



Our reference: EF15/19454, DOC15/432244-01
Contact: John Goodwin

Ms May Banh
Department of Planning and Environment
GPO BOX 39
SYDNEY 2001

Dear Ms Banh

**SSD 6980 – BROOKVALE COMMUNITY HEALTH CENTRE – ENVIRONMENTAL
IMPACT STATEMENT (EIS)**

I am writing to you in reply to your invitation to the EPA to comment on the EIS for the Brookvale Community Health Centre.

The EPA requests that these comments be read in conjunction with its emails dated 10 April 2015 and 25 September 2015.

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


- (a) site investigation and remediation, including removal an Underground Petroleum Storage System and site validation under the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014;
- (b) engagement of a site auditor accredited under the Contaminated Land Management Act 1997
- (a) demolition related asbestos handling and management;
- (b) construction-related noise and vibration impacts (including recommended standard construction hours and intra-day respite periods for highly intrusive noise generating work);
- (c) site preparation and construction phase dust control and management,
- (d) site preparation and construction phase erosion and sediment control and management;
- (e) operational noise and vibration impacts on noise sensitive receivers (especially surrounding residences) arising from operational activities such as waste collection, loading dock activities, mechanical services (especially air conditioning plant);

- (g) operational assessment, storage, handling, transport and disposal of 'clinical and related wastes'; and
- (h) requirement to obtain a radiation management licence (or vary an existing licence) under the Radiation Control Act and Regulation.

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


MIKE SHARPIN
A/Manager Metropolitan Infrastructure
Environment Protection Authority

Encl. Attachment A

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS –

BROOKVALE COMMUNITY HEALTH CENTRE (CHC)

1. General

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

The EPA notes the proximity of surrounding residences.

The EPA further notes the likely presence of asbestos, most likely asbestos sheeting, and potentially site contaminating previous uses of parts of the site. And, designation of the site as being within an environmentally sensitive zone under the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014.

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.

2. Construction phase

The EPA anticipates a range of environmental impacts during the construction phase of the development.

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

- site investigation and remediation,
- handling, transport and disposal of any asbestos waste arising from demolition of existing structures,
- 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,
- waste management consistent with the hierarchy of re-use, recycle and then disposal as the last resort,
- effective dust control and management, and
- effective erosion and sediment control.

2.1 Site investigation and remediation

EIS Appendix K comprises a letter from Parsons Brinckerhoff dated 10 October 2015 which summarises the findings of previous site investigations.

The EPA notes that –

- a section A site audit statement has been issued for 612 Pittwater Road (subject to conditions), and
- a section B site audit statement has been issued for 620 Pittwater Road.

However, the EPA understands that a Section A site audit statement has not been issued for the entire development site.

Recommendation

The proponent be required to:

- (a) engage a site auditor accredited under the Contaminated Land Management Act 1997; and
- (b) provide a Section A site audit statement for the whole of the development site by an EPA accredited site auditor determining site suitability for the proposed land uses prior to undertaking any construction.

2.2 Asbestos

The EPA is aware of a number of structures set for demolition that are likely to contain asbestos cement cladding.

EPA guidance material concerning the handling, transport and disposal of asbestos wastes is available via the following link to its web-site

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

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 should be required to consult with SafeWork NSW concerning the handling of any asbestos waste.

2.3 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 should 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.

2.4 Dust control and management

The EPA considers dust control and management to be an important air quality issue during demolition, site clearance and preparation, bulk earthworks and subsequent construction and construction-related activities. For instance, bulk earthworks inevitably generate dust as a result of –

- (a) the 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 should commit to:

- (a) minimising dust emissions on the site, and
- (b) preventing dust emissions from the site.

2.5 Erosion and sediment control

The Managing Urban Stormwater Soils and Construction, 4th Edition published by Landcom (the '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.

2.6 Noise and vibration

EIS Appendix F comprises a Noise and Vibration Impact Assessment.

The EPA considers that the project is likely to generate significant noise and vibration impacts on surrounding residences and other noise sensitive land uses during demolition, site clearing and preparation, bulk earthworks, and construction and construction-related activities. The EPA provides guidance material available on its web site and including downloadable copies of –

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

The EPA notes that section 5.2 to Appendix F incorrectly suggests that the NSW Industrial Noise Policy is relevant to construction phase noise and vibration impact assessment.

2.6.1 *Noise and vibration (standard hours)*

The EIS does not appear to explicitly address the issue of construction hours although EIS Appendix F does appear to suggest certain works might be justified to be undertaken outside the standard hours recommended in the Interim Construction Noise Guideline, 2009 (ICNG)

However, the EPA does accept that certain emergency work may need to be undertaken urgently (other than during the standard recommended hours) in order to avoid –

- loss of life,
- damage to property, or
- environmental harm.

The EPA acknowledges that certain oversize plant and equipment may be subject to RMS travel restrictions. However, the EPA considers that all unloading of oversize plant or equipment onto the site and all loading of oversize plant or equipment for removal from the site should be undertaken during standard hours.

Recommendation

The proponent be required to ensure that demolition, site preparation, bulk earthworks, and construction and construction-related activities are undertaken during the recommended standard hours as set out in Table 1 to Chapter 2 of the Interim Construction Noise Guideline, 2009.

2.6.2 *Construction hours (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 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 should be required to schedule intra-day 'respite periods' for demolition, site preparation, bulk earthworks, and construction and construction-related activities identified in the Interim Construction Noise Guideline as being particularly annoying to surrounding residents.

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

2.6.4 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, 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 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.

3. Operational phase

The CHC will represent a significant long-term infrastructure investment with concomitantly long-term environmental impacts.

The EPA considers that environmental impacts that arise once the new facilities commence operation can largely be averted by appropriate environmental management practices, particularly with regard to:

- (a) feasible and reasonable noise avoidance and minimisation.
- (b) proper assessment, storage, handling, transport and disposal of wastes, especially clinical and cytotoxic waste;
- (c) management and use of regulated material under the Radiation Control Act 1990; and
- (d) energy and water conservation;

3.1 Noise and vibration impacts

EPA is aware from long experience that significant risks of unacceptable noise impact arise from inadequate noise management and mitigation measures. The EPA has been obliged to undertake extensive investigation of ongoing complaints about noise from air conditioning plant associated with newly commissioned hospital buildings.

The EPA reviewed EIS Appendix F *Noise and Vibration Impact Assessment* prepared by Acoustic Logic (Ref. 20150645.1/1706A/R2/JR dated 17 June 2015).

The EPA considers that further information is required from the proponent before it is able to determine the extent of the operational noise and vibration impacts of the proposal.

Section 6.3 to Appendix F indicates that "As detailed plant selections for the development are not available at this stage it is not possible to carry out a detailed examination of the ameliorative mitigation measures that may be required to achieve ..." the noise criteria derived for the proposal. Instead, section 6.3 suggests that noise from mechanical plant can be reduced to meet criteria by appropriate selection of noise mitigation measures, such as silencers and duct lining. The EPA considers the approach suggested in section 6.3 to be inadequate particularly given the proximity of nearby residences to the proposed plant room on the south side of the building.

Accordingly, the EPA considers that the EIS does not adequately *"Identify and provide a quantitative assessment of the main noise and vibration sources during construction and operation. Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land."*

The EPA further considers that:

- (a) the EIS should have included an indicative worst-case quantitative assessment of the likely noise impact of mechanical plant to nearby residential receivers, together with information on the noise mitigation measures required to achieve applicable worst-case criteria; and
- (b) the EIS should have included an undertaking that noise emissions from mechanical plant will not be 'tonal' as defined in Chapter 4 of the NSW Industrial Noise Policy (INP).

However, the EPA would consider it reasonable to adopt a night-time noise limit of 40dBLAeq (15 minute), measured at the most affected residence, applied to air handling and other mechanical plant and equipment –

- (a) in the absence of a worst-case quantitative assessment referred to above, and
- (b) subject to the plant and equipment not generating noise that exhibits tonal or other annoying characteristics likely to contribute to sleep disturbance.

Recommendation

The proponent be required to undertake a comprehensive assessment of noise and vibration impacts associated with operation of the CHC and to identify noise mitigation and management measures, including but not limited to:

- (a) potential sleep disturbance impacts (including ground-borne noise impacts on surrounding residences and the hospital;
- (b) tonal noise emissions which may be associated with plant and equipment for which 'modifying factors' (see INP chapter 4) may need to be applied to noise monitoring data and associated noise impact assessment;
- (c) mitigating against noise and vibration (human comfort) impacts from mechanical plant;
- (d) design of loading docks and waste collection areas to –
 - (i) avoid or minimise the activation of vehicle reversing alarms during use of those facilities, or
 - (ii) adequate noise shielding of surrounding noise sensitive receivers, especially residences, from noise generated during activities associated with those facilities;
- (e) adequate design, selection and maintenance of noise generating mechanical services (especially air handling plant and equipment and automated valves) and associated rooms and enclosures; and
- (f) limiting the hours of operation of loading dock and waste collection activities to 'day-time' hours, being 7.00 am to 6.00 pm Monday to Saturday and 8.00 am to 6.00 pm Sundays and public holidays); and
- (g) negotiating with residents and the hospital the times at which fire alarms and standby emergency generators (if any) are tested

Recommendation

That consideration be given to requiring the proponent to undertake the following:

- (a) a noise compliance assessment –
 - (i) during commissioning of the CHC, and
 - (ii) at set periods following commencement of operation of the CHC; and

- (b) reporting the results of the compliance assessment monitoring referred to in (a) to confirm that noise levels do not exceed levels predicted in the required noise and vibration impact assessment and acceptable noise criteria identified in the NSW Industrial Noise Policy, January 2000.

3.2 Clinical and related waste

EIS section 3.9 confirms that operation of the CHC will generate 'clinical and related waste' but only a brief outline of how such wastes will be managed.

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.

Recommendation

The proponent be required to prepare a comprehensive 'waste management plan' for the CHC 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). However, the EPA is unclear whether 'regulated material' will be stored and possessed at the CHC. '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 hospital campus. And, the existing management licence held by the Local Health District will require amendment in respect of any such material at the CHC.

A natural person who uses regulated material at the CHC 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 consult with the Environment Protection Authority in regard to any necessary amendment to the Local Health District 'radiation management licence' in respect of regulated material at the CHC and the management and handling of waste containing radioactive material.

3.4 Energy and Water Conservation

Energy and water conservation and efficiency are essential components of ecologically sustainable development particularly pursuant to the principle of inter-generational equity.

The EPA notes that EIS Section 3.10 outlines proposed energy efficiency measures to be adopted in conjunction with operation of the CHC.

The EPA further notes:

- the large areas of hardstand proposed across the development site;
- the proximity of Warringah Golf Course south of the development site;
- the proximity of Brookvale Creek which traverses the golf course; and
- that EIS Appendix I Stormwater Management Report H proposes "... an onsite detention tank to be consistent with Warringah Councils On-site Stormwater Detention Technical Specification, August 2012." with stormwater quality "... addressed by incorporating a gross pollutant trap (HumeCeptor) and a Humes Jellyfish ...".

However, the EPA is unclear whether stormwater detained on site will be stored for re-use (examples: landscape irrigation, toilet flushing) as would be suggested by Water Sensitive Urban Design principles and objectives. The proponent does not appear to have investigated opportunities for stormwater re-use on site or by the nearby golf course

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),
- water conservation through stormwater collection, treatment and re-use for non-potable purposes such as grounds maintenance, and
- water efficiency

Recommendation

The proponent be required to identify, evaluate and implement additional practical measures to minimise potable water use and to integrate those measures into the design of the CHC.

Recommendation

The proponent be required to identify, evaluate and implement additional practical measures for the management of stormwater consistent with the principles and objectives of water sensitive urban design, including collection, treatment and re-use of stormwater for non-potable water uses on the development site and at Warringah Golf Course.
