NSW EPA

Our reference: EF15/9530, DOC16/358157-01
Contact: John Goodwin

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

Dear Ms Fu

SSD 7642 WESTMEAD HOSPITAL – ACUTE SERVICES BUILDING - EIS

I am writing to you in reply to your invitation to the EPA to provide a submission in respect of the project EIS for the new 13 storey Acute Services Building (including rooftop helipad) at Westmead Hospital.

The EPA requests that the following advice be considered together with its letter dated 26 May 2016 concerning 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, has not reviewed the environmental management plans forming part of or referred to in the EIS.

Demolition

The EPA understands that various structures, including a multi-storey carpark, are being demolished under a separate assessment process pursuant to the Infrastructure SEPP 2007. And, as a consequence an existing helipad is being relocated until commissioning of the replacement rooftop helipad on the new building.

Contamination

The EPA notes the sensitive nature of the proposed use and understands that previous site investigations identified –

- a large volume of asbestos contaminated soil on the site, and
- a number of Underground Petroleum Storage Systems (presumably used to supply fuel to back-up generators.

The EPA further notes that the site investigations undertaken to date would not encompass the footprint of existing structures required to be demolished for the purposes of the project.

PO Box 668 Parramatta NSW 2124
Level 13, 10 Valentine Avenue, Parramatta NSW 2150
Tel: (02) 9995 5000 Fax: (02) 9995 6900
ABN 43 692 285 758
www..epa.nsw.gov.au

The EPA understands that a site auditor accredited under the Contaminated Land Management Act has been appointed for various projects being undertaken on the hospital campus. The proponent should obtain a Part A statement for the whole of the site prior to any construction.

The EPA notes that the majority of the project site is within the Underground Petroleum Storage Systems Regulation Parramatta City Council environmentally sensitive zone. The proponent should obtain a validation certificate following removal of any underground petroleum systems and prior to any construction work.

Toongabbie Creek

The EPA is aware that the northerly end of the hospital campus is bounded by Toongabbie Creek and is concerned that different contractors may be engaged to undertake various stages of the project (e.g. demolition, site preparation, bulk earthworks, construction and operation). Accordingly, the EPA recommends that appropriate measures are adopted to ensure a seamless transition of environmental impact mitigation measures between those stages.

Site specific concerns

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

(a) the need to undertake detailed assessment of potential site contamination and engagement of an accredited site auditor;

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

(c) proper removal and validation of underground petroleum storage systems identified on the development site;

(c) site preparation, bulk earthworks, construction and construction-related noise and vibration impacts (including recommended standard construction hours and intra-day respite periods for highly intrusive noise generating work);

(d) site preparation, bulk earthworks, construction and construction-related dust control and management;

(e) site preparation, bulk earthworks, construction and construction-related erosion and sediment control and management;

(f) detailed assessment of operational noise impacts on noise sensitive receivers (especially surrounding residences) arising from aero-medical services associated with any temporarily relocated helipad;

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

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

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

(j) detailed assessment of any site preparation and operational water quality impacts on Toongabbie Creek;

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

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

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

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

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

Yours sincerely

M. Sharpin 22-8-16

MIKE SHARPIN
Acting Manager Metropolitan Infrastructure
Environment Protection Authority

Attachment A

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS -

SSD 7642 WESTMEAD HOSPITAL ACUTE SERVICES

1. General

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

2. Construction phase

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

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

- detailed site contamination investigation and remediation,
- compliance with recommended standard construction hours,
- waste management consistent with the hierarchy of re-use, recycle and then disposal as the last resort,
- '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 a site auditor accredited under the Contaminated Land Act has been engaged by the proponent to ensure the Westmead hospital campus is properly remediated and made suitable for the proposed Acute Services building and associated development.

Recommendation

The proponent be required to undertake further assessment of soil contamination following demolition of existing structures and prior to undertaking any earthworks.

Recommendation

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

Recommendation

The proponent be required to obtain a validation certificate in respect of the de-commissioning and removal of any existing underground petroleum storage system from the development site or adjacent areas of the Westmead hospital campus.

Recommendation

The proponent be required to obtain from a site auditor (accredited under the Contaminated Land Management Act) a Section A site audit statement for the whole of the development site and its immediate surrounds determining site suitability for the proposed land uses prior to undertaking any construction.

Asbestos contaminated soil

The EPA understands that the proponent has suggested in the EIS that if "... *excess soil cannot be re-distributed or has been situated in proximity to asbestos containing materials, the sand and soils are required to be treated and/or disposed of, potentially as low level contaminated waste via a licensed removalist to a disposal facility".* The EPA notes that details of proposed management of asbestos impacted soils are purportedly contained in the Remedial Action Plan (RAP) for the Stage 1 works but that document does not appear to have been included with the EIS.

However, all waste must be classified in accordance with the *Waste Classification Guidelines* (EPA, 2014) prior to disposal. The EPA emphasises that there is no such classification as 'low level contaminate waste'. And, the proponent should ensure soil or sand which is free of contamination is segregated and stored appropriately to ensure cross-contamination does not occur.

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

(a) classified as asbestos waste, and

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

Recommendation

The proponent be required to satisfy the requirements of the Protection of the Environment Operations (Waste) Regulation 2014 with particular reference to Part 7 'asbestos wastes'.

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

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

Recommendation

The proponent be required to consult with Safework NSW concerning the handling of any asbestos waste that may be encountered during the course of the project.

2.2 Waste control and management (general)

The proponent should manage waste in accordance with the waste management hierarchy. The waste hierarchy, established under the Waste Avoidance and Resource Recovery Act

2001, is one that ensures that resource management options are considered against the following priorities:

Avoidance including action to reduce the amount of waste generated by households, industry and all levels of government

Resource recovery including reuse, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources

Disposal including management of all disposal options in the most environmentally responsible manner.

All wastes generated during the project must be properly assessed, classified and managed in accordance with the EPA's guidelines to ensure proper treatment, transport and disposal at a landfill legally able to accept those wastes.

The EPA further anticipates that, without proper site controls and management, mud and waste may be tracked off the site during the course of the project.

Recommendation

The proponent be required to ensure that:

(1) all waste generated during the project is assessed, classified and managed in accordance with the "*Waste Classification Guidelines Part 1: Classifying Waste*" (Department of Environment Climate Change and Water, December 2009);

(2) the body of any vehicle or trailer, used to transport waste or excavation spoil from the premises, is covered before leaving the premises to prevent any spill or escape of any dust, waste, or spoil from the vehicle or trailer; and

(3) mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site, is removed before the vehicle, trailer or motorised plant leaves the premises.

2.2.1 Waste control and management (concrete and concrete rinse water)

The EPA anticipates that during the course of the project concrete deliveries and pumping are likely to generate significant volumes of concrete waste and rinse water. The proponent should ensure that concrete waste and rinse water is not disposed of on the project site and instead that –

(a) waste concrete is either returned in the agitator trucks to the supplier or directed to a dedicated watertight skip protected from the entry of precipitation, and

(b) concrete rinse water is directed to a dedicated watertight skip protected from the entry of precipitation or a suitable water treatment plant.

Recommendation

The proponent be required to ensure that concrete waste and rinse water are not disposed of on the development site.

2.3 Dust control and management

The EPA considers dust control and management to be an important air quality issue during site preparation, bulk earthworks 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 be required to:

(a) minimise dust emissions on the site, and

(b) prevent dust emissions from the site.

2.4 Erosion and sediment control

The Managing Urban Stormwater Soils and Construction, 4th Edition published by Landcom (the so-called 'Blue Book') provides guidance material for achieving effective erosion and sediment control on construction sites.

The EPA emphasises the importance of –

(a) not commencing earthmoving or vegetation removal until appropriate erosion and sediment controls are in place, and

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

2.5 Noise and vibration

The EPA notes the proximity of Westmead Children's Hospital and residences on the eastern side of Hawkesbury Road.

The EPA considers that the project is likely to generate significant demolition, site preparation, bulk earthworks, construction and construction-related noise and vibration impacts on surrounding residences and potentially on Westmead Children's Hospital.

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

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

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

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

2.5.1 Recommended standard construction hours

The EPA notes that EIS section 6.14 (p.71) proposes that construction be undertaken between 6.30 am and 6.00 pm Monday to Friday and 7.00 am to 5.00 pm Saturdays which hours are inconsistent with the recommended standard construction hours set out in Interim Construction Noise Guideline (ICNG) Table 1.

Recommendation

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

2.5.2 Construction hours (including respite periods)

ICNG section 4.5 specifies construction activities proven to be particularly annoying and intrusive to nearby residents and which are considered at least as annoying to the nearby private hospital and schools. The EPA anticipates that those activities generating noise with particularly annoying or intrusive characteristics would be subject to a regime of intra-day respite periods where –

(a) they are only undertaken over continuous periods not exceeding 3 hours with at least a 1 hour respite every three hours, and.

(b) 'continuous' means any period during which there is less than an uninterrupted 60 minute respite between temporarily halting and recommencing any of the work referred to in ICNG section 4.5

Recommendation

The proponent be required to:

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

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

2.5.2 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.

The proponent should commit to undertaking a safety risk assessment of construction activities to determine whether it is practicable to use audible movement alarms of a type that would minimise the noise impact on surrounding noise sensitive receivers, without compromising safety.

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

3. Operational phase

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

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

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

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

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

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

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

(f) water sensitive urban design, and

(g) practicable opportunities for energy efficiency and conservation.

3.1 Noise and vibration impacts

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

The EPA anticipates that the proposed facilities are likely to change the nature and intensity of noise impacts on surrounding noise sensitive receivers (example: residences, Westmead

Children's Hospital). And, that noise impacts are likely to include noise emitted from amongst other things:

- mechanical plant and equipment (including ventilation and elevator plant) and associated rooms and enclosures;
- activation of reversing beepers fitted to ambulances and other emergency services vehicles manoeuvring on the site (particularly at night);
- loading docks and waste collection services, including truck movements that activate reversing beepers;
- back-up generator and automated valve testing; and
- aero-medical services [see section 3.1.1 of these comments].

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

The EPA emphasises that properly establishing background noise levels in accordance with guidance material in the New South Wales Industrial Noise Policy (INP) is fundamental to a consistent approach to the quantitative assessment of noise impacts of development.

The EPA emphasises that whilst acknowledging noise impacts on existing facilities on the hospital campus are relevant to the proponent as a basis for ensuring adequate patient comfort and care, the EPA focus is to consider impacts on off-campus noise sensitive land uses. The EPA notes that monitoring was undertaken at location 6 (and location 6A) to establish background noise levels for 'Residential Catchment A' being the most affected off-campus residential land use.

Whilst section 6.1 to EIS Appendix G describes noise criteria for mechanical equipment, only general noise targets and noise mitigation measures are discussed. The EPA understands that final mechanical plant and equipment selections have not been made, further detail on likely items of plant and equipment, their operational noise emissions, and any necessary mitigation measures necessary to meet criteria at noise sensitive receivers should have been incorporated into the assessment as per EPA's previous comments. An assessment of the effectiveness of any such measures and any remaining residual impacts should also have been included.

The EPA considers that the proponent has not provided adequate information to address comments provided at the draft SEARs stage of the project assessment process. And, in the absence of that information, the EPA has recommended appropriate conditions aimed at ensuring a satisfactory acoustic environment at the most affected off-campus noise sensitive receiver, especially during the night-time period.

Recommendation

The proponent be required to:

(a) Either:
(a1) undertake quantitative assessment of predicted noise impacts of the operational phase of the proposed development on surrounding residences, including impacts

from the activation of ambulance and other emergency service vehicle reversing alarms, especially during night-time; or

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

Noise Catchment	LAeq (15minute)	LAeq (period)	LA1 (1 minute)
A (south east of Hawkesbury Road	44 dB (A)	40 dB (A)	54 dB (A)
B (north of Darcy Road)	46 dB (A)	39 dB (A)	56 dB (A)

where 'night-time period' has the same meaning as 'Night' as defined in the New South Wales Industrial Noise Policy, January 2000.

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

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

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

Recommendation

The proponent be required to ensure that the emergency services vehicle parking is designed, constructed and operated such that ambulances and emergency services vehicles entering, leaving and parking are able to accomplish those tasks (as far as is practicable without compromising patient well-being) in a forward direction so as to avoid the need to activate reversing beepers, especially at night.

Recommendation

The proponent be required to –

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

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

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

3.1.1 Aero-medical flight movements and ground running

Aero-medical services are not a scheduled activity within the meaning of the Protection of the Environment Operations Act 1997.

The EPA understands that the New South Wales government has no jurisdiction in regard to aircraft in the air. Instead, this is a matter the subject of Commonwealth Government legislation understood to be administered by Air Services Australia.

The EPA further understands that Westmead Hospital is one of several round the clock major trauma centres serving the entire State of New South Wales. The EPA further understands that the temporary and replacement helipad are vital to ensuring emergency access to intensive care and other acute services facilities for critical care patients.

The EPA considers decisions concerning the transport of critical care patients to properly be an operational matter for NSW Health.

The EPA further considers that, whilst ground running of certain aircraft may be regulated by the EPA, NSW Health has implemented reasonable and feasible measures to minimise impacts on residences and other noise sensitive land uses, by –

- restricting hospital helipad use to aero-medical evacuation, retrieval and rescue aircraft;
- implementing protocols and procedures to shut down aircraft engines as soon as practicable after landing; and
- providing aircraft pilots with remote control of helipad landing lights to minimise periods of potential glare nuisance.

3.2 Clinical and related waste

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

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

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

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

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

The occupier of any premises comprising a hospital, day procedure centre, pathology laboratory, mortuary or medical research facility where clinical and related waste is generated, must ensure that there is a waste management plan, in respect of that waste, for

the premises. And, should prepare that plan with due regard to the relevant provisions of clause 113 of the Protection of the Environment Operations (Waste) Regulation 2014.

The EPA notes with concern that the EIS references the *Sydney West Area Health Services (SWAHS) Waste Management Policy,* contained within Appendix N to the report. This policy, issued in 2010, was created in 2006 and is significantly out of date.

Specific details as to the management of operational waste streams such as clinical, cytotoxic or sharps waste have not been provided, although reference has been made to relevant guidelines and codes of practice.

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

3.3 Radiation Control Act and Regulation

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

(a) radioactive substances,

(b) ionising radiation apparatus,

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

(d) sealed source devices.

A 'person responsible' within the meaning of section 6 of the Radiation Control Act 1990 is obliged to hold an appropriate 'radiation management licence' in respect of regulated material at the acute services building.

A natural person who uses regulated material at the acute services building must hold a 'radiation user licence' and must comply with any conditions to which the licence is subject.

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

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

Recommendation

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

3.4 Back-up Generator and Underground Petroleum Storage System

The EPA anticipates that the acute services building will be served by a back-up generator served in turn by 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. And, any such UPSS must be designed, installed and operated with regard to Guidelines issued by the EPA.

Recommendation

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

3.5 Water sensitive urban design and energy efficiency

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

Hospitals are typically heavy users of –

- electricity which in NSW is for the most part generated by burning non-renewable fossil fuel resources, and
- potable water which is expensive and energy intensive to deliver on demand at a quality consistent with NHMRC Drinking Water Quality Guidelines.

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

- energy efficiency (with resultant running cost savings) and energy conservation through adoption of practicable opportunities to use renewable energy sources,
- water conservation through implementation of water sensitive urban design principles (including stormwater harvesting, treatment and re-use for non-potable purposes such as grounds maintenance), and
- water efficiency

The EPA acknowledges that EIS section 6.19 and Appendix V provide an overview of proposed water and energy efficiency and conservation measures but does not appear to discuss practicable opportunities for implementing water sensitive urban design.

Section 2 to EIS Appendix V clearly states that "*The project is not assessing environmental performance using a suitably accredited rating scheme to meet industry best practice. Whilst we believe the design achieves best practice standards the focus has been on developing cost effective strategies that reduce operational consumption whilst still providing high levels of comfort and indoor air quality.*" However, the EIS does not provide any analysis to support the express belief that the design achieves best practice standards.

Recommendation

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

Recommendation

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