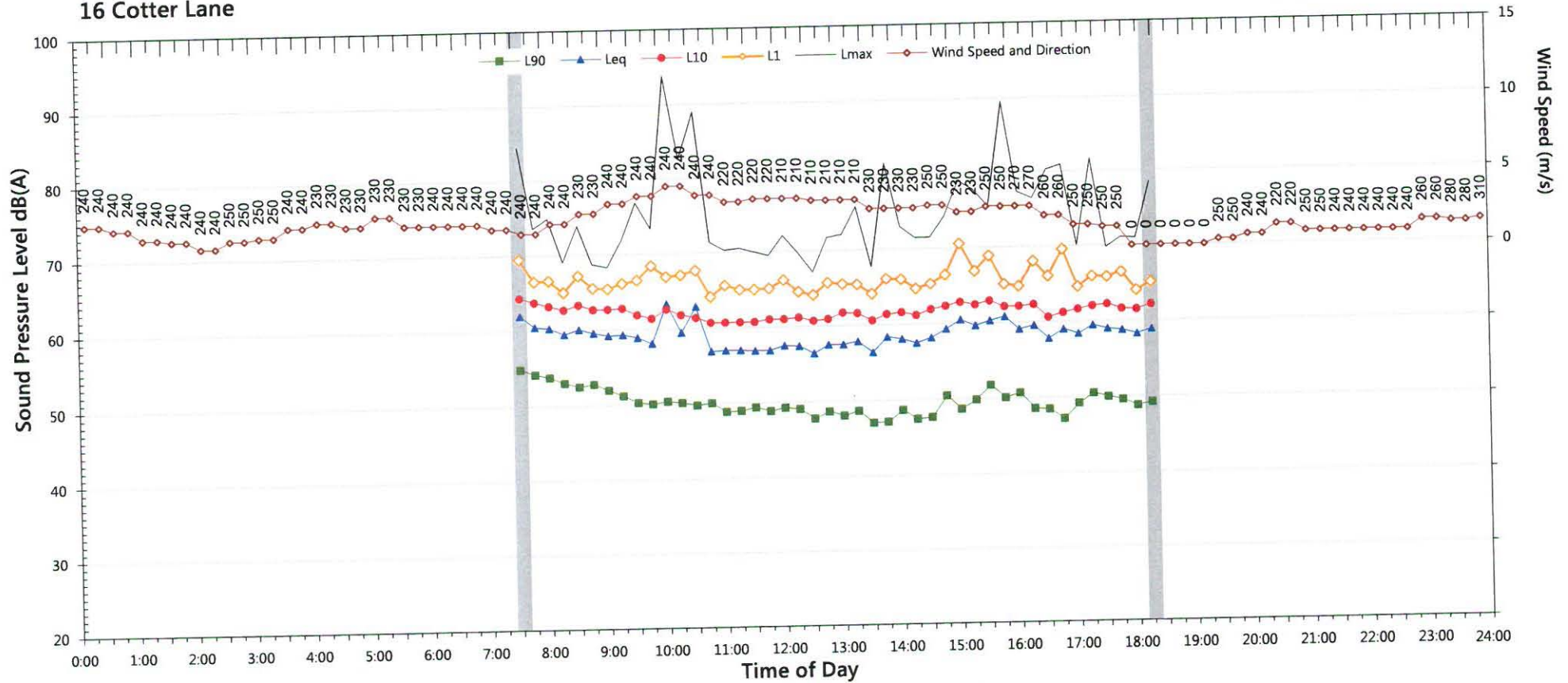


Unattended Noise Monitoring Results

16 Cotter Lane

Tuesday, 28 June 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4,5}
L ₉₀	47.7	-	-
L _{Aeq}	59.1	-	-

Night Time Maximum Noise Levels

(see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured in free-field; tabulated results facade corrected
7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade) (see note 6)

Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	61.6	-
L _{eq} 1hr upper 10 percentile	62.9	-
L _{eq} 1hr lower 10 percentile	59.6	-

Data File: Various

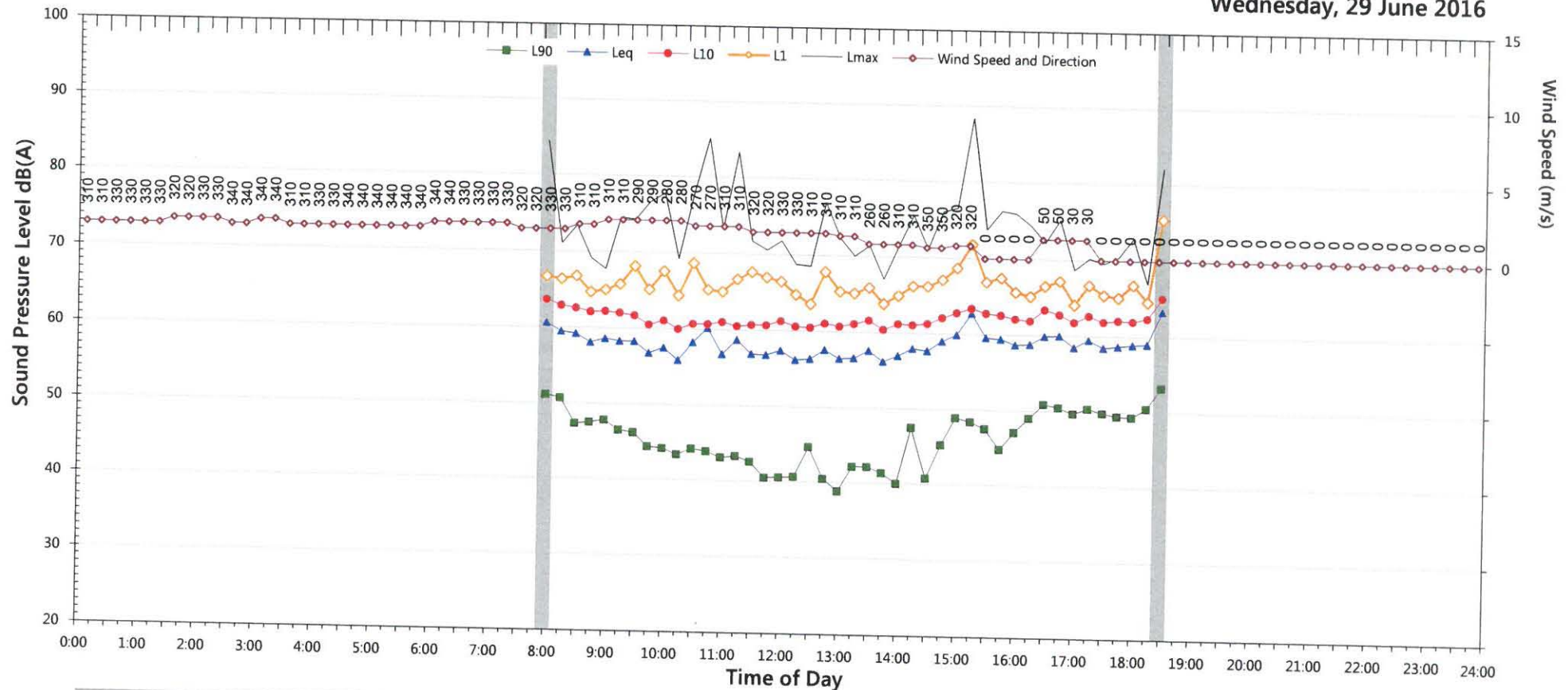
TH925 - M10 16 Cotter Lane combined (r1)

QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

16 Cotter Lane

Wednesday, 29 June 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4,5}
L ₉₀	40.6	-	-
L _{Aeq}	58.5	-	-

Night Time Maximum Noise Levels

(see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.

3. "Evening" is the period from 6pm till 10pm

6. Graphed data measured in free-field; tabulated results facade corrected

4. "Night" relates to the remaining periods

7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade)

(see note 6)

Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	61.0	-
L _{eq} 1hr upper 10 percentile	62.8	-
L _{eq} 1hr lower 10 percentile	59.2	-

2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days

5. "Night" relates to period from 10pm on this graph to morning on the following graph.

Data File: Various

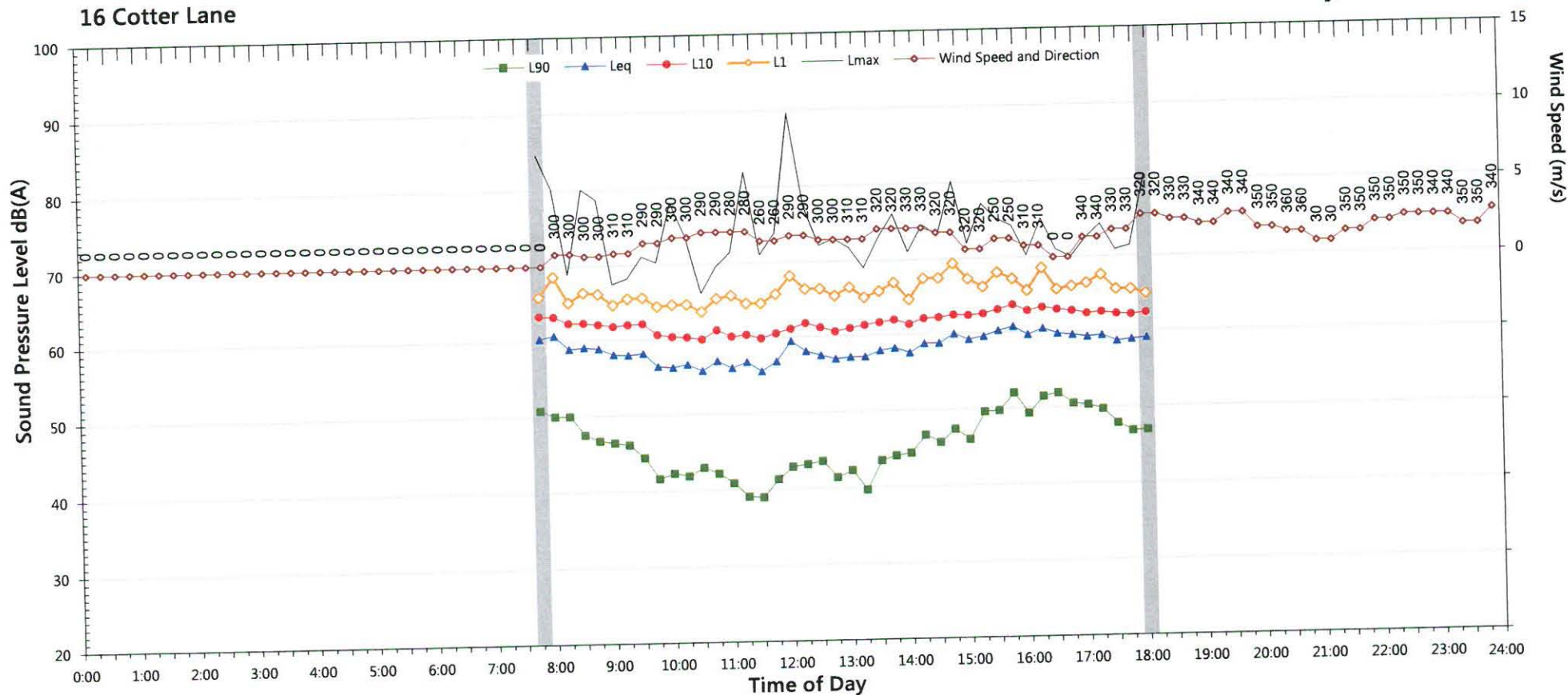
TH925 - M10 16 Cotter Lane combined (r1)

QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

16 Cotter Lane

Thursday, 30 June 2016



NSW Industrial Noise Policy (Free Field)			
Descriptor	Day ²	Evening ³	Night ^{4 5}
L ₉₀	41.1	-	-
L _{Aeq}	58.5	-	-

Night Time Maximum Noise Levels (see note 7)			
L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes:

- Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
- "Evening" is the period from 6pm till 10pm
- "Night" relates to the remaining periods
- Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade) (see note 6)		
Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	61.0	-
L _{eq} 1hr upper 10 percentile	63.1	-
L _{eq} 1hr lower 10 percentile	59.0	-

- "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
- "Night" relates to period from 10pm on this graph to morning on the following graph.

Data File: Various

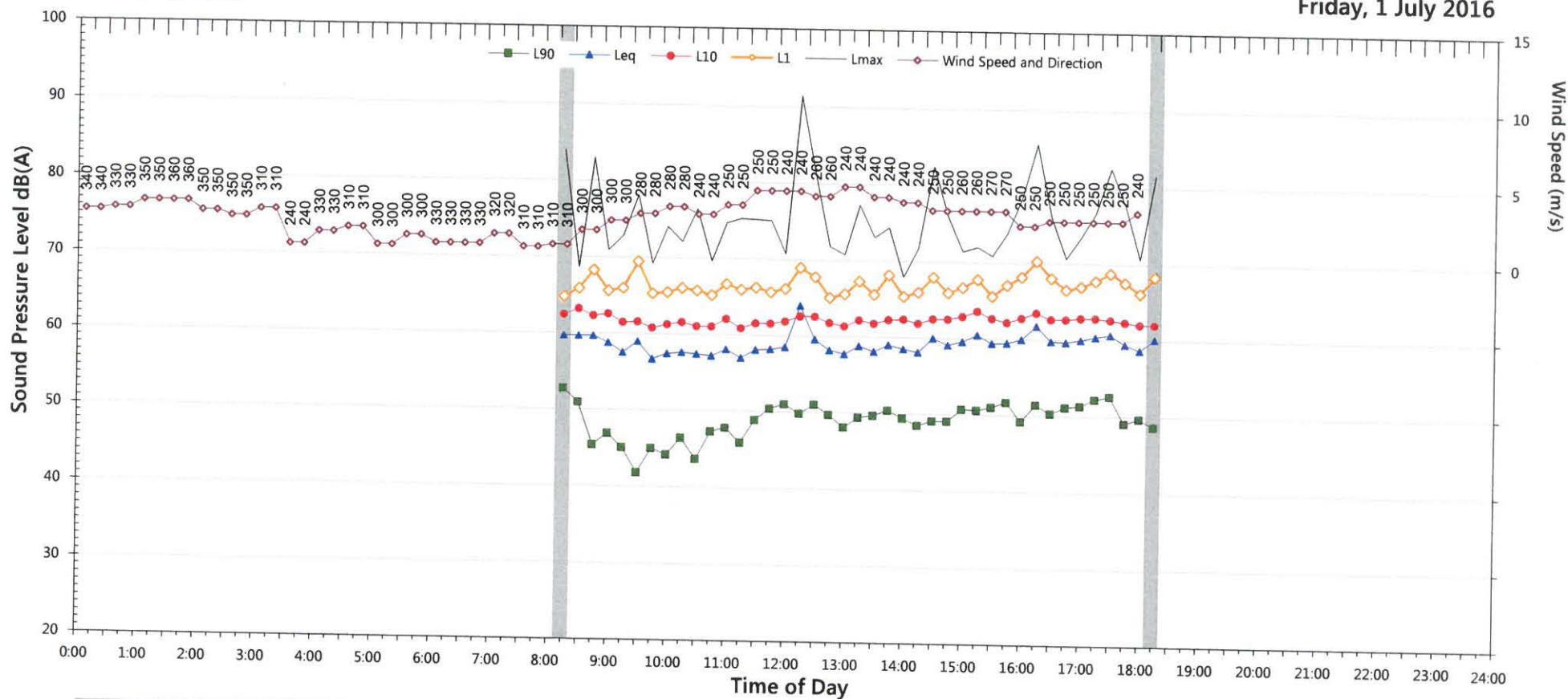
TH925 - M10 16 Cotter Lane combined (r1)

QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

16 Cotter Lane

Friday, 1 July 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4 5}
L ₉₀	45.0	-	-
L _{Aeq}	59.3	-	-

Night Time Maximum Noise Levels

(see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.

3. "Evening" is the period from 6pm till 10pm

6. Graphed data measured in free-field; tabulated results facade corrected

4. "Night" relates to the remaining periods

7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade)

(see note 6)

Descriptor	Day 7am-10pm	Night ⁵ 10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	61.8	-
L _{eq} 1hr upper 10 percentile	63.2	-
L _{eq} 1hr lower 10 percentile	60.1	-

Data File: Various

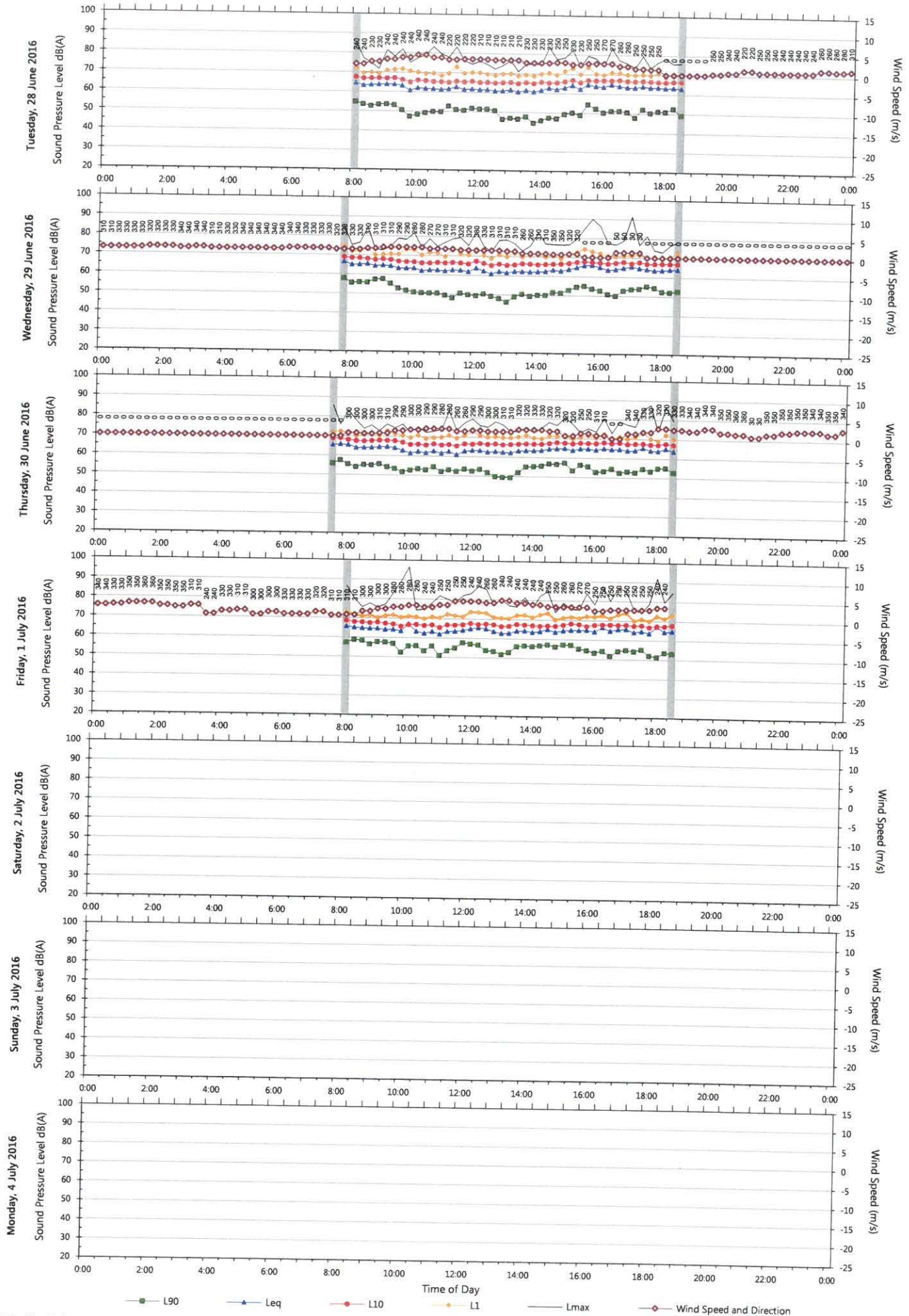
TH925 - M10 16 Cotter Lane combined (r1)

QTE-26 (rev 11) Logger Graphs Program

5. Lower 10th percentile $L_{Aeq, 1hr}$

Unattended Monitoring Results

Location: 149 Maddecks Ave



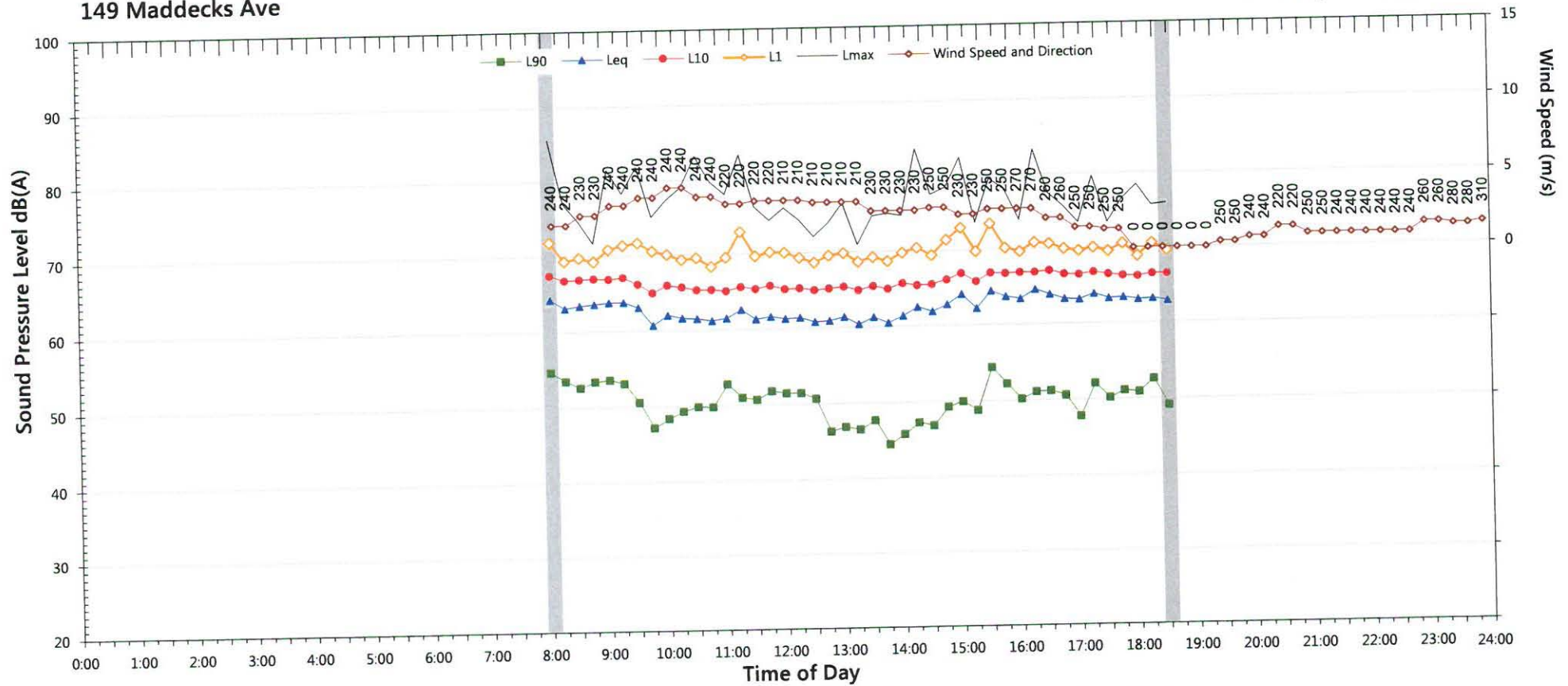
Data File: Various

Template: QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

149 Maddecks Ave

Tuesday, 28 June 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4 5}
L ₉₀	46.7	-	-
L _{Aeq}	62.6	-	-

Night Time Maximum Noise Levels

(see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.

3. "Evening" is the period from 6pm till 10pm

6. Graphed data measured in free-field; tabulated results facade corrected

4. "Night" relates to the remaining periods

7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade) (see note 6)

Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	65.1	-
L _{eq} 1hr upper 10 percentile	66.3	-
L _{eq} 1hr lower 10 percentile	63.4	-

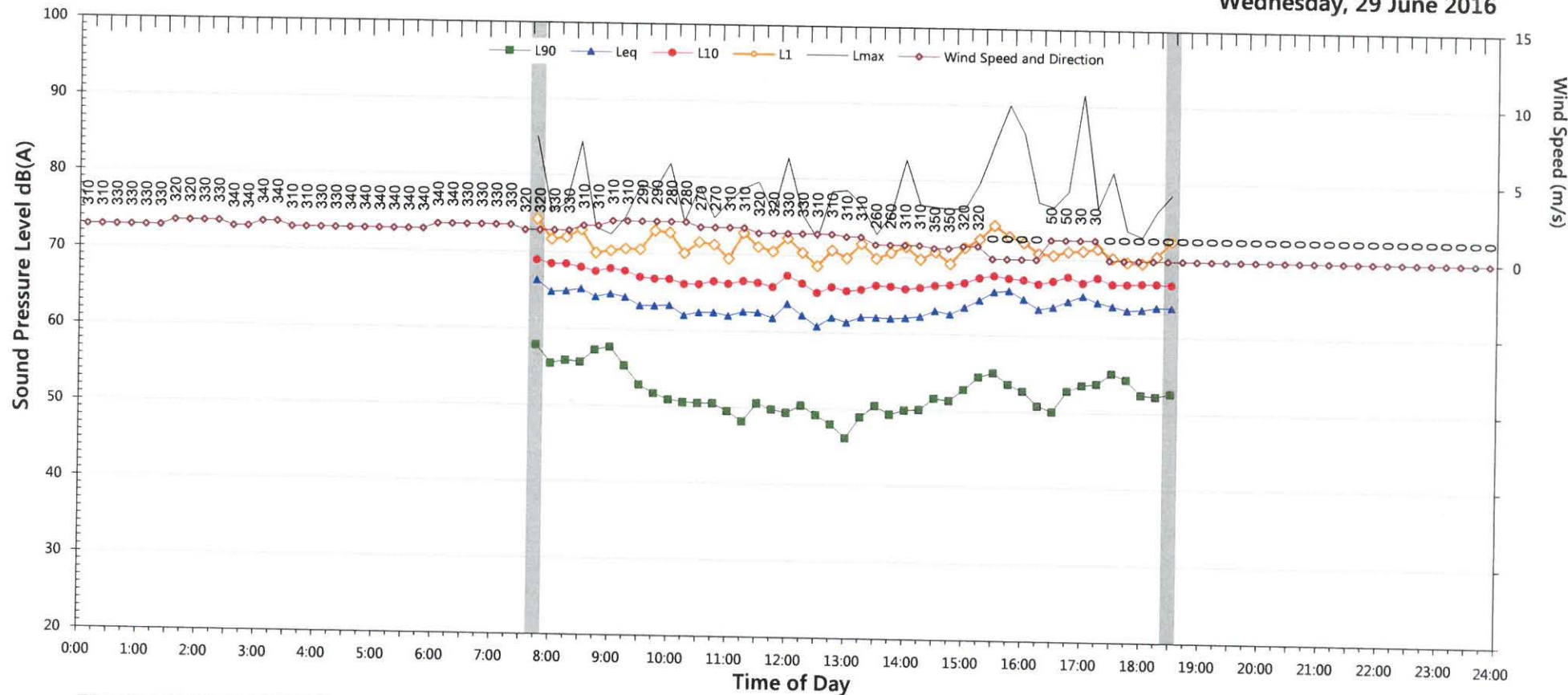
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days

5. "Night" relates to period from 10pm on this graph to morning on the following graph.

Unattended Noise Monitoring Results

149 Maddecks Ave

Wednesday, 29 June 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4 5}
L ₉₀	49.2	-	-
L _{Aeq}	63.5	-	-

Night Time Maximum Noise Levels (see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured in free-field; tabulated results facade corrected
7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

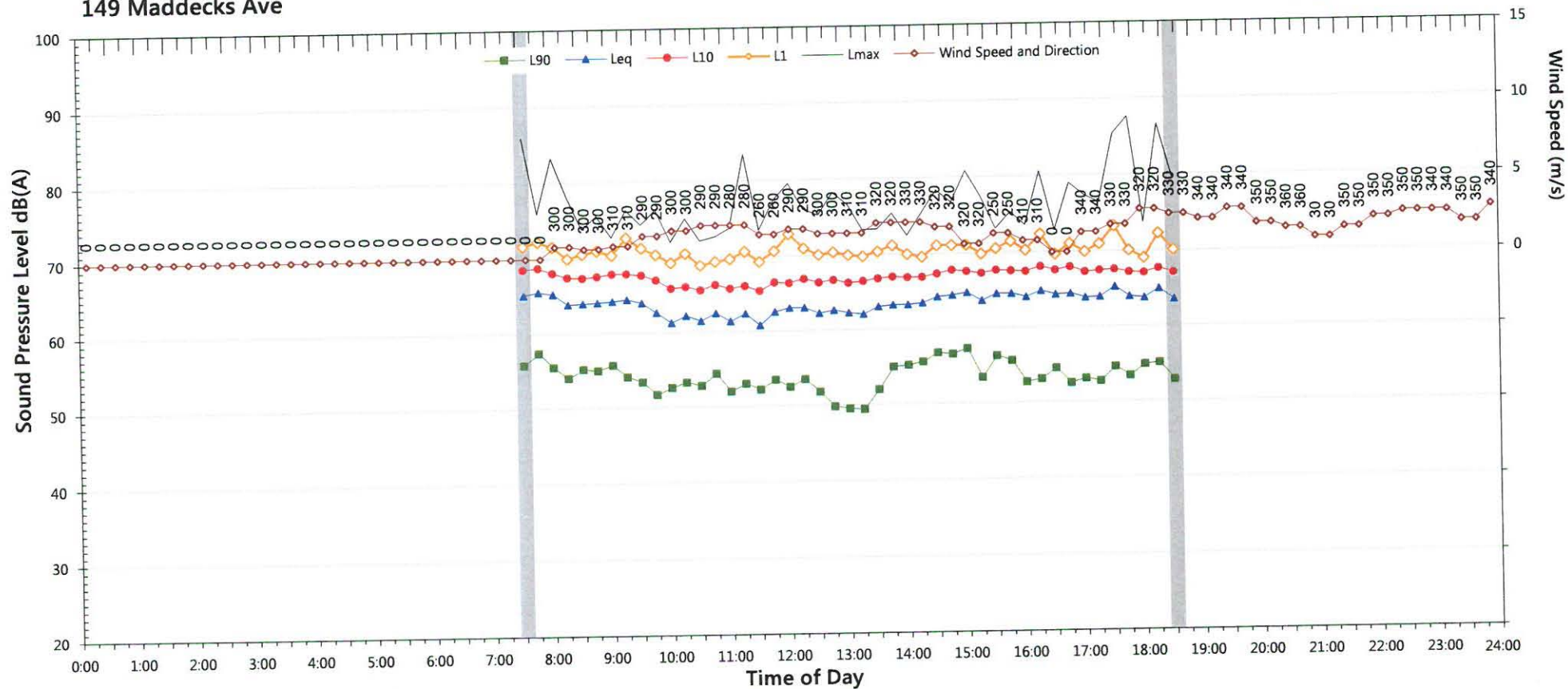
NSW Road Noise Policy (1m from facade) (see note 6)

Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	66.1	-
L _{eq} 1hr upper 10 percentile	67.7	-
L _{eq} 1hr lower 10 percentile	64.2	-

Unattended Noise Monitoring Results

149 Maddecks Ave

Thursday, 30 June 2016



NSW Industrial Noise Policy (Free Field)			
Descriptor	Day ²	Evening ³	Night ^{4,5}
L ₉₀	51.8	-	-
L _{Aeq}	63.7	-	-

Night Time Maximum Noise Levels (see note 7)			
L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes

- Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
- "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
- "Evening" is the period from 6pm till 10pm
- "Night" relates to the remaining periods
- "Night" relates to period from 10pm on this graph to morning on the following graph.
- Graphed data measured in free-field; tabulated results facade corrected
- Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade) (see note 6)		
Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	66.2	-
L _{eq} 1hr upper 10 percentile	67.9	-
L _{eq} 1hr lower 10 percentile	64.5	-

Data File: Various

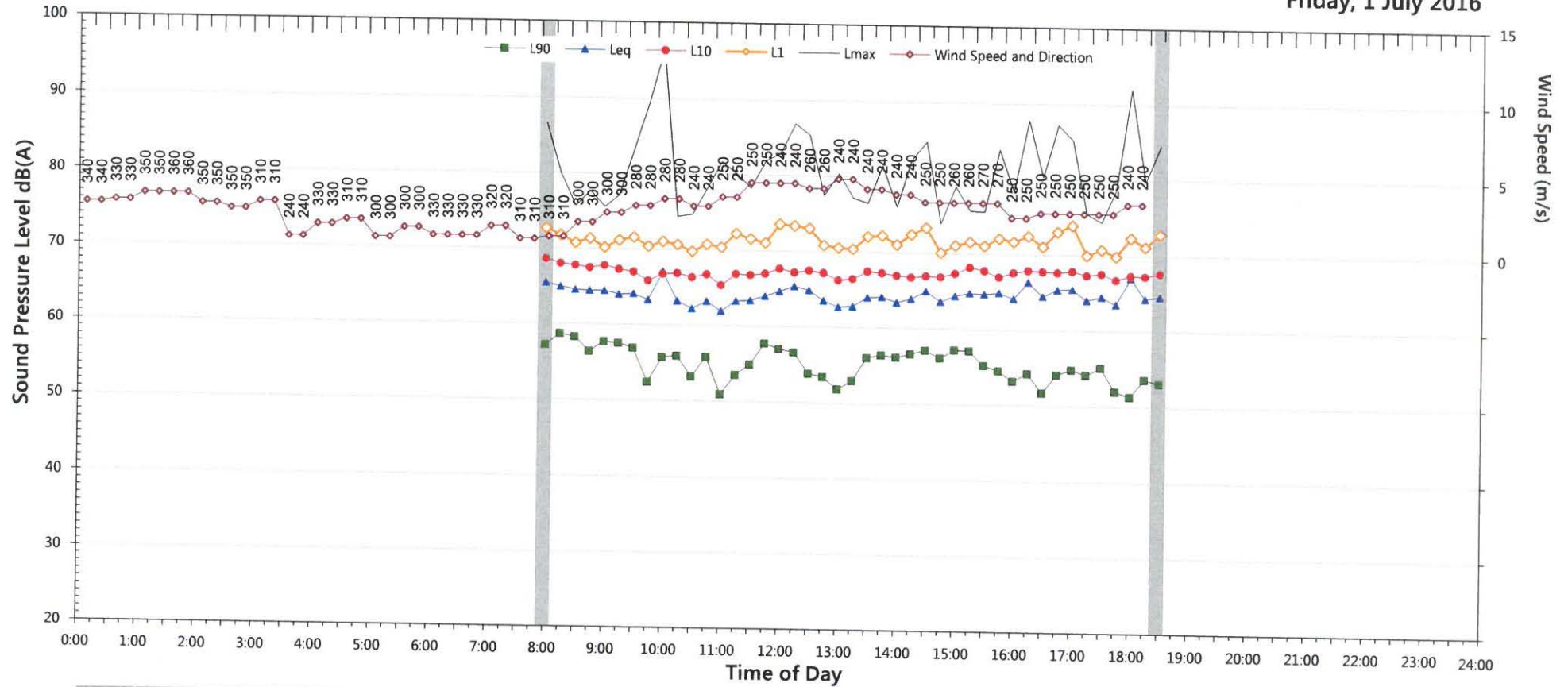
TH925 - M11 149 Maddecks Ave (r0)

QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

149 Maddecks Ave

Friday, 1 July 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4 5}
L ₉₀	51.9	-	-
L _{Aeq}	64.4	-	-

Night Time Maximum Noise Levels (see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured in free-field; tabulated results facade corrected
7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

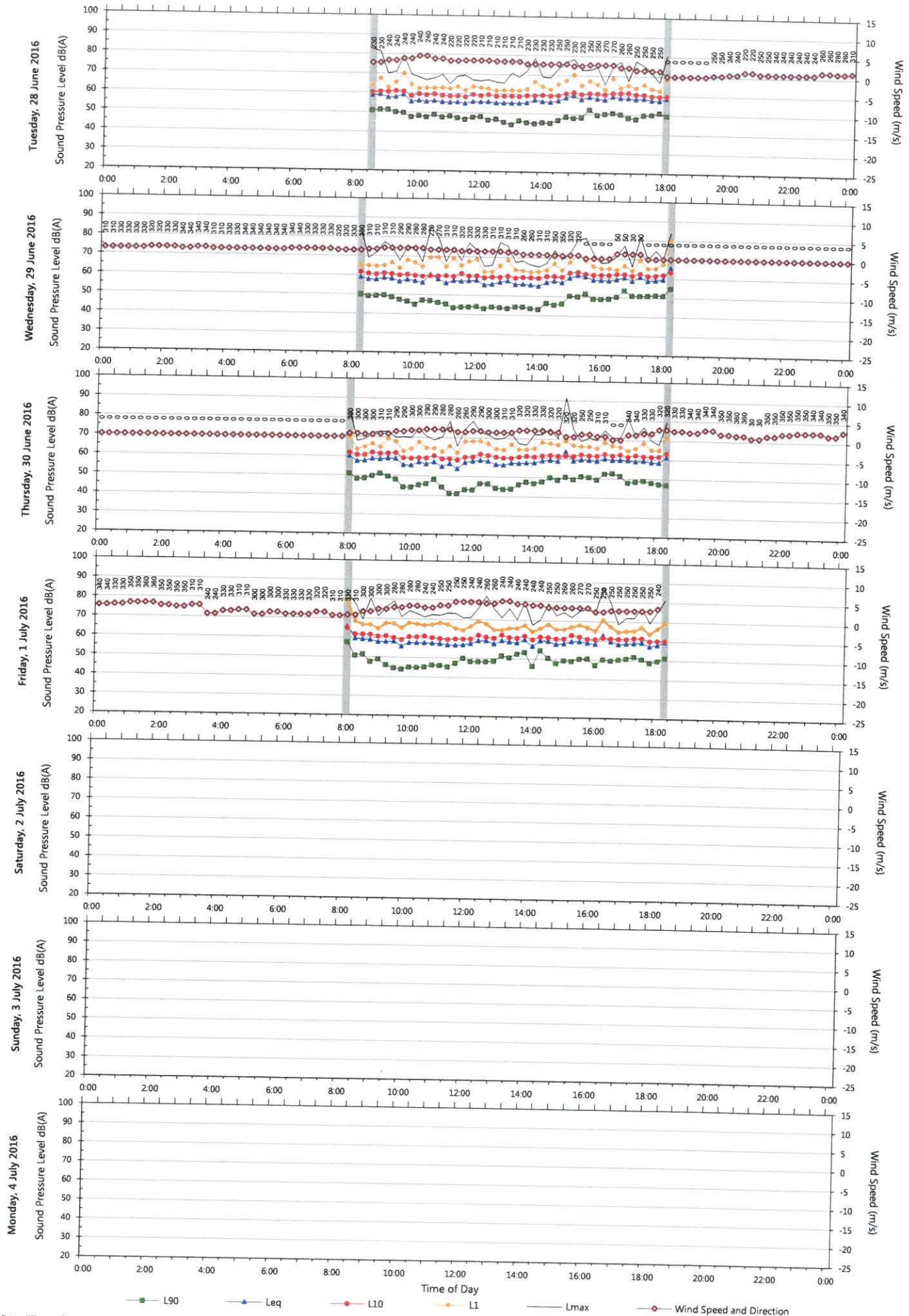
NSW Road Noise Policy (1m from facade) (see note 6)

Descriptor	Day 7am-10pm	Night ⁵ 10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	66.9	-
L _{eq} 1hr upper 10 percentile	68.0	-
L _{eq} 1hr lower 10 percentile	65.3	-

5. Lower 10th percentile $L_{Agg, 10\%}$

Unattended Monitoring Results

Location: 12 Silverleaf Lane



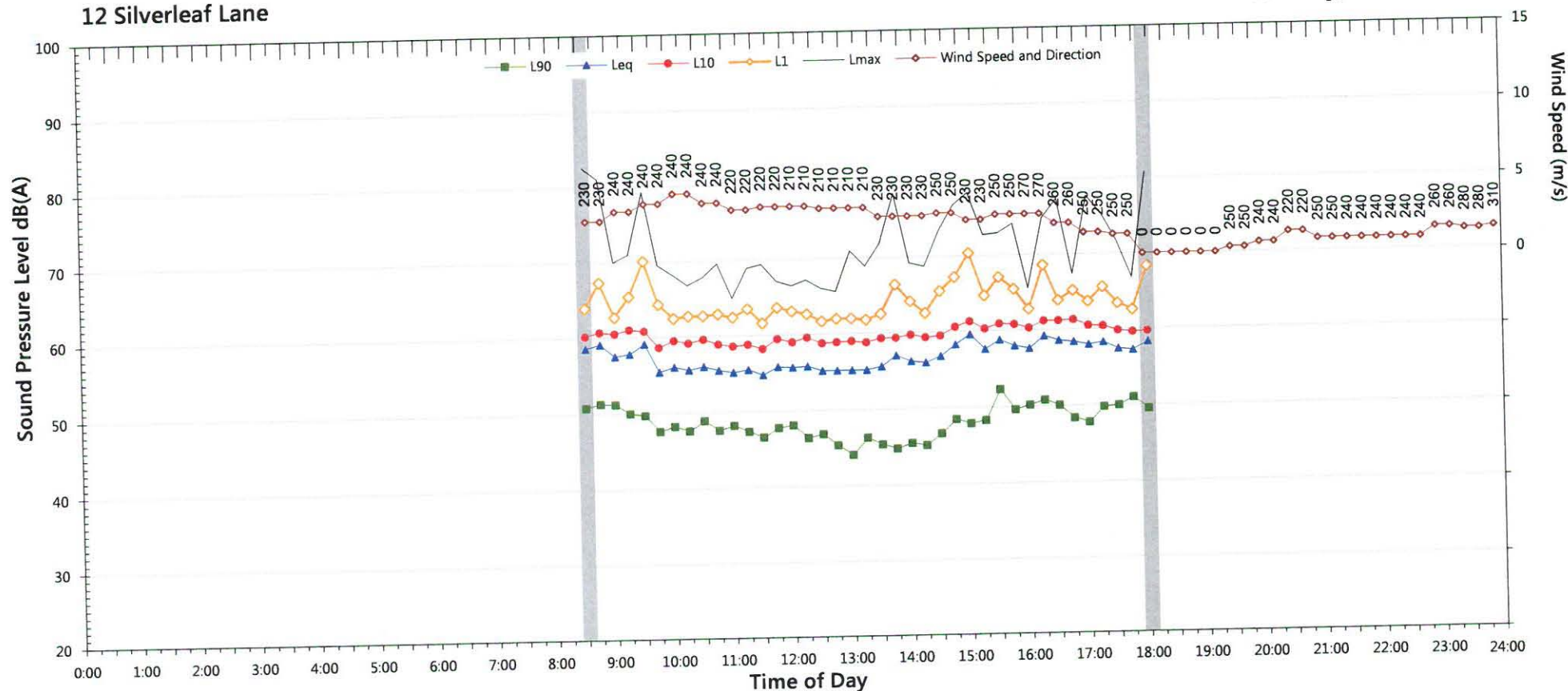
Data File: various

Template: QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

12 Silverleaf Lane

Tuesday, 28 June 2016



NSW Industrial Noise Policy (Free Field)			
Descriptor	Day ²	Evening ³	Night ^{4,5}
L ₉₀	45.4	-	-
L _{Aeq}	57.1	-	-

Night Time Maximum Noise Levels (see note 7)			
L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
3. "Evening" is the period from 6pm till 10pm
4. "Night" relates to the remaining periods
5. "Night" relates to period from 10pm on this graph to morning on the following graph.
6. Graphed data measured in free-field; tabulated results facade corrected
7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade) (see note 6)		
Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	59.6	-
L _{eq} 1hr upper 10 percentile	61.1	-
L _{eq} 1hr lower 10 percentile	57.9	-

Data File: various

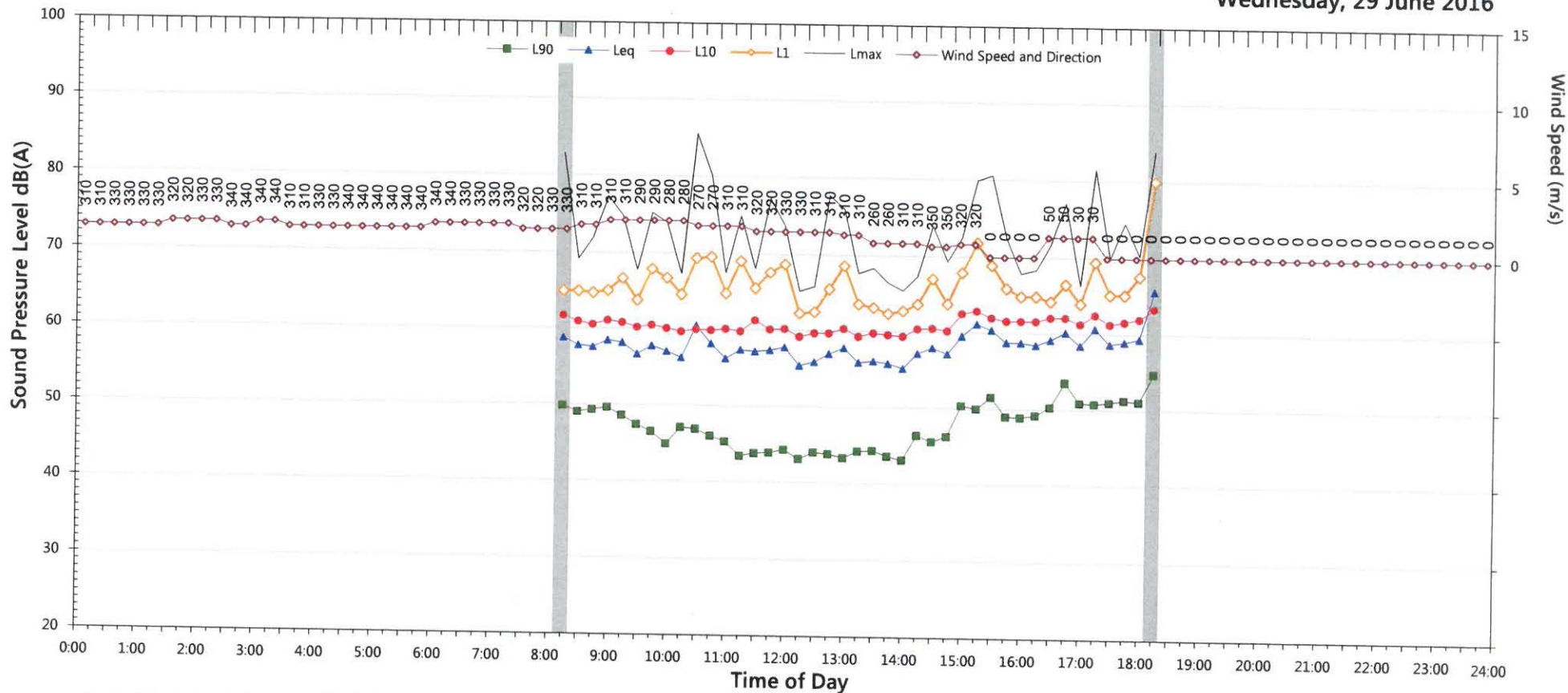
TH925 - M12 12 Silverleaf Lane (r0)

QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

12 Silverleaf Lane

Wednesday, 29 June 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4 5}
L ₉₀	43.4	-	-
L _{Aeq}	58.2	-	-

Night Time Maximum Noise Levels

(see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.

3. "Evening" is the period from 6pm till 10pm

6. Graphed data measured in free-field; tabulated results facade corrected

4. "Night" relates to the remaining periods

7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade) (see note 6)

Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	60.7	-
L _{eq} 1hr upper 10 percentile	62.4	-
L _{eq} 1hr lower 10 percentile	58.3	-

2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days

5. "Night" relates to period from 10pm on this graph to morning on the following graph.

Data File: various

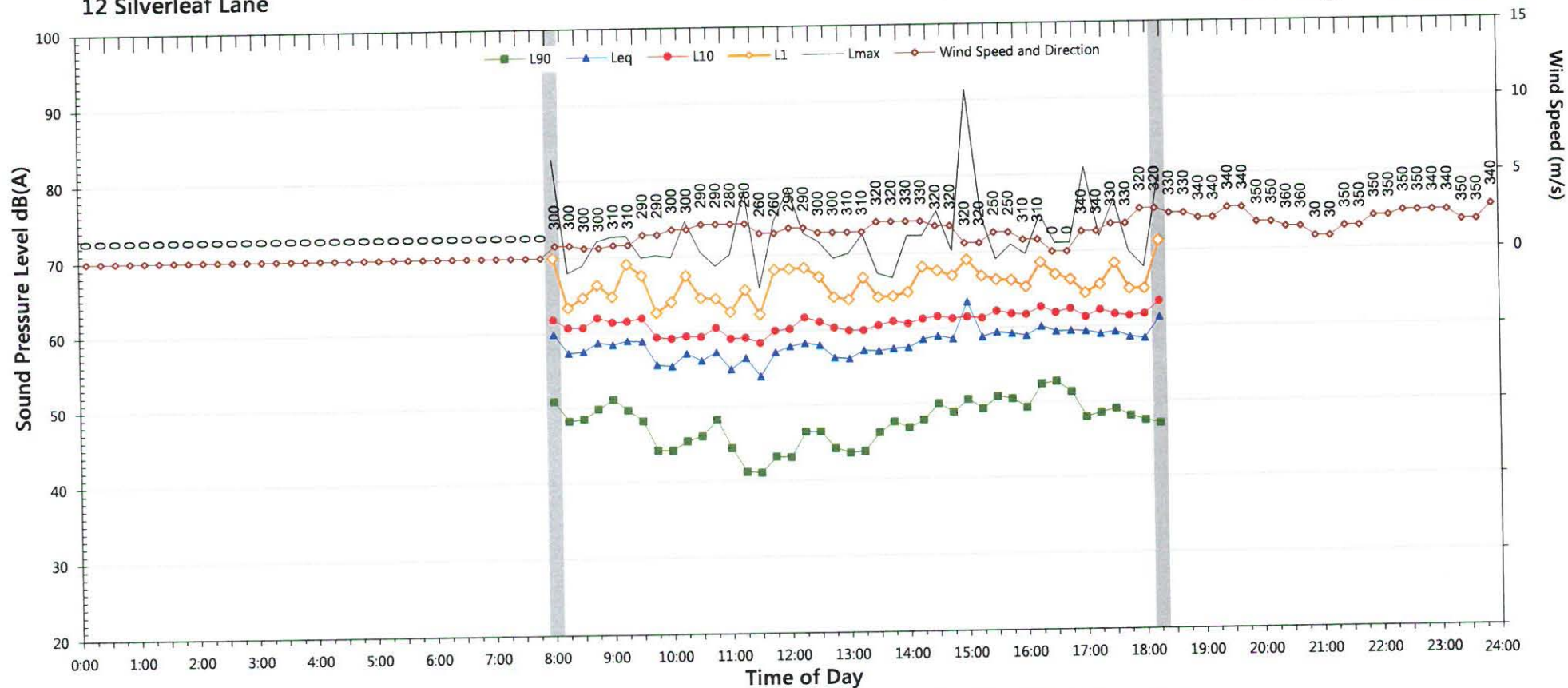
TH925 - M12 12 Silverleaf Lane (r0)

QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

12 Silverleaf Lane

Thursday, 30 June 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4,5}
L ₉₀	43.4	-	-
L _{Aeq}	58.3	-	-

Night Time Maximum Noise Levels

(see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes:

- Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
- "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
- "Evening" is the period from 6pm till 10pm
- "Night" relates to the remaining periods
- "Night" relates to period from 10pm on this graph to morning on the following graph.
- Graphed data measured in free-field; tabulated results facade corrected
- Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

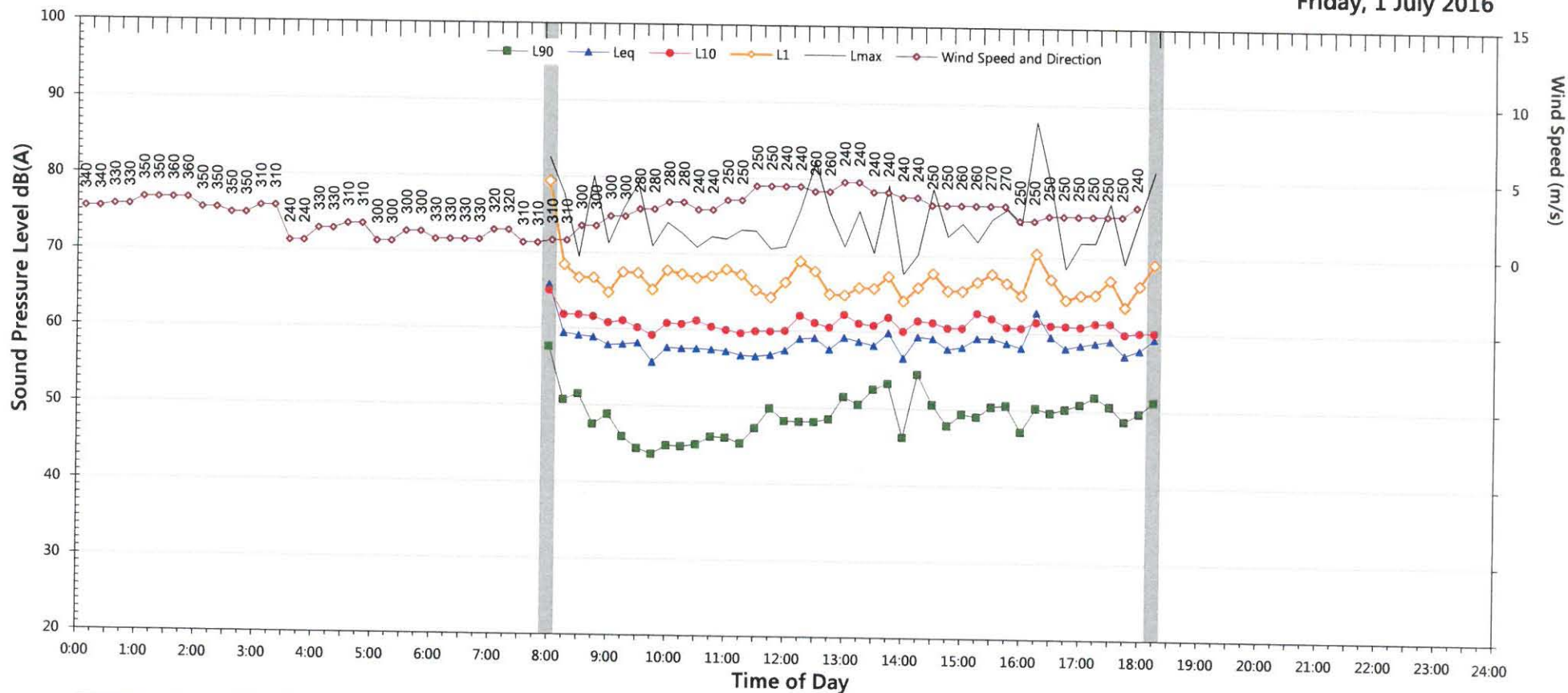
NSW Road Noise Policy (1m from facade) (see note 6)

Descriptor	Day 7am-10pm	Night ⁵ 10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	60.8	-
L _{eq} 1hr upper 10 percentile	63.0	-
L _{eq} 1hr lower 10 percentile	58.9	-

Unattended Noise Monitoring Results

12 Silverleaf Lane

Friday, 1 July 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4 5}
L ₉₀	45.0	-	-
L _{Aeq}	58.5	-	-

Night Time Maximum Noise Levels (see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.

3. "Evening" is the period from 6pm till 10pm

6. Graphed data measured in free-field; tabulated results facade corrected

4. "Night" relates to the remaining periods

7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

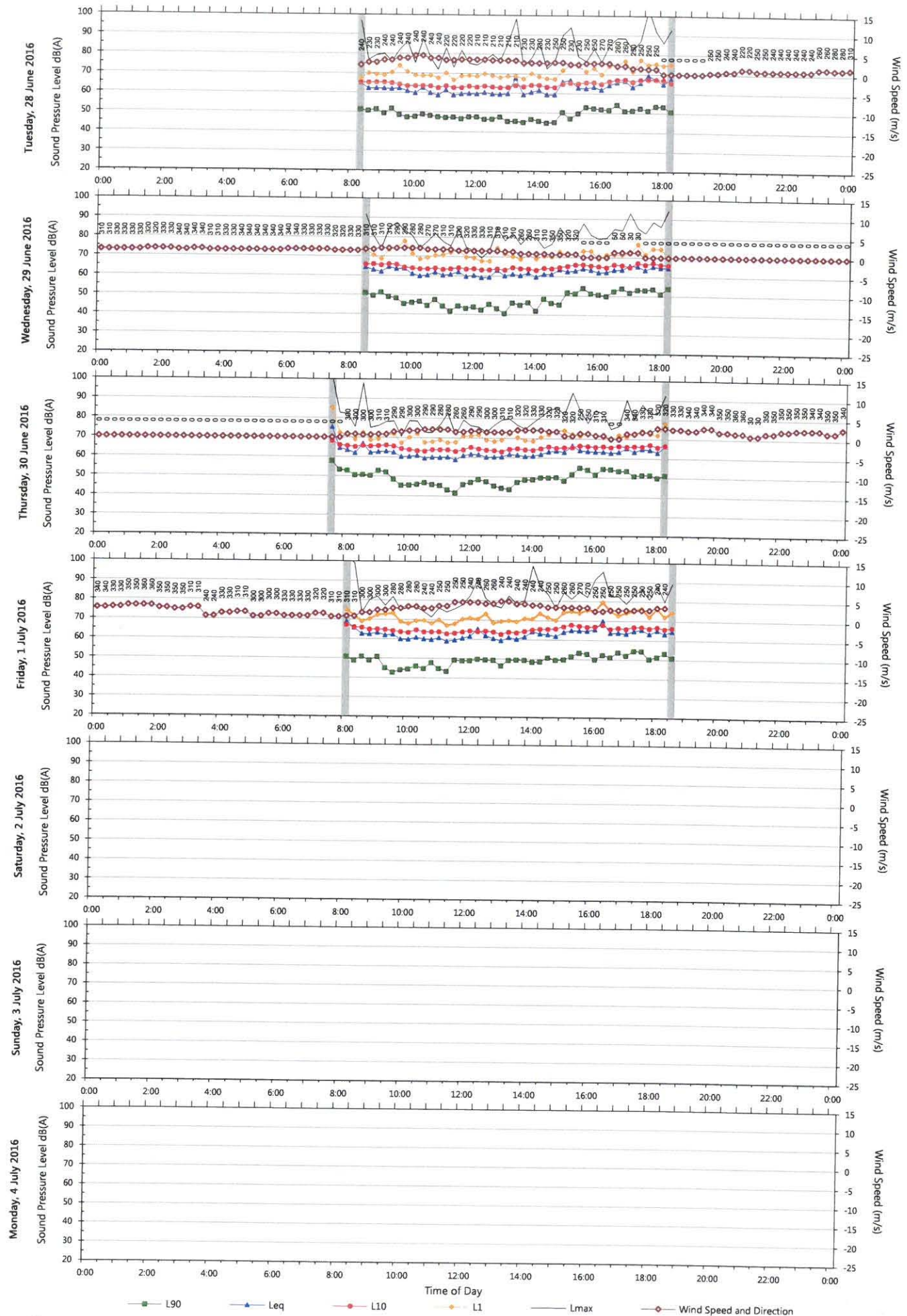
NSW Road Noise Policy (1m from facade) (see note 6)

Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	61.0	-
L _{eq} 1hr upper 10 percentile	62.7	-
L _{eq} 1hr lower 10 percentile	59.4	-

2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days

5. "Night" relates to period from 10pm on this graph to morning on the following graph

5. Lower 10th percentile $L_{\text{app } 10\%}$



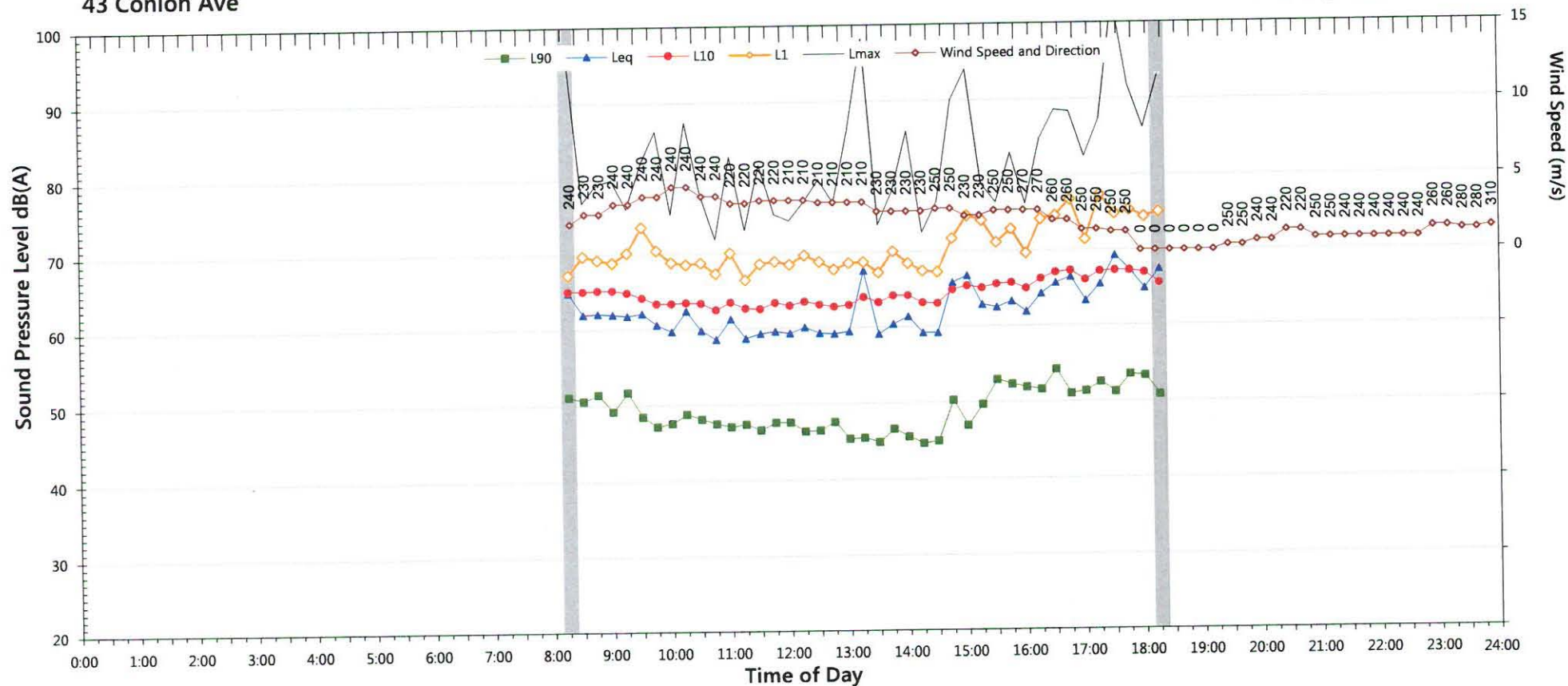
Data File: various

Template: QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

43 Conlon Ave

Tuesday, 28 June 2016



NSW Industrial Noise Policy (Free Field)			
Descriptor	Day ²	Evening ³	Night ^{4,5}
L ₉₀	45.4	-	-
L _{Aeq}	63.2	-	-

Night Time Maximum Noise Levels (see note 7)			
L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

NSW Road Noise Policy (1m from facade) (see note 6)		
Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	65.7	-
L _{eq} 1hr upper 10 percentile	69.6	-
L _{eq} 1hr lower 10 percentile	61.7	-

Notes:

- Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
- "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
- "Evening" is the period from 6pm till 10pm
- "Night" relates to the remaining periods
- "Night" relates to period from 10pm on this graph to morning on the following graph.
- Graphed data measured in free-field; tabulated results facade corrected
- Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

Data File: various

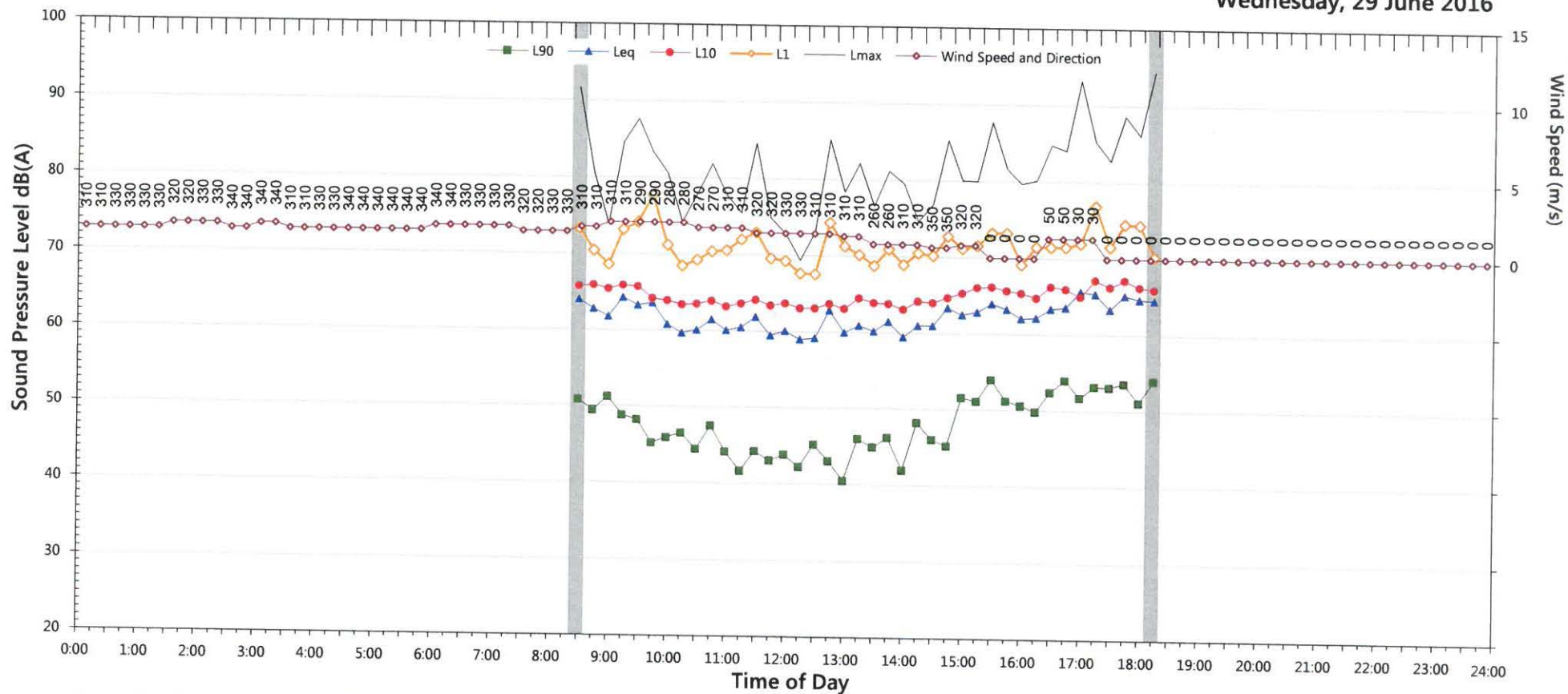
TH925 - M13 43 Conlon Ave (r0)

QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

43 Conlon Ave

Wednesday, 29 June 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4 5}
L ₉₀	42.2	-	-
L _{Aeq}	62.4	-	-

Night Time Maximum Noise Levels

(see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.

3. "Evening" is the period from 6pm till 10pm

6. Graphed data measured in free-field; tabulated results facade corrected

4. "Night" relates to the remaining periods

7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade) (see note 6)

Descriptor	Day	Night ⁵
	7am-10pm	10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	64.9	-
L _{eq} 1hr upper 10 percentile	67.2	-
L _{eq} 1hr lower 10 percentile	62.9	-

2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days

5. "Night" relates to period from 10pm on this graph to morning on the following graph.

Data File: various

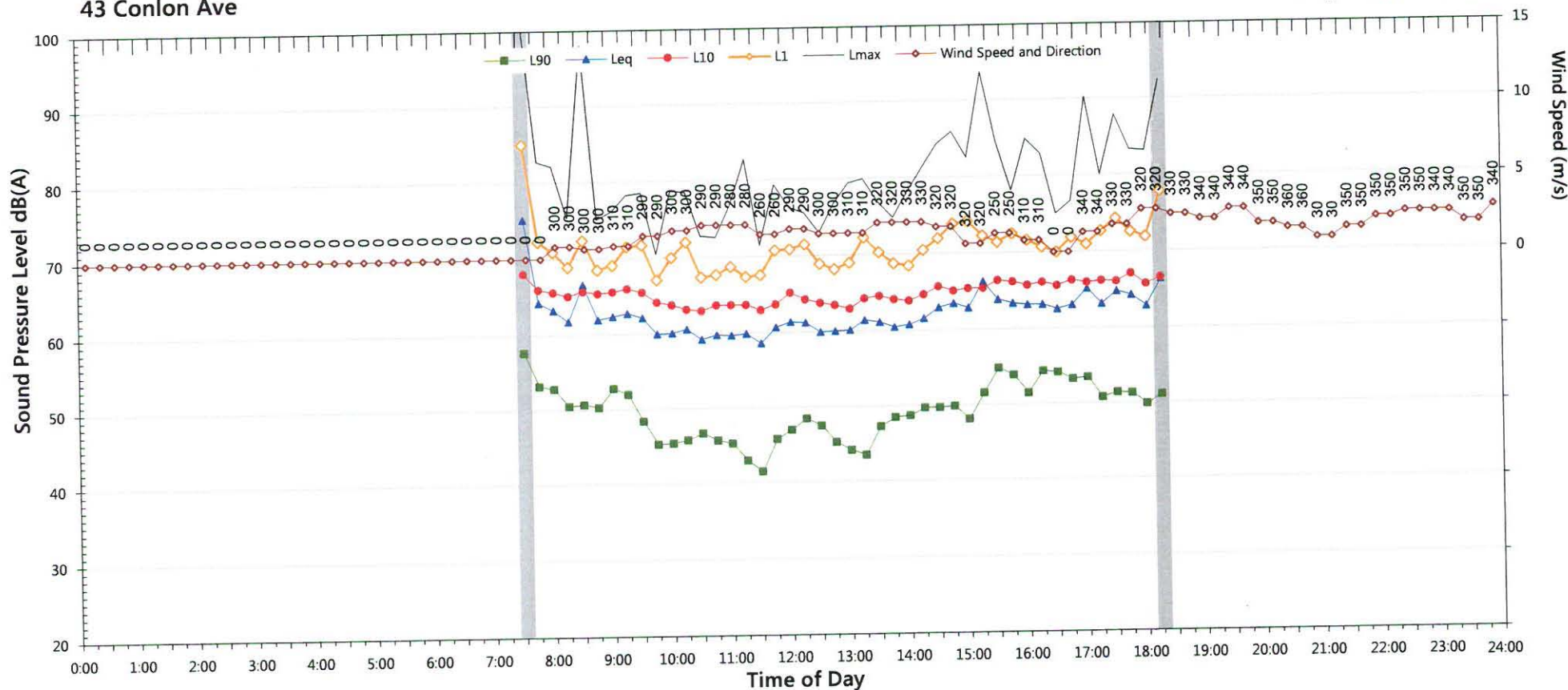
TH925 - M13 43 Conlon Ave (r0)

QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

43 Conlon Ave

Thursday, 30 June 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4 5}
L ₉₀	45.3	-	-
L _{Aeq}	62.5	-	-

Night Time Maximum Noise Levels

(see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes:

- Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.
- "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days
- "Evening" is the period from 6pm till 10pm
- "Night" relates to the remaining periods
- "Night" relates to period from 10pm on this graph to morning on the following graph.
- Graphed data measured in free-field; tabulated results facade corrected
- Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade) (see note 6)

Descriptor	Day 7am-10pm	Night ⁵ 10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	65.0	-
L _{eq} 1hr upper 10 percentile	66.8	-
L _{eq} 1hr lower 10 percentile	62.4	-

Data File: various

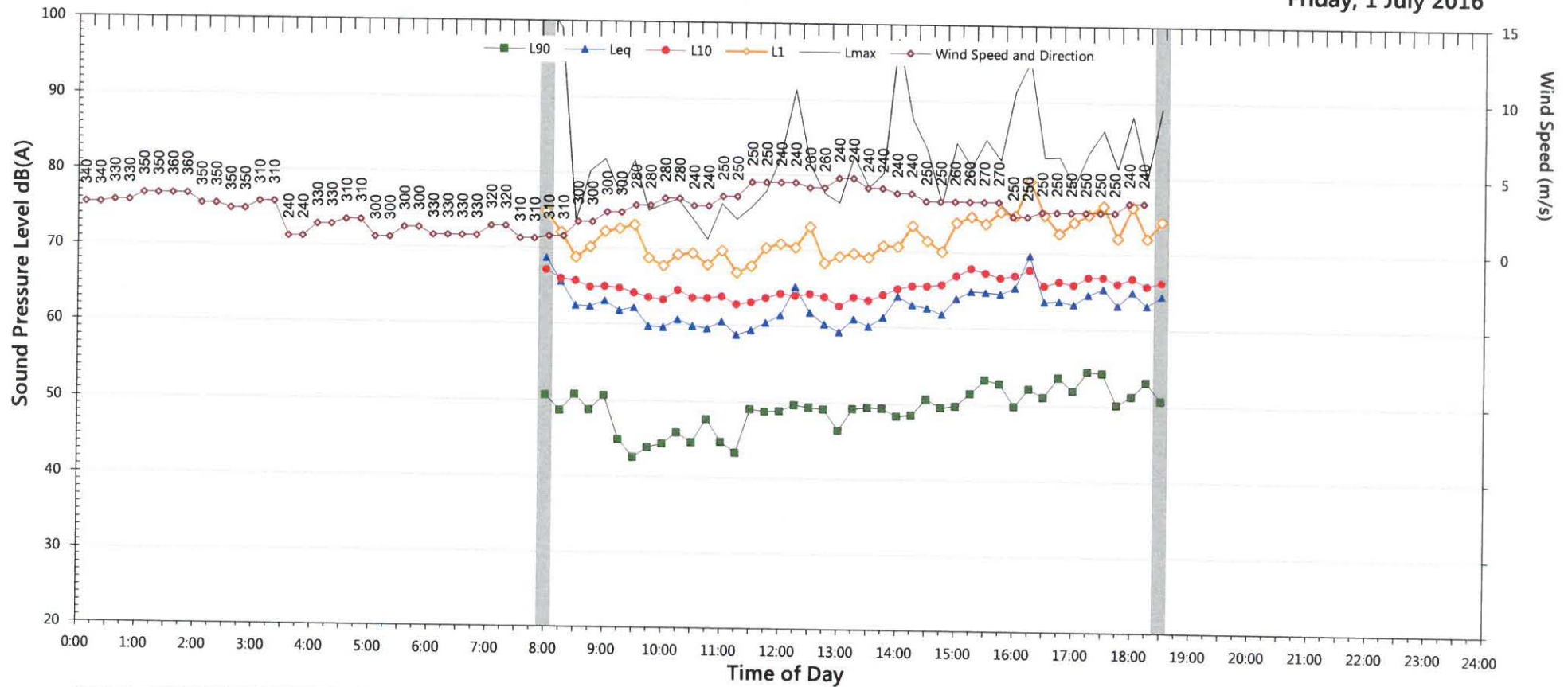
TH925 - M13 43 Conlon Ave (r0)

QTE-26 (rev 11) Logger Graphs Program

Unattended Noise Monitoring Results

43 Conlon Ave

Friday, 1 July 2016



NSW Industrial Noise Policy (Free Field)

Descriptor	Day ²	Evening ³	Night ^{4 5}
L ₉₀	44.5	-	-
L _{Aeq}	63.2	-	-

Night Time Maximum Noise Levels (see note 7)

L _{Max} (Range)	-	to	-
L _{Max} - L _{eq} (Range)	-	to	-

Notes:

1. Shaded periods denote measurements adversely affected by rain, wind or extraneous noise - data in these periods are excluded from calculations.

3. "Evening" is the period from 6pm till 10pm

6. Graphed data measured in free-field; tabulated results facade corrected

4. "Night" relates to the remaining periods

7. Night time L_{Max} values are shown only where L_{Max} > 65dB(A) and where L_{Max} - L_{eq} ≥ 15dB(A)

NSW Road Noise Policy (1m from facade) (see note 6)

Descriptor	Day 7am-10pm	Night ⁵ 10pm-7am
L _{eq} 15 hr and L _{eq} 9 hr	65.7	-
L _{eq} 1hr upper 10 percentile	68.4	-
L _{eq} 1hr lower 10 percentile	62.6	-

2. "Day" is the period from 8am till 6pm on Sundays and 7am till 6pm on other days

5. "Night" relates to period from 10pm on this graph to morning on the following graph.

Data File: various

TH925 - M13 43 Conlon Ave (r0)

QTE-26 (rev 11) Logger Graphs Program

APPENDIX G Supplementary operator attended short term noise survey observations and results

F- 1 Operator attended measurements 16 Feb 2016 (15min samples)

File	Location	Date	Time	LAFmax	LAeq	LAF1.0%	LAF10.0%	LAF90.0%	Observations
SLM_000	104 Maddecks Ave (near M4)	16/02/2016	9:37:10	74.5	56	68.4	59.4	41.6	Wind 3.4m/s S0/8 cloud26.4degC 39.5 RH Passing & distant traffic. Dog. Distant cicadas. Distant sawing (momentary). Aircraft.
SLM_001	42 Sims St (similar to M2/M5)	16/02/2016	10:02:07	79.1	52.2	60.8	48.5	40.5	Distant cicadas. Aircraft. Helicopters. Distant traffic. Dog barking.
SLM_002	No 4 Turton Rd (similar to M2)	16/02/2016	10:28:48	60.6	47.7	55.4	49.9	43.4	Distant cicadas. Distant traffic. Aircraft.
SLM_003	No 88 Horizon Circuit (similar to M7)	16/02/2016	10:51:38	76.7	55.8	68	55.3	44	Cicadas stop & start, variable volume. Traffic on Brickmakers. Aircraft. Reversing smart alarm from Benedict site (no obvious earth moving eqpt noise). No construction activity from house sites. Passing traffic
SLM_004	110 Travers St (M8)	16/02/2016	11:09:29	73.8	55.6	67.1	57.1	46.5	Traffic on Brickmakers drive. Aircraft. No cicadas. Impact sounds from Benedict (wont affect background). No obvious earthmoving eqpt audible from Benedict.
SLM_005	No 10 Cotter Lane (M10A)	16/02/2016	11:30:18	70.8	59.2	65.9	62.2	49.9	Cicadas intermittent. Traffic on Brickmakers Drive. No Benedict sounds here. When cicadas are sounding, about 59dB(A). L90 affected by cicadas. Est L90 48dB(A).
SLM_006	Rear 27 Martin Cresc (M9)	16/02/2016	12:12:03	68.3	53.1	62.5	56.1	45.8	Cicadas intermittent. Aircraft. Distant traffic.

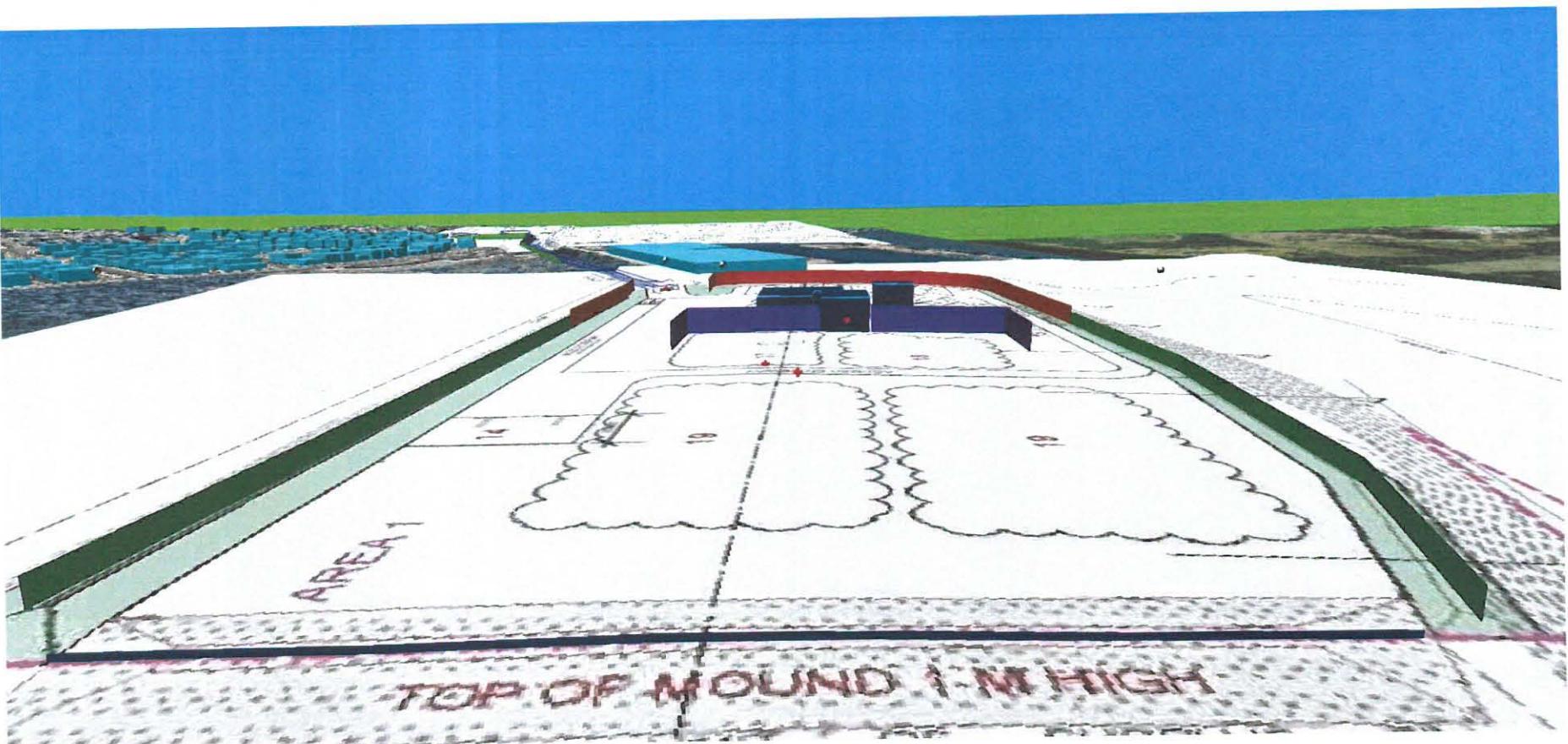
F- 2 Operator attended measurements 1 March 2016 (15min samples)

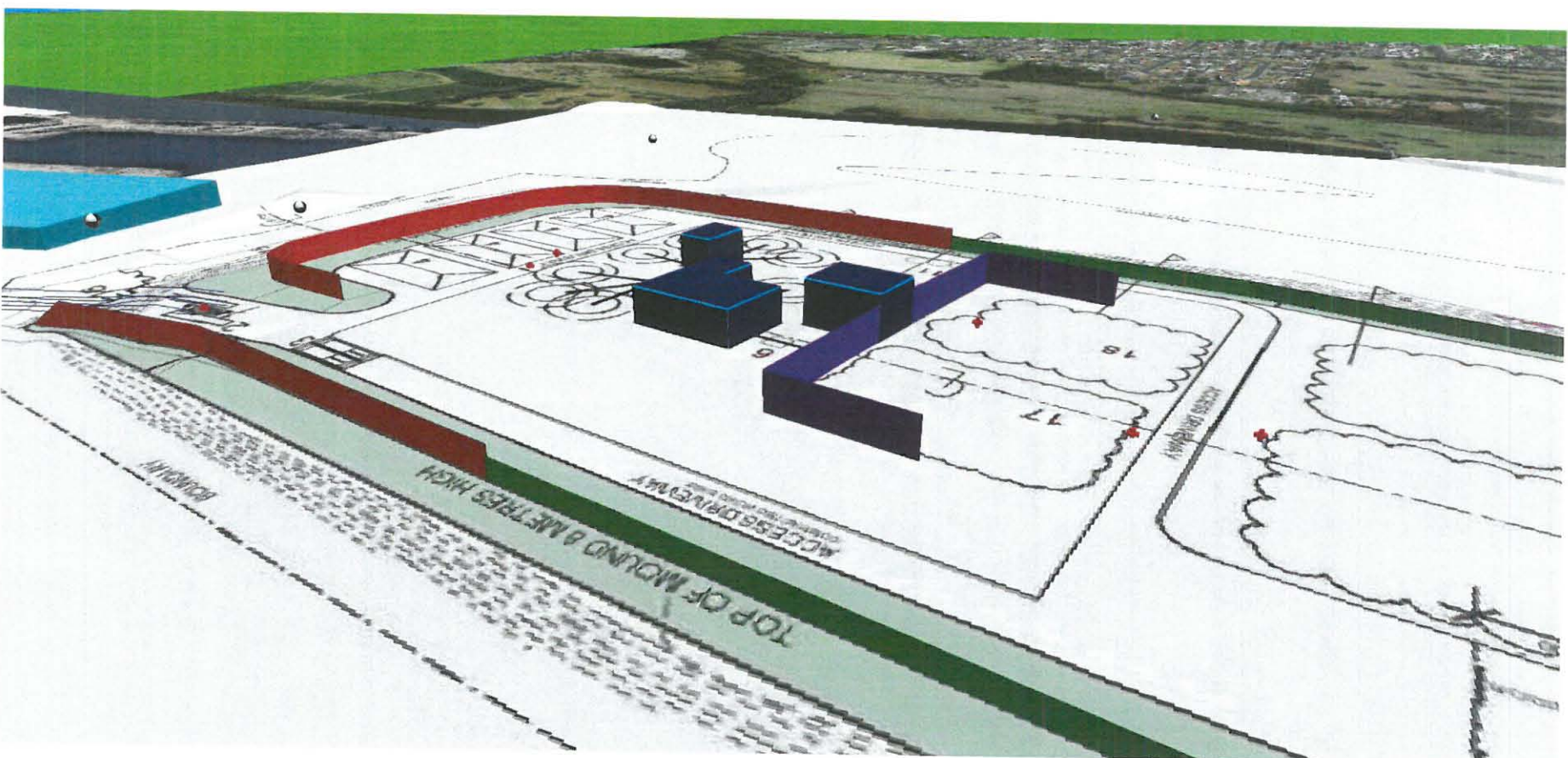
File	Location	Date	Stop Time	LAFmax	LAeq	LAF1.0%	LAF10.0%	LAF90.0%	Observations
SLM_000	110 Travers St (M8)	1/03/2016	14:50:23	70.5	56.6	64.4	58.8	51.8	Cicadas on and off. L90 ok. Occasional bucket noise from Benedict (doesn't affect L90). Traffic on Brickmakers Drive. Aircraft.
SLM_001	88 Horizon Cresc (similar to M7)	1/03/2016	15:08:57	68.7	57.3	67.7	57.7	48.2	Cicadas on and off. L90 OK. Traffic on Brickmakers. Truck idling in next lot for 3 minutes. No building activity. Aircraft. Alarm goes off, sample terminated early. 30degC 50.8RH wind 0-1m/sec E 2/8 octa
SLM_002	30 Speare St (M6)	1/03/2016	15:32:20	67.8	50	62.6	52.2	37.1	No cicadas. Traffic on brickmakers. Local traffic. Aircraft.
SLM_003	104 Maddecks Ave (M4)	1/03/2016	15:52:13	80.4	59.6	70.3	63.6	40.9	No cicadas. Local and distant traffic (quite a few vehicles passing)
SLM_004	10 Cotter Lane (M10A)	1/03/2016	16:11:03	74.6	60.4	69	63.4	48.8	Traffic on Brickmakers. Cicadas on & off. L90 ok. Aircraft
SLM_005	42 Sims Street (similar to M2/M5)	1/03/2016	16:30:15	65.2	47.5	56.8	48.9	39.2	No cicadas. Distant traffic. Aircraft. Distant lawnmowers (stops so L90 ok)
SLM_006	46 Schulton St (similar to M6)	1/03/2016	16:49:11	92.5	64.6	68.7	50.8	41	No cicadas. Traffic on Brickmakers. Aircraft. Loud passing bike.
SLM_007	4 Turton Rd (similar to M2)	1/03/2016	17:08:09	65.5	45.6	51.9	46.4	42	Distant traffic. Aircraft.
SLM_008	23 Christiansen Blvd (similar to M1)	1/03/2016	17:28:34	81.8	62	73.6	65.4	45.8	Distant traffic, local traffic (heavy). Aircraft.
SLM_009	27 Martin Cresc. (M9)	1/03/2016	17:59:54	69.6	47.3	55.6	48.6	42.2	Distant traffic. Birds.

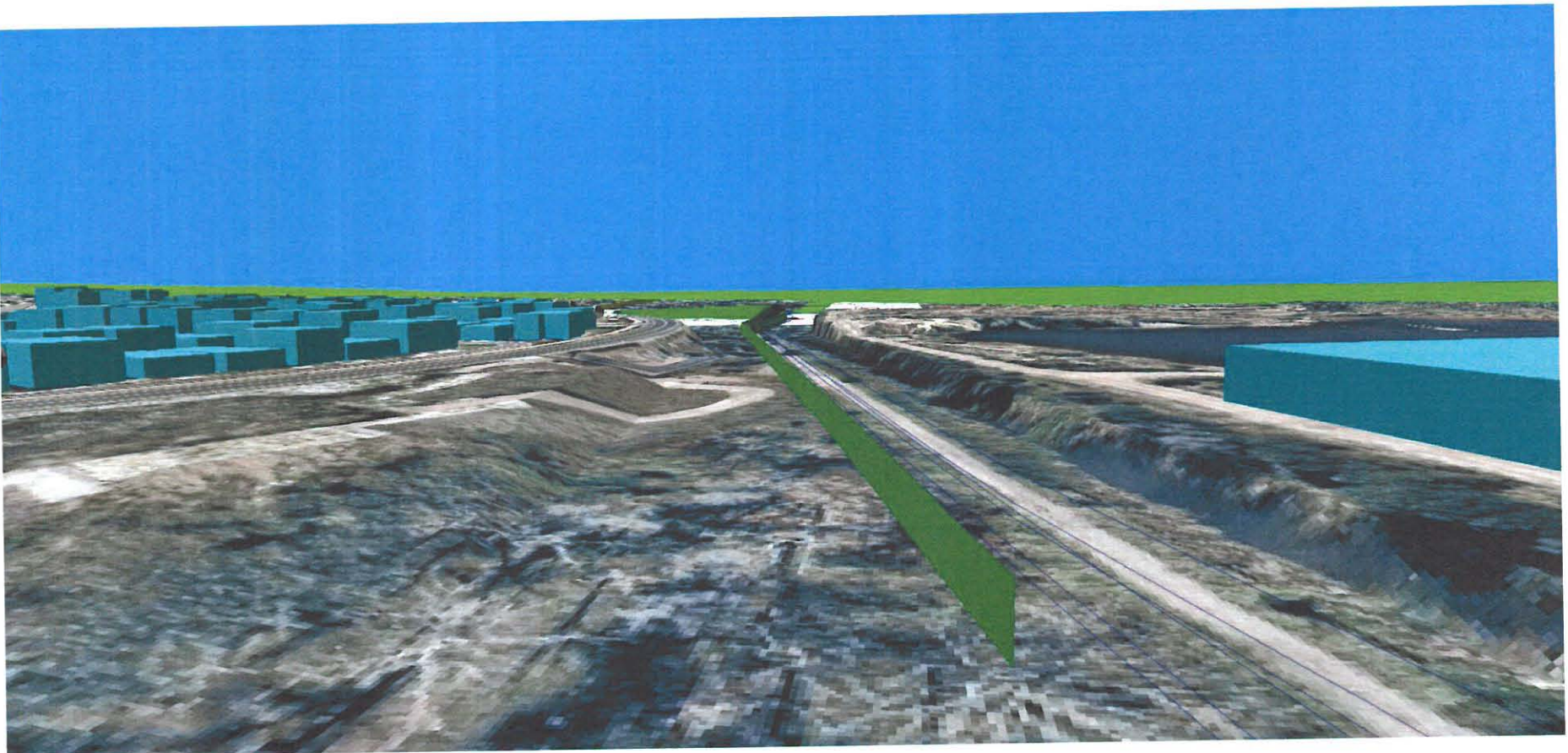
F- 3 Operator attended measurements 24 June 2016 (15min samples)

File	Location	Date	Time	LAFmax	LAeq	LAF1%	LAF10%	LAF90%	Observations
SLM_000	16 Cotter Lane (M10)	24/06/2016	10:08:41	82.8	59.7	69.2	62.8	43.2	Aircraft. Passing motor vehicles. Distant traffic. No insects. 16.4degC, Nil wind 72%RH, 7/8 octa
SLM_001	16 Cotter Lane (M10)	24/06/2016	10:24:10	73.3	56.8	66	61.1	44.2	Ditto. Heat pump operating at back. Not audible at front.
SLM_002	14 Cotter Lane (M10A)	24/06/2016	10:36:43	88.9	62.4	71.2	62.9	46.8	Pause at 10min, resident arrives
SLM_003	14 Cotter Lane (M10A)	24/06/2016	10:51:54	82.2	60	68.1	63.2	47.8	Train in distance (train horn)

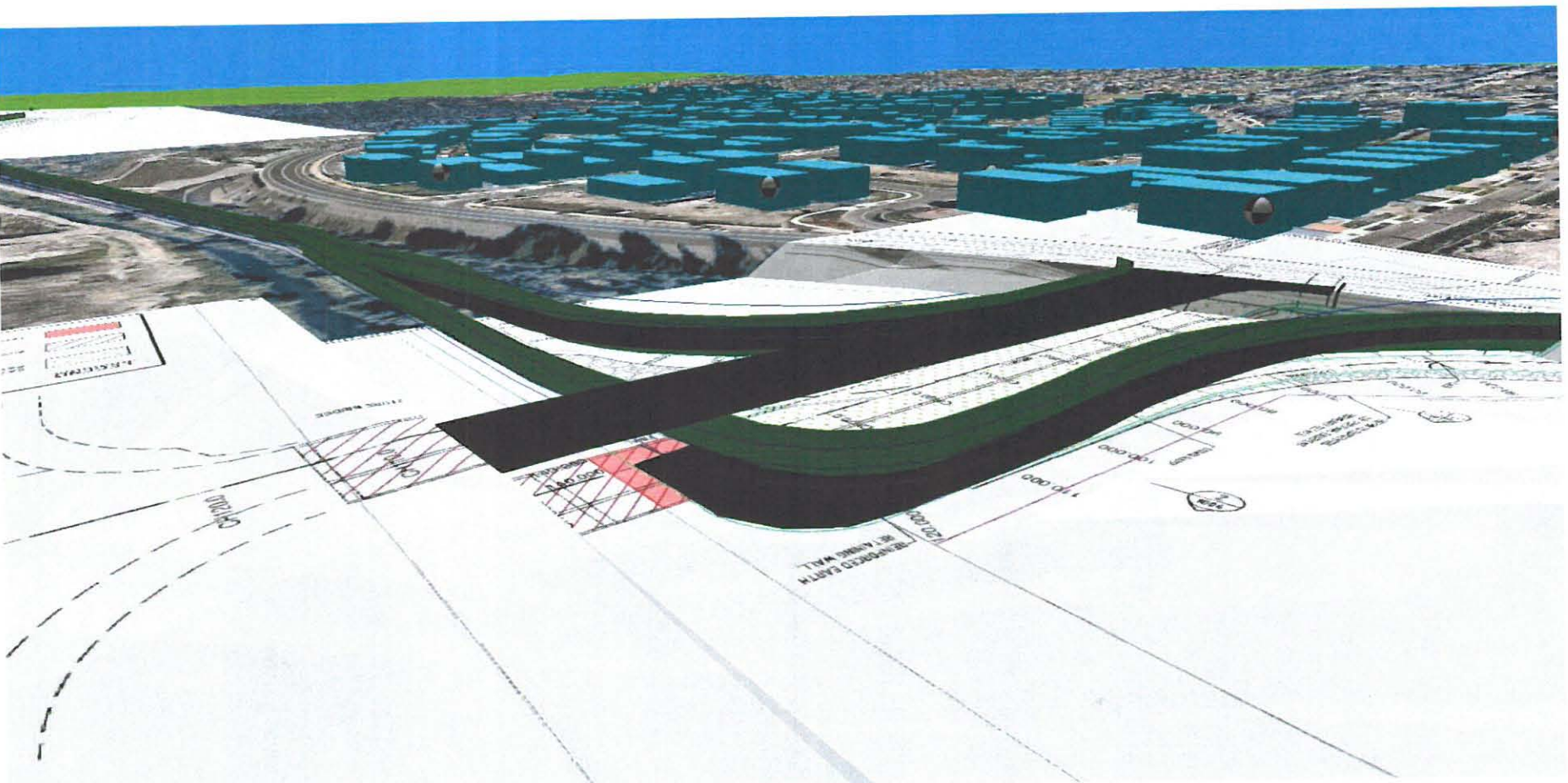
APPENDIX H Perspective view of ramp acoustic wall treatment

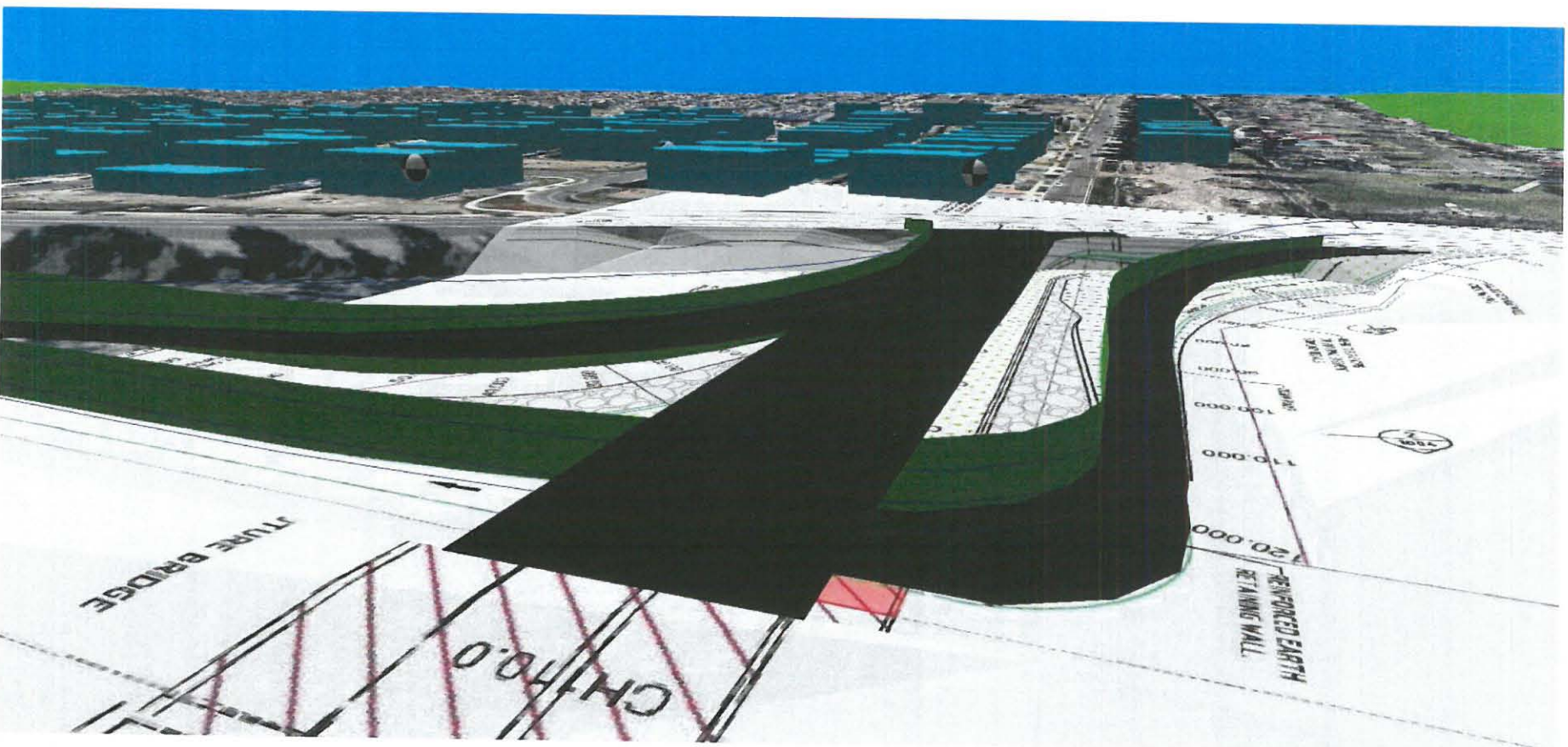


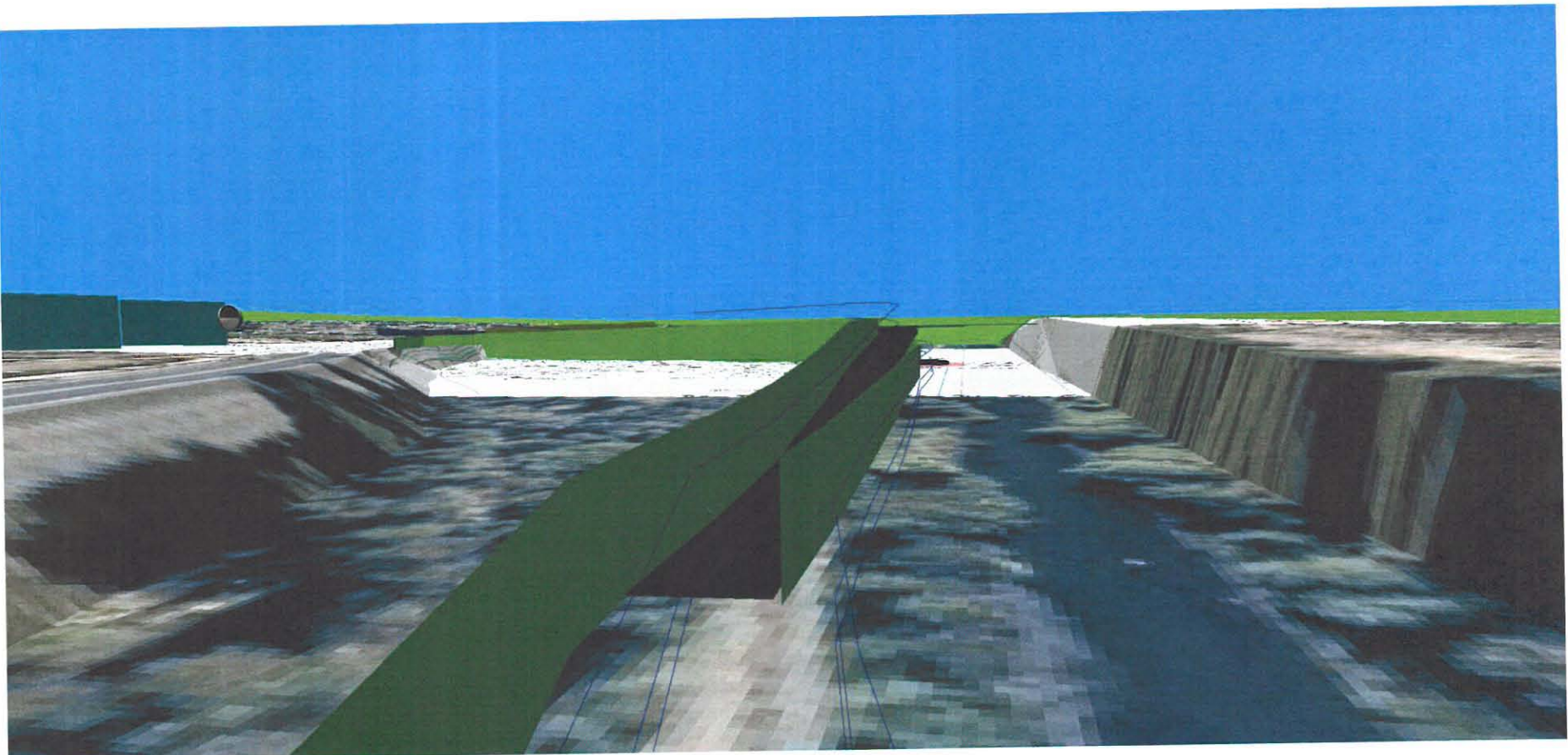


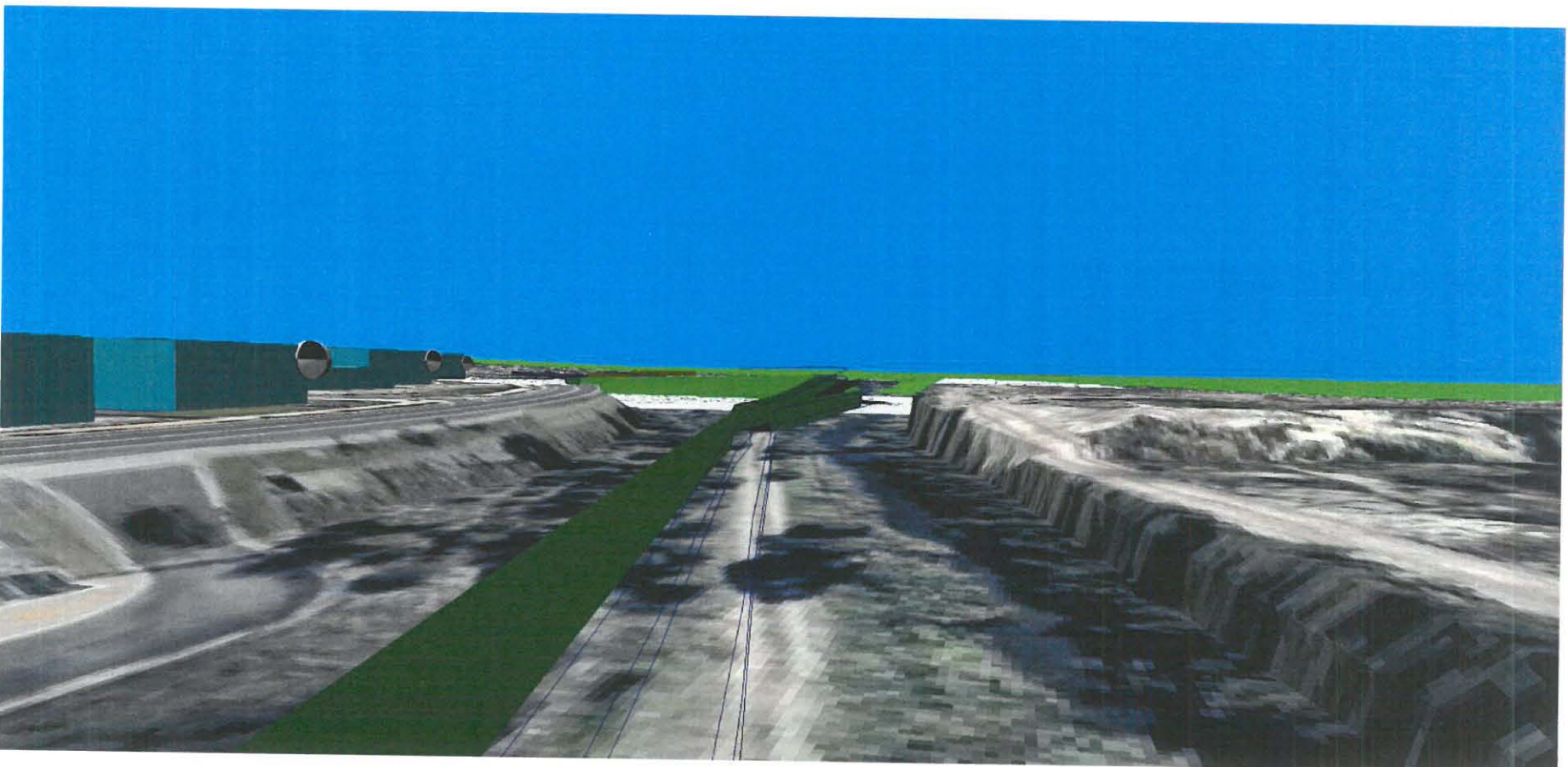












APPENDIX I Calculation of road noise levels

Location M8A 71 Horizon Circuit

Measured LAeq(11hr) existing	63.8	
Correction for (15hr)	-0.6	
LAeq(15hr) existing	63.2	
Contribution	Trucks	Trucks
	Departing	Arriving
Measured LAeq(15hr) at 23m to CL Road	58.6	56.2
Distance to CL Brickmakers Drive (m)	23	58
Distance Correction	0	-4.0
Corrected LAeq(15hr)	58.6	52.2
Total Contribution LAeq(15hr)	59.5	
Total LAeq(15hr) future	64.7	
Increase	1.5	

Note: All LAeq are façade corrected

Location Elouera Crescent Park

	2Way
	Trucks
LAeq(15hr) existing	63.2
Less façade correction	-2.5
Existing LAeq(15hr) free field	60.7
Contribution at 30kph based on 38 mov/hr	56.8
Adjustment for 324 movements per day	-1.1
Adjusted Contribution LAeq(15hr)	55.7
Total LAeq(15hr) future	61.9
Increase	1.2

Note:

- 1 All LAeq are free field
- 2 correction for 30kph over 25kph = $24.6 \log(30/25) = 1.9\text{dB}$ based on FHWA heavy truck noise emission levels

Table H 1 Results of truck noise measurements at Camellia 16 August 2016

Msmt	Truck Description			Background	No	No	SEL	SEL
No		SEL	sec	SEL	Departing	Arriving	Departing	Arriving
1	Truck + Dog	88.9	11	72.2	1		88.8	
2	Mack Truck	81.4	14	71.1	1		81.0	
3	Truck + Dog	79.7	21	69.9	1		79.2	
4	Truck	86.3	14	72.6		1		86.1
5	Concrete Recyclers Truck + Dog	76.5	8	71.5		1		74.8
6	Truck	75.8	9	70.8	1		74.1	
7	Truck	81.6	11	68.4	1		81.4	
8	Truck	82	7	66.8		1		81.9
9	Concrete Recyclers Mack Truck + Dog	85.1	21	74.3	1		84.7	
10	Concrete Recyclers Mack Truck + Dog	77.8	18	73.7	1		75.7	
11	2 Trucks- Truck and Truck + Dog	86.8	27	75.3	2		86.5	
12	Truck + Dog	82.3	15	71.5		1		81.9
13	Mack truck	77.3	15	71.5	1		76.0	
14	Truck	79	9	70.1		1		78.4
15	Truck + Dog	78.9	14	72.3		1		77.8
16	Truck + Dog (stopped at intersection for a while)	82.2	32	74.5	1		81.4	
17	Merc Truck + Dog	78.7	12	71	1		77.9	
18	2 Trucks - Semi and Truck	84.2	28	73.5	2		83.8	

19	Truck ANL	80.4	18	73.2	1		79.5
20	Truck (loud)	88.4	21	73.7	1		88.3
21	Truck Volvo	76.5	6	72.6	1		74.2
22	2 Trucks - Concrete Recyclers Truck and Truck	76.3	14	68.2		2	75.6
23	Mitsubishi Truck	76.9	24	72	1		75.2
24	Truck + Dog	82.4	14	68.7	1		82.2
25	Fleck Truck + Dog	82.7	13	68	1		82.6
26	Mack Truck	79.6	14	70		1	79.1
27	Mack Truck + Dog	75.2	9	66.6	1		74.6
28	Truck + Dog	77.6	10	67.4		1	77.2
29	Truck + Dog	77.5	11	67.5		1	77.0
30	Truck + Dog	79	18	72.1		1	78.0
31	Concrete Recyclers Mitsubishi truck	77.9	25	73.3	1		76.1
32	Truck	78.5	11	69.7	1		77.9
33	Concrete Recyclers Scania Truck	81.2	14	71.2	1		80.7
34	Typhoon Demolition Truck + Dog	86	17	72.9	1		85.8
35	Mack Truck	78.9	14	71.4	1		78.0
36	Semi	79.2	15	71.5		1	78.4
37	Semi + Dog	77.4	12	71.1		1	76.2
38	Truck + Dog	79.4	23	74.1	1		77.9
39	Truck + Dog	75.2	9	67.1		1	74.5
40	Truck + Dog	84.3	13	72.9	1		84.0
41	Mack Truck + Dog	83.6	32	69.7	1		83.4
42	Truck + Dog	76.8	12	69.3		1	75.9
43	Concrete Recyclers Truck + Dog	80.5	21	70.9	1		80.0

44	Merc Semi	74.7	14	68.3	1	73.6
45	Truck + Dog	77.5	12	67.6	1	77.0
46	Semi	80.9	19	70.3	1	80.5
47	Truck + Dog	74.9	13	72.3	1	71.4
48	Truck + Dog	80	17	72.8	1	79.1
49	Semi + Dog	82	23	74.6	1	81.1
50	2 Trucks - Truck + Dog and Truck	83.8	30	74.4	2	83.3
51	Truck + Dog	73.8	4	63.7	1	73.4
52	Mitsubishi Truck + Dog	70.8	6	68.7	1	66.6
53	Truck + Dog	79.8	9	70.2	1	79.3
54	Truck + Dog	83.7	11	70.5	1	83.5
55	Truck + Dog	84.9	11	70.5	1	84.7
56	Concrete Recyclers Truck + Dog	76.7	14	72.5	1	74.6
57	Truck	76.7	8	69.5	1	75.8
58	Truck + Dog	79.9	19	72.4	1	79.0
59	Truck + Dog	83.7	10	69.8	1	83.5
60	Truck + Dog	82.8	15	74.9	1	82.0
61	Truck + Dog	81.3	14	71.6	1	80.8
62	Semi	77.8	11	70.6	1	76.9
63	Semi	80.8	17	71.9	1	80.2
64	Truck + Dog	80.8	9	68.9	1	80.5
65	2 Trucks - Truck + Truck	79.7	9	74.6	2	78.1
66	Truck + Dog	80.8	17	73.7	1	79.9
67	Concrete Recyclers Mack Truck + Dog	81.9	10	75	1	80.9
68	Concrete Recyclers Mack Truck + Dog	78.6	10	71.8	1	77.6

69	Concrete Recyclers Truck + Dog	81.3	14	74.5	1		80.3
70	Volvo Semi	81.1	14	72.9	1		80.4
71	Concrete Recyclers Truck + Dog	78.2	17	73.6	1		76.4
72	Truck + Dog	77.6	8	71.9		1	76.2
73	Mack Truck	77	9	73.5	1		74.4
74	Truck + Dog	78.4	11	74.2		1	76.3
75	Concrete Recyclers Truck	79	11	74.2	1		77.3
76	Semi	84.2	11	74.2	1		83.7
77	Concrete Recyclers Truck + Dog	75.2	9	73.5		1	70.3
78	Semi	84.3	20	73.9		1	83.9
79	Semi	78.6	10	72.1	1		77.5
80	Concrete Recyclers Truck	80.8	10	72.1	1		80.2
81	Truck + Dog	78.6	13	73.1		1	77.2
82	Semi	87.8	19	74	1		87.6
83	Truck + Dog	80.9	17	72.8	1		80.2
84	Truck + Dog	73.4	12	69.8		1	70.9
85	Mack Truck + Dog	82.3	15	72.1	1		81.9
86	2 Trucks - Volvo Semi and Concrete Recyclers Truck + Dog	81.5	20	74.5	2		80.5
87	CAT Truck	78.6	14	69.9		1	78.0
88	BORAL Truck + Dog	78.2	10	69.5		1	77.6
89	2 Trucks - Truck + Dog and Mack Truck	84.1	26	70.6	2		83.9
90	Hino Truck	77.3	20	69.6	1		76.5
91	International Truck	77.2	8	68.6	1		76.6
92	COLMAC semi (noisy)	86.3	11	69.6		1	86.2
93	Three Trucks - Truck + Dog, Truck, Truck	82.5	19	69.5	3		82.3

94	Truck	82.3	13	67.7	1		82.1	
95	Mack Truck	78.4	20	73.1	1		76.9	
96	Truck + Dog	84.1	8	69.3	1		84.0	
97	Semi	80.2	19	72.8	1		79.3	
98	2 Trucks - Truck + Dog, Boral Truck + Dog	86.2	32	74.4	2		85.9	
99	2 Trucks - Semi + Dog, Truck + Dog	80.1	21	73.5	2		79.0	
100	Truck + Dog	80.9	9	71.6	1		80.4	
101	Semi	77.2	9	70.2		1	76.2	
105	Truck	76.7	11	72.9	1		74.4	
106	3 Trucks - Truck, Truck, Semi	89.8	32	77.9	3		89.5	
107	2 Trucks - Truck, Semi	83.1	27	77.3		2	81.8	
					83	35		
					SEL Per Vehicle		81.4	78.9
					No Vehicles		162	162
					LAeq(15hr) Façade Corrected		58.6	56.2

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