63	47	54	52	48	47	44	46	44	41
17/11/2024 21:15	48	65	40	52	53	48	46	44	44	41	36
17/11/2024 21:30	48	60	41	52	53	49	49	46	44	40	33
17/11/2024 21:45	48	60	43	52	52	46	45	42	45	41	33
17/11/2024 22:00	48	61	45	51	51	46	44	44	46	40	31
17/11/2024 22:15	48	62	44	52	51	48	46	43	46	40	31

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
17/11/2024 22:30	47	59	43	50	50	46	44	42	44	39	31
17/11/2024 22:45	47	59	41	50	49	44	44	41	43	39	34
17/11/2024 23:00	46	63	38	50	52	46	48	45	42	36	30
17/11/2024 23:15	45	59	39	48	51	48	46	41	41	36	29
17/11/2024 23:30	45	57	39	50	50	44	44	42	42	37	30
17/11/2024 23:45	44	58	39	47	51	44	44	42	40	34	27
18/11/2024 00:00	42	53	39	43	49	42	39	38	39	33	26
18/11/2024 00:15	42	55	37	44	48	41	39	38	39	34	28
18/11/2024 00:30	40	60	35	41	48	41	38	36	38	32	26
18/11/2024 00:45	39	55	36	40	46	41	37	37	37	29	25
18/11/2024 01:00	42	60	35	41	47	40	39	36	39	35	27
18/11/2024 01:15	41	59	34	43	50	48	42	36	37	31	27
18/11/2024 01:30	39	63	35	41	45	41	35	36	36	26	26
18/11/2024 01:45	41	65	36	42	45	40	38	37	38	31	28
18/11/2024 02:00	40	58	37	41	47	39	36	37	38	29	25
18/11/2024 02:15	43	62	37	44	47	41	40	38	41	35	27
18/11/2024 02:30	37	49	34	39	45	37	34	34	35	24	24
18/11/2024 02:45	39	57	33	39	45	38	37	35	37	31	26
18/11/2024 03:00	41	59	34	41	47	40	39	35	39	34	27
18/11/2024 03:15	43	59	38	44	47	42	40	38	41	35	28
18/11/2024 03:30	43	61	38	43	46	41	39	38	41	33	25
18/11/2024 03:45	41	62	38	43	47	42	41	38	38	26	24
18/11/2024 04:00	44	60	39	45	49	43	40	39	42	36	29
18/11/2024 04:15	45	62	40	45	49	43	42	41	42	36	29

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
18/11/2024 04:30	44	61	40	45	48	43	40	39	42	34	31
18/11/2024 04:45	47	62	42	48	48	43	42	42	44	38	32
18/11/2024 05:00	50	63	45	53	51	47	47	44	47	42	35
18/11/2024 05:15	52	62	48	55	53	49	48	46	50	43	37
18/11/2024 05:30	55	63	51	58	56	53	51	49	53	47	38
18/11/2024 05:45	54	64	49	57	56	51	51	48	52	46	37
18/11/2024 06:00	55	64	50	59	55	53	52	50	53	47	36
18/11/2024 06:15	56	68	52	59	57	53	51	50	54	47	37
18/11/2024 06:30	56	66	52	58	56	52	51	50	54	47	37
18/11/2024 06:45	56	64	53	58	58	54	52	51	54	48	37
18/11/2024 07:00	58	69	54	60	57	53	52	52	56	50	40
18/11/2024 07:15	57	65	54	59	59	55	53	51	55	49	39
18/11/2024 07:30	58	73	54	59	61	59	58	55	56	49	37
18/11/2024 07:45	55	62	52	57	61	56	53	50	53	47	35
18/11/2024 08:00	57	70	53	59	61	60	56	53	54	47	40
18/11/2024 08:15	57	64	54	59	62	56	54	51	54	48	37
18/11/2024 08:30	58	71	55	59	61	58	55	53	55	49	37
18/11/2024 08:45	58	65	55	60	61	59	55	53	56	49	38
18/11/2024 09:00	58	64	56	60	60	59	55	54	56	48	36
18/11/2024 09:15	57	68	55	59	60	57	54	53	55	48	37
18/11/2024 09:30	58	75	53	59	62	59	57	57	55	48	39
18/11/2024 09:45	57	66	54	59	61	56	55	53	54	47	37
18/11/2024 10:00	55	69	51	57	59	56	55	53	52	45	37
18/11/2024 10:15	54	71	49	57	59	54	52	50	52	46	40

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
18/11/2024 10:30	54	67	49	57	59	56	55	52	51	45	35
18/11/2024 10:45	53	61	49	56	60	55	52	48	50	45	34
18/11/2024 11:00	55	74	48	56	62	60	56	52	51	45	36
18/11/2024 11:15	54	71	49	57	62	56	54	50	51	45	35
18/11/2024 11:30	57	73	50	58	60	64	61	54	51	45	36
18/11/2024 11:45	56	83	49	57	60	55	52	51	54	47	36
18/11/2024 12:00	57	80	49	58	61	58	54	52	54	47	35
18/11/2024 12:15	55	68	51	57	62	58	54	49	52	47	36
18/11/2024 12:30	54	65	49	57	60	56	53	50	51	45	33
18/11/2024 12:45	53	66	49	56	59	53	52	48	51	45	34
18/11/2024 13:00	53	61	49	56	59	54	52	48	51	45	34
18/11/2024 13:15	56	74	50	57	58	59	56	53	52	46	34
18/11/2024 13:30	54	65	50	57	59	58	53	50	51	46	34
18/11/2024 13:45	54	65	51	56	59	54	52	49	52	46	35
18/11/2024 14:00	56	65	53	58	59	55	54	51	53	47	35
18/11/2024 14:15	55	71	52	57	59	54	52	50	53	46	36
18/11/2024 14:30	56	66	52	58	61	57	55	53	53	47	36
18/11/2024 14:45	56	67	53	58	61	58	55	52	53	46	37
18/11/2024 15:00	57	65	54	59	62	57	54	53	54	47	36
18/11/2024 15:15	56	76	53	57	61	56	54	52	53	48	35
18/11/2024 15:30	59	72	54	61	64	65	60	56	55	48	38
18/11/2024 15:45	56	65	53	58	60	56	53	51	54	47	35
18/11/2024 16:00	57	75	55	59	60	56	55	54	55	49	38
18/11/2024 16:15	57	72	54	58	58	55	53	51	54	48	36

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
18/11/2024 16:30	58	72	55	59	59	57	54	52	55	50	41
18/11/2024 16:45	58	78	54	60	59	56	53	52	56	51	44
18/11/2024 17:00	62	86	56	64	59	58	54	54	60	55	51
18/11/2024 17:15	62	82	56	64	58	55	53	54	59	55	49
18/11/2024 17:30	64	82	57	66	60	59	55	56	61	57	51
18/11/2024 17:45	65	88	58	67	60	60	59	58	61	59	52
18/11/2024 18:00	62	81	57	65	59	60	55	56	60	55	49
18/11/2024 18:15	66	89	59	69	60	61	57	59	64	59	53
18/11/2024 18:30	66	82	59	69	59	59	56	60	63	58	53
18/11/2024 18:45	66	86	58	68	59	59	55	60	63	58	53
18/11/2024 19:00	62	86	56	65	59	58	55	56	60	55	50
18/11/2024 19:15	58	77	53	61	58	58	54	54	55	51	45
18/11/2024 19:30	62	80	55	66	59	59	57	55	60	56	49
18/11/2024 19:45	65	85	57	69	59	60	57	58	62	59	53
18/11/2024 20:00	58	77	52	60	59	57	54	51	55	51	44
18/11/2024 20:15	57	74	51	60	58	55	52	50	54	50	42
18/11/2024 20:30	56	79	51	59	58	56	53	50	54	50	42
18/11/2024 20:45	57	79	50	61	57	57	52	50	55	50	43
18/11/2024 21:00	54	70	48	57	57	52	49	48	50	47	41
18/11/2024 21:15	53	61	49	56	58	53	50	48	49	45	39
18/11/2024 21:30	53	63	48	56	57	54	50	48	50	44	37
18/11/2024 21:45	52	66	47	55	57	54	50	47	49	44	36
18/11/2024 22:00	52	62	48	56	56	53	51	47	50	45	36
18/11/2024 22:15	52	65	47	55	58	54	53	47	48	42	35

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
18/11/2024 22:30	55	71	48	58	61	57	57	52	51	45	37
18/11/2024 22:45	53	69	47	57	61	56	55	50	49	44	36
18/11/2024 23:00	54	68	47	58	62	58	58	51	49	42	36
18/11/2024 23:15	51	65	45	54	59	56	54	48	47	40	32
18/11/2024 23:30	54	65	47	58	58	55	53	48	51	45	35
18/11/2024 23:45	52	66	45	56	58	56	54	48	49	43	35
19/11/2024 00:00	48	62	42	51	56	52	50	45	44	36	29
19/11/2024 00:15	49	65	42	51	57	53	51	46	44	38	30
19/11/2024 00:30	47	65	42	50	56	52	50	45	43	35	28
19/11/2024 00:45	46	60	42	48	55	50	47	44	43	34	26
19/11/2024 01:00	47	62	42	48	55	49	45	42	44	39	28
19/11/2024 01:15	44	56	40	47	54	47	44	41	41	35	27
19/11/2024 01:30	42	58	39	43	52	45	41	40	39	31	25
19/11/2024 01:45	41	59	38	42	50	44	39	40	38	30	25
19/11/2024 02:00	43	57	40	44	52	46	41	41	40	31	25
19/11/2024 02:15	42	58	39	44	50	45	42	41	39	29	24
19/11/2024 02:30	43	56	39	44	51	45	40	41	39	30	27
19/11/2024 02:45	41	51	39	43	52	46	40	40	37	27	26
19/11/2024 03:00	43	58	39	44	51	45	41	41	40	33	27
19/11/2024 03:15	43	56	40	44	51	45	41	41	40	32	28
19/11/2024 03:30	42	56	40	44	51	44	40	41	39	30	26
19/11/2024 03:45	45	63	40	47	51	45	42	41	42	37	31
19/11/2024 04:00	44	62	40	44	51	44	39	41	41	36	27
19/11/2024 04:15	44	61	40	45	52	45	43	41	41	36	29

Table A.3 – Measured Sound Levels at LT3											
Period start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH Z	4KH z
19/11/2024 04:30	44	58	41	45	51	43	40	42	41	33	27
19/11/2024 04:45	46	60	42	48	52	46	42	43	44	38	30
19/11/2024 05:00	48	61	43	51	52	46	43	44	46	40	31
19/11/2024 05:15	51	61	47	55	54	48	47	47	49	43	33
19/11/2024 05:30	53	62	48	56	56	50	48	48	50	45	36
19/11/2024 05:45	52	62	48	56	56	49	48	47	50	44	36
19/11/2024 06:00	52	63	48	55	55	48	46	48	50	44	34
19/11/2024 06:15	55	70	50	58	58	53	52	53	52	44	34
19/11/2024 06:30	55	62	52	58	58	52	52	52	53	46	35
19/11/2024 06:45	55	62	53	57	58	52	51	51	53	46	36
19/11/2024 07:00	54	62	50	57	58	51	49	49	52	46	35
19/11/2024 07:15	54	63	50	57	59	53	51	48	52	47	36
19/11/2024 07:30	56	66	53	58	60	54	52	51	54	47	37
19/11/2024 07:45	58	80	53	58	61	54	54	52	56	48	37
19/11/2024 08:00	55	62	51	57	60	53	50	49	53	47	36
19/11/2024 08:15	56	64	53	59	61	55	54	50	54	48	37
19/11/2024 08:30	56	66	52	59	61	53	50	50	54	49	37
19/11/2024 08:45	57	66	53	59	61	57	53	52	54	48	39
19/11/2024 09:00	56	69	53	59	60	54	52	51	54	48	42
19/11/2024 09:15	55	64	52	58	60	55	53	51	52	47	36
19/11/2024 09:30	54	67	51	57	61	54	51	51	52	45	37
19/11/2024 09:45	55	63	52	58	61	54	50	50	53	47	38
19/11/2024 10:00	54	66	49	57	60	55	54	51	51	44	34
19/11/2024 10:15	55	64	50	57	60	54	51	51	52	46	36

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
15/11/2024 14:30	49	63	43	52	59	53	52	45	43	39	33
15/11/2024 14:45	49	60	44	51	59	53	52	44	44	40	33
15/11/2024 15:00	48	63	43	50	58	52	52	43	43	38	32
15/11/2024 15:15	48	62	44	50	58	53	52	43	44	38	34
15/11/2024 15:30	49	66	45	51	58	53	53	44	44	39	31
15/11/2024 15:45	48	61	44	51	57	52	51	45	44	38	30
15/11/2024 16:00	49	63	44	51	57	54	53	44	44	38	30
15/11/2024 16:15	48	64	43	50	57	53	52	43	43	38	30
15/11/2024 16:30	56	78	44	59	56	55	54	50	51	50	46
15/11/2024 16:45	56	81	46	58	56	55	53	50	52	49	46
15/11/2024 17:00	57	77	51	60	58	56	54	54	54	49	43
15/11/2024 17:15	59	76	52	61	57	57	55	55	55	51	46
15/11/2024 17:30	60	77	53	63	57	58	54	55	56	52	46
15/11/2024 17:45	63	82	54	66	59	61	56	57	59	56	51
15/11/2024 18:00	60	87	51	61	56	56	53	54	57	53	47
15/11/2024 18:15	58	75	51	61	56	56	53	54	54	50	44
15/11/2024 18:30	60	75	53	62	58	58	55	56	56	52	47
15/11/2024 18:45	63	80	55	66	59	61	56	60	59	54	50
15/11/2024 19:00	64	93	51	67	58	61	57	60	61	55	51
15/11/2024 19:15	65	88	52	68	55	56	56	60	62	57	51
15/11/2024 19:30	64	88	53	67	57	58	55	61	61	56	51
15/11/2024 19:45	66	93	53	68	58	58	56	60	64	58	51

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
15/11/2024 20:00	64	83	53	67	61	58	57	60	61	56	50
15/11/2024 20:15	65	86	53	69	55	55	55	61	62	57	53
15/11/2024 20:30	63	84	46	66	53	55	57	60	60	54	50
15/11/2024 20:45	46	68	37	49	52	49	47	42	42	37	34
15/11/2024 21:00	43	65	35	47	51	47	46	40	38	33	27
15/11/2024 21:15	42	58	36	46	50	45	45	40	38	31	24
15/11/2024 21:30	43	54	36	46	52	47	46	39	38	32	24
15/11/2024 21:45	41	52	35	44	50	44	43	37	37	30	24
15/11/2024 22:00	43	60	36	47	51	47	46	42	38	30	24
15/11/2024 22:15	43	54	35	47	51	47	46	41	38	30	24
15/11/2024 22:30	41	54	34	46	50	46	44	39	37	30	24
15/11/2024 22:45	41	50	34	45	50	44	44	36	37	31	24
15/11/2024 23:00	41	57	34	44	51	45	44	36	37	32	25
15/11/2024 23:15	39	51	33	44	50	44	42	35	35	29	24
15/11/2024 23:30	38	50	32	43	50	43	42	33	34	29	24
15/11/2024 23:45	40	53	32	44	49	43	42	37	35	29	24
16/11/2024 00:00	38	50	31	42	49	43	41	32	34	28	23
16/11/2024 00:15	35	49	30	38	47	40	38	31	31	26	23
16/11/2024 00:30	37	49	31	41	48	42	40	32	33	26	23
16/11/2024 00:45	36	50	30	38	46	40	38	31	32	26	23
16/11/2024 01:00	36	51	29	39	46	41	39	31	32	25	23
16/11/2024 01:15	37	52	29	41	45	41	40	32	33	27	23
16/11/2024 01:30	34	50	29	35	45	38	36	29	30	24	23

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
16/11/2024 01:45	34	47	29	36	44	38	36	30	30	25	23
16/11/2024 02:00	32	46	29	32	44	37	32	29	28	21	23
16/11/2024 02:15	36	52	30	35	46	40	38	31	32	26	23
16/11/2024 02:30	35	55	29	35	43	39	36	30	31	25	23
16/11/2024 02:45	33	51	30	33	43	37	34	29	30	23	23
16/11/2024 03:00	35	48	31	37	44	40	36	31	30	24	24
16/11/2024 03:15	37	54	31	40	43	38	34	30	33	30	27
16/11/2024 03:30	36	50	30	39	44	38	36	30	32	28	25
16/11/2024 03:45	33	54	30	34	41	35	29	28	28	22	28
16/11/2024 04:00	35	51	30	37	44	40	34	31	29	23	29
16/11/2024 04:15	35	50	31	36	43	37	32	29	30	23	30
16/11/2024 04:30	36	52	31	39	44	40	36	31	32	25	30
16/11/2024 04:45	36	50	31	38	44	41	37	31	32	26	26
16/11/2024 05:00	38	54	32	42	45	42	40	33	33	28	31
16/11/2024 05:15	40	55	33	45	49	45	41	36	36	32	30
16/11/2024 05:30	42	55	34	46	47	44	43	37	38	33	32
16/11/2024 05:45	42	58	35	46	47	44	43	39	38	33	32
16/11/2024 06:00	42	53	35	46	50	46	45	38	37	32	27
16/11/2024 06:15	46	65	36	49	51	51	50	46	40	34	30
16/11/2024 06:30	44	57	36	48	52	49	47	42	39	34	29
16/11/2024 06:45	44	55	37	48	51	48	47	40	40	34	29
16/11/2024 07:00	45	60	38	48	51	47	45	40	41	37	32
16/11/2024 07:15	45	60	38	48	50	47	45	41	41	36	32

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
16/11/2024 07:30	52	80	39	53	52	48	47	42	43	48	46
16/11/2024 07:45	51	70	40	55	54	52	51	46	42	43	41
16/11/2024 08:00	56	87	41	55	56	57	50	48	52	48	50
16/11/2024 08:15	66	94	55	66	56	55	54	59	63	60	55
16/11/2024 08:30	67	86	58	70	55	54	55	62	64	59	58
16/11/2024 08:45	68	89	60	70	58	58	56	63	64	60	59
16/11/2024 09:00	71	91	64	74	58	58	59	66	67	63	61
16/11/2024 09:15	69	85	63	72	58	57	59	64	66	61	58
16/11/2024 09:30	70	85	63	73	59	57	58	64	67	62	59
16/11/2024 09:45	72	94	64	74	58	58	58	64	69	64	62
16/11/2024 10:00	71	94	63	73	58	59	60	66	67	64	63
16/11/2024 10:15	67	88	56	69	57	56	56	62	64	58	56
16/11/2024 10:30	68	90	57	71	56	56	57	65	65	59	56
16/11/2024 10:45	70	95	62	72	58	59	58	64	66	64	59
16/11/2024 11:00	66	84	61	69	59	59	57	62	62	59	55
16/11/2024 11:15	68	89	60	71	59	58	57	63	66	61	59
16/11/2024 11:30	69	85	61	73	57	57	58	64	66	62	59
16/11/2024 11:45	69	88	61	72	60	58	58	64	65	61	58
16/11/2024 12:00	74	98	64	75	61	61	61	67	70	68	63
16/11/2024 12:15	69	91	61	71	61	61	59	65	65	61	62
16/11/2024 12:30	72	88	64	75	58	58	61	67	68	66	61
16/11/2024 12:45	72	91	64	76	56	56	60	68	68	65	61
16/11/2024 13:00	73	94	62	76	55	55	59	68	70	64	60

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
16/11/2024 13:15	70	94	60	72	59	60	60	65	67	62	58
16/11/2024 13:30	64	88	52	65	56	58	55	59	61	58	51
16/11/2024 13:45	62	82	52	65	59	61	56	58	58	55	52
16/11/2024 14:00	71	91	56	74	57	57	57	64	69	62	61
16/11/2024 14:15	69	86	58	72	57	58	57	63	66	61	58
16/11/2024 14:30	70	91	57	72	57	57	58	63	68	62	59
16/11/2024 14:45	67	87	54	70	55	56	56	62	65	59	55
16/11/2024 15:00	70	88	56	74	56	57	57	64	68	61	59
16/11/2024 15:15	73	92	56	77	55	55	59	68	71	64	62
16/11/2024 15:30	75	96	56	79	57	58	60	68	73	66	61
16/11/2024 15:45	59	81	46	63	55	53	53	57	55	50	45
16/11/2024 16:00	51	64	45	54	55	51	51	47	48	42	32
16/11/2024 16:15	49	64	44	52	54	50	50	45	46	40	34
16/11/2024 16:30	51	72	44	54	54	50	50	46	48	43	34
16/11/2024 16:45	48	54	43	51	53	50	50	43	45	38	28
16/11/2024 17:00	51	72	44	53	54	51	51	47	48	42	33
16/11/2024 17:15	50	63	44	52	58	53	51	45	46	40	30
16/11/2024 17:30	52	64	45	54	53	51	51	47	49	43	30
16/11/2024 17:45	49	59	44	52	53	49	49	44	46	40	28
16/11/2024 18:00	50	65	44	52	54	51	50	46	47	40	30
16/11/2024 18:15	49	62	44	52	53	49	50	45	46	40	29
16/11/2024 18:30	51	67	43	54	55	54	52	49	47	39	29
16/11/2024 18:45	51	70	42	53	56	55	53	49	46	38	27

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
16/11/2024 19:00	54	85	44	52	54	54	53	52	49	43	35
16/11/2024 19:15	47	64	43	50	53	49	49	43	45	37	29
16/11/2024 19:30	49	69	43	53	53	57	49	46	46	40	29
16/11/2024 19:45	48	71	42	52	53	52	50	45	45	38	28
16/11/2024 20:00	49	65	42	52	52	51	49	45	46	40	30
16/11/2024 20:15	47	62	41	51	52	52	50	44	43	36	27
16/11/2024 20:30	48	62	41	50	51	48	47	43	45	39	30
16/11/2024 20:45	46	58	40	49	50	47	46	41	43	37	27
16/11/2024 21:00	50	63	41	53	52	49	49	45	46	42	37
16/11/2024 21:15	46	58	41	50	51	47	46	41	43	37	31
16/11/2024 21:30	50	66	42	53	53	51	51	46	46	41	33
16/11/2024 21:45	48	66	41	51	52	47	46	43	46	40	31
16/11/2024 22:00	45	56	40	49	49	45	44	40	42	37	29
16/11/2024 22:15	46	57	40	49	51	47	46	40	43	37	29
16/11/2024 22:30	49	64	41	51	51	48	47	45	46	40	30
16/11/2024 22:45	47	58	39	51	50	48	47	42	44	37	29
16/11/2024 23:00	46	66	40	50	50	48	46	40	43	39	34
16/11/2024 23:15	44	59	38	47	51	49	47	41	39	33	26
16/11/2024 23:30	47	62	39	50	51	49	50	43	42	36	29
16/11/2024 23:45	46	59	39	50	50	48	48	42	43	36	29
17/11/2024 00:00	46	61	38	50	50	47	46	42	43	36	28
17/11/2024 00:15	43	56	37	47	49	46	44	38	40	33	27
17/11/2024 00:30	44	61	38	48	48	46	45	39	41	35	27

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
17/11/2024 00:45	42	55	36	44	47	44	42	36	39	32	26
17/11/2024 01:00	41	58	36	44	46	42	40	36	39	31	25
17/11/2024 01:15	40	54	35	43	48	43	40	36	37	30	25
17/11/2024 01:30	40	56	35	44	47	43	41	35	37	30	26
17/11/2024 01:45	44	66	37	46	50	48	47	39	39	34	30
17/11/2024 02:00	40	54	37	42	48	44	41	36	37	29	26
17/11/2024 02:15	39	52	35	40	46	40	37	36	37	28	24
17/11/2024 02:30	45	71	36	45	53	47	48	45	38	32	32
17/11/2024 02:45	43	62	36	46	49	47	46	38	39	33	31
17/11/2024 03:00	40	51	36	44	46	42	40	37	38	30	25
17/11/2024 03:15	39	56	37	40	46	40	35	36	36	24	29
17/11/2024 03:30	41	61	35	43	46	47	44	36	36	28	31
17/11/2024 03:45	47	64	35	51	48	51	54	43	37	30	28
17/11/2024 04:00	37	52	34	38	45	38	35	34	34	25	26
17/11/2024 04:15	41	57	34	45	48	44	44	38	37	29	25
17/11/2024 04:30	42	62	36	44	47	44	45	43	36	26	24
17/11/2024 04:45	43	60	38	45	48	43	41	38	40	32	29
17/11/2024 05:00	49	68	38	52	50	51	54	48	40	31	29
17/11/2024 05:15	44	58	39	47	47	48	45	40	41	33	29
17/11/2024 05:30	45	61	38	48	47	44	46	40	42	36	32
17/11/2024 05:45	45	60	37	50	48	44	46	40	42	36	29
17/11/2024 06:00	45	57	39	48	49	47	47	42	40	32	34
17/11/2024 06:15	47	59	41	51	51	50	48	42	44	37	31

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
17/11/2024 06:30	48	59	41	52	52	48	49	43	45	38	30
17/11/2024 06:45	46	58	42	49	52	48	45	42	43	36	31
17/11/2024 07:00	47	66	42	50	51	47	45	42	44	38	34
17/11/2024 07:15	47	61	42	50	52	47	48	44	43	36	28
17/11/2024 07:30	48	66	42	51	52	49	51	45	43	37	33
17/11/2024 07:45	46	65	42	48	51	47	46	43	42	34	31
17/11/2024 08:00	50	72	43	53	53	49	51	46	45	42	39
17/11/2024 08:15	49	71	44	52	55	53	50	47	43	40	39
17/11/2024 08:30	52	77	44	54	55	56	51	50	46	43	40
17/11/2024 08:45	58	82	51	59	55	56	55	56	54	48	47
17/11/2024 09:00	68	90	52	72	55	56	58	66	65	58	56
17/11/2024 09:15	67	91	51	71	53	55	57	64	65	57	53
17/11/2024 09:30	65	90	51	68	55	55	57	63	62	54	52
17/11/2024 09:45	64	86	50	66	55	56	55	62	61	55	53
17/11/2024 10:00	65	89	53	67	55	56	56	62	63	55	51
17/11/2024 10:15	60	79	53	63	57	58	57	59	56	51	50
17/11/2024 10:30	66	86	52	69	56	56	56	63	62	58	53
17/11/2024 10:45	64	86	52	67	55	56	56	61	60	55	53
17/11/2024 11:00	63	84	51	66	54	55	55	61	59	56	49
17/11/2024 11:15	64	84	51	67	55	55	54	60	60	57	53
17/11/2024 11:30	63	86	53	67	56	56	55	60	60	56	52
17/11/2024 11:45	60	81	47	62	55	53	55	57	55	52	50
17/11/2024 12:00	52	70	47	55	56	53	53	50	47	43	38

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
17/11/2024 12:15	54	76	49	57	56	56	53	52	49	45	42
17/11/2024 12:30	57	78	50	61	56	54	53	54	52	49	46
17/11/2024 12:45	62	85	54	63	57	59	56	59	58	53	48
17/11/2024 13:00	73	89	61	76	57	57	61	69	71	65	58
17/11/2024 13:15	71	91	59	74	58	57	60	67	69	62	58
17/11/2024 13:30	72	94	59	75	58	57	60	67	69	64	59
17/11/2024 13:45	70	89	57	74	57	57	59	66	68	61	57
17/11/2024 14:00	70	88	59	73	57	59	59	65	67	62	57
17/11/2024 14:15	70	89	61	73	56	58	59	65	68	62	57
17/11/2024 14:30	67	87	52	70	56	56	59	63	64	58	57
17/11/2024 14:45	57	84	52	57	56	52	53	54	52	48	45
17/11/2024 15:00	52	59	49	54	55	50	51	48	48	44	42
17/11/2024 15:15	56	74	52	58	57	55	54	52	50	48	49
17/11/2024 15:30	55	64	51	57	58	51	52	49	50	47	46
17/11/2024 15:45	55	74	48	56	56	54	53	51	51	46	41
17/11/2024 16:00	55	77	49	57	56	54	53	49	50	45	51
17/11/2024 16:15	54	75	47	56	55	52	52	48	50	47	47
17/11/2024 16:30	52	62	47	55	56	51	52	48	49	44	35
17/11/2024 16:45	53	63	47	56	55	51	53	48	49	44	38
17/11/2024 17:00	53	61	48	56	56	51	52	48	50	45	37
17/11/2024 17:15	53	58	49	55	57	54	52	48	50	43	35
17/11/2024 17:30	52	60	48	55	55	54	52	48	49	43	34
17/11/2024 17:45	51	59	48	53	55	51	51	47	48	41	32

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
17/11/2024 18:00	53	68	49	54	57	52	51	50	50	41	31
17/11/2024 18:15	51	57	48	53	55	51	50	47	49	38	30
17/11/2024 18:30	51	64	48	53	56	52	51	47	49	41	32
17/11/2024 18:45	52	71	48	55	57	53	52	49	49	42	32
17/11/2024 19:00	51	71	46	53	55	53	51	50	47	38	30
17/11/2024 19:15	48	61	45	51	56	50	49	45	45	37	28
17/11/2024 19:30	49	58	46	51	54	53	49	46	46	36	27
17/11/2024 19:45	48	60	44	50	55	52	48	45	44	35	28
17/11/2024 20:00	47	57	44	50	52	48	47	43	44	37	29
17/11/2024 20:15	47	59	41	51	51	47	47	42	44	39	29
17/11/2024 20:30	47	58	41	50	53	49	49	43	43	37	28
17/11/2024 20:45	47	59	41	51	52	49	48	43	44	39	33
17/11/2024 21:00	52	63	49	54	51	47	47	44	46	45	44
17/11/2024 21:15	48	59	42	51	51	46	45	42	41	40	41
17/11/2024 21:30	46	60	38	49	52	48	48	45	39	34	32
17/11/2024 21:45	44	57	38	48	51	45	44	40	40	35	30
17/11/2024 22:00	43	54	40	46	50	45	43	40	40	33	28
17/11/2024 22:15	45	55	41	49	50	48	46	42	42	33	28
17/11/2024 22:30	44	54	41	47	50	47	44	41	41	34	29
17/11/2024 22:45	46	58	42	49	49	44	44	41	42	38	36
17/11/2024 23:00	46	65	39	47	51	45	46	45	41	33	33
17/11/2024 23:15	43	54	39	46	50	45	43	41	39	31	27
17/11/2024 23:30	44	58	40	47	50	45	44	42	40	32	27

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
17/11/2024 23:45	42	58	38	44	49	44	43	41	38	28	25
18/11/2024 00:00	40	52	37	41	49	43	39	37	37	28	24
18/11/2024 00:15	40	51	37	43	47	42	39	37	37	30	27
18/11/2024 00:30	39	52	35	39	46	40	38	36	36	28	24
18/11/2024 00:45	39	51	36	40	46	41	37	36	36	26	24
18/11/2024 01:00	41	57	36	42	48	41	39	37	38	32	26
18/11/2024 01:15	42	58	36	44	50	48	44	38	37	30	28
18/11/2024 01:30	40	54	37	43	47	43	36	37	38	28	27
18/11/2024 01:45	42	55	38	44	48	43	39	39	39	29	28
18/11/2024 02:00	41	57	39	43	49	42	38	39	39	27	26
18/11/2024 02:15	43	56	39	45	49	42	41	39	41	32	27
18/11/2024 02:30	39	48	36	41	47	39	35	36	37	25	23
18/11/2024 02:45	40	56	35	40	47	40	37	37	37	30	25
18/11/2024 03:00	41	56	37	42	49	41	39	37	39	31	25
18/11/2024 03:15	44	56	40	45	49	43	40	40	42	34	26
18/11/2024 03:30	43	58	40	45	48	44	40	39	42	32	24
18/11/2024 03:45	43	54	41	46	49	45	44	40	41	27	23
18/11/2024 04:00	45	56	42	46	50	44	41	41	43	35	29
18/11/2024 04:15	46	58	42	48	50	45	44	43	44	34	31
18/11/2024 04:30	45	57	42	47	50	45	41	41	44	33	31
18/11/2024 04:45	48	59	44	50	50	45	43	43	46	37	33
18/11/2024 05:00	50	61	46	53	52	48	47	45	48	40	34
18/11/2024 05:15	53	60	49	55	54	50	49	47	51	42	35

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
18/11/2024 05:30	56	64	53	58	57	53	51	51	54	46	35
18/11/2024 05:45	55	61	52	57	56	52	52	49	53	45	35
18/11/2024 06:00	56	65	53	59	56	53	53	51	54	46	34
18/11/2024 06:15	56	64	54	58	57	53	52	51	55	46	35
18/11/2024 06:30	56	65	54	58	56	53	51	52	55	46	34
18/11/2024 06:45	56	66	54	58	58	54	53	52	54	45	33
18/11/2024 07:00	58	67	55	60	58	54	53	53	56	49	38
18/11/2024 07:15	58	74	56	59	59	54	53	52	56	48	45
18/11/2024 07:30	59	74	55	58	61	59	58	56	56	47	35
18/11/2024 07:45	55	59	54	57	61	56	53	51	53	43	33
18/11/2024 08:00	57	70	54	58	61	58	57	54	54	44	38
18/11/2024 08:15	56	61	55	57	61	56	55	52	54	44	34
18/11/2024 08:30	57	71	55	58	61	57	55	53	55	44	35
18/11/2024 08:45	57	72	55	58	60	56	54	52	55	45	40
18/11/2024 09:00	57	63	56	58	59	56	55	53	55	44	33
18/11/2024 09:15	57	63	56	59	59	56	55	54	56	43	36
18/11/2024 09:30	59	76	55	58	61	59	58	58	57	46	35
18/11/2024 09:45	57	61	56	59	60	56	55	54	56	43	33
18/11/2024 10:00	56	70	52	56	59	56	56	54	53	41	32
18/11/2024 10:15	53	66	50	55	58	54	51	50	50	41	35
18/11/2024 10:30	54	68	48	55	59	55	55	52	50	41	31
18/11/2024 10:45	51	59	48	53	59	53	51	47	48	40	31
18/11/2024 11:00	55	84	48	55	62	60	57	52	50	43	40

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
18/11/2024 11:15	54	75	48	55	61	55	55	52	50	42	36
18/11/2024 11:30	56	72	48	54	59	64	61	54	49	41	30
18/11/2024 11:45	52	67	48	54	59	53	52	48	48	41	36
18/11/2024 12:00	53	64	47	55	60	58	55	49	49	41	32
18/11/2024 12:15	53	70	48	54	59	56	54	49	49	42	39
18/11/2024 12:30	52	67	48	55	59	55	53	48	49	42	39
18/11/2024 12:45	51	66	47	54	57	52	51	47	48	42	31
18/11/2024 13:00	51	65	48	54	57	52	52	47	49	41	32
18/11/2024 13:15	55	72	49	55	57	58	56	53	50	43	32
18/11/2024 13:30	53	64	50	55	57	57	52	49	51	43	33
18/11/2024 13:45	52	62	49	54	56	52	52	48	50	42	32
18/11/2024 14:00	54	64	51	55	57	53	53	50	51	43	33
18/11/2024 14:15	53	74	50	55	57	52	51	48	50	42	43
18/11/2024 14:30	54	67	51	55	59	54	55	52	51	42	32
18/11/2024 14:45	54	64	51	56	59	56	55	51	51	42	34
18/11/2024 15:00	54	66	52	56	60	55	54	51	52	43	34
18/11/2024 15:15	52	60	50	54	58	53	53	49	50	41	31
18/11/2024 15:30	57	73	51	59	63	63	61	54	52	45	35
18/11/2024 15:45	54	79	50	55	58	53	53	50	52	44	39
18/11/2024 16:00	59	80	53	62	59	56	56	55	55	50	47
18/11/2024 16:15	60	83	53	61	56	53	53	53	55	56	45
18/11/2024 16:30	69	93	55	68	57	55	55	59	64	65	58
18/11/2024 16:45	65	87	55	67	58	58	55	59	61	59	54

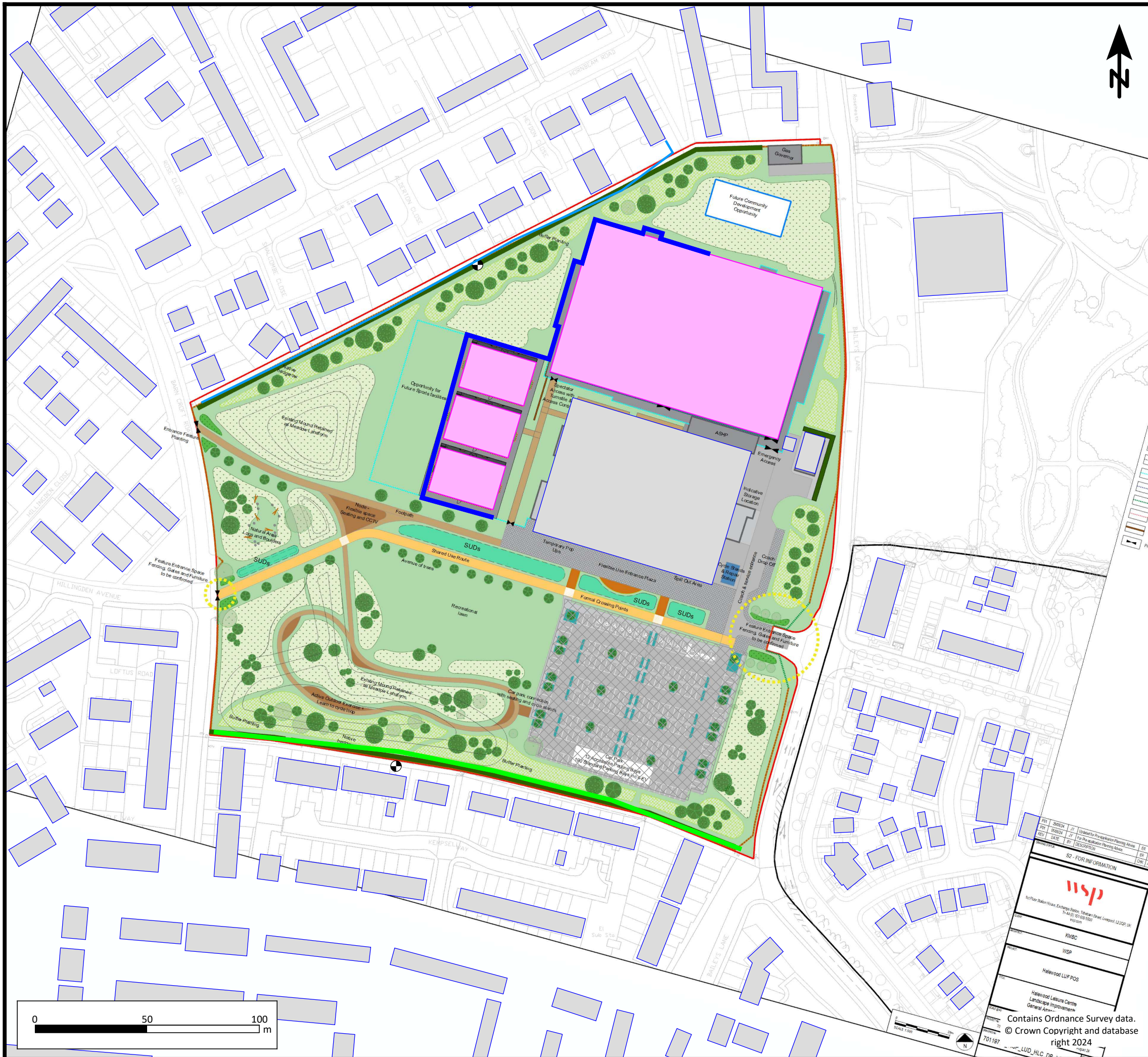
Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
18/11/2024 17:00	64	82	58	68	59	58	56	59	61	57	54
18/11/2024 17:15	64	81	58	67	57	54	56	59	61	56	51
18/11/2024 17:30	65	84	58	68	58	56	56	60	62	58	52
18/11/2024 17:45	67	86	60	70	59	58	58	63	65	59	55
18/11/2024 18:00	64	85	59	67	59	60	58	61	61	56	52
18/11/2024 18:15	64	80	60	66	60	61	59	61	61	56	50
18/11/2024 18:30	66	82	61	68	59	60	59	62	63	57	51
18/11/2024 18:45	66	83	61	68	59	59	58	62	63	58	53
18/11/2024 19:00	65	84	56	69	59	58	57	62	62	57	51
18/11/2024 19:15	58	74	54	61	57	57	53	54	55	51	45
18/11/2024 19:30	64	81	56	67	57	57	55	57	61	57	51
18/11/2024 19:45	65	84	58	68	59	60	58	59	62	59	52
18/11/2024 20:00	62	81	53	66	58	57	55	58	59	55	49
18/11/2024 20:15	58	79	52	60	57	55	53	52	56	49	43
18/11/2024 20:30	58	79	51	60	56	55	52	52	56	49	43
18/11/2024 20:45	59	78	51	63	56	55	51	54	57	51	44
18/11/2024 21:00	55	79	50	57	56	51	49	51	52	47	42
18/11/2024 21:15	52	61	50	55	56	50	48	48	50	43	38
18/11/2024 21:30	53	62	49	56	56	51	49	48	50	44	38
18/11/2024 21:45	52	65	49	55	56	54	49	48	50	43	37
18/11/2024 22:00	53	61	49	55	55	50	49	47	50	44	37
18/11/2024 22:15	51	64	48	54	55	50	47	46	49	41	37
18/11/2024 22:30	53	64	48	56	56	51	49	48	50	44	37

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
18/11/2024 22:45	51	64	47	54	56	50	48	47	49	42	37
18/11/2024 23:00	50	61	47	52	54	49	47	45	47	40	36
18/11/2024 23:15	49	62	45	52	55	49	48	46	46	38	35
18/11/2024 23:30	53	61	47	56	56	50	49	47	51	44	36
18/11/2024 23:45	51	66	46	54	57	51	51	46	49	42	36
19/11/2024 00:00	47	59	44	49	54	48	43	44	44	35	34
19/11/2024 00:15	46	58	43	49	54	48	46	43	43	36	33
19/11/2024 00:30	46	60	43	48	54	49	45	43	43	34	32
19/11/2024 00:45	46	57	43	48	54	48	44	44	43	33	32
19/11/2024 01:00	47	63	43	48	55	47	44	43	44	37	32
19/11/2024 01:15	44	55	41	47	53	46	43	42	41	32	31
19/11/2024 01:30	43	55	40	45	52	45	40	41	40	29	31
19/11/2024 01:45	43	54	40	44	50	44	39	40	39	28	30
19/11/2024 02:00	44	54	42	46	51	46	41	42	41	29	31
19/11/2024 02:15	43	53	40	45	50	45	41	41	40	28	30
19/11/2024 02:30	44	53	41	46	51	45	40	42	40	29	30
19/11/2024 02:45	43	53	40	45	52	46	40	42	39	27	30
19/11/2024 03:00	43	53	40	45	51	45	41	42	40	31	29
19/11/2024 03:15	44	54	41	46	51	45	42	42	41	29	29
19/11/2024 03:30	43	52	41	45	51	44	39	41	40	29	27
19/11/2024 03:45	45	60	42	47	52	45	41	42	42	35	30
19/11/2024 04:00	44	60	41	45	51	44	38	41	41	34	28
19/11/2024 04:15	44	55	42	46	52	45	42	42	42	32	29

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
19/11/2024 04:30	45	52	42	46	52	45	40	43	42	30	27
19/11/2024 04:45	46	56	43	48	53	46	41	43	44	34	30
19/11/2024 05:00	48	57	44	51	52	46	42	44	46	37	31
19/11/2024 05:15	51	59	49	54	55	48	46	48	50	40	33
19/11/2024 05:30	52	59	50	54	56	51	48	49	50	42	34
19/11/2024 05:45	52	59	49	54	56	49	48	48	49	41	34
19/11/2024 06:00	52	59	50	54	56	49	45	49	50	40	33
19/11/2024 06:15	54	69	52	56	58	52	49	52	52	41	32
19/11/2024 06:30	56	64	54	58	59	53	51	53	54	44	34
19/11/2024 06:45	56	59	54	57	59	53	50	52	54	43	33
19/11/2024 07:00	54	60	52	56	59	52	48	51	52	43	34
19/11/2024 07:15	54	59	51	56	60	53	51	50	51	44	35
19/11/2024 07:30	58	77	54	58	61	54	52	52	54	44	51
19/11/2024 07:45	58	75	54	57	61	55	54	53	56	45	35
19/11/2024 08:00	55	61	53	56	61	53	49	51	53	44	34
19/11/2024 08:15	56	67	54	57	61	55	54	52	54	45	35
19/11/2024 08:30	56	63	54	57	61	54	50	52	54	46	35
19/11/2024 08:45	56	63	54	57	62	56	51	52	54	45	35
19/11/2024 09:00	57	72	55	58	61	55	51	53	55	46	41
19/11/2024 09:15	55	63	54	57	61	55	53	52	53	43	34
19/11/2024 09:30	54	62	53	56	61	54	50	52	52	43	35
19/11/2024 09:45	55	62	53	57	61	55	50	52	53	44	36
19/11/2024 10:00	54	66	51	56	60	55	54	53	51	41	33

Table A.4 – Measured Sound Levels at LT4											
Period Start	Broadband Sound Levels, dBA				Octave Band Sound Levels, dB Leq						
	Leq	Lmax	L90	L10	63H z	125H z	250H z	500H z	1Kh z	2KH z	4KH z
	19/11/2024 10:15	54	67	52	56	60	54	51	51	52	43

DRAWINGS



- Key**
- Site Boundary
 - Existing Buildings
 - APG
 - Parking lot
 - 2.5 m Barrier
 - 1.8 m Barrier

CLIENT: Knowsley Metropolitan Borough Council		
PROJECT: Halewood LUF		
TITLE: Figure 1 - Halewood LUF Barrier Location		
DRG NO: ST21181/0002/001	REV: A	
DRG SIZE: A3	SCALE: 1:1700	DATE: 13/02/2025
DRAWN BY AS	CHECKED BY PB	APPROVED BY PB



WSP

For Road Station House, Exchange Station, Tithebarn Street, Liverpool L2 2DP, UK
P: 0151 207 5500
E: info@wsp.co.uk
W: www.wsp.co.uk

RMBC

WSP

Halewood LUF POS

Halewood Leisure Centre
Landscaping Improvements
General Area

Contains Ordnance Survey data.
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