Sydney Cricket Ground Trust

NOISE MONITORING, KFC BIG BASH LEAGUE – SYDNEY SIXERS VS SYDNEY THUNDER
2 FEBRUARY 2019

February 2019

Report Prepared by: **EVENT NOISE MANAGEMENT**

Queensland – 3/4 Tombo Street, Capalaba, QLD 4157
New South Wales – 69 Reservoir Street, Surry Hills, NSW 2010

☎ 1300 851 761
✉ enm@ane.com.au

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CONTENTS

1 INTRODUCTION

1.1 SCOPE OF ASSESSMENT

Sydney Cricket Ground Trust (SCGT) commissioned Event Noise Management to conduct event noise monitoring during the Sydney Sixers vs Sydney Thunders KFC Big Bash League match held on 02 February 2019 as part of the requirements under the Noise Management Plan (NMP) for the facility[1]. 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 Sydney Cricket Ground (SCG) on Saturday 02 February 2019 from 7:00 pm to 10:30 pm.

1.3 EVENT NOISE CRITERIA

Noise limits for sporting events held at the SCG 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 the SCG:***
>
> - *At a point within one (1) metre of the boundary nearest to the SCG, at the corner of Poate Road and Poate Lane, Centennial Park;*
> - *At a point within one (1) metre of the boundary nearest to the SCG, at the corner of Leinster and Regent Streets, Paddington; and*
> - *At a point within one (1) metre of the boundary nearest to the SCG, at the corner of Robertson Road and Martin Road (northern intersection), Moore Park.*

[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 three 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 at the corner of Poate Road and Poate Lane
2	Fixed monitoring position located within 1 m of the front boundary at the corner of Leinster and Regent Streets
3	Fixed monitoring position located within 1 m of the front boundary at the corner of Robertson Road and Martin Road (northern intersection)

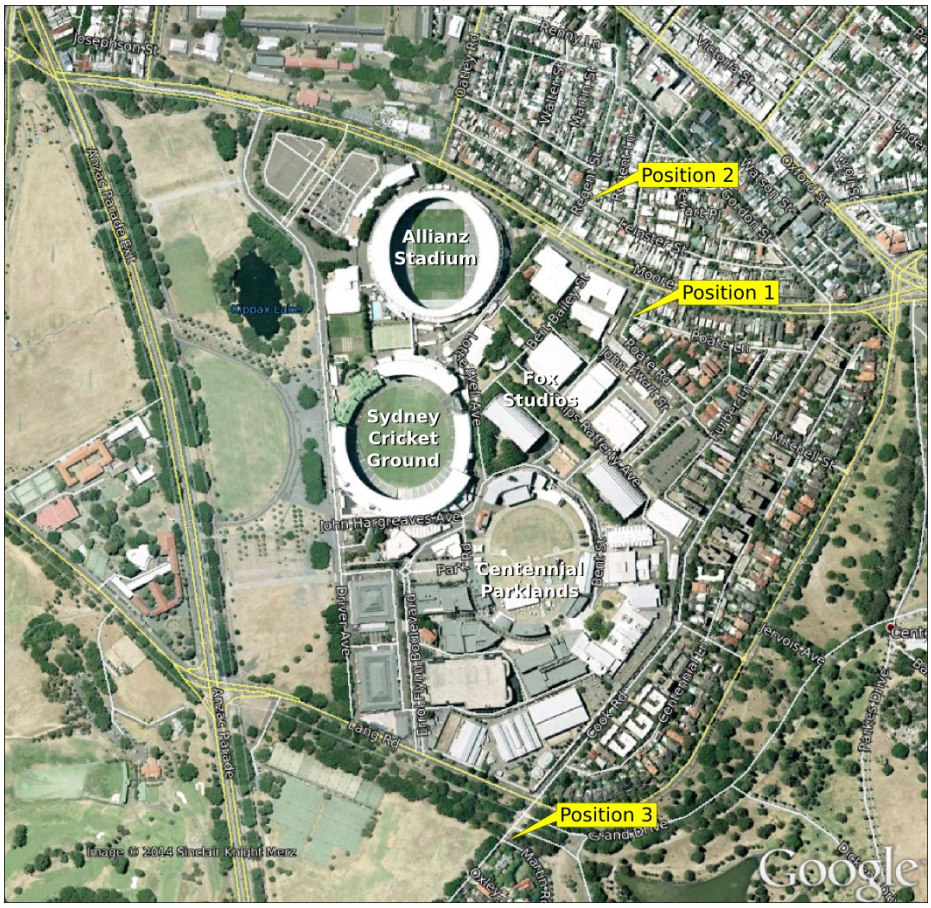

Figure 1: Noise Monitoring Positions (External Fixed Locations)

2.2 OPERATORS

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

- Position 1: Roger Treagus: BA, MA Env. Stud, MAAS.
- Position 2: James Daramola: BEng(Mech), AAS(Grad).
- Position 3: Samuel Wong: BEng(Chem), 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 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	1404663	29/06/19	Svantek SV03A	358	27/11/19
2	B&K 2250L	2741104	21/11/19	Svantek SV03A	358	27/11/19
3	B&K 2250L	3006647	17/07/19	BnK Type 4231	3012190	30/04/19

Field calibrations of each of the instruments were also undertaken prior to and immediately after the monitoring was completed. Less than 0.5 dB 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 light to moderate in speed and predominantly easterly. These conditions directed noise away from the nearest houses and monitoring positions, which were located to the south and north-east of the venue. Light and intermittent rain was observed on site during monitoring, with moderate rain observed around 9 pm till about 9:30 pm.

3 RESULTS OF MONITORING

3.1 METHODOLOGY

Noise monitoring was completed continuously at each location with the maximum noise level 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 exceedences 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 monitoring are presented in Appendix B. During the cricket match it was identified that noise levels from the event were within the criteria defined in the site's NMP throughout the noise monitoring.

Amplified sound from the event was inaudible for majority of the event and heavily dominated by road traffic and other local noises (birds, insects, patrons, pedestrians, and residents). However the amplified sound was distinguished during breaks in road traffic noise at all three positions and noise levels were:

- < 54 dB(A) max at Position 1
- < 56 dB(A) max at Position 2
- < 50 dB(A) max at Position 3.

All noise levels from the amplified sound (during minimal extraneous noise contributions) were within the 60 dB(A) criteria.

It is noted that all recorded L_{Amax} noise levels were greater than the noise criteria set in the NMP. However, these noise levels do not represent non-compliance with the NMP as the L_{Amax} levels recorded were attributable to extraneous noise sources and not the PA system. These sources included passing vehicles, aircraft overhead and pedestrians.

3.3 EVENT HOTLINE

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

4 CONCLUSIONS

Noise monitoring of amplified sound from the Sydney Cricket Ground during the KFC Big Bash League cricket match held on 02 February 2019 was completed at three positions as required by the site's Noise Management Plan. Noise levels were measured for the duration of the amplified activities associated with the event from 6:00 pm to 10:30 pm.

During the cricket match it was identified that noise levels from the event were within the criteria defined in the site's NMP throughout the noise monitoring. All positions were heavily dominated by road traffic noise and other local noises (birds, insects, patrons, pedestrians, and residents).

No noise complaints were received by the Trust or by Event Noise Management staff during the event.

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:	5662	**Date:**	02/02/19
Project Description:	Noise Monitoring – Big Bash League		
Monitoring Location:	Position 1		
Operator:	RT		
Weather Description:			
Instrument:	Nor 140	**Calibrator Model:**	Svantek SV03A
Instrument Serial:	1404663	**Calibrator Serial:**	358
Instrument NATA Calibration Date:	29/06/19	**Calibrator NATA Calibration Date:**	27/11/19
Pre-calibration:	93.9	**Post calibration:**	94.0

Time	L_{Amax} dB(A)	Description of Noise and/or Changes to Weather
18:18	72.2	Venue amplification inaudible. Road traffic and birds dominant.
18:20	66.3	Venue amplification inaudible. Road traffic and birds dominant.
18:22	72.2	Venue amplification inaudible. Road traffic, birds, people, and aircraft dominant.
18:24	72.8	Venue amplification inaudible. Road traffic and birds dominant.
18:26	120	Venue amplification inaudible. People up close shouting into microphone
18:28	66.9	Venue amplification inaudible. Road traffic and birds dominant.
18:30	82.3	Venue amplification inaudible. Road traffic and people dominant.
18:32	70.1	Venue amplification inaudible. Road traffic and people dominant.
18:34	73.2	Venue amplification inaudible. Road traffic and people dominant.
18:36	69.7	Venue amplification inaudible. Road traffic and people dominant.
18:38	70.2	Venue amplification inaudible. Road traffic and people dominant.
18:40	70.1	Faint venue amplification 42 dBA max. Road traffic and people dominant.
18:42	70.5	Venue amplification inaudible. Road traffic and birds dominant.
18:44	68.5	Venue amplification inaudible. Road traffic and birds dominant.
18:46	79.6	Venue amplification inaudible. Road traffic and birds dominant.
18:48	70.7	Venue amplification inaudible. Road traffic and birds dominant.
18:50	77.5	Venue amplification inaudible. Road traffic and birds dominant.
18:52	69.2	Venue amplification inaudible. Road traffic and birds dominant.

Time	L_{Amax} dB(A)	Description of Noise and/or Changes to Weather
18:54	64	Venue amplification 47 dBA max. Road traffic and birds dominant.
18:56	69.7	Venue amplification 52 dBA max. Road traffic and birds dominant.
18:58	69.3	Venue amplification 52 dBA max. Road traffic and birds dominant.
19:00	71.4	Venue amplification 51 dBA max. Road traffic and birds dominant.
19:02	64.3	Venue amplification inaudible. Road traffic and birds dominant.
19:04	66.1	Venue amplification inaudible. Road traffic and birds dominant.
19:06	72.9	Venue amplification inaudible. Road traffic and birds dominant.
19:08	64.6	Venue amplification inaudible. Road traffic and birds dominant.
19:10	82.3	Venue amplification 47 dBA max. Road traffic and birds dominant.
19:12	67.1	Venue amplification 47 dBA max. Road traffic and birds dominant.
19:14	66.6	Venue amplification 47 dBA max. Road traffic and birds dominant.
19:16	72.1	Venue amplification 47 dBA max. Road traffic and birds dominant.
19:18	79.3	Venue amplification inaudible. Road traffic and birds dominant.
19:20	66.8	Venue amplification inaudible. Road traffic and birds dominant.
19:22	68.6	Venue amplification 52 dBA max. Road traffic and birds dominant.
19:24	72.4	Venue amplification 52 dBA max. Road traffic and birds dominant.
19:26	68.9	Venue amplification 52 dBA max. Road traffic and birds dominant.
19:28	68.5	Venue amplification inaudible. Road traffic and birds dominant.
19:30	65.1	Venue amplification < 48 dBA. Road traffic and birds dominant.
19:32	70.8	Venue amplification < 48 dBA. Road traffic and birds dominant.
19:34	65.5	Venue amplification < 48 dBA. Road traffic, aircraft and birds dominant.
19:36	65.1	Venue amplification inaudible. Road traffic, aircraft and birds dominant.
19:38	60.7	Venue amplification inaudible. Road traffic and people dominant.
19:40	65.2	Venue amplification inaudible. Road traffic and people dominant.
19:42	77.9	Venue amplification inaudible. Road traffic and people dominant.
19:44	67.8	Venue amplification 48 dBA max. Road traffic and birds dominant.
19:46	71	Venue amplification 48 dBA max. Road traffic and birds dominant.
19:48	72.9	Venue amplification 52 dBA max. Road traffic and birds dominant.

Time	L_{Amax} dB(A)	Description of Noise and/or Changes to Weather
19:50	62.7	Venue amplification inaudible. Road traffic and people dominant.
19:52	70.2	Venue amplification inaudible. Road traffic, birds and people dominant.
19:54	70	Venue amplification inaudible. Road traffic and people dominant.
19:56	70.2	Venue amplification inaudible. Road traffic and people dominant.
19:58	69.6	Venue amplification 48 dBA max. Road traffic and birds dominant.
20:00	69.3	Venue amplification 50 dBA max. Road traffic and birds dominant.
20:02	65.7	Venue amplification 50 dBA max. Road traffic and birds dominant.
20:04	69	Venue amplification 50 dBA max. Road traffic and birds dominant.
20:06	79.8	Venue amplification 52 dBA max. Road traffic and birds dominant.
20:08	75	Venue amplification <46 dBA. Road traffic and birds dominant.
20:10	73.6	Venue amplification 48 dBA max. Road traffic and birds dominant.
20:12	76.8	Venue amplification 53 dBA max. Road traffic and birds dominant.
20:14	68	Venue amplification 48 dBA max. Road traffic, insects and birds dominant.
20:16	70.4	Venue amplification 48 dBA max. Road traffic, insects and birds dominant.
20:18	71.2	Venue amplification 52 dBA max. Road traffic and insects dominant.
20:20	71.4	Venue amplification inaudible. Road traffic and insects dominant.
20:22	69.2	Venue amplification inaudible. Road traffic and insects dominant.
20:24	71.1	Crowd noise 50 dBA max. Insects 64 dBA and traffic dominant.
20:26	68.5	Venue amplification 48 dBA max. Road traffic and insects dominant.
20:28	68	Venue amplification 48 dBA max. Road traffic and insects dominant.
20:30	74.6	Venue amplification 53 dBA max. Insects 64 dBA and traffic dominant.
20:32	68.7	Venue amplification 54 dBA max. Insects 64 dBA and traffic dominant.
20:34	68.4	Venue amplification 48 dBA max. Insects 64 dBA and traffic dominant.
20:36	73.8	Venue amplification 48 dBA max. Insects 64 dBA and traffic dominant.
20:38	69.7	Venue amplification 48 dBA max. Insects 64 dBA and traffic dominant.
20:40	66.6	Venue amplification 48 dBA max. Insects 64 dBA and traffic dominant.
20:42	71.6	Venue amplification 48 dBA max. Insects 64 dBA and traffic dominant.
20:44	72.1	Venue amplification 48 dBA max. Insects 64 dBA and traffic dominant.

Time	L_{Amax} dB(A)	Description of Noise and/or Changes to Weather
20:46	61.7	Venue amplification 48 dBA max. Insects 64 dBA, traffic and aircraft dominant.
20:48	75.2	Venue amplification 50 dBA max. Insects and traffic dominant.
20:50	63.3	Venue amplification 50 dBA max. Insects and traffic dominant.
20:52	64.2	Venue amplification 50 dBA max. Insects and traffic dominant.
20:54	66.1	Venue amplification 50 dBA max. Insects and traffic dominant.
20:56	63.7	Venue amplification 50 dBA max. Insects and traffic dominant.
20:58	64.7	Venue amplification inaudible. Insects and traffic dominant.
21:00	61.8	Venue amplification inaudible. Insects and traffic dominant.
21:02	61.5	Venue amplification inaudible. Insects and traffic dominant.
21:04	70.3	Venue amplification inaudible. Insects and traffic dominant.
21:06	73.3	Venue amplification inaudible. Insects and traffic dominant.
21:08	61.8	Venue amplification 48 dBA max. Insects, traffic and aircraft dominant.
21:10	63	Venue amplification inaudible. Insects and traffic dominant.
21:12	63.7	Venue amplification inaudible. Insects and traffic dominant.
21:14	73.6	Venue amplification inaudible. Insects and traffic dominant.
21:16	67.1	Venue amplification inaudible. Insects and traffic dominant.
21:18	61.3	Venue amplification < 48 dBA. Insects and traffic dominant.
21:20	66	Venue amplification < 48 dBA. Insects and traffic dominant.
21:22	61.1	Venue amplification < 48 dBA. Insects and traffic dominant.
21:24	66.5	Venue amplification < 48 dBA. Insects and traffic dominant.
21:26	68.3	Venue amplification 52 dBA max. Insects and traffic dominant.
21:28	76.9	Venue amplification 52 dBA max. Insects and traffic dominant.
21:30	61.9	Venue amplification 52 dBA max. Insects and traffic dominant.
21:32	67.9	Venue amplification 54 dBA max. Insects and traffic dominant.
21:34	61.8	Venue amplification 54 dBA max. Insects and traffic dominant.
21:36	60.4	Venue amplification 52 dBA max. Insects and traffic dominant.
21:38	63.1	Venue amplification 52 dBA max. Insects and traffic dominant.
21:40	75.2	Venue amplification 52 dBA max. Insects and traffic dominant.

Time	L_{Amax} dB(A)	Description of Noise and/or Changes to Weather
21:42	70.1	Venue amplification 52 dBA max. Insects and traffic dominant.
21:44	60	Venue amplification 50 dBA max. Insects and traffic dominant.
21:46	66.8	Venue amplification < 48 dBA. Insects and traffic dominant.
21:48	82.4	Venue amplification 52 dBA max. Insects and traffic dominant.
21:50	59.8	Venue amplification 50 dBA max. Insects and traffic dominant.
21:52	63.4	Venue amplification 50 dBA max. Insects and traffic dominant.
21:54	71.7	Venue amplification inaudible. Insects and traffic dominant.
21:56	68	Venue amplification inaudible. Insects and traffic dominant.
21:58	69.1	Venue amplification 52 dBA max. Insects and traffic dominant.
22:00	60.7	Venue amplification < 46 dBA. Insects and traffic dominant.
22:02	59.8	Venue amplification < 46 dBA. Insects and traffic dominant.
22:04	67.2	Venue amplification < 46 dBA. Insects and traffic dominant.
22:06	60.1	Venue amplification inaudible. Insects and traffic dominant.
22:08	66.3	Venue amplification < 46 dBA. Insects and traffic dominant.
22:10	69.5	Venue amplification < 44 dBA. Insects and traffic dominant.
22:12	67.3	Venue amplification 50 dBA max. Traffic dominant.
22:14	62.9	Venue amplification 50 dBA max. Traffic dominant.
22:16	69.2	Venue amplification 48 dBA max. Traffic dominant.
22:18	63	Venue amplification 48 dBA max. Traffic dominant.
22:20	73.2	Venue amplification < 46 dBA. Traffic dominant.
22:22	62.3	Venue amplification < 46 dBA. Traffic dominant.
22:24	66.3	Venue amplification < 46 dBA. Traffic dominant.
22:26	70.3	Venue amplification < 46 dBA. Traffic dominant.
22:28	73.1	Venue amplification < 46 dBA. Traffic dominant.
22:30	51.6	Venue amplification < 46 dBA. Traffic dominant.

EVENT NOISE MANAGEMENT

Project Number:	5662	**Date:**	02/02/19
Project Description:	Noise Monitoring – Big Bash League		
Monitoring Location:	Position 2		
Operator:	JD		
Weather Description:			
Instrument:	B&K 2250L	**Calibrator Model:**	Svantek SV03A
Instrument Serial:	2741104	**Calibrator Serial:**	358
Instrument NATA Calibration Date:	21/11/19	**Calibrator NATA Calibration Date:**	27/11/19
Pre-calibration:	93.9	**Post calibration:**	93.8

Time	**L_{Amax} dB(A)**	**Description of Noise and/or Changes to Weather**
18:18	73.6	Venue amplification inaudible. Cars, patrons (heading to SCG), residents, bar patrons dominant
18:20	78.9	Venue amplification inaudible. Cars, patrons (heading to SCG), residents, bar patrons dominant
18:22	78.0	Venue amplification inaudible. Cars, patrons (heading to SCG), residents, bar patrons dominant
18:24	72.6	Venue amplification inaudible. Cars, patrons (heading to SCG), residents, bar patrons dominant
18:26	69.9	Venue amplification inaudible. Cars, patrons (heading to SCG), residents, bar patrons dominant
18:28	72.4	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:30	77.6	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:32	68.4	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:34	84.8	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:36	78.3	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:38	73.0	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:40	73.3	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant

Time	L_{Amax} dB(A)	Description of Noise and/or Changes to Weather
18:42	72.8	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:44	66.3	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:46	72.8	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:48	76.1	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:50	77.0	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:52	71.2	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:54	67.1	Venue amplification audible. Cars and patrons (heading to SCG) dominant
18:56	70.4	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
18:58	66.3	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:00	71.1	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:02	83.6	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:04	68.7	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:06	81.5	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:08	71.6	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:10	77.5	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:12	77.6	Venue amplification barely audible. Cars and patrons (heading to SCG) dominant
19:14	67.9	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:16	69.7	Venue amplification just audible. Cars and patrons (heading to SCG) dominant
19:18	76.2	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:20	88.2	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:22	69.5	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:24	71.3	Venue amplification barely audible. Cars and patrons (heading to SCG) dominant
19:26	76.0	Male PA audible. Cars and patrons (heading to SCG) dominant
19:28	70.9	Venue amplification inaudible. Cars and patrons (heading to SCG) dominant
19:30	72.9	Venue amplification inaudible. Cars dominant
19:32	68.6	Venue amplification inaudible. Cars dominant

Time	L_{Amax} dB(A)	**Description of Noise and/or Changes to Weather**
19:34	83.1	Venue amplification inaudible. Cars dominant
19:36	70.8	Venue amplification inaudible. Patrons (heading to SCG) dominant
19:38	83.3	Venue amplification inaudible. Cars dominant
19:40	71.7	Venue music just audible. Cars and patrons (heading to SCG) dominant
19:42	82.5	Venue amplification inaudible. Cars dominant
19:44	78.2	Venue amplification inaudible. Cars, crowd(2s), motorbike 78.2 dBA dominant
19:46	67.5	Male PA audible. Cars and pedestrian talking on the phone dominant
19:48	66.9	Venue amplification inaudible. Cars and insects dominant
19:50	68.9	Venue amplification inaudible. Cars and insects dominant
19:52	75.3	Resident talking
19:54	68.6	Venue amplification inaudible. Cars and insects dominant
19:56	84.6	Venue amplification just audible. Cars, motorbike 84.6, and resident dominant
19:58	74.3	Venue amplification inaudible. Cars and insects dominant
20:00	65.5	Male PA just audible. Cars and insects dominant
20:02	68.9	Venue amplification inaudible. Cars and insects dominant
20:04	68.8	Venue amplification inaudible. Cars, pedestrians and insects dominant
20:06	68.6	Venue amplification < 50 dBA max. Cars, pedestrians and insects dominant
20:08	77.1	Venue amplification inaudible. Cars and insects dominant
20:10	69.0	Male PA and crowd clapping audible < 50 dBA max. Cars 69.9 dBA, insects and birds 68 dBA dominant
20:12	70.4	Venue amplification inaudible. Cars 69.9 dBA, insects and birds 68 dBA dominant
20:14	74.9	Venue amplification inaudible. Cars and insects dominant
20:16	74.8	Male PA, music and crowd audible. Cars, birds, and insects dominant
20:18	63.4	Female PA audible. Cars and insects dominant
20:20	66.7	Venue amplification inaudible. Cars and insects dominant
20:22	68.5	Music and clapping audible < 54 dBA. Cars and insects dominant
20:24	74.6	Venue amplification inaudible. Cars and insects dominant

Time	L_{Amax} dB(A)	**Description of Noise and/or Changes to Weather**
20:26	66.9	Male PA and crowd audible < 55 dBA. Cars, insects, and chatter near the bar audible.
20:28	63.2	Venue amplification inaudible. Cars and insects dominant
20:30	63.5	Venue music < 55 dBA max. Cars and insects dominant
20:32	77.8	Venue amplification inaudible. Cars and insects dominant
20:34	66.7	Resident talking to operator
20:36	64.0	Venue amplification barely audible. Cars and insects dominant
20:38	65.6	Male Pa < 55 dBA max. Cars and insects dominant
20:40	82.2	Male Pa < 55 dBA max. Resident talking to operator
20:42	65.2	Venue amplification inaudible. Cars and insects dominant
20:44	73.9	Venue amplification inaudible. Cars and insects dominant
20:46	66.2	Venue amplification inaudible. Cars and insects dominant
20:48	66.0	Music audible < 56 dBA max. Cars and insects dominant
20:50	68.7	Music audible < 56 dBA max. Cars and insects dominant
20:52	80.8	Venue amplification inaudible. Cars and insects dominant
20:54	71.7	Venue amplification inaudible. Cars and insects dominant
20:56	67.5	Venue music < 56 dBA max. Cars and insects dominant
20:58	67.8	Venue amplification inaudible. Cars and insects dominant
21:00	66.8	Venue amplification inaudible. Cars and insects dominant
21:02	66.0	PA 51.9 dBA max. Cars and insects dominant
21:04	67.0	Venue amplification inaudible. Cars and insects dominant
21:06	73.5	Venue amplification inaudible. Cars and insects dominant
21:08	70.2	Venue amplification inaudible. Cars and insects dominant
21:10	68.6	Venue amplification inaudible. Cars and insects dominant
21:12	63.5	Venue music < 55 dBA max. Cars and insects dominant
21:14	72.2	Venue music < 55 dBA max. Cars and insects dominant
21:16	-	**Measurement stopped due to rain.**
21:18	-	

Time	L_{Amax} dB(A)	**Description of Noise and/or Changes to Weather**
21:20	-	
21:22	-	
21:24	-	
21:26	-	
21:28	-	
21:30	88.6	Venue music < 55 dBA. Cars, insects and patrons dominant
21:32	66.8	Venue music < 55 dBA. Cars, insects and patrons dominant
21:34	64.6	Venue music < 55 dBA. Cars, insects and patrons dominant
21:36	65.4	Venue music < 55 dBA. Cars, insects and patrons dominant
21:38	67.1	Venue music < 55 dBA. Cars, insects and patrons dominant
21:40	85.5	Patron singing into the sound meter
21:42	71.0	Venue music < 55 dBA. Cars and patrons dominant
21:44	73.8	Venue noise amplification inaudible. Cars and patrons dominant
21:46	70.9	Venue noise amplification inaudible. Cars and patrons dominant
21:48	86.7	Ambulance 86.7 dBA max
21:50	67.2	Venue noise amplification inaudible. Cars dominant
21:52	67.5	Venue noise amplification inaudible. Cars dominant
21:54	63.5	Venue noise amplification inaudible. Cars dominant
21:56	65.0	Venue noise amplification inaudible. Cars dominant
21:58	73.6	Venue noise amplification inaudible. Cars dominant
22:00	68.1	Venue noise amplification inaudible. Cars dominant
22:02	73.9	Motorbike 73.9 dBA max
22:04	66.4	Venue noise amplification inaudible. Cars dominant
22:06	72.0	Pedestrians 71.1 dBA max
22:08	66.6	Venue noise amplification inaudible. Cars dominant
22:10	69.1	Male PA and music audible. Cars 68 dBA, pedestrians dominant
22:12	69.1	Venue noise amplification inaudible. Cars dominant

Time	L_{Amax} dB(A)	**Description of Noise and/or Changes to Weather**
22:14	71.6	Male PA and music < 55 dBA max. Patrons (from SCG) playing on the road 71.6 dBA dominant
22:16	70.5	Venue noise amplification inaudible. Cars dominant
22:18	62.6	Venue noise amplification inaudible. Cars dominant
22:20	79.6	Venue noise amplification inaudible. Cars dominant
22:22	84.8	Venue noise amplification inaudible. Cars dominant
22:24	74.5	Venue noise amplification inaudible. Cars dominant
22:26	77.7	Venue noise amplification inaudible. Cars dominant
22:28	84.7	Venue noise amplification inaudible. Cars dominant

EVENT NOISE MANAGEMENT

Project Number:	5662	**Date:**	02/02/19
Project Description:	Noise Monitoring – Big Bash League		
Monitoring Location:	Position 3		
Operator:	SW		
Weather Description:			
Instrument:	BnK	**Calibrator Model:**	BnK Type 4231
Instrument Serial:	3006647	**Calibrator Serial:**	3012190
Instrument NATA Calibration Date:	17/07/19	**Calibrator NATA Calibration Date:**	30/04/19
Pre-calibration:	93.9	**Post calibration:**	94.0

Time	**L_{Amax} dB(A)**	**Description of Noise and/or Changes to Weather**
18:00	73.0	PA inaudible. cars causing maximum
18:02	64.5	PA inaudible. cars causing maximum
18:04	65.7	PA inaudible. cars causing maximum
18:06	69.5	PA inaudible. cars causing maximum
18:08	81.3	PA inaudible. cars causing maximum
18:10	73.1	PA inaudible. cars causing maximum
18:12	76.4	PA inaudible. Patrons walking to venue, local traffic
18:14	66.0	PA inaudible. Local traffic causing maximum
18:16	75.7	PA inaudible. Local traffic causing maximum
18:18	62.3	PA inaudible. Local traffic causing maximum
18:20	72.0	PA inaudible. Local traffic causing maximum
18:22	70.5	PA inaudible. Local traffic causing maximum
18:24	71.0	PA inaudible. Local traffic causing maximum
18:26	66.9	PA inaudible. Local traffic causing maximum
18:28	65.5	PA inaudible. Local traffic causing maximum
18:30	67.6	PA inaudible. Local traffic causing maximum
18:32	64.4	PA inaudible. Local traffic causing maximum
18:34	65.5	PA inaudible. Local traffic causing maximum

Time	L_{Amax} dB(A)	Description of Noise and/or Changes to Weather
18:36	65.7	PA inaudible. Local traffic causing maximum
18:38	72.7	PA inaudible. Local traffic causing maximum
18:40	67.9	PA inaudible. Local traffic causing maximum
18:42	64.3	PA inaudible. Local traffic causing maximum
18:44	70.5	PA inaudible. Local traffic causing maximum
18:46	68.8	PA inaudible. Local traffic causing maximum
18:48	62.3	PA inaudible. Local traffic causing maximum
18:50	77.5	PA inaudible. Plane overhead causing maximum, local traffic
18:52	65.9	Faint PA sound audible at times. Local traffic causing maximum
18:54	63.2	PA inaudible. Local traffic causing maximum
18:56	61.6	Music barely audible, 50 dB(A). Local traffic causing maximum
18:58	63.6	Music barely audible at times. Local traffic causing maximum
19:00	68.5	PA inaudible. Local traffic causing maximum
19:02	67.2	PA inaudible. Local traffic causing maximum
19:04	65.2	PA inaudible. Local traffic causing maximum
19:06	66.5	PA inaudible. Local traffic causing maximum
19:08	69.0	PA inaudible. Local traffic causing maximum
19:10	67.5	PA inaudible. Local traffic causing maximum
19:12	63.3	PA just audible for a few seconds. Local traffic causing maximum
19:14	70.7	PA inaudible. Local traffic causing maximum
19:16	67.9	PA inaudible. Local traffic causing maximum
19:18	69.1	PA inaudible. Local traffic causing maximum
19:20	65.8	PA inaudible. Local traffic causing maximum
19:22	71.1	PA inaudible. Local traffic causing maximum
19:24	74.6	PA inaudible. Local traffic causing maximum
19:26	73.6	PA inaudible. Local traffic causing maximum
19:28	67.4	PA inaudible. Local traffic causing maximum
19:30	70.7	PA inaudible. People talking causing max, local traffic

Time	L_{Amax} dB(A)	**Description of Noise and/or Changes to Weather**
19:32	64.5	PA inaudible. Local traffic causing maximum
19:34	60.3	PA inaudible. Local traffic causing maximum
19:36	73.4	PA inaudible. Local traffic, people talking
19:38	69.2	PA inaudible. Local traffic causing maximum
19:40	62.6	PA inaudible. Local traffic causing maximum
19:42	74.1	PA inaudible. People talking causing max, local traffic
19:44	73.1	PA inaudible. Plane overhead causing maximum, local traffic
19:46	66.9	PA inaudible. Local traffic causing maximum
19:48	71.6	PA inaudible. Local traffic causing maximum
19:50	99.4	PA inaudible. Car horn causing max, local traffic
19:52	90.5	PA inaudible. Car horn causing max, local traffic
19:54	73.0	PA inaudible. Local traffic causing maximum
19:56	78.9	PA inaudible. Local traffic causing maximum
19:58	76.8	PA inaudible. People talking causing max, local traffic
20:00	71.6	PA inaudible. People talking causing max, local traffic
20:02	64.8	PA inaudible. Local traffic causing maximum
20:04	67.0	PA inaudible. Local traffic causing maximum
20:06	63.0	PA inaudible. Local traffic causing maximum
20:08	69.6	PA inaudible. Local traffic causing maximum
20:10	69.0	PA inaudible. Insects causing max, local traffic
20:12	72.8	PA inaudible. Insects causing max, local traffic
20:14	74.4	PA inaudible. Insects causing max, local traffic
20:16	72.6	PA inaudible. Local traffic causing maximum
20:18	64.5	PA inaudible. Local traffic causing maximum
20:20	64.6	PA inaudible. Local traffic causing maximum
20:22	67.2	PA inaudible. Local traffic causing maximum
20:24	67.9	PA inaudible. Local traffic causing maximum
20:26	70.2	PA inaudible. Insects causing max, local traffic

Time	L_{Amax} dB(A)	**Description of Noise and/or Changes to Weather**
20:28	70.0	Music barely audible for a few seconds. Insects causing max, local traffic
20:30	68.8	PA inaudible. Local traffic causing maximum
20:32	66.9	Music/PA inaudible. Insects causing max, local traffic
20:34	58.1	Music/PA inaudible. Local traffic causing maximum
20:36	61.8	Music/PA inaudible. Local traffic causing maximum
20:38	63.8	Half time – PA barely audible. Local traffic causing maximum
20:40	68.8	Music/PA inaudible. Local traffic causing maximum
20:42	65.4	Music/PA inaudible. Local traffic causing maximum
20:44	70.7	Music/PA inaudible. Plane overhead causing maximum, local traffic
20:46	68.8	Music barely audible on one occasion. Local traffic causing maximum
20:48	69.2	Music/PA inaudible. Local traffic causing maximum
20:50	65.5	Music/PA inaudible. Local traffic causing maximum
20:52	65.6	Music/PA inaudible. Local traffic causing maximum
20:54	65.9	Music/PA inaudible. Local traffic causing maximum
20:56	74.3	Music/PA inaudible. People talking causing max, local traffic
20:58	57.1	Music/PA inaudible. People talking causing max, local traffic
21:00	64.0	Music/PA inaudible. Local traffic causing maximum
21:02	73.3	Music/PA inaudible. People talking causing max, local traffic
21:04	63.5	Music/PA inaudible. Local traffic causing maximum
21:06	72.8	Music/PA inaudible. Local traffic causing maximum
21:08	61.9	Music/PA inaudible. Local traffic causing maximum
21:10	65.8	Music/PA inaudible. Local traffic causing maximum
21:12	62.7	Music/PA inaudible. Local traffic causing maximum
21:14	69.9	Music/PA inaudible. Local traffic causing maximum
21:16	64.9	Music/PA inaudible. Local traffic causing maximum
21:18	65.0	Music/PA inaudible. Local traffic causing maximum
21:20	60.3	Music/PA inaudible. Local traffic causing maximum
21:22	63.5	Music/PA inaudible. Local traffic causing maximum

Time	L_{Amax} dB(A)	**Description of Noise and/or Changes to Weather**
21:24	63.8	Music barely audible at end of measure. Local traffic causing maximum
21:26	59.6	Music barely audible < 50 dB(A) during rain break. Local traffic causing maximum
21:28	56.4	Music barely audible below 50 dB(A) during rain break. Local traffic causing maximum
21:30	61.8	Music barely audible below 50 dB(A) during rain break. Local traffic causing maximum
21:32	65.8	Music barely audible below 50 dB(A) during rain break. Local traffic causing maximum
21:34	65.2	Music barely audible below 50 dB(A) during rain break. Local traffic causing maximum
21:36	62.4	Music barely audible below 50 dB(A) during rain break. Local traffic casuing maximum
21:38	61.9	Music barely audible. Local traffic causing maximum
21:40	62.5	Music barely audible. Local traffic causing maximum
21:42	64.4	Music/PA inaudible. Local traffic causing maximum
21:44	64.4	Music/PA inaudible. Local traffic causing maximum
21:46	60.4	Music/PA inaudible. Local traffic causing maximum
21:48	70.2	Music/PA inaudible. Car horn causing max, local traffic
21:50	69.3	Music/PA inaudible. Local traffic causing maximum
21:52	60.5	Music/PA inaudible. Local traffic causing maximum
21:54	60.7	Music/PA inaudible. People talking causing max, local traffic
21:56	76.4	Music/PA inaudible. Local traffic causing maximum
21:58	70.1	Music/PA inaudible. Local traffic causing maximum
22:00	71.9	Music/PA inaudible. People talking causing max, local traffic
22:02	64.4	Music/PA inaudible. Local traffic causing maximum
22:04	63.3	Music/PA inaudible. Local traffic causing maximum
22:06	56.3	Music/PA inaudible. Local traffic causing maximum

Time	L_{Amax} dB(A)	**Description of Noise and/or Changes to Weather**
22:08	56.9	Music/PA inaudible. Local traffic causing maximum
22:10	64.4	PA barely audible towards end of measure. Local traffic causing maximum
22:12	63.4	Music/PA inaudible. Local traffic causing maximum
22:14	65.9	Music barely audible. Local traffic causing maximum
22:16	66.1	Post-game music barely audible. Local traffic causing maximum
22:18	61.7	Post-game music barely audible. Local traffic causing maximum
22:20	63.4	Post-game music barely audible. Local traffic causing maximum
22:22	65.4	Music/PA inaudible. Local traffic causing maximum
22:24	65.0	Music/PA inaudible. Local traffic causing maximum
22:26	76.3	Music/PA inaudible. People talking causing max, local traffic
22:28	68.5	Music/PA inaudible. Local traffic causing maximum