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SSD 8778

4/5/18

Mr Scott Hay
Department of Planning and Environment
GPO BOX 39
SYDNEY NSW 2001

Dear Mr Hay

**SSD 8778 – GREYSTANES PUBLIC SCHOOL RE-DEVELOPMENT – ENVIRONMENTAL
IMPACT STATEMENT (EIS)**

I am writing in reply to Mr Beattie's invitation to the 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 9 October 2017 in respect of the draft Secretary's environmental assessment requirements (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 'arm's length'. The EPA has not reviewed any environmental management plan forming part of or referred to in the EIS.

The EPA notes that the development includes:

- (a) temporary relocation of existing demountables;
- (b) demolition of existing structures G, H and I along with associated infrastructure; and
- (c) construction of a new building as well as strip out and renovation of existing block A.

The EPA is concerned that section 1 to EIS Appendix 05 indicates that the proponent limited its assessment of soil contamination to the footprint of the proposed structures instead of undertaking an assessment across the entire school campus.

The EPA anticipates significant demolition/construction noise and vibration impacts and operational phase noise impacts on surrounding residences, especially adjoining residences.

The EPA has identified the following site specific concerns based on the project information available on the Department of Planning and Environment (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 relocation or demolition;
- (b) the need to undertake a hazardous materials survey of buildings as well as surface and in-ground infrastructure;
- (c) demolition/construction phase noise and vibration impacts (including the need to adopt recommended standard construction hours and intra-day respite periods for highly intrusive noise generating work) on noise sensitive receivers, especially adjoining residences;
- (d) demolition/construction phase dust control and management,
- (e) demolition/construction phase erosion and sediment control and management;
- (f) 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);
- (g) 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 cumulative operational noise impacts on surrounding residences;
- (h) practical opportunities to implement water sensitive urban design principles, including stormwater re-use; and
- (i) practical opportunities to minimise consumption of energy generated from non-renewable sources and to implement effective energy efficiency measures.

Further details are provided in attachment A.

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 -

GREYSTANES PUBLIC SCHOOL RE-DEVELOPMENT

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 –

- on hazardous materials and site contamination management,
- 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,
- effective erosion and sediment control, and
- waste handling and management, particularly concrete waste and rinse water.

2.1 Hazardous materials

EIS Appendix 22 confirms the majority of buildings were constructed in the 1960s and 1970s. 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. However, EIS Appendix 22 appears limited to assessment of the presence of asbestos containing materials and reports the presence of asbestos principally in the form of asbestos cement sheeting and as a component of vinyl floor tiles.

Section 9.4 to EIS Appendix 05 '*Stage 1/Stage 2 Contamination Assessment*' indicates the presence of uncontrolled fill material within the limited investigation area of the school campus and acknowledges "... the likelihood of asbestos being present is possible, ...", albeit discounting widespread asbestos issues on the basis of the results of that limited investigation.

Recommendation

The proponent be required (prior to commencing any work on the development site) to prepare and implement a procedure for identifying and dealing with unexpected finds of site contamination (including asbestos containing materials and lead-based paint). Further, that procedure includes details of who will be responsible for implementing the unexpected finds procedure and the roles and responsibilities of all parties involved.

2.1.1 asbestos waste

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.

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 Site contamination

The Department of Education is a 'public authority' within the meaning of the *Protection of the Environment Administration Act 1991*. Further, 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.

For instance, the EPA's Contaminated Land Consultant Certification Policy provides clear guidance about best practicable measures that support the development and implementation of nationally consistent certification schemes in Australia, and encourage the use of certified consultants by the community and industry.

The EPA requires all reports submitted to the EPA to comply with the requirements of the *Contaminated Land Management Act 1997* (CLM Act) to be prepared, or reviewed and approved, by a certified consultant.

EIS Appendix 05 'Preliminary Stage 1/Stage 2 Contamination Assessment' is as noted in section 2.1 to this Attachment) limited in its scope to the footprint of proposed new buildings, which assessment included a desktop study, site visit and soil sampling from only 5 boreholes.

The EPA is unclear how the proponent would limit site disturbance across the 29,700 square metre campus to only the footprint of the proposed buildings. For instance, the EPA anticipates significant site disturbance in preparing the site for the new location of demountables and subsequent provision of access and services thereto. Accordingly, the EPA anticipates that per its Sampling Design Guidelines that approximately 40 sampling points would be required to properly characterise soil contamination.

The EPA also notes that the proponent not only took an inadequate number of soil samples but also did not perform stratified soil sampling.

EIS Appendix 05 indicates that:

- (a) groundwater was not assessed during the preliminary investigation; and
- (b) an *unexpected finds protocol* is included in Section 9.3 of the site assessment report but that protocol is generic and does not include parties who will be responsible in implementing this protocol or the roles and responsibilities for all parties involved.

Section 4.2.1 to EIS Appendix 05 indicates that the contamination assessment identified various potential sources of contamination in the Area of Environmental Concern but inspection did not identify any obvious sources of potential contamination. However, the EPA anticipates that a site contamination assessment would not be limited to "obvious" sources of contamination.

Accordingly, the EPA does not consider that the proponent has adequately justified the conclusion in section 9.4 to EIS Appendix 05 that on the basis of the assessment of the investigation area -

- (a) the potential risks associated with contamination are low,
- (b) further investigation and/or remediation is not considered to be required; and
- (c) the investigation areas can be made suitable for the proposed development.

Instead, the EPA anticipates that the proponent would assess soil and groundwater contamination across the entire school campus in accordance with the relevant guidance material issued by the EPA.

Recommendation

The proponent be required to:

- (a) implement the processes outlined in *State Environmental Planning Policy 55 - Remediation of Land (SEPP55)* for assessing the suitability of the land and undertaking any remediation required in relation to the proposed use;

- (b) conduct a detailed site investigation and prepare a remedial action plan to address any contamination whilst regard to the following guidance material -
- NSW EPA Sampling Design Guidelines,
 - Guidelines for the NSW Site Auditor Scheme (3rd edition) 2017,
 - Guidelines for Consultants Reporting on Contaminated Sites, 2011, and
 - The National Environment Protection (assessment of contamination) Measures 2013 as amended;
- (c) 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
- (d) ensure that any contamination identified as meeting the trigger in the EPA's '*Guidelines for the Duty to Report Contamination*' is notified in accordance with requirements of section 60 of the Contaminated Land Management Act.

2.3 Noise and vibration

The EPA anticipates that demolition, site preparation (including tree clearing), demountable building relocation, bulk earthworks, construction and construction-related activities are likely to have significant noise and vibration impacts on surrounding residences, especially adjoining residences.

2.3.1 general construction hours

The EPA emphasises 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 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.

2.3.2 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.

2.3.3 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.

2.3.4 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 (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;
- (c) water sensitive urban design; and
- (d) energy conservation and efficiency.

3.1 Noise and vibration impacts

The EPA anticipates the proposed development together with existing development (especially out of hours use of school facilities by external parties) may have significant operational noise impacts on nearby sensitive receivers, especially adjoining residences.

3.1.1 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. Chapter 3 and Appendix B to the INP provide guidance concerning how to properly establish background noise levels, including amongst other things that -

- (a) at least a 'week's worth' of valid monitoring data is required to establish background noise levels, and
- (b) noise levels measured during rain and during winds having a velocity of greater than 5 metres per second (i.e. 18 kilometres per hour) should be excluded when deriving background levels.

Section 3.1 to EIS Appendix 14 indicates that background noise monitoring was undertaken at two monitoring locations –

- (east) from 23 to 29 June 2017 – with only 5 days and 2 half days of data which figure 4 indicates the final 24 hours may have been rain affected and no evening or night period data for Thursday, and
- (west) from 6 to 14 December 2017 – with some days rain affected and some wind speeds exceeding 18 kilometres per hour during 2 days.

However, Section 3.3 to EIS Appendix 14 does not indicate whether background noise monitoring was affected by wind.

The EPA is unclear –

- (a) why Tables 1 and 2 to EIS Appendix 14 present "Typical LA90,15min" instead of Assessment Background Levels (ABLs), being the single figure background level representing each assessment period, and
- (b) about the relationship between Rating Background Levels (RBLs) presented in Table 7 and 'averaged' levels presented in Tables 3 and 4.

Accordingly, the EPA considers that the background noise levels have not been established in accordance with the guidance provided in the INP.

EIS Appendix 14 presents amenity criteria that are incorrectly based on total ambient noise instead of the existing level of industrial noise. Thus, the EPA does not accept the proposed noise criteria.

Accordingly, the EPA in light of its concerns about the background noise levels and amenity criteria calculations, does not accept the project specific noise levels presented in Table 9 to EIS Appendix 14.

The EPA further notes that graphical presentations in Appendix B (to EIS Appendix 14) clearly show that the December 2017 background noise monitoring results are affected by a specific source or sources (extraneous noise) at specific times of the days. Importantly, those effects are not considered in Appendix 14.

The EPA recommends DPE require the proponent to establish background noise levels in accordance with the requirements of the INP.

Recommendation

The proponent be required to properly establish the background noise level for the locality for each assessment period (i.e. day, evening, night) in accordance with the guidance provided in the New South Wales Industrial Noise Policy.

3.1.1 noise impact mitigation and management – typical school activities

The EPA notes with concern the proximity of the surrounding residences and is aware from long experience of the need for appropriate operational noise mitigation and management measures, particularly in regard to:

- (a) the nature of and times during which school facilities are made available for community use;
- (b) the design and operation of the school public address/bell system;
- (c) the design and location of waste storage facilities;
- (d) time restrictions on waste collection services;
- (e) design, selection and operation of mechanical ventilation plant and equipment; and
- (f) time restrictions on grounds maintenance using powered equipment (e.g. leaf blowers, brush cutters and lawn mowers).

Section 6 to EIS Appendix 14 '*Acoustic Report*' inappropriately –

- dismisses the impact of noise from existing activities in the overall assessment of noise impacts, and
- suggests in sub-section 6.6 that "... adjacent noise-sensitive dwellings will already be acclimatised to the existing sounds of general school activities, ...".

The EIS should have taken into account the cumulative noise impact of both existing and proposed development across the school campus on surrounding residences.

Out of hours' community use of school facilities

The EPA is aware of government policy to encourage out of hours community use of school facilities provided that use does not cause noise emissions that interfere unreasonably with the comfort or repose of persons not on the premises.

The EPA considers that, in relation to the school hall, noise from normal school activities in class hours would not be acoustically significant. However, the use of the hall for other events, particularly outside school hours, has the potential to adversely impact on residences.

The EPA considers the proposed community use of school facilities (especially the hall and outdoor sports courts) outside normal school hours needs to be carefully managed to ensure noise impacts on nearby residences are minimised.

Recommendation

1. The proponent be required to ensure that the outdoor sports courts are not made available for community use –
 - (i) during week day mornings,
 - (ii) later than 6.00 pm on week nights,
 - (iii) other than between the hours of 8.00 am and 6.00 pm on Saturdays, and
 - (iv) during Sundays and public holidays.
2. The proponent be required to ensure that the school hall is not made available for community use
 - (i) after 10.00 pm or before 8.00 am, and
 - (ii) during Sundays and public holidays.

Public address and school bell system

The EPA notes numerous reports of community concern arising from inadequate design and installation as well as inappropriate use of school public address and bell systems and considers that appropriate design, installation and operation of those systems can both –

- meet the proponent's objectives of proper administration of the school and ensuring the safety of students, staff and visitors, and
- avoid interfering unreasonably with the comfort and repose of occupants of nearby residences.

Recommendation

The proponent be required to design, install and operate the school public address/bell system to implement all such other measures as may be necessary to ensure use of that system does not interfere unreasonably with the comfort and repose of occupants of nearby residences.

Waste collection services

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

Recommendation

The proponent be required ensure waste collection services are not undertaken outside the hours of 7.30 am to 6.00 pm Monday to Friday.

Mechanical plant and equipment

Section 5 to EIS Appendix 14 appears to indicate that details of mechanical services, plant and equipment are not yet available and the EIS does not appear to show the location of mechanical plant and equipment.

Recommendation

The proponent be required to:

- (a) provide a comprehensive quantitative assessment of operational noise impacts on surrounding noise sensitive receivers, especially adjoining residences;
- (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 western boundary of the development site, and
 - (ii) exhibits tonal or other annoying characteristics.

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) at schools 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. 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.

3.3 Water sensitive urban design and energy conservation and efficiency

The EPA acknowledges that EIS Appendix 18 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 of all teaching and learning spaces, and
 - (ii) installation of solar photovoltaic arrays
-