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SSD 8388

Ms Megan Fu
Department of Planning and Environment
GPO BOX 39
SYDNEY NSW 2001

13 December 2017

Dear Ms Fu

SSD 8388 – MACQUARIE UNIVERISTY ARTS PRECINCT – ENVIRONMENTAL IMPACT STATEMENT (EIS)

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

The EPA requests that this submission be read in conjunction with its letter dated 2 May 2017 in respect of the draft SEARs for the project.

The EPA emphasises that it does not review or endorse environmental management plans or the like for reasons of maintaining regulatory 'arms length' and therefore has not reviewed any environmental management plan forming part of or referred to in the EIS.

The EPA anticipates potential water quality impacts on Mars Creek can be avoided by implementing appropriate erosion and sediment controls and adopting water sensitive urban design principles during the project demolition/construction and operational phases respectively.

The EPA notes the proximity of the aged care facility located off Balaclava Road (between University Avenue and Epping Road) and anticipates potentially significant noise impacts during demolition, site preparation, bulk earthworks, construction and construction-related activities.

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;

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(b) construction phase noise and vibration impacts (including recommended standard construction hours and intra-day respite periods for highly intrusive noise generating work) on noise sensitive receivers such as surrounding residences;

(c) construction phase dust control and management,

(e) construction phase erosion and sediment control and management;

(f) operational noise impacts on noise sensitive receivers (especially surrounding residences on adjoining and adjacent holdings) arising from operational activities such as public address/school bell systems, community use of school facilities, waste collection services and mechanical services (especially air conditioning plant);

(g) the need to assess feasible and reasonable noise mitigation and management measures (including time restrictions on the use of the facilities proposed to be available for community use) to minimise operational noise impacts on surrounding residences;

(h) practical opportunities to implement water sensitive urban design principles, including stormwater re-use; and

(i) practical opportunities to minimise consumption of energy generated from non-renewable sources and to implement effective energy efficiency measures.

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

Yours sincerely

JACINTA HANEMANN
Regional Manager Operations - Metropolitan Infrastructure
NSW Environment Protection Authority

Attachment A

Contact officer: JOHN GOODWIN
Click here to enter text.

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS –

MACQUARIE UNIVERSITY ARTS PRECINCT

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 particular emphasis on –

- the site contamination remediation action plan accompanying the EIS,
- compliance with recommended standard construction hours,
- intra-day respite periods from high noise generating construction activities (including jack hammering, rock breaking, pile boring or driving, saw cutting),
- 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 Site contamination and hazardous materials

The EPA understands that buildings W6A and W6B are proposed to be stripped out and refurbished and a ' faculty showcase building' erected on the southern side of those buildings in a position currently occupied by earth mounds. The EPA anticipates that given the age of buildings W6A and W6B, asbestos containing materials and lead-based paints are likely to be encountered during demolition/stripping out.

Section 12 to EIS Appendix J Stage 1 Environmental Site Assessment recommends further investigation following removal of the earth mounds located south of building W6A and prior to further excavation.

EIS Appendix K comprises a hazardous materials survey report that provides an ".. update to the current Asbestos Registers for buildings W6A and W6B …" as well as determining the presence of other hazardous material in those buildings.

Clause 79 of the Protection of the Environment Operations (Waste) Regulation 2014 has required transporters of loads of asbestos waste to provide certain details of the loads to the EPA using the "WasteLocate" system. And, those details –

(a) include the source site, date of proposed transport, details of the proposed destination site and the approximate weight of asbestos waste in the load, and

(b) must be provided to the EPA before transportation of the load commences.

Note: The EPA provides additional guidance material about tracking asbestos waste via the following link to its web-site:

http://www.epa.nsw.gov.au/your-environment/waste/tracking-transporting-hazardous-waste/transporting-asbestos-waste-tyres/tracking-asbestos-waste-locate

Recommendation

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,

Recommendation

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'.

Recommendation

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 and vibration

The EPA anticipates that demolition, site preparation (including tree clearing), bulk earthworks, construction and construction-related activities are likely to have significant noise impacts on the nearest noise sensitive receiver, being the Baptist aged care centre (off Balaclava Road).

2.2.1 general construction hours

The EPA emphasises that demolition, site preparation, bulk earthworks, construction and construction-related activities should be undertaken during the recommended standard construction hours.

Recommendation

The proponent be required to ensure that as far as practicable all demolition, site preparation, bulk earthworks, 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.

2.2.2 intra-day respite periods

The EPA anticipates that those demolition, site preparation, bulk earthworks, construction and construction-related activities generating noise with particularly annoying or intrusive characteristics (such as those identified as particularly annoying in section 4.5 of the Interim Construction Noise Guideline) would be subject to a regime of intra-day respite periods where –

(a) they are only undertaken after 8.00 am,

(b) they are only undertaken over continuous periods not exceeding 3 hours with at least a 1 hour respite every three hours, and.

(c) 'continuous' means any period during which there is less than an uninterrupted 60 minute respite between temporarily halting and recommencing any of the intrusive and annoying work referred to in Interim Construction Noise Guideline section 4.5

The EPA emphasises that intra-day respite periods are not proposed to apply to those demolition, site preparation, bulk earthworks, construction and construction-related activities that do not generate noise with particularly annoying or intrusive characteristics.

Recommendation

The proponent be required to schedule intra-day 'respite periods' for construction activities identified in section 4.5 of the Interim Construction Noise Guideline as being particularly annoying to noise sensitive receivers, including surrounding residents.

2.2.3 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 that site.

Recommendation

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

2.2.4 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 (nee Transport Construction Authority), Barangaroo Delivery Authority/Lend Lease and Leighton Contractors (M2 Upgrade project) 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.

2.4 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.

2.5 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.

2.6 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 "*Waste Classification Guidelines Part 1: Classifying Waste*" (Department of Environment Climate Change and Water, December 2009);

(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.

2.7 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 with regard to:

(a) feasible and reasonable noise mitigation measures;

(b) waste management in accordance with the waste management hierarchy;

(c) water sensitive urban design; and

(d) energy conservation and efficiency.

3.1 Noise and vibration impacts

The EPA emphasises that 'offensive noise' means inter alia, noise that "… interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person …" who is outside the premises from which the noise is emitted.

The EPA notes EIS Appendix S *Noise and Vibration Impact Assessment* appears to evaluate operational noise impacts at on campus rather than off-campus noise sensitive receivers such as the nearby Baptist aged care centre.

The EPA understands that –

(a) the proposed 'faculty showcase' building is proposed to be erected south of and immediately adjacent to building W6A, and

(b) the mechanical ventilation/air-conditioning system serving the 'faculty showcase' building would operate 24 hours per day to provide constant climate control for the preservation of exhibits.

background noise measurement

The EPA emphasises that properly establishing background noise levels in accordance with guidance material in the New South Wales Industrial Noise Policy (INP) is fundamental to a consistent approach to the quantitative assessment of noise impacts of development.

The EPA is concerned that monitoring to establish background noise levels was not undertaken consistent with the guidance material provided in the INP. For instance, Figure 2 to EIS Appendix S shows that background noise measurements were erroneously undertaken within the University campus rather than at the most affected off-campus noise sensitive receivers. The EPA anticipates that the background noise measurements would have been affected by on campus noise sources near the monitoring locations shown in Figure 2.

The Industrial Noise Policy guidance material also specifies that noise from an existing development should be excluded from background noise measurements. The EPA is unclear whether noise from buildings W6A and W6B was excluded from the background noise measurements.

Recommendation

The proponent be required to measure representative background noise levels –

(a) at the most affected off-campus noise sensitive receivers, including Baptist aged care centre off Balaclava Road, and in accordance with guidance material in the Industrial Noise Policy, or

(b) to adopt a deemed night period background noise level of 30 dBA.

mechanical plant and equipment

Section 6.2 EIS Appendix S predicts noise emissions from the operation of mechanical services, plant and equipment but does not predict the evening and night period noise impacts at the most affected off-campus noise sensitive receivers, especially the nearby Baptist aged care facility.

Recommendation

The proponent be required to:

(a) provide a comprehensive quantitative assessment of operational noise impacts on surrounding noise sensitive receivers, especially adjoining residences;

(b) ensure mechanical plant and equipment installed on the development site does not generate -

(i) noise that exceeds 5 dBA above the rating background noise level (day, evening and night) measured at the southern boundary of the development site opposite the Baptist aged care facility, and

(ii) noise that exhibits tonal or other annoying characteristics.

3.2 Waste management

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.

Recommendation

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

3.3 Water sensitive urban design and energy conservation and efficiency

EIS Appendix X comprises an environmentally sustainable development report that identifies potential–

(a) water sensitive urban design measures, including –

(i) rainwater harvesting and re-use, and

(ii) water efficient fixtures; and

(b) measures to maximise energy efficiency and minimise energy consumption, including –

(i) solar passive design, and

(ii) installation of solar photovoltaic energy power system.

However, EIS Appendix X does not appear to commit the University to implementing the identified sustainability measures

Recommendation

The proponent be required to adopt and implement throughout the project all the practicable ecologically sustainable development measures outlined in EIS Appendix X.
