NSW EPA

Your reference SSD 7370
Our reference: EF13/5547, DOC16/76272-01
Contact: J Goodwin 9995 6838

Mr Nathan Stringer
Department of Planning and Environment
GPO BOX 39
SYDNEY 2001

Dear Mr Stringer

SSD 7370 – UNIVERSITY OF NEW SOUTH WALES – ELECTRICAL ENGINEERING BUILDING EIS

I am writing to you in reply to your invitation to the EPA to provide comments on the Environmental Impact Statement (EIS) for the above proposal.

The EPA requests that these comments be read in conjunction with its letter and attachment dated 16 November 2015 concerning the 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, has not reviewed the environmental management plans forming part of or referred to in the EIS.

The EPA has identified the following site specific concerns based on the information in the EIS as obtained from the Department's Major Projects web site:

(a) handling, transport and disposal of any asbestos waste encountered during the refurbishment;

(b) demolition and construction-related 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 and the Sydney Children's Hospital, Royal Hospital for Women and surrounding health services precincts;

(c) demolition, site preparation and construction phase dust control and management,

(d) demolition, site preparation and construction phase erosion and sediment control and management;

(e) operational noise impacts on noise sensitive receivers (especially surrounding residences, the Sydney Children's Hospital, Royal Hospital for Women and surrounding health services precincts) arising from operational activities such as mechanical services (especially air conditioning plant).

The EPA expands on its comments in Attachment A

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

Yours sincerely

15.3.16

MIKE SHARPIN
Acting Manager, Metropolitan Infrastructure
NSW Environment Protection Authority
Attachment A

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS –

UNSW ELECTRICAL ENGINEERING BUILDING RE-FURBISHMENT

1. General

The EPA considers that the project the subject of the EIS 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. And the risk of encountering underground petroleum storage systems on the development site.

2. Construction phase

The EPA anticipates that construction and construction-related activities will be undertaken in an environmentally responsible manner with particular emphasis on –

- Site investigation and remediation,
- 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 and vibratory rolling),
- feasible and reasonable noise and vibration minimisation and mitigation,
- effective dust control and management,
- runoff, erosion and sediment control and management, and
- waste handling and management, particularly concrete waste and rinse water.

2.1 Site investigation and remediation

Recommendation

The proponent be required prior to commencing work the subject of the EIS –

(a) to prepare and implement an appropriate procedure for identifying and dealing with unexpected finds of site contamination, and

(b) to develop and implement site clean up and remediation as necessary.

Recommendation

The proponent be required to –

(a) develop and implement a protocol for the handling, storage, transport and disposal of any asbestos encountered during the course of the project, and

(b) satisfy the requirements of the Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 'asbestos wastes'.

2.2 noise and vibration

The EPA notes the proximity of noise sensitive receivers, including –

- residences in the Willis Street–Oval Lane residential precinct located south east of the electrical engineering building,
- Sydney Childrens Hospital (Randwick), and
- Royal Hospital for Women.

The EPA emphasises the importance of properly managing noise and vibration impacts during demolition, site preparation, construction and construction-related activities, especially in regard to high noise impact activities, such as grinding, jack hammering, pile driving, rock breaking and hammering, rock drilling, saw cutting, and vibratory rolling. The EPA strongly recommends that intra-day respite periods be imposed in negotiation with NSW Health and hospital managements (see also intra-day respites below).

The EPA understands that the proposal includes the demolition of existing structures.

The EPA provides guidance material available on its web site including downloadable copies of –

- the Interim Construction Noise Guideline (2009), and
- Assessing Vibration: a technical guideline (2006).

The EPA considers that the project is likely to generate significant noise and vibration impacts on surrounding residences and both hospitals during demolition, site preparation, construction and construction-related activities.

2.2.1 general construction hours

Although, section 7.2.1 to EIS Appendix H refers to standard construction hours as recommended in Table 1 Chapter 2 of the Interim Construction Noise Guideline, July 2009, the EIS does not commit to restricting site preparation, construction and construction-related activities to those standard hours

Recommendation

The proponent be required to undertake all demolition, site preparation, excavation and construction during the standard construction hours recommended in Table 1 Chapter 2 of the Interim Construction Noise Guideline, July 2009

2.2.2 intra-day respite periods

ICNG section 4.5 specifies construction activities proven to be particularly annoying and intrusive to nearby residents. The EPA anticipates that those site preparation, demolition, construction and construction-related activities generating noise with particularly annoying or intrusive characteristics 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 work referred to in ICNG section 4.5

Recommendation

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

2.2.3 queuing and idling construction vehicles and vessels

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) and vessels involved in construction and construction-related activities do not arrive at the project site or in surrounding residential precincts outside approved construction hours.

2.3 Dust control and management

The EPA is unclear whether the proposal involves bulk earthworks and the likelihood of large stockpiles of excavated material on the project site. Nevertheless, the EPA considers dust control and management to be an important air quality issue during demolition, site clearance and preparation, and subsequent construction. The EPA anticipates dust emissions as a result of –

(a) demolition,

(b) the excavation, processing and handling of excavation spoil,

(c) wind action on any spoil stock piles, and

(d) wind action on and plant movement across areas bare of vegetation or other cover.

Recommendation

The proponent be required to :

(a) minimise dust emissions on the site, and

(b) prevent dust emissions from the site.

2.4 Erosion and sediment control

Managing Urban Stormwater Soils and Construction, 4th Edition published by Landcom (the so-called 'Blue Book') provides guidance material for achieving effective erosion and sediment control on construction sites. However, 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, earthmoving, construction and construction-related activities until appropriate and effective erosion and sediment controls are in place, and

(b) daily inspection of erosion and 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 "*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.

2.5 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 not disposed of on the development site;

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) implementation of water sensitive urban design principles, including stormwater re-use, and

(c) implementation of energy efficiency and water conservation measures.

3.1 Noise and vibration impacts

Table 2 to EIS Appendix H (p.15) indicates that –

(a) the dominant noise source in the residential precinct to the south east of the electrical engineering building is rooftop plant noise from the existing electrical engineering building,

(b) night-time background noise levels at location S1 (Southeast of the existing EEB) were measured at night-time on 24 November 2015 (1.00 am to 2.00 am) with building J17 and J18 rooftop plant switched off, and.

(c) Leq / L90 levels were 42 dBA and 41 dBA respectively which aligns with the noise traces in Acoustic Report appendix A for this location, which tend to drop to around 40 dBA during the night-time period.

Section 8 of EIS Appendix H (p.39) states the ".. final plant selections have not been made, therefore a detailed assessment has not been able to be carried out." And, suggests instead a noise limit of 65-70 dBA at 1 metre of the building rooftop boundaries (for both EEB and Rex Vowels).

The EPA notes that the derived night-time project-specific noise level for Willis Street is 36 dBA, and was as a basis for mitigation design. The EPA further notes that compliance with the proposed design limit would likely result in compliance with the project-specific noise level.

Whilst EIS Appendix H indicates that noise impacts on nearby residences were assessed, the EIS does not appear to report any assessment of potential operational noise impacts on either the residences and hospitals to the east of the proposed development. The EPA, however, considers that if operational noise impacts satisfy criteria at the nearest sensitive receivers, further assessment of potential operational noise impacts at residences and hospitals to the east of university campus is unwarranted at this time.

Recommendation

The proponent be required to undertake compliance noise monitoring at the time of commissioning of roof top plant and equipment to confirm that noise emitted from rooftop plant and equipment associated with operation of the building –

(a) does not exceed the nominated project-specific noise levels at the most affected residence in the Willis Street-Oval Lane residential enclave, and

(b) does not exhibit tonal, intermittent or other characteristics that require application of 'modifying factor' adjustments to measured noise levels as outlined in Chapter 4 of the NSW Industrial Noise Policy, or give rise to sleep disturbance impacts.

3.2 Water Conservation

The EPA emphasises that water conservation is an essential component of ecologically sustainable development particularly pursuant to the principle of inter-generational equity.

The EPA considers that EIS section 6.2 does not adequately detail proposed measures to implement water sensitive urban design principles.

Recommendation

The proponent be required to implement water sensitive urban design principles, including stormwater collection, treatment and re-use for non-potable purposes.

3.3 Energy Efficiency

The EPA emphasises that energy efficiency is an essential component of ecologically sustainable development particularly pursuant to the principle of inter-generational equity.

The EPA notes the commitments in EIS section 6.20 to implementing passive and active energy efficiency.
