

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

Dear Ms Fu

SSD 7539 – DARLINGTON TERRACES MIXED USE – ENVIRONMENTAL IMPACT STATEMENT (EIS)

I am writing in reply to the Department of Planning and Environment's (DPE) invitation to the Environment Protection Authority (EPA) to make a submission concerning the above project EIS.

The EPA requests that the submission at Attachment A be read in conjunction with its letter dated 18 March 2016 in respect of the draft Secretary's environmental assessment requirements (SEARs) for the project and the EPA's input of September 2013 to Director-General's requirements for the Campus Improvement Program.

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

The EPA notes adjoining residences interspersed with the various parts of the development site as well as the proximity of the Darlington Public School and (non-university) residences to the west and south of the development site.

The EPA has identified the following site specific concerns based on the project information available on the DPE major projects web site:

- a) the need for a detailed assessment of 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 such as surrounding residences and Darlington Public School;
- c) construction phase dust control and management,

- d) construction phase erosion and sediment control and management;
- e) operational noise impacts on noise sensitive receivers (especially surrounding residences on adjoining and adjacent holdings) arising from operational activities such as public address/school bell systems, community use of school facilities, waste collection services and mechanical services (especially air conditioning plant);
- f) the need to assess feasible and reasonable noise mitigation and management measures (including time restrictions on the use of the facilities proposed to be available for community use) to minimise operational noise impacts on surrounding residences;
- g) practical opportunities to implement water sensitive urban design principles, including stormwater re-use; and
- h) 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



SARAH THOMSON
Unit Head, Metropolitan Infrastructure
NSW Environment Protection Authority

Attachment A

Contact officer: JOHN GOODWIN

ATTACHMENT A

- ENVIRONMENT PROTECTION AUTHORITY COMMENTS -

SSD 7539 DARLINGTON TERRACES MIXED USE

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 remediation action plan accompanying the EIS,
- 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,
- erosion and sediment control, and
- waste handling and management, particularly concrete waste and rinse water.

2.1 Site contamination

The EPA notes that EIS –

- Appendix Y comprises a detailed site investigation, and
- Appendix Z comprises a Remedial Action Plan.

The EPA further notes that:

- (a) section 10.3 to EIS Appendix Y recommends amongst other things –
- (i) removal from the development site of “... shallow impacted fill materials ...”,
 - (ii) retention on the development site of impacted fill materials beneath a suitable cover layer ...”, and
 - (iii) preparation of a Remedial Action Plan;

- (b) sections 7.2 and 14 to EIS Appendix Z recommend amongst other things further investigation of the ‘...eastern extent of the site (Area 4)’ to enable assessment of whether that part of the site is suitable for the proposed use; and
- (c) section 6.4 to EIS Appendix Z proposes a remediation process (including fill removal under proposed building footprints) that it predicts would make the development site “...suitable for the proposed use without implementation of an environmental management plan.”

Recommendations

1. The proponent be required to ensure that the Remedial Action Plan (including sections 6.5.1 and 7.2) is implemented.
2. The proponent be required to:
 - (a) ensure that any contamination identified as meeting the trigger in the EPA ‘*Guidelines for the Duty to Report Contamination*’ is notified in accordance with requirements of section 60 of the Contaminated Land Management Act;
 - (b) ensure the proposed development does not result in a change of risk in relation to any pre-existing contamination on the site so as to result in significant contamination; and
 - (c) the processes outlined in *State Environmental Planning Policy 55 - Remediation of Land (SEPP55)* be followed, to assess the suitability of the land and any remediation required in relation to the proposed use.

Note: The EPA recommends use of “*certified consultants*” and requires all reports submitted to the EPA to comply with the requirements of the *Contaminated Land Management Act 1997* to be prepared, or reviewed and approved, by a certified consultant.

2.1.1 hazardous materials

The EPA anticipates that given the age of some of the structures on the development site, asbestos containing materials and lead-based paints are likely to be encountered during demolition and notes the EIS section 6.8 suggests lead levels encountered on the development arise from weathering of lead-based paint.

Since late 2015, clause 79 of the Waste Regulation has required transporters of loads of asbestos waste to provide certain details of the loads to the EPA using the “WasteLocate” system. These details include details of the source site, date of proposed transport, details of the proposed destination site and the approximate weight of asbestos waste in the load. The information must be provided to the EPA before transportation of the load commences.

WasteLocate is an online tool that allows the EPA to track the transport of asbestos waste. Transporters are required to use WasteLocate to report the movement of more than 100 kilograms of asbestos waste or more than 10 square metres of asbestos sheeting within NSW. The details can be reported on WasteLocate by using an app on a mobile phone or tablet or by using a computer.

Recommendations

1. 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.
2. The proponent be required prior to commencing any work on the development site to prepare and implement an appropriate procedure for identifying and dealing with unexpected finds of site contamination, including –

- (i) asbestos containing materials, and
- (ii) lead-based paint,

and that that procedure includes details of who will be responsible for implementing the unexpected finds procedure and the roles and responsibilities of all parties involved.

3. 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>.

4. 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 anticipates that demolition, site preparation (including tree clearing), bulk earthworks, construction and construction-related activities are likely to have significant noise and vibration impacts on surrounding residences and Darlington Public School, especially adjoining residences in Darlington Road and Golden Grove Street.

2.2.1 *general construction hours*

EIS section 6.7.1 inappropriately proposes adoption of City of Sydney construction hours of –

- 7.00 am to 7.00 pm Monday to Friday, and
- 7.00 am to 5.00 pm Saturdays

The EPA emphasises that the proponent is a 'public authority' within the meaning of the *Protection of the Environment Administration Act 1991*. Further, that the EPA has general responsibility under that Act for amongst other things:

- (a) ensuring that the best practicable measures are taken for environment protection in accordance with the environment protection legislation and other legislation, and
- (b) coordinating the activities of all public authorities in respect of those measures.

Table 1 to the EPA's Interim Construction Noise Guideline clearly identifies the best practicable measures in respect of the recommended standard hours of construction (in the absence of strong justification for alternative hours in the particular case).

Accordingly, the EPA anticipates that demolition, site preparation, bulk earthworks, construction and construction-related activities should 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 any noise sensitive receivers (such as surrounding residences and Darlington Public School) 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.

2.2.2 *intra-day respite periods*

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) 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 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.

2.2.3 *idling and queuing construction vehicles*

The EPA is aware from previous major infrastructure projects that community concerns are likely to arise from noise impacts associated with the early arrival and idling of construction vehicles (including concrete agitator trucks) at the development site and in the residential precincts surrounding that site.

Recommendation

The proponent be required to ensure construction vehicles (including concrete agitator trucks) involved in 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.

2.2.4 *reversing and movement alarms*

The EPA has identified the noise from ‘beeper’ type plant movement alarms to be particularly intrusive and is aware of feasible and reasonable alternatives. Transport for NSW, Barangaroo Delivery Authority/Lend Lease and Leighton Contractors (M2 Upgrade project) have undertaken safety risk assessments of alternatives to the traditional ‘beeper’ alarms. Each determined that adoption of ‘quacker’ type movement/reversing alarms instead of traditional beepers on all plant and vehicles would not only maintain a safe workplace but also deliver improved outcomes of reduced noise impacts on surrounding residents.

Interim Construction Noise Guideline Appendix C provides additional background material on this issue.

Recommendation

The proponent 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.

2.3 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.

2.4 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.

2.5 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 EPA "*Waste Classification Guidelines Part 1: Classifying Waste*", November 2014 and the 2016 Addendum thereto;
- (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.

2.6 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 development 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;
- (c) water sensitive urban design; and
- (d) energy conservation and efficiency.

3.1 Noise and vibration impacts

EIS Appendix AA comprises a Noise Impact Assessment of the proposed development.

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 NSW 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 rainfall should be excluded when deriving those background levels. However, the EPA notes that –

- The two noise monitoring locations were on the site of the development, one at the front facing Darlington Road and one at the rear facing Darlington Lane. The rear location was opposite mechanical plant associated with the adjoining commercial uses (i.e. university buildings), affecting the measured ambient noise levels. Noise should have been monitored at the nearest affected receivers, in accordance with the *NSW INP*. However, for this site the EPA considers that the background noise levels for the front of the site (labelled as Front of 110 Darlington Road) appear reasonably representative of potentially affected noise sensitive receiver locations on Darlington Road.
- The *NSW INP* requires 7 days of valid data. Noise monitoring from the 'rear' logger is less than 7 valid days of monitoring, with 6 days provided and a significant amount of this data is affected by wind speeds greater than 5 m/s. However, as noted above, the EPA considers that the background noise levels measured at the rear of the site were also affected by mechanical plant, whereas the background noise levels at the front of the site are reasonably representative of sensitive receivers on Darlington Road.

Darlington Public School

The EPA's input to the draft SEARS identified Darlington Public School as a noise sensitive receiver location. And, notes with concern that the EIS does not appear to properly assess noise impacts at the school.

Recommendation

The proponent be required to –

- (a) undertake background noise monitoring at Darlington Public School in accordance with the guidance material in Chapter 3 and Appendix B to the New South Wales Industrial Noise Policy, and
- (b) provide a noise impact assessment of demolition/construction and operational noise emissions from the proposed development on Darlington Public School.

mechanical plant and equipment

Section 7.2 to EIS Appendix AA indicates that "...plant selections are locations are not finalised ..." and goes on to indicate the installation of large condenser units in a proposed plant room and possible location of smaller condensers across the development site.

The EPA anticipates that mechanical plant and equipment would be located, selected and operated so that any noise emissions from that plant and equipment (whether individually or cumulatively) would not more than 5 dB above background level.

Recommendation

The proponent be required to:

- (a) provide a comprehensive quantitative assessment of operational noise impacts on surrounding noise sensitive receivers, especially adjoining and surrounding residences and Darlington Public School;
- (b) ensure mechanical plant and equipment installed on the development site does not generate noise that –
 - (i) exceeds 5 dBA above the rating background noise level (day, evening and night) measured at the eastern boundary of the development site, and
 - (ii) exhibits tonal or other annoying characteristics.

terrace recreation areas

Section 7.1 to EIS Appendix AA addresses noise impacts associated with use of the roof terrace proposed in building A and the courtyard terrace between buildings B and C, and proposes a range of restrictions on the use of those terraces.

Recommendation

The proponent be required to ensure that –

- (a) terrace recreation areas on the development are not used at those times and for those purposes likely to emit noise that interferes unreasonably with the comfort or repose of persons not on the development site, and
- (b) terrace recreation area use restrictions include inter alia –
 - (i) no amplified sound equipment,
 - (ii) no use of the terrace areas before -
 - 7.00 am on weekdays, and
 - 8.00 am on Saturdays, Sundays and public holidays, and
 - (iii) no use of the terrace areas after –
 - 10.00 pm on weekdays and Saturdays, and
 - 6.00 pm on Sundays and public holidays.

waste collection services (including grease trap pump out)

Architectural drawings indicate the installation of garbage rooms and at least one grease trap with direct access to Darlington Lane.

The EPA notes numerous reports of community concern arising from waste collection services, especially those undertaken during evening and night times.

Recommendation

The proponent be required ensure waste collection services (including grease trap pump outs) are not undertaken outside the hours of 7.30 am to 6.00 pm Monday to Friday.

grounds maintenance using powered equipment

The EPA notes numerous reports of community concern arising from grounds maintenance involving the use of powered equipment (example: leaf blowers, lawn mowers, brush cutters) during early morning and evening periods as well as on weekends and public holidays.

Recommendation

The proponent be required ensure grounds maintenance involving the use of powered equipment is not undertaken outside the hours of 7.30 am to 6.00 pm Monday to Friday.

3.2 Waste management

The proponent should manage waste in accordance with the waste management hierarchy (mentioned earlier).

Recommendation

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

3.3 Water sensitive urban design and energy conservation and efficiency

The EPA acknowledges that EIS Appendix BB 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 –
 - (i) natural ventilation and lighting, and
 - (ii) installation of rooftop solar photovoltaic arrays
