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SSD 7974

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

10 November 2017

Dear Ms Fu

SSD 7974 – SYDNEY UNIVERSITY HEALTH PRECINCT (STAGE 1) – ENVIRONMENTAL IMPACT STATEMENT (EIS)

I am writing to you in reply to your invitation to the NSW Environment Protection Authority (EPA) to make a submission concerning the above project EIS.

The EPA requests that this submission be read in conjunction with its letter dated 29 September 2016 in respect of the draft SEARs for the project.

The EPA emphasises that it does not review or endorse environmental management plans or the like for reasons of maintaining regulatory 'arms length' and therefore has not reviewed any environmental management plan forming part of or referred to in the EIS.

The EPA notes with concern the close proximity of the existing Blackburn Building to Royal Prince Alfred hospital intensive care services and maternity wing as well as other hospital facilities and anticipates significant noise and potential vibration impacts associated with demolition, site preparation, bulk earthworks, and construction and construction-related activities.

The EPA further notes that EIS section 2.3 indicates that the proponent intends to demolish existing structures (including the multi-storey 'Blackburn' building) down to ground level pursuant to a separate approval process. Nevertheless, the EPA anticipates that any demolition and site preparation work undertaken by or on behalf of the proponent, would be undertaken:

(a) in close consultation with Sydney Local Health District and hospital management to minimise any impacts on RPA hospital patients by amongst other things implementing intra-day respite periods from high noise impact activities;

(b) only during weekdays and only during the recommended standard construction hours of 7.00 am to 6.00 pm with high noise impact activities not to commence before 8.00 am and to cease by 5.00 pm;

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(c) using demolition methods having the lowest feasible and reasonable noise impact, including amongst other things –

(i) stripping out without use of power tools,

(ii) installing sound reducing liners in tipper truck bodies,

(iii) loading tipper trucks behind intervening buildings,

(iv) processing and sorting demolition waste off site, and

(v) using hydraulic shears (instead of highly intrusive noise generating implements such as rock breakers, rock hammers and concrete/demolition saws) to remove re-inforced concrete structural elements;

(d) using other environment protection measures outlined in this submission for below ground demolition, site preparation, bulk earthworks, construction and construction-related activities, and

(e) by such means as necessary to ensure a seamless transition of environmental impact mitigation measures between demolition, site preparation, bulk excavation, and construction stages of the project, particularly if different contractors are to be engaged for some or all of those stages of the project.

The EPA has identified the following site specific concerns based on the project information available on the Department of Planning and Environment major projects web site:

(a) potential site contamination, including information about groundwater and a detailed assessment of the footprint and surrounds of existing buildings following their demolition;

(b) construction phase noise and vibration impacts (including recommended standard construction hours and intra-day respite periods for highly intrusive noise generating work) on noise sensitive receivers, especially RPA h such as surrounding residences;

(c) construction phase dust control and management,

(e) construction phase erosion and sediment control and management;

(f) operational noise impacts on RPA hospital and other nearby off-campus noise sensitive land uses;

(g) potential operational use of equipment and substances that may warrant variation of the existing radiation management licence held by Sydney University under the Radiation Control Act and Regulation;

(h) operational storage, handling, transport and disposal of ‘clinical and related wastes’;

(i) operation including secondary leak detection associated with any Underground Petroleum Storage System (UPSS) serving the proposed back-up generator;

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

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

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

Yours sincerely

JACINTA HANEMANN
Regional Manager Operations - Metropolitan Infrastructure
NSW Environment Protection Authority

Attachment A

Contact officer: John Goodwin

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS –

SYDNEY UNIVERSITY HEALTH PRECINCT (STAGE 1)

1. General

The EPA considers that the project comprises distinct phases of construction and operation and has set out its comments on that basis.

The EPA notes the proximity of surrounding residences which may be adversely affected by noise impacts during demolition, site preparation, construction and operation phases of the project.

2. Construction phase

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

- the site contamination identification and remediation,
- proper handling, transport and disposal of hazardous materials,
- compliance with recommended standard construction hours,
- intra-day respite periods from highly intrusive noise generating 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,
- erosion and sediment control, and
- waste handling and management, particularly concrete waste and rinse water.

2.1 Hazardous materials and soil contamination

The EPA understands that the Blackburn Building was completed in 1933 and substantially altered during the 1960s and thus anticipates that lead-based paint and asbestos containing materials are likely to be encountered. The EPA further notes the potential for polychlorainted biphenyls (PCB) contamination from old light fittings and electrical equipment.

EIS Appendix N did not identify contamination above screening levels within soil or groundwater collected during the limited investigation and indicates –

(a) at section 2.2 that ‘low level radioactive waste’ was kept in the dangerous goods store serving the health precinct;

(b) at section 2.2 that an emergency (diesel) generator is located in the northern courtyard of the Blackburn Building and that "… it has been assumed to contain a small internal tank of diesel fuel."; and

(c) at section 6.6 that drains serving Blackburn Building research laboratories and the dangerous goods store may have become contaminated over time with the risk of soil contamination due to breakages and leaks.

The EPA thus considers it prudent to investigate –

(a) (prior to any demolition) whether sanitary plumbing and drainage serving Blackburn Building research laboratories and the dangerous goods store may have been contaminated by radioactive substances,

(b) potential soil contamination following removal of existing structures and drainage infrastructure, and

(c) whether an underground petroleum storage system serves the emergency generator located in the northern courtyard of the Blackburn Building.

Recommendation

The proponent be required to investigate whether any sanitary plumbing and drainage serving Blackburn Building research laboratories and the dangerous goods store may have been contaminated by radioactive substances.

Recommendation

The proponent be required to investigate whether any underground petroleum storage system is associated with the emergency generator located in the northern courtyard of the Blackburn Building.

Recommendation

The proponent be required prior to commencing work to prepare and implement an appropriate procedure for identifying and dealing with unexpected finds of site contamination, including –

(i) asbestos containing materials,

(ii) lead-based paint, and

(iii) PCBs.

Recommendation

The proponent be required to ensure that following demolition of any existing structures and in ground utilities further investigation be undertaken of soil contamination within the footprint of those structures and utilities prior to undertaking any construction.

Recommendation

The proponent be required to ensure processes outlined in *State Environmental Planning Policy 55 - Remediation of Land (SEPP55)* are followed in order to assess the suitability of the land and any remediation required in relation to the proposed use.

Recommendation

The proponent be required to report to the EPA any contamination identified during further investigation which contamination meets the triggers in the EPA *Guidelines for the Duty to Report Contamination*

Note: the Guidelines are available at the EPA web site via the following link –

http://www.epa.nsw.gov.au/resources/clm/150164-report-land-contamination-guidelines.pdf

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 the EPA web site via the following link –

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 noise and vibration

The EPA considers that noise and vibration impacts should be assessed for noise sensitive land uses not located on the development site (i.e. the University campus).

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 and saw cutting.

The EPA is especially concerned about demolition, site preparation, bulk earthworks, construction and construction-related noise and vibration impacts on Royal Prince Alfred hospital, including the intensive care services and maternity wing which is only 30 metres from the existing Blackburn Building,

The EPA further anticipates that demolition, site preparation, bulk earthworks, construction and construction-related activities are likely to have significant noise impacts on off-campus noise sensitive land uses, including –

(a) St Andrew's residential college (subject to clarification of whether it is off-campus),

(b) Newtown North public school, and

(c) Carillon Avenue child care centre.

The EPA understands that the proponent has initiated preliminary liaison between itself and the Sydney Local Health District (to which Royal Prince Alfred Hospital belongs) and the management of St Andrew's College.

2.2.1 background noise measurement

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.

The EPA is concerned that monitoring to establish background noise levels was undertaken inconsistent with the guidance material provided in the INP. For instance, section 3.1 to EIS Appendix F '*SEARs Noise and Vibration Assessment'* indicates that unattended background noise monitoring was undertaken at Wesley residential college in 2012. However, the EPA understands that Wesley college is located within lot 1 in deposited plan 1171804 being part of the University campus.

Instead, the EPA anticipates that background noise measurements would have been undertaken at the most or potentially most affected noise sensitive receiver locations being –

(a) Royal Prince Alfred Hospital,

(b) off-campus residential - St Andrew's College (subject to clarification of off-campus status),

(c) off-campus educational establishment - Newtown North Public School, and

(d) off-campus child care centre – Carillon Avenue child care centre.

The EPA is also concerned that EIS Appendix F only refers to the 2012 background noise measurements and does not provide any detail as to how those measurements were undertaken and whether not the equivalent of "… one week's worth of valid data …" was obtained in a manner consistent with the guidance material provided in the INP.

Recommendation

The proponent be required to undertake background noise monitoring consistent with the guidance material provided in the New South Wales industrial Noise Policy.

2.2.2 special noise mitigation and management measures (Royal Prince Alfred Hospital)

EIS Appendix F does not include details of the model used to predict noise levels during demolition, site preparation, bulk earthworks, construction and construction-related activities and does not adequately canvass the full range of feasible and reasonable noise mitigation and management measures.

Recommendation

The proponent be required to ensure all feasible and reasonable special noise mitigation and management measures are adopted to minimise noise and vibration impacts on Royal Prince Alfred Hospital, including –

(i) planning every work site and work process and taking all such practicable measures as may be necessary to minimise movements that would activate audible reversing and movement alarms,

(ii) selecting and locating access points and roads to the premises as far away as practicable from Royal Prince Alfred Hospital,

(iii) using existing structures and topography to shield Royal Prince Alfred Hospital from noise impacts,

(iv) locating and orienting plant and equipment that generates high noise levels, impulsive noise, intermittent noise, low-frequency noise or tonal noise, so as to minimise noise impacts on Royal Prince Alfred Hospital,

(v) avoiding the simultaneous operation of two or more items of noisy plant or equipment close together and near Royal Prince Alfred Hospital,

(vi) undertaking loading and unloading operations as far away as is practicable from Royal Prince Alfred Hospital,

(vii) installing measures to dampen noise from impacts on metal trays, tipper bodies and waste bins/skips,

(viii) processing and sorting demolition waste off site, and

(ix) identifying and using least noisy construction methods, vehicles, plant and equipment available for the type of work being undertaken, including using hydraulic shears (instead of highly intrusive noise generating implements such as rock breakers, rock hammers and concrete/demolition saws) to remove re-inforced concrete structural elements.

2.2.2 general construction hours

Section 5.3 to EIS Appendix F under the heading 'Work programming' appears to suggest the prospect that some demolition, site preparation, bulk earthworks, construction and construction-related activities may be undertaken outside the recommended standard construction hours referred to in Table 1 to the Interim Construction Noise Guideline. The proponent has not provided any justification for undertaking any works outside the standard construction hours.

The EPA emphasises that demolition, site preparation, bulk earthworks, construction and construction-related activities should only be undertaken during the recommended standard construction hours.

Recommendation

The proponent be required to ensure that as far as practicable all demolition, site preparation, bulk earthworks, construction and construction-related activities likely to be audible at Royal Prince Alfred Hospital or any other off-campus noise sensitive receiver location are only undertaken during the standard construction hours, being -

(a) 7.00 am to 6.00 pm Monday to Friday,

(b) 8.00 am to 1.00 pm Saturday, and

(c) no work on Sundays or gazetted public holidays.

2.2.3 intra-day respite periods (impact minimisation on RPA hospital)

The EPA anticipates that those demolition, site preparation, bulk earthworks, construction and construction-related activities generating noise with particularly annoying or intrusive characteristics (such as those identified as particularly annoying in section 4.5 of the Interim Construction Noise Guideline) would be subject to a regime of intra-day respite periods where –

(a) those activities are only undertaken after 8.00 am and before 5.00 pm,

(b) those activities are not undertaken on Saturdays, Sundays or public holidays,

(b) those activities are only undertaken over continuous periods not exceeding 3 hours with at least a 1 hour respite every three hours unless otherwise negotiated with Sydney Local Health District and Royal Prince Alfred Hospital management, 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 intrusive and annoying work referred to in Interim Construction Noise Guideline section 4.5

The EPA emphasises that intra-day respite periods are not proposed to apply to those demolition, site preparation, bulk earthworks, construction and construction-related activities that do not generate noise with particularly annoying or intrusive characteristics.

Recommendation

The proponent be required to schedule intra-day 'respite periods' for construction activities identified in section 4.5 of the Interim Construction Noise Guideline as being particularly annoying to noise sensitive receivers, including surrounding residents.

2.2.4 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 demolition, site preparation, bulk earthworks, construction and construction-related activities do not arrive at the project site or in surrounding residential precincts outside approved construction hours.

2.2.5 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 be required to consider undertaking a safety risk assessment of site preparation, bulk earth works, construction and construction-related 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.

2.4 Dust control and management

The EPA considers dust control and management to be an important air quality issue during demolition, site preparation, bulk earthworks and subsequent construction.

Recommendation

The proponent be required to :

(a) minimise dust emissions on the site, and

(b) prevent dust emissions from the site.

2.5 Sediment control

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

(b) daily inspection of sediment controls which is fundamental to ensuring timely maintenance and repair of those controls.

2.6 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.

2.7 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

(a) not disposed of on the development site, and

(b) prevented from entering waters, including any natural or artificial watercourse.

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) waste management in accordance with the waste management hierarchy, including proper assessment, classification, storage, handling, transport and disposal of -

(i) clinical and related waste, and

(ii) waste containing radioactive material;

(c) any emergency generator and associated underground petroleum storage system;

(d) radiation control; and

(e) energy and water conservation.

3.1 Noise and vibration impacts

The EPA anticipates the proposed development may have significant operational noise impacts on nearby sensitive receivers, especially Royal Prince Alfred Hospital, off-campus Wesley and St Andrew's residential colleges, Newtown North public school and Carillon Avenue child care centre.

The EPA understands that the University has been liaising with the management of the hospital and colleges concerning operational noise impacts.

3.1.1 background noise measurement

The EPA again 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 – please refer also to section 2.2 to this submission.

The NSW Industrial Noise Policy (INP) specifies that at least a 'week's worth' of monitoring data is required to establish background noise levels and that noise levels measured during adverse meteorological conditions should be excluded when deriving those background levels.

Whilst section 3.2 to Appendix F indicates that limited attended background noise monitoring was undertaken for 1.5 during the morning of Friday 16 June 2017, no such monitoring was undertaken during evening or night periods.

The Industrial Noise Policy guidance material also specifies that noise from an existing development should be excluded from background noise measurements.

Recommendation

The proponent be required to re-measure background noise levels, and measure representative noise levels for the area in accordance with the guidance material in the Industrial Noise Policy

3.1.2 mechanical plant and equipment

Section 4.3 to EIS Appendix F indicates under the heading 'Emergency operation' that an emergency generator is proposed to be installed on the roof of the Stage 1 building and proposes that "… the applicable noise criteria for the emergency generator be relaxed (increased) by 5 dB (A)." The EPA

is not aware of any strong justification for the proposed location of the emergency generator or any relaxation of the relevant noise criteria.

Section 6 to EIS Appendix F states "… details of the precise nature of mechanical plant at the site are not available".

Appendix F does not appear to assess the noise impact of various operational activities (e.g. goods delivery, waste collection services, emergency generator testing, grounds maintenance using powered equipment) which from EPA experience are likely to emit noise that interferes unreasonably with the comfort or repose of persons at the neighbouring Royal Prince Alfred Hospital.

Recommendation

The proponent be required to:

(a) provide a comprehensive quantitative assessment of operational noise impacts on surrounding noise sensitive receivers, especially Royal Prince Alfred Hospital;

(b) install the proposed emergency generator in an acoustically treated enclosure on the eastern side of the Stage 1 building and below roof level so positioned as to maximise any acoustic screening to Royal Prince Alfred Hospital that might be afforded by the Stage 1 building;

(b) ensure mechanical plant and equipment, including any emergency generator, installed on the development site does not generate noise –

  (i) that exceeds 5 dBA above the rating background noise level (day, evening and night) measured at the western boundary of the development site, and

  (ii) that exhibits tonal or other annoying characteristics.

Recommendation

The proponent be required to:

(a) develop and implement an effective consultation and communication strategy (incorporating a responsive noise complaints management process) in respect of any operational noise impacts on Royal Prince Alfred Hospital;

(b) undertake a noise monitoring program to 'ground truth' revised operational noise impact predictions on commissioning of mechanical plant and equipment, especially mechanical ventilation plant and equipment;

(c) ensure that the following activities (where they are likely to be audible at Royal Prince Alfred Hospital) are only undertaken between the hours of 7.30 am to 6.00 pm Monday to Friday –

  (i) goods delivery;

  (ii) waste collection;

  (iii) emergency generator testing; and

(iv) grounds maintenance involving the use powered equipment (including leaf blowers and lawn mowers).

3.2 Air quality

The EPA is aware that emergency generators typically emit smoke and particulates during testing and early stages of operation and thus anticipates that the proposed rooftop emergency generator may adversely impact rooftop air intakes at Royal Prince Alfred Hospital.

Recommendation

The proponent be required to ensure that the emergency generator does not emit smoke and particulates likely to impact air quality at Royal Prince Alfred Hospital.

3.3 Waste management

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.

Recommendation

The proponent be required to identify and implement feasible and reasonable opportunities for the re-use and recycling of waste, including food waste.

clinical and related waste

The EIS indicates that a clinical waste storage area is proposed on level 0. The EPA thus anticipates that the proposed facilities will generate 'clinical and related waste' which are defined under the Protection of the Environment Operations Act 1997, as follows -

'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. That plan should be prepared 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 properly classify and manage clinical and related waste in accordance with the EPA's Waste Classification Guidelines.

3.4 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 apply for and obtain any necessary amendment to the 'radiation management licence' currently held under the name of the University of Sydney in respect of regulated material at the new facilities and the management and handling of any waste containing radioactive material.

Recommendation

The proponent be required to properly classify and manage solid and liquid wastes containing radionuclides in accordance with '*Part 3 Waste containing radioactive material, 2014'* of the EPA's Waste Classification Guidelines.

3.5 Back-up Generator and Underground Petroleum Storage System

EIS section 8.5 under the heading 'Operational' indicates that the Health Precinct Stage 1 is to be served by a back-up/emergency generator and the EPA anticipates that that generator will be served in turn by a 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; 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 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.

3.6 Water sensitive urban design and energy conservation and efficiency

The EPA acknowledges that EIS Appendix J comprises an environmentally sustainable development report that proposes –

(a) a range of water sensitive urban design measures, including –

  (i) rainwater harvesting and re-use, and

  (ii) water efficient fixtures; and

(b) a range of measures to maximise energy efficiency and minimise energy consumption, including adoption of passive thermal design measures and installation of solar photovoltaic arrays on the roof.
