NSW EPA

Your reference SSI 5982
Our reference: EF13/5120
Contact: J Goodwin 9995 6838

Peter McManus
Department of Planning and Infrastructure
GPO BOX 39
SYDNEY 2001

Dear Mr McManus

SSI 13_5982 – PROPOSED NORTHERN BEACHES HOSPITAL EIS

I am writing to you in reply to your invitation to the EPA to comment on the EIS for Northern Beaches Hospital stage 1, including concept design, site clearance and preparatory works. The EPA draws your attention to its letter dated 18 June 2013 providing detailed input to the draft DGRs.

As outlined in our email of 19 November 2013, the EPA does not consider the Noise Assessment comprising Appendix K to be sufficiently comprehensive and detailed to allow the EPA to determine the extent of the noise and vibration impacts of the proposal. The EPA understands that the Department referred our concerns to the proponent.

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) a detailed assessment of potential site contamination including engagement of a site auditor;

(b) handling, transport and disposal of any asbestos waste;

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

(d) construction-related noise and vibration impacts (including recommended standard construction hours and intra-day respite periods for highly intrusive noise generating work);

(e) site preparation and construction phase dust control and management,

(f) site preparation and construction phase erosion and sediment control and management;

(e) operational noise and vibration impacts on noise sensitive receivers (especially surrounding residences and The Forest High School) arising from operational activities such as emergency service vehicle movements, waste collection, loading dock activities, mechanical services (especially air conditioning plant) and standby generator testing and operation;

PO Box 668 Parramatta NSW 2124
Level 7, 79 George Street Parramatta NSW 2150
Tel: (02) 9995 5000 Fax: (02) 9995 6900
ABN 30 841 387 271
www..environment.nsw.gov.au

(f) feasible and reasonable operational noise mitigation and management measures, including noise barriers and location of emergency service vehicle access to minimise impacts on surrounding residents; and

(g) 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

28/11/13

FRANK GAROFALOW
Manager, Metropolitan Infrastructure
NSW Environment Protection Authority
encl. Attachment A

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS –

NORTHERN BEACHES HOSPITAL STAGE 1

(CONCEPT DESIGN, SITE CLEARANCE AND PREPARATORY WORKS)

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 has not found any draft statement of commitments for the project.

The EPA understands that Manly Area Health Service facilities buildings have been demolished and removed from the land and that Bantry Bay Road has been acquired but not demolished. The EPA further understands there are no known underground fuel storage tanks on the land but part of the land was cleared and used for agriculture between 1906 and 1959.

The EPA notes the proximity of The Forest High School and residences along Frenchs Forest Road and the southern side of Warringah Road .

2. Construction phase

The construction phase is proposed over 3 years between 2015 and 2018. 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.

The EPA anticipates that 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,
- 'special waste' management (i.e. asbestos),
- 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

The EPA understands from the EIS that a Phase 1 contamination assessment was undertaken and is the subject of Douglas Partners Project Report 73033.01 dated July 2012.

The EIS concludes that based on the abovementioned assessment report "... the potential for chemical contamination is considered low: ..." (p.56 , NBH Stage 1). And, that asbestos impacted soils have been previously identified on the site following demolition of former residential buildings and are likely in the vicinity of the site of the former health centre..

EIS Section 7.10 goes on to indicate that soils under the former community health building may have been treated with organochlorine pesticides. The EPA considers that given the proximity of bushland to the former residential and community health centre buildings, those building footprints and their immediate curtilage are likely to have been treated with termiticides and other pesticides over many years.

The EPA is unclear about the fate of Bantry Bay Road or whether any assessment has been undertaken of hydrocarbon or other contamination associated with the road and associated drainage structures, particularly should the road be demolished.

The EPA further notes that Appendix H section 6.1 (p.6) in discussing history of use indicates that significant areas of the site had been extensively cleared and were previously "... owned by orchardists for the majority of the period between 1906 and 1959. It is likely that this was part of the property to the west of the site which appeared to have orchards present on it. ..." The EPA considers that areas of bushland regrowth following agricultural use since acquisition by the State government, are likely to have been subject to application of a variety of agricultural chemicals, including a variety pesticides typically in use during pre and post war periods.

The EPA is concerned that the scope of the site investigations conducted to date are insufficient to adequately characterise the general contamination status of the site, noting at the same time that additional investigation is recommended.

The EPA is unclear whether a site auditor has been engaged for the project at this point in time. The EPA considers that re-development of the site for a hospital campus warrants the involvement of a site auditor..

Recommendation

The proponent should commit to satisfying the requirements of the Protection of the Environment Operations ('Waste Regulation) 2005 with particular reference to 'special wastes'. The EPA provides additional guidance material at its web-site http://www.environment.nsw.gov.au/waste/asbestos/index.htm.

Recommendation

The proponent should commit to consulting with Workcover NSW concerning the handling of any asbestos waste.

Recommendation

The proponent should commit to:

(a) a more detailed investigation of site contamination; and

(b) engaging a site auditor accredited under the Contaminated Land Management Act 1997.

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 should commit to ensuring 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 site clearance and preparation, and subsequent construction. 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 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.

2.6 noise and vibration

The EPA considers that the project is likely to generate significant noise and vibration impacts on surrounding residences, the adjoining high school and other noise sensitive land uses during construction. 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).

Recommendation

The proponent be required to –

(a) identifying surrounding noise sensitive land uses, and

(b) undertake a comprehensive noise and vibration impact assessment of construction activities, especially any such activities -

(i) likely to generate noise with annoying or intrusive characteristics, or

(ii) proposed to be undertaken outside the recommended standard hours discussed in Table 1 to the *Interim Construction Noise Guideline.*

2.6.1 construction hours (including respite periods)

Whilst ICNG recommended standard hours for construction (outside of which long experience shows increasing levels of community concern about construction noise impacts) the EPA accepts 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.

ICNG section 4.5 specifies construction activities proven to be particularly annoying and intrusive to nearby residents and school students. 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 :

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

(b) schedule 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 (the Forest High School); and

(c) adopt special 'examination-time' arrangements in negotiation with the Forest High School.

2.6.2 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 (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 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 Hospital 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 hospital facilities commence operation can largely be averted by responsible 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; most recently Royal North Shore Hospital acute services building.

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 and The Forest high school). The *NSW Industrial Noise Policy, January 2000* (INP) provides guidance material on noise impact assessment.

The proponent should ensure that the EIS for stage 2 is sufficiently comprehensive and detailed to allow the EPA to determine the extent of any noise and vibration impact(s) of the proposal. The stage 2 EIS should both:

(a) describe operational mitigation and management options that will be used to prevent, control, abate or minimise identified noise and vibration impacts to reduce risks to human health and prevent the degradation of the environment; and

(b) include an assessment of the effectiveness and reliability of the mitigation and management measures and any residual impacts after these measures are implemented.

Recommendation

The proponent be required to undertake a comprehensive assessment of noise and vibration impacts associated with operation of the hospital its various stages of development together with design for feasible and reasonable noise impact avoidance and mitigation, including but not limited to:

(a) potential sleep disturbance impacts on surrounding residents and child care facilities (if any);

(b) the need to apply 'modifying factors' (see INP chapter 4) to noise monitoring data and associated noise impact assessment;

(c) likely noise impacts on residences and the high school of where the emergency service vehicle and parking area accesses are to be located;

(d) noise shielding of residences and the high school from on site parking (including emergency vehicle manoeuvring and parking/holding areas;

(e) noise compliance monitoring of mechanical plant noise during commissioning, can largely avoid unintended noise and vibration impacts.

(f) 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 and the high school, from noise generated during activities associated with those facilities;

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

- limiting the hours of operation of loading dock and waste collection activities outside '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);

- negotiating with residents and the high school the times at which standby emergency generators are tested and fire alarms are tested

Recommendation

The proponent be required to avert unacceptable noise impacts on surrounding noise sensitive receivers by undertaking the following –

- preparing a detailed operational noise impact statement that incorporates feasible and reasonable measures to avoid, minimise and manage noise and incorporating those noise avoidance and minimisation measures at the design stage of the project,
- establishing and fostering a good relationship with noise sensitive receivers, especially surrounding residents and the high school (including facilitation of the logging noise complaints and obtaining an active and timely response to those complaints);
- undertaking a noise monitoring program to 'ground truth' noise impact predictions at set periods following commencement of operation of the new facilities;
- restricting loading dock, waste collection and standby emergency generator testing activities to 'day-time' as defined in the NSW Industrial Noise Policy, January 2000;
- undertaking a noise monitoring program at various periods after commencement of operation of the each project element to verify that measured noise levels do not exceed levels predicted in the required noise impact statement and acceptable noise levels identified in the NSW Industrial Noise Policy, January 2000.

3.2 Clinical and related waste

EIS section 7.13 briefly discusses waste management but offers no detail and no reference to the Protection of the Environment Operations (Waste) Regulation 2005.

The EPA anticipates that the proposed facilities will generate 'clinical and related waste' which are defined under the Protection of the Environment Operations Act 1997. Clinical and related waste includes clinical waste; cytotoxic waste; pharmaceutical, drug or medicine waste; and sharps waste.

Clinical and related waste has been pre-classified as a 'special waste'. This allows the EPA to set more stringent and specific requirements for the transport and management of the waste to minimise the risk to the environment and human health. Clause 43 to the Protection of the Environment Operations (Waste) Regulation 2005 prescribes requirements for managing certain clinical and related waste.

Waste managers/operators who transport, store, treat or dispose of clinical and related waste should check the details of the Protection of the Environment Operations Act and the Protection of the Environment Operations (Waste) Regulation 2005 for licensing and generic requirements in relation to clinical waste.

Recommendation

The proponent be required to undertake proper assessment, handling, storage, transport, treatment and disposal of clinical and related waste arising from operation of the new facilities to ensure compliance with Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Waste) Regulation 2005.

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 hospital 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 hospital campus.

A natural person who uses regulated material at the hospital campus 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

Appendix N section 1.2 acknowledges the EPA's Waste Classification Guidelines including Part 3: Waste Containing Radioactive Material

Recommendation

The proponent be required to consult with the Environment Protection Authority in regard to a 'radiation management licence' in respect of regulated material on the hospital campus and the management and handling of waste containing radioactive material.

3.4 Energy and Water Conservation

EIS Section 9.2 Ecologically Sustainable Development appears to be mute on energy and water conservation and efficiency. However, 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.

Hospitals are also typically heavy consumers of potable water which is expensive and energy intensive to deliver on demand at quality consistent with NHMRC Drinking Water Quality Guidelines.

The EPA considers the design stage of the project ot be the optimum tiime 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 practical measures to minimise energy and water use and to integrate those measures into the design of the hospital campus and its supporting infrastructure..
