



DOC20/58989

24 January 2020

Mr Andy Nixey
Social and Infrastructure Assessments
Department of Planning, Industry and Environment
GPO Box 39,
Sydney NSW 2001

Dear Mr Nixey

Stadium Australia Redevelopment (SSD 10342) Response to Submissions

I am writing to you in reply to the invitation to the Environment Protection Authority (EPA) to provide comment on the Response to Submissions (RtS) for the above project.

In its submission to the Environmental Impact Statement (EIS), the EPA provided comment on noise and vibration, and contamination issues. The EPA has no further comment regarding contamination issues.

Regarding **noise and vibration** the EPA previously advised that no assessment had been made on mechanical plant and other non-event operational noise in the EIS. The applicant's response is that there would be 'no changes to the everyday operation of the stadium', including noise emissions from these sources. The EPA considers that the changes being made to the stadium may have flow-on effects to non-event operational noise and that these have not been properly considered in the applicant's assessment. Therefore, the following conditions are recommended for mechanical plant and operation:

Operational mechanical plant noise

1. Mechanical plant noise generated at the premises must not exceed the noise limits at the times and locations in the table below. The noise limits apply at all residential receivers within the nominated noise catchment area (NCA) in the table below. The area of each NCA is defined in Figure 4 and Table 2 of *Infrastructure New South Wales Stadium Australia Redevelopment SSDA – Noise and Vibration Assessment*, Issue 2, prepared by Arup (dated 04.12.19).

Location – Residential receivers within noise catchment area	Noise limit dB(A)			
	Day	Evening	Night	Night
	L _{Aeq,15min}	L _{Aeq,15min}	L _{Aeq,15min}	L _{Amax}
NCA 1	52	43	38	55
NCA 2	53	43	38	61
NCA 3	47	43	38	56
NCA 4	46	46	43	54

Phone 131 555
Phone 02 9995 5555
(from outside NSW)

Fax 02 9995 6900
TTY 133 677, then
ask for 131 155

PO Box 668
PARRAMATTA
NSW 2124

Level 13
10 Valentine Avenue
PARRAMATTA NSW
2150 AUSTRALIA

info@epa.nsw.gov.au
www.epa.nsw.gov.au
ABN 43 692 285 758

Note: Noise limits were derived using the *Noise Policy for Industry* (EPA, 2017) and the rating background levels (RBLs) presented in Table 6 of the *Noise and Vibration Assessment* (Arup, 04.12.19).

2. For the purposes of **condition 1**:
 - (a) Day means the period from 7 am to 6 pm Monday to Saturday and the period from 8 am to 6 pm Sunday and public holidays.
 - (b) Evening means the period from 6 pm to 10 pm.
 - (c) Night means the period from 10 pm to 7 am Monday to Saturday and the period from 10 pm to 8 am Sunday and public holidays.

3. Noise-enhancing meteorological conditions:
 - a) The noise limits set out in **condition 1** apply under the following meteorological conditions:

Assessment Period	Meteorological Conditions
Day	Stability Categories A, B, C, D and E with wind speeds up to and including 3 m/s at 10 m above ground level.
Evening	Stability Categories A, B, C, D and E with wind speeds up to and including 3 m/s at 10 m above ground level.
Night	Stability Categories A, B, C, D and E with wind speeds up to and including 3 m/s at 10 m above ground level; or Stability category F with wind speeds up to and including 2 m/s at 10 m above ground level.

- b) For those meteorological conditions not referred to in **condition 3a**), the noise limits that apply are the noise limits in **condition 1** plus 5 dB.
4. For the purposes of **condition 3**, the meteorological conditions are to be determined from meteorological data obtained from the nearest, representative Bureau of Meteorology weather station.
5. For the purpose of demonstrating compliance with the noise limits in **condition 1**, the noise monitoring equipment must be located at the reasonably most affected external point at the location, but no closer than 3 m to a vertical reflecting surface and between 1.2 to 1.5 m above ground level for single storey residences and at a height between 1.2 to 1.5 m above the finished floor level for multi-storey residences.
6. For the purpose of determining compliance with **condition 1**, the modifying factor corrections in Table C1 in Fact Sheet C of the Noise Policy for Industry (NSW EPA, 2017) may be applied, if appropriate, to the noise measurements by the noise monitoring equipment.
7. Noise measurements must not be undertaken where rain or wind speed at microphone level will affect the acquisition of valid measurements.

Construction noise

The EPA also recommends the following construction related conditions for noise and vibration. Please note that the section titled “Exemptions to standard construction hours in exceptional circumstances” (highlighted in blue) includes conditions that have been successfully applied by the EPA in its licensing to ensure the authority is informed and prepared for when exceptional out of hours construction activities are being undertaken, and could be adapted to apply to the Department of Environment, Industry and Environment (DPIE).

Noise limits

8. The applicant must implement all feasible and reasonable noise and vibration mitigation measures at the premises to minimise noise and vibration impacts on noise sensitive receivers and seek to achieve, where feasible and reasonable, the noise and vibration management levels in the *Interim Construction Noise Guideline* (EPA, 2009).

Hours of operation

9. Unless permitted by another condition of this approval, construction works and activities must:
 - (a) only be undertaken between the hours of 7 am and 6 pm Monday to Friday; and
 - (b) only be undertaken between the hours of 8 am and 1 pm Saturday; and
 - (c) not be undertaken on Sundays or Public Holidays.

Exemptions to standard construction hours for low noise impact works

10. The following works and activities may be carried out outside of the hours specified in **condition 9** if the works and activities do not cause, when measured at the boundary of the most affected noise sensitive receiver:
 - (d) Leq(15 minute) dB(A) noise levels greater than 5dB above the day, evening and night rating background level (RBL) as applicable; and
 - (e) L1(1 minute) dB(A) or LFmax dB(A) noise levels greater than 15dB above the night RBL for night works; and
 - (f) continuous or impulsive vibration values greater than those for human exposure to vibration, set out for residences in Table 2.2 in *Environmental noise management – Assessing Vibration: a technical guideline* (DEC, February 2006); and
 - (g) intermittent vibration values greater than those for human exposure to vibration, set out for residences in Table 2.4 in *Environmental noise management – Assessing Vibration: a technical guideline* (DEC, February 2006).

NOTE: For the purpose of this condition, the RBLs are those contained in an environmental assessment for the scheduled activity subject to this licence prepared under the *Environmental Planning and Assessment Act 1979*. Alternatively, the licensee may use another RBL determined in accordance with the *NSW Noise Policy for Industry* (EPA, 2017) and provided to the EPA prior to carrying out any works or activities under this condition.

Exemptions to standard construction hours in exceptional circumstances

11. The applicant may undertake works outside of standard construction hours if any of the following applies:
 - (a) emergency works is required to avoid the loss of lives or property, or to prevent material harm to the environment;
 - (b) the delivery of oversized plant or structures has been determined by the police or other authorised authorities to require special arrangements to transport along public roads.
12. On becoming aware of the need to undertake emergency construction work under **condition 11**, the applicant must notify the DPIE as soon as practicable and submit a report to DPIE by 2pm on the next business day after the emergency works commenced that describes:
 - (a) the cause, time and duration of the emergency; and
 - (b) action taken by or on behalf of the licensee in relation to the emergency; and
 - (c) details of any measures taken or proposed to be taken by the licensee to prevent or mitigate against a recurrence of the emergency.

For the purpose of this condition, “material harm to the environment” has the same meaning as in section 147 of the *POEO Act*.

High Noise Impact Works

13. Unless otherwise specified by another condition of this approval, high noise impact works and activities must only be undertaken:
- (a) between the hours of 8 am to 6 pm Monday to Friday;
 - (b) between the hours of 8 am to 1 pm Saturday; and
 - (c) in continuous blocks not exceeding 3 hours each with a minimum respite from those activities and works of not less than 1 hour between each block.

For the purposes of this condition 'continuous' includes any period during which there is less than a 1 hour respite between ceasing and recommencing any of the work that is the subject of this condition.

NOTE: High noise impact works means jack hammering, rock breaking or hammering, pile driving, vibratory rolling, cutting of pavement, concrete or steel or other work occurring on the surface that generates noise with impulsive, intermittent, tonal or low frequency characteristics and any works exceeding 75 dB(A) using the LAeq, 15 minute noise descriptor assessed at the most affected noise sensitive receiver.

Should you require clarification of any of the above please contact Anna Timbrell on 9274 6345 or email anna.timbrell@epa.nsw.gov.au.

Yours sincerely



SARAH THOMSON
Unit Head, Metropolitan Infrastructure
Environment Protection Authority