

Mr Karl Fetterplace
Department of Planning and Environment
GPO BOX 39
SYDNEY NSW 2001

Dear Mr Fetterplace

SSD 8663 – SYDNEY OPERA HOUSE – CONCERT HALL UPGRADE AND CREATIVE LEARNING CENTRE – 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 letters dated 8 December 2016, 31 January 2017 and 5 August 2017 in respect of the draft Secretary's environment assessment requirements for the project.

The EPA notes that many of the environmental impact mitigation measures (e.g. dust, sediment control) outlined in Table 18 (section 7) to the EIS are proposed to be the subject of environmental management plans (e.g. Construction Environmental Management Plan and Construction Noise Plan). The EPA emphasises that it does not review or endorse environmental management plans or the like for reasons of maintaining regulatory 'arm's length'. As such, the EPA has not reviewed any environmental management plan forming part of or referred to in the EIS.

The EPA has identified the following site specific concerns based on the project information available on the Department of Planning and Environment major projects web site:

- (a) the need for a detailed assessment of potential site contamination, including information about groundwater and a detailed assessment of the footprint and surrounds of existing buildings following their demolition;
- (b) construction phase noise impacts on noise sensitive receivers such as surrounding residences;
- (c) construction phase dust control and management,
- (d) construction phase erosion and sediment control and management; and
- (e) operational noise impacts on noise sensitive receivers (especially surrounding residences) arising from operational activities such as new mechanical services (especially air conditioning plant).

Should you require clarification of any of the above please contact John Goodwin on 9995 6838.

Yours sincerely



SARAH THOMSON
Unit Head, Metropolitan Infrastructure
NSW Environment Protection Authority

Attachment A

Contact officer: JOHN GOODWIN

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS –

SYDNEY OPERA HOUSE (CONCERT HALL UPGRADE AND CREATIVE LEARNING CENTRE)

1. General

The EPA considers that the project comprises distinct phases of construction and operation and has set out its comments on that basis.

The EPA notes the proximity of surrounding residences which may be adversely affected by noise impacts during demolition, site preparation, construction and operation phases of the project.

2. Construction phase

The EPA anticipates that site establishment, demolition, bulk earthworks, construction and construction-related activities will be undertaken in an environmentally responsible manner with emphasis on –

- feasible and reasonable noise and vibration minimisation and mitigation,
- effective dust control and management,
- erosion and sediment control, and
- waste handling and management, particularly concrete waste and rinse water.

2.1 Asbestos containing material

The EPA anticipates that given the age of the building interiors asbestos containing materials and lead-based paints are likely to be encountered during demolition.

Since late 2015, clause 79 of the Waste Regulation has required transporters of loads of asbestos waste to provide certain details of the loads to the EPA using the “WasteLocate” system. These details include details of the source site, date of proposed transport, details of the proposed destination site and the approximate weight of asbestos waste in the load. The information must be provided to the EPA before transportation of the load commences.

WasteLocate is an online tool that allows the EPA to track the transport of asbestos waste. Transporters are required to use WasteLocate to report the movement of more than 100 kilograms of asbestos waste or more than 10 square metres of asbestos sheeting within NSW. The details can be reported on WasteLocate by using an app on a mobile phone or tablet or by using a computer.

Recommendations

1. The proponent be required, prior to commencing work, to prepare and implement an appropriate procedure for identifying and dealing with unexpected finds of site contamination, including –
 - (i) asbestos containing materials, and
 - (ii) lead-based paint,
2. The proponent be required to satisfy the requirements of the Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 ‘asbestos wastes’.

Note: The EPA provides additional guidance material at its web-site:
<http://www.environment.nsw.gov.au/waste/asbestos/index.htm>.

3. The proponent be required to consult with Safework NSW concerning the handling of any asbestos waste that may be encountered during the course of the project.

2.2 noise

The EPA notes that:

- (a) Table 3 to EIS Appendix 15 incorrectly interprets the Interim Construction Noise Guideline in that in the column headed "Highly Noise Affected Level" the same noise management level (i.e. RBL + 5 dB) for all assessment periods other than 'Day (standard) hours';
- (b) section 5.4.1 to EIS Appendix 15 (5th para, page 12) incorrectly states that 'sleep disturbance screening criteria' "... includes all background noise including noise from the project";
- (c) section 7.2 to EIS Appendix 15 indicates that "... work at night would only take place internally ..." and "... the exception to this night-time ban on work would be the delivery of small loads of concrete and the delivery of large items that cannot safely be delivered during the day."; and
- (d) section 8 to EIS Appendix 15 concludes that such work "... would not have detrimental impact on the nearest noise sensitive receivers."

Recommendation

The proponent be required to ensure that as far as practicable all demolition, site preparation, construction and construction-related activities likely to be audible at any noise sensitive receivers such as surrounding residences are only undertaken during the standard construction hours, being -

- (a) 7.00 am to 6.00 pm Monday to Friday,
- (b) 8.00 am to 1.00 pm Saturday, and
- (c) no work on Sundays or gazetted public holidays.

2.2.1 idling and queuing construction vehicles

The EPA is aware from previous major infrastructure projects that community concerns are likely to arise from noise impacts associated with the early arrival and idling of construction vehicles (including concrete agitator trucks) at the development site and in the residential precincts surrounding sites.

Recommendation

The proponent be required to ensure construction vehicles (including concrete agitator trucks) involved in demolition, site preparation, construction and construction-related activities do not arrive at the project site or in surrounding residential precincts outside approved construction hours.

2.2.2 reversing and movement alarms

The EPA has identified the noise from 'beeper' type plant movement alarms to be particularly intrusive and is aware of feasible and reasonable alternatives. Transport for NSW, Barangaroo Delivery Authority/Lend Lease and Leighton Contractors have undertaken safety risk assessments of alternatives to the traditional 'beeper' alarms. Each determined that adoption of 'quacker' type movement/reversing alarms instead of traditional beepers on all plant and vehicles would not only

maintain a safe workplace but also deliver improved outcomes of reduced noise impacts on surrounding residents. Interim Construction Noise Guideline Appendix C provides additional background material on this issue.

Recommendation

The proponent be required to consider undertaking a safety risk assessment of site preparation, bulk earth works, construction and construction-related activities to determine whether it is practicable to use audible movement alarms of a type that would minimise the noise impact on surrounding noise sensitive receivers, without compromising safety.

2.3 Dust control and management

The EPA considers dust control and management to be an important air quality issue during demolition, site preparation, bulk earthworks and subsequent construction.

Recommendation

The proponent be required to:

- (a) minimise dust emissions on the site; and
- (b) prevent dust emissions from the site.

2.4 Sediment control

Managing Urban Stormwater Soils and Construction, 4th Edition published by Landcom (the so-called 'Blue Book') provides guidance material for achieving effective sediment control on construction sites. The proponent should implement all such feasible and reasonable measures as may be necessary to prevent water pollution in the course of developing the site.

The EPA emphasises the importance of –

- (a) not commencing demolition, site preparation, bulk earthworks, construction and construction-related activities until appropriate and effective sediment controls are in place; and
- (b) daily inspection of sediment controls which is fundamental to ensuring timely maintenance and repair of those controls.

2.5 Waste control and management (general)

The proponent should manage waste in accordance with the waste management hierarchy. The waste hierarchy, established under the [Waste Avoidance and Resource Recovery Act 2001](#), is one that ensures that resource management options are considered against the following priorities:

Avoidance including action to reduce the amount of waste generated by households, industry and all levels of government

Resource recovery including reuse, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources

Disposal including management of all disposal options in the most environmentally responsible manner.

All wastes generated during the project must be properly assessed, classified and managed in accordance with the EPA's guidelines to ensure proper treatment, transport and disposal at a landfill legally able to accept those wastes.

The EPA further anticipates that, without proper site controls and management, mud and waste may be tracked off the site during the course of the project.

Recommendation

The proponent be required to ensure that:

- (1) all waste generated during the project is assessed, classified and managed in accordance with the EPA "*Waste Classification Guidelines Part 1: Classifying Waste*", November 2014 and the 2016 Addendum thereto;
- (2) the body of any vehicle or trailer, used to transport waste or excavation spoil from the premises, is covered before leaving the premises to prevent any spill or escape of any dust, waste, or spoil from the vehicle or trailer; and
- (3) mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site, is removed before the vehicle, trailer or motorised plant leaves the premises.

2.6 Waste control and management (concrete and concrete rinse water)

The EPA anticipates that during the course of the project concrete deliveries and pumping are likely to generate significant volumes of concrete waste and rinse water. The proponent should ensure that concrete waste and rinse water is not disposed of on the project site and instead that –

- (a) waste concrete is either returned in the agitator trucks to the supplier or directed to a dedicated watertight skip protected from the entry of precipitation; and
- (b) concrete rinse water is directed to a dedicated watertight skip protected from the entry of precipitation or a suitable water treatment plant.

Recommendation

The proponent be required to ensure that concrete waste and rinse water are:

- (a) not disposed of on the development site; and
- (b) prevented from entering waters, including any natural or artificial watercourse.

3. Operational phase

The EPA considers that environmental impacts that arise once the development is operational should be able to be largely averted by responsible environmental management practices, particularly regarding feasible and reasonable noise mitigation measures.

3.1 Noise impacts (mechanical plant and equipment)

Section 6.2.2 to EIS Appendix 15 indicates that –

- some ventilation plant is being replaced and is in the process of being selected, and
- “[n]oise from the AHU plant at residential receivers will be less than 30 dB(A) ...”.

Recommendation

The proponent be required to ensure mechanical ventilation plant is:

- (a) selected such that it is consistent with the octave-band sound power level data presented in Table 6 to EIS appendix 15; and
- (b) is installed and operated such that it does not emit noise:
 - (i) that exceeds 30 dBA at residential receivers, and
 - (ii) that exhibits tonal or other annoying characteristics.

3.2 Waste management

The proponent should manage waste in accordance with the waste management hierarchy outlined above.

Recommendation

The proponent be required to identify and implement feasible and reasonable opportunities for the re-use and recycling of waste, including food waste.
