



CFe/CFe
16044
13 September 2016

Ms Carolyn McNally
Secretary
Department of Planning and Environment
22-33 Bridge Street
SYDNEY NSW 2000

Attention: Cameron Sargent

Dear Ms McNally,

**SECTION 75W MODIFICATION APPLICATION TO DA 445-10-2003
SYDNEY OPERA HOUSE – USE OF SOUTHERN FORECOURT AND MONUMENTAL STEPS FOR PERFORMING ARTS / COMMUNITY EVENTS AND
CORPORATE FUNCTIONS**

APPLICANT'S RESPONSE TO SUBMISSIONS

This Response to Submissions (RTS) letter has been prepared on behalf of the Sydney Opera House Trust, in relation to the Section 75W Modification Application of DA 445-10-2003, which relates to the use of southern forecourt and monumental steps for performing arts / community events and corporate functions. The applicant has also provided a response to the Department's request for additional information and clarification in **Table 1** below. **Table 2** provides the applicant's response to each of the submissions made to the Section 75W Application. The RTS is accompanied by the following Appendices:

- **Appendix A** – Amended Acoustic Report (Acoustic Studio)
- **Appendix B** – Sydney Opera House Outdoor Events and Activities Heritage Guidelines
- **Appendix C** – Sydney Opera House Outdoor Event Management Proposal

Table 1 – Applicant's response to Department's request for additional information

Issue	Requirement	Response
Noise	- The proposed C-weighted noise limits are receiver based and are not considered to be appropriate for events in an urban context. This is because they are likely to encounter the same issues as the existing limits with background noise interference during monitoring. - The Department therefore suggests that consideration is given to setting suitable front-of house (FOH) noise limits (i.e. at the mixing desk). Any such consideration shall be accompanied by a revised Acoustic Assessment which shall detail (but not be limited to): - the proposed FOH noise limits and corresponding noise levels modelled at the nearest receivers. This should be modelled in dB(A), dB(C) and dB(lin), as well as providing a level for the 63 Hz octave; - a discussion on the acoustic spectrum of a range of music genres likely to be played; - a discussion on the FOH noise levels required to achieve acceptable patron experience for the music genres; and - details of all reasonable and feasible mitigation and management measures such as provision of respite periods (days-off) between performances during high impact events. - This is consistent with the approach adopted by Brisbane City Council and is considered to represent current best practice for event noise management in urban environments. This approach has a number of key benefits such as ease of monitoring in real-time, more accurate identification event noise at the source and ease of confirming compliance post event.	A revised acoustic assessment has been prepared by Acoustic Studio which addresses the Department's comments (Appendix A). This amended report proposes Front of House limits of: 1. Live Music Events- 96dBLAeq(5min) and 102dBLCeq(5min) 2. Australia Day- 92dBLAeq(5min) and 98dBLCeq(5min) 3. The Opera 2016- 82dBLAeq(5min) and 90dBLCeq(5min) For events on the Western Boardwalk, it also proposes the boundary levels at: a) Northern end of the Western Boardwalk: 90dBLAeq(5min) and 100dBLCeq(5min) b) Southern end of the Western Boardwalk: 85dBLAeq(5min) and 95dBLCeq(5min) This proposed modification application has been made in consultation with the Department of Planning and Environment and the Environmental Protection Authority (EPA). The proposed modification application: a) Reduces the number of event days; b) Provides a simpler method for the SOH to convey noise limits to hirers and neighbours; c) Provides a simpler method for compliance assessment; and d) Importantly, does not result in an increased noise level at adjacent residences.
Heritage	The RTS should include a copy of the draft Heritage Guidelines for outdoor events referred to in the documentation supporting the application. In particular, these guidelines should detail the regime of event free periods proposed for all events (low to high impact) to minimise impacts on members of the public visiting the site.	Included within this RTS letter is a copy of the Sydney Opera House Outdoor Events and Activities Heritage Guidelines in draft format (Appendix B). The document is designed to provide hirers and the SOH Event Operations team with a consistent framework that can be applied to all external events without affecting the State, National or World Heritage values of the site. The guide details the regime of event free periods proposed.
Event Management	- More detail should be provided in the RTS outlining how different sized events and associated impacts would be managed from start to finish. The RTS should include a copy of the most recent version of the SOH Outdoor Event Guide. - The RTS should include a commitment to prepare detailed Event Management Plans (EMPs) for all events to be held at the site. The RTS should also include details of any Sub Plans (e.g. Traffic and Pedestrian, Noise, Heritage and Light Spill Management) that are likely to accompany EMPs. - The RTS should list all key information to be provided in EMPs (and associated Sub-Plans) and include details of consultation to be undertaken with key stakeholders (e.g. government and residents). - The RTS should detail the measures that would be put in place to manage patron behaviour during events as they enter and exit the site to minimise potential amenity impacts on nearby residents.	An Outdoor Event Management Guide has been prepared and included in the RTS (Appendix C). The mitigation and management procedures (such as respite periods) are detailed in the Outdoor Event Management Guide which details the Outdoor Event Guide, sub plans, consultation and patron management.

Table 2 – Response to submissions

Submission	Key issues	Response
1. SOH Concerned Citizens Group	MOD lodged without consultation with committee in attempts to increase the length of the events on the forecourt and the hours of operation	The Opera House met with select Bennelong Apartments residents on 10 February, 9 March and 29 April 2016. The proposed modification to facilitate <i>Sydney Opera House: The Opera</i> was raised at the April meeting. The Opera House proposed a meeting in early July to provide a more detailed briefing on the modification, in addition to other matters raised by the residents, but was advised that the residents were collating information and that they were not in a position to meet formally before this work was completed. The Opera House emailed residents in the week the modification was lodged, prior to its lodgement. The Sydney Opera House has taken the concerns of nearby residences on board. As a result, the following actions have been taken: - established a working group with the residents, which meet semi-regularly; - created a new role of Precinct Manager to act as an interface between the residents, the operators and security team in the management of the site; - provided the residents with a dedicated after-hours contact person (the Precinct Manager) and an after-hours contact number (which is manned by the Opera House's security duty manager) so that their concerns can be dealt with as soon as practically possible.
	Opposed to any extension of hours in events within the forecourt	The existing DA permits the following hours of operation: - Performing Arts/ Community Events (8am – 11pm); - Corporate Functions (8am – midnight) (Condition 7) with amplified music permitted between 10am –11pm (Conditions 42 and 43); - After 11pm, noise levels should not exceed the background noise (Condition 44). SOH proposes to combine all forms of function (performing arts/ community/ corporate events) under one set of hours of operation. There is no application to increase the hours of operation for amplified music. This has the benefit of: - Easier to understand conditions and compliance enforcement; - Reduces the time that the set-up is located on the forecourt, therefore limiting heritage impacts and potential visitor experience during the peak daylight tourist times; - Ability to 'bump out' set up whilst patrons are leaving the forecourt (i.e. when the ambient noise from patrons leaving the venue is higher, 'noisier' bump out works can proceed); and - Earlier securing of the venue and clear public space returned.
	Increasing the hours of operation as proposed will cause sleep disturbance as noise will continue well past event conclusion due to patrons exiting	The MOD application does not propose any changes to the hours which amplified music is currently permitted, being 10am – 11pm, and therefore, no change is proposed to the time in which patrons will currently be exiting performances. This is assessed in the revised acoustic report (Appendix A) in Section 7.4.2. This section concludes that whilst there are instances when the external noise level from patrons may exceed the Sleep Disturbance Screening Level to a minor extent, the detailed analysis shows that patron departure noise does not exceed the internal Sleep Awakening Level and is therefore not likely to cause awakening events. This assumes the minimum allowable façade attenuation for a building at this location; it is likely that the internal noise levels will be lower due to better performing façades. This analysis is also based on the following assumptions:

Submission	Key issues	Response
		- The layouts of the northernmost Bennelong Apartments being orientated with living areas located further away on the southern end and based on the conservative assumption that levels at the eastern and western facades of the Bennelong Apartments are 5-10dB less than the most exposed northern façade; - That the façade of the Bennelong Apartments has been constructed to achieve a minimum of 25dB level difference in order to meet the Australian Standard for internal continuous background noise levels. Furthermore, detail has been provided in the SOH Outdoor Event Management Guide to show the extensive patron management employed by SOH for day to day operations and events. The Opera House employs a Precinct Response Team whereby one of its key objectives is to work closely with neighbours and external stakeholders to limit impacts of operations. The Sydney Opera House has long understood the potential for disturbance due to patrons exiting events, and will continue to employ management principles for ensuring that patrons are moved along quickly in one group away from the residential areas, and for controlling their behaviour. The outdoor event management plan includes details on how patron departure is managed to minimise disturbance to nearby residential receivers.
	Opposed to any increase in the number of hours and any increase in number of days per event	<u>Number of Hours:</u> This has been addressed previously in this RTS. To reiterate, the modification application does not seek to increase the hours of operation for amplified music beyond the hours currently permitted in the existing approval. <u>Number of days per event:</u> Whilst the proposal seeks to change the number of days per event, it also proposes to decrease the number of <u>event days per year</u>. Generally the days per event do not correlate to amplified music. For example, an event period of 20 days is likely to have between 6-10 performances, to facilitate bump-in prior to the performance(s) and bump out following the performance(s).
	Recommend hours of operation for concerts be amended to commence earlier and finish earlier	The timing of events is driven by the time at which people would look to attend an event, i.e. in the evening. It would be unreasonable and commercially not viable to alter the current performance times. The modification application does not seek to change the hours of operation to finish earlier.
	Object to bumping in / bumping out works from being carried out during night hours when extra lighting is used	The bumping in and out for a performance does not require additional lighting.
	Lighting and machinery noise during night hours creates sleep disturbance, therefore bump in bump out should be during daylight hours	The NSW Industrial Noise Policy (INP) provides a framework by which works can be carried out in night hours. The INP is considered to be a stringent (but appropriate) policy aiming to preserve acoustic amenity, particularly for residential receivers. Night time noise targets are less than the existing ambient levels in the area. Accordingly, Acoustic Studio in their amended acoustic report have defined the noise criteria associated with bump in and out in Section 6.5, which the SOH proposes to adopt as a target screening level, being $LA_{eq} \leq 55-65dB(A)$ at the Bennelong Apartments.
2. Submission from resident of 5 Macquarie Street	Objection to extending hours of concerts and increasing the hours of bumping in and bumping out	<u>Hours of Concerts:</u> This has been addressed previously in this RTS. To reiterate, the modification application does not seek to increase the hours of operation for amplified music beyond the hours currently permitted in the existing approval. <u>Hours of Bumping in and out:</u> The increase in the activities from 11pm to midnight will: Reduce the time that the set-up is located on the forecourt, therefore limiting impacts on potential visitor experience during the peak daylight tourist times.

Submission	Key issues	Response
		- Ability to 'bump out' set up whilst patrons are leaving the forecourt (i.e. when the ambient noise from patrons leaving the venue is higher, 'noisier' bump out works can proceed) - Earlier securing of the venue and the clearing of public space, returning the site to a safe public space as soon as possible. Furthermore and as outlined previously, night time noise targets are less than the existing ambient levels in the area. Accordingly, Acoustic Studio in their amended acoustic report have defined the noise criteria associated with bump in and out in Section 6.5, which the SOH proposes to adopt, being a target level of $L_{Aeq} \leq 55-65dB(A)$ at the Bennelong Apartments.
	Both concert and post event noise from patrons leaving the concerts impacts on sleep	The modification does not propose changes to the hours which amplified music is permitted, being 10am-11pm, therefore, there is no change proposed to the time when patrons will depart the premises. As outlined previously in this RTS, whilst there are instances when the external noise level from patrons may exceed the Sleep Disturbance Screening Level, the detailed analysis shows that patron departure noise is unlikely to exceed the internal Sleep Awakening Level and is therefore unlikely to cause awakening events. Furthermore, it should be noted that the original City of Sydney Council's Development Consent No. 94/00279 for the Bennelong Apartments is likely to have been grounded in an assessment which raised the issue of noise attenuation for the apartments when it was originally issued. Accordingly, consideration is likely to have been given at the time of the approval to the external background noise level of the precinct, with the <i>pre-existing</i> operations of Circular Quay and the Opera House considered, in the issuing of the original approval for Bennelong Apartments. The amended acoustic report prepared by Acoustic Studio (Section 7.4.2) indicates that if the building was constructed in accordance with the relevant Australian Standard (AS2107:2000), the façade of the building would need to have been approved providing a sound attenuation to facilitate sleep based on the pre-existing background noise levels at the site when the residences were built.
	Request bump in and bump out occur within daylight hours	The NSW Industrial Noise Policy (INP) provides a framework by which works can be carried out in night hours. The INP is considered to be a stringent (but appropriate) policy aiming to preserve acoustic amenity, particularly for residential receivers. Night time noise targets are less than the existing ambient levels in the area. Accordingly, Acoustic Studio in their amended acoustic report have defined the noise criteria associated with bump in and out in Section 6.5, which the SOH proposes to adopt target level, being $L_{Aeq} \leq 55-65dB(A)$ at the Bennelong Apartments.
EPA submission (24.8.16)	Accept the proposed change of measuring 'C' weighting of $Leq(5min)$ as the chosen noise monitoring method	This is noted, however the applicant has followed the request of the Department of Planning and Environment, and proposes an alternative approach, as outlined in the revised Acoustic Studio Acoustic Assessment for Modification Report. This approach proposes Front of House limits of: 1. Live Music Events- $96dB_{LAeq}(5min)$ and $102dB_{LCeq}(5min)$ 2. Australia Day- $92dB_{LAeq}(5min)$ and $98dB_{LCeq}(5min)$ 3. The Opera 2016- $82dB_{LAeq}(5min)$ and $90dB_{LCeq}(5min)$ For events on the Western Broadwalk, it also proposes the boundary levels at: a) Northern end of the Western Broadwalk: $90dB_{LAeq}(5min)$ and $100dB_{LCeq}(5min)$

Submission	Key issues	Response
		b) Southern end of the Western Broadwalk: 85dBLAeq(5min) and 95dBLCeq(5min) The proposal; a) Reduces the number of event days b) Provides a simpler method for the SOH to convey noise limits to hirers and neighbours c) Provides a simpler method for compliance assessment d) Importantly, does not result in an increased noise level at adjacent residences.
	▪ The references to limits in any approval should say Leq(Smin) 85 dBC at the Bennelong Apartments, and Leq(smin) 80 dBC at other residential receivers as opposed to the reference within the application to "dBCeq (5min)"	Noted - this recording method has been adopted in the amended acoustic report (Appendix A).
	▪ Any approval should adopt the proponents suggestion that only pack down will occur between the hours of 11 pm and midnight, and prevent amplification equipment from being used during that time except where it is needed to ensure safety of venue staff, patrons or the public.	Noted and accepted. SOH has not submitted a proposal to increase amplified music past 11pm.
	▪ Noise monitoring reports should be provided for each event held under the approval, and be accompanied by a complaints register. The complaints register is to include a transcript and any other relevant information (origin of complaint, time and date, description of noise) for each complaint made to the venue.	Noted and accepted. Also it is further proposed to do the following: ▪ Provide reports of every event held under the modified noise conditions; ▪ SOH to provide to the Department of Planning a consolidated report in January each year of the previous year's result; ▪ Proposed review with noise levels in 2017 to review FOH noise levels and environmental noise levels as a result of the changes; and ▪ Conduct a 5 year review, at a time to be determined in 2021, which will review the effectiveness of the proposed limits.
RMS submission (18 August 2016)	▪ Roads and Maritime raises no objection to the above subject application.	Noted. No further action required.
	▪ This proposal should be referred to Transport for NSW for comment.	Noted. The proposal has been forwarded to TfNSW who have provided comment.
City of Sydney Council submission	▪ Recommended conditions of consent are contained within Attachment A	Refer to Table 3 of this Response to Submissions Letter.

Submission	Key issues	Response
(29 August 2016)	■ Noise: It is recommended that the Department request further clarification on the Noise Emission Criteria for Sydney Opera House events, particularly in relation to amplified music. An event duration of up to 25 days may be too intrusive for residential receivers with criteria and noise levels of up to 85dB_{Lc}. In this regard, the Acoustic Report should be amended consistent with City of Sydney Standard Noise Conditions. <i>Note: The City Of Sydney Standard noise criteria is measured to 15 minute criteria, the Acoustic Report gives a 5 minute criteria. Health recommend that a 15 minute criteria be given as this is the guidance given in the Noise Guide for Local Government and Industrial Noise.</i>	Noted. The Department of Planning and Environment has requested further clarification in their letter dated 29/8/16 under Attachment 1 - Noise, which has amended the originally proposed criteria. It is noted that an event duration of 25 days is only requested for one event in 2016. This only equates to 5 performances, none of which have amplified music. Refer to Appendix D - The Opera Acoustic Impact Report submitted with the modification application for more details. The subsequent maximum event days proposed are at 20 days, whereby it could be expected that performances with amplified music would equate to between 6 to 10 performances, with days before and after for bumping in and out. It is noted as per the amended acoustic report, the City of Sydney requirements are specifically addressed in Section 6.3.3. Subsequently, Section 6.3.6 goes on to explain the benefits of the 5 minute criteria, being: ■ The five-minute measurement interval is long enough to capture reasonably continuous event noise levels, but not so long that the Leq sound energy-averaging integration method does not obscure the instances of high noise events. For most music noise, the Leq(5min) would be numerically similar to the L10(15minute). ■ The Leq is a noise level measurement that describes sound energy averaging, and can be used in calculations. For example, it may be used to calculate the contribution of different noise sources to produce a cumulative effect. The L10 is a statistical measure, representing the 90th percentile noise. It cannot be used for many further analyses, modelling or calculations. ■ Recent guidelines issued by the NSW EPA suggest that, according to the latest research into annoyance due to environmental noise, the Leq descriptor is a reliable indicator of community annoyance. For example, the 2009 NSW EPA <i>Interim Construction Noise Guideline</i> departed from the previous <i>Environmental Noise Control Manual</i> LA10 and / LAmax criterion to adopt an LAeq(15 minute) noise management level for construction noise emissions.
	■ Plan of Management: An amended Plan of Management must be prepared for the site addressing the proposed modifications and a strong commitment to good management, particularly in relation to management potential impacts on adjoining and surrounding land uses and premises, as well as the public domain.	The proposal includes an Outdoor Event Management Guide which has been amended having regard to the proposed modifications. The Outdoor Event Management Guide provides a commitment to good management, particularly in relation to managing potential impacts on adjoining and surrounding land uses and premises, as well as the public domain.
	■ Traffic: Overall, the ARUP Transport Assessment indicates that the transport impacts arising from the proposal are expected to be minimal. Accordingly, the proposed modification is supportable as it is unlikely to result in any change to the circumstances arising from the current consent. Patrons will continue use modes currently available including train/bus/ferry services as well as taxi and private car using nearby parking stations.	Noted, no further action required.
Submission from	■ Potentially inadequate security provisions for the nature of	The Sydney Opera House takes the security of its patrons, its staff and the general public extremely seriously. No part of the

Submission	Key issues	Response
resident of 71/3 Macquarie Street	events proposed;	proposal provides an operational security risk, as it does not propose anything different to the current operations. The Outdoor Event Management Proposal (Appendix C) provides a description of security measures that are required by hirers for an outdoor event and patron safety measures are further described in the SOH Outdoor Event Management Guide, in section 3. A Precinct Response Team (PRT) was developed by the Sydney Opera House. This team was developed in response to; a) Ensuring crowd management; b) Management of patrons frequenting the lower concourse and Opera Bar; c) Monitor Liquor Act compliance & ensure well-being of patrons; d) Work closely with neighbours & external stakeholders to limit impacts of operations; and e) React quickly and decisively to any potential emergency/ security threat The PRT operate in conjunction with the Opera House security team (security team available 24/7) and provide a significant additional security presence in the case of events.
	▪ Degradation of the Opera House's quality as a national and World Heritage site;	A heritage specialist expert and widely regarded heritage expert on the Sydney Opera House, Design 5, was engaged to complete the Heritage Impact Statement for this proposal. The status of the Sydney Opera House as a performing arts centre is fundamental to its heritage value. Events have been conducted on the forecourt since 1973 and continue to be a part of its core function. This is confirmed in Appendix J and K, being the Heritage Impact Statements included with the proposed MOD application, which both conclude that the proposals do not threaten the World Heritage listing of the site. Both HIS reports conclude that with the adherence to the proposed Outdoor Event Heritage Guidelines "would still allow performance and community events and functions to take place on the Forecourt, using the Monumental Steps as seating, but should guide the design and placement of infrastructure to be less intrusive than it has often been in the past. This would improve their acceptability for the proposed longer timeframe per event allowed in the proposed modification to the DA."
	▪ As a Macquarie Street resident who overlooks the site I believe the local infrastructure currently in place is demonstrably inadequate to cope with the subject events;	The Sydney Opera House is highly experienced in major event planning and delivery, and has been carrying out events of this scale and nature for the past 43 years. The local infrastructure, which has been assessed by industry professionals in terms of acoustics, lighting, heritage, traffic and transport (and issued in each Appendix), all conclude that the current infrastructure can accommodate these events.
	▪ The events proposed at the venue will continue to generate excessive noise in a residential context;	Further to the request from the Department of Planning, the proposed Front of House noise limits are equivalent to (or less than) the Lmax limits which have applied since 2003, and therefore events will not constitute an increase in the allowable event noise level from amplified sound systems. The revised acoustic report clearly outlines that the proposal will not generate excessive noise for the residential context. This issue has been addressed in more detail in response to Submission 1.
	▪ Invasive forecourt event lighting will continue to be used and compromise residential standards;	Bump in and out of performance does require some lighting but focused on the areas where the work is taking place. Event lighting is focused on the areas of the event, not on residences.
	▪ Macquarie Street will continue to become gridlocked during many of the forecourt events proposed; and	The Arup Traffic Assessment provided with the modification application has outlined that "Subject to the continued implementation of appropriate traffic management measures to support the event, the transport impacts arising from the

Submission	Key issues	Response
Transport for NSW submission		proposal can be managed appropriately". Furthermore, Roads and Maritime Services (RMS) have responded with no objections to the proposal.
	Excessive alcohol consumption and the consequent inevitable violence will not abate.	The Sydney Opera House Guide includes information which demonstrates that the Sydney Opera House manages all its venues to ensure that the Responsible Service of Alcohol is implemented at all of its performances. The Precinct Response Team (PRT) is specifically tasked with the; - Management of patrons frequenting the lower concourse and Opera Bar - Monitor Liquor Act compliance & ensure well-being of patrons
	MOD will permit noisy and disruptive bump-in and bump-out activities during the night after each event concludes that will further erode the amenity of adjacent residents	This has been addressed in the response to Submission 1 .
	Site should be inspected in high season to make an assessment of the proposal.	All analyses presented, in particular acoustics and traffic, have been predicated on upper limits and worst case scenarios to ensure the maximum probable impact of performances is considered.
	Sydney Light Rail project was determined by the Department of Planning and Environment (DP&E) on 4 June 2014. TfNSW advises that construction has now commenced and will be carried out in accordance with the existing approvals and any modifications subsequently approved.	Noted.
	- Events management - TfNSW has no issues with the proposed amendments to the Sydney Opera House operation. TfNSW requests the following measures be in place to minimise the impacts on general traffic and bus operation within the CBD during the events at the site: - The applicant promote in their advertising materials that the patrons are encouraged to use public transport when attending any events or functions; and - The applicant schedule the start and finish times of the bump in and bump out events outside the commuter peak periods. - TfNSW requests that the applicant consults with the CBD Coordination Office within TfNSW in relation to the above issues. TfNSW would be pleased to consider any further material forwarded from the applicant.	Noted. The applicant will accept the recommendations of TfNSW.

In addition to the above, the applicant has prepared in **Table 3** below a response to the recommended Conditions of Consent proposed by the City of Sydney Council in their submission.

Table 3 – Applicant's response to City of Sydney Council's proposed Conditions of Consent

Condition	COS Proposed wording	Applicant's response
(1) NOISE - GENERAL	(a) The emission of noise associated with the use of the premises including the cumulative operation of any mechanical plant and equipment, and air conditioning shall comply with the following: (i) The $L_{Aeq, 15 \text{ minute}}$ noise level emitted from the use must not exceed the project specific noise level for that receiver as determined in accordance with the <i>NSW EPA Industrial Noise Policy</i>. Noise must be measured in accordance with the Industrial Noise Policy and relevant requirements of Australian Standard AS 1055-1997 Acoustics - Description and measurement of environmental noise. (ii) Project specific noise levels shall be determined by establishing the existing environmental noise levels, in complete accordance with the assessment $L_{A90, 15 \text{ minute}}$ /rating $L_{A90, 15 \text{ minute}}$ process to be in accordance with the requirements for noise monitoring listed in the <i>NSW EPA Industrial Noise Policy</i> and relevant requirements of Australian Standard AS 1055-1997 Standard AS 1055-1997 Acoustics Description and measurement of environmental noise. (iii) Modifying factors in Table 4.1 of the NSW EPA Industrial Noise Policy are applicable. (b) An $L_{Aeq, 15 \text{ minute}}$ noise level emitted from the use must not exceed the $L_{A90, 15 \text{ minute}}$ noise level by more than 3dB in any Octave Band Centre Frequency (31.5 Hz to 8 kHz inclusive) when assessed inside any habitable room of any affected residence or noise sensitive commercial premises provided that; (i) Where the $L_{A90, 15 \text{ minute}}$ noise level is below the threshold of hearing, T_f at any Octave Band Centre Frequency as defined in Table 1 of International Standard ISO 226 : 2003- Normal Equal-Loudness-Level Contours then the value of T_f corresponding to that Octave Band Centre Frequency shall be used instead. (ii) The $L_{Aeq, 15 \text{ minute}}$ noise level and the $L_{A90, 15 \text{ minute}}$ noise level shall both be measured with all external doors and windows of the affected residence closed; (iii) The relevant background noise level ($L_{A90, 15 \text{ minute}}$) is taken to mean the day, evening or night rating background noise level determined in complete accordance with the methodology outlined in the <i>NSW EPA Industrial Noise Policy</i> and Australian Standard AS 1055.1997 Acoustics – Description and measurement of environmental noise. (iv) Background noise shall be established in the absence of all noise emitted from the use but with the ventilation equipment normally servicing the affected residence operating. Background noise measurements are to be representative of the environmental noise levels at the affected location. (v) Modifying factors in Table 4.1 of the <i>NSW EPA Industrial Noise Policy</i> are applicable. Internal Noise measurements are not to be corrected for duration.	An approach to noise monitoring and conditions through liaison with the Department of Planning and Environment has been proposed through the modification application, which will ensure that the emission of noise associated with the use of the premises including the cumulative operation of any mechanical plant and equipment, and air conditioning shall comply with the appropriate criteria, being the NSW Industrial Noise Policy. This has been outlined in the amended acoustic report included with the RTS (Appendix A). Accordingly, the City of Sydney Council conditions are not proposed to be adopted. The FOH monitoring approach proposed seeks to preserve a balance between achieving acoustic amenity and having quality performances. The application of the NSW Industrial Noise Policy also meets the intent of the City of Sydney conditions in a practical way.

Condition	COS Proposed wording	Applicant's response
(2) NOISE – ENTERTAINMENT VENUES	(a) The LA10. 15 minute noise level emitted from the use must not exceed the background noise level (LA90, 15minute) in any Octave Band Centre Frequency (31.5 Hz to 8 kHz inclusive) by more than 5dB between the hours of 7.00am and 12.00 midnight when assessed at the boundary of any affected residence. (b) The LA10, 15 minute noise level emitted from the use must not exceed the background noise level (LA90, 15 minute) in any Octave Band Centre Frequency (31.5 Hz to 8 kHz inclusive) between the hours of 12.00 midnight and 7.00am when assessed at the boundary of any affected residence. (c) Notwithstanding compliance with (a) and (b) above, noise from the use when assessed as an LA10. 15 minute enters any residential use through an internal to internal transmission path is not to exceed the existing internal LA90, 15 minute (from external sources excluding the use) in any Octave Band Centre Frequency (31.5 Hz to 8 kHz inclusive) when assessed within a habitable room at any affected residential use between the hours of 7am and 12midnight. Where the LA10. 15 minute noise level is below the threshold of hearing, Tf at any Octave Band Centre Frequency as defined in Table 1 of International Standard ISO 226 : 2003- Normal Equal-Loudness Level Contours then the value of Tf corresponding to that Octave Band Centre Frequency shall be used instead. (d) Notwithstanding compliance with (a), (b) and (c) above, the noise from the use must not be audible within any habitable room in any residential use between the hours of 12.00 midnight and 7.00am. (e) The LA10. 15 minute noise level emitted from the use must not exceed the background noise level (LA90, 15 minute) in any Octave Band Centre Frequency (31.5 Hz to 8 kHz inclusive) by more than 3dB when assessed indoors at any affected commercial premises. Note: The LA10. 15 minute noise level emitted from the use is as per the definition in the Australian Standard AS 1055-1997 Acoustics - Description and measurement of environmental noise. The background noise level LA90, 15 minute is to be determined in the absence of noise emitted by the use and be representative of the noise sensitive receiver. It is to be determined from the assessment LAgo I rating LAgo methodology in complete accordance with the process listed in the NSW EPA Industrial Noise Policy and relevant requirements of AS1055.1997.	

Condition	COS Proposed wording	Applicant's response
(3) NOISE - CONCERTS AND SPECIAL EVENTS	(a) The temporary event must not result in the transmission of "offensive noise" as defined in the Protection of the Environment Operations Act 1997 at any affected receiver. Noise emissions associated with event bump in bump out must comply with the City of Sydney Construction Noise Code of Practice. (b) All recommendations contained in the acoustic report titled Acoustic Assessment for Modification of DA-445-10-2010 prepared by Sav Shimada of Acoustic Studio, dated August 2016, must be implemented prior to and during the events. (c) Appropriate attended noise monitoring shall be undertaken by a suitably qualified acoustical consultant* throughout the event. The acoustic consultant shall verify noise emanating from the event, at the nearest residential boundary, does not exceed the noise criteria detailed in the "Noise Control" condition. (d) An acoustic report detailing the results of monitoring undertaken should be submitted to the Council's Health Compliance within 7 days after the event. Note: Suitably qualified Acoustic Consultant means a consultant who possesses the qualifications to render them eligible for membership of the Australian Acoustics Society, Institution of Engineers Australia or the Association of Australian Acoustic Consultants at the grade of member. The Consultant must not have track record of unsuccessfully managing events and festivals. With respect to (i), in selecting a consultant, the proponent may wish to consider previous relevant experience of the consultant.	

Condition	COS Proposed wording	Applicant's response
(4) ENVIRONMENTAL NOISE MANAGEMENT (TEMPORARY EVENT)	(a) Noise emissions associated with events bump in / bump out of temporary infrastructure are to comply with the City of Sydney Construction Noise Code of Practice. (b) Cumulative noise emissions from any operations associated with the proposed activities, are to comply with the criteria outlined in parts (c) and (d) of this condition as measured at the following locations in accordance with relevant methodology prescribed in Australian Standard 1055-1997 and the NSW EPA Industrial Noise Policy: (i) The boundary of any noise sensitive residential or commercial receiver external to the operational area of the event. Noise measurements are to be taken no closer than 3m to the building facade, if this is not possible a measurement may be taken at 1 m with not more than a 3dB facade correction applied to as an increase to the criteria. (c) The LAeq 1s minute noise level from music and entertainment noise, conversational discourse noise must be the lesser of the following: (i) To 10pm LAeq 15 minute s LA90, day/evening background + 10 dB; or (ii) LAeq 15 minute s 55 dB (Day/Evening - 1 Oam to 1 Opm); (iii) 1 Opm to 11.30pm, LAeq 15 minute S LA90, night + 5 dB; or (iv) LAeq 15 minute S 50 dB (night - 1 Opm to 11.30pm) (v) As a guideline for resolving complaints, LC, Max must not exceed 75 dB at any location as per part (b) above although further reductions in noise may be necessary. (d) Mechanical plant noise levels are not to exceed the lesser of the following criteria at the boundary of any nearby noise sensitive receiver, compliance being established in accordance with the methodology in (b) above: (i) The LAeq 15 minute noise level from any plant and equipment must be the lesser of the following at the boundary of any nearby residential or commercial receiver notwithstanding noise levels for sensitive uses other than residential given in Table 2.1 of the NSW EPA Industrial Noise Policy: LAeq 15 minute s LA90, background + 5 dB, LAeq 15 minute S 55 dB (any time), (e) The background noise level (LA90, 15 minute) is to be established prior to the approved event. Monitoring must be undertaken by a suitably qualified acoustic consultant. Suitably qualified acoustic consultant means a consultant who possesses the qualifications to render them eligible for membership of the Australian Acoustics Society, Institution of Engineers Australia or the Association of Australian Acoustic Consultants at the grade of member. (f) The relevant background noise level (LA90, 15 minute) is taken to mean the day and evening rating background noise level determined in complete accordance with the methodology outlined in the NSW EPA Industrial Noise Policy and Australian Standard AS1055.1997 Acoustics - Description and measurement of environmental noise. (g) The background noise level shall be established in the absence of all noise emitted from the temporary event. Background noise measurements are to be representative of the environmental noise levels at the affected location. (h) Event management are responsible for the establishment and ongoing maintenance of the following during the course of the frequency limited events for the period of the event, including bump in and out: (i) A complaints hotline (All complaints must be reacted to and not initially discarded as vexatious without documenting reasons as to why), (ii) Maintaining a complaints register associated with the event, and (iii) Disseminating the complaints hotline details to identified noise sensitive commercial and residential receivers. (iv) The complaints register is to be in the form of a written logbook and be kept for the record for a term up to 2 years after the completion of the last event. (i) The Acoustic Consultant and Persons authorised under the Environmental Planning & Assessment Act (1979), Protection of the Environment Operations Act (1997), and the Local Government Act (1993) must be granted	

Condition	COS Proposed wording	Applicant's response
(5) TEMPORARY FOOD SALES-SET UP AND OPERATION	(a) All temporary food stalls or temporary food vendors associated with Sydney Opera House events must have a current Approval from the City of Sydney in accordance with the requirements of the Local Government Act 1993. Approval numbers (Temporary Food Permit numbers) for all food operators must be submitted to the City 14 days prior to the event. (b) The set up and operation of any temporary food stall or vendor and associated equipment must comply with relevant sections of the City of Sydney fact sheet -"Requirements for the Operation of a Temporary Food Stall" and Standard 3.2.2, Food Safety Practices and General Requirements of the Australia and New Zealand Food Standards Code. Note: The "Requirements for the Operation of a Temporary Food Stall, City of Sydney" and the "Temporary Food Stalls Event Register" and "Details of Temporary Food Stall "forms can be obtained from the City of Sydney website http://www.cityofsydney.nsw.gov.au/	As highlighted in the modification, it was proposed to remove a similar condition from the original development conditions. However, it is noted that under the current framework, food businesses may be exempt from this requirement if they meet the criteria listed by the NSW Department of Primary Industries, Food Authority.

In addition to the above, the applicant has prepared in **Table 4** below a response to the Conditions of Consent proposed by the Heritage Council of NSW in their submission.

Table 4 – Applicant's response to Heritage Council of NSW's proposed Conditions of Consent

Condition	COS Proposed wording	Applicant's response
1. TEMPORARY STRUCTURES	a) Infrastructure associated with any event or activity should be designed and sited to minimise intrusion into primary view lines on the southern approach to the site and to maximise public access to the Forecourt and Monumental Steps;	As previously noted within this RTS letter is a copy of the Sydney Opera House Outdoor Events and Activities Heritage Guidelines in draft format (Appendix B). The document is designed to provide hirers and the SOH Event Operations team a consistent framework that can be applied to all external events without affecting the State, National or World Heritage values of the site. The document aligns with the Heritage Council of NSW's proposed conditions and generally these can be accepted. It is noted that the requirement for no white or off-white infrastructure will require up to 12 months to implement (as noted in the HIS), given current availability of fit-for-purpose infrastructure to stage events of this nature. The final determination of these items will be part of the consultation process around the Heritage Guidelines.
	b) All structures, containers, scaffold towers and the like should be covered in a suitable screening material with appropriate graphics or artwork that reduces their visual impact and does not detract from or compete with the Opera House itself.	
	c) No infrastructure element should be highly reflective, white or off-white, but a more neutral colour that does not compete with the Opera House shells or Podium;	
	d) Potentially intrusive items, or those that inhibit public access should be installed at the last possible opportunity and removed as soon as possible and practicable after the event.	
	e) All event infrastructure and installations, including fencing and signage, should be of high quality design and execution that does not diminish or detract from the setting and presentation of this World Heritage Listed site	
	f) Stage, rear and side-stage trucks and props for the one-off opera event in 2016, when not in use and between blocks of performances should, where possible, be moved to the eastern end of the monumental steps to minimise visual intrusion and to maximise public access to these steps.	
2. SITE PROTECTION & WORKS	Significant building fabric and elements are to be protected during the works from potential damage. Protection systems must ensure significant fabric is not damaged or removed.	Noted
3. NOMINATED HERITAGE CONSULTANT	A suitably qualified and experienced heritage consultant is to be nominated to provide advice for temporary events in relation to potential impacts on heritage values, including the impact on significant fabric.	Sydney Opera House Outdoor Events and Activities Heritage Guidelines are being developed by a Heritage Consultant, Design 5. It is proposed that the guidelines would be developed with the heritage consultant however it would not be practical or economically justifiable to have a heritage consultant sign off on every outdoor event. The guidelines are designed to be included within the Outdoor Event Guide and will form part of a checklist that must be completed prior to any event being undertaken on the forecourt. The Opera House's Eminent Architects Panel and Conservation Council will have broad visibility of upcoming events and will be consulted on specific event infrastructure as appropriate.
4. APPROVAL UNDER THE HERITAGE ACT	The approval for the modification of the number and duration of events in the forecourt shall only operate following further approval by the Heritage Council of NSW under the Heritage Act 1977. The Heritage Council	Noted, this detail can be further developed with the Heritage Council of NSW in the development of the Outdoor Events and Activities Heritage

Condition	COS Proposed wording	Applicant's response
	will require detailed information about the number and type of events being planned with a clear understanding of event free days and temporary event guidelines. Following this consideration by the Heritage Council the number and duration of events may require amendment.	Guidelines to inform them of the proposal.
5. TIME LIMIT FOR APPROVAL	The number and type of outdoor events to be held at the Sydney Opera House & associated structures shall be reviewed every 5 years and approved by the Heritage Council or its delegate. The Sydney Opera House Trust is to provide an annual report to the Heritage Council of NSW on outdoor events to assist in this review. The report is to include the dates of events, their purpose, their specific location, and description & location of temporary structures associated with the event. The report should include visual representation of the information requested.	Noted, this may form a review, which is consistent with the proposed noise review period and SOH is open to this approach. SOH requests the ability to review and comment on the proposed review frameworks and periods prior to their enforcement.
ADVICE	Please note that the proposed infrastructure required for the event The Opera is being considered acceptable only in this instance as a one-off event. It is advised that a repeat of such events requiring this level of infrastructure to be placed on the forecourt for extended periods is considered to have an unacceptable impact on the setting and the overall significance of the Sydney Opera House.	Noted.

Should you have any queries about this matter, please do not hesitate to contact me on (02) 9956 6962 or cferreira@jbaurban.com.au.

Yours faithfully,



Chris Ferreira
Senior Planner