

Air, Noise & Water Policy



Purpose

To outline how RAS Management will manage air quality, noise, waste and the water cycle.

Policy

The Homebush Bay Masterplan Development Consent required a management plan for air quality, noise, waste and the water cycle for the construction and operation of the Showground.

Aim

The aim of the plans is to establish management procedures that ensure air quality, noise, waste and the water cycle is maintained within EPA and SafeWork criteria during RAS activities.

Air Quality

The purpose of the air quality management plan is to establish management procedures for air quality control during RAS activities. Some of the activities of the RAS may affect the local air quality and may also contribute to the bigger problems of urban air pollution. Air quality is directly linked to energy usage.

Air pollution may be caused by dust, gases and smoke, exhaust fumes, air conditioning and cleaning operations. The air quality is managed as follows:

Within Buildings

- The ventilation of all buildings is designed to Australian Standards. In several buildings ventilation is via naturally induced air movement, e.g. Animal pavilions.
- Air conditioning is used on some areas e.g. Administration (central Chillers with air-cooled heat exchangers) Dome to Hall 6, function rooms, food preparation areas (packaged stand-alone units) and the Main Arena.
- All mechanical ventilation and air conditioning is maintained to NSW Legislative requirements and the Australian Standards.
- The use of CFC refrigeration and HCFC's has been eliminated wherever possible. Persons installing or maintaining, decommissioning or recovering refrigeration or air conditioning equipment must be authorised by the Department of Fair Trading.
- Energy management of electricity is achieved via building controls such as Building Management System (BMS), power factor correction, thermostats, lighting including C-Bus control and LED fittings, air conditioning and staff education.
- LPG gas cylinders are regularly checked to ensure that there are no leaks and replaced where required.

Grounds

- The site consists of landscaped areas including turf, sealed roads and paths, livestock exercise areas and the Arena perimeter track. Windblown dust emissions for exposed earth is controlled during use by maintaining the surface in a damp condition.
- Roads will be swept by mechanical means. The site has a designed drainage system including both storm water and sewer and a series of related CDS Gross Pollutant Traps (GPT's) to manage storm water waste before it leaves site. Washing down bulk litter, refuse, sediment, and animal manure is unacceptable.
- Raw materials stockpiles will be covered to prevent erosion by wind.
- Motor vehicles and temporary generator sets will be correctly maintained to

minimise exhaust fumes. Odours from BOH waste streams will be controlled/prevented.

- No burning of materials is permitted on site.

Only registered environmentally safe pesticides/herbicides will be used. Do not spray if there is a risk of drift. Always check if unprotected people nearby are at risk.

Noise

The purpose of the noise management plan is to:

- Minimise the impact of noise on residents, commercial businesses and wildlife in adjacent areas
- Establish management procedures for noise control during RAS activities

The EPA is the regulatory authority for outdoor entertainment activities at Sydney Olympic Park.

The following residential areas are located near the Showground:

- Newington (700m west/northwest)
- Wentworth Point (2,000m northeast)
- Homebush/Lidcombe (1,500m south/ southeast)
- Concord West (1800m east)

The following commercial areas are located near the Showground:

- Australia Park
- Novatel/Pullman Hotels
- Sites adjacent the Carnival site such as Samsung & Lion
- Neighbouring venues
- Olympic Park Railway Station
- Sites along Murray Rose Avenue such as NRMA & Thales

Noise is generated during the Sydney Royal Easter Show (SRES), in the Main Arena including sports and music events & concerts and in other events held through the exhibition halls and across the site.

Maximum noise levels have been set in accordance with the Showground and Carnival Development Consent Conditions and the "Venue Operations Guide"(s) issued by the OCA, now Sydney Olympic Park Authority (SOPA) January 1998 (based on background noise level tests at the nearest resident's boundary) for the overall site. The EPA no longer license major events as "scheduled activities". The noise management will be based on previous EPA criteria considered "best practice" as follows:

1. Outdoor Mass Audience Events: 65 dB(A) maximum at residential boundaries until 11pm, (subject to Liquor Licensing Board Average Maximum criteria of background noise plus 5 dB 0700 to midnight and background noise only midnight to 0700).
2. Continuous noise, Commercial boundary = 80dBA.
3. Fireworks (100dBL peak until 12am).
4. Easter Show: L10 80 dB(A) at commercial boundaries and L10 45 dB(A) at residential boundaries (until 11pm).

Noise Guide

Option 1: dB(A) – Dance Party / Liquor Licence Criteria

This option generally applies to dance parties operating under Liquor Licence conditions.

Before midnight (7:00am – 12:00am):

- Noise is permitted up to 5 dB(A) above background levels
- Measured at residential boundaries

After midnight (12:00am – 7:00am):

- Noise must not exceed background levels
- Noise must be inaudible inside habitable rooms of nearby residences
- This requires a significant reduction in music levels

This option allows events to trade later; however, compliance becomes very restrictive after midnight and is often challenging for promoters and patrons.

Option 2: dB(A) & dB(C) – Concert / Festival Criteria

This option applies to concerts and festivals with a capacity of 5,000 pax or more, where the event finishes by 11:00pm.

To access the maximum sound levels under this option, the following applies:

- Maximum 65 dB(A) at residential receivers
- Maximum 85 dB(C) to manage low-frequency bass
- These are absolute maximum levels (not averages)
- Events are generally permitted to operate between 10:00am and 11:00pm only

This option is stricter overall but provides clearer compliance limits and avoids the post-midnight inaudibility requirements associated with liquor licence criteria.

Summary:

- The event type, music style, patron capacity and finish time determine which noise criteria applies
- Events seeking higher sound levels must meet the 5,000pax capacity threshold and 11:00pm finish time
- Electronic and bass-heavy music requires careful consideration, particularly indoors e.g. Munro Pavilion

Noise Monitoring

Noise monitoring is required at the Sydney Showground for dance parties, concerts/festivals and the Easter Show. The different activities are assessed under different criteria.

Monitoring of dance parties at the RAS are normally assessed under the Liquor Licence Conditions.

- The LA10 Noise Condition are in two parts according to different times of day, being the pre-midnight criteria (7.00 am to midnight) and the post-midnight criteria (after midnight to 7.00 am).
- The pre-midnight criterion allows noise emissions from a licensed premise to exceed the background noise level by 5 dB in any octave band with centre frequencies between 31.5 Hz and 8 kHz at any residential boundary.
- The post-midnight noise criteria are more stringent and require that the noise emission

from any licenced premises is not to exceed the background noise level within the same octave bands used in the pre-midnight criteria at any residential boundary. The post-midnight criteria also stipulate that noise emissions from licenced premises are to be inaudible in any habitable room of any residential premises.

- The criteria are not an Leq level, or an absolute maximum level. However, because acoustical environments at residential receivers can be subject to noise from various sources (particularly traffic) the use of statistical L10 levels by person not adequately trained in acoustics (e.g. council officers/rangers) does not identify the contribution from a licensed venue. Hence, the LA10 Condition is expressed as the LA10* as follows:

The LA10 noise level emitted from the licensed premises shall not exceed the background noise level in any Octave Band Centre Frequency (31.5 Hz – 8k Hz inclusive) by more than 5 dB between 07:00 am and 12:00 midnight at the boundary of any affected residence.*

For the purpose of this condition the LA10 can be taken as the maximum deflection of the noise emission from the licensed premises*

Monitoring of concerts/festivals at the RAS are normally assessed under the former EPA criteria applied to the Showgrounds.

Originally an outdoor music concert having more than 10,000 people in attendance was classified as a Scheduled Premises under the Noise Control Act and required approval from the NSW Environment Protection Authority (EPA). The EPA applied a maximum level of 65 dB(A) at residential receivers – with the requirement for a warning when the maximum level went above 60 dB(A).

The Noise Control Act was replaced by the Protection of the Environment Act (in July 1999). The Protection of the Environment Act does not include outdoor music concerts as Scheduled Premises.

As a consequence, the EPA have incorporated the previous EPA music concert criteria in Section 96 Prevention Notices (e.g. Prevention Notice 1002139 for Centennial Park & Moore Park Trust specifying 'Category 3' event - being any musical concert event using sound amplification equipment with a crowd capacity greater than 5000 people) as the classification that requires monitoring of the concert maximum levels and provision of a formal report. The Prevention Notice specified absolute maximum levels of 65 dB(A) and 85 dB(C). The Prevention Notice does not specify Leq levels and noted the levels are not LA, 10 or LC, 10.

The practicality of the maximum level becomes self-evident in monitoring concert/festival noise at Sydney Showground, with the RAS adopting the EPA's suggestion of using the previous RAS procedure (65A and 85C) at Moore Park for the Sydney Showground.

Monitoring at Sydney Olympic Park

Monitoring of dance parties and concerts over time identifies receiver locations that are noise hot-spots or locations of repeated complaints (typically based upon audible noise). Appendix A identifies the standard reference locations from years of monitoring and complaints.

Experience also identifies topographical features (ridges that cause reflections/bending of sound depending upon wind direction) and weather patterns that may give rise to an enhancement of noise (downwind versus upwind) and on occasions temperature inversions.

Originally when the RAS moved to Homebush the suburb of Newington was restricted to the

northern end but over time that suburb expanded to the south towards the M4.

With the expansion of the suburb of Newington, the southern end of Nurmi Avenue, Newington became the critical measurement location for general/neutral weather conditions, such that generally compliance at Nurmi Avenue would achieve compliance at all other locations.

For dance parties or concerts with less than 5000 people the monitoring is conducted using one person continuously roaming around the area to the reference locations in Appendix A. Depending on the weather conditions there may be a focus in certain regions and individual complaints.

For the concert criteria the monitoring involves continuous monitoring at Nurmi Avenue (location 9) with a second person undertaking the roaming monitoring. Two people are necessary to provide continuous monitoring in Newington, and this protects the majority of complainants. There are regulars in Newington who come to the monitoring location to check the conclusion time of the event and check the monitoring is occurring.

The concert type monitoring is more expensive than the dance party monitoring by reason of the additional monitoring personnel.

The concert/festival classification only permits noise between 10am and 11pm. Going after 10pm on a Sunday night always brings complaints.

The dance party monitoring can automatically go to midnight for background + 5 dB(A) but after midnight the background + 0 dB(A) and the inaudibility criterion require dramatic reduction in music levels that are not generally accepted by patrons.

The provision of electronic music over the last few years presents challenges in complying with the dB(C) or 31 – 125 Hz noise limits.

It is easier to comply with the dB(C) limit than the octave band limit that sees more use of the concert criteria but results in an earlier finishing times.

Use of the indoor venues with current electronic recorded music (not bands) give the potential for lower frequencies and excitation of the building structure. The use of delay stacks down the side of the pavilion or distributed speaker stacks around a dance floor rather than large sub-woofer stacks at the stage significantly reduced coupling of the low frequency energy to the building structure (proven more than 30 years ago for Mardi Gra dance parties in the RHI at Moore Park).

FIREWORKS

The intermittent nature of the Fireworks noise limits the impact on the residents.

The Sydney Showground Event Licensee is subject to the following conditions of License.

1. The Licensee must ensure that at all times between 7.00am and midnight, the noise level from the Premises does not exceed 5dB(A) above the background noise level (in the octave band centre frequencies of 31 Hz – 8 kHz inclusive) at the boundary of any private residence outside the Showground.
2. The Licensee must ensure that at all times between midnight and 7.00am the noise level from the Premises does not
3. exceed the background noise level (in the octave band centre frequencies of 31 Hz to

8 kHz inclusive) at the boundary of any private residence outside the Showground and the noise level must not be audible in any habitable room of any private residence during this period.

4. In the event of a breach of paragraphs (a) and (b), the Licensor may immediately and without and further notice take action as it considers necessary, including but not limited to:
 - a. notification to the Licensee to immediately reduce the noise to acceptable levels if there is a requirement for noise reduction; (Form EMP-011.1)
 - b. if there is no such reduction within five (5) minutes of the initial advice, the Licensor will immediately impose a fine of five thousand dollars (\$5,000.00) to be deducted from the Holding Bond.
 - c. where the aforementioned breach continues, fines of five thousand dollars (\$5,000.00) will be deducted from the Holding Bond for every additional five (5) minute period.
 - d. should there be no acceptable noise reduction after the elapse of twenty (20) minutes from the issue of the initial advice, the Licensor reserves the right to withdraw Operational Services and terminate this License.
5. The Licensee indemnifies the Licensor against any Claim (including legal and consultants' costs) in respect of which the Licensor may become liable as a result of a breach of paragraphs (a) or (b).
6. An acoustical consultant will monitor noise emanating from the Premises during the Event in the residential areas surrounding the Showground. The Licensee must on demand reimburse the Licensor in respect of the fees charged by the consultant to the Licensor for such monitoring.

Main Arena

Concerts and other music events in the Main Arena are subject to the provisions of this plan. The main stage position in the Main Arena will be positioned at ground level (arena playing surface) facing the centre of the grandstand to the South. PA speakers will be directed downwards.

Noise management guidelines:

- Hours of event operation
- Rehearsal periods
- Allocation of the RAS person in ultimate control of the event (including the PA system). Instruct the sound engineers to keep base noise down – Front of House Department.
- Noise monitoring during the event and post event reporting by an independent acoustic consultant.
- Notice to nearby residents – see “Schedule of Actions”.
- Complaint handling – see “Schedule of Actions”.
- Position of stages and direction of speaker equipment- stages/PAs to be as far away from nearby residents as possible. The topography of the site and buildings to be used as shielding.
- Noise limits for sound checks or rehearsals shall not exceed the levels set in this plan as brief as possible and be tested at the reference points.

The Head of Events & Venue Operations or delegated Sydney Showground Event Representative will establish independent noise level monitoring for each such activity. The noise monitor or Head of Events & Venue Operations will have direct contact with the sound operator during the event to ensure noise levels do not exceed these guidelines and the appropriate legislation including the POE Act. The RAS Noise Liaison Officer will contact the

Police to take action if requests to limit noise levels are ignored. “User Pays” Police may be on duty during the event.

The Sydney Showground Event Noise Management Plan lists a Schedule of Actions for event noise monitoring (*See Schedule of Actions*). A Sydney Showground Event Representative advertises public notices in both “Parra News” and “The Daily Telegraph”(digital) as required.

The Head of Events & Venue Operations books The Acoustics Group and the cost recovered from the event. Details of the event are discussed with SOPA at the fortnightly SOPA/Sydney Showground events meeting.

Carnival (RES)

The 1998 OCA Noise Management Plan requires a limitation of carnival sound systems and compliance monitoring (Development Consent Condition 29) with L10 80dB(A) limit at adjacent commercial boundaries. To this end, a nominal level of 85dB(A) at 7 meters from any ride is used.

This level also addresses OHS noise exposure limits for staff. During the RES, monitoring is typically carried out on the first day of the show (7 meters from each ride), followed by a second survey and a third.

Rides exceeding 85dB(A) noise are required to reduce their noise levels and/or redirect speakers. The commercial boundary logger position is usually along the roadway (fenceline) of the Bronson & Jacobs premises. The logger is installed in a wire cage provided by the RAS.

Water Cycle

The purpose of the water cycle management plan is to establish management procedures for the water cycle, drainage, soil erosion and sediment control during RAS activities including maintenance and events. The objectives are:

- Not to allow anything other than clean rainwater to enter the stormwater drains;
- To minimise the use of mains water (as a natural resource);
- To maximise recycling of water; and
- To positively contribute to the water quality of Sydney Olympic Park.

The OCA has prepared the “*Water Cycle Infrastructure – Drainage and Stormwater Strategy*” to protect the natural environment of Sydney Olympic Park. The Strategy provides the framework for the management of drainage and stormwater.

Runoff from the site may include contaminants such as nutrients, coliforms, and other organic matter. Soil contains plant nutrients, minerals, organic matter and seeds, pesticides, and other pollutants. Erosion can take away topsoil that contains these pollutants. Simple preventative measures minimise the likelihood of soil and sediment reaching the waterways and increasing the risk of flooding, buildup of silt, spread of weeds, odours, impact on fish and recreational users of the waterways and drinking water. Topsoil is reused on site.

Preventative measures before work begins including appropriately placed sediment controls such as sediment traps and straw bales down slope of the site. Run off is treated prior to leaving the site via CDS gross pollutant traps designed to collect gross pollutants such as litter and sediment. After leaving the site, stormwater is discharged into control ponds treated and returned as grey water for irrigation as part of the SOPA WRAMS project.

The CDS units are checked and maintained quarterly. Samples of stormwater are collected and analysed by SOPA OCA for a range of water quality parameters. The results and action required of these tests are issued to the RAS for review and action. Overall, the toxicity of the RAS site stormwater is low due to the absence of industrial processes or storage and high levels of ground maintenance.

During the SRES and other animal events, animal manure will be collected from streets, pavilions, and lawn areas by dry sweeping/raking. This is a continuous process to ensure the removal of accumulated faeces, bedding and straw. Washing down bulk manure from streets and pavilions is not acceptable. This material is removed offsite for composting by a licensed contractor. Geofabric socks and or straw bales are used to minimise the risk of animal residue from entering the drainage system.

The roads are subject to accidental pollution caused by the movement of animals along the road system. For the duration of the SRES, a Stormwater Pollution Control Pump Out system was installed by the SOPA to reduce pollution of the stormwater system from the cattle wash overflow by collecting the runoff using the existing NS CDS Unit as the collecting well and by pumping the collected waste to sewer. The pump is turned off for the remainder of the year.

The SRES extends to areas normally controlled by SOPA and is subject to the terms and conditions of SOPA Licences to occupy these areas, i.e.:

- The Carnival and Horse Trail areas will be monitored during the SRES to ensure ground water run off does not drain to the Brickpit or the Frog Pond areas. SOPA will be notified if this problem is detected. Staff and competitors will be educated on the Green and Gold Bell Frog Population and Habitat.
- Cathy Freeman Park will be rolled into the auspicious of the SRES Waste Management Plan conducted by the Cleaning Contractor.
- Australia Avenue may be used to stable horses. This area will be monitored during the SRES to ensure ground water run off does not drain to the Brick pit or the Frog Pond areas. Light and noise will be minimised. S O P A will be notified if this problem is detected. Staff and competitors will be educated on the Green and Gold Bell Frog Population and Habitat.

Ensuring no stagnant water will collect on the site will control mosquito breeding. SOPA conducts mosquito control spraying programmes as required. SOPA provides notice in advance of spraying programmes.

Grease traps for both RAS and licensed contractors will service contract food vendors. Contractors regularly inspect and completely pump out (maintain) grease traps to ensure the pollutants do not enter the sewage system. The collected waste is removed off site to EPA licensed waste facilities. The cleaning/maintenance frequency will depend on the load on individual grease traps. Cooking oil is collected from both the permanent kitchens and vendors in drums and removed by EPA licensed contractors for recycling. Vendors will be encouraged to scrape plates before washing.

Temporary plumbing and drainage installations for events is to be carried out by a person licensed by the Building Services Corporation of NSW, to the National Plumbing and Drainage Standard, the relevant Codes of Practice and the manufacturers guidelines.

Trucks and equipment will be washed down at the designated area.

Stockpiles of sand, gravel and soil are located so that the material does not spill onto the road or is placed in drains or watercourses. This material cannot be washed into drains or watercourses.

Roads will be dry swept by mechanical means. Washing down bulk litter, refuse, sediment and animal manure is unacceptable. Storage areas for chemicals etc. will be bunded, covered and secure.

The Arena turf irrigation and Woodchop wood sprinkler systems are designed to recycle water and be topped up with grey water. The Arena turf irrigation tank water is topped up with grey water as plant needs and weather conditions prevail. Both systems use potable water until the OCA WRAMS grey water supply project is finished 1999. A licensed contractor pumps out sediment that may form in the tanks for these systems. Recycled water for the Arena irrigation is tested for pH, fertiliser content etc.

Water sensors will ensure irrigation is minimised during wet weather. Soil moisture will be retained via mulch. Use of fertilisers and pesticides will be minimised. Exotic plants will not be introduced to the Showground site.

Waste

See EMP-Waste

Records

Incident reports Waste audits

Procedure Owner

Senior Manager Asset & Facility Management

Head of Events & Venue Operations

Event Noise Management Plan – Schedule of Actions

Issue	Action	Person Responsible	Timing	Date Complete
Forthcoming Events	<ul style="list-style-type: none"> Provide Schedule of forthcoming events to SOPA 	Event Planner/Manager	To be raised at the fortnightly events meeting between SOPA and Sydney Showground around one month prior or as early as possible	
Forthcoming Events	<ul style="list-style-type: none"> Inform event promoter of Noise Control guidelines and Action Plan. Publish a Public Notice in the local newspaper advising of the event and the contact phone number of the RAS Noise Liaison Officer for complaints during the event. Provide SOPA with information about this publication. Copy of Public Notice to be kept on Sydney Showground Event File. 	Event Planner/Manager	One week prior to the event	
Noise Monitoring	<ul style="list-style-type: none"> RAS carry out noise monitoring of new events or events with the potential to generate noise in excess of the RAS Environmental Management Plan. Sydney Showground to commission and brief an independent and experienced company to monitor event noise, where necessary. Provide SOPA with details of noise control measures. 	Event Planner/Manager	One week prior to the event	
RAS Noise Liaison Officer	<ul style="list-style-type: none"> Appoint an RAS representative as “Noise Liaison Officer” for the event and provide SOPA with contact details. 	Event Planner/Manager	One week prior to the event	
Notify Police	<ul style="list-style-type: none"> Email Auburn Police advising of the event and venue contact phone number for noise issues. 	Event Planner/Manager	Prior to event	
Noise Controls	<ul style="list-style-type: none"> Noise Monitor reports noise that exceeds guidelines to RAS Noise Liaison Officer. Noise Liaison Officer instructs event to limit noise to ensure compliance. 	RAS Noise Liaison Officer	Prior to (sound checks) and during event	
Noise Complaints	<ul style="list-style-type: none"> RAS Noise Liaison Office/Event Planner/CSO (as may apply) is the single point of contact for noise complaints. Receive, investigate, and implement controls. 	RAS Noise Liaison Officer/Event Planner/Manager	During event or as soon as possible after and report within one week	
Records	<ul style="list-style-type: none"> Copy of Public Notice, complaints, correspondence and action taken kept in the Sydney Showground event file. 	Event Planner/Manager	Following event	

This notice is to inform you that the noise generated by your event has exceeded the noise level as recommended by the Environmental Protection Authority (EPA).

In accordance with clause 7.7 of your Event Licence, you will be fined AUD \$5,000.00 per Notice where the noise level was not reduced within 5 minutes of the Notice. This amount will be deducted from your bond. If your event has more than one area in breach then the fines apply per breach, per location.

The fine notice procedure is outlined below:

Notice ONE will be verbal for the immediate reduction of noise to acceptable levels
If not rectified within 5 minutes = Notice TWO will attract a \$5,000 FINE
If not rectified within 5 minutes = Notice THREE will attract a further \$5,000 FINE in addition to the Notice 2 fine and House Lights ON
If not rectified within 5 minutes = Notice FOUR will attract a further \$5,000 FINE in addition to Notice 2 and 3 fines and All Lights remain ON
If not rectified within 5 minutes = Notice FIVE will attract a further \$5,000 FINE, in addition to Notice 2, 3 and 4 and the Police notified, Your Event SHUT DOWN

Please contact your Floor Manager with any queries or for assistance. Sydney Showground, 1 Showground Road, Sydney Olympic Park NSW 2127 T: 02 9704 1111

Notice Number:	# 1	# 2	# 3	# 4	# 5
Time of Issue:					
AM/PM Date of Issue:					
Applicable fine:					
Issued by: Issued to:					
Location:	NIL	\$5,000	\$5,000	\$5,000	\$5,000
Total Accumulated FINE	(Circle the appropriate amount)	\$5,000	\$10,000	\$15,000	\$20,000

APPENDIX A: Site and Measurement Locations



