



DOC19/517679-1
SSI 9835

Ms Karen Harragon
Director Social and Other Infrastructure Assessments
Planning Services Division
Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2001

Dear Ms Harragon

**SSD 9249 – SYDNEY FOOTBALL STADIUM
(STAGE 2 DESIGN, CONSTRUCTION AND OPERATION)
ENVIRONMENTAL IMPACT STATEMENT (EIS)**

I am writing to you in reply to your invitation to the Environment Protection Authority (EPA) to make a submission concerning the above project EIS.

The EPA requests that this submission be read in conjunction with its letter dated 1 February 2019 in respect of the draft SEARs for the project.

The EPA notes that the overall project comprises: Stage 1 demolition of the existing stadium and ancillary buildings; and Stage 2 design, construction and operation of the new stadium, and that Stage 1 was the subject of a separate assessment.

The EPA understands that, although the development site is located within Sydney Cricket and Sports Ground Trust lands, the Trust is not the proponent. The EPA anticipates that on completion of the redeveloped football stadium precinct, control and management of those facilities would revert to the Sydney Cricket and Sports Ground Trust.

Attached are the EPA's detailed comments in relation to noise impacts during both operation and construction (Attachment A), and land contamination (Attachment B).

Should you require clarification of any of the above please contact Anna Timbrell on 9274 6345.

Yours sincerely

17.07.19

A handwritten signature in blue ink, appearing to read 'Claire Miles'.

CLAIRE MILES
A/ Regional Manager Operations, Metropolitan Infrastructure
NSW Environment Protection Authority

Attachment A – EPA Comments on Noise
Attachment B – EPA Comments on Contaminated Land Matters

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ATTACHMENT A

EPA COMMENTS ON NOISE

SYDNEY FOOTBALL STADIUM – STAGE 2 (DESIGN, CONSTRUCTION AND OPERATION)

The following documents have been considered in this noise assessment:

1. *Environmental Impact Statement Stage 2 Construction and Operations Sydney Football Stadium*, dated 12 June 2019, Ethos Urban Pty Ltd, Ref: 218948, Final for exhibition (EIS report)
2. *Infrastructure New South Wales Sydney Football Stadium Redevelopment Stage 2 SSDA – Noise and Vibration Assessment*, Ver 4, dated 31 May 2019, Arup Pty Ltd, (Noise report) – (Appendix X of the EIS)
3. *Sydney Cricket and Sports Ground Trust Sydney Football Stadium Redevelopment Draft Noise Management Plan*, dated 31 May 2019, Arup Pty Ltd, Draft Rev 3, (DNMP) – (Appendix G of Appendix X of the EIS)
4. *Development Consent, Redevelopment of Sydney Football Stadium*, Modification 3, dated 28 June 2019, SSD 9249 – Stage 1 (SSD 9249 Development Consent)
5. *Prevention Notice No. 1003904*, NSW Environment Protection Authority, dated 29 July 2002 incorporating Variation of Prevention Notice Number 1003904, dated 2 December 2013, NSW Environment Protection Authority, reference EF13/9331 (current Prevention Notice)

1. General

Based on review of the above documents, the EPA presents the following advice summary:

- The key issue is the management of Event noise. Noise impacts from the new stadium are not expected to change significantly, the review identified a number of areas where the proponent must provide clarification.
- The EPA will need to further consider items that may affect the regulation of the premises, particularly with regards to defining the mechanisms for determining compliance with the (proposed) revised noise limits. Comments are focussed on the DNMP as the primary tool for managing noise.
- Technical issues have been identified within the Operational (Non-Event) and Construction noise assessments. Although further information and clarification is required, it is not anticipated that this will materially alter the outcomes reported in these assessments. Operational noise (Non-Events) is not expected to present a significant risk and can be managed with good practice. Construction noise can be adequately managed with established procedures.

2. Events Noise

The Noise report has predicted noise from concert events based on three different sound system configurations and noise from sporting events. The application proposes amending noise limits to a $L_{eq,5min}$ A-weighted level and a 63Hz unweighted octave band level, developed in consultation with EPA and DPIE. The predictions indicate that event noise will comply with these proposed noise limits.

The primary mechanism for managing noise impacts is presented in the DNMP. This is critical to ensure the premises can effectively manage noise impacts. Therefore, it is important that at this stage, the proponent outlines the principles and methods they intend to use when the stadium is operational. There are a number of issues in the DNMP and Noise report that require further

clarification. These matters are necessary for the EPA to develop an updated Prevention Notice and/or EPL to regulate event noise.

The key items are set out below:

- 1) The noise report has not provided an assessment of how the proposed stadium will perform against the noise requirements in the current Prevention Notice (1003904) as required by Condition C17 of the SSD 9249 Development Consent. Whilst the noise report claims that the proposed stadium design will reduce noise levels from sporting, non-sporting and concerts events, and states that it can achieve the revised $L_{eq,5min}$ noise limits, it has not demonstrated that the existing Prevention Notice limits can be met. Because, the $L_{eq,5min}$ limits were derived from a comparison of L_{max} and their equivalent $L_{eq5mins}$ from previous events, impacts are not expected to differ significantly. However, this requirement is set out in the SEARs and also is important to demonstrate and support the proposed change to noise limits and noise indicators.
- 2) SEARs Key Issue 20, bullet point 3 requested noise from events / activities outside of the stadium structure to be addressed. The Noise report does not address these activities such as amplified music outside of the stadium for fan engagement activities or public address systems in Fig Tree Place or Busbys Corner. There is a risk that portable sound systems may be placed in these areas for events as they are currently at the SCG for sporting events. The proponent should assess these events / activities and provide details on how they will be managed.
- 3) A definition of a non-compliance is proposed in Chapter 3.4 the DNMP, as requested by SSD 9429 Development Consent Condition C20c). However, the proposed non-compliance scheme does not have any basis, is ambiguous, and lacks definitions regarding the cumulative effect of exceeding periods. The EPA also considers that will likely permit many excursions over the noise limit, for example allowing 4 occasions to exceed the limit by more than 5 dB. This means for 4 non-consecutive 5 minutes blocks, noise levels could be more than 5 dB above the criteria. The EPA will need to consider how it will define a non-compliance and regulatory action triggers.
- 4) The Noise report does not provide a clear description of all measures to minimise potential noise impacts that will be considered as part of the design. Whilst the report does provide an analysis for the use of an acoustically opaque roof, it also states that there will be a 5 metre gap under the roof, but does not justify why exploring further enclosure of the stadium envelope has not been investigated. The proponent should set out the design measures considered to manage noise emissions from all noise generating items and activities as required by Key Issue 20 of the SEARs.
- 5) The Noise report has not nominated noise limits for intermediate compliance points as required by Condition C19 of SSD 9249 Development Consent. Although the design is not sufficiently advanced to permit a detailed calculation, the determination of accurate intermediate compliance limits will need to be progressively developed. It is recommended that a trial period, to validate and refine the limits, is implemented. This should include a sufficient number of events, configurations, and meteorological conditions to obtain a representative data.
- 6) The alternative compliance methodology proposes to use continuous noise monitoring points in the stadium roof. The proponent should continue to review the location of monitoring points as the design is developed to ensure that the locations are suitable and able to provide a reliable intermediate point to represent noise emissions from amplified sound sources at sensitive receivers.
- 7) The Noise report and DNMP should maintain a consistent definition of sensitive receiver for event noise. The current Prevention Notice (1003904) classifies them as “places such as nursing homes, hospitals, schools and residences”. In Chapter 2 of the Noise report, a sensitive receiver is defined as residential, educational, child care etc. However, the DNMP only applies noise limits at residential receivers. This could have implications for the educational UTS building adjacent to the SFS which is considered a sensitive receiver

when in use. The proponent should clarify the receiver types where noise limits apply and which locations will be used for compliance purposes.

- 8) The DNMP has not provided an analysis of events which are deemed to comply and those which will require specific Event Acoustic Assessments which was required by Condition C20b) of the SSD 9249 Development Consent. The proponent should provide this analysis.
- 9) The DNMP has defined an event representative's responsibilities, and that the Trust has ultimate responsibility, but has not clarified the chain of responsibility regarding noise management. This information was required by Condition C20d) of the SSD 9249 Development Consent and should be provided.
- 10) The DNMP should clarify the management strategies to minimise impacts of sound checks, rehearsals, bump in and bump out, post event clean-up activities and maintenance as required by Condition C20e) of the SSD 9249 Project Approval. The DNMP does not currently provide clear management strategies for these items.
- 11) The DNMP currently states that noise limits will not apply at wind speeds greater than 5 m/s following Table 5. The proponent should provide more information on this item as follows:
 - a. The location where the wind speed is measured should be defined.
 - b. The intermediate compliance points are proposed to be in and around the stadium roof where wind speeds would be expected to be elevated. The proponent should describe how the monitoring system will consider elevated wind speeds and the ability to measure event noise effectively.
 - c. The proponent should clarify the meaning of the statement "wind generated noise is considered to be a significant contributor to event noise" following Table 5 of the DNMP. Noise limits apply only to the amplified sound system and not to the total ambient noise, so it is not clear how wind generated noise contributes to event noise.
 - d. The EPA should also consider whether to apply additional noise limits for wind speeds greater than 5 m/s so that the premises has noise limits under all meteorological conditions.
- 12) The DNMP will need to be updated progressively as the design advances and the regulatory framework is developed.

Operational noise (non-event)

The Noise report has provided an assessment of operational noise unrelated to events. The impact of these operational noise sources has only been indicatively assessed as the design is not at a stage which allows for a detailed assessment. Whilst operational noise (non-event) is unlikely to cause significant impacts, there were a number of issues with the assessment as follows:

- 1) The indicative assessments in the Noise report have not been undertaken in accordance with the *NSW Noise Policy for Industry* (NPfI) (EPA, 2017).
 - a. The Noise report has not derived Project Noise Trigger Levels (PNTL) in accordance with the NPfI. The report should be revised and use the process in Section 2.1 and Figure 1 of the NPfI to determine PNTLs for operational noise sources.
 - b. Chapter 4.3 has used either an amenity level or intrusive level as criteria for the assessment, which is not consistent with the NPfI. The noise report should be revised to assess operational noise according to NPfI Section 3.
 - c. Table 27 of the Noise report has not derived the maximum noise level event trigger levels in accordance with NPfI Section 2.5. The Noise report should be updated to include correct triggers levels.

- 2) The night criteria in Table 34 and Table 37 of the Noise report are not consistent with the criteria listed in Table 27 of the report. Furthermore, only the intrusive criteria has been considered instead of the PNTL. The Noise report should be updated to include an assessment using the correct PNTLs.
- 3) During subsequent stages of the design, the operational noise levels should continue to be assessed and mitigated where required to meet the requirements of the NPfI.

Construction noise and vibration

- 1) The Noise report has applied a noise management level of 70 dBA for child care centres. However *Interim Construction Noise Guideline* (DECC, 2009) (ICNG) Section 4.1.3 states that alternative management levels may apply to noise sensitive business such as child care centres. The EPA considers that use of the upper internal noise levels in AS 2107 for an equivalent occupancy type may be more appropriate to set management levels for child care centres, unless the proponent can provide a justification for the currently proposed management levels.
- 2) Predicted construction noise levels are above the highly noise affected level at one representative receiver (R6) for the majority of the construction activities. However, the scale of the maps in Appendix D make it difficult to see the extent and number of receivers impacted over the highly noise affected level. The noise report should detail the number of receivers and the duration of the activities which are predicted to be above the highly noise affected level.
- 3) As the highly noise affected level is predicted to be exceeded, the proponent should nominate additional feasible and reasonable mitigation, including consideration of community engagement and respite periods.
- 4) The management of construction vibration should consider any sensitive medical imaging equipment or human comfort in the educational UTS building.
- 5) Road noise impacts from construction activities was assessed and did not predict significant increases in road noise levels from heavy vehicle movements. However, there are expected to be up to 600 workers on site. Whilst the construction traffic impacts are unlikely to exceed the *Road Noise Policy* (DECCW, 2011) (RNP) criteria, light vehicle traffic generated by construction should be considered in the assessment.
- 6) Figure 6 of the Noise report shows the assessed construction traffic routes. However, these routes are not consistent with the routes in Figure 60 and 61 of the EIS report. The proponent should provide an assessment of potential impacts for all significant construction traffic routes for light and heavy vehicles.
- 7) The Noise report does not provide a draft Construction Noise and Vibration Management Plan (CNVMP) as requested by the SEARs. The Noise report states that the CNVMP will need to be prepared by the contractor prior to construction commencing. It is unlikely that the proponent has sufficient detail to enable a CNVMP to be developed at this stage. However, the principles and methodology for the draft CNVMP should still be included.
- 8) Consistent with the Noise report's proposal, construction working times to be limited to:
 - 7am and 6pm Monday to Friday
 - 8am to 1pm Saturdays
 - No work on Sundays or Public Holidays

ATTACHMENT B

EPA COMMENTS ON CONTAMINATED LAND MATTERS

SYDNEY FOOTBALL STADIUM – STAGE 2 (DESIGN, CONSTRUCTION AND OPERATION)

The following documents have been considered in this contamination assessment:

1. *Environmental Impact Statement Stage 2 Construction and Operation Sydney Football Stadium*, Ethos Urban Pty Ltd, dated 12 June 2019, Ref: 218948, Final for exhibition (EIS report)
2. *Report on Detailed Site Investigation (Contamination) Sydney Football Stadium Redevelopment Moore Park NSW*, Douglas Partners, dated 28 May 2019, Rev 1. (Appendix J1 of the EIS)
3. *Comment on Groundwater for Stage 2 SEARs – Sydney Football Stadium Redevelopment, Moore Park, NSW*, Douglas Partners, dated 29 May 2019, Rev 1. (Appendix GG of the EIS)
4. *Sydney Football Stadium Redevelopment, Moore Park IAA #1: Review of Detailed Site Investigation*, Senversa Pty Ltd, dated 12 June 2019. (Appendix J2 of the EIS)

The EPA advises that a portion of the site called “Area 2” has been previously notified to the EPA in relation to section 60 of the *Contaminated Land Management Act* (CLM Act) and was assessed as not significant enough to warrant regulation under the CLM Act.

1. General comments on the reports, and the methodology used to determine the risks associated with the areas of contamination and the contaminants

Detailed Site Investigation (Appendix J1 of the EIS report)

This report has been reviewed by the Site Auditor.

Groundwater Assessment (Appendix GG of the EIS report)

This consists of response to Water and Natural Resources SEARs¹. This report does not have much relevance information regarding groundwater contamination and is not relevant to contamination comments for the EPA.

Interim Audit Advice (Appendix J2 of the EIS report)

This letter is an interim audit advice and not a site audit statement. Despite being an interim advice, the letter is useful in providing the Auditor’s opinion following review of the site investigations prepared by the consultant. DPIE should continue to require use of site auditor as part of consent conditions for the site.

The EPA agrees with the recommendations listed in the interim audit advice so that:

- Imported topsoil meets the Recreational / Recreational Open Space criteria defined in Schedule B1 of the *National Environment Protection Measure, As Amended* (NEPC, 2013).
- Any VENM classification should take into account historic and any additional results.
- A CEMP is developed for the construction phase of the development and must set out clear protocols for unexpected finds encountered.

¹ Note: DPIE is the agency that issues SEARs. This description “Water and Natural Resources SEARs” quoted from Appendix GG is possibly responding to comments on Draft SEARs from DPI Water and the Natural Resource Access Regulator (NRAR).

- The preliminary waste classifications outlined in **Section 2** above are amended based on any 'unexpected finds', where appropriate.
- Any waste transported off-site is waste classified in line with the EPA guidelines and taken to a facility that can lawfully receive the waste.

2. Adequacy of any mitigation measures proposed

One sample on-site was reported to contain bonded fibre cement. This suggests that asbestos containing materials may be encountered on the site and should be dealt with via an Unexpected Finds Protocol. The Unexpected Finds Protocol in Section 1.2.1 of the construction management plan does not include protocol for unexpected contamination at the site. Hence the EPA recommends that the proponent develop unexpected finds protocol to deal with unexpected contamination at the site.

3. Compliance with SEARS

The proponent complied with majority of the requirements specified in Section 21 of the SEARs. However, more details are required to address the following requirements:

- Provide details of the methods of identification, handling, transport and disposal of any asbestos containing and other hazardous materials that may be encountered during this development.
- Submit Spoil and Demolition Waste Strategy or Protocol, in case of a Remediation Action Plan (RAP) being submitted. The Spoil and Demolition Waste Strategy / Protocol should identify how contaminated material and soil will be managed during the demolition stage both on-site and off-site demonstrating that suitable processes would be in place to ensure no cross contamination or unauthorised disposal of contaminated material occurs.
- Instead of a site audit statement, an interim audit advice was submitted as Appendix J of the EIS requirements. The EPA notes that interim audit advice is different from a site audit statement, and that prior to site use, the proponent will need to submit a site audit statement regarding the suitability of this land for its proposed use.

4. Recommendations relating to contaminated land matters

The EPA recommends the following:

- 1) DPIE to include a development consent condition requiring the proponent to continue use of the site auditor. The site auditor should be engaged by the proponent to issue a Section A site audit statement on the suitability of the land for the proposed use.
- 2) The proponent to adhere to Section 7.7 of the Construction Management Plan (Appendix AA of the EIS) and to manage the existing underground petroleum storage system at the site as per the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014*.
- 3) The Proponent prepare a detailed procedure for identifying and dealing with unexpected finds (which potentially could include asbestos containing materials), prior to commencing any work on the development site. The proponent should ensure that the procedure includes details of who will be responsible for implementing the unexpected finds procedure and the roles and responsibilities of all parties involved.
- 4) The Proponent ensure the proposed development does not result in a change of risk in relation to any pre-existing contamination on the site that would result in significant

contamination [note that this would render the proponent the 'person responsible' for the contamination under section 6(2) of CLM Act].

- 5) All reports submitted in relation to contaminated land management are prepared, or reviewed and approved, by a 'certified consultant'.
 - Note: A 'certified consultant' is a consultant certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. The quality information section of a report submitted, is to include the details of the consultant's certification, which should include a personalised electronic seal for either the CEnvP(SC) scheme or CPSS CSAM scheme.
 - Please note that the EPA's Contaminated Land Consultant Certification Policy () supports the development and implementation of nationally consistent certification schemes in Australia, and encourages the use of certified consultants by the community and industry. Note that the EPA requires all reports submitted to the EPA to comply with the requirements of the Contaminated Land Management Act 1997 (CLM Act) to be prepared, or reviewed and approved, by a certified consultant.
- 6) The following guidance, as relevant, should be considered, when assessing contamination at the site:
 - NSW EPA Sampling Design Guidelines
www.epa.nsw.gov.au/resources/clm/95059sampgdline.pdf
 - Guidelines for the NSW Site Auditor Scheme (3rd edition) 2017
<https://www.epa.nsw.gov.au/publications/contaminatedland/17p0269-guidelines-for-the-nsw-site-auditor-scheme-third-edition>
 - Guidelines for Consultants Reporting on Contaminated Sites, 2011
www.epa.nsw.gov.au/resources/clm/20110650consultantsglines.pdf
 - The National Environment Protection (assessment of contamination) Measures 2013 as amended.
- 7) The Proponent must ensure that any contamination identified as meeting the trigger in the EPA '*Guidelines for the Duty to Report Contamination*') is notified (or re-notified) in accordance with requirements of section 60 of the *Contaminated Land Management Act*; and
- 8) The processes outlined in *State Environmental Planning Policy 55 - Remediation of Land (SEPP55)* be followed, to assess the suitability of the land and any remediation required in relation to the proposed use.