

APPENDIX I



Proposed Residential Development
Material Change of Use
179 Francis Street
West End

ACOUSTIC REPORT



Client:

Kaenetto Investments Pty Ltd

Reference:

2026025 R01B 179 Francis Street, West End RTN.docx

Date Issued:

25 March 2026

Document Information

Contact Details

Acoustic Works
Suite 17/10 Benson Street
Toowong QLD 4066
(07) 3393 2222

PO Box 69
Toowong DC
QLD 4066

Greg Pearce
Ph: 0450 337 375
Email: gpearce@acousticworks.com.au

Mark Enersen
Ph: 0409 317 416
Email: menersen@acousticworks.com.au

Report Register

Date	Revision	Author	Reviewer	Manager
25/03/26	R01A (DRAFT)	Kaitlyn Meldrum	Kayleigh Styles	ME
25/03/26	R01B	Kaitlyn Meldrum	Kayleigh Styles	ME

Disclaimer

Reports produced by Acoustic Works are prepared for a particular Client’s objective and are based on a specific scope, conditions and limitations, as agreed between Acoustic Works and the Client. Under no circumstances shall information and/or report(s) prepared by Acoustic Works be used by other parties other than the Client without first obtaining written permission from Acoustic Works.

TABLE OF CONTENTS

1.Introduction	5
2.Site Description	5
2.1 Site Location	5
2.2 Proposal	6
2.3 Acoustic Environment	6
3.Equipment	6
4.Noise Monitoring	7
4.1 Unattended Noise Monitoring	7
4.1.1 Road Traffic Noise Monitoring	7
5.Measured Noise Levels	8
5.1 Meteorological Conditions.....	8
5.2 Road Traffic Noise Levels	9
6.Noise Criteria.....	10
6.1 Road Traffic Noise Criteria.....	10
6.1.1 State Development Assessment Provisions (SDAP)	10
6.1.2 Queensland Design Code MP4.4	12
7.Road Traffic Assessment	13
7.1 Traffic Volumes	13
7.2 Road Traffic Noise Verification	13
7.3 Predicted Road Traffic Noise Levels - 2036	14
8.Recommendations.....	17
8.1 Acoustic Barriers	17
8.1.1 Glazing.....	18
8.1.2 Alternative Ventilation	19
8.1.3 Wall Construction	20
8.1.4 Roof/ceiling Construction	20
9.Conclusion	21
10. Appendices	22
10.1 Development Plans.....	22
10.2 Noise Monitoring Charts	24
10.2.1 Road Traffic Noise Monitoring	24

TABLE INDEX

<i>Table 1: Meteorological Conditions – Townsville</i>	<i>8</i>
<i>Table 2: Measured ambient and road noise levels – all time periods</i>	<i>9</i>
<i>Table 3: SDAP Road Traffic Noise Criteria.....</i>	<i>10</i>
<i>Table 4: Table 1 of SDAP Maximum Building Façade Acoustic Levels.....</i>	<i>11</i>
<i>Table 5: Table 2 of SDAP Maximum Free Field Acoustic Levels</i>	<i>11</i>
<i>Table 6: Table 3 of SDAP Maximum Internal Acoustic Levels</i>	<i>11</i>
<i>Table 7: Queensland Development Code Noise Categories</i>	<i>12</i>
<i>Table 8: Traffic Volumes</i>	<i>13</i>
<i>Table 9: Comparison of measured and predicted noise levels</i>	<i>13</i>
<i>Table 10: Predicted Road Traffic Noise Impacts 2036 – with acoustic barrier.....</i>	<i>14</i>
<i>Table 11: Road Traffic Noise Impacts to Passive Recreation Areas – with acoustic barrier</i>	<i>16</i>
<i>Table 12: Recommended Acoustic Barrier Height.....</i>	<i>17</i>
<i>Table 13: Required façade acoustic ratings</i>	<i>18</i>
<i>Table 14: QDC typical wall construction</i>	<i>20</i>
<i>Table 15: QDC typical roof construction</i>	<i>20</i>

FIGURE INDEX

<i>Figure 1: Site location (not to scale)</i>	<i>5</i>
<i>Figure 2: Site and Noise Monitoring Location.....</i>	<i>7</i>
<i>Figure 3: SoundPLAN verification of noise monitoring location – Road Traffic</i>	<i>13</i>
<i>Figure 4: Predicted Year 2036 Traffic Noise Levels – Ground Level (Façade Corrected)</i>	<i>15</i>
<i>Figure 5: Predicted Year 2036 Traffic Noise Levels – Ground Level (Free Field)</i>	<i>16</i>
<i>Figure 6: TMR Acoustic Barriers.....</i>	<i>17</i>

1. Introduction

This report is in response to a request by Kaenetto Investments Pty Ltd for a road traffic noise assessment of a proposed residential development to be located at 179 Francis Street, West End. To facilitate the assessment, unattended noise monitoring was conducted to establish existing road traffic impacts from Percy Street to the proposed development. Based on the results of the assessment, recommendations for acoustic treatments are specified in this report.

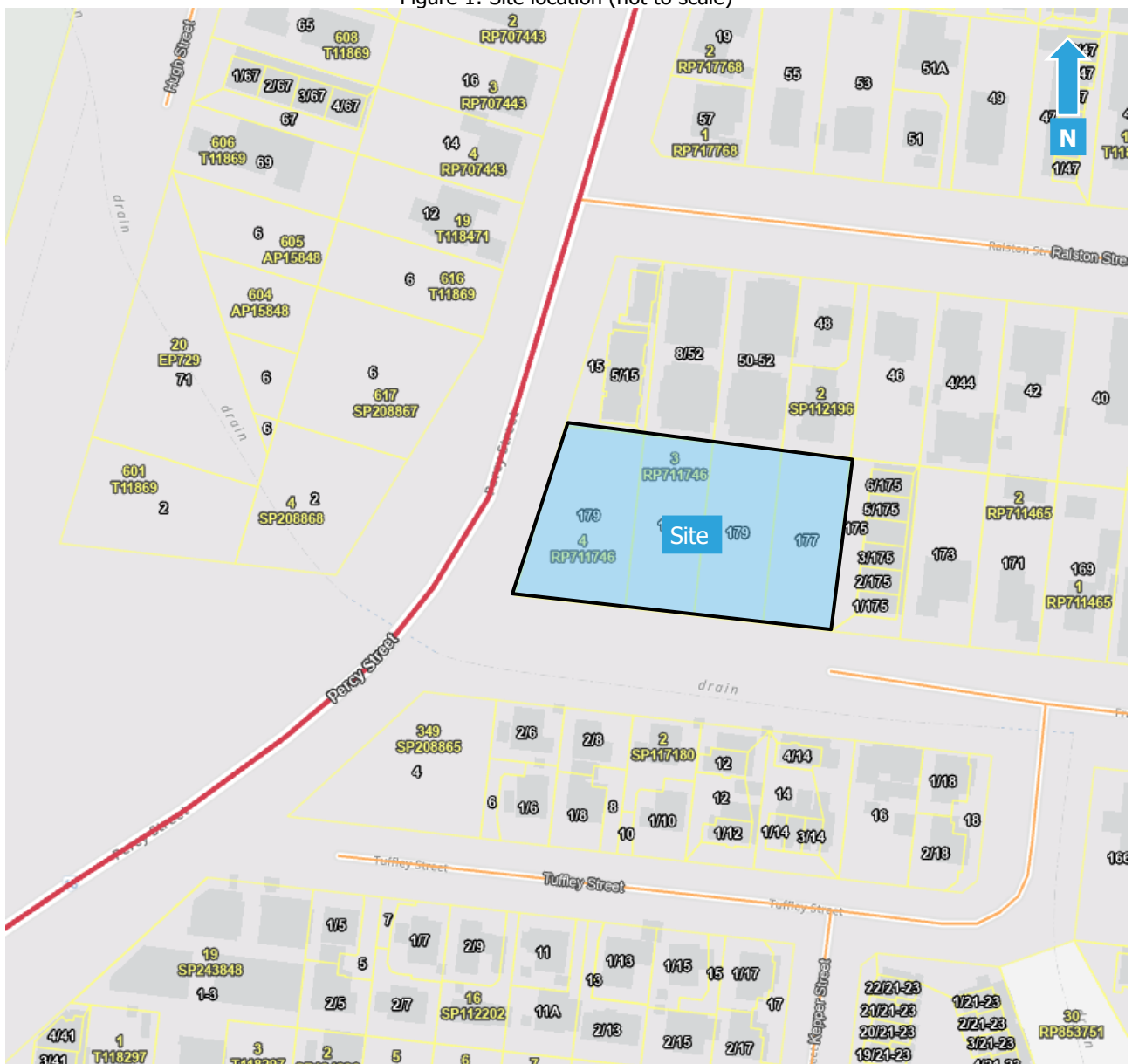
2. Site Description

2.1 Site Location

The site is described by the following;

177-179 Francis Street, West End
Lots 1-4 on RP711746

Figure 1: Site location (not to scale)



A site survey was conducted on 17 February 2026 which identified the following in relation to the site;

- a) The site is currently vacant and ready for construction.
- b) Residential land uses bound the site to the north and east.
- c) Francis Street is located to the southeast of the site, separating it from residential dwellings.
- d) Percy Street bounds the site to the west, separating it from vacant land.

2.2 Proposal

The proposal is to construct 14 single residential units comprised of the following;

- Total site area: 4,433m².
- 6 duplex and 2 villas.
- 11 visitor carparking spaces
- Site access via Francis Street.

2.3 Acoustic Environment

The ambient noise environment at the site is primarily affected by road traffic noise from Percy Street.

3. Equipment

The following equipment was used to record noise levels:

- Rion NL42 Environmental Noise Monitor
- Pulsar Model 105 Sound Calibrator

The sound measuring equipment holds current NATA Laboratory Certification and was field calibrated before and after the monitoring period with no significant drift from the reference signal recorded.

4. Noise Monitoring

4.1 Unattended Noise Monitoring

4.1.1 Road Traffic Noise Monitoring

A Rion NL42 road traffic noise monitor was placed at 21 Percy Street approximately 8m from the nearest lane of the Percy Street to measure road traffic noise levels. The monitor was located in a free field position with the microphone approximately 1.4 metres above ground surface level. The monitor was set to record noise levels between 17 February and 11 March 2026.

The road traffic noise monitor was set to record noise levels in "A" weighting, fast response using 1-hour statistical intervals. Road traffic noise monitoring was conducted in accordance with Australian Standard *AS2702:1984 Acoustics - Methods for the measurement of road traffic noise*.

Refer to Figure 2 for noise monitoring location.

Figure 2: Site and Noise Monitoring Location



5. Measured Noise Levels

The following tables present the measured traffic noise levels from the unattended noise surveys. Any periods of inclement weather or extraneous noise were omitted from the measured data prior to determining the results.

5.1 Meteorological Conditions

Meteorological observations during the unattended noise monitoring survey were obtained from the Bureau of Meteorology website (<http://www.bom.gov.au/climate/data>), shown in Table 1 below.

Table 1: Meteorological Conditions – Townsville

Day	Date	Rainfall (mm)	Wind			
			9am		3pm	
			Direction	Speed (km/h)	Direction	Speed (km/h)
Tuesday	17/02/2026	7.2	ESE	11	8	ENE
Wednesday	18/02/2026	31.6	SSE	17	8	E
Thursday	19/02/2026	66.8	-	Calm	3	NNE
Friday	20/02/2026	73.8	ENE	9	8	WNW
Saturday	21/02/2026	11.6	E	6	8	ENE
Sunday	22/02/2026	18	SE	13	8	ENE
Monday	23/02/2026	0	SSW	6	-	NE
Tuesday	24/02/2026	1.6	SE	15	8	E
Wednesday	25/02/2026	0	S	13	2	ENE
Thursday	26/02/2026	0	ESE	17	8	ESE
Friday	27/02/2026	0.8	SW	6	-	NE
Saturday	28/02/2026	0.6	SE	17	-	ENE
Sunday	1/03/2026	1	SSE	11	E	33
Monday	2/03/2026	12	ESE	24	ESE	24
Tuesday	3/03/2026	0.4	SSE	19	E	31
Wednesday	4/03/2026	4.8	SSE	17	E	24
Thursday	5/03/2026	0	SSE	20	SE	24
Friday	6/03/2026	5.8	S	13	E	19
Saturday	7/03/2026	27.2	N	26	N	26
Sunday	8/03/2026	23	N	20	N	22
Monday	9/03/2026	7	NNW	17	5	N
Tuesday	10/03/2026	10.8	NW	17	NW	8

5.2 Road Traffic Noise Levels

The measured road traffic noise levels at the monitoring locations were as follows:

Table 2: Measured ambient and road noise levels – all time periods

Day	Date	L10(18h)	Leq(1h) Day	Leq(1h) Night	L90(8h)	L90(18h)
Tuesday	17/02/2026	69.7	69.5	61.3	43.0	49.0
Wednesday	18/02/2026	71.4	72.6	67.4	46.6	52.8
Thursday	19/02/2026	70.1	72.7	74.4	49.8	50.9
Friday	20/02/2026	72.1	72.0	70.6	47.6	54.5
Saturday^	21/02/2026	70.5	69.2	65.6	44.8	50.7
Sunday^	22/02/2026	69.5	73.3	65.2	45.8	48.7
Monday	23/02/2026	69.2	69.6	65.7	45.0	49.8
Tuesday	24/02/2026	69.5	72.5	65.7	45.8	50.5
Wednesday	25/02/2026	69.5	69.9	68.6	43.9	50.4
Thursday	26/02/2026	69.7	67.8	65.6	43.1	50.3
Friday	27/02/2026	70.5	69.3	67.4	43.8	50.2
Saturday^	28/02/2026	69.9	72.1	65.7	41.1	48.2
Sunday^	1/03/2026	69.0	69.7	62.7	40.0	49.0
Monday	2/03/2026	70.0	72.4	67.0	40.7	50.0
Tuesday	3/03/2026	70.3	71.0	67.6	41.2	50.0
Wednesday	4/03/2026	69.9	70.5	66.6	40.6	49.3
Thursday	5/03/2026	69.9	72.3	66.5	40.1	50.5
Friday	6/03/2026	71.4	70.9	65.9	41.2	51.5
Saturday^	7/03/2026	70.8	70.4	66.6	46.5	50.0
Sunday^	8/03/2026	69.9	70.7	63.8	46.8	50.8
Monday	9/03/2026	70.0	69.0	66.9	43.9	51.3
Tuesday	10/03/2026	71.9	69.8	66.9	45.7	52.3
Overall value		70.1	70.5	66.2	42.8	50.3

*Note rainfall 18-20 February and 9 March for all time periods was found to affect the measurements, therefore the data was omitted for the affected time periods.

^The proposed development is located within a state-controlled transport noise corridor overlay. To be consistent with the advice in Section 4.3.1.2 of the Transport Noise Management Code of Practice, road traffic data for weekend periods and public holidays was not utilised in the assessment. The code specifies that measurements of traffic noise shall not be conducted during periods of atypical traffic flows. Periods of atypical traffic flows and patterns generally include weekends, school and public holidays.

Refer to the appendix for a graphical representation of the noise monitoring.

6. Noise Criteria

6.1 Road Traffic Noise Criteria

As the development is located near a state-controlled road (Percy Street), the *State Development Assessment Provisions (SDAP)* criteria detailed in Section 6.1.1 applies.

6.1.1 State Development Assessment Provisions (SDAP)

The criteria applied are in accordance with the *SDAP* Version 3.5 dated 12 December 2025 by the Department of State Development, Manufacturing, Infrastructure and Planning. The *SDAP State Code 1: Development in a state-controlled road environment* sets out matters of interest for the assessment of developments near state-controlled roads or multi-modal corridors. The applicable criteria for the development in the year 2035 (ten-year planning horizon) requires road traffic noise to be assessed in accordance with Table 1.5 of the policy statement as follows;

Table 3: SDAP Road Traffic Noise Criteria

Material change of use (accommodation activity)	
Ground floor level requirements adjacent to a state-controlled road or type 1 multi-modal corridor	
P039 Development minimises noise intrusion from a state-controlled road in private open space.	AO39.1 Development provides a noise barrier or earth mound which is designed, sited and constructed: 1. to achieve the maximum free field acoustic levels in reference table 2 (item 2.2) for private open space at the ground floor level; 2. in accordance with: a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020. OR AO39.2 Development achieves the maximum free field acoustic level in reference table 2 (item 2.2) for private open space by alternative noise attenuation measures where it is not practical to provide a noise barrier or earth mound.
P040 Development (excluding a relevant residential building or relocated building) minimises noise intrusion from a state controlled road in habitable rooms at the facade.	AO40.1 Development (excluding a relevant residential building or relocated building) provides a noise barrier or earth mound which is designed, sited and constructed: 1. to achieve the maximum building façade acoustic level in reference table 1 (item 1.1) for habitable rooms; 2. in accordance with: a. Chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013; b. Technical Specification-MRTS15 Noise Fences, Transport and Main Roads, 2019; c. Technical Specification-MRTS04 General Earthworks, Transport and Main Roads, 2020. OR AO40.2 Development (excluding a relevant residential building or relocated building) achieves the maximum building façade acoustic level in reference table 1 (item 1.1) for habitable rooms by alternative noise attenuation measures where it is not practical to provide a noise barrier or earth mound.

P041 Habitable rooms (excluding a relevant residential building or relocated building) are designed and constructed using materials to achieve the maximum internal acoustic level in reference table 3 (item 3.1).	No acceptable outcome is provided.
Above ground floor level requirements (accommodation activity) adjacent to a state-controlled road or type 1 multi-modal corridor	
P042 Balconies, podiums, and roof decks include: 1. a continuous solid gap-free structure or balustrade (excluding gaps required for drainage purposes to comply with the Building Code of Australia); 2. highly acoustically absorbent material treatment for the total area of the soffit above balconies, podiums, and roof decks.	No acceptable outcome is provided.
P043 Habitable rooms (excluding a relevant residential building or relocated building) are designed and constructed using materials to achieve the maximum internal acoustic level in reference table 3 (item 3.1).	No acceptable outcome is provided.

Table 4: Table 1 of SDAP Maximum Building Façade Acoustic Levels

Applicable use	Acoustic levels
1.1: Accommodation activity	a. ≤ 60 dB(A) L10 (18 hour) façade corrected (measured L90 (8 hour) free field between 10pm and 6am ≤ 40 dB(A)) OR b. ≤ 63 dB(A) L10 (18 hour) façade corrected (measured L90 (8 hour) free field between 10pm and 6am > 40 dB(A))

Table 5: Table 2 of SDAP Maximum Free Field Acoustic Levels

Applicable use	Acoustic levels
2.2: Private open space for an accommodation activity (including lots created for a future accommodation activity)	a. ≤ 57 dB(A) L10 (18 hour) free field (measured L90 (18 hour) free field between 6am and 12 midnight ≤ 45 dB(A)) OR b. ≤ 60 dB(A) L10 (18 hour) free field (measured L90 (18 hour) free field between 6am and 12 midnight > 45 dB(A))

Table 6: Table 3 of SDAP Maximum Internal Acoustic Levels

Applicable use	Acoustic levels
3.1: Habitable rooms in an accommodation activity (excluding uses addressed in QDC MP4.4)	≤ 35 dB(A) Leq (1 hour) (maximum hour over 24 hours)

6.1.2 Queensland Design Code MP4.4

To determine the minimum design requirements for any new residential buildings located in a transport noise corridor, the Queensland Development Code Part 4.4 may be applied if no alternative solutions are provided. In accordance with MP4.4, the noise categories are stated in Table 7.

Table 7: Queensland Development Code Noise Categories

Category	Noise level L10 (18hr) dBA (including façade correction)
Category 4	≥ 73
Category 3	68-72
Category 2	63-67
Category 1	58-62
Category 0	≤ 57

The building treatment for any future development onsite shall be determined at Building Approval stage, in general accordance with the Queensland Development Code. Alternative solution may be provided on request.

7. Road Traffic Assessment

Road traffic noise associated with Percy Street for a ten-year planning horizon was assessed at the development to determine compliance with SDAP criteria (refer to Section 6.1.1) and any requirements for acoustic treatments.

7.1 Traffic Volumes

Traffic volume for Francis Street was obtained from Transport and Main Roads Traffic Census and is presented in Table 8, with a growth rate of 2.92% used to predict the future AADT.

Table 8: Traffic Volumes

Location	2023 AADT	2026 Predicted AADT	2036 Predicted AADT	Percentage of Heavy Vehicles
Francis Street	24,660	26,883	35,850	3%

7.2 Road Traffic Noise Verification

To ensure the CoRTN noise model is accurate, a verification model of the predicted $L_{A10(18hr)}$ was created and compared to the measured noise level. The CoRTN method allows a 2dB(A) variation from the predicted and measured level, if the variation exceeds 2dB(A) a correction to the predicted level is required.

Table 9: Comparison of measured and predicted noise levels

Location	Measured $L_{A10(18hr)}$ dB(A)	Predicted $L_{A10(18hr)}$ dB(A)	Correction
Francis Street	70.1	70.3	0

Figure 3: SoundPLAN verification of noise monitoring location – Road Traffic

Figure 3: SoundPLAN verification of noise monitoring location - Road Traffic

179 Francis Street, West End - RSPS0002.res: 260312 179 Francis Street Road Traffic Verification 2026

Run info

Single receiver

Details + graphics

Roads

Receiver	FI	L10(18h)
		dB(A)
Logger location	GF	70.3

Inputs applied in the verification of the noise modelling are as follows:

- Speed: 60km/hr
- Road Surface correction: 0dBA, as per the Transport Noise Code of Practice the road surface was identified as Bitumen Dense Graded Asphalt.
- Width of each Lane: 3.5m.
- -0.7 free field correction.

7.3 Predicted Road Traffic Noise Levels - 2036

Road traffic noise modelling for the proposed development was based on the following information:

- Site layout provided by Concepts Building Design, project number 25-051, dated December 2025.
- Percy Street speed limit of 60km/h.
- Receiver heights were based on 1.5m above finished level.
- +2.5dB(A) Façade correction.
- -0.7dBA free field correction and -1.7dBA façade correction for Queensland conditions.

Table 10: Predicted Road Traffic Noise Impacts 2036 – with acoustic barrier

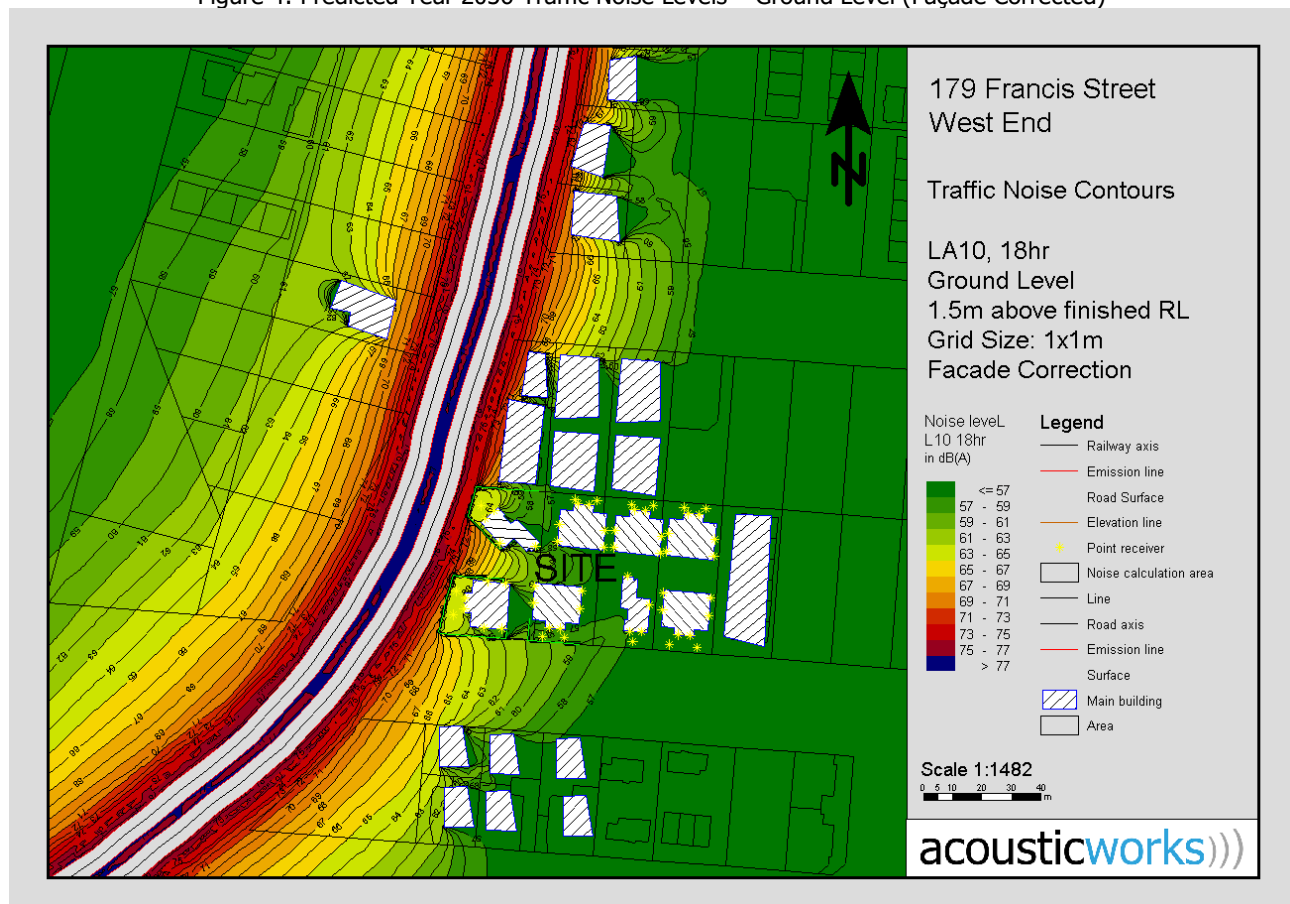
Unit	Floor	Room	Predicted Road Traffic Noise Levels	
			L10 (18h) dB(A)	QDC Noise Category
U1	GF	Bed 1	52	0
U1	GF	Bed 2	51	0
U1	GF	Living/kitchen/dining	54	0
U2	GF	Bed 1	47	0
U2	GF	Bed 2	47	0
U2	GF	Living/kitchen/dining	54	0
U3	GF	Bed 1	51	0
U3	GF	Bed 2	51	0
U3	GF	Living/kitchen/dining	51	0
U4	GF	Bed 1	47	0
U4	GF	Bed 2	47	0
U4	GF	Living/kitchen/dining	51	0
U5	GF	Bed 1	54	0
U5	GF	Bed 2	53	0
U5	GF	Living/kitchen/dining	51	0
U6	GF	Bed 1	48	0
U6	GF	Bed 2	48	0
U6	GF	Living/kitchen/dining	51	0
U7	GF	Bed 1	56	0
U7	GF	Bed 2	56	0
U7	GF	Living/kitchen/dining	53	0
U8	GF	Bed 1	50	0
U8	GF	Bed 2	50	0
U8	GF	Living/kitchen/dining	52	0
U9	GF	Bed 1	52	0
U9	GF	Bed 2	61	1
U9	GF	Bed 3	64	2
U9	GF	Living/kitchen/dining	63	2
U10	GF	Bed 1	57	0
U10	GF	Bed 2	60	1
U10	GF	Living/kitchen/dining	64	2
U11	GF	Bed 1	58	1
U11	GF	Bed 2	58	1
U11	GF	Living/kitchen/dining	63	2
U12	GF	Bed 1	60	1
U12	GF	Bed 2	58	1
U12	GF	Living/kitchen/dining	57	0
U13	GF	Bed 1	50	0
U13	GF	Bed 2	50	0
U13	GF	Living/kitchen/dining	57	0
U14	GF	Bed 1	53	0

Unit	Floor	Room	Predicted Road Traffic Noise Levels	
			L10 (18h) dB(A)	QDC Noise Category
U14	GF	Bed 2	48	0
U14	GF	Bed 3	56	0
U14	GF	Living/kitchen/dining	56	0

Based on the predicted noise impacts, additional facade treatments are required in accordance with QDC MP4.4. Refer to Section 8 for further recommendations.

The 3D SoundPLAN CoRTN noise model predicts $L_{A10,18\text{hour}}$ levels as shown Figure 4.

Figure 4: Predicted Year 2036 Traffic Noise Levels – Ground Level (Façade Corrected)



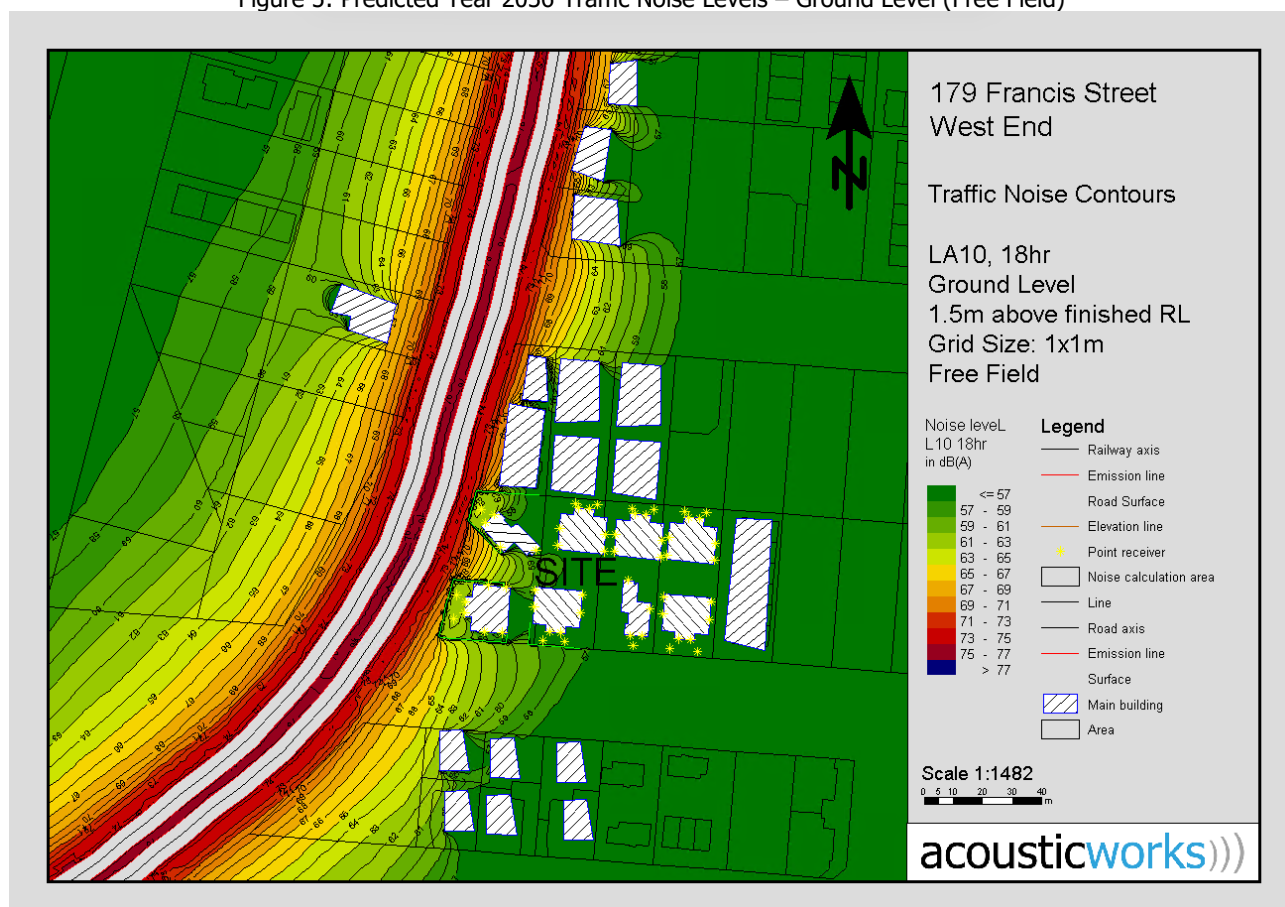
Noise impacts to passive recreation areas are presented in the following table:

Table 11: Road Traffic Noise Impacts to Passive Recreation Areas – with acoustic barrier

Location			Predicted Road Traffic Noise Impacts (Free Field) 2036	Compliance to SDAP Criteria <60dB(A) (yes/no)
Unit	Floor	Area	L _{A10(18hr)} dB(A)	
U1	GF	Yard	54	yes
U2	GF	Yard	53	yes
U3	GF	Yard	53	yes
U4	GF	Yard	52	yes
U5	GF	Yard	53	yes
U6	GF	Yard	52	yes
U7	GF	Yard	54	yes
U8	GF	Yard	53	yes
U9	GF	Yard	63	no
U10	GF	Yard	62	no
U11	GF	Yard	62	no
U12	GF	Yard	56	yes
U13	GF	Yard	56	yes
U14	GF	Yard	55	yes

The 3D SoundPLAN CoRTN noise model predicts L_{A10,18hour} levels as shown Figure 5.

Figure 5: Predicted Year 2036 Traffic Noise Levels – Ground Level (Free Field)



8. Recommendations

8.1 Acoustic Barriers

Acoustic barriers are recommended to be constructed along the passive recreational boundaries of units 9-13 as shown in Figure 6. The barriers are recommended to be built to a height of 2.0 metres for units 9-11 and 1.8m for units 12 and 13 above the finished recreational level or boundary level (whichever is higher).

The barrier shall be constructed using materials that achieve a minimum surface density of 15kg/m². The barriers shall be constructed in accordance with Main Roads Standard Specification MRTS15 "Noise Fences". The barrier shall be free of gaps and holes.

Figure 6: TMR Acoustic Barriers

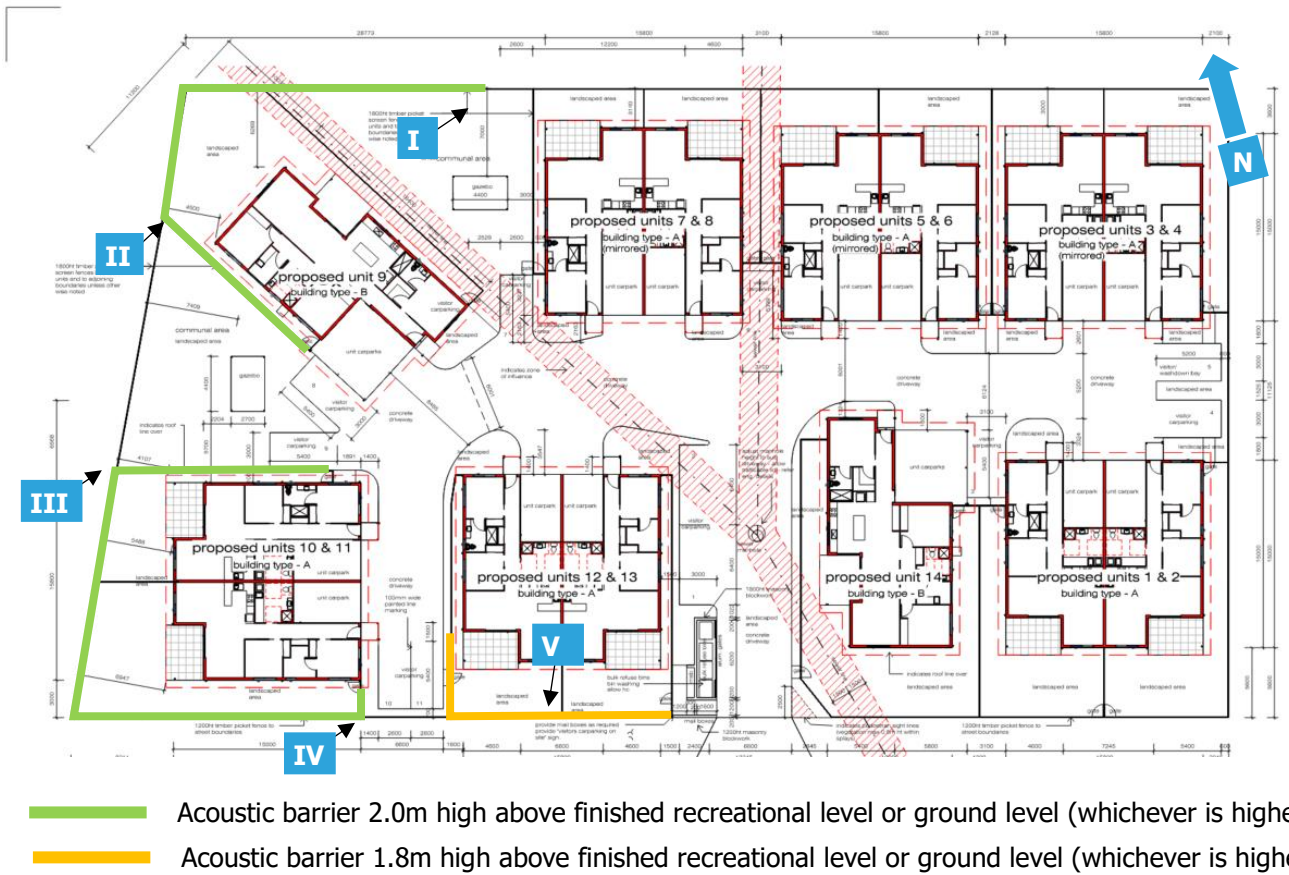


Table 12: Recommended Acoustic Barrier Height

Reference Point	Approximate Finished Recreational Level (m)	Recommended Barrier Height (m)	Approximate Finished Top Barrier Level (m)
I	3.27	2.0	5.3
II	3.00	2.0	5.0
III	3.00	2.0	5.0
IV	3.00	2.0	5.0
V	3.00	1.8	4.8

8.1.1 Glazing

The minimum glazing treatments are required to comply with the following:

- The minimum glass thickness specified shall not be reduced regardless of the R_w performance of the glass unless the glazier can provide a specific (non-generic) NATA Test report proving the proposed glazing system complies (the test report must be based on the same configuration proposed for the development). Note an estimation or calculated performance will not be accepted.
- If compliance cannot be achieved with the minimum R_w ratings, the glazing system shall be upgraded until compliance is achieved.
- Glazing specified with acoustic seals requires a seal that has been tested with a glazing system or door to achieve an R_w rating in accordance with AS/NZS ISO 717.1 (Q-Ion seals or an equivalent product), mohair seals are not acceptable.
- The glazier shall provide NATA test reports on request to verify compliance with the minimum R_w ratings. Generic reports are not acceptable.
- Living areas are defined as habitable rooms other than bedrooms (excluding garages, kitchens, bathrooms & hallways).

Table 13: Required façade acoustic ratings

Unit	Floor	Room	QDC Noise Category	QDC R_w Ratings			QDC Glazing Minimum Construction Requirements	Acoustic seals
				Wall	Roof	Glazing		
U1	GF	Bed 1	0	-	-	-	Standard	no
U1	GF	Bed 2	0	-	-	-	Standard	no
U1	GF	Living/kitchen/dining	0	-	-	-	Standard	no
U2	GF	Bed 1	0	-	-	-	Standard	no
U2	GF	Bed 2	0	-	-	-	Standard	no
U2	GF	Living/kitchen/dining	0	-	-	-	Standard	no
U3	GF	Bed 1	0	-	-	-	Standard	no
U3	GF	Bed 2	0	-	-	-	Standard	no
U3	GF	Living/kitchen/dining	0	-	-	-	Standard	no
U4	GF	Bed 1	0	-	-	-	Standard	no
U4	GF	Bed 2	0	-	-	-	Standard	no
U4	GF	Living/kitchen/dining	0	-	-	-	Standard	no
U5	GF	Bed 1	0	-	-	-	Standard	no
U5	GF	Bed 2	0	-	-	-	Standard	no
U5	GF	Living/kitchen/dining	0	-	-	-	Standard	no
U6	GF	Bed 1	0	-	-	-	Standard	no
U6	GF	Bed 2	0	-	-	-	Standard	no
U6	GF	Living/kitchen/dining	0	-	-	-	Standard	no
U7	GF	Bed 1	0	-	-	-	Standard	no
U7	GF	Bed 2	0	-	-	-	Standard	no
U7	GF	Living/kitchen/dining	0	-	-	-	Standard	no
U8	GF	Bed 1	0	-	-	-	Standard	no
U8	GF	Bed 2	0	-	-	-	Standard	no
U8	GF	Living/kitchen/dining	0	-	-	-	Standard	no
U9	GF	Bed 1	0	-	-	-	Standard	no
U9	GF	Bed 2	1	35	35	27	4mm float	yes
U9	GF	Bed 3	2	41	38	35	10.38 lam	yes
U9	GF	Living/kitchen/dining	2	41	38	35	10.38 lam	yes
U10	GF	Bed 1	0	-	-	-	Standard	no
U10	GF	Bed 2	1	35	35	27	4mm float	yes

Unit	Floor	Room	QDC Noise Category	QDC Rw Ratings			QDC Glazing	Acoustic seals
				Wall	Roof	Glazing	Minimum Construction Requirements	
U10	GF	Living/kitchen/dining	2	41	38	35	10.38 lam	yes
U11	GF	Bed 1	1	35	35	27	4mm float	yes
U11	GF	Bed 2	1	35	35	27	4mm float	yes
U11	GF	Living/kitchen/dining	2	41	38	35	10.38 lam	yes
U12	GF	Bed 1	1	35	35	27	4mm float	yes
U12	GF	Bed 2	1	35	35	27	4mm float	yes
U12	GF	Living/kitchen/dining	0	-	-	-	Standard	no
U13	GF	Bed 1	0	-	-	-	Standard	no
U13	GF	Bed 2	0	-	-	-	Standard	no
U13	GF	Living/kitchen/dining	0	-	-	-	Standard	no
U14	GF	Bed 1	0	-	-	-	Standard	no
U14	GF	Bed 2	0	-	-	-	Standard	no
U14	GF	Bed 3	0	-	-	-	Standard	no
U14	GF	Living/kitchen/dining	0	-	-	-	Standard	no

Any locations not identified in Table 13 shall require standard construction, with minimum 4mm float for windows (minimum Rw 22) and 4mm toughened for sliding doors (minimum Rw 23).

8.1.2 Alternative Ventilation

To achieve the required internal noise levels, it would be necessary that all locations nominated in Table 13 as QDC Noise Category 2 to close the facade doors and windows. Therefore these locations would require the provision for alternative ventilation. To achieve this, mechanically assisted ventilation or air conditioning can be used.

Penetrations through the wall or ceiling shall not reduce the overall acoustic performance of the installed system.

8.1.3 Wall Construction

The wall construction recommendations from QDC MP4.4 are included in the table below. Note that these are not the only allowable methods of construction for the development, and alternative constructions to achieve the required Rw ratings may also be provided.

Table 14: QDC typical wall construction

QDC Noise Category	Wall Rw	QDC Acceptable forms of construction
2	41	Two leaves of clay brick masonry at least 110mm thick with cavity not less than 50mm between leaves OR Single leaf of clay brick masonry at least 110mm thick with: (i) a row of at least 70mm x 35mm timber studs or 64mm steel studs at 600mm centres, spaced at least 20mm from the masonry wall; and (ii) mineral insulation or glass wool insulation at least 50mm thick with a density of at least 11kg/m ³ positioned between studs; and (iii) One layer of plasterboard at least 10mm thick fixed to outside face of studs OR Single leaf of brick masonry at least 110mm thick with at least 13mm thick render on each face OR Concrete brickwork at least 110mm thick OR In-situ concrete at least 100mm thick OR Precast concrete at least 100mm thick and without joints. OR 1 layer of 9mm FC, 90mm timber stud with 75mm glasswool batts (density 11kg/m ³) and 1 layer of 13mm plasterboard internally.
1	35	Single leaf of clay brick masonry at least 110mm thick with: (i) a row of at least 70mm x 35mm timber studs or 64mm steel studs at 600mm centres, spaced at least 20mm from the masonry wall; and (ii) One layer of plasterboard at least 10mm thick fixed to outside face of studs OR Minimum 6mm thick fibre cement sheeting or weatherboards or plank cladding externally, minimum 90mm deep timber stud or 92mm metal stud, standard plasterboard at least 13mm thick internally.
0	N/A	Standard Construction

8.1.4 Roof/ceiling Construction

The roof/ceiling construction recommendations from QDC MP4.4 are included in the table below. Note that these are not the only allowable methods of construction for the development, and alternative constructions to achieve the required Rw ratings may also be provided.

Table 15: QDC typical roof construction

QDC Noise Category	Roof Rw	QDC Acceptable forms of construction
2	38	Concrete or terracotta tile or metal sheet roof with sarking, plasterboard ceiling at least 10mm thick fixed to ceiling cavity, mineral insulation or glass wool insulation at least 50mm thick with a density of at least 11 kg/m ³ .
1	35	Concrete or terracotta tile or metal sheet roof with sarking, plasterboard ceiling at least 10mm thick fixed to ceiling cavity.
0	n/a	Standard Construction

9. Conclusion

A traffic noise assessment has been conducted for the proposed residential development to be located at 179 Francis Street, West End. On condition the recommendations in Section 8 are implemented, compliance is predicted with SDAP MP4.4 criteria.

If you should have any queries please do not hesitate to contact us.

Report Prepared by:



Kaitlyn Meldrum

Acoustic Consultant

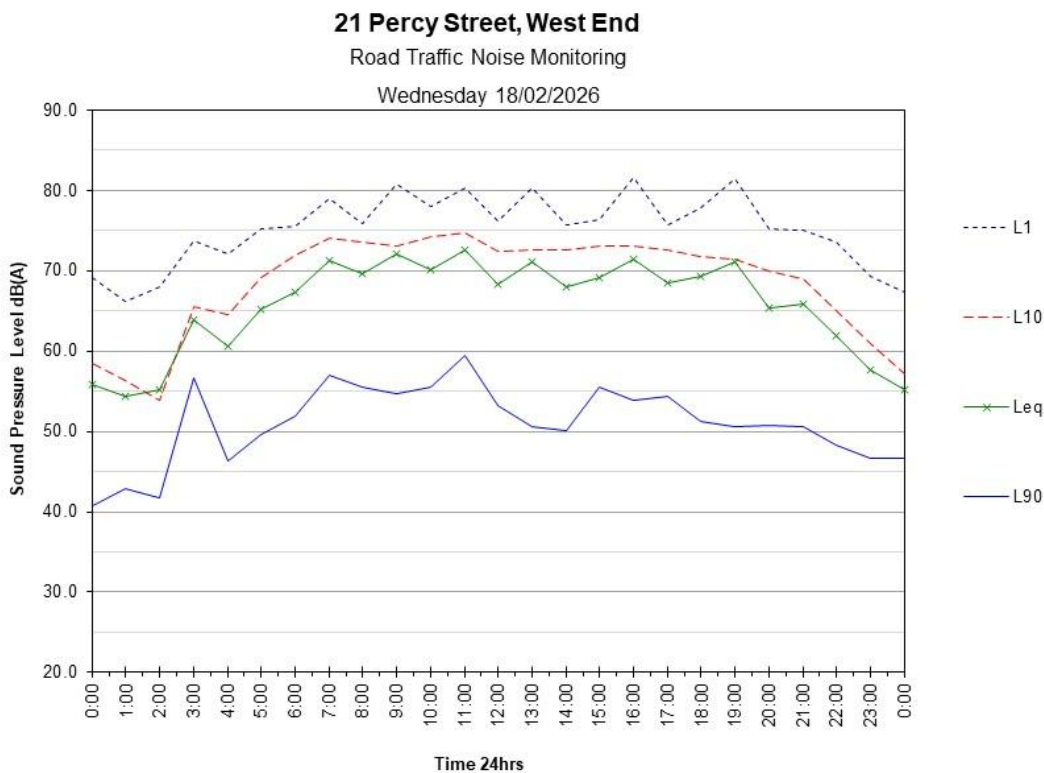
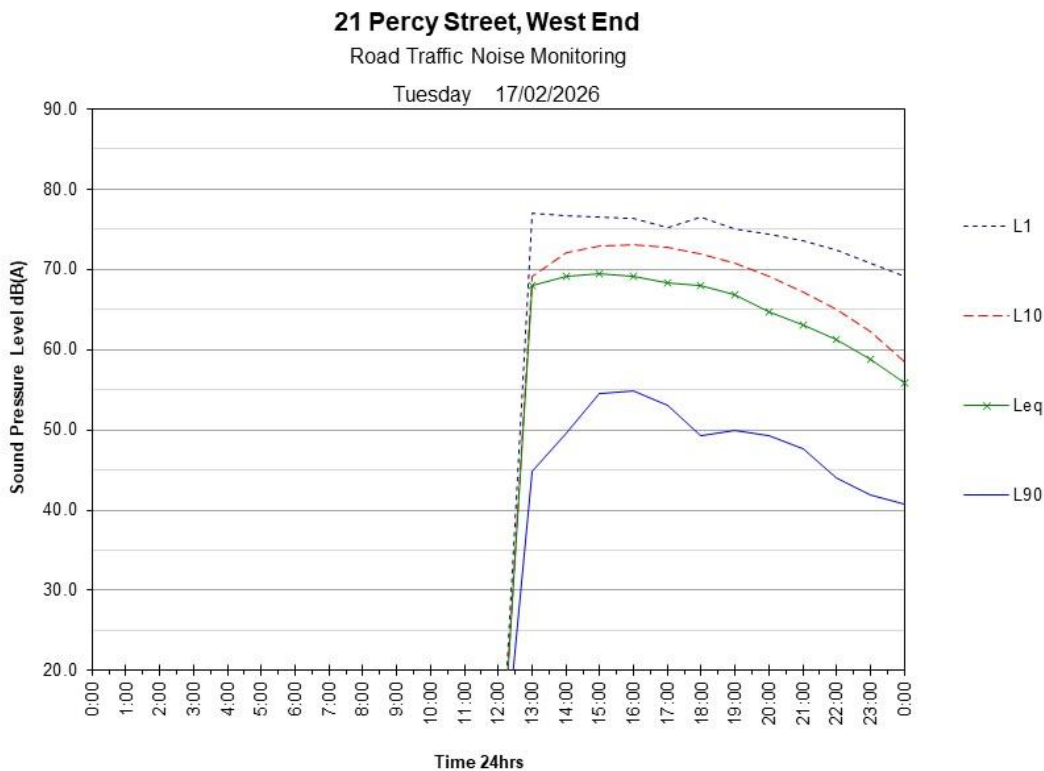
acousticworks)))

10. Appendices

10.1 Development Plans

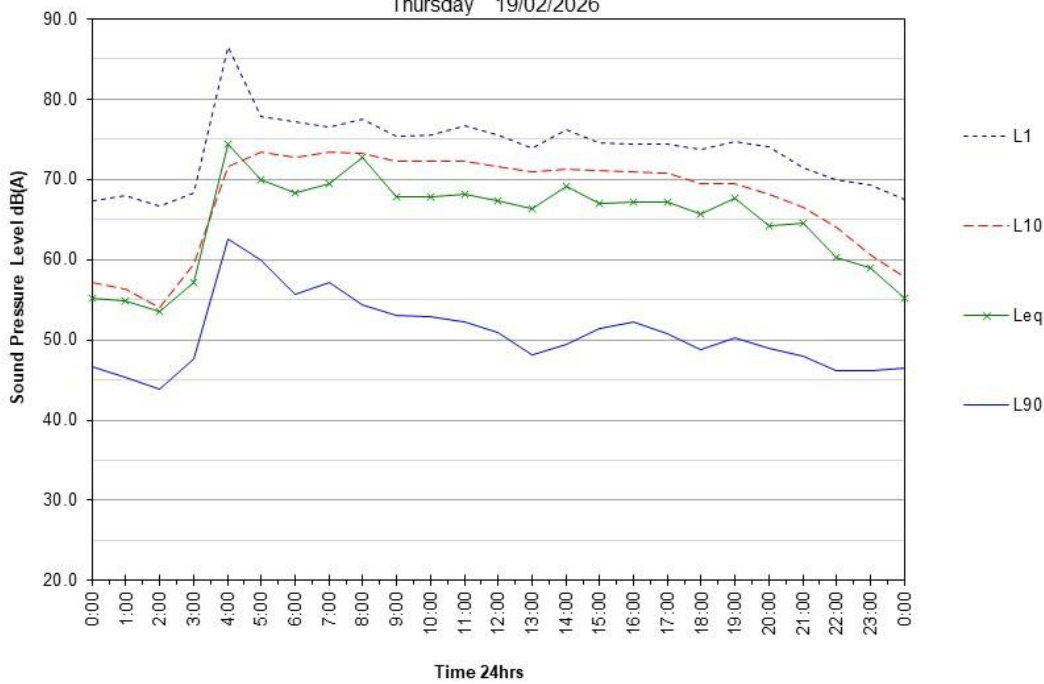


10.2 Noise Monitoring Charts
10.2.1 Road Traffic Noise Monitoring



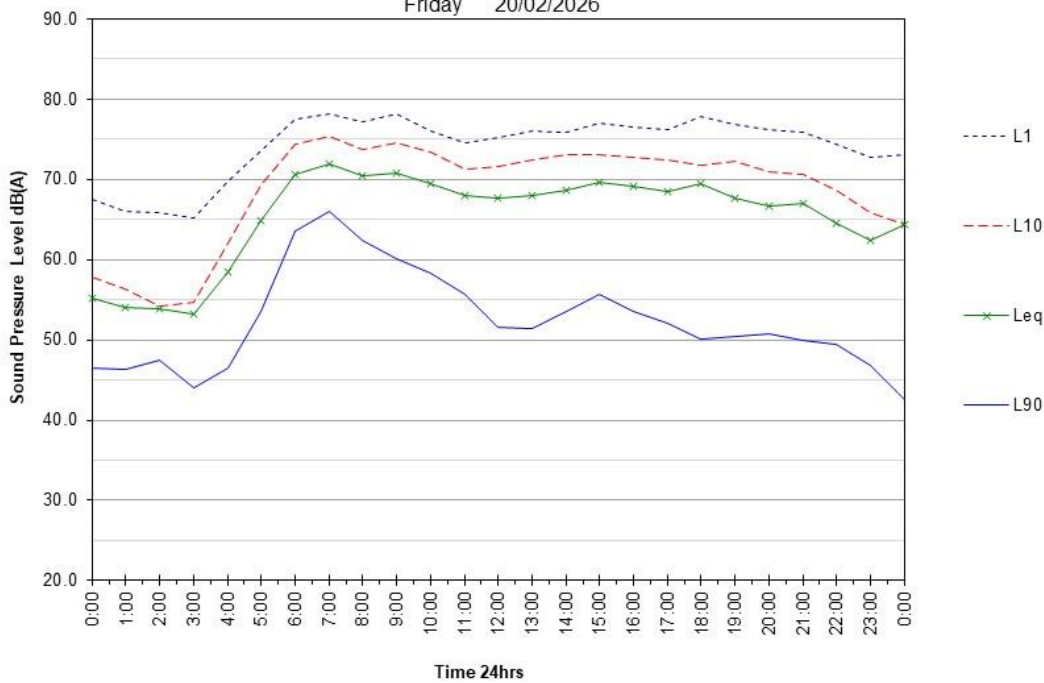
21 Percy Street, West End
Road Traffic Noise Monitoring

Thursday 19/02/2026



21 Percy Street, West End
Road Traffic Noise Monitoring

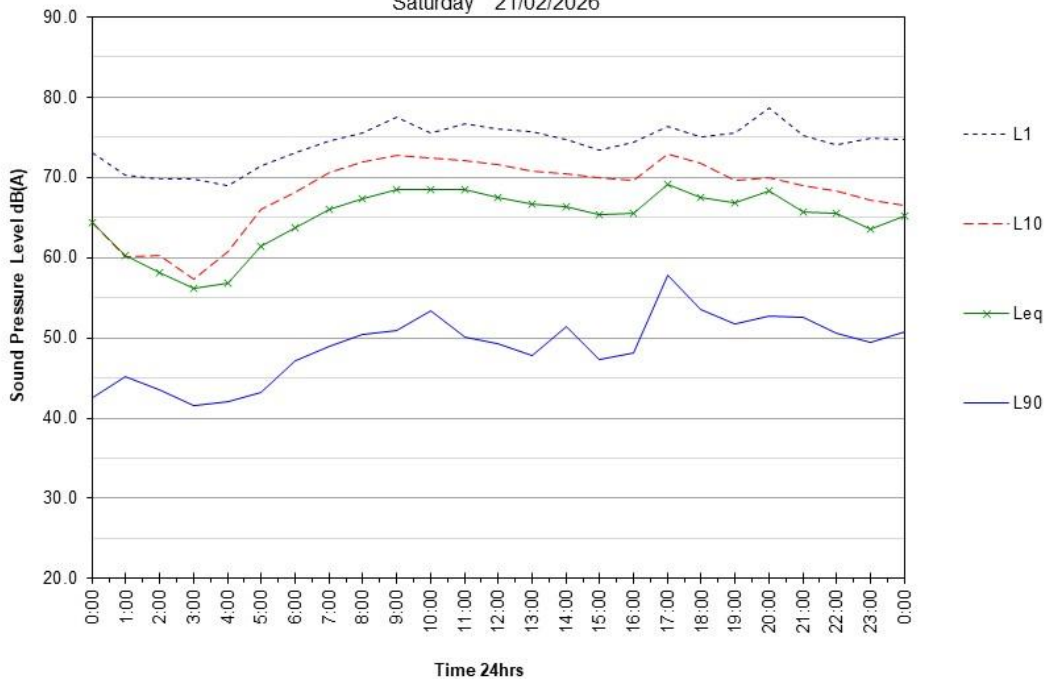
Friday 20/02/2026



21 Percy Street, West End

Road Traffic Noise Monitoring

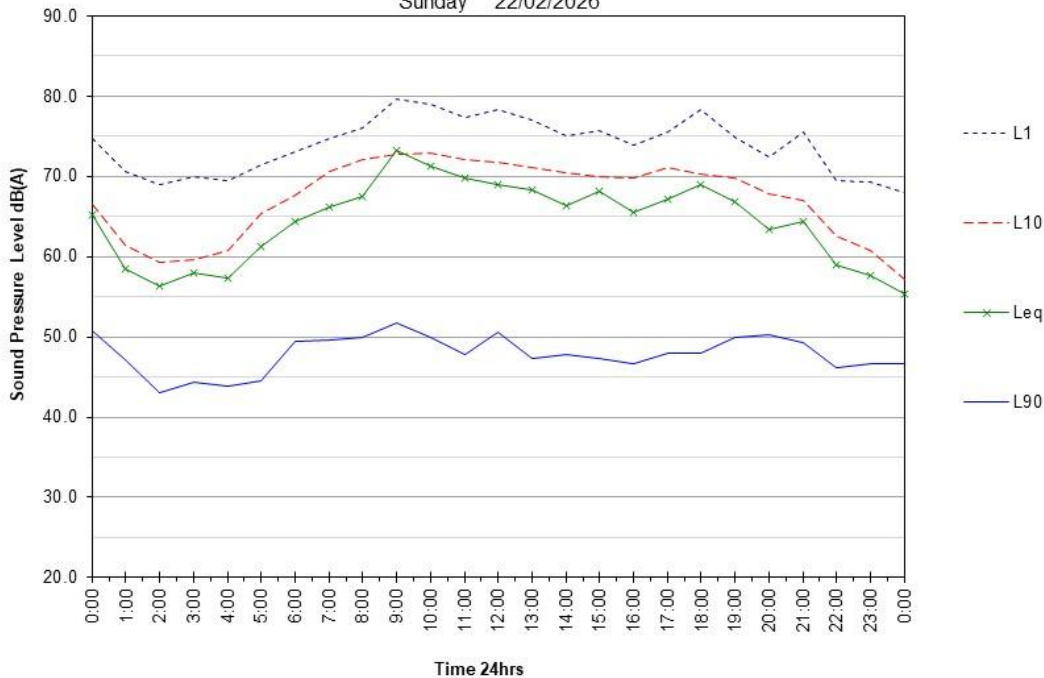
Saturday 21/02/2026



21 Percy Street, West End

Road Traffic Noise Monitoring

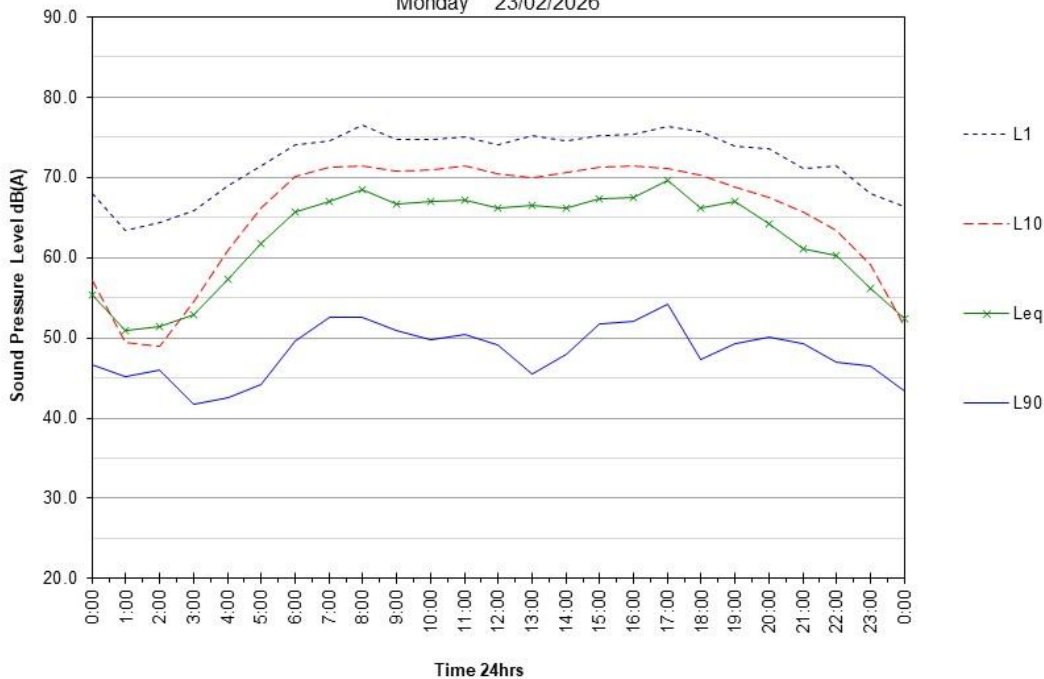
Sunday 22/02/2026



21 Percy Street, West End

Road Traffic Noise Monitoring

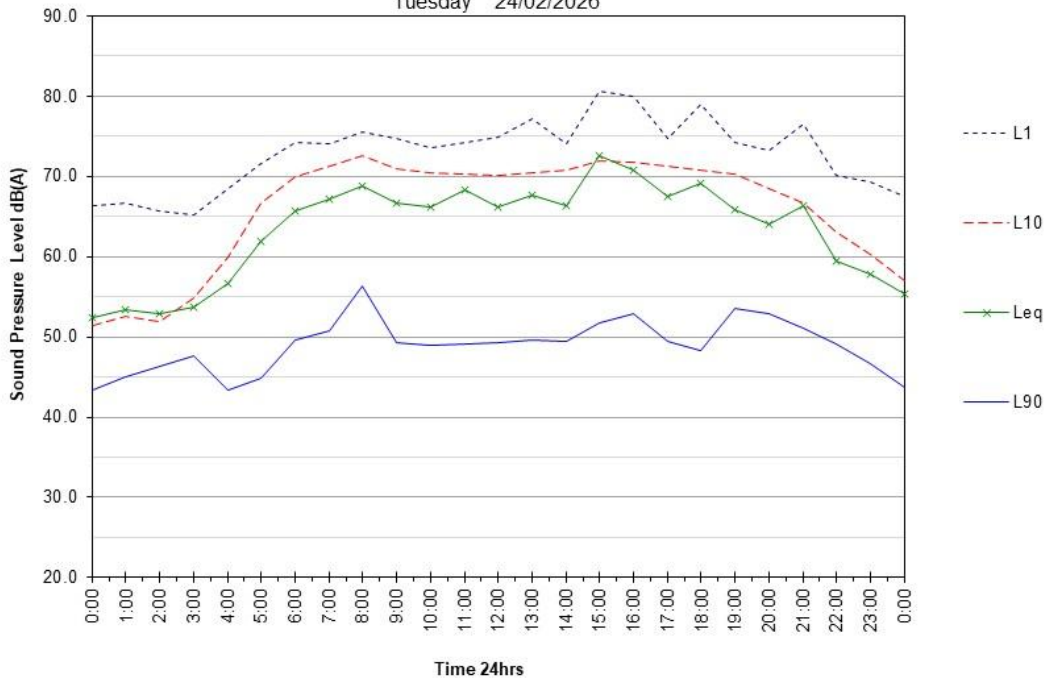
Monday 23/02/2026



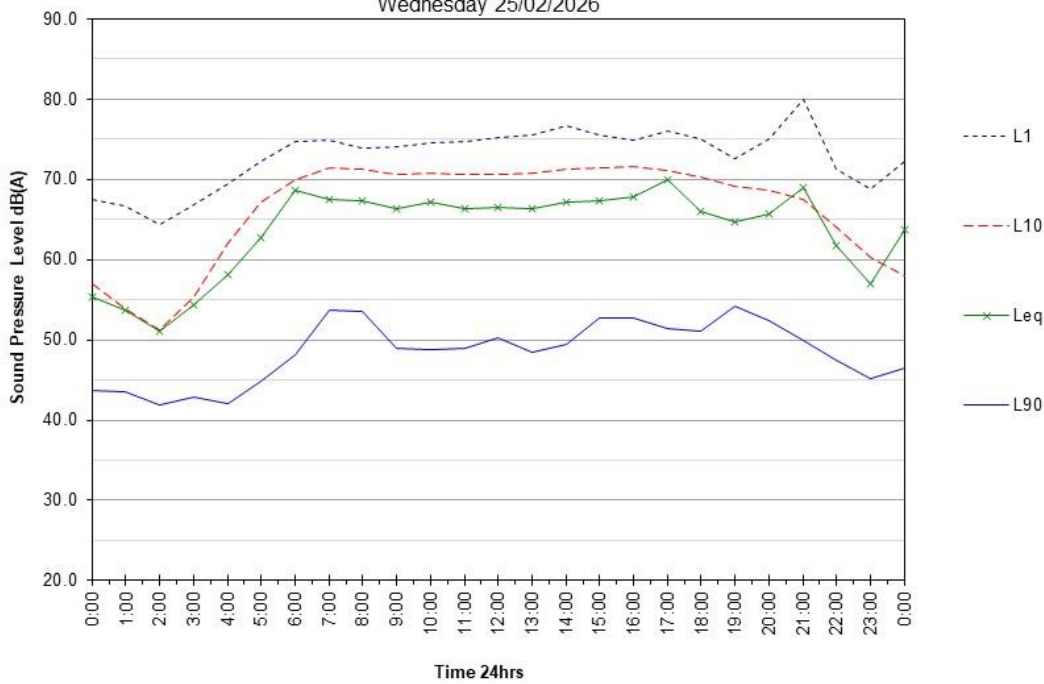
21 Percy Street, West End

Road Traffic Noise Monitoring

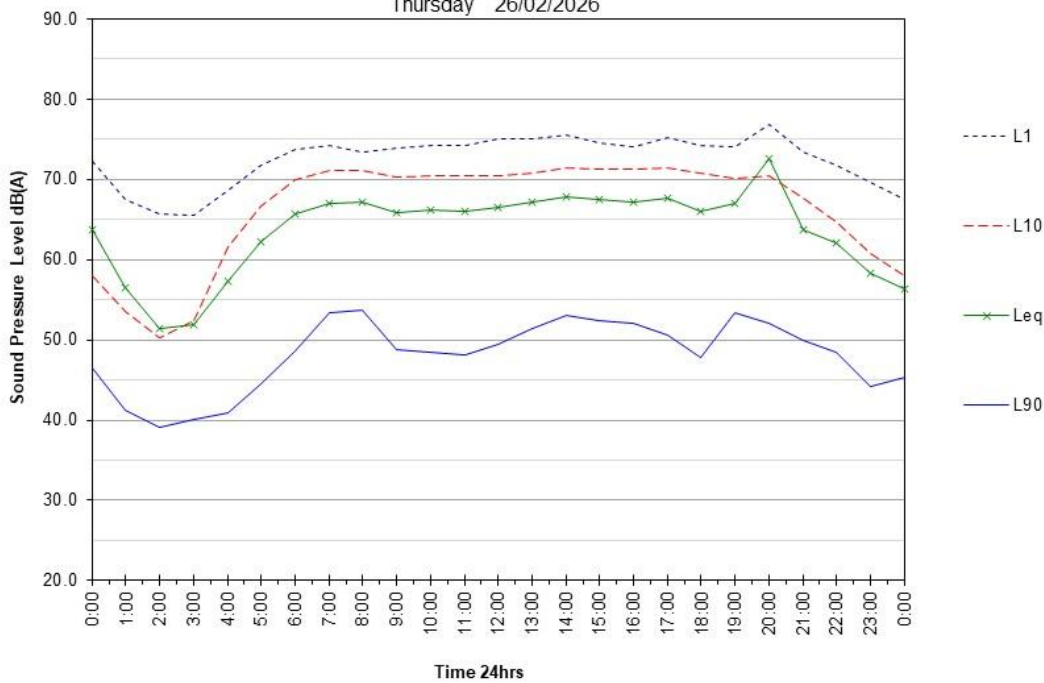
Tuesday 24/02/2026



21 Percy Street, West End
Road Traffic Noise Monitoring
Wednesday 25/02/2026



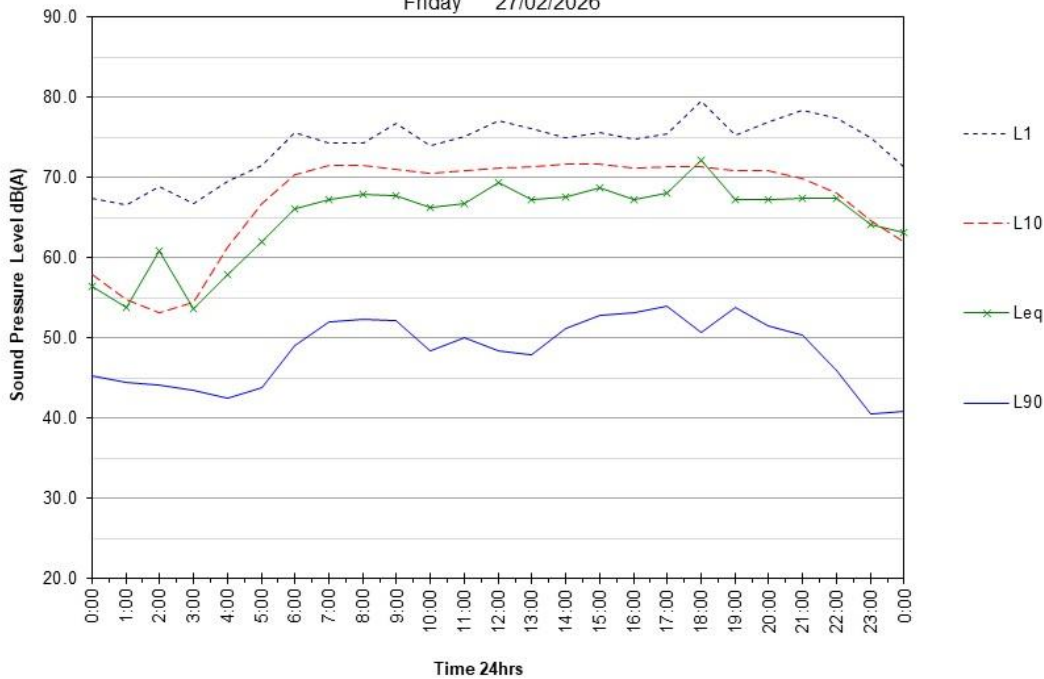
21 Percy Street, West End
Road Traffic Noise Monitoring
Thursday 26/02/2026



21 Percy Street, West End

Road Traffic Noise Monitoring

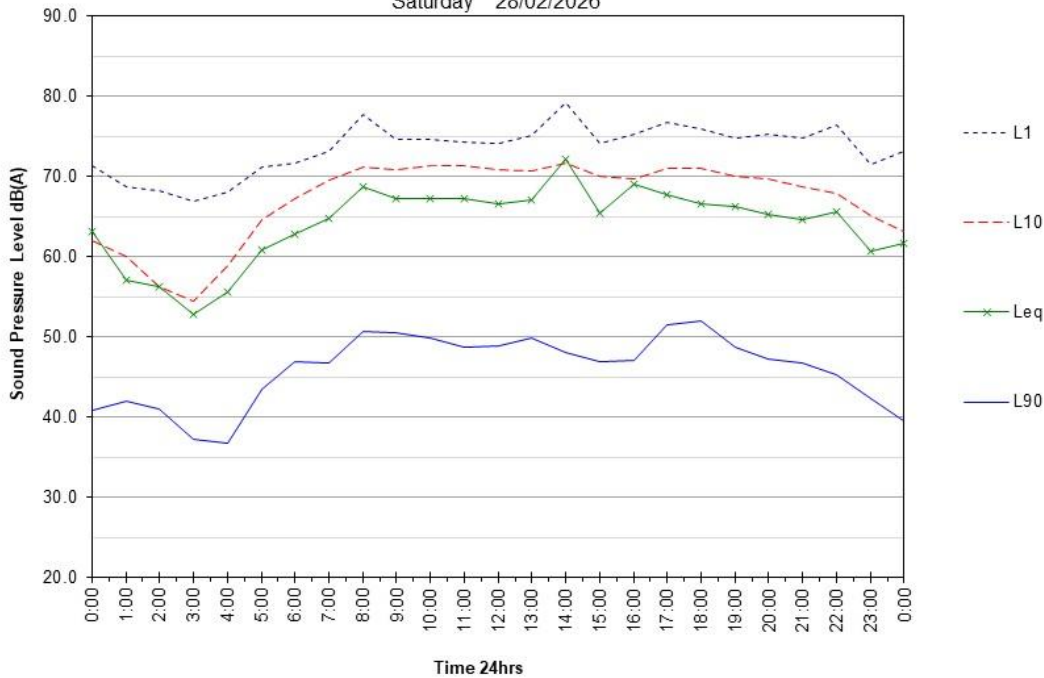
Friday 27/02/2026

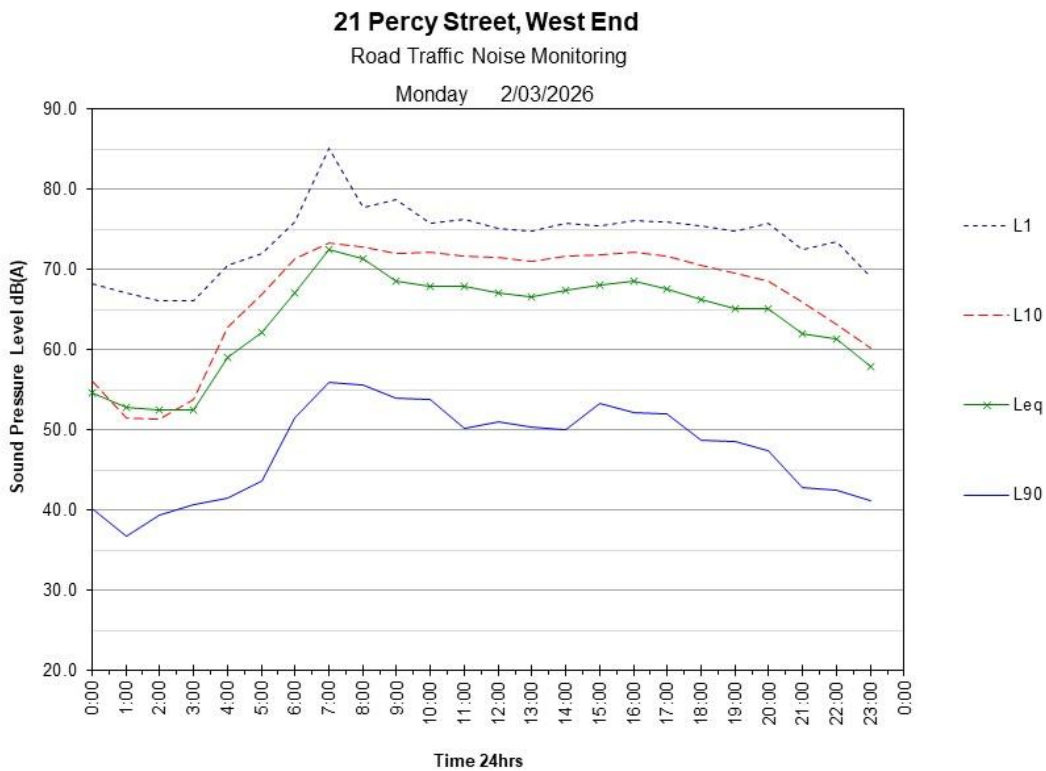
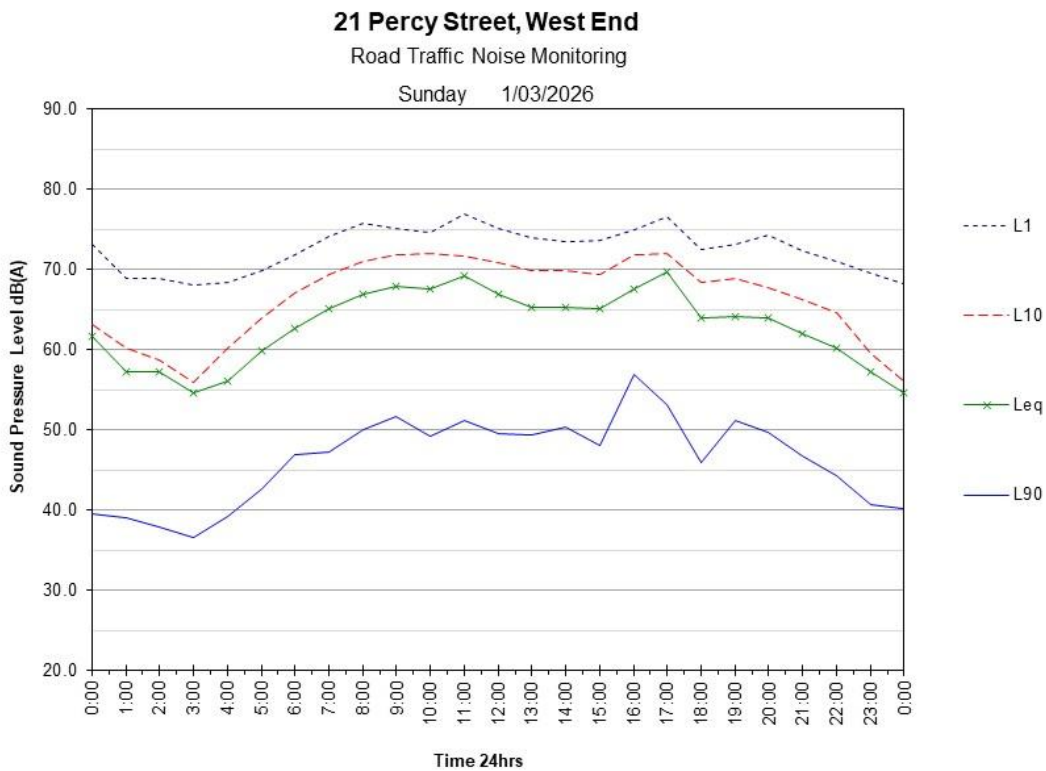


21 Percy Street, West End

Road Traffic Noise Monitoring

Saturday 28/02/2026

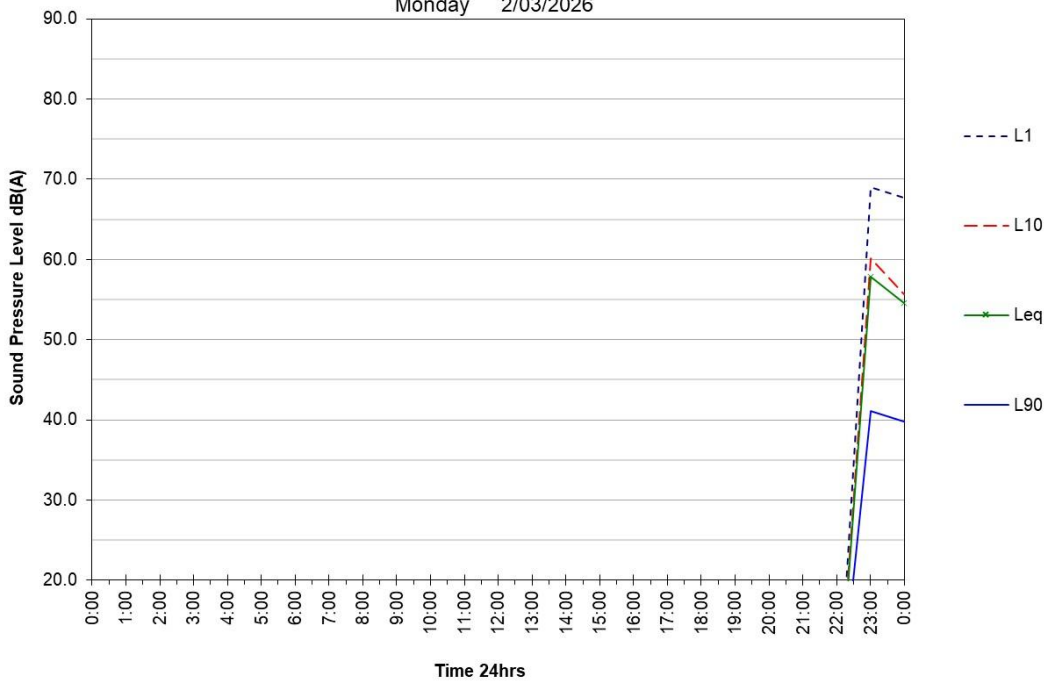




21 Percy Street, West End

Road Traffic Noise Monitoring

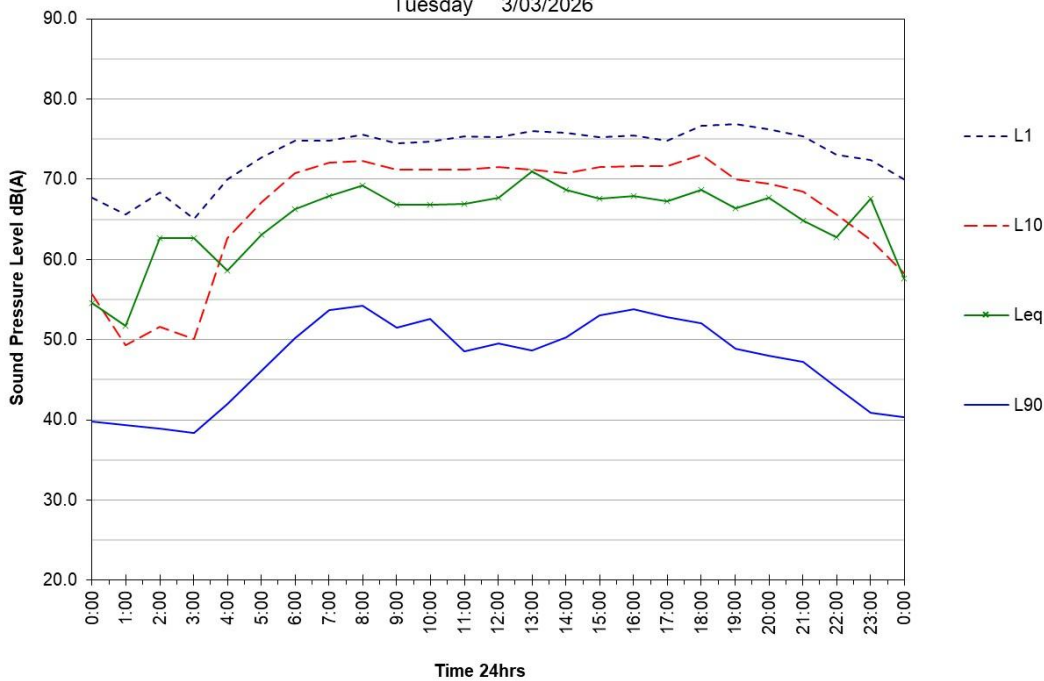
Monday 2/03/2026



21 Percy Street, West End

Road Traffic Noise Monitoring

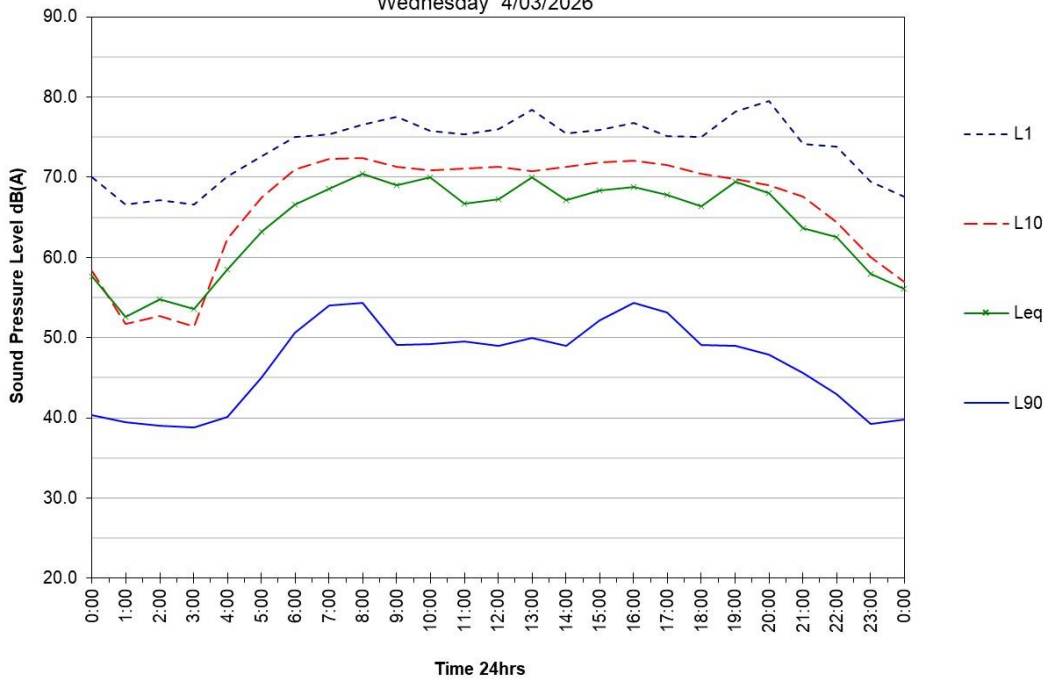
Tuesday 3/03/2026



21 Percy Street, West End

Road Traffic Noise Monitoring

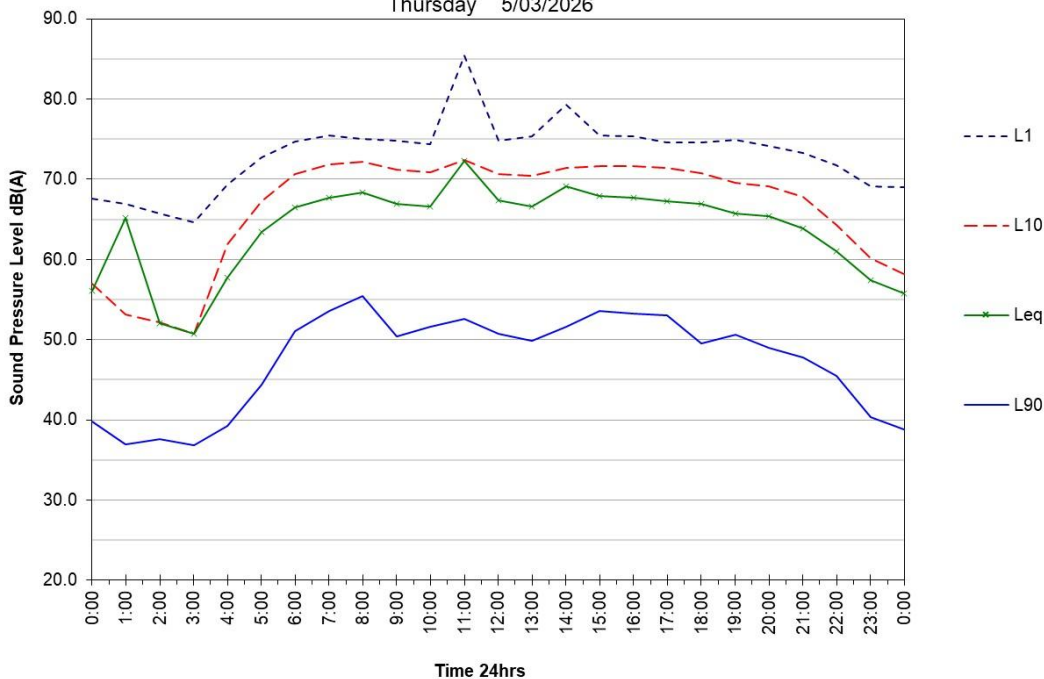
Wednesday 4/03/2026



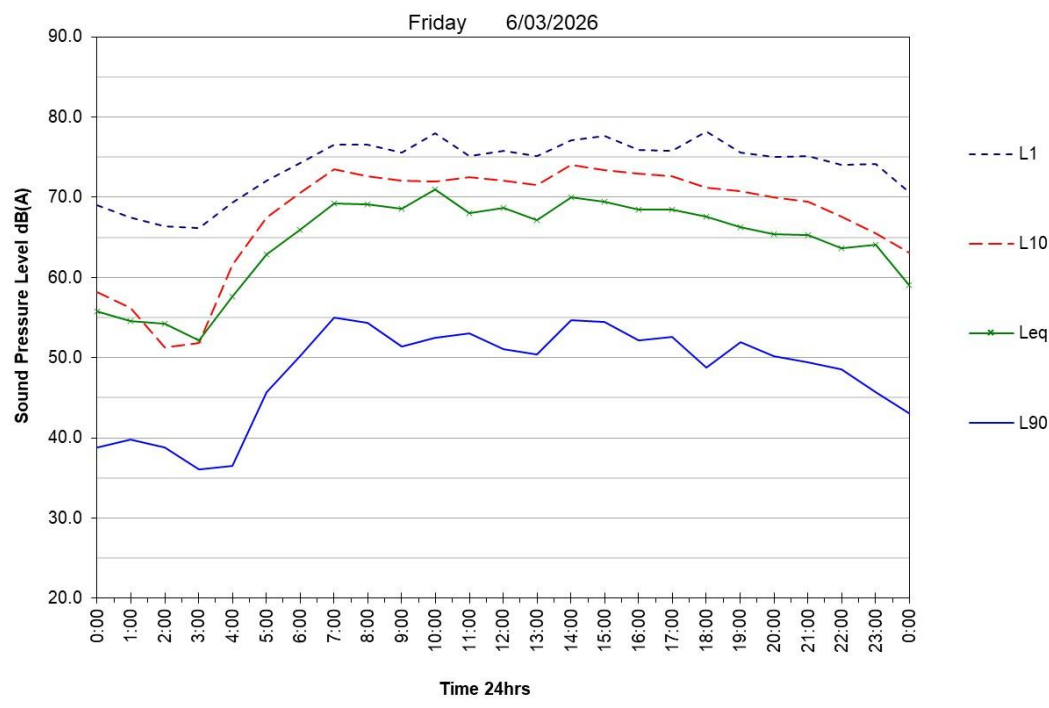
21 Percy Street, West End

Road Traffic Noise Monitoring

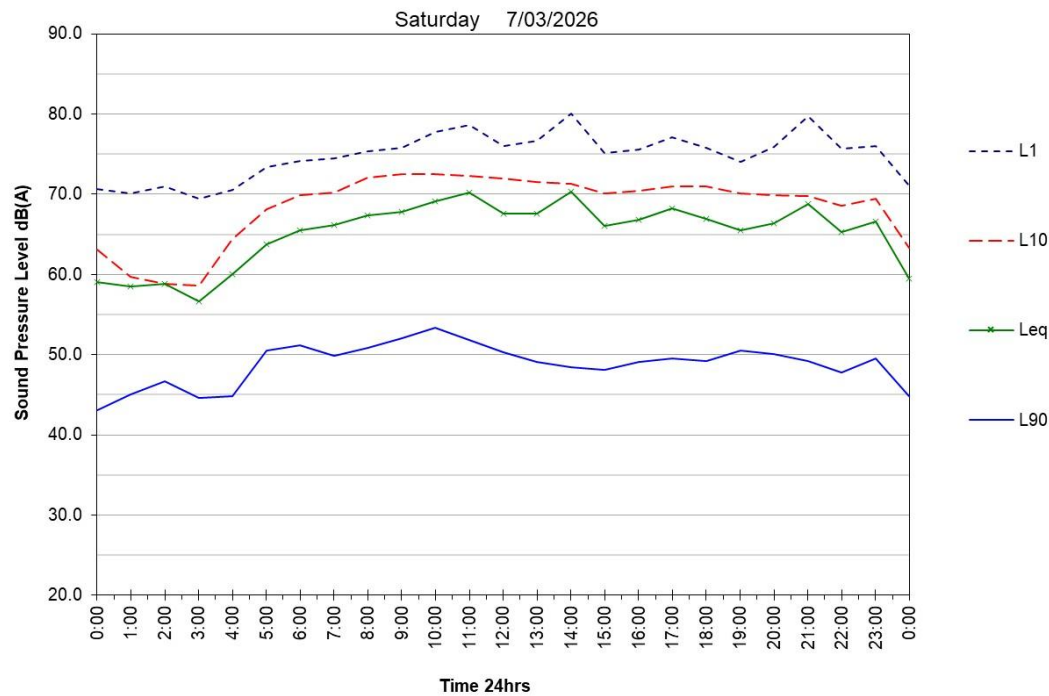
Thursday 5/03/2026



21 Percy Street, West End
Road Traffic Noise Monitoring



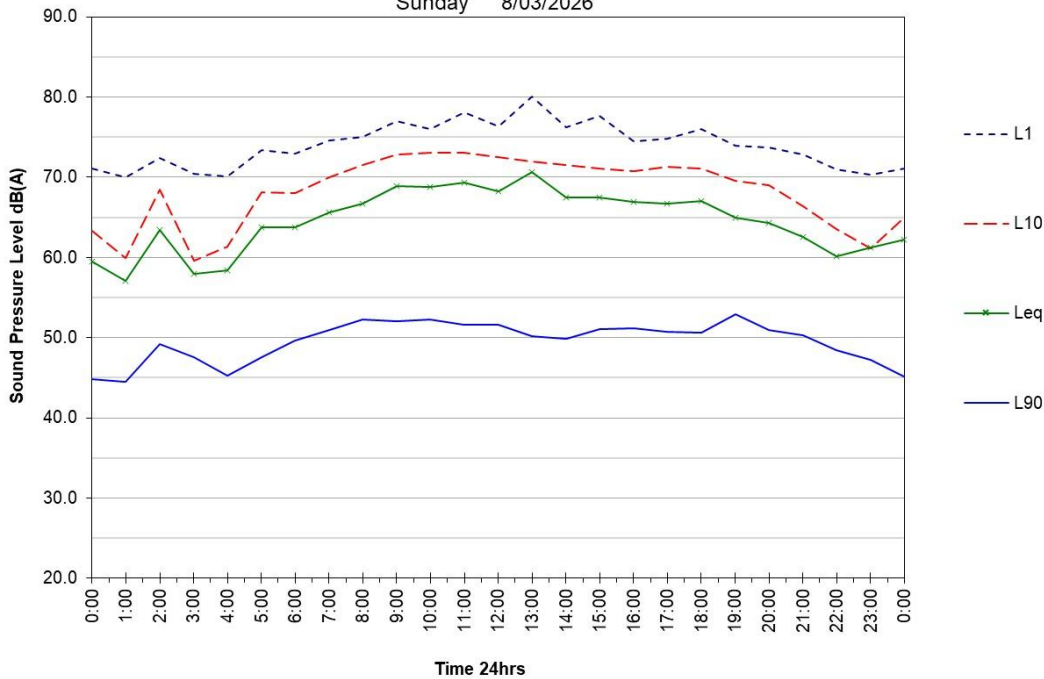
21 Percy Street, West End
Road Traffic Noise Monitoring



21 Percy Street, West End

Road Traffic Noise Monitoring

Sunday 8/03/2026



21 Percy Street, West End

Road Traffic Noise Monitoring

Monday 9/03/2026

