NSW EPA

Our reference: EF15/9059, DOC16/370785-01
Contact: John Goodwin

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

Dear Ms Fu

SSD 7714 BLACKTOWN HOSPITAL – STAGE 2 ACUTE SERVICES BUILDING - EIS

I am writing to you in reply to your invitation to the EPA to provide a submission in respect of the project EIS for the new 9 storey Acute Services Building and associated hospital re-development.

The EPA requests that the following advice be considered together with its letter dated 1 December 2015 concerning the Stage 2 Concept Plan and Enabling Works EIS 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 understands that demolition and bulk earthworks for the project have already been commenced. And, that 8 of 15 Panorama Parade residences backing on to the hospital campus are to be acquired to improve vehicular access to the acute services building.

The EPA strongly recommends that appropriate measures are adopted to ensure a seamless transition of environmental impact mitigation measures between demolition, site preparation and bulk excavation, and construction stages of the project, particularly if different contractors are to be engaged for two or more stages.

The EPA notes the location of noise sensitive receivers adjoining the hospital campus and their proximity to the Acute Services Building as follows –

- a residence at 13 Panorama Parade – 34 metres southwest,
- 'Mullauna' retirement village at 59-65 Bungarribee Road – 238 metres south,
- Blacktown Uniting Church at 59-65 Bungarribee Road,
- 'Rosemont' townhouses at 45 Bungarribee Road – 168 metres southeast

The EPA has identified the following site specific concerns based on the project information available on the Department's Major Projects web site:

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Level 13, 10 Valentine Avenue, Parramatta NSW 2150
Tel: (02) 9995 5000 Fax: (02) 9995 6900
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(a) handling, transport and disposal of any asbestos waste encountered on site;

(b) demolition (prior to refurbishment of existing internal areas), construction and construction-related noise and vibration impacts (including recommended standard construction hours and intra-day respite periods for highly intrusive noise generating work);

(c) demolition (prior to refurbishment of existing internal areas), construction and construction-related dust control and management;

(d) construction and construction-related erosion and sediment control and management;

(e) detailed assessment of operational noise and vibration impacts on noise sensitive receivers (especially surrounding residences) arising from operational activities such as emergency service vehicle movements, waste collection service and loading dock activities, mechanical services, and standby generator testing and operation;

(f) the need to vary the existing Western Sydney Local Health District radiation management licence under the Radiation Control Act and Regulation;

(g) operational storage, handling, transport and disposal of 'clinical and related wastes';

(h) the need to identify any proposed Underground Petroleum Storage System (UPSS) installed or proposed to be installed to supply to fuel to a back-up generator system to serve the proposed building (and how any such UPSS would satisfy the requirements of the Protection of the Environment Operations (Underground Petroleum Storage System) Regulation 2014 (including a properly designed and installed secondary leak detection system, loss detection procedures, environment protection plan documentation and incident log);

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

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

The EPA expands on its concerns in Attachment A to this letter.

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

Yours sincerely

26.8.16

MIKE SHARPIN
Acting Manager Metropolitan Infrastructure
Environment Protection Authority

Attachment A

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS -

SSD 7714 BLACKTOWN HOSPITAL ACUTE SERVICES

1. General

The EPA considers that the project comprises two distinct phases (construction and operational) and has set out its comments on that basis.

2. Construction phase

The EPA anticipates a range of environmental impacts during the construction phase of the development which should be comprehensively addressed in detail by the environmental assessment. And, notes the proximity of surrounding residences.

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

- detailed site contamination investigation and remediation,
- compliance with recommended standard construction hours,
- waste management consistent with the hierarchy of re-use, recycle and then disposal as the last resort,
- asbestos encountered during construction and demolition,
- feasible and reasonable noise and vibration minimisation and mitigation,
- intra-day respite periods from high noise generating construction activities (including jack hammering, rock breaking, pile boring or driving, saw cutting and vibratory rolling),
- effective dust control and management, and
- effective erosion and sediment control.

2.1 Site investigation and remediation

EIS Appendix K reports on a detailed site investigation which concludes that "... the site is suitable for the ongoing use as a hospital without further contamination or investigation.'

However, the EPA notes that the project includes demolition prior to refurbishment of existing internal spaces.

Recommendation

The proponent be required prior to commencing any work (including demolition) to prepare and implement an appropriate procedure for identifying and dealing with unexpected finds of site contamination, including asbestos containing materials and lead-based paint, particularly in respect of refurbishment of existing internal spaces.

The proponent must ensure that any waste material contaminated with asbestos is –

(a) classified as asbestos waste, and

(b) chemically tested prior to disposal to establish its further classification (i.e. it could also end up being Hazardous Waste as well and required immobilisation or treatment if other contaminants are found).

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'.

Note: The EPA provides additional guidance material at its web-site

http://www.environment.nsw.gov.au/waste/asbestos/index.htm.

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 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.

2.2.1 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.

2.3 Dust control and management

The EPA considers dust control and management to be an important air quality issue during demolition, construction and construction-related activities, which inevitably generate dust as a result of –

(a) excavation, processing and handling of excavation spoil,

(b) wind action on spoil stock piles, and

(c) 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

The 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.

The EPA emphasises the importance of –

(a) not commencing earthmoving or vegetation removal until appropriate 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 Noise and vibration

The EPA notes the proximity of surrounding noise sensitive land uses, including residences in Panorama Parade, at 'Mullauna' retirement village and Rosemont townhouses, and the Blacktown Uniting church.

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

The EPA provides the following guidance material for the assessment of noise and vibration impacts -

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

The proponent may download a copy of the above mentioned guidance material via the following link –

http://www.epa.nsw.gov.au/noise/

2.5.1 Recommended standard construction hours

The EPA notes that EIS section 3.10 (p.26) proposes that construction be undertaken between 7.00 am and 6.00 pm Monday to Friday and 7.00 am to 5.00 pm Saturdays. The Proposed Saturday construction hours are inconsistent with the recommended standard construction hours set out in Interim Construction Noise Guideline (ICNG) Table 1.

Recommendation

The proponent be required to ensure that demolition, construction and construction-related work is undertaken only during the standard construction hours recommended in Table 1 Chapter 2 of the Interim Construction Noise Guideline, July 2009.

2.5.2 Construction hours (including respite periods)

ICNG section 4.5 specifies construction activities proven to be particularly annoying and intrusive to nearby residents. The EPA anticipates that those 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 over continuous periods not exceeding 3 hours with at least a 1 hour respite every three hours, and.

(b) '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:

(a) comply with the standard construction hours as recommended in Table 1 Chapter 2 of the Interim Construction Noise Guideline, July 2009;

(b) scheduled intra-day 'respite periods' for construction activities identified in the Interim Construction Noise Guideline as being particularly annoying to surrounding residents and other noise sensitive receivers.

2.5.3 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.

The proponent should commit to undertaking a safety risk assessment of construction 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.

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

3. Operational phase

The project represents a significant long-term infrastructure investment with concomitantly long-term environmental impacts.

The EPA considers that environmental impacts that arise once the Acute Services Building commences operation can largely be averted by responsible environmental management practices, particularly with regard to:

(a) feasible and reasonable noise avoidance and minimisation, including in respect of emergency services vehicle operations on the site;

(b) undertaking comprehensive compliance monitoring during commissioning of the mechanical plant and equipment serving the acute services building and associated development;

(c) proper assessment, storage, handling, transport and disposal of wastes, especially clinical and cytotoxic waste;

(d) variation of the Western Sydney Local Health District radiation management licence;

(e) back-up generator associated underground petroleum storage system design, installation, documentation and use,

(f) water sensitive urban design, and

(g) practicable opportunities for energy efficiency and conservation.

3.1 Noise and vibration impacts

The EPA is aware from long experience that significant risks of unacceptable noise impact arise from inadequate noise management and mitigation measures.

The EPA anticipates that the proposed facilities are likely to change the nature and intensity of noise impacts on surrounding noise sensitive receivers (example: residences, Westmead Children's Hospital). And, that noise impacts are likely to include noise emitted from amongst other things:

- mechanical plant and equipment (including ventilation and elevator plant) and associated rooms and enclosures;
- activation of reversing beepers fitted to ambulances and other emergency services vehicles manoeuvring on the site (particularly at night);
- loading docks and waste collection services, including truck movements that activate reversing beepers; and
- back-up generator and automated valve testing.

The *NSW Industrial Noise Policy, January 2000* (INP) provides guidance material on noise impact assessment and anticipates feasible and reasonable noise mitigation and management measures.

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. However, the EPA notes that long-term background noise monitoring data presented in Appendix One to EIS Appendix M only covers a period of approximately 5.25 days rather than the minimum 7 days recommended in the INP.

In this instance, the EPA considers that an additional 1.75 days' monitoring data would be unlikely to have appreciably changed the rating background level at that location, due to the consistent noise environment as evidenced by the charts in Appendix A.

EIS Appendix M does not appear to include an assessment of –

(a) the potential for sleep disturbance from events such as, but not limited to, loading dock activities and emergency operations, or

(b) an assessment of internal traffic generated by the proposal and associated car parking areas.

The EPA considers that EIS Appendix M does not provide adequate information to address the operational noise impacts of the Acute Services Building and associated development.

Recommendation

The proponent be required to:

(a) either:

(a1) undertake quantitative assessment of predicted noise impacts of the operational phase of the proposed development on surrounding residences and other noise sensitive land uses, including impacts from the activation of ambulance and other emergency service vehicle reversing alarms, especially during evening and night; or

(a2) ensure, in the absence of the assessment referred to in paragraph (a1), that noise impacts of mechanical plant and equipment and the activation of ambulance and other emergency service vehicle reversing alarms do not exceed the following noise limits measured at the most affected noise sensitive receiver in Panorama Parade –

Noise descriptor	LAeq (15minute)	LAeq (period)	LA1 (1 minute)
Evening	47 dB (A)	45 dB (A)	-
Night	46 dB (A)	40 dB (A)	56 dB (A)

where 'evening' and 'night' have the same meaning as in the New South Wales Industrial Noise Policy, January 2000. And, where compliance monitoring is undertaken in accordance with the New South Wales Industrial Noise Policy, January 2000 and related Application Notes.

(b) adequately design, selection and maintenance of noise generating mechanical services (especially air handling plant and equipment, elevator plant and automated valves) and associated rooms and enclosures;

(c) ensure that mechanical plant and equipment serving the acute services building and associated development does not exhibit tonal, intermittent or impulsive noise characteristics; and

(d) undertake noise compliance monitoring of mechanical plant and equipment during commissioning of same so as to ensure avoidance of unintended and unacceptable noise impacts on surrounding residences and other noise sensitive land uses.

Recommendation

The proponent be required to ensure that the emergency services vehicle parking is designed, constructed and operated such that ambulances and emergency services vehicles entering, leaving and parking are able to accomplish those tasks (as far as is practicable

without compromising patient well-being) in a forward direction so as to avoid the need to activate reversing beepers, especially at night.

Recommendation

The proponent be required to install noise mounds or such other passive noise mitigation measures as may be necessary to minimise the noise impact of emergency and general patient receival areas, and internal traffic movements on residences adjoining and adjacent to the hospital campus.

Recommendation

The proponent be required to –

(a) design loading dock and waste collection areas to avoid or minimise the activation of vehicle reversing alarms during use of those facilities;

(b) restrict loading dock and waste collection services to the 'day' time as defined in the NSW Industrial Noise Policy, January 2000; and

(c) restrict back-up generator and automated valve testing to 'day' time as defined in the NSW Industrial Noise Policy, January 2000;

3.2 Clinical and related waste

The EPA anticipates that the proposed facilities will generate 'clinical and related waste' which are defined under the.

'Clinical and related waste' includes clinical waste; cytotoxic waste; pharmaceutical, drug or medicine waste; and sharps waste.

"Clinical waste means any waste resulting from medical, nursing, dental, pharmaceutical, skin penetration or other related clinical activity, being waste that has the potential to cause injury, infection or offence, and includes waste containing any of the following:

(a) human tissue (other than hair, teeth and nails),
(b) bulk body fluids or blood,
(c) visibly blood-stained body fluids, materials or equipment,
(d) laboratory specimens or cultures,
(e) animal tissue, carcasses or other waste from animals used for medical research,

but does not include any such waste that has been treated by a method approved in writing by the Director-General of the Department of Health."

The occupier of any premises comprising a hospital, day procedure centre, pathology laboratory, mortuary or medical research facility where clinical and related waste is generated, must ensure that there is a waste management plan, in respect of that waste, for the premises. And, should prepare that plan with due regard to the relevant provisions of clause 113 of the Protection of the Environment Operations (Waste) Regulation 2014.

The existing 'waste management plan' for the hospital should be modified as necessary in accordance with the Waste Management Guidelines for Health Care Facilities (meaning the publication '*Waste Management Guidelines for Health Care Facilities*' issued by NSW Health in August 1998).

3.3 Radiation Control Act and Regulation

The EPA administers the Radiation Control Act 1990 (and Radiation Control Regulation 2013) and anticipates that 'regulated material' will be stored and possessed on the university campus. 'Regulated material' means -

(a) radioactive substances,

(b) ionising radiation apparatus,

(c) non-ionising radiation apparatus of a kind prescribed by the regulations, and

(d) sealed source devices.

A 'person responsible' within the meaning of section 6 of the Radiation Control Act 1990 is obliged to hold an appropriate 'radiation management licence' in respect of regulated material at the acute services building.
A natural person who uses regulated material at the acute services building must hold a 'radiation user licence' and must comply with any conditions to which the licence is subject.

Frequently asked questions about radiation management licences is available via the following link

http://www.epa.nsw.gov.au/radiation/management/faq.htm

Recommendation

The proponent be required to apply for and obtain any necessary amendment to the 'radiation management licence' currently by Western Sydney Local Health District in respect of regulated material at the new acute services building.

3.4 Back-up Generator and Underground Petroleum Storage System

The EPA anticipates that the acute services building will be served by a back-up generator served in turn by an Underground Petroleum Storage System (UPSS).

The proponent may only use a UPSS in accordance with the requirements of the Protection of the Environment Operations (Underground Petroleum Storage System) Regulation 2014. And, any such UPSS must be designed, installed and operated with regard to Guidelines issued by the EPA.

Recommendation

The proponent be required to design, install, document and operate any underground petroleum storage system in accordance with the requirements of the Protection of the Environment Operations (Underground Petroleum Storage System) Regulation 2014

3.5 Water sensitive urban design and energy efficiency

The EPA emphasises that energy and water conservation are essential components of ecologically sustainable development particularly pursuant to the principle of inter-generational equity.

Hospitals are typically heavy users of –

- electricity which in NSW is for the most part generated by burning non-renewable fossil fuel resources, and

- potable water which is expensive and energy intensive to deliver on demand at a quality consistent with NHMRC Drinking Water Quality Guidelines.

The EPA considers the design stage of the project to be the optimum time to integrate measures to achieve -

- energy efficiency (with resultant running cost savings) and energy conservation through adoption of practicable opportunities to use renewable energy sources,

- water conservation through implementation of water sensitive urban design principles (including stormwater harvesting, treatment and re-use for non-potable purposes such as grounds maintenance), and

- water efficiency

The EPA acknowledges that EIS section 3.9 provides very broad outline of the proponent's assessment measures intended to achieve Environmentally Sustainable Development (ESD) strategies and principles. And, EIS Appendix P 'Integrated Water Management Report' provides an overview of water sensitive urban design to be implemented on the hospital campus in conjunction with the separately approved Enabling Works.

The EPA further notes that section 6.1 to Appendix P identifies potable water demand reduction strategies for incorporation into the project.

Recommendation

The proponent be required to implement water sensitive urban design principles in conjunction with the operation of the project including stormwater harvesting, treatment and re-use for non-potable consumption.

Recommendation

The proponent be required to provide a detailed analysis of how the proposed ESD initiatives deliver feasible and reasonable best practice standards.
