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SSD 8373

30 January 2018

Mr Peter McManus
Department of Planning and Environment
GPO BOX 39
SYDNEY NSW 2001

peter.mcmanus@planning.nsw.gov.au

Dear Mr McManus

**SSD 8373 – ALEXANDRIA PARK COMMUNITY SCHOOL – ENVIRONMENTAL IMPACT STATEMENT (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 18 April 2017 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, has not reviewed any environmental management plan forming part of or referred to in the EIS.

The EPA further notes that the development of the school campus includes:

(a) demolition of existing structures;

(b) construction of a primary school and secondary school for approximately 2,200 students;

(c) a pre-school;

(d) community centre; and

(c) sports hall, outdoor sports courts and a multi-purpose artificial-turf sports field.

The EPA notes with concern the proximity of residences in Belmont and Buckland Streets and various complaints arising from recent construction and operation of the temporary 'pop-up' school located in the north western corner of the development site. And, emphasises the importance of effective

environmental management of the demolition, construction and operational stages of the project, particularly in respect of noise impacts on surrounding residences.

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 school facilities proposed to be available for community use) to minimise 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.

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

Yours sincerely

**JENNIFER SAGE**
**Unit Head, Metropolitan Infrastructure**
**NSW Environment Protection Authority**

**Attachment A**

Contact officer: JOHN GOODWIN
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**ATTACHMENT A**

**- ENVIRONMENT PROTECTION AUTHORITY COMMENTS –**

**ALEXANDRIA PARK COMMUNITY 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 Site and groundwater contamination (including ACM and ASS)

The site has not been previously notified to the NSW EPA in relation to section 60 of the *Contaminated Land Management Act 1997* (the Act) and is not regulated under the Act. However, the site history in EIS Appendix V indicates a range of potentially significant industrial activities previously undertaken on the site including chemical manufacturing, furniture making and a match manufacturer (1950s until mid 1970s).

The detailed site investigation and soil vapour investigation reports identified contamination above screening levels within soil, groundwater and soil vapour in some areas of the development site. The EPA notes that there a remedial action plan has been prepared to address contamination issues at the site.

EIS Appendix Y includes a *Soil Vapour Investigation Report* which included targeted soil vapour investigation in that part of the site where Volatile Halogenated Compounds (VHCs) were detected in groundwater.

The EPA notes that –

(a) trichloroethene (TCE) was detected above the adopted screening levels at locations SS3 and SS7 and that a preliminary risk assessment indicated that the future indoor vapour risk at these locations is considered low and acceptable, but

(b) the calculations and detailed assumptions for the preliminary risk assessment were not presented.

Accordingly, the EPA considers further investigation is required to fully assess potential indoor vapour risk.

EIS Appendix V *Detailed Site Investigation (DSI)* reports on a desktop study, site visit, soil sampling and groundwater sampling. The EPA notes that there are several data gaps and uncertainties that were recognised in the DSI report including (but not limited to):

(a) insufficient data to characterise the fill material across the site;

(b) variability of the chemicals of potential concern (COPC) within the fill material; and

(c) insufficient data to assess groundwater quality across the site.

EIS Appendix Z comprises a *Remediation Action Plan* (RAP). However, the RPA is not sufficiently detailed. For instance, the "unexpected finds procedure" outlined in RAP section 16.2.3 is generic and limited. And, does not include the parties who will be responsible for implementing the unexpected finds procedure or the roles and responsibilities of all parties involved.

The EPA understands that an Underground Petroleum Storage System (UPSS) is located towards the eastern (Park Road) boundary of the development site. Section 11.4 to EIS Appendix Z recommends de-commissioning of the UPSS, its removal and removal of any impacted soils.

**Recommendation**

The proponent be required:

(a) to engage a site auditor accredited under the *Contaminated Land Management Act 1997* to inter alia review the adequacy of the site investigations, unexpected finds protocol, any remedial works or management plan, particularly given that some COPCs were reported above the screening levels;

(b) to undertake further investigation of indoor vapour risk due to TCE being detected in soil vapour;

(c) to ensure that following relocation or demolition of any existing structures and in ground utilities, further investigation is undertaken of soil contamination within the footprint of those structures and utilities prior to undertaking any construction;

(d) to ensure that the "Alexandria Park Community School Remedial Action Plan" prepared by Coffey and dated 8 December 2017 is submitted to the accredited site auditor for review;

(f) to ensure the Remedial Action Plan is implemented subject to any conditions imposed by the site auditor;

(g) to ensure that as lead has been found on site and preliminary testing indicated its leachability, all lead impacted soil 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);

(h) (prior to commencing any work on the development site) to prepare and implement a revised procedure for identifying and dealing with unexpected finds of site contamination (including asbestos containing materials) and that the revised procedure includes details of who will be responsible for implementing the unexpected finds procedure and the roles and responsibilities of all parties involved;

(i) to 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 as any such change would render the proponent the 'person responsible' for the contamination under section 6(2) of the Contaminated Land Management Act;

(j) to ensure that it notifies the EPA under section 60 of the Contaminated Land Management Act of any contamination encountered on the development site which meets the triggers in the EPA's *Guidelines for the Duty to Report Contamination*;

(k) to ensure that the processes outlined in State Environmental Planning Policy 55 - Remediation of Land (SEPP 55) are followed in order to assess the suitability of the land and any remediation required in relation to the proposed use; and

(l) to provide a Section A site audit statement (SAS) and accompanying site audit report (SAR) prepared following completion of remediation and validation certifying suitability of the development site for the proposed use prior to undertaking any construction;

*2.1.1 Asbestos Containing Material*

EIS Appendix W reports on a hazardous building materials survey which confirms the presence of asbestos cement sheeting in buildings identified for demolition. The EPA thus anticipates that demolition of the existing school is likely to generate 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.

*2.1.2 asbestos impacted soils*

Figure 3 to EIS Appendix V indicates that asbestos containing material fragments were observed during utility trench excavation for the existing 'pop-up' school and on the surface during the site walkover.

Section 11.1 to EIS Appendix Z *Remedial Action Plan* indicates that the proponent's preferred option is to undertake "... capping and on-going management following regrading works."

The EPA favours removal of asbestos impacted soils from sites proposed to be used for schools in preference to the proposed on site containment of those soils.

**Recommendation**

Should the proposed on-site containment of asbestos contaminated soils be approved, the EPA recommends that the proponent be required to ensure:

(a) an asbestos works management plan and Long Term Environmental Management Plan (LTEMP) are prepared and submitted to the site auditor for review;

(b) the asbestos works management plan is implemented upon confirmation from the site auditor that the asbestos works management plan is considered to be appropriate;

(c) all in-ground utility services are installed above the marker layer to minimise any risks to workers undertaking future maintenance work in service trenches;

(d) the LTEMP is developed and used to identify the location and the requirements for ongoing management of asbestos impacted soil and other contaminated soil to be contained on the site, including:

  (i) the expected limitations on the development site use,

  (ii) relevant environmental, and health and safety processes and procedures,

  (iii) management processes, procedures and responsibilities to be adopted by future site users within the development site, and

  (iv) details on the location and extent of placed or residual asbestos impacted soil and other contaminated fill materials, capping layers and marker barriers within the development site.

**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.

*2.1.3 Acid Sulfate Soils/Potential Acid Sulfate Soils*

The EPA understands from –

(a) section 3.3 to EIS Appendix V Detailed Site Investigation (DSI) that the southern part of the site was reclaimed from Shea's Creek swamp;

(b) section 3.4 EIS Appendix V notes that "... it is considered feasible that potential acid sulfate soils may exist within the site beneath fill used to reclaim the surrounding area.";

(c) EIS Appendix X confirms the presence of acid sulfate soils in the southern section of the development site; and

(d) section 6 to EIS Appendix X concludes that "... there is considered to be a high potential for ASS to be disturbed during the proposed development if piling works extend into either or both the sand/peat and silty clay soil strata underlying the southern part of the development site.

However, EIS Appendix Z *Remedial Action Plan* does not appear to consider acid sulfate soils management or the potential sulfurous odours arising from the exposure of acid sulfate soils during works associated with installation of piles.

Acid sulfate soils may only be disposed of at a waste facility legally able to receive such waste. And, any waste containing acid sulfate soils must be classified in accordance the EPA's waste classification guidelines Part 4.

The EPA's waste classification guidelines are available at its web site via the following link –

http://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines

The EPA confirms its advice as indicated in the cover letter to this submission that it neither reviews nor endorses environmental management plans or the like, including any acid sulfate soils management plan.

**Recommendation**

The proponent be required to assess and manage any acid sulfate soil (ASS) and potential acid sulfate soil (PASS) in accordance with the 1998 *Acid Sulfate Soils Manual* published by the NSW Acid Sulfate Soil Management Advisory Committee (ASSMAC).

**Recommendation**

The proponent be required to ensure all acid sulfate soil waste generated during the project is kept separate from all other waste and is assessed, classified and managed in accordance with the "*Waste Classification Guidelines Part 4: Acid Sulfate Soils*".

**Recommendation**

The proponent be required to ensure that all such measures as may be necessary to minimise and manage any odours arising from excavation, stockpiling and removal of acid sulfate soil are implemented, including but not limited to :

(a) staged excavation to limit the surface area of exposed odorous material,

(b) application of odour suppressants,

(c) effective covering of stockpiles and truckloads of excavation spoil, and

(d) expedited removal of odorous material from the development a facility legally able to accept those wastes.

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, especially residences in Belmont and Buckland Streets.

*2.2.1 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.

*2.2.2 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 (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 (especially out of hours use of school facilities by external parties) may have significant operational noise impacts on nearby sensitive receivers, especially adjoining residences in Belmont and Buckland Streets

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).

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 Industrial Noise Policy (INP) specifies that at least a 'week's worth' of monitoring data is required to establish background noise levels. The EPA notes however that although the proponent measured background noise levels at two locations and that –

(a) measurements at location 1 were for four days only and do not meet the Industrial Noise Policy (INP) requirement for one week of valid data,

(b) measurements at location 2 meet the measurement duration requirement,

(c) neither measurement location appears to have been at the most-affected or potentially most-affected noise-sensitive receiver location (i.e. residence) as anticipated by the guidance material in INP Table 3.1 *Methods for determining background noise.*

In 2017 the EPA measured noise levels over two nights at a residence in Buckland Street and considers on the basis of those results background noise levels reported at location 2 are representative of the background noise levels of potentially most-affected residences.

**Recommendation**

The proponent be required to apply the design criteria derived from background noise monitoring at location 2 to all activities across the entire development site.

'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, sports field and outdoor sports courts) outside normal school hours needs to be carefully managed to ensure noise impacts on nearby residences are minimised.

The EPA considers that, in relation to the sports hall, noise from normal school activities in class hours would not be acoustically significant.

However, the use of the sports hall for events outside school hours, has the potential to adversely impact on residences. Section 5.2.4 to EIS Appendix T predicts that –

(a) noise from sporting events in the sports hall are not expected to adversely impact residences during day and evening periods, and

(b) noise from music events held in the sports hall are expected to adversely impact residences during the 'evening period' (i.e. 6.00 pm to 10 pm) unless door openings on the northern elevation are closed.

The EPA anticipates significant noise impacts on surrounding residences should the sports hall be used during the night period (i.e. 10.00 pm to 7.00 am Monday to Saturday, 10.00 pm to 8.00 am on Sundays and public holidays).

EIS Appendix T does not appear to have taken into account noise impacts arising from the departure of patrons (e.g. vehicle door slamming) following community use of the school hall outside school hours.

**Recommendation**

The proponent be required to ensure the sports hall is not made available for community use –

(i) between 10.00pm and 7.00 am week days and Saturdays, and

(ii) during Sundays and public holidays.

**Recommendation**

The proponent be required to ensure that in the absence of strong justification (including comprehensive noise compliance monitoring of representative use) the sports field and 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.

**Recommendation**

The proponent be required to –

(a) undertake comprehensive noise compliance monitoring of representative uses of the sports field and outdoor sports courts 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.

(b) submit 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 field and outdoor sports courts and associated facilities (e.g. parking) outside school hours.

(c) ensure that noise compliance monitoring referred to in paragraph (a) above, would include quantitative noise impact assessment to address noise emissions arising from amongst other things –

- audience/spectator noise,
- referee whistle noise,
- training sessions as well as sporting events,
- any 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

Section 5.2.2 to EIS Appendix T indicates that details of mechanical services, plant and equipment, including the location of those services, plant and equipment, are not yet 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;

(b) ensure mechanical plant and equipment installed on the development site does not generate noise that –

(i) does not generate noise that exceeds 5 dBA above the rating background noise level (day, evening and night) measured at the boundaries of the development site, and

(ii) does not generate noise that 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.

Section 5.2.7 to EIS Appendix T proposes a number of measures to minimise noise impacts that may arise from inadequate design and installation as well as inappropriate use of school public address and bell systems

**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.

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 S 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 ‘habitable’ rooms, and

(ii) installation of solar photovoltaic arrays

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