



Operational Waste Management Plan
Amity College Leppington
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1. Summary

This Operational Waste Management Plan has been prepared by Amity College Australia Limited to accompany a State Significant Development Application for the Amity College Leppington Campus to be located at 85 Byron Road and No 63 Ingleburn Road at Leppington, comprising Lots 1 & 2 DP 525996 respectively. The proposal seeks to establish a new school (the project) on that part of the above property zoned SP2 Infrastructure (Educational Establishment), including roadworks on designated roads. The proposed new school will have a kindergarten, a 3-stream primary school and a 3-stream secondary school with a maximum capacity of 1,000 students ie. serving K-12 students.

The New South Wales State Environmental Planning Policy designates Leppington as part of the South West Priority Growth Area and land has been released for development, including low and medium density housing.

This waste management plan will consider the estimated waste volumes (based on student and staff numbers), waste collection and removal strategies, waste collection facilities and waste minimisation initiatives in order to develop an effective waste management system.

This plan outlines measures to achieve the following:

- Avoid the generation of unnecessary waste;
- Minimise the volume of waste to be collected; and
- Recycle, reuse and recover waste generated

Waste bins for the school will be colour coded and categorised into general, comingled recyclable and paper and cardboard waste to encourage sustainable waste management with categorised waste bins situated across the school sites in populous areas and areas of foot traffic. Waste deposited in these bins will be hauled to the respective waste collection sites for collection by a waste collection contractor at scheduled intervals.

Chemical and hazardous waste will be collected by a suitably qualified waste collection contractor.

The proposed driveway to the waste collection area for the new school is on the southern end of the school, from the new road to be formed, running perpendicular off Byron Road.

The waste storage area will be designed and constructed to meet the following requirements:

- Provide adequate storage based on estimated waste generation rates and estimated population;
- Direct, safe and convenient access for cleaners, collectors and users of the facility;
- Well screened or hidden to minimise visual and odoriferous impacts;
- Cleanable, non-slip and durable surfaces; and
- Appropriate signage that clearly identify bins and storage areas

2. School Operations

The proposed development of Amity College Leppington Campus is intended to meet the local educational demand for approximately 1,000 students.

2.1 Estimated Waste Volumes

Amity College operates a combined primary and secondary school located at Prestons 9.7km north east of this proposed campus and has 1420 students currently enrolled. The estimated waste volumes for the Leppington Campus is projected to be 70% of the Preston campus volumes.

At Prestons Campus, each classroom has separate general waste basket and recycled paper basket which are emptied to a trolley by the cleaners each night and taken to the respective waste collection bins. In the playground and heavy traffic areas there are smaller garbage bag-lined 120lt garbage bins (placed across the schools) separated into general waste, comingled and paper. The cleaners collect these waste into trolleys after lunch and in the evenings and empty into the respective waste collection bins.

The current waste volumes at Prestons campus with 1420 students are as shown below:

Bin Type	Bin Size	Quantity of Bins	Collection Rate (Weekly)	Total Volume (Weekly)
Main General Waste	4.5 m3	1	5	1350 kg
Comingled Recyclable Waste	240ltr	28	1	295 kg
Paper and Cardboard Waste	4.5 m3	1	2	120 kg

Considering the proposed size of the school with 1000 students, the proposed arrangement for Leppington Campus will be:

Bin Type	Bin Size	Quantity of Bins	Collection Rate (Weekly)	Total Volume (Weekly)
Main General Waste	3 m3	1	5	950 kg
Comingled Recyclable Waste	240ltr	20	Weekly	215 kg
Paper and Cardboard Waste	3 m3	1	2	90 kg

2.2 Waste Management School Guiding Principles

Amity College's guiding principles for waste are management:

- **Reduce** - Purchasing, consuming, and throwing away less.
- **Reuse** - Reusing items by repairing, donating, or selling them. Reuse is even better than recycling because items do not have to be reprocessed before they can be used again.
- **Recycle** - A series of activities that includes collecting recyclable materials that would otherwise be considered waste.
- **Buy Recycled** - Consider purchasing products made of recycled m

Waste Reduction:

Source reduction prevents the generation of waste in the first place, making it the most preferred method of waste management. A range of measures will be considered to reduce the amount of consumables purchased. This will have added cost benefit to the school in terms of initial costs and also waste disposal.

Paper is one of the main forms of waste generated by schools, representing up to 25% of waste. Strategies to reduce this will include:

- Use the Internet for research assignments.
- Make memo pads out of scrap paper
- View information electronically instead of printing hard copies
- Reduce hand-outs distributed

Paper waste will be managed through:

- Provided separate paper waste bins.
- Educate teachers and staff on the importance of recycling, and this should filter down to the pupils.
- Set up a paper collection scheme for each classroom by making 'paper only' waste bins or boxes for the children and teachers to put used paper in.
- Involve pupils by allowing them to create posters and bright labels for the recycle bins.

Similar initiatives will also be encouraged for other materials such as plastics and metals.

Waste Re-use:

Initiatives to promote re-use, at school, and in the home, will include:

- Reuse school supplies, such as folders and binders
- Donate furniture or electronics to a local charity
- Collect unclaimed items at the end of the year to donate or reuse
- Use old magazines for art projects

Waste Recycling:

The school will actively promote recycling by:

- Recycling waste materials for craft projects
- Providing adequate segregated waste bins in classrooms
- Providing adequate waste segregation in the main refuse area
- Procuring their waste collection services in line with their waste management policy

Buy Recycled:

School budgets are extremely challenging. There is, however, undoubtedly opportunity to consider purchasing materials that are either recycled or purchased from suppliers who have creditable sustainable credentials and the school will be pleased to make this a factor of their ongoing procurement process. Typical items that can be considered would include:

- Purchase of recycled print cartridges
- Purchase of recycled stationary
- Preferred suppliers who use recycled packaging.

2.3 Waste Management System

The following summarises the system for managing waste/recyclables at the school:

Waste Streams:

Bins will be colour coded to assist and encourage students and staff to place rubbish into the correct bins. Bins will be separated into four categories: General Waste, Commingled Recyclable Waste Paper and Cardboard Waste and Green waste.

These colour coded bins will be strategically placed across the school sites and collected in regular intervals by the cleaners to be transferred to the large waste bins located in waste collection site.

Waste Stream	Bin Body Colour	Lid Colour
Paper & Cardbord Recycling	Green	Blue
Commingled Recycling	Green	Yellow
General Waste	Green	Red
Organics	Green	Red

The following provides an indication as to the location of the bins for the various streams and that will be utilised by students, staff, and cleaning/maintenance staff.

- Cardboard/paper recycling bins will be located in all teaching spaces (as food is not permitted in these areas, no general waste bins are required).
- Commingled and general waste bins will be located in public areas (eg., school grounds, heavy traffic areas).
- Organics, recycling and waste bins will be located in the kitchen and dining room areas.
- Recycling bins will be located in office and other areas.

Waste accumulated in individual classrooms is to be deposited in the nearest categorized wheel bin for transfer to the waste collection area. Cleaning staff will be responsible for collecting all waste and recyclables and transporting to the bin storage area for consolidation. General waste will be compacted so far as reasonably practical to minimize the volumes in the waste collection bins thus minimising the time required for waste collection vehicles to be on site creating disruptive noise. Occasional large clean ups, such as event clean ups, will be arranged in addition to the weekly collection schedule if required, this will be removed by dedicated skip called in for the occasion.

Chemical and hazardous waste will be collected by a suitably qualified/specialist waste collection contractor from their dedicated storage areas.

Signage:

The placement of signage is very important for successful waste management system, ensuring students and staff have visual aids for them to make the right choices. Signs should be applied throughout the school grounds and facilities. Below are some examples that can be used.



Don't waste YOUR future



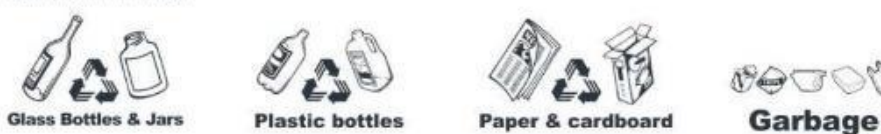
Don't waste YOUR future



Example wall posters



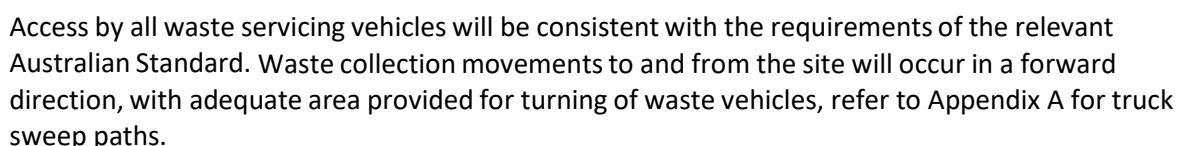
Example bin lid stickers



Education & Training:

All students, staff and cleaning/maintenance staff will be briefed on the proper use of the waste management systems. Recycling streams will be monitored and reported by cleaners/school management, as it is imperative that they remain free of contamination to ensure compliance with Council and contractor collection protocols. Staff and students will be encouraged to maximise the separation of general waste and mixed recyclables to aid the proper disposal of all materials.

Driveway access to the waste storage area is proposed towards the southern end of the school site from the new southern future local road off Byron Road (along the southern boundary of the school). The driveway will be designed to provide safe access for front lift trucks to collect waste, reverse and depart in a forward direction. The trucks proposed by the Prestons Campus incumbent waste collection contractor are 8m long.



2.5 Waste Facility & Bin Storage Area

The waste facilities and bin storage areas for the new school will be designed to suit the Educational Facilities Standards & Guidelines (EFSG) requirements which include the following requirements:

- Provide adequate storage based on estimated waste generation rates and estimated population;
- Permit direct, safe and convenient access for cleaners, collectors and users of the facility;
- Well screened or hidden to minimise visual and odoriferous impacts;
- The main waste compound to be a sealed concrete slab, graded and drained to meet Sydney Water Guidelines.
- Cleanable, non-slip and durable surfaces, Provide a trapped gully and hot and cold water mixer tap. Refer to Sydney Water for requirements.
- The Path of travel from bin holding areas and/ or waste stores to truck must have no steps or kerb and a maximum gradient of 1:14
- Display appropriate signage that clearly identifies general, comingled and recycling bins and storage areas.
- All equipment must have safe operation procedures in place. Appropriate safety signage must be provided.

All waste facility and bin storage areas will be designed and constructed to comply with the Building Code of Australia, Australian Standards and Camden Council requirements.

2.5 Grounds Attendant

The waste facilities and equipment will be managed by the school's Operations Manager and his delegate the General Grounds Attendant. The grounds attendant's duties will include, but not limited to, the following:

- General maintenance and cleaning of waste collection site
- Organising and maintaining waste bins and waste removal equipment
- Deodorising the waste collection site as required
- Educating and updating staff and students on waste classification and disposal into appropriate bins
- Assisting with emptying of bins during collection as required

APPENDIX A - GARBAGE TRUCK SWEEP PATH DIAGRAM

