



EF13/5058, DOC17/333610-01
SSD 8114

Mr Brent Devine
Department of Planning and Environment
GPO BOX 39
SYDNEY NSW 2001

Dear Mr Devine

SSD 8114 – LINDFIELD LEARNING VILLAGE – 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 12 December 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 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) 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;
- (c) construction phase dust control and management,
- (e) construction phase erosion and sediment control and management to prevent pollution of tributaries of the Lane Cove River, especially Blue Gum and Sugarbag Creeks;
- (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 operational noise impacts on surrounding residences;
- (h) the need to minimise operational water quality impacts on surface waters, especially Blue Gum and Sugarbag Creeks (tributaries of the Lane Cove River);
- (i) practical opportunities to implement water sensitive urban design principles, including stormwater re-use; and
- (j) practical opportunities to minimise consumption of energy generated from non-renewable sources and to implement effective energy efficiency measures.

The EPA's detailed comments are at Attachment A. Should you require clarification of any of the above please contact John Goodwin on 9995 6838.

Yours sincerely



4/8/2017

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

Attachment A

Contact officer: J GOODWIN
9995 – 6838

ATTACHMENT A
- ENVIRONMENT PROTECTION AUTHORITY COMMENTS -
LINDFIELD LEARNING VILLAGE EIS

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 the development site has not been previously notified in relation to section 60 of the *Contaminated Land Management Act* (the Act) and is currently not regulated under the Act.

EIS Appendix P *Preliminary Environmental Site Assessment, March 2017* reports that the site was used as an army rifle range from 1915 until the late 1960s and that the rifle range was located about 150metres to the south east of the development site which was in turn part of a safety zone behind the target range.

Appendix P identifies fill material as a source of potential contamination and indicates that while filling is unlikely to be extensive based on the reported site history assessment, testing of any contamination in fill has not been undertaken.

Section 6.3 to Appendix P provides an opinion that "... the site can be made suitable for the proposed development provided that the recommendations in section 6.2 are completed" and on the proviso that demolition of existing buildings and excavation or construction of new buildings is not undertaken without further investigation.

Whilst the EPA accepts the report's conclusion that unpaved areas of the site present a higher risk for dermal contact in relation to the existing building/landscaping configuration, stage 2 investigations should also include paved areas together with any other areas that could potentially be modified in the future without the need for additional development approval. Those investigations should include test

pitting in the vicinity of the former rifle range including behind the 'stop butts' area in order to enable the visual assessment for any bullets or materials associated with the former rifle range.

Section 5.4 to Appendix P recommends that a hazardous building material assessment be undertaken prior to any refurbishment works. The EPA considers that given the age of the complex, the hazardous materials assessment should include assessment for –

- asbestos containing materials,
- lead-based paint, and
- PCB capacitors.

Recommendation

The proponent be required to ensure that:

- (a) the proposed development, including any change in land use, 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 [Please **note** should such change occur the proponent would be rendered the 'person responsible' for the contamination under section 6(2) of Contaminated Land Management (CLM) Act 1997];
- (b) a Stage 2 investigation of the potential for soil contamination is undertaken, with analysis for contaminants of potential concern in fill, lead and any ordnance in soil profile.
- (c) a hazardous building material assessment is undertaken prior to any refurbishment works and that that assessment includes assessment for lead based paint, asbestos containing materials and PCB capacitors,
- (d) any hazardous materials identified as being an unacceptable risk must be managed or removed, and validated by an appropriately qualified occupational hygienist prior to any reoccupation of the building, and
- (e) should the additional investigations identify any contamination which meets the trigger in the *Guidelines for the Duty to Report Contamination* (www.epa.nsw.gov.au/resources/clm/150164-report-land-contamination-guidelines.pdf) that contamination is notified in accordance with requirements of section 60 of the CLM Act.

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 noise and vibration

The EPA understands that understands that the majority of demolition and construction work will involve gutting and refurbishment of existing structures. Nevertheless, the EPA anticipates that construction and construction-related activities are likely to have significant noise impacts on surrounding residences, especially residences in multi-storey flats located in Dunstan Grove and Tubbs View.

Accordingly, the EPA encourages the proponent to adopt standard construction hours and intra-day respite periods consistent with those recommended in this submission.

2.2.1 *general construction hours*

The EPA emphasises that in general 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 construction and construction-related work likely to be audible at any noise sensitive receivers such as 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.

2.2.2 *intra-day respite periods*

The EPA anticipates that those 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, 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 (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, 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 notes with concern the proximity of the surrounding residences (especially the multi-storey apartments in Dunstan Grove and Tubbs View) and is aware from long experience of the need for appropriate operational noise mitigation and management measures, particularly in regard to:

- (a) the nature and frequency 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 plant and equipment, especially mechanical ventilation plant and equipment; and
- (f) time restrictions on grounds maintenance using powered equipment (e.g. leaf blowers, brush cutters and lawn mowers).

The EPA notes that:

- the development includes re-development of the existing sports hall, including gymnasium and 2 squash courts, on the northern side of Dunstan Grove and adjacent to 2 multi-storey unit blocks;
- Section 2.2 (p.8) to EIS Appendix E states that the existing auditorium (which is located opposite the above-mentioned unit blocks) will be redeveloped as a 750 seat auditorium which will be made available for community use and that the "... adjoining dining area ..." will be available for functions; and
- EIS section 3.1 indicates that the re-developed auditorium and lecture theatres 1 and 2 would be made available for "... after hours for community use."

The EPA anticipates the proposed development (especially out of hours use of school facilities by external parties) may have significant operational noise impacts on nearby sensitive land uses, including residences in multi-storey unit blocks in Dunstan Grove and Tubbs View to the north and east of the development site.

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.

Section 4 to EIS Appendix N outlines how noise measurements were undertaken to determine the background noise levels for the project. However, the EPA is concerned that monitoring to establish background noise levels was not undertaken consistent with the guidance material provided in the INP, in particular –

- (a) Table 1 to Appendix N presents day and evening period L_{A90} background noise levels for the South monitoring location as 48 dBA and 47 dBA respectively,
- (b) L_{A90} chart levels for the South location at the end of Appendix N show are lower than those levels presented in Table 1, typically around 40 dBA to 45 dBA,
- (c) Table 1 presents the $L_{Aeq(15hour)}$ level for the South location as 43 dBA which indicates that the background noise levels at that location are likely to be lower than those reported in Table 1.

Section 4.1 to EIS Appendix N indicates that filming was being undertaken on site during the course of background noise monitoring. However, section 4.1 does not provide any information concerning the times at which filming took place or the potential impact of film related equipment and activities (example: generators, air conditioning, vehicle movements) that may have affected the measured noise levels. However, Appendix N P.7) states nevertheless concludes that "...the monitoring is representative of the background noise in the absence of noise from the use of the site."

The L_{Aeq} noise graphs attached to Appendix N show an unexplained noisy period (centred on about 6.30 pm) during the evening period on most nights and at both monitoring locations.

Recommendation

The proponent be required to review the background noise analysis and re-tabulate the Assessment Background Levels / Rating Background Levels for each monitoring location and time period (i.e. day, evening and night).

Recommendation

The proponent be required to revise the EIS as necessary to take into account the revised background noise levels and provide revised criteria derived from those revised background noise levels.

Recommendation

The proponent be required to clearly demonstrate why background noise monitoring was not affected by noise from filing activities on the site during the monitoring period.

Recommendation

The proponent be required to explain the nature of the evening period noisy events represented by the peaks on the L_{Aeq} noise graphs approximately centred on 6.30 pm most nights during the background noise monitoring.

quantitative assessment of noise impacts – noise from internal areas

Section 6.3 to EIS Appendix N *Noise Impact Assessment* discusses predicted impacts from the operational use of classrooms, the gymnasium and auditorium but does not provide the quantitative noise impact assessment required the SEARs or outline the measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land.

Section 6.3 also –

- (a) concludes instead that the noise impacts of the proposed school and out of hours community use "... would be very similar ..." to the current use but does not offer any evidence to substantiate that conclusion, and
- (b) indicates that the auditorium (presumably including the adjoining dining/ function room) would be used "... on occasion in the evenings (up to 11pm)." even though the 'night period' for noise impact assessment is considered to commence at 10.00 pm.

Recommendation

The proponent be required to provide a quantitative assessment of potential operational noise impacts, including sleep disturbance impacts, of day, evening and night period use of 'internal areas' (especially the gymnasium, redeveloped auditorium and function room and the large lecture theatres 1 and 2).

'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 the proposed community use of school facilities outside normal school hours needs to be carefully managed to ensure noise impacts on nearby residences (especially those in the 2 multi-storey unit blocks in Dunstan Grove) are minimised.

The EPA notes that the EIS does not appear to identify the sports hall/gymnasium as a facility that would be made available for community use and considers any such future use should not occur without a formal modification application accompanied by a detailed noise impact assessment.

Recommendation

The proponent be required to undertake:

- (a) comprehensive noise compliance monitoring of representative uses of the sports hall/gymnasium, lecture theatres 1 and 2, dining/function room, auditorium and dining/function room, and associated facilities (e.g. parking) outside school hours to demonstrate that the level, nature, quality and character of noise emitted by those uses and the time at which and frequency of those uses would not interfere unreasonably with or be likely to interfere unreasonably with the comfort or repose of persons not on the development site, especially the occupants of nearby residences; and.
- (b) submission of a detailed noise compliance monitoring report with noise measurements reported against relevant noise criteria and the outcomes of appropriate community consultation together with detailed recommendations concerning any additional feasible and reasonable noise mitigation and management measures, including further or more relaxed restrictions on the times at which and the frequency of each type of use of the sports hall/gymnasium, lecture theatres 1 and 2, dining/function room, auditorium and dining/function room, and associated facilities (e.g. parking) outside school hours.

The EPA anticipates that the recommended noise compliance monitoring would include quantitative noise impact assessment to address noise emissions arising from amongst other things –

- audience/spectator noise,
- referee whistle noise,

- squash and basketball impact noise on sports court floor, walls and backboard surfaces,
- training sessions as well as sporting events,
- amplified sound during concerts and any associated noise tests and rehearsals,
- amplified sound during sporting events and any associated training sessions, and
- post-event audience/spectator noise, including vehicle door slamming and departure noise.

mechanical plant and equipment

Sub-section 4.1.3 to EIS Appendix K *ESD Report* indicates that natural ventilation will be provided to habitable rooms "... where possible ..." but notes many existing spaces will nevertheless require mechanical ventilation and air conditioning.

The EPA further notes that the EIS Appendix N *Noise Impact Assessment* does not provide detailed assessment of any of the plant and equipment but proposes instead (section 6.5, p.18) to prepare such an assessment pending detailed design becoming available.

Recommendation

The proponent be required to:

- (a) provide a comprehensive quantitative assessment of operational noise impacts on surrounding noise sensitive receivers, especially nearby residences in Dunstan Grove, Tubbs View, Millwood Avenue and Valley View Close;
- (b) ensure mechanical plant and equipment (including mechanical ventilation and elevator 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.

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 implement the EIS recommendations concerning the design, installation and operation of the school public address/bell system and all such other measures as may be necessary (without compromising student, staff or visitor safety) 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.

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

Section 4 to EIS Appendix K *ESD Report* outlines various measures proposed to minimise water and energy consumption together with ongoing environmental performance targets and measurement of water and energy consumption.

Sub-section 4.1.5 to EIS Appendix K proposes water sensitive urban design (WSUD) initiatives including stormwater harvesting and re-use.
