



Sydney Cricket Ground Trust

**NOISE MONITORING, A LEAGUE:
SYDNEY FC V CENTRAL COAST
MARINERS**

20 JANUARY 2018

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Report Prepared by:

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Executive Summary

Monitoring of noise levels at sensitive receptors in the area surrounding Allianz Stadium was undertaken during the A League Sydney FC v Central Coast Mariners Football match held on 20 January 2018 to determine compliance with the following noise criteria defined in the site's Noise Management Plan (NMP):

'When measured at the specified monitoring locations, the L_{Amax} of noise emanating from any sound amplification equipment must not exceed 60 dB (A) during any sporting events.

This noise limit applies to wind speeds up to 5m/s, above which wind generated noise on the microphone limits measurement accuracy. During periods of wind greater than 5m/s this noise limit does not apply.

Noise levels measured when wind speed exceed 5m/s (at microphone height) should not be used to measure compliance with noise limits, as wind generated noise may influence measurement accuracy. During periods of wind greater than 5 m/s the Trust must continue to take all reasonable and feasible actions to minimise noise.'

Noise levels were measured for the duration of the amplified activities associated with the event between 6:30 pm to 22:00 pm at the two positions required by the Noise Management Plan. During the monitoring, notes were also made regarding the sources of noise in the area and the source of any potential exceedences of the noise criteria.

Throughout the monitoring, noise levels were measured continuously and the maximum levels were recorded at each location every two minutes. During each two minute period notes were also made regarding the sources of noise in the area and the source of any potential exceedences of the noise criteria. The noise levels recorded represent the highest RMS noise level recorded during the two minute period.

During the event, the acoustic environment was defined by road traffic noise along Moore Park Road and crowd chants which occurred continuously. For the majority of the time, the actual PA levels were difficult to distinguish from the crowd and road traffic noise levels, and were noted to be generally below the crowd and traffic levels. During periods of low traffic, the noise monitoring and site observations confirmed that amplified sound was below the 60 dB(A) limit for the majority of the time. However, on 3 occasions at Position 1 (along Moore Park Road), noise levels from PA announcements were above the limit by 1 dB, 4 dB and 3 dB. In each of these instances, the PA coordinator was informed following each of the exceedences for rectification. No complaints were forwarded to Event Noise Management staff for investigation.

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1 INTRODUCTION

1.1 SCOPE OF ASSESSMENT

Sydney Cricket Ground Trust (SCGT) commissioned Event Noise Management to conduct event noise monitoring during the A League Sydney FC v Central Coast Mariners Football match held on 20 January 2018 as part of the requirements under the Noise Management Plan (NMP) for the facility¹.

This report presents a summary of the results of the monitoring and a comparison with the noise criteria for the event as defined in the NMP.

1.2 EVENT DETAILS

The sporting event was held at Allianz Stadium on Saturday 20 January 2018. The gates opened at 6:50 pm and the game concluded at approximately 10:00 pm, with amplified music, announcements and advertising occurring between these periods.

1.3 EVENT NOISE CRITERIA

Noise limits for sporting events held at Allianz Stadium are provided in the site's NMP as follows:

'When measured at the specified monitoring locations, the L_{Amax} of noise emanating from any sound amplification equipment must not exceed 60 dB (A) during any sporting events.'

This noise limit applies to wind speeds up to 5m/s, above which wind generated noise on the microphone limits measurement accuracy. During periods of wind greater than 5m/s this noise limit does not apply.

Noise levels measured when wind speed exceed 5m/s (at microphone height) should not be used to measure compliance with noise limits, as wind generated noise may influence measurement accuracy. During periods of wind greater than 5 m/s the Trust must continue to take all reasonable and feasible actions to minimise noise.'

Section 6.2.1 of the NMP details the monitoring positions that must be considered as follows:

'Monitoring Locations

For both sporting events and concerts attended monitoring locations will be as set out below.

For activities taking place at Allianz Stadium:

- *At a point within one (1) metre of the boundary nearest to Allianz Stadium at 234 Moore Park Road, Paddington*
- *At a point within one (1) metre of the boundary nearest to Allianz Stadium of 10 Alexander Street, Paddington.*

¹ Sydney Cricket Ground and Allianz Stadium, Noise Management Plan (NMP), prepared by ERM for Sydney Cricket and Sports Ground Trust (SCGT), April 2015

2 MONITORING METHODOLOGY

2.1 MONITORING POSITIONS

Monitoring during the match was undertaken at two fixed monitoring positions as required by the NMP. Table 2.1 presents a summary of the monitoring locations assessed during the event, with the monitoring positions identified on Figure 1.

TABLE 2.1: SUMMARY OF MONITORING POSITIONS

Position	Description
1	Fixed monitoring position located within 1 m of the front boundary of 234 Moore Park Road
2	Fixed monitoring position located within 1 m of the front boundary of 10 Alexander Street



Figure 1: Noise Monitoring Positions (External Fixed Locations)

2.2 OPERATORS

During the monitoring undertaken on 20 January 2018, Event Noise Monitoring personnel were located at each position identified in Figure 1. The monitoring study was undertaken by the following personnel:

- Position 1: Samuel Wong: BEng(Chem), MAAS.
- Position 2: Roger Treagus: BA, MA Env. Stud, MAAS.

2.3 MONITORING EQUIPMENT

Table 2.2 presents a summary of the equipment used to complete the monitoring. The monitoring instruments utilised conform to Australian Standard 1259 "Acoustics - Sound Level Meters", (1990) as Type 1 precision sound level meters and have an accuracy suitable for both field and laboratory use.

The sound level meters and calibrator used for the monitoring have been checked, adjusted and aligned to conform to the Type 1 specifications within the last 24 months and issued with a conformance certificate (NATA).

TABLE 2.2: SUMMARY OF MONITORING EQUIPMENT

Position	Instrument Model	Instrument Serial	Instrument Calibration Due Date	Calibrator Model	Calibrator Serial	Calibrator Calibration Due Date
1	Nor 140	1405306	14/7/19	Pulsar 105	62686	16/11/18
2	B&K 2250L	2741106	23/1/19	Pulsar 105	62686	16/11/18

Field calibrations of each of the instruments were also undertaken prior to and immediately after the monitoring was completed. Less than 0.5dB drift occurred over the measurement periods. All instruments were fitted with a windshield and monitoring was completed at a height of 1.5 m above ground level.

2.4 WEATHER CONDITIONS DURING THE EVENT

During the monitoring period, wind conditions were generally light north-easterly winds. The light north-easterly winds carried noise away from the noise monitoring positions and nearest sensitive receptors to the north and east. No rain occurred during the monitoring.

3 RESULTS OF MONITORING

3.1 METHODOLOGY

Noise monitoring was completed at each location throughout the monitoring period with the maximum noise levels recorded for every two minute period. During the monitoring, notes were also made regarding the sources of noise in the area and the source of any potential exceedances of the noise criteria. The noise levels represent the highest RMS noise level recorded during the two minute period. Hence, even where exceedances are identified, it is possible such exceedances are due to noise sources unrelated to amplified event noise (e.g. road traffic).

3.2 MONITORING RESULTS

The measured noise levels and associated notes that were recorded during the event are presented in Appendix B.

At Position 1, the amplified PA system was in operation, which occurred prior to commencement of the match (which began at 7:50 pm), during half-time and immediately after the match. Amplified sound included announcements and background music. At Position 2, amplified sound was audible when in operation but below 54 dB(A).

During the event, the acoustic environment was defined by road traffic noise along Moore Park Road and crowd noise. It was noted that chanting from the crowd occurred continuously throughout the match and reached up to 72 dB(A). For the majority of the time, the actual PA levels were difficult to distinguish from the crowd and road traffic noise levels, and were noted to be generally below the crowd and traffic levels. During periods of low traffic, the noise monitoring and site observations confirmed that amplified sound was below the 60 dB(A) limit for the majority of the time. However, on 3 occasions at Position 1, noise levels from PA announcements were above the limit:

- 7:30 pm – 61 dB(A);
- 7:50 pm – 64 dB(A);
- 8:54 pm – 63 dB(A).

The PA coordinator was informed following each of the exceedances for rectification. Background noise monitoring was below the noise limit at all times.

All recorded L_{Amax} noise levels were greater than the noise criteria set in the NMP for noise emanating from sound amplification equipment. However, these noise levels do not represent non-compliance with the NMP as the L_{Amax} levels recorded were attributable to extraneous ambient noise sources and not the Allianz Stadium PA system. These sources included chanting and singing of the crowd, passing vehicles, aircraft overhead, pedestrians, and event patrons outside the venue.

3.3 EVENT HOTLINE

During the event no noise complaint related calls were received on the concert hotline established by the Sydney Cricket Ground Trust and no complaints were received by Event Noise Management staff for investigation.

4 CONCLUSIONS

Monitoring of amplified noise from Allianz Stadium during the A League Sydney FC v Central Coast Mariners match held on 20 January 2018 was completed at two positions as required by the site's Noise Management Plan (NMP).

Noise levels were measured for the duration of the amplified activities associated with the event from 6:30 pm to 22:00 pm. Throughout the monitoring, noise levels were measured continuously, with the maximum levels for every two minute period recorded. During each two minute period notes were also made regarding the sources of noise in the area and the source of any potential exceedences of the noise criteria. The noise levels recorded represent the highest RMS noise level during the two minute period.

During the event, the acoustic environment was defined by road traffic noise along Moore Park Road and crowd chants which occurred continuously. For the majority of the time, the actual PA levels were difficult to distinguish from the crowd and road traffic noise levels, and were noted to be generally below the crowd and traffic levels. During periods of low traffic, the noise monitoring and site observations confirmed that amplified sound was below the 60 dB(A) limit for the majority of the time. However, on 3 occasions at Position 1 (along Moore Park Road), noise levels from PA announcements were above the limit by 1 dB, 4 dB and 3 dB. In each of these instances, the PA coordinator was informed following each of the exceedences for rectification. No complaints were forwarded to Event Noise Management staff for investigation.

APPENDIX A

ACOUSTIC GLOSSARY

APPENDIX A: GLOSSARY OF ACOUSTIC TERMINOLOGY

A-Weighting	A response provided by an electronic circuit which modifies sound in such a way that the resulting level is similar to that perceived by the human ear.
dB (decibel)	This is the scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and the reference pressure (0.00002N/m ²).
dB(A)	This is a measure of the overall noise level of sound across the audible spectrum with a frequency weighting (i.e. 'A' weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.
dB(C)	This is a standard weighting of the audible frequencies, commonly used for the measurement of Peak Sound Pressure level.
Facade Noise Level	Refers to a sound pressure level determined at a point close to an acoustically reflective surface (in addition to the ground). Typically a distance of 1 metre is used.
Free Field	Refers to a sound pressure level determined at a point away from reflective surfaces other than the ground with no significant contribution due to sound from other reflective surfaces; generally as measured outside and away from buildings.
Hertz (Hz)	A measure of the frequency of sound. It measures the number of pressure peaks per second passing a point when a pure tone is present.
L_{Aeq} Equivalent Continuous Sound Level	This is the equivalent steady sound level in dB(A) containing the same acoustic energy as the actual fluctuating sound level over the given period. For a steady sound with small fluctuations, its value is close to the average sound pressure level.
L_{A90,T}	This is the dB(A) level exceeded 90% of the time, T.
L_{A10,T}	This is the dB(A) level exceeded 10% of the time, T.
L_{Amax}	is the maximum A-weighted sound pressure level recorded over the period stated.
L_{Cmax}	is the maximum C-weighted sound pressure level recorded over the period stated.

APPENDIX B

DETAILED MONITORING DATA (FIXED POSITIONS)

EVENT NOISE MANAGEMENT

Project Number:	5258	Date:	20/1/18
Project Description:	A-League		
Monitoring Location:	Position 1 - 234 Moore Park Road		
Operator:	SW		
Weather Description:	Light north-easterly winds		
Instrument:	Nor140	Calibrator Model:	Pulsar 105
Instrument Serial:	1405306	Calibrator Serial:	62686
Instrument NATA Calibration Date:	14/7/19	Calibrator NATA Calibration Date:	16/11/17
Pre-calibration:	93.9	Post calibration:	93.8

Time	L_{Amax} dB(A)	<u>Description of Noise and/or Changes to Weather</u>
18:30:00	80.7	Traffic, moderate easterly breeze
18:32:00	75.6	Traffic
18:34:00	80.8	Traffic
18:36:00	76.3	Traffic
18:38:00	75.4	Traffic
18:40:00	74.1	Traffic
18:42:00	76.1	PA music audible, less than 52 dB(A), traffic causing max
18:44:00	78.1	PA music audible, less than 52 dB(A), traffic causing max
18:46:00	83.6	Traffic
18:48:00	74.8	Traffic
18:50:00	79	Traffic dominant, PA voice and music bass audible for a short period
18:52:00	75.5	Traffic dominant, music less than 56 dB(A)
18:54:00	77.1	Traffic dominant, PA music around 54 dB(A) during period of low traffic
18:56:00	77.3	Traffic
18:58:00	74.4	Traffic dominant, PA announcer around 57 dB(A)

Time	L _{Amax} dB(A)	Description of Noise and/or Changes to Weather
19:00:00	75.3	Traffic
19:02:00	83.2	Traffic dominant, PA announcer just audible at times
19:04:00	90.8	Traffic dominant, music less than 56 dB(A)
19:06:00	77.6	Traffic
19:08:00	77.9	Traffic
19:10:00	74.9	Traffic
19:12:00	76.7	Traffic, PA announcer audible for short period
19:14:00	81.5	Traffic
19:16:00	79.8	Traffic
19:18:00	82.9	Traffic
19:20:00	82.9	Traffic
19:22:00	74.9	Traffic, PA announcer around 58 dB(A)
19:24:00	78.9	Traffic
19:26:00	78	Traffic
19:28:00	89.9	Car horn
19:30:00	85.2	PA announcer around 58-60 dB(A) and up to approximately 61 dB(A) for a moment, PA coordinator informed to turn down 2 dBA
19:32:00	76.1	Traffic dominant, music/PA audible
19:34:00	76.8	Traffic dominant, music/PA audible
19:36:00	81	Traffic dominant, music/PA audible
19:38:00	74.4	Traffic dominant, music/PA audible
19:40:00	83.9	Traffic dominant, music/PA audible
19:42:00	78.9	Traffic dominant, music/PA audible, winds calmed down
19:44:00	84.9	Traffic dominant, music/PA audible

Time	L _{Amax} dB(A)	Description of Noise and/or Changes to Weather
19:46:00	75.1	Traffic dominant, music/PA audible
19:48:00	75	Traffic
19:50:00	90.6	Traffic caused max, PA announcement 4 dB over, informed PA coordinator
19:52:00	90.4	People talking
19:54:00	80.6	Traffic
19:56:00	85.8	Traffic, people talking
19:58:00	78.5	Crowd 64 dBA
20:00:00	80.8	Crowd 60-68 dBA
20:02:00	79.8	Traffic, crowd noise
20:04:00	79.8	Traffic, crowd noise
20:06:00	80.3	Traffic, crowd noise
20:08:00	81.1	People talking nearby caused max, crowd noise
20:10:00	72.1	Traffic, crowd noise
20:12:00	84.7	Traffic, crowd noise
20:14:00	77.9	Traffic, crowd noise
20:16:00	77.2	Traffic, crowd noise
20:18:00	80.6	Traffic, crowd noise
20:20:00	79.8	Traffic, crowd noise
20:22:00	78.4	Traffic, crowd noise
20:24:00	77.5	Traffic, crowd noise
20:26:00	79	Traffic, crowd noise
20:28:00	77.3	Traffic, crowd noise
20:30:00	80.5	Traffic, crowd noise

Time	L _{Amax} dB(A)	Description of Noise and/or Changes to Weather
20:32:00	88.8	Traffic, crowd noise
20:34:00	81.8	Traffic, crowd noise
20:36:00	82	Traffic, crowd noise
20:38:00	75.5	Traffic, crowd noise
20:40:00	84.3	Traffic, crowd roar caused max
20:42:00	76.3	Traffic, crowd noise
20:44:00	80.1	Traffic, crowd noise
20:46:00	71.6	Half time, traffic, PA around 58 dB(A)
20:48:00	73.7	Traffic, background music less than 57 dB(A)
20:50:00	77	Traffic, PA announcement around 59 dB(A)
20:52:00	90.1	Traffic dominant, background music
20:54:00	71.4	PA announcer up to 63 dB(A), informed PA coordinator
20:56:00	79.1	Traffic, background music
20:58:00	78.5	Traffic, background music
21:00:00	92.7	Music audible, but difficult to distinguish SPL due to passing traffic
21:02:00	74.9	2nd half started
21:04:00	77	Traffic, crowd noise
21:06:00	74.3	Traffic, crowd noise
21:08:00	86.2	Traffic, crowd noise
21:10:00	75.6	Traffic, crowd noise
21:12:00	72.7	Traffic, crowd noise
21:14:00	81	Traffic, crowd noise
21:16:00	74.2	Traffic, crowd noise
21:18:00	83.8	Crowd roar

Time	L _{Amax} dB(A)	Description of Noise and/or Changes to Weather
21:20:00	76.2	Traffic, crowd noise, aircraft caused max
21:22:00	78.8	Traffic, crowd noise
21:24:00	74.2	Traffic, crowd noise
21:26:00	74.5	Traffic, crowd noise
21:28:00	80.9	Traffic, crowd noise
21:30:00	74.7	Traffic, crowd noise
21:32:00	73.4	Traffic, crowd noise
21:34:00	76.5	Traffic, crowd noise
21:36:00	74.1	Traffic, crowd noise
21:38:00	77.4	Traffic, crowd noise
21:40:00	74.1	Traffic, crowd noise
21:42:00	75.7	Traffic, crowd noise
21:44:00	81.1	Traffic, crowd noise
21:46:00	80.9	Traffic, crowd noise
21:48:00	74.7	Traffic, crowd noise
21:50:00	75.6	Traffic, crowd noise
21:52:00	80.9	Traffic, crowd noise
21:54:00	85.3	Traffic, people leaving game, announcer and music barely audible
21:56:00	78.9	Traffic, people leaving game, music barely audible
21:58:00	90.1	Traffic, people leaving game, music barely audible
21:58:00	87.8	Crowd
22:00:00	86.4	Crowd
22:02:00	87.2	Crowd
22:04:00	87.8	Crowd



Time	L _{Amax} dB(A)	<u>Description of Noise and/or Changes to Weather</u>
22:06:00	79.4	Crowd

EVENT NOISE MANAGEMENT

Project Number:	5258	Date:	20/1/18
Project Description:	A-League		
Monitoring Location:	Position 2 - 10 Alexander Street Paddington		
Operator:	RT		
Weather Description:	Light easterly		
Instrument:	Bruel & Kjaer 2250	Calibrator Model:	Pulsar 105
Instrument Serial:	241165	Calibrator Serial:	62086
Instrument NATA Calibration Date:	23/01/17	Calibrator NATA Calibration Date:	16/11/17
Pre-calibration:	94.3	Post calibration:	94.0

Time	L_{Amax} dB(A)	<u>Description of Noise and/or Changes to Weather</u>
18:30:00	71.2	No event noise – Ambient, birds, traffic
18:32:00	65.8	Birds, traffic
18:34:00	68.3	Birds, traffic
18:36:00	68.7	Birds, traffic, sirens
18:38:00	76.6	76.6dB(A) max caused by birds, traffic
18:40:00	61.7	Birds, traffic
18:42:00	74.8	Birds, traffic
18:44:00	62.1	Birds, traffic
18:46:00	65.5	Birds, traffic
18:48:00	69.3	Birds, traffic
18:50:00	57.1	Birds, traffic
18:52:00	61.5	Birds, traffic
18:54:00	74.8	Birds, aircraft, traffic – no event noise
18:56:00	68.2	Birds, traffic, faint PA noise less than 50dB(A) max
18:58:00	75.7	Birds, traffic

Time	L _{Amax} dB(A)	Description of Noise and/or Changes to Weather
19:00:00	75.3	Birds, traffic
19:02:00	70.5	Birds, traffic
19:04:00	66.5	Birds, traffic
19:06:00	71.9	Birds, traffic, aircraft
19:08:00	72.7	Birds, traffic
19:10:00	67.8	Birds, traffic
19:12:00	73.0	Aircraft
19:14:00	68.2	Birds, traffic, aircraft
19:16:00	72.9	Birds, traffic, aircraft
19:18:00	76.2	Dogs, birds, traffic, PA less than 50dB(A) max
19:20:00	66.9	Dogs, birds, traffic, PA less than 52dB(A) max
19:22:00	67.0	Dogs, birds, traffic, 55dB(A)max caused by PA
19:24:00	71.8	PA less than 52dB(A)max
19:26:00	70.1	Dogs, birds, traffic, PA less than 50dB(A) max
19:28:00	71.3	Dogs, birds, aircraft, traffic
19:30:00	68.8	Traffic, birds, PA less than 52dB(A) max
19:32:00	73.1	Traffic, PA less than 52dB(A) max
19:34:00	68.4	Traffic, PA less than 52dB(A) max
19:36:00	69.6	Traffic, PA less than 52dB(A) max
19:38:00	68.4	Traffic
19:40:00	77.0	Traffic, birds, PA less than 52dB(A) max
19:42:00	73.9	Traffic, birds, PA less than 54dB(A)max
19:44:00	71.8	Traffic, birds, PA less than 52dB(A)max

Time	L _{Amax} dB(A)	Description of Noise and/or Changes to Weather
19:46:00	59.9	Traffic, PA less than 50dB(A) max
19:48:00	67.7	Traffic, birds, PA less than 50dB(A) max
19:50:00	67.7	Traffic, birds, crowd noise
19:52:00	68.5	Traffic, birds, crowd noise
19:54:00	60.9	Traffic, crowd noise
19:56:00	68.3	Traffic, crowd noise
19:58:00	71.1	Traffic, crowd noise
20:00:00	73.4	Traffic, crowd noise
20:02:00	76.8	Traffic, sirens, crowd noise
20:04:00	80.8	Traffic
20:06:00	83.0	Traffic
20:08:00	74.6	Traffic, faint crowd noise
20:10:00	73.0	Traffic, faint crowd noise
20:12:00	76.2	Traffic, faint crowd noise
20:14:00	69.3	Traffic, faint crowd noise
20:16:00	65.9	Traffic, faint crowd noise
20:18:00	66.4	Traffic, faint crowd noise
20:20:00	65.2	Traffic, faint crowd noise
20:22:00	63.6	Traffic, birds
20:24:00	65.4	Traffic, birds
20:26:00	62.6	Traffic, birds
20:28:00	71.7	Faint crowd noise
20:30:00	67.0	Faint crowd noise

Time	L _{Amax} dB(A)	Description of Noise and/or Changes to Weather
20:32:00	66.6	Faint crowd noise
20:34:00	60.4	Faint crowd noise
20:36:00	70.4	Traffic, bats, faint crowd noise
20:38:00	81.9	Traffic, bats, faint crowd noise
20:40:00	83.0	Traffic, aircraft, PA less than 52dB(A) max
20:42:00	64.9	Traffic, bats
20:44:00	63.6	Traffic, PA less than 50dB(A) max
20:46:00	57.7	Traffic, PA less than 53dB(A) max
20:48:00	62.2	Traffic, PA less than 52dB(A) max
20:50:00	65.2	Traffic, bats, dogs, PA less than 52dB(A) max
20:52:00	68.2	Traffic, bats, dogs, PA less than 52dB(A) max
20:54:00	70.8	Traffic, bats, dogs, PA less than 52dB(A) max
20:56:00	69.0	Traffic, bats, dogs, PA less than 50dB(A) max
20:58:00	68.5	Traffic, bats, PA less than 50dB(A) max
21:00:00	67.3	Traffic, PA less than 50dB(A) max
21:02:00	59.3	Traffic, crowd noise less than 50dB(A) max
21:04:00	61.8	Traffic, dogs, bats, crowd noise less than 50dB(A) max
21:06:00	67.6	Traffic
21:08:00	63.4	Traffic, bats, crowd noise less than 50dB(A)max
21:10:00	67.4	Traffic, bats
21:12:00	63.4	Traffic, bats
21:14:00	65.4	Traffic bats
21:16:00	66.7	Traffic, bats
21:18:00	64.5	Traffic, bats

Time	L _{Amax} dB(A)	Description of Noise and/or Changes to Weather
21:20:00	64.4	Traffic, bats, crowd noise less than 52dB(A) max
21:22:00	72.8	Traffic, aircraft, crowd noise less than 50dB(A) max
21:24:00	64.1	Traffic, crowd noise less than 53dB(A) max
21:26:00	63.1	Traffic, crowd noise less than 53dB(A) max
21:28:00	62.5	Traffic, crowd noise less than 53dB(A) max
21:30:00	64.7	Traffic, crowd noise less than 50dB(A) max
21:32:00	65.2	Traffic, crowd noise less than 50dB(A) max
21:34:00	64.3	Traffic, crowd noise less than 50dB(A) max
21:36:00	59.4	Traffic, crowd noise less than 50dB(A) max
21:38:00	65.1	Traffic, PA less than 52dB(A) max
21:40:00	72.3	Traffic, aircraft, crowd noise less than 50dB(A) max
21:42:00	67.6	Traffic, PA less than 52dB(A) max
21:44:00	60.5	Traffic, crowd noise less than 50dB(A) max
21:46:00	63.1	Traffic
21:48:00	59.5	Traffic, crowd noise less than 50dB(A) max
21:50:00	53.4	Ambient conversation, flying foxes, crowd noise less than 50dB(A) max
21:52:00	53.4	Traffic, PA less than 50dB(A)max
21:54:00	67.9	Traffic, PA less than 50dB(A)max
21:56:00	60.0	Traffic, PA less than 50dB(A)max
21:58:00	59.1	Traffic
21:58:00	79.7	Traffic