



Marist Catholic College
North Shore

Operational Waste
Management Plan

April 2021

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1. Introduction

This Operational Waste Management Plan report for Carmichael Tompkins Property Group has been prepared by Waste Audit & Consultancy Services (Aust) Pty Ltd for the Marist Catholic College North Shore (MCCNS) project 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 Stage Significant Development (SSD) Development Application (DA) for the expansion and redevelopment of Marist Catholic College North Shore, which is submitted to the Department of Planning, Industry and Environment (DPIE) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (the Act). Sydney Catholic Schools is the proponent of the SSD DA.

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

A 24-month study undertaken by Sydney Catholic Schools has identified a major deficiency in the provision of affordable, non-government education within the North Sydney Local Government Area (LGA).

The study also identified that the choice for families is extremely limited, as almost all of the schools in North Sydney provide single-sex education, with co-educational schools significantly underrepresented.

Sydney Catholic Schools, as operators of St Mary's Catholic Primary School and Marist College North Shore, is responding to this challenge and has identified a strategic response that can positively support the future of North Sydney.

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-10473 issued on the 21st July 2020.

Preparation of this Operational 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.

4. The Site

4.1 Background & Site Description

The site is located at 270 Miller Street, North Sydney within North Sydney LGA. It is bound by Carlow Street to the north, Ridge Street to the south, Miller Street to the east, and Ridge Lane to the west. It is surrounded by a mix of civic, residential and commercial uses.

It is approximately 700m north of the North Sydney CBD and located opposite St Leonards Park and North Sydney Oval. The site is strategically located between Crows Nest and North Sydney, which will soon be connected by the Sydney Metro. The site is approximately 250 m to the north of the future Sydney Metro Station at the corner of Miller and McLaren Streets.

Existing development on the site includes St Mary's Primary School, Marist College North Shore, St Mary's Church and Parish Centre, the former Presbytery and Monastery, as well as the two acquired terraces along Miller Street and a childcare centre known as the Jacaranda Centre.

The site comprises 26 lots and has a total area of 22,420m². The locational context of the site is shown at Figure 1 and an aerial photograph of the site is shown at Figure 2.

Figure 1. Site Context

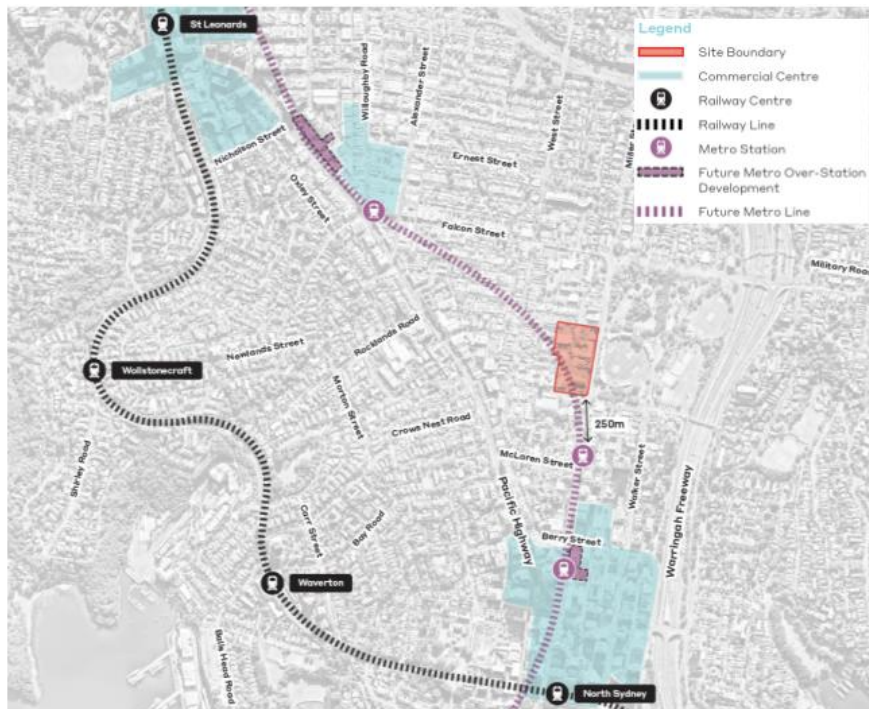


Figure 2. Site Aerial View



4.2 Overview of Proposed Development

The SSD DA seeks approval for:

- Retention of key buildings including St Mary's Church and Parish Centre, the former Presbytery and Monastery, St Mary's Primary School and some existing buildings on the western boundary.
- Demolition of existing buildings along Miller Street and Carlow Street, including the childcare centre and terrace houses.
- Construction of a mixed-use education precinct comprising a high school and early learning centre, including:
 - Adaptive reuse of the existing Presbytery, and alterations and additions to retained educational buildings;
 - Construction of a multistorey educational building on the corner of Miller Street and Carlow Street;
 - Construction of a multistorey mixed-use building along Miller Street, accommodating Teaching facilities, an early learning centre and an auditorium.
 - Construction of a new basement car park; and
 - Provision of ancillary canteen/café uses.
- Landscaping and public domain works, including the creation of a new Piazza along Miller Street, adjoining St Mary's Church.
- New northern door openings from St Mary's Church to the Piazza

A detailed breakdown of the staged construction program can be found below:

Stage 1 – Year 7/8 Amendments (Complete)

Stage 2 – Carlow Street

Enabling Works

- Demolition of Jacaranda Corner (Existing childcare and terrace houses),
- Convert to open space, recreation and play areas.

Stage 2A – “Wing” Building

- Demolition of hall foyer, and ante space (known as the foyer),
- Construction of new 4 level building for learning spaces (D&T, GLA's and 2 science labs)
- Construction of elevated walkways and access to the building.
- Refurbishment to TAS

Stage 2B – Carlow Street

- Demolition of cricket nets buildings
- Stormwater diversion,
- Construction of Carlow St Building
- Includes substation, solar panels and Miller St lobby (shell).

Stage 3 – Precinct Works

Stage 3A – Parish Centre

- Demolition of existing Miller Street building
- Restore existing Presbytery for the new Parish Centre, including fitout.
- Precinct Pavilion and Café/Canteen.
- Refurbish Ron Dyer Centre level 1 for St Mary's Primary expansion.
- Refurbish Ron Dyer Centre ground floor for new MCCNS reception
- New Piazza
- New Church door opening

Stage 3B – MCCNS Refurbishments

- Senior Hospitality expansion,
- Re-purpose existing Library to GLA's

Stage 4 – Miller Street Development

- New auditorium & function space
- New Childcare centre (base build only)
- New Performing Arts Centre,
- Additional Learning space,
- New Ideation Centre

Stage 5 – MCCNS Landscaping

- MCCNS "Quadrangle" Landscaping: multipurpose courts, recreation spaces and soft landscaping

Stage 6 – Minor refurbishment to Hall/Gym

- Replace doors from Hall/Gym to the balcony with new Doors and make good facade

Stage 7 – Childcare fitout

- Fitout of Childcare

5. Relevant Standards, Codes of Practice, & Legislation

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

- NSW EPA *Protection of the Environment Operations Act 1997*
- NSW EPA *Protection of the Environment Operations (Waste) Regulation 2014, Part 11*
- NSW EPA *Waste Classification Guidelines 2014*
- City of Sydney *Guidelines for Waste Management in New Developments 2018*
- *SEARs Requirements*

6. Operational Waste Generation

6.1 Current Waste Generation – Senior School

The proposed new buildings, landscape and refurbishment of the Marist Catholic College Senior School will increase the maximum student cap. Therefore, the senior school is expected to see an increase in waste generation and the current servicing arrangement will need to be altered. The current waste management procedure is as follows:

The senior school waste includes all secondary classrooms, café's/kitchens, common rooms, and hallways across the campus. All bins (3 cubic metre general waste and cardboard/paper recycling, and 240- litre paper wheelie bins) are picked up from the basketball court at the top off the Miller Street driveway, directly next to the wall that separates the basketball court and the rear of the Miller Street terrace houses.

The general waste skip is collected daily, Monday to Friday, with the cardboard/paper skip and wheelie bins collected once per week, during Term time, All collections are generally made between 1 am and 5 am. Cleanaway drivers have swipe card access to the main vehicle gate.

Every teaching space has an 80-litre paper recycling bin; when the bin is full a student is required to take the bin and decant it into the 3 cubic metre cardboard/skip. Most classroom recycle bins are only emptied when full; on average, this occurs 2-3 times per Term.

There are two 240 litre plastic/glass bottle recycle bins. These bins were introduced mid-way through 2020, and are emptied when full, around twice per Term. The bottles are taken by the Business Manager to a cash and earn recycle centre. Figure 3 below shows the current bin area.

Figure 3: Current Bin Storage Area



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

Table 1: Current General Waste & Recycling

Waste Stream	Number & Size of Bins	Collection Frequency	Estimated Litres/Week	Storage Area (m ²)
General Waste	1 x 3 m ³	5 x per week	15,000	2.72
Paper & Cardboard Recycling	1 x 3 m ³	1 x per week	3,000	2.72
Paper Only Recycling	3 x 240-litre	1 x per week	720	1.53
Mixed Recycling	2 x 240-litre	Monthly	240	1.02
Total			18,960	7.99

6.2 Current Waste Generation – Junior School & St Mary’s Church & Parish Centre

The current waste servicing arrangement for St Mary’s Primary (Junior School) includes 1 x 1100-litre General Waste bins, serviced 3 times per week during Term (Monday/Wednesday/Friday). The bins sit in an alcove on the side of St Mary’s Church, alongside two of the Parish’s bins. St Mary’s Church and Parish Centre’s bins comprise of 1 x 1.5m General Waste and 1 x 660L Commingled recycling.

Cleanaway accesses the bins off Ridge Street into a one-way driveway and exits onto Miller Street. The Parish driveway is secured by a locked gate on Ridge Street. The school cleaners are responsible for transporting all the waste around campus to the waste storage area.

Due to space allocations on the Parish driveway, St Mary’s Primary is currently unable to accommodate any recycling services. It is proposed to consolidate the whole school’s waste and recycling services (including St Mary’s Church) into the dedicated room to be constructed in the Ground Floor of the Carlow Building, which will result in safer and more efficient collections and improved amenity, as well as enabling recycling for St Mary’s Primary.

MCCNS’s cleaners will continue to be responsible for transporting waste from around campus, the only adjustment to current practice being the relocation of the bin storage area to the Ground Floor of the Carlow Building.

6.3 Projected Junior & Senior School General Waste & Recycling

New materials streams are expected to be generated by the development, with a new waste storage area to be located on the Ground Floor of the Carlow Building (set to be constructed in the second stage of works). The procedures and management for the disposal and collection of waste will remain the same throughout and on completion of the development.

Table 3 shows expected volumes to be generated upon completion of works and for the increase in student numbers from 828 to 1,440. It is recommended that all teaching and administrative areas are fitted with bin hubs for the identified streams in Table 2, as detailed in Section 9.

Table 2: Projected General Waste & Recycling - Junior + Senior School

Waste Stream	Number & Size of Bins	Collection Frequency	Estimated Litres/Week	Storage Area (m ²)
General Waste	6 x 1100-litre	5 x per week	33,000	12.28
Paper & Cardboard Recycling	4 x 1100-litre	2 x per week	8,800	8.19
Commingled Recycling	1 x 1100-litre	1 x per week	1,100	2.05
Food Organics Recycling	3 x 120-litre	1 x per week	360	0.98
Other Recycling Streams	TBC	As required	<100	3.00
Bulky Waste	N/A	As required	N/A	10.0
Bin Wash	N/A		N/A	4.0
Total Required Area			42,900	40.49
Actual Waste Storage Area				52

6.4 Bin Transfer & Collection

All general waste and recyclables will be stored in the bin storage rooms on the Ground Floor of the Carlow Street building, as shown in Appendix A. The School's cleaners will be responsible for transferring waste and recycling from the common areas to the waste enclosure and rotating bins around the waste enclosure to segregate the waste and recycling as well as the empty/full bins.

On the designated collection days (to be established with MCCNS's waste contractor), bins will be collected from the waste enclosure on the Ground Floor by cleaning or maintenance staff and presented for collection in the waste loading bay, where the collection vehicle will park while the bins are being loaded. Following loading, the contractor will leave the empty bins in the loading bay, and MCCNS staff will return the bins to the Ground Floor storage room.

As the School is located in a residential area, collections will adhere to time restrictions as shown on North Sydney Council's website (details below), with allowed waste collection hours of between 6 am-10 pm, although a current COVID-19 exemption allows for collections before 6 am due to social distancing requirements at depots. We would suggest a collection window of 6 am-7:30 am to be reasonable and achievable for the School's waste contractor.

https://www.northsydney.nsw.gov.au/Business_Projects/Business_Economic_Development/Regulations_for_all_Businesses/Noise_Pollution

6.5 Storage Room Design

The guiding principles below represent best practices and as such should be taken into account in design of the new waste storage room in the Carlow Building:

- Naturally or mechanically ventilated
- Walls to be constructed from masonry or similar, washable, and painted with light colour
- Floors to be sealed, with flat and even surface and graded drains to sewer connection
- All corners coved and sealed 100 mm up to eliminate build-up of dirt
- Storm water entrance preventative measures in place
- Brightly lit to Australian standard and light switches at 1.6 m (sensors recommended)
- All doors are lockable, tightly fitted, hinged, and self-closing and of at least 2 m width
- Conformance with the Building Code of Australia, Australian standards, and local laws
- Childproofing and public/operator safety assessed and ensured
- A regular cleaning schedule and documented pest control regime
- All bin lids to be kept closed when not being used

A bin washing area will also be required, either within the storage room itself or in the Ground Level loading bay.

Examples of storage room design and signage are shown in Appendix D.

7 Recommended Waste & Recycling Streams

7.1 General Waste, Paper/Cardboard, & Mixed 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 located throughout the campus' corridors, classrooms and courtyards.
- Cleaners collect materials and transfer waste/recycling to the bins to the designated waste storage area
- General waste and recycling contractors service bins to designated schedule

7.2 Food & Garden Organics

Establishing a food organics recycling program will involve separating this material into dedicated bins in kitchen areas and collecting it for recycling. MCCNS's waste contractor should be able to provide a collection service for this material, either once or twice weekly.

Green garden waste will be managed by maintenance staff, who will remove these materials from the site as part of their contract and ensure they are sent to an appropriate facility for processing. Volumes of this material have not been included in our projections for the development.

7.3 Other Recycling Streams

Other materials, for which the school already has recycling systems, include printer cartridges, e-waste, and fluorescent lamps. The increase in student and staff population will require more frequent collections of these materials.

Currently, fluorescent lamps are collected by Blue Gum Electrical where required.

E-waste (electrical and electronic waste) is collected around once per year by Hoxton Industries.

8. Roles & Responsibilities

MCCNS'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 will also be involved in ongoing efforts to increase recycling and reduce the quantity of waste to landfill.

8.1 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.

8.2 Monitoring & Measurement

MCCNS will have the potential 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.

9. 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 educational settings are shown below. Differently coloured 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.



10. 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 11.

The waste and recycling collection vehicles will be required to abide by the clearance levels displayed in Appendices A and B. The truck dimensions identified in Appendix B, Waste Collection Vehicle Swept Path Analysis depicts a vehicle with a maximum 9.24m in length and 3.8m height. The swept path analysis also shows the truck manoeuvring a 3-point turn that allows the vehicle to enter and exit the site in a forward direction.

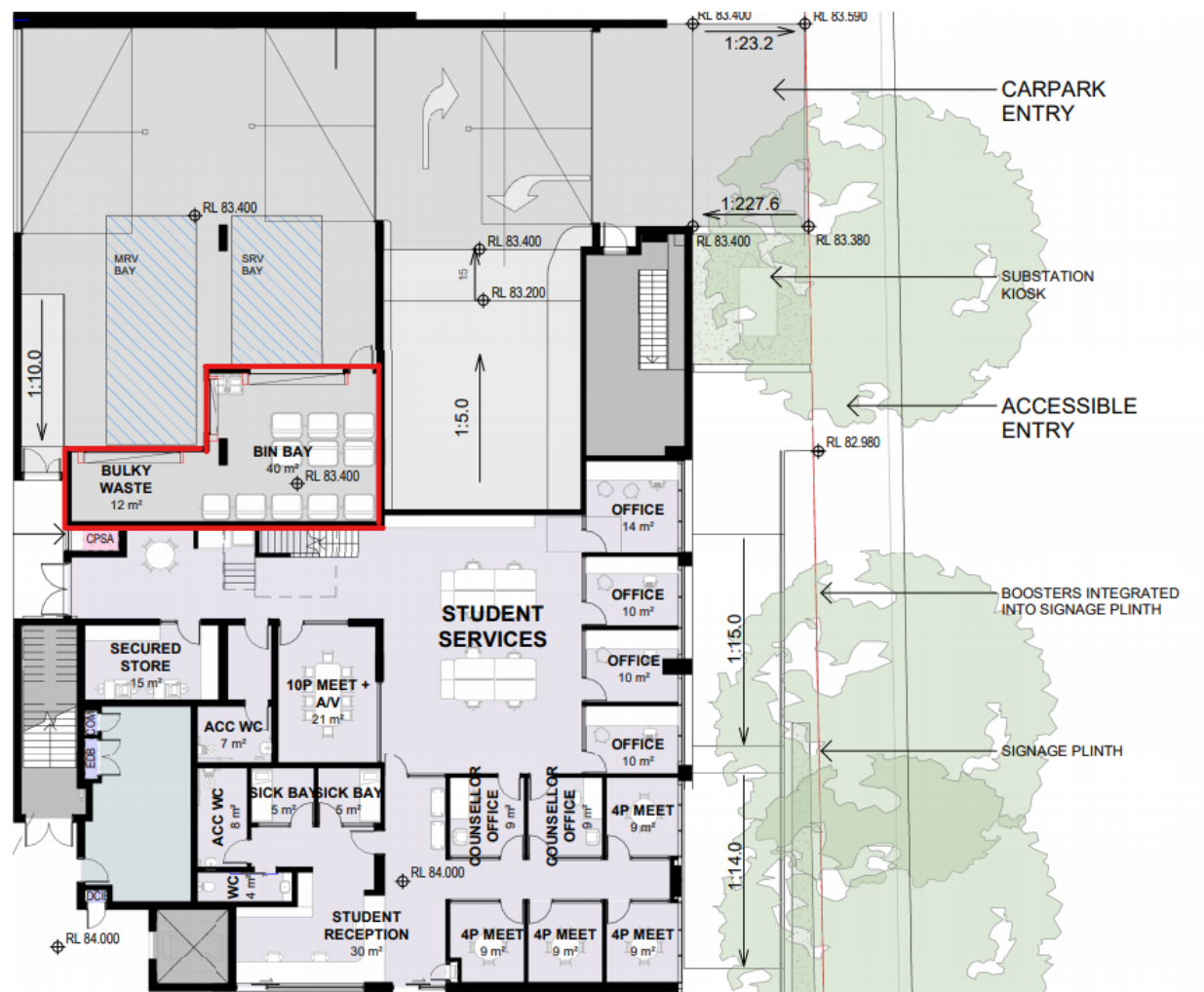
11. Waste Contractor Requirements

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

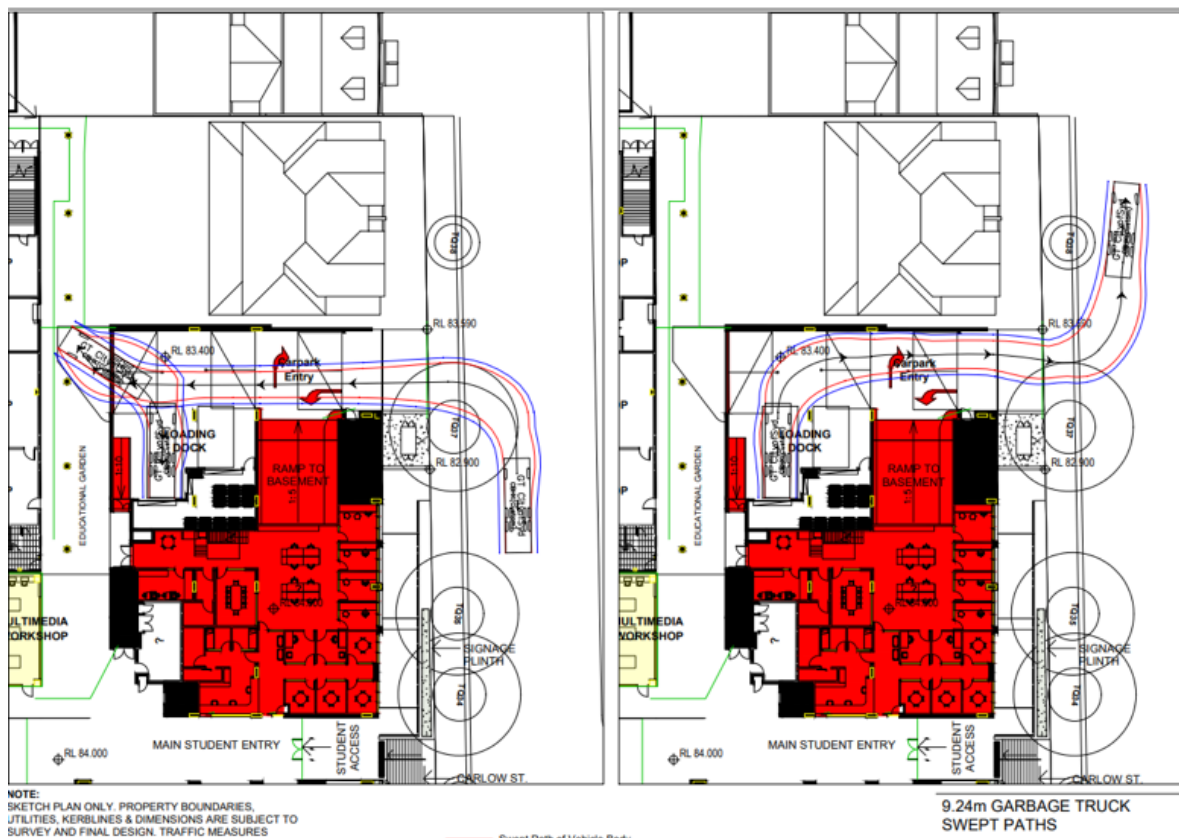
- Reliable and efficient servicing, and meeting agreed schedules
- Working with the site to achieve continuous improvements in recovery rates
- Providing monthly reports on diversion and financial outcomes
- Providing tenant engagement and education programs
- Maintaining current details of processing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

Appendix A: General Waste & Recycling Storage

The drawings below show proposed bin storage areas, based on current building plans. The entry/exit point to the loading bay is via Carlow Street.

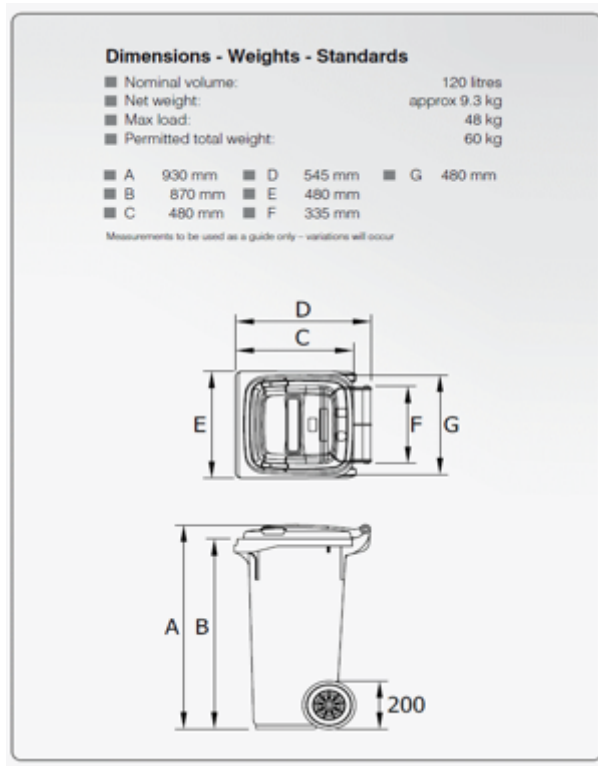


Appendix B: Waste Collection Vehicle Swept Path Analysis

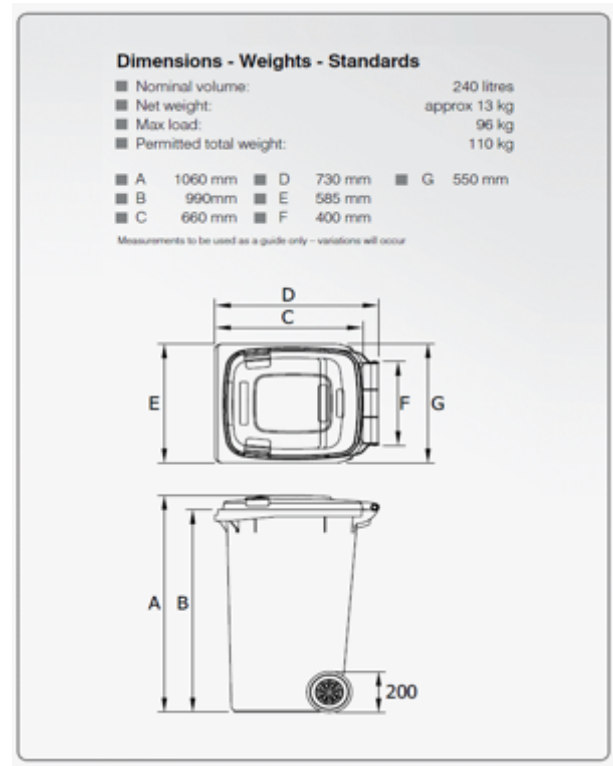


Appendix C: Bin Specifications

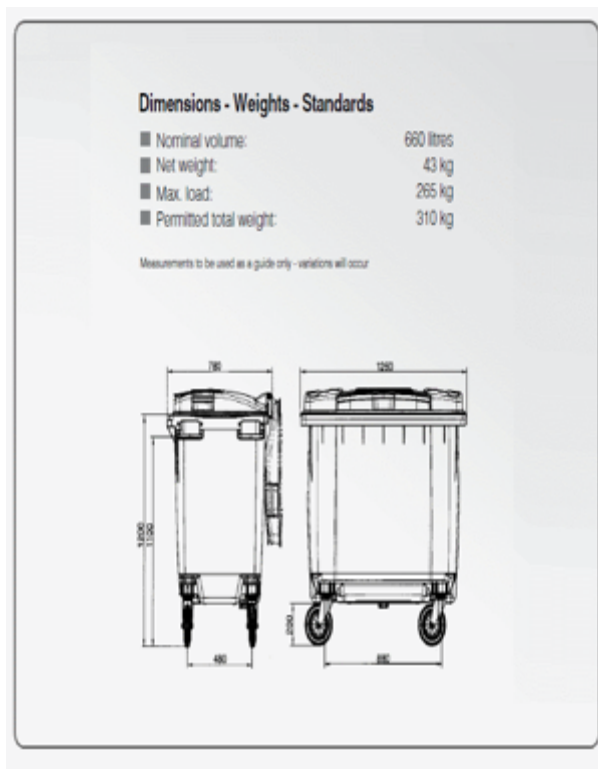
120-litre MGB



240-litre MGB



660-litre MGB

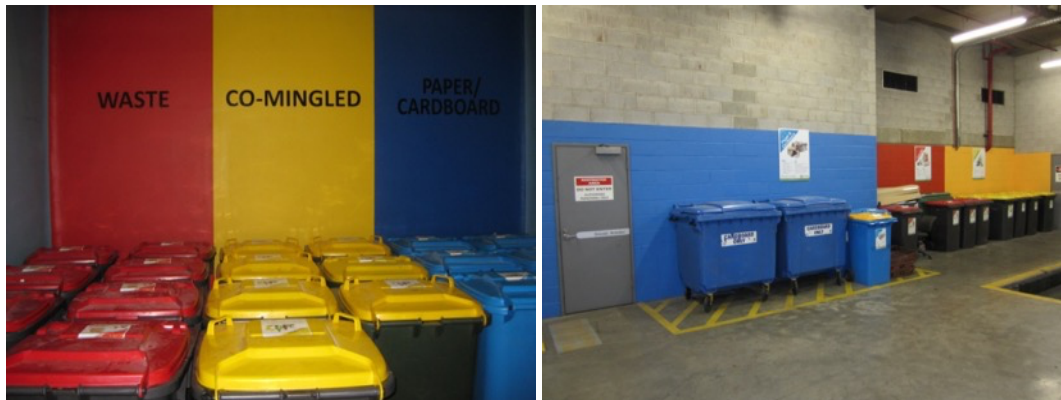


1100-litre MGB



Appendix D: Storage Area Design & Signage Examples

The photographs below show examples of best practice in storage area design and layout:



The signage examples below are for illustration purposes only. Actual signage should include suitable branding specific to MCCNS.

