Kambala Sport, Wellbeing, & Senior Learning Precinct Development

Operational Waste Management Plan May 2020

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1. Introduction

This Operational Waste Management Plan report for the Kambala Sport, Wellbeing, and Senior Learning Precinct development has been prepared by Waste Audit & Consultancy Services (Aust) Pty Ltd for the Kambala School and Carmichael Tompkins Property Group to provide guidance on environmentally sound and cost-effective management of waste and recyclable materials during the operational phase of the proposed development.

This report supports a State Significant Development Application (SSDA) submitted to the Department of Planning, Infrastructure and Environment (DPIE) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act), for the proposed redevelopment of the sports precinct of Kambala School at 794 -796 New South Head Road, Rose Bay.

This application is SSD by way of clause 8 and schedule 1 under State Environmental Planning Policy (State and Regional Development) 2011 on the basis that the development is for the purpose of an existing school and has a Capital Investment Value of more than $20 million.

2. Background

Kambala is an independent day and boarding school for girls up to 18 years. Kambala also has an early learning centre catering for approximately 70 girls and boys aged between 6 months and 5 years. The school was established in the late 1800s and moved to the current campus in 1913. The campus has evolved in an organic and ad-hoc manner over the last 100 years as the school and its demands have grown.

A new campus-wide planning approach offers the opportunity to strategically plan for the future in a sustainable and effective manner and to preserve the unique aesthetic and heritage qualities of the campus. The preparation of a campus-wide planning approach is also consistent with the School's 2019 - 2023 Strategic Plan which identified the need for a broader strategic plan to coordinate renewal and development in a feasible and staged manner.

3. SEARS Requirements

This report has been prepared having regard to the Secretary's Environmental Assessment Requirements issued for the project by DPIE, ref no SSD-10385 issued on 24 November 2019.

Preparation of this Construction Waste Management Plan has been undertaken with reference to the relevant SEARs requirement 20. Waste below, as well as industry best practices.

Identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.

This report addresses the operational aspects of waste management for the proposed project. Construction waste is addressed in a separate report.

4. The Site

4.1 Background & Site Description

Kambala is located at 794 -796 New South Head Road, Rose Bay and is within the Woollahra Council local government area (LGA). Situated in the eastern suburbs of Sydney, the School is approximately 8km east of the Sydney CBD. The School is located on New South Head Road which is a classified road connecting the City with the eastern beaches. The School is surrounded by predominantly residential uses.

The campus is bound by New South Head (to the east), Bayview Hill Road (to the north) and Tivoli Avenue (to the west). Fernbank Boarding House is located at 1A -3 Bayview Hill Road opposite the Kambala School grounds. No works are proposed to this part of the campus in this DA. The locational context of the School is illustrated at Figure1. Figure 2 provides an aerial map of the School and its immediate surrounds.

The School campus slopes down from New South Head Road in the east to the west and comprises a series of existing buildings in the western part of the campus that range in height and age. The south western and north western part of the campus accommodates much of the school's existing built form, while the eastern part has the school's sporting fields and courts.

The Kambala School building known as Tivoli House is in the heart of the campus. The house, its interiors, gateposts, gates and flanking walls with railing facing Tivoli Avenue, as well as 2 Norfolk Island Pines are listed as a heritage item in Woollahra Local Environmental Plan 2014 (WLEP 2014).

Within the School campus, the site of this SSDA is illustrated in Figure 3. The site proposed for new buildings is on top of the existing sports field and music building, as shown in green. The site proposed for demolition works and associated façade redevelopment and landscaping works is shown in red and is limited to a portion of the existing Hawthorne Building and the Arts building. The site of new landscape works is shown in yellow and includes all external spaces connecting these works. It is anticipated that the construction works will be staged, so the construction site for any given stage will be smaller than the overall site identified in Figure 3. The four key main buildings proposed are identified in Figure 4.

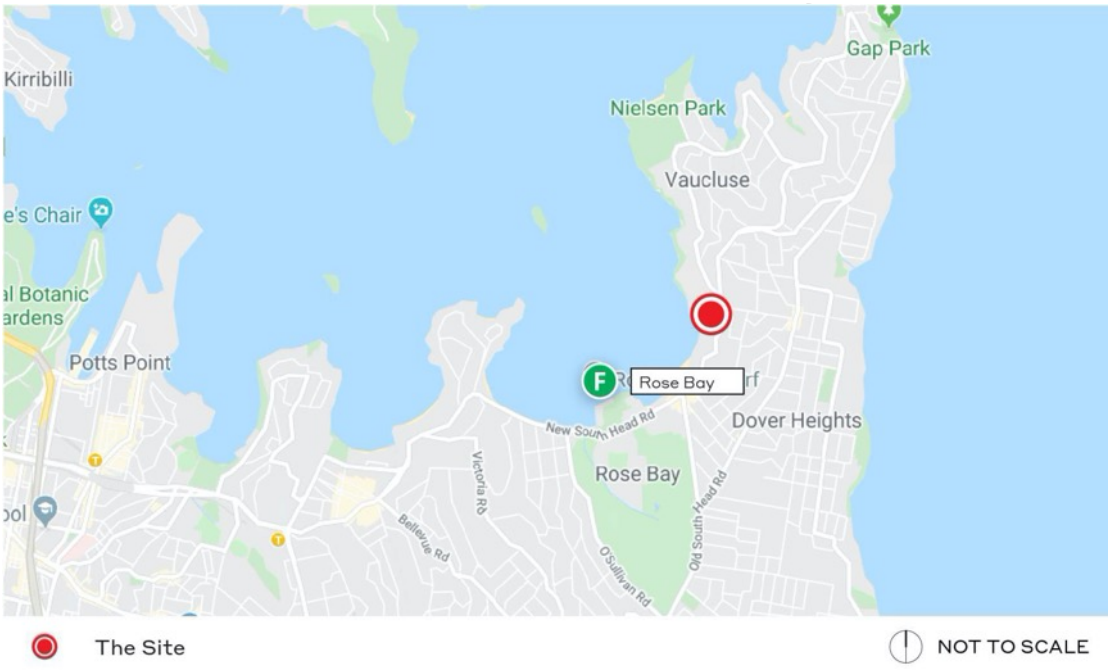


Figure 1 – Kambala School Location Context Plan
Source: Ethos Urban

Figure 2 – Aerial Map of the Kambala Campus
Source: Near Map

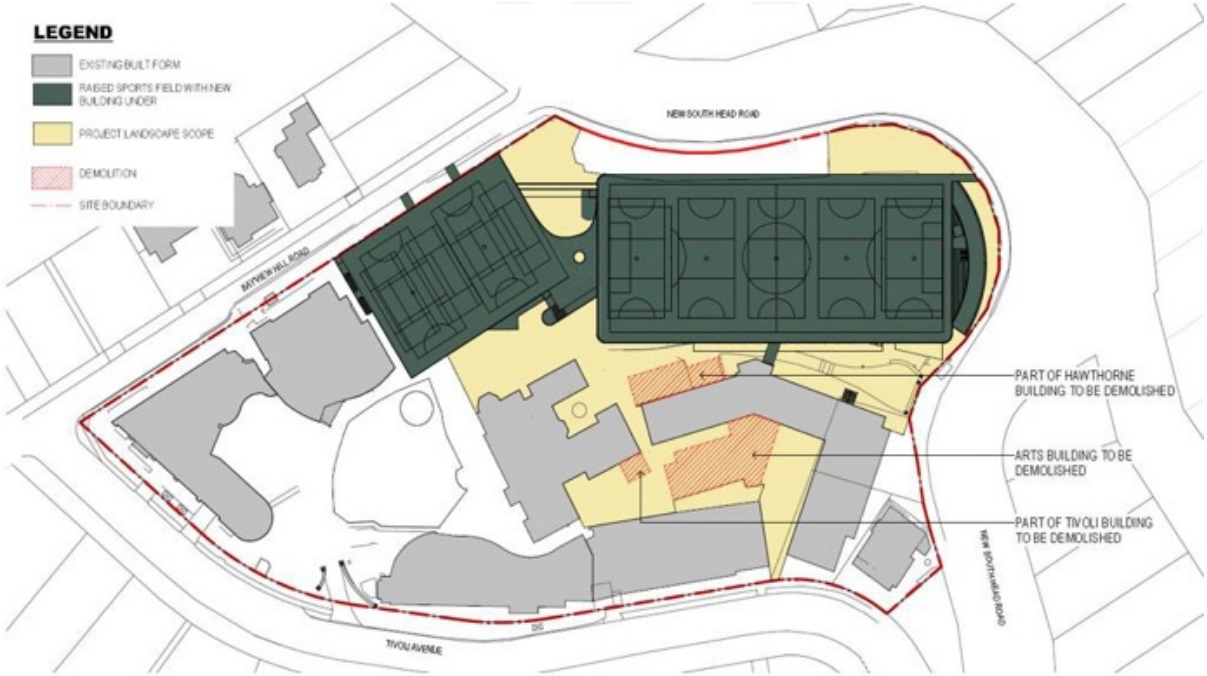


Figure 3 – Project Scope
Source: AJC

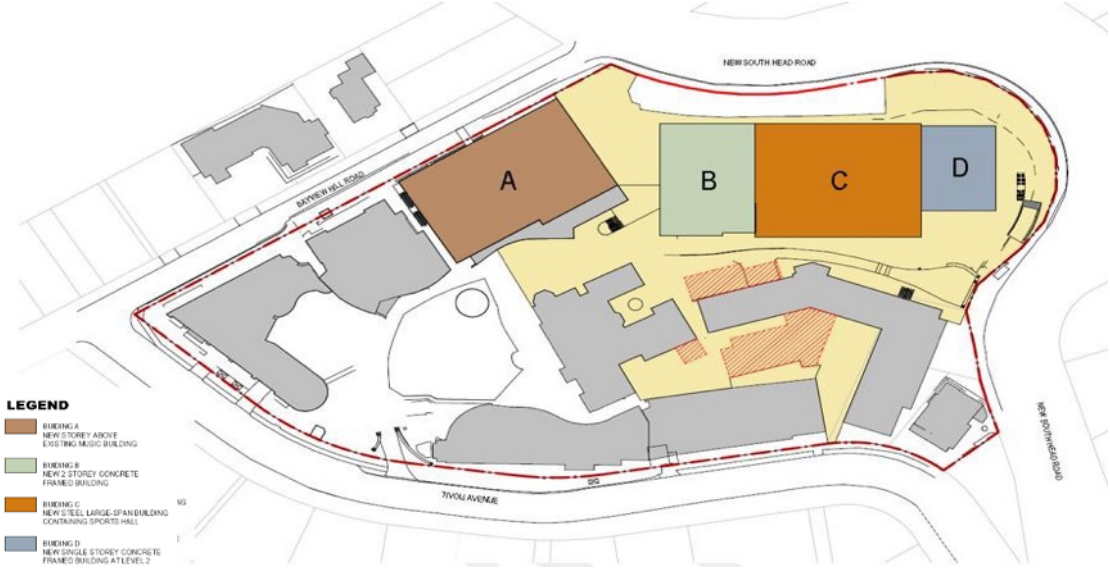


Figure 4 – Key Plan
Source: AJC

4.2 Legal Description and Ownership

The campus comprises several allotments, the legal descriptions of which are provided in Table 1 below. The existing campus has a site area of approximately 22,511m^2.

Table 1: Legal Description

Address	Lot	Plan
794-796 New South Head Road	Lot 67	DP 2538
	Lot C	DP 210074
	Lot 1	DP 1089403
3 Tivoli Avenue	Null	SP 64653
3 Bayview Hill Road	Lot 1	DP 175832
1A Bayview Hill Road	Lot 45	DP 2538
1 Bayview Hill Road	Lot 46	DP 2538

4.3 Overview of Proposed Development

This SSDA includes detailed plans for a new sport, wellbeing and senior learning precinct. Accordingly, consent is sought for the following:

- The excavation of part of the existing sports field to facilitate the construction of the following:
  - Sports facilities including weights room and dance rooms;
  - Indoor multipurpose sports courts for use by up to 1500 people
  - Innovative and flexible teaching and learning spaces
  - Amenities, store rooms, plant, circulation and ancillary spaces
  - Reinstatement of the sports field surface on the roof (sports field and perimeter fencing)
  - Spectator seating / bleachers
- The removal of the tennis courts (currently on the roof of the music building), and the construction of the following:
  - A wellbeing centre, called the SHINE centre, to accommodate the Kambala SHINE program
  - A new staff centre, called the KITE centre, to accommodate staff workstations, meeting areas, staff development workshop rooms and amenities
  - Reinstatement of the tennis courts, lighting and perimeter fencing on the new roof

- A new eastern forecourt for the school, new external landscaped areas and new courtyards;
- Minor works to the existing music building to facilitate a new connection to the new courtyard;
- The partial demolition of the Hawthorne building and the construction of a new façade, roof and landscaping; and
- The demolition of the Arts building and the construction of new facades to adjacent affected buildings, and new landscaping to the footprint of the demolished building

5. Current & Expected Operational Waste Generation

The proposed Sport, Wellbeing, and Senior Learning Precinct will result in the addition of around 5,665 m^2 of floor area, divided into a number of functional spaces. The SSDA includes a request to increase the student cap from the current 950 to 1020 (7.4%). A commensurate increase in operational waste and recycling production is therefore predicted as a result of the proposed development.

Currently, Kambala produces the following volumes of general waste and recyclables weekly, based on information provided by the school:

Table 2: Current General Waste & Recycling

Waste Stream	Bins/Week	Litres/Week
General Waste	9 x 660-litre	5,940
Cardboard & Paper Recycling	Average 2 bales	2,000
Commingled Recycling	15 x 240-litre	3,600
Green Waste Recycling	2 x 660-litre	1,320
Total		**12,860**

Assuming a 7.4% increase in general waste and recycling volumes (excluding green waste recycling), post-development operational volumes would be as shown in Table 3:

Table 3: Post-Development General Waste & Recycling

Waste Stream	Bins/Week	Litres/Week
General Waste	10 x 660-litre	6,378
Cardboard & Paper Recycling	Average 2-3 bales	2,147
Commingled Recycling	17 x 240-litre	3,865
Green Waste Recycling	2 x 660-litre	1,320
Total		**13,808**

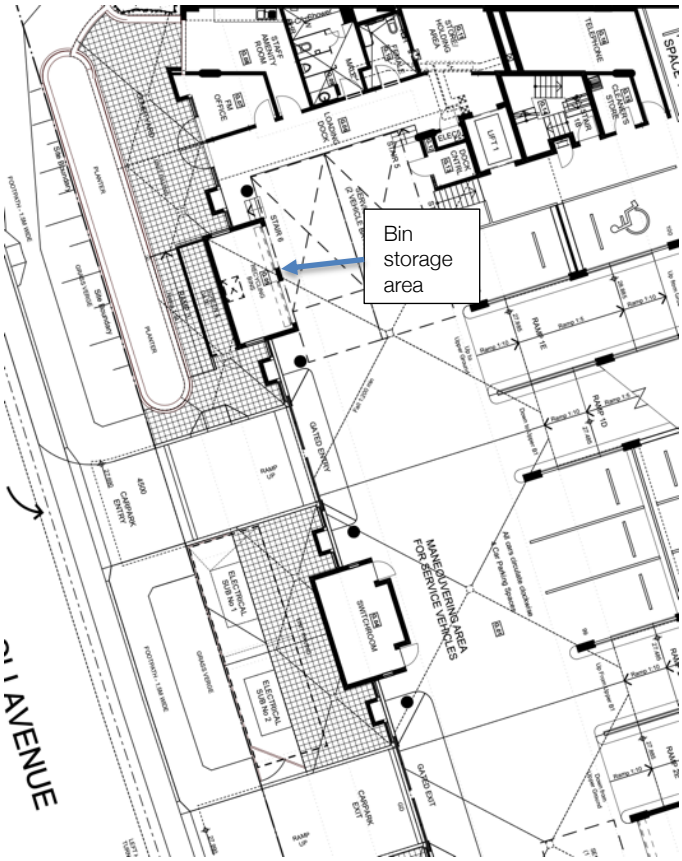
The predicted additional number of bins will require the following storage area:

Table 4: Storage Space Calculations

Material Stream	Additional Litres/ Week	Bin Size Litres	Additional Bins	Additional Storage Area (m^2)
General Waste	438	660	1	1.16
Cardboard & Paper	147	1.1 m bale	1	1.00
Commingled Recycling	265	240	2	0.85
Green Waste Recycling	0	660	0	0.00
Total Additional Bin Footprint				**3.02**

No new waste and recycling streams are expected to be generated by the development, and the existing storage area located in the school's loading dock on Tivoli Avenue will continue to be used for storage of all future operational general waste and recycling streams. As these additional bins and bales can be easily accommodated within the existing storage area, the proposed development will not require construction of any new storage facilities.

Figure 5 shows the location of the current bin storage area in the loading dock:



6. Waste & Recycling Streams

6.1 General Waste & Recycling

Standard procedures for managing general waste and recycling generated from classrooms, General Learning Areas, sporting facilities, changerooms, and offices, will be as follows :

- Staff and students dispose of material into designated bins
- Cleaners collect materials and transfer to the bins within storage room
- Recycling contractor services bins to designated schedule

6.2 Organic Waste

Green garden waste will continue to be managed by maintenance staff, who will place the materials in dedicated 660-litre bins. No increase in the volume of green waste is expected as a result of the proposed development.

The school is investigating, independently of the proposed development, food waste recycling, which would involve separating this material from other waste and collecting it for recycling (either combined with the garden wastes or in separate dedicated food waste bins).

6.3 Other Materials

Other materials, for which the school already has recycling systems, include printer cartridges, e-waste, and fluorescent lamps. The expected small additional quantities of these materials can be integrated into these existing systems without difficulty.

7. Roles & Responsibilities

The school's Facilities Manager will be responsible for reviewing the Operational Waste Management Plan annually, ensuring its objectives are met, and making adjustments where required, to ensure continued accuracy and relevance to actual operational circumstances.

Students are also involved in ongoing efforts to reduce waste to landfill.

7.1 Waste Diversion Targets

Based on the expected waste profiles of the proposed development, we recommend setting an initial diversion target of 50% of overall waste diverted from landfill. This target should be reviewed by the school after the first year of operations, and annually thereafter, and adjusted accordingly based on actual measured performance.

7.2 Monitoring & Measurement

Kambala already has systems in place for monitoring, measurement, and reporting of operational waste management performance. Reports and invoices provide weights of materials streams and numbers of bins collected.

Annual performance and contract reviews will be conducted with the school's Facilities Manager, waste contractor, and cleaning manager, to assess progress towards annual waste diversion targets and other KPIs, identify operational issues, and address any shortcomings. Waste audits will also be conducted annually to benchmark performance.

8. Internal Receptacles

It is recommended that all internal areas of the development are equipped with bin hubs for:

- Paper & Cardboard Recycling
- Commingled Recycling
- General Waste

Bins should be situated in areas which effectively service a group of workstations and offices, with no bins under desks; this improves cleaning staff efficiencies by reducing the number of bins that require collection, and also reduces the number of bin liners required.

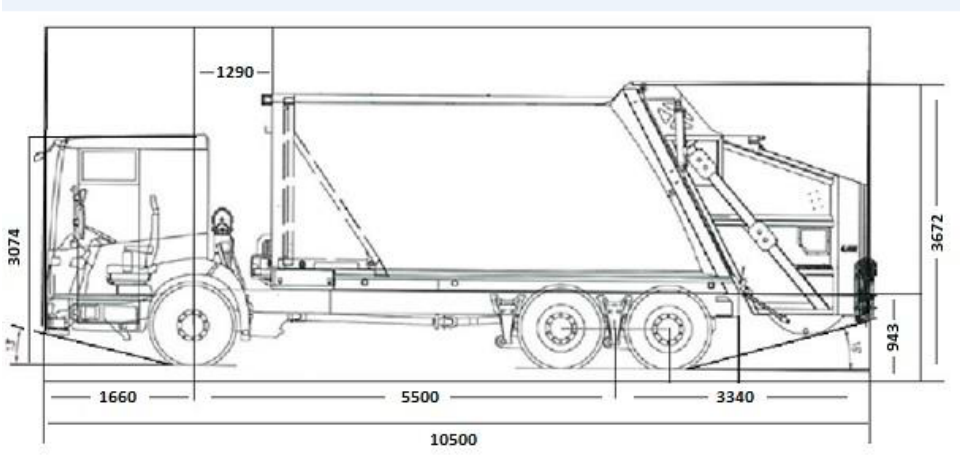
Examples of bins that are commonly used in office or educational settings are shown below. Differently colored bin liners (general waste-black; paper-clear; commingled-blue) are recommended to assist cleaning staff to distinguish the different streams and enable them to identify contamination, prior to final disposal in the bins in the central storage room.

The green lid bin bins shown in the second two photographs are for food organics: if the school is looking at implementing a recycling program for this material, care must be taken to place the bins in correct locations, i.e. those where most generation and disposal takes place, such as kitchens, dining areas, and common rooms.

9. Vehicle Access & Site Safety

Contractors responsible for the removal of general waste and recycling will be required to undertake a site induction process to ensure their operational practices are conducted safely and efficiently, and conform with the specific requirements listed in Section 9.

General waste and recycling will be collected in standard trucks as shown below:



10. Waste Contractor Requirements

Kambala's waste contractor(s) will comply with the following specific requirements:

- Reliable and efficient servicing, and meeting agreed schedules
- Working with the site to achieve continuous improvements in recovery rates
- Providing monthly reports on diversion and financial outcomes
- Providing tenant engagement and education programs
- Maintaining current details of processing facilities used
- Having collection vehicles fitted with weighing technology
- Maintaining evidence of compliance with relevant Green Star reporting criteria

11. Relevant Legislation, Standards and Guidelines

The following guidelines and standards have been used as references in compiling this Waste Management Plan:

- NSW EPA *Protection of the Environment Operations Act 1997* and *Protection of the Environment Operations (Waste) Regulation 2014, Part 11*
- NSW EPA *Waste Classification Guidelines* 2014
- *SEARs Requirements*

This report has been prepared by:

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