

EF13/5058, DOC17160088-01
SSD 7787

Ms Michelle Niles
Department of Planning and Environment
GPO BOX 39
SYDNEY NSW 2001

Dear Ms Niles

SSD 7787 – KELLYVILLE SOUTH PUBLIC SCHOOL – EIS

I am writing to you in reply to your invitation to the EPA to make a submission concerning the above project EIS.

The EPA requests that this submission be read in conjunction with its letter dated 28 July 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.

EIS section 3.4 indicates that the proponent has negotiated a shared use agreement with the local Council in respect of the sports hall (2 basketball courts) and outdoor sports field proposed to be aligned along the western boundary of the development site. And, proposes daily use of those facilities between the hours of -

- (a) (sports hall) 7.00 am and 11.00 pm, and
- (b) (outdoor sports field) 8.00 am and 11.00 pm.

The EPA notes with concern that occupants of residences adjoining the western boundary of the development site (especially those in Charlemont Terrace and Brighton Drive) are likely to suffer unreasonable interference with their comfort and repose unless adequate noise mitigation and management measures (including hours of use restrictions) are implemented.


The EIS Executive Summary (final para, p.7) and section 3.2 (p.23) indicate that "... early works ..." such as demolition, site preparation and bulk earthworks are proposed to be undertaken under a separate development application currently before the local Council. The EPA emphasises the importance of ensuring a seamless transition and hand over of environmental control and management measures (e.g. site remediation, erosion and sediments controls, dust minimisation and mitigation measures) provided during those early works, particularly if those works are to be undertaken by a contractor other than the contractor undertaking the works the subject of this proposal.

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;
- (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 Strangers Creek (a tributary of Caddie's Creek);
- (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.

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

Yours sincerely



28/4/2017

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 -
KELLYVILLE SOUTH PUBLIC SCHOOL

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 Asbestos containing material

The EIS indicates that demolition of existing structures as well as site establishment and bulk earthworks are proposed to be undertaken pursuant to a consent sought from the Hills Council, albeit that Council is understood to be party to an arrangement with the proponent to share the use outside school hours of the sports hall and outdoor sports field

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 anticipates that construction and construction-related activities are likely to have significant noise and vibration impacts on surrounding residences, especially adjoining residences in Charlemont Terrace and Brighton Drive.

Whilst the EPA acknowledges that a separate approval process applies to demolition, site preparation and bulk earthworks associated with the project, residents affected by noise and vibration impacts arising from those activities are unlikely to make the distinction. 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 5 dB above background levels 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 anticipates the proposed development (especially out of hours use of school facilities by Council and other external parties) may have significant operational noise impacts on nearby sensitive receivers, including existing and proposed residences in –

- (a) Charlemont Terrace and Brighton Drive to the west,
- (b) Free Settlers Drive (proposed) to the north, and
- (c) Ernesta Place (proposed) to the south.

The EPA notes with concern the proximity of the surrounding residences (existing and proposed) 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 (including facilities proposed to be shared with the local council) 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).

Background noise monitoring

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 the development.

Figure 2-1 to EIS Appendix U indicates that background noise monitoring was undertaken in February 2017 in the northwest corner of the development site but not at the boundary of the "... most potential [sic] affected residences ... " to the west (i.e. Charlemont Terrace and Brighton Drive) of the sports hall and outdoor sports court.

Section 3.1 does not appear to –

- (a) clarify why the background noise monitoring was not undertaken at the boundary of the most affected residences, and
- (c) confirm whether the adverse wind and rain affected data (see monitoring graphs) was excluded per the guidance provided in INP Chapter 3 and Appendix B.

Recommendation

The proponent be required to justify departures from the guidance material concerning background noise monitoring as provided in the New South Wales Industrial Noise Policy.

'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 (especially the sports hall, and outdoor sports field and sports court) outside normal school hours needs to be carefully managed to ensure noise impacts on nearby residences (especially adjoining residences In Charlemont Terrace and Brighton Drive) are minimised.

EIS section 6.1 (9th dot point) indicates that the proposed sports hall is to have a clear internal height of 7 metres to facilitate "... competition level basketball" and will be cut into the site to a depth of 3 metres.

EIS section 6.4.3 proposes community use of the –

- (a) the sports hall and associated parking area between the hours of 7.00 pm and 11.00 pm for council and community activities, and
- (b) outdoor sports field and associated parking area between the hours of 4.00 pm and 11.00 pm.

The EPA notes that the section 6.4.3 is inconsistent with the recommendations in section 5.5 to EIS Appendix U *Construction and Operational Noise Report* which recommends –

- limiting outdoor "... sporting fields..." to the evening period (i.e. 6.00 pm and 10.00 pm),
- scheduling any sporting contests to the early evening (i.e. 6.00 pm to 8.00 pm), and
- avoiding whistle use after 8.00 pm

EIS section 6.8.2 'Operational Noise' confirms that the sports hall (2 basketball courts) is also proposed to be used for potentially high noise impact activities including competition level basketball and other sporting events as well as for concerts. The EPA considers that proposed out of hours use of school facilities for concerts and rehearsals, and for competition level basketball, training sessions and other sporting events is likely to have significant intrusive noise impacts that would interfere unreasonably with the comfort and repose of residents, especially those occupying residences adjoining the western boundary of the development site.

EIS section 6.8.2 and Table 5 (p.54) propose certain operational noise mitigation measures, including-

- providing noise impact assessment of mechanical plant and equipment at the detailed design stage,

- "... improved constructions ..." of the sports hall walls and roof at the detailed design stage, and
- "... enclosed ..." doors and windows during sporting events and concerts outside school hours.

The EPA notes that whilst the EIS is unclear about what is meant by sports hall 'improved constructions' and 'enclosed' doors and windows, and the predicted residual noise impact on nearby residences, EIS Appendix U recommends acoustic ratings for doors, windows, walls and roofing.

Whilst, Table 5-2 to EIS Appendix U indicates the predicted noise levels at residences with sports hall windows open and closed, those noise levels use the $L_{Aeq,15}$ minute noise descriptor but –

- omit predictions using $L_{A1,1}$ minute descriptor (albeit that Appendix U recommends no major events after 10.00 pm) which would indicate levels of night-time intrusiveness associated with short term noise such as the impact of basketballs on floors and backboards,
- omit predictions using $L_{Ceq,15}$ minute and L_{Cmax} descriptors required for comprehensive assessment of predicted impacts of noise from rock concerts, and
- are mute about whether any modifying factor applied to adjust for intermittent or impulsive noise characteristics.

The EPA notes with concern that the proposal –

- is to allow daily use of the sports hall, outdoor sports field and outdoor basketball court outside school hours, and
- appears to be mute concerning the intended frequency of high noise impact events such as competition level basketball and other indoor sporting events, sporting matches (outdoor), sports training sessions, concerts (including sound tests and rehearsals) and other events involving amplified sound systems and audience/crowd participation, and
- does not include detailed noise predictions concerning the use of the outdoor sports field and sports court outside school hours.

The EPA anticipates a range of low-level activities may take place at the sports hall (example: community classes, meetings and workshops) that are unlikely to have a significant noise impact on nearby residences. However, the EPA anticipates significant noise impacts from community use of the sports hall, sports field, and outdoor sports court outside normal schools unless use of those facilities is appropriately managed in recognition of potential noise impacts on nearby residences. And, notes the proponent's policies concerning community use of school facilities which use may generate unacceptable noise impacts on surrounding residents.

Thus the EPA strongly advocates restrictions on the frequency of use as well as the times of use (i.e. limited to less sensitive day-time and evening periods) of the sports hall, sports field and outdoor sports and a comprehensive follow-up noise compliance monitoring program. The EPA considers noise compliance monitoring should be undertaken of representative uses of the sports hall, sports field and outdoor sports court to measure and evaluate noise impacts. And that, such monitoring should be considered in the context of appropriate community consultation as the basis for determining the nature and scope of feasible and reasonable noise mitigation and management measures.

Recommendation

The proponent be required to ensure implementation of all feasible and reasonable noise mitigation and management measures, including but not limited to :

- sports hall design and construction –

- (i) including mechanical ventilation sufficient to avoid the need to open doors and windows during sporting and concert events,
 - (ii) including airlocks to all exit doors other than emergency egress doors to minimise 'break out' noise as patrons access the hall,
 - (iii) orientate all windows and doors (other than emergency egress doors) away from nearby residences,
 - (iv) include fitting of alarms to all emergency egress doors to prevent unauthorised use,
 - (v) include a noise limiter on the sound system as recommended in section 5.4 to EIS Appendix U, and
 - (vi) incorporate wall and roof materials selected to achieve noise attenuation adequate to prevent emission of noise of a level, nature, character, or quality likely to interfere unreasonably with the comfort or repose of persons not on the development site;
- (b) restricting use of the proposed sports hall to –
- (i) not later than 10.00 pm for sports events,
 - (ii) not later than 10.30 pm for concerts, especially concerts involving amplified sound,
 - (iii) not more than 3 concerts (involving amplified music) per year, and
 - (iv) concerts which do not involve amplified rock music performances;
- (c) restricting use of the outdoor sports field and sports court to –
- (i) not later than 10.00 pm (instead of the proposed 11.00pm) for not more than one single week night during any single week,
 - (ii) not later than 7.00 pm on the other four week nights per week,
 - (iii) 8.00 am to 6.00 pm on Saturdays, and
 - (iv) no use on Sundays and public holidays; and
- (c) comprehensive noise compliance monitoring of representative uses of the sports hall, outdoor sports field, outdoor sports court 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.
- (d) 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, outdoor sports field, outdoor sports court 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,
- basketball impact noise on sports court floor, walls and backboard surfaces,
- training sessions as well as sporting events,
- amplified sound during concerts (including rock music 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

The EIS proposes natural ventilation to most teaching and learning spaces (other than the air conditioned communications room). The EPA has recommended air conditioning of the sports hall particularly during community use of that facility outside normal school hours.

The EPA further notes that the EIS does not provide detailed noise impact assessment of any of the plant and proposes instead 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 adjoining residences in Charlemont Terrace and Brighton;
- (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.

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.

EIS Appendix U makes a number of recommendations concerning appropriate design, installation and operation of the school public address/bell system.

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 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

EIS Section 6.5 outlines various measures proposed to minimise water and energy consumption.

EIS Table 5 (p.54) proposes water sensitive urban design (WSUD) of the stormwater system serving the development site, including stormwater harvesting and installation of proprietary gross pollutant traps.
