NSW EPA

PCU059084

Your reference SSD 6674
Our reference: EF13/5547, DOC15/71040-02
Contact: J Goodwin 9995 6838

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

Dear Ms Fu

SSD 6674 – UNSW BIOLOGICAL SCIENCES PROJECT EIS

I am writing to you in reply to your invitation to the EPA to comment on the EIS for University of New South Wales Biological Sciences project construction and operation phases.

The EPA requests that you take into account its previous comments by letter dated 25 September 2014.

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) potential site contamination;

(b) 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) construction phase dust control and management;

(d) construction phase runoff and sediment control;

(e) construction phase air quality impacts;

(f) operational noise and vibration impacts;

(g) operational waste management including radioactive waste, clinical and related wastes and trackable wastes;

(h) operational radiation control; and

(i) operational energy efficiency and water conservation.

PO Box 668 Parramatta NSW 2124
Level 13, 10 Valentine Street Parramatta NSW 2150
Tel: (02) 9995 5000 Fax: (02) 9995 6900
ABN 30 841 387 271
www..environment.nsw.gov.au

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

7-4-15

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

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS –

UNSW BIOLOGICAL SCIENCES PROJECT

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 understands that certain site preparation works are to be undertaken pursuant to a separate planning process. And, is concerned that the assessment and management of the environmental impacts of those preparatory works and the work the subject of the EIS may not be seamless.

The EPA notes for instance the proximity of surrounding residences and 2 nearby hospitals which may be adversely affected by noise impacts during site preparation, construction and operation phases of the project. And that, the EIS identifies the presence of uncontrolled fill materials and an underground petroleum storage system on the development site.

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 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),
- feasible and reasonable noise and vibration minimisation and mitigation,
- effective dust control and management,
- runoff, erosion and sediment, and
- waste handling and management, particularly concrete waste and rinse water, and

2.1 <u>Site investigation and remediation</u>

EIS section 6.9.1 states that the site was at one time a quarry which "... was backfilled in an uncontrolled manner with deep contaminated and heterogeneous material." And, confirms the possible presence of asbestos, especially in the fill material.

The EPA understands from the EIS that a Phase 1 contamination assessment was undertaken by Douglas Partners as outlined in EIS Appendix K. The EPA is concerned that 'enabling works' for the project (which presumably include site excavation and remediation) may not be encompassed by the EIS or form part of the SSD 6674 application.

Underground Petroleum Storage System (UPSS)

EIS Appendix K (p.32) indicates that an existing UPSS is to be removed from the site pursuant to a separate REF process, presumably under Part 5 of the Environmental Planning and Assessment Act 1979. And, incorrectly refers to the 2008 Regulation which was superseded in September 2014.

The EPA emphasises that the UPSS removal work must be undertaken in accordance the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014 and related technical notes and guidelines available on the EPA web site via the following links –

http://www.epa.nsw.gov.au/clm/upssguidelines.htm

http://www.epa.nsw.gov.au/resources/clm/1036technotedecom.pdf

Recommendation

The proponent be required to obtain a validation report pursuant to the requirements of the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014 before undertaking work the subject of the EIS.

Enabling works

The EPA notes that the final paragraph of the Executive Summary to EIS Appendix K concludes that the site can be made suitable for the proposed use as an educational establishment subject to undefined site '"... Enabling Works ...".

Recommendation

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

(a) to undertake additional detailed investigation of potential soil and groundwater contamination,

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

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

Recommendation

The proponent should commit to satisfying 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 should commit to consulting with Workcover NSW concerning the handling of any asbestos waste that may be encountered.

2.2 noise and vibration

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

- residences on the eastern side of Botany Street
- residences on the northern side of High Street,
- residences to the south
- 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 respites 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.

Recommendation

The proponent be required to establish the background noise level at the most affected residential receivers and both hospitals.

2.2.1 general construction hours

EIS Section 3.2 indicates that all construction and construction-related activities will be undertaken during standard construction hours as 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.

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

(a) demolition,

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

(c) wind action on 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) appropriate clinical and related waste management, and

(c) radiation

(c) energy efficiency and water conservation measures.

3.1 Noise and vibration impacts

EIS section 6 indicates that the proposed 9 storey building and associated development will include rooftop cooling towers and other mechanical ventilation plant as well as a loading dock and an emergency generator.

The EPA anticipates that operational noise impacts are likely to include noise from amongst other things -

- mechanical ventilation plant and equipment, including a chiller plant on the lower ground floor,
- truck movements (incl. reversing beepers) associated with use of the loading dock and with waste collection services, and
- testing of emergency generators.

The EPA anticipates the proposed development may have significant operational noise impacts on nearby sensitive receivers, including residences to the east, north and south, Sydney Children's Hospital and the Royal Hospital for Women.

However, EIS Appendix G indicates that noise monitoring to establish background noise levels, which are fundamental to assessing operational noise impacts, are questionable because the measurements:

(a) were limited to only 5 days of background monitoring rather than the minimum of 7 days required by the guidance material in the NSW Industrial Noise Policy (INP);

(b) are not supported by any assurance that they measurements were not affected by adverse meteorology (i.e. rain or winds with a velocity exceeding 5 metres per second);

(c) were not made at or near the boundary of noise sensitive receivers (example: most affected residences particularly to the east but including the most affected nearby residences to the north and south);

(d) were not made at nearby hospitals located to the east along Hospital Road; and

(c) were made at a location adjacent to a university building, which may have raised night-time background levels due to the influence of -

(i) mechanical plant, and

(ii) façade reflection.

The EPA is further concerned that EIS Appendix G presents generic/qualitative comments and recommendations in relation to noise objectives and defers quantification of impacts to the detailed design stage. The EPA considers that a detailed assessment of the operational noise impacts of the proposed development against the relevant INP criteria is impracticable given the omission of quantitative objectives for plant and equipment, loading dock operations and emergency generator testing.

Recommendation

The proponent be required to undertake background monitoring at the most affected residential receivers and both hospitals in accordance with the guidance material provided in the NSW Industrial Noise Policy.

Recommendation

The proponent be required to ensure that all noise resulting from operation of plant and equipment associated with operation of the building, loading dock operations and waste collection services does not exceed properly determined night, evening and day background levels by more than 5dB at the potentially most affected residence on Botany Road.

3.2 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 university campus.

A natural person who uses regulated material at the university 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

Recommendation

The proponent be required to consult with the Environment Protection Authority in regard to any necessary amendment to the University's 'radiation management licence' in respect of regulated material at the new facilities and the management and handling of waste containing radioactive material.

3.3 Radioactive Waste

EIS Appendix W identifies various Class 7 radioactive (substances wastes) that may be generated during operation of the project.

As noted in section 3.3 to these comments, the EPA administers the Radiation Control Act 1990 (and Radiation Control Regulation 2013). However, EIS Appendix W section 3.9 incorrectly refers to the Office of Environment and Heritage rather than the EPA as the regulatory authority.

Waste containing radioactive material must be classified in accordance with the EPA's Waste Classification Guidelines including Part 3: Waste Containing Radioactive Material.

Radioactive material must be placarded, consigned, packed and loaded for transport and transported in accordance with the Radiation Control Act 1990 (and Radiation Control Regulation 2013).

Recommendation

The proponent be required to consult with the Environment Protection Authority in regard to the management of radioactive waste – see also recommendation to section 3.2 to these comments.

3.4 Clinical and related waste

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.

EIS Appendix W sections 3.10 to 3.13.2 briefly outline a range of clinical and related wastes likely to be generated but appears to omit any reference to the special requirements relating to clinical and related waste pursuant to clause 113 to Protection of the Environment Operations (Waste) Regulation 2014.

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 consult with the Environment Protection Authority in regard to proper assessment, handling, storage, transport, treatment and disposal of clinical and related waste arising from operation of the new facilities.

3.5 Trackable waste

The EPA considers it likely that that the proposed facilities will generate some wastes likely to be 'trackable waste' within the meaning of the Protection of the Environment Operations (Waste) Regulation 2014.

Recommendation

The proponent be required to consult with the Environment Protection Authority in regard to proper assessment, handling, and transport of 'trackable waste' arising from operation of the new facilities.

3.6 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 the design stage of the project to be the optimum time to integrate measures to achieve water conservation through stormwater collection, treatment and re-use for non-potable purposes.

3.7 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 considers the design stage of the project to be the optimum time to integrate measures to achieve passive and active energy efficiency throughout the new facilities.
