



# OPERATIONAL WASTE MANAGEMENT PLAN

Upgrade to Kingswood Public School

**Revision Number:** VERSION 1

**Report Date:** 10/02/2025

**Presented by:** **Simon Lunn**  
ECCELL ENVIRONMENTAL MANAGEMENT  
35 WAVERLEY CRESCENT  
BONDI JUNCTION NSW 2022  
[www.eccellenvironmental.com.au](http://www.eccellenvironmental.com.au)

**Prepared for:** NSW Department of Education (DoE)

## TABLE OF CONTENTS

### CONTENTS

1	INTRODUCTION .....	1
1.1	PROPOSED ACTIVITY DESCRIPTION .....	1
1.2	ACTIVITY SITE .....	1
1.3	OBJECTIVES OF THE OWMP .....	3
2	EVALUATION OF ENVIRONMENTAL IMPACTS .....	3
2.1	IMPACT MANAGEMENT MITIGATION MEASURES .....	3
3	LEGISLATIVE REQUIREMENTS AND GUIDELINES .....	4
3.1	REF DELIVERABLE REQUIREMENTS .....	4
3.2	LEGISLATION AND REGULATIONS .....	5
3.3	EDUCATIONAL FACILITIES STANDARDS AND GUIDELINES (EFSG) .....	5
4	WASTE GENERATION .....	5
4.1	WASTE TYPES .....	5
4.2	WASTE HIERARCHY .....	7
5	WASTE ESTIMATES .....	8
5.1	ESTIMATE OF QUANTITIES .....	8
6	WASTE MANAGEMENT .....	9
6.1	SEGREGATING WASTE .....	10
6.2	RECYCLING STATIONS .....	10
6.3	WASTE MOVEMENT .....	11
6.4	WASTE STORAGE AREA .....	11
6.5	WASTE COLLECTION .....	12
6.6	VEHICLE MOVEMENTS .....	12
6.7	COLLECTION HOURS .....	12
6.8	WASTE CONTRACTORS .....	12
6.9	WASTE MANAGEMENT SERVICE CONTRACT .....	13
6.10	SPILL PROTOCOL .....	13
7	ONGOING MANAGEMENT .....	13
7.1	SIGNAGE .....	13
7.2	EDUCATION AND TRAINING .....	14
7.3	ROLES AND RESPONSIBILITIES .....	14
8	REVIEW PROCESS .....	15
9	LIMITATIONS .....	16
	APPENDIX A –WASTE STORAGE AREA .....	17
	APPENDIX B – PROPOSED BIN LAYOUT WITHIN WASTE STORAGE AREA .....	18
	APPENDIX C – COLLECTION PATH .....	19
	APPENDIX D – EXAMPLES OF BIN TYPES .....	20
	APPENDIX E – EXAMPLES OF APPROPRIATE WASTE SIGNAGE .....	22

## DISCLAIMER

This report is based on information provided by RP Infrastructure & NSW Department of Education. To that extent, this report relies on the accuracy of the information provided to the Consultant. This report is not a substitute for legal advice on the relevant environmental related legislation, which applies to businesses, contractors or other bodies. Accordingly, EcCell Environmental Management will not be liable for any loss or damage that may arise out of this project.

### Proponent

The Department of Education (DoE) is the proponent and determining authority pursuant to Division 5.1 of the *Environmental Planning and Assessment Act 1979* (the Act).

### Landowner

The Minister for Education and Early Learning is the landowner.

### Background information

The project is seeking approval for a Development Without Consent (REF) application under Part 5 of the EP&A Act.

## DOCUMENT CONTROL

ISSUE NUMBER	DATE	COMMENTS	AUTHOR	REVIEW
Draft	09/12/2024	Issue	Simon Lunn	Jo Drummond
Version 1	10/02/2025	Issue	Simon Lunn	Jo Drummond

## 1 INTRODUCTION

This Operational Waste Management Plan (OWMP) has been prepared to accompany a Review of Environmental Factors (REF) for the Department of Education (DoE) for upgrades to Kingswood Public School (the activity) under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and *State Environmental Planning Policy (Transport and Infrastructure) 2021* (SEPP TI).

This document has been prepared in accordance with the *Guidelines for Division 5.1 assessments* (the Guidelines) by the Department of Planning, Housing and Infrastructure.

This report examines and takes into account the relevant environmental factors in the Guidelines and *Environmental Planning and Assessment Regulations 2021* under Section 170, Section 171 and Section 171A of the EP&A Regulation.

The purpose of this report is to document the OWMP as part of the REF planning process, addressing operational waste management measures for the activity.

Two separate waste plans have been prepared by EcCell to address the Construction and Operational Stages of the activity.

---

### 1.1 PROPOSED ACTIVITY DESCRIPTION

The proposed activity for upgrades to Kingswood Public School includes:

- One (1) new single storey classroom building comprising eight (8) general learning spaces (GLS), two (2) learning commons areas, two (2) multi-purpose spaces and a verandah along the eastern side of the building;
- The construction of a covered walkway that will provide a connection between the proposed classroom building and an existing covered outdoor learning area (COLA) to the north east of the proposed building; and
- Removal of existing portable classroom buildings containing ten (10) classrooms.

---

### 1.2 ACTIVITY SITE

The project site is located at 46-54 Second Avenue, Kingswood and is legally described as Lot 172 in Deposited Plan (DP) 839785. Kingswood Public School is located on the southern side of Second Avenue.

Figure 1 provides an aerial photograph of the site.

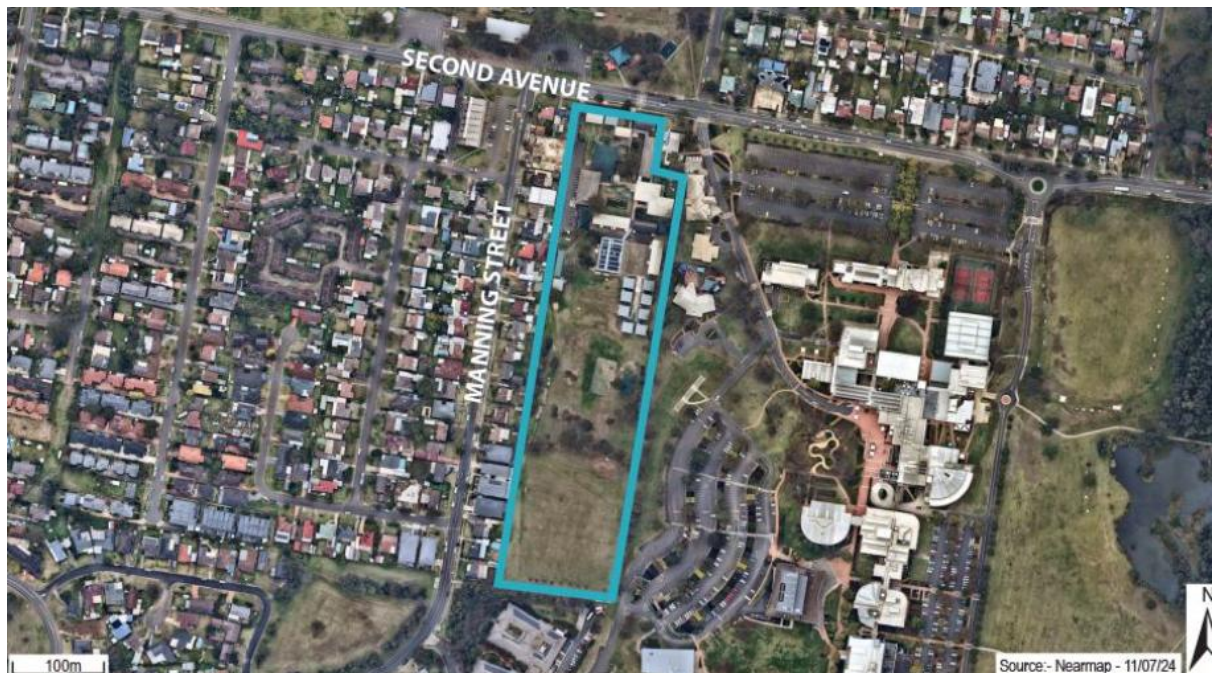


Figure 1 - Aerial Photograph

Figure 2 below shows the scope of works for the proposed activity.

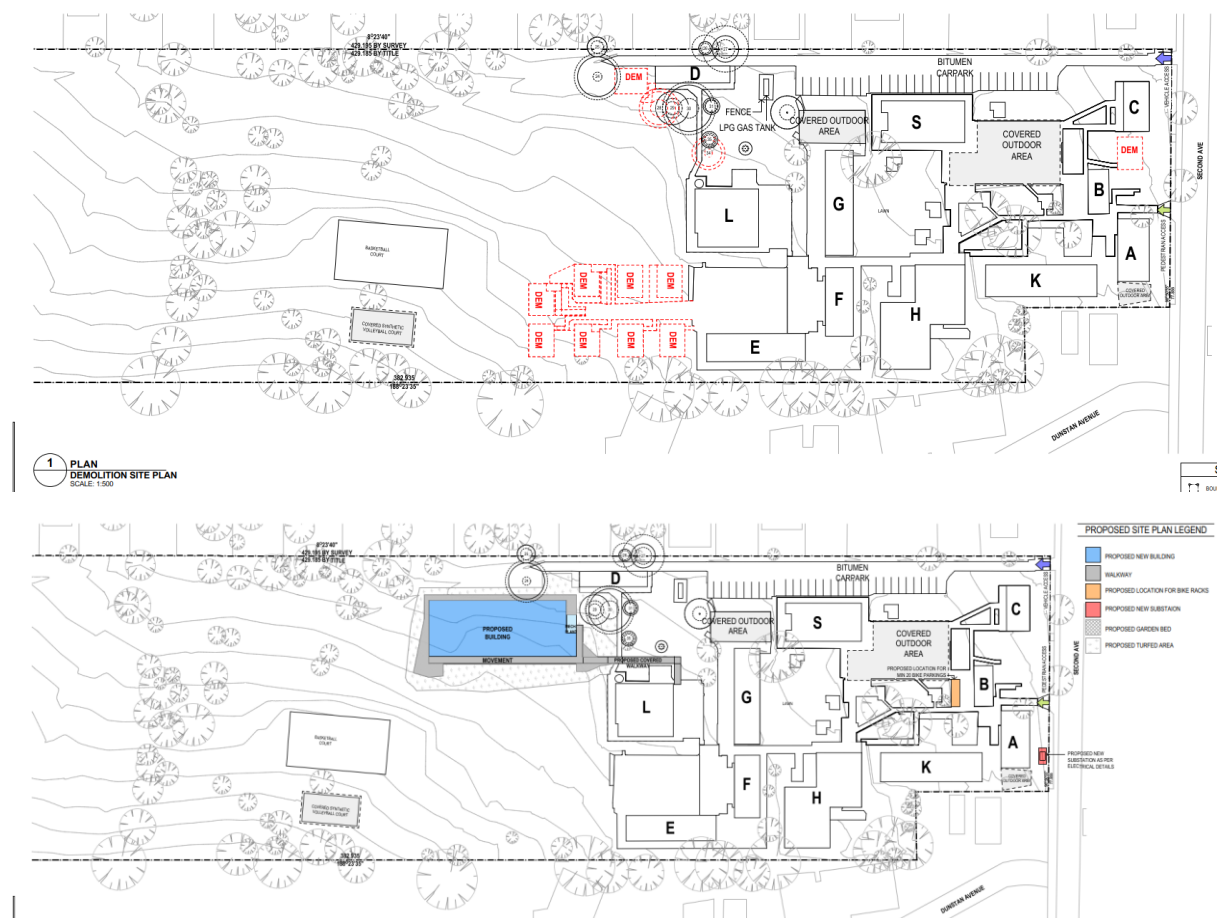


Figure 2 - Proposed Scope of Works

### 1.3 OBJECTIVES OF THE OWMP

The objectives of the OWMP are as follows:

- Detail the type and quantity of waste to be generated during operation of the school.
- Advise the appropriate waste storage, source separation and collection facilities to maximise recovery of recyclables.
- Ensure waste management facilities are;
  - safely and easily accessible to students, visitors, staff and service providers and
  - appropriately sized for storage of the expected waste and recycling.
- Describe the handling, storage and disposal of all waste streams generated at the school.
- Minimise adverse impacts to health, environmental and safety associated with handling and disposal of waste and recycled material.
- Discourage illegal dumping and prevent large quantities of waste piling up by describing appropriate onsite storage and removal services, and
- Help facilitate diversion from landfill targets of 75% of all waste generated as per the requirements of NSW Waste Resource and Recovery Act 2014, with scope to reach an aspirational target of 85% in anticipation of future mandatory targets as indicated in the Cleaning Up Our Act: The Future for Waste and Resource Recovery in NSW. Issues Paper 2020.

## 2 EVALUATION OF ENVIRONMENTAL IMPACTS

As part of the REF planning pathway, this report confirms that the operational waste generated after the completion of the proposed works is not expected to result in a significant environmental impact.

These changes from the activity will not introduce additional long-term waste challenges to the school. Waste minimisation and management practices will ensure that potential impacts are mitigated effectively.

The evaluation of the environmental impacts is summarised as follows:

1. The extent and nature of potential impacts are low and will not have significant impact on the locality, community and/or the environment.
2. Potential impacts can be appropriately mitigated or managed to ensure that there is minimal impact on the locality, community and/or the environment.

### 2.1 IMPACT MANAGEMENT MITIGATION MEASURES

The school aims to reduce its impact on the environment by reducing waste to landfill. Table 1 outlines the impacts and mitigation measures designed to decrease landfill waste and resource consumption.

Table 1 – Mitigation Measures

Project Stage	Mitigation Category	Mitigation Measure	Reason for Mitigation Measure
O	<b>Waste Segregation Practices</b>	Ensure proper segregation of waste streams, including recyclables, organics, and general waste.	To reduce waste sent to landfill and improve recycling rates.



Project Stage	Mitigation Category	Mitigation Measure	Reason for Mitigation Measure
D & C	<b>Bin Labelling and Placement</b>	Install clearly labelled recycling and general waste bins in accessible locations across the school.	To facilitate proper waste disposal and reduce contamination.
O	<b>Staff and Student Training</b>	Provide training for staff and students on correct waste disposal and recycling practices.	To improve awareness and compliance with waste management goals.
O	<b>Waste Monitoring and Reporting</b>	Regularly monitor waste volumes to ensure alignment with waste minimisation targets.	To track performance and identify opportunities for improvement.
O	<b>Compliance with Waste Targets</b>	Achieve a minimum diversion from landfill of 75% of total operational waste, in line with sustainability goals.	To support environmental sustainability and comply with best practices.
O	<b>Operational Waste Management Plan</b>	Ensure the preparation and approval of a final Operational Waste Management Plan by the Crown Certifier, generally in accordance with this Operational Waste Management Plan, prior to the commencement of operation of the new school building.	To ensure a structured and approved waste management approach is in place before operations begin.
O	<b>Review of Operational Waste Management Plan</b>	Periodically review and update the Operational Waste Management Plan to ensure its effectiveness and alignment with evolving best practices and regulatory requirements.	To maintain compliance, improve efficiency, and support continuous improvement in waste management.

\*Note: Project stages include:

- (D) Design
- (C) Construction
- (O) Operation

The proposed substation works, upgrading from the existing pole substation to an on-site kiosk substation, have no impact on the Operational Waste Management of the school.

### 3 LEGISLATIVE REQUIREMENTS AND GUIDELINES

#### 3.1 REF DELIVERABLE REQUIREMENTS

Table 2 below outlines the individual REF matters relevant to operational waste management and where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 2 – REF Operational Waste Management Plan

Requirement	Response
<ul style="list-style-type: none"> <li>Identify, quantify and classify the likely waste streams to be generated during operation.</li> </ul>	Table 6

<ul style="list-style-type: none"> <li>Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.</li> </ul>	Section 6
<ul style="list-style-type: none"> <li>Identify appropriate servicing arrangements for the site.</li> </ul>	Section 6 Appendix A, B & C

### 3.2 LEGISLATION AND REGULATIONS

Guidance documents and policies considered in the preparation of this OWMP are included below:

- NSW Department of Planning and Development Environmental Planning and Assessment Act 1979 (NSW).*
- Educational Facilities Standards & Guidelines (EFSG) NSW Updated 2022.*
- NSW Environment Protection Authority (EPA) Waste Classification Guidelines 2014.*
- NSW EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012.
- Sustainable Buildings SEPP October 2023.*
- NSW Net Zero Plan Stage 1: 2020–2030.*
- NSW Waste and Sustainable Materials Strategy 2041 Stage 1: 2021–2027.
- Penrith Development Control Plan 2014 C5 Waste Management (2014)

### 3.3 EDUCATIONAL FACILITIES STANDARDS AND GUIDELINES (EFSG)

The Department has nine (9) goals to 2030 to eliminate resource waste. The EFSG section Version V2.0 Operational Waste requires new and refurbished schools to establish operational waste targets and deliver on these priorities. The minimum targets adopted for the operation of waste for this school reflects those from NSW Waste and Resource Recovery Strategy 2014–21 requirements which are to:

1. Increase total waste diverted from landfill to 75%.

By setting realistic achievable goals, targets and performance, the OWMP is more likely to succeed, and the school will be able to report on waste diversion and reduction targets, in line with the Department of Education's waste contract and comply with any resultant conditions with respect to waste. Examples of key performance indicators required are shown in Figure 3.



Figure 3 - Key Metrics for Waste Management and Sustainability Initiatives (EFSG NSW 2022)

## 4 WASTE GENERATION

### 4.1 WASTE TYPES

The NSW EPA Waste Classification Guidelines (NSW EPA, 2014a) groups waste that pose similar risks to the environment and human health, as defined in the *Protection of the Environment Operations Act*



1997. The primary waste streams expected to be generated and corresponding EPA classifications for the ongoing operation of the activity are summarised in Table 3.

Table 3 – Potential Waste Types and Classifications and AS 4123.7 Waste Storage Requirements

EPA Classification	Waste Stream	Waste Type	Bin Colour	Waste Management
General solid waste (putrescible)	Organics	Food Organics	Lime Green	Food waste bin
		Garden Organics	N/A	Composted on site or removed as required by greenskeeper / arborist
General solid waste (non-putrescible)	Recycling	Metals (steel, aluminium, stainless)	Yellow	Comingled recycling bins
		Hard Plastics (recyclables)		
		Glass (bottles, containers, jars)		
		Soft Plastic (plastic bags, bread bags, bubble wrap, plastic wrappers, etc.)	Purple	Soft plastic bin
		Return and Earn Plastic Bottles (ONLY containers with the 10c refund label)	White	Container Deposit Scheme
		Paper (excluding paper towels, toilet paper and tissues)	Blue	Paper and Cardboard recycling bins
		Cardboard, excluding waxed cardboard		
	General	Non-recyclable Plastics (Dirty/contaminated plastic)	Red	General waste bins
		General refuse		
Other classified waste	Other	Potentially toxic liquid waste	N/A	Science department to manage storage and collection as per Material Safety Data Sheets (MSDS).
		Sanitary waste (including feminine hygiene products, nappy waste)		Collected by an appropriate contractor or subcontractor as defined in the buy. NSW Contract 9698 Agreement
		Lead-acid or nickel-cadmium batteries		
		Secure destruction (of sensitive documents)		
		Used printer cartridges		
		e-waste		
		Waste pipes from chemistry labs		
Medical Waste	Sharps	Sharps		Sharps container removed by appropriate contractor
	Medical Waste	Blood and bandages		Medical Waste container removed by appropriate contractor.

## 4.2 WASTE HIERARCHY

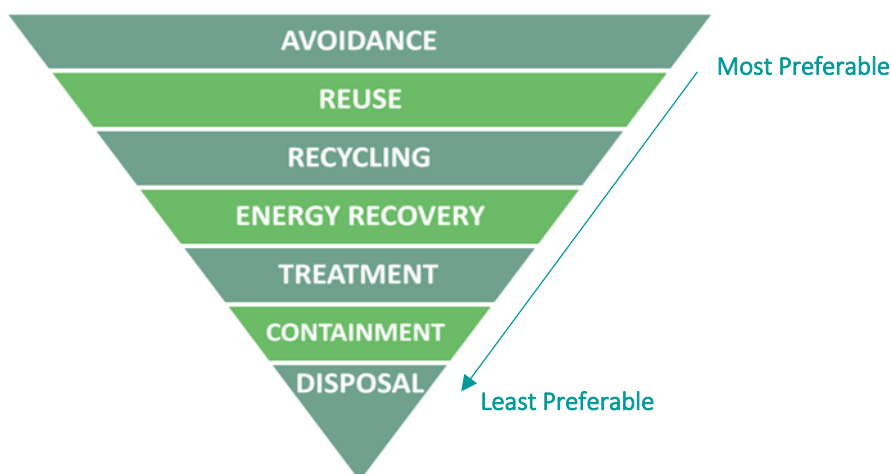


Figure 4 - Order of the Waste Hierarchy (Source: NSW EPA)

The EFSG requires schools to identify opportunities for reuse and recycling in the operation of the facilities. Table 4 indicates waste management practices that should be adopted in accordance with the *Waste Avoidance and Resource Recovery Act 2001* (NSW EPA, 2014), which requires consideration of management, reuse, recycling and safe disposal of waste.

This includes providing:

- Details of an overall strategy to be implemented to manage, reuse, recycle and safely dispose of this waste, and
- Identify appropriate servicing arrangements for the site.

Table 4 – Recommendations for Implementing the Waste Hierarchy

Recommendations for Implementing the Waste Hierarchy
<b>Avoid / Reduce</b>
Reduce general waste at the source, determine changes in returnable delivery systems including packaging and purchasing.
Reduce consumption of resources that have the potential to become waste through strategies such as green purchasing - purchasing items with reusable, recyclable, have no packaging or are biodegradable.
Examining all processes to determine where wastes are produced and to devise measures for waste prevention or reduction.
Devising ways of reducing waste with students so they too can share in the savings (i.e. rewards for students who reduce waste).
Partnering with others to assist with waste minimisation.
Keeping track of changes and improvement.
<b>Reuse</b>
Set up a reuse area for excess materials and promote the contribution and reuse of excess food.
Donate old (useable) computer/electrical equipment, furniture and fittings to staff, charities, or sell at auction.
Reusing drums, cartridges and containers where possible.

Recommendations for Implementing the Waste Hierarchy
Selling or donating usable waste materials to other organisations.
<b>Recycle</b>
Introduce recycling systems for major waste streams generated onsite including: <ul style="list-style-type: none"> <li>Paper and cardboard</li> <li>Bottles and cans</li> <li>Packaging and plastics,</li> <li>Organics and</li> <li>Electronics</li> </ul>
Modify or refresh signage on recycling bins or in recycling areas to promote correct recycling practice.
Provide regular information and education to staff on appropriate usage and recycling bins.
Investigating alternative uses for organic waste that cannot be reduced or reused (i.e. composting, bio-gas from waste, digester, etc.).
Provision for bin stations throughout the school with the option of source separation and clear waste signage to ensure source separation.
Explore opportunities for recycling waste types not included in the mandatory stream separation (i.e. batteries, coffee cups, e-waste, etc.).
<b>Waste Disposal</b>
Students, staff and cleaners dispose of waste in accordance with this OWMP.
<b>Monitoring and Assessment</b>
Request the waste contractor to provide monthly data and reporting on recycled and materials sent to landfill.

## 5 WASTE ESTIMATES

### 5.1 ESTIMATE OF QUANTITIES

The Penrith Development Control Plan 2014 C5 Waste Management (2014) only provides waste generation rates for Education/Training Teaching Space and not guidance for schools. As such a desktop assessment of waste generated from similarly structured schools with a variety of student numbers was conducted to provide indicative waste volumes.

Table 5 – Weekly waste generation (Litres/week) across different schools currently operating in the Greater Sydney Area

School	Students	General Litres Per Week	Recyclable Per Week
Parramatta Public School	600	6,000	2,400
Pendle Hill High School	450	4,500	1,800
Mainsbridge School	130	1,980	1,920
Erskine Park High School	1,011	6,000	1,500

In addition, an in-depth review of waste material composition was estimated based on the results of the Erskine Park High School Waste Audit 2019 conducted by APC Waste Consultants in collaboration with the NSW Department of Education. The waste assessed through this audit was considered representative of waste that will be generated, and EcCell has formed the basis for the waste generation estimates for this school.

To derive indicative quantities of waste from data obtained from existing schools, the following assumptions have been applied:

- The occupancy rate = 5 days per week (with students present during the NSW DoE designated term dates)
- Number of students = 600
- Reference was made to the waste generated from schools listed in Table 5, and
- Collection schedules have been assumed ; however, the final frequency of waste collection will be made once final waste contractor agreements are in place.

Table 6 – Waste generation estimates and collection frequency

Material Type	Weekly Vol. (L)	Collections per week	Bin Size (L)	Bin Footprint (sqm, m2)	No of Bins required	Total Bin Footprint (sqm, m2)
Paper Cardboard	890	1	1100	1.7	1	1.7
Comingled	1098	1	1100	1.7	1	1.7
Organics	178	1	240	0.43	1	0.43
General	2220	3	1100	1.7	1	1.7
Bin Area						5.53
Circulation Space						17.47
<b>Total Waste Storage Area</b>						<b>23</b>

## 6 WASTE MANAGEMENT

Suitably labelled waste and recycling bins will be placed in class and staff rooms as required. Recycling stations should be provided in convenient locations and areas of high waste generation.

The students, staff and visitors will be responsible for placing their waste and recycling into the correct receptacle. The fullness of the source separation bins will be monitored by school management and cleaners.

Each room will be supplied with adequate space for storage of waste. Typically, schools utilise up to 60L bin receptacles. These waste and recycling bins are placed within close proximity to classroom doors, desk areas, eating areas, play areas, hall and washrooms.

---

## 6.1 SEGREGATING WASTE

Based on the types of activities anticipated for the school, the following waste management practices are recommended.

### **Kitchens, Office Tea Rooms and Food Preparation Areas**

Any food preparation area, including kitchens and office tea rooms, will be provided with dedicated source separation bins including a general waste bin, organics caddy and a recycling bin for comingled bottles and cans. Cleaners or nominated staff will be responsible for monitoring these bins and emptying them as required.

### **Bathrooms**

Washroom facilities will be supplied with collection bins for paper towels and sanitary waste.

### **Printing and Photocopying Areas**

It is recommended that printing and photocopying areas are supplied with bins for the collection of paper, as well as separate receptacles for ink toner cartridges for recycling. The cleaners or nominated staff are responsible for monitoring these bins and ensuring the items are collected and recycled by an appropriate contractor.

### **First Aid Medical Room**

A 'Sharps' container will be available in the first aid room for needles and sharps and will be removed by appropriate contractor.

Medical Waste will be stored in the first aid room and containerised and removed from the first aid room by an appropriate contractor.

### **Sanitary waste**

Sanitary (including clinical waste where applicable) waste handled by trained (or qualified) personnel using appropriate personal protective equipment and stored in dedicated bins and containers for collection by an appropriate qualified and licensed service provider for transport to a facility appropriate for the purpose of disposing of that waste.

---

## 6.2 RECYCLING STATIONS

Recycling stations will be strategically placed across areas of the school to allow for separation at the source. In addition to a general waste bin, the recycling station should have the following categories:

1. Comingled Recycling – only recyclable plastics (Code 1-7), aluminium and steel cans and glass
2. Organics – all food waste, small amounts of garden vegetation.
3. Paper and Cardboard – only paper and cardboard and
4. Electronic materials including computer's /phones/printer cartridges and batteries



Figure 5 - Example of a Recycling Station. (Source: Canberra's Maribyrnong Primary School, ABC News)

Recycling stations are expected to be located in common areas, rather than having one in every classroom.

Small quantities of hazardous wastes may be generated through the ongoing operation and maintenance of the school (e.g. light bulbs, e-waste, batteries, oil, chemicals or paint). These materials will be stored by the cleaners in appropriate locations as they are generated and removed by the waste contractor.

### 6.3 WASTE MOVEMENT

It is anticipated that staff, students and visitors will place general waste, organics and recycling into small waste and recycling bins (paper and comingled) located in the offices, canteen, classrooms and open space playground. Waste and recycling will be then transported by cleaning contractors via the nominated egress corridors to the waste storage area and placed in the relevant waste stream bins.

Waste collection contractors will drive as close as possible to the Waste Storage Area, load the bins as required for servicing and replace them when emptied (as shown in Appendix B).

### 6.4 WASTE STORAGE AREA

The existing waste storage area, will be retained for the storage and collection of applicable waste streams. This area is already sized to accommodate all bins or containers for all applicable waste streams for at least one collection cycle.

The allocated waste storage area, approximately 23m<sup>2</sup> as shown in Appendix A, is sufficiently sized to meet the waste storage requirements of the school.

Responsibility for cleaning of waste storage area and service compartments will be designated to the cleaning staff. The basic requirements for waste storage area are as follows:

- To be of adequate size;



- Integrated with building design and site landscaping;
- Suitably screened from public areas;
- Area to be level, with appropriate access for collection;
- Assurance that OH&S requirements for waste contractors are met;
- Access to waste enclosure to be safe, convenient to all users and to meet WorkCover NSW Occupational Health and Safety guidelines; and
- Bins to be covered against birds, vermin and vandals.

The proposed waste area and associated access is in line with the requirements of the existing school collection practices.

---

## 6.5 WASTE COLLECTION

Waste is collected from the nominated Waste Collection Point (WCP) is shown in Appendix B. The appointed waste contractors will wheel the MGBs for each waste stream from their resting position to the back of the truck for collection and then wheel the MGBs back at nominated times in accordance with the relevant waste contract. The nominated WCP is within the boundary of the site and not within a public place.

---

## 6.6 VEHICLE MOVEMENTS

The waste collection vehicles will access the site in the same way as prior to the school upgrades, as the bin storage location remains unchanged. An indicative access diagram is provided in Appendix A.

---

## 6.7 COLLECTION HOURS

Collections should, where possible, be scheduled to occur outside of school hours to eliminate risk from the truck and bin movements affecting operations on-site including; school drop off and pickups. The waste contractor in consultation with school management will determine the collection days appropriate for each waste stream.

---

## 6.8 WASTE CONTRACTORS

All waste services to the school, must be delivered by licensed waste contractors, and all materials leaving the site must be conveyed to a facility that is legally permitted to accept materials of that type. A contract with a licensed waste contractor for the removal of all waste will be arranged prior to a Crown Completion Certificate or commencement of use (earlier of the two). The contract should also include provisions for the collection of potentially hazardous waste including e-waste.

The waste services engaged must cover all the various types of waste materials that the school will generate. This could potentially include a medical sharps service, if staff or students with health issues requiring injections to treat medical conditions are present.

All waste vehicles servicing the school must be capable of entirely containing their load of materials, without leakage, for the entirety of the journey to the receiving location.

## 6.9 WASTE MANAGEMENT SERVICE CONTRACT

Schools must use NSW Government's procurement guidelines "buy.NSW Contract 9698" (<https://www.info.buy.nsw.gov.au/contracts/waste-management>). This contract is mandatory and covers waste management services (bins, collection, transport, processing, treatment and disposal). Waste streams include general waste, organic, grease trap, recycling, secure destruction and clinical. This contract should be reviewed and updated if required prior to occupation of the building.

## 6.10 SPILL PROTOCOL

All spill protocols (including disposal of spilled materials) in regard to chemicals nominated by NSW EPA or SafeWork NSW must be followed, and appropriate spill treatment kits be provided and kept maintained.

All waste collection, tipping, aggregation and sorting activities are to take place within the subject site, not in any public place. Public places include any public road, footpath, nature strip, park or similar that is under public ownership. Any materials spilled during waste tipping/pumping activities must be cleaned up promptly and thoroughly, by staff or agents of the school.

# 7 ONGOING MANAGEMENT

## 7.1 SIGNAGE

Signage will be provided in all waste disposal, storage and collection areas demonstrating how to use the waste management system, including what materials are acceptable in each bin. All waste streams will be stored in clearly labelled; colour coded bins as appropriate to ensure that waste streams are not inadvertently mixed. Signage will be prepared and located on site in accordance with the Australian Standard (AS 1319) for safety signs, and the NSW EPA and Australian Standard (AS 2899) for recycling signage. Examples of signage are shown in Appendix E.

Table 7 – AS 4123.7 Waste Storage Requirements

Bin Colour	Waste Stream	Waste Type
Lime Green	Organics	Food Organics and Garden Organics
Yellow	Recycling	Comingled Containers
Blue	Recycling	Paper and Cardboard
Red	General	General Waste

The provision of space must include source separation, including bin stations and appropriate signage of waste and receptacles for multiple waste streams as per Appendix D. Designers must refer to AS 4123.7 Mobile waste containers - Colours, markings, and designation requirements for further guidance on bin colour, waste stream and waste type.

## 7.2 EDUCATION AND TRAINING

The school will aim to build a strong culture of waste reduction and recycling through regular waste management updates at assemblies, student gatherings, Parents and Citizens (P&C) meetings, staff inductions and meetings, ideally within an effective framework such as the Waste Wise Schools program.

## 7.3 ROLES AND RESPONSIBILITIES

It is expected and required that school staff, students, waste contractors and cleaners will commit to the OWMP and be responsible for their own actions in adhering to the waste management objectives and requirements.

Table 8 – Roles and Responsibilities

Responsibility	Activity
Administrative Manager & School Principal	<ul style="list-style-type: none"> <li>Ensuring staff (and students) are inducted into the OWMP and other applicable management plans.</li> <li>Responsible for undertaking procurement of operational materials in accordance with the waste management hierarchy.</li> <li>Segregation of waste streams where required to ensure appropriate use, treatment and/or disposal.</li> <li>Compliance with applicable environmental legislation and project conditions.</li> <li>Ensure environmental management plan(s) across the site are adhered to and accurate to site conditions.</li> <li>Undertake inspections to ensure compliance.</li> <li>Maintenance of waste related signage, colour coding and MGBs.</li> <li>Security of waste storage area during day-to-day business.</li> <li>Ensure no waste is placed on the public way.</li> <li>Promoting and enabling compliance with the OWMP by other stakeholders (cleaners, staff, students, etc.) through delivery of positive waste management culture at the school.</li> </ul>
Cleaners Removing Material	<ul style="list-style-type: none"> <li>Responsible for acting in accordance with the OWMP.</li> <li>Transfer of waste within the school.</li> <li>Transfer of MGBs to the nominated waste storage area and return of MGBs to waste school areas.</li> <li>Clean areas around waste storage area.</li> <li>Ensure no waste is placed on the public way.</li> </ul>
Staff	<ul style="list-style-type: none"> <li>Adherence to the OWMP.</li> <li>Placement of waste/recycling within correct bins.</li> <li>Notify manager/cleaning contractor when bins are overfull and require transport to the MGBs.</li> <li>Informing the Administrative Manager of any waste management incidences.</li> <li>Reinforcing positive waste management culture as defined by administrative manager amongst colleagues and students.</li> </ul>

Responsibility	Activity
Students	<ul style="list-style-type: none"> <li>Responsible use of waste facilities and appropriate disposal of waste.</li> <li>Encourage BYO for the following items: water bottles, containers, straws, reusable utensil sets, washable hand towel, carry bag and coffee cups.</li> <li>Engaging with positive waste management culture as delivered by teachers.</li> </ul>
Waste Contractors	<ul style="list-style-type: none"> <li>Acknowledge and comply with waste targets.</li> <li>Use reasonable endeavours to assist reaching the waste targets.</li> <li>Provide feedback on actual volumes of waste and recycling collected to enable waste volume evaluation by Administrative Manager.</li> </ul>

## 8 REVIEW PROCESS

This OWMP forms the basis of operational waste management on-site for the proposed school, at each proposed stage of operation. The OWMP is a living document which will be reviewed and revised to provide increased accuracy of waste generation estimates and to ensure appropriate onsite waste management in accordance with current and future waste management regulations. Compliance by the school staff, cleaning contractors and waste collection contractor is essential to ensure the efficiency of the system. As such, all stakeholder engaging with the OWMP will need to maintain awareness of any new relevant guidelines and regulations that come into effect during the operational phase of the activity.

The school management will undertake regular reviews of the OWMP including the following indices:

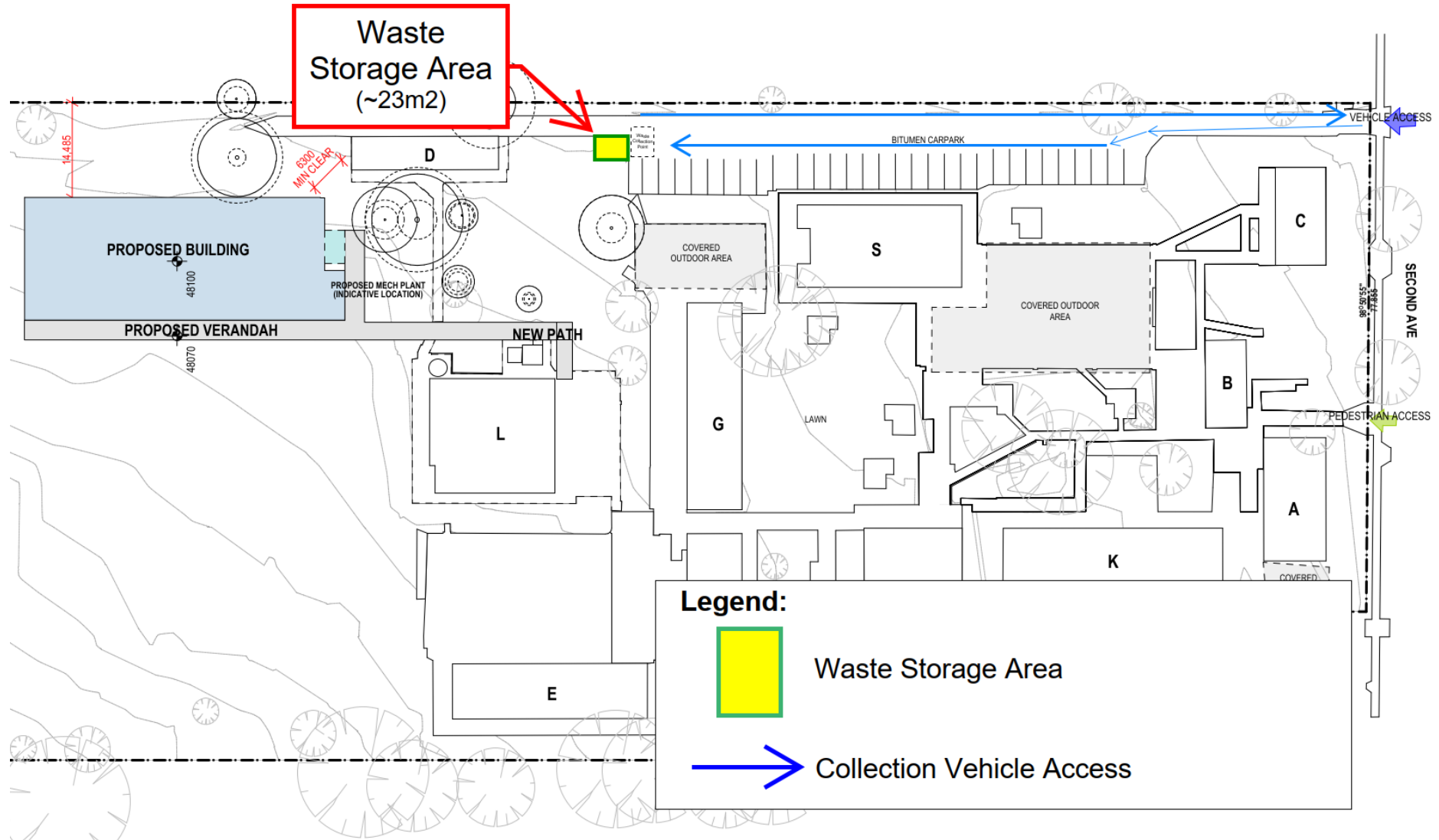
Waste Management Contract and Licences
On-Site Signage
Waste Contractor Performance
Data on Recycling Rates
On-Site Waste and Recycling Systems

## 9 LIMITATIONS

This report documents an Operational Waste Management Plan (OWMP) as part of the REF with the following limitations:

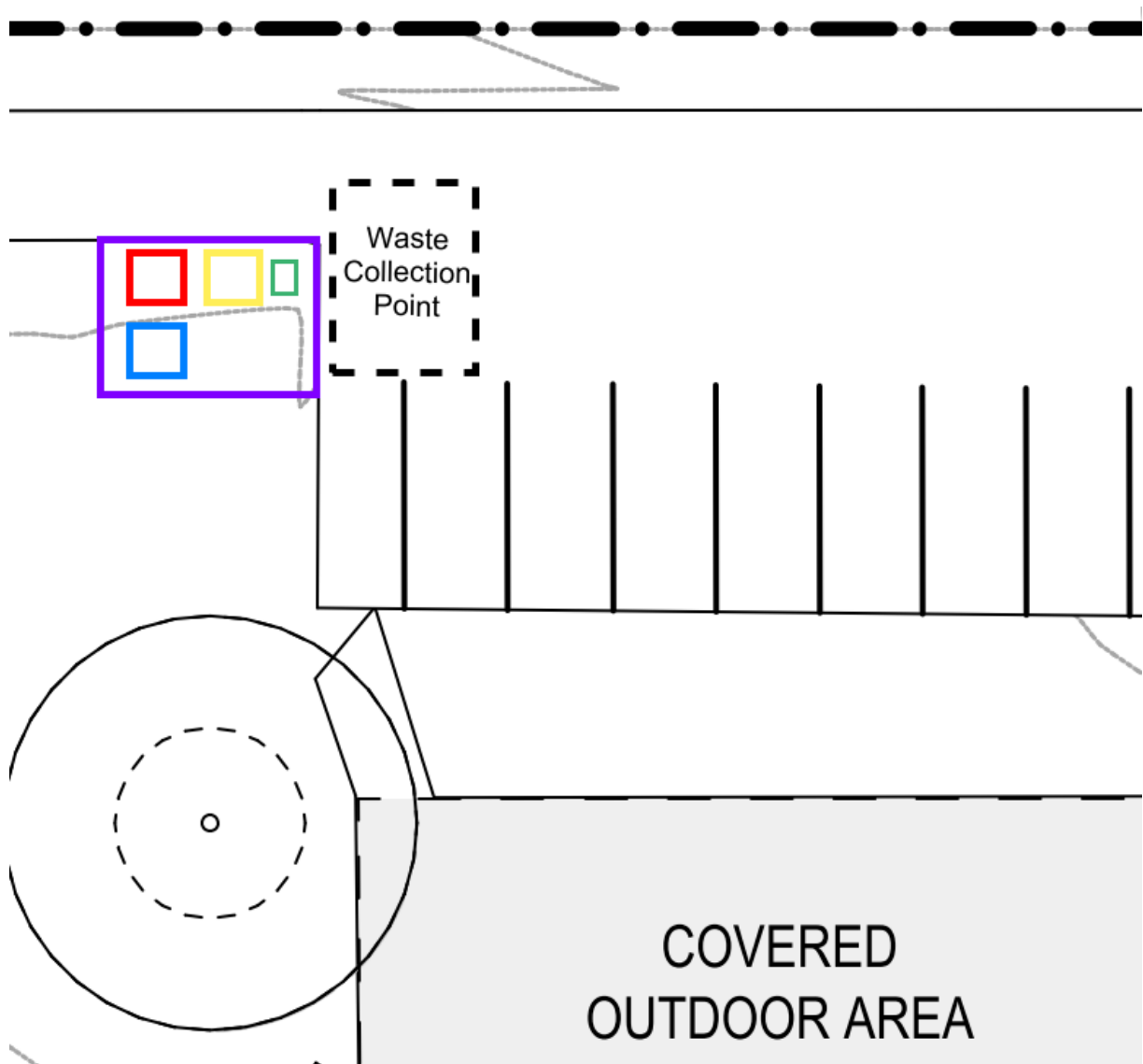
- Estimates and details contained in this waste management plan have been prepared by analysing the information, plans and documents supplied by the client and third parties including Council and government information.
- The figures presented in the report are an estimate only – the actual amount of waste generated will be dependent on the occupancy rate and waste generation intensity as well as the approach to educating visitors, staff and students regarding waste management operations and responsibilities.
- The School Administrative Manager will make adjustments as required based on actual waste volumes (if waste is greater than estimated) and increase the number of bins and collections accordingly.
- This OWMP has been prepared with reference to applicable legislation, regulations and guidelines in effect at the time of writing and no guarantee can be made that the recommendations provided will remain compliant with future mandatory requirements during the operational lifespan of the school.
- EcCell provide specifications and recommendations on bin access and travel paths within this OWMP, however it is the architect's responsibility to ensure the architectural drawings meet these provisions
- The report has been prepared with all due care, however, no assurance or representation is made that the OWMP reflects the actual outcome and EcCell will not be liable for plans or outcomes that are not suitable for the purpose of the project, whether as a result of incorrect or unsuitable information or otherwise, and
- EcCell offer no warranty or representation of accuracy or reliability of the OWMP unless specifically stated.

## APPENDIX A –WASTE STORAGE AREA





## APPENDIX B – PROPOSED BIN LAYOUT WITHIN WASTE STORAGE AREA



The colour code is as follows:

Red	General
Yellow	Recycling
Blue	Paper cardboard
Lime Green	Organics

## APPENDIX C – COLLECTION PATH



View from Second Ave. Source: Google Maps Street View

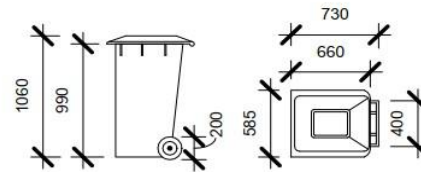
## APPENDIX D – EXAMPLES OF BIN TYPES



Photo 1: Two 240 litre bins

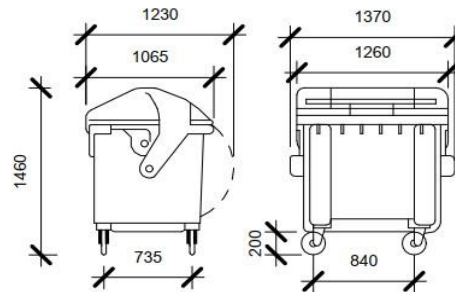
### BIN TYPES

#### 240 Litre Wheelie Bin



- Nominal Volume 240 litres
- Net Weight approx. 12.3 kg
- Max Load 96 kg
- Permitted Total Weight 110 kg

#### 1100 Litre Domed Lid



- Nominal Volume 1100 litres
- Net Weight approx. 65 kg
- Max Load 440 kg
- Permitted Total Weight 510 kg



Photo 2: A 1100 litre bin

#### Colour Scheme



- Green Bin (Food Waste Bin):
- Food Organics



- Red Bin (General Waste Bin):
- Non-Recyclable Plastics (Dirty/contaminated plastic)
  - General Refuse



- Yellow Bin (Comingled Recycling Bins):
- Metals (Steel, aluminium, stainless)
  - Hard Plastics (Recyclables)
  - Glass (Bottles, containers, jars)



- Blue Bin (Paper & Cardboard Recycling Bins):
- Paper (Excluding paper towels, toilet paper & tissues)
  - Cardboard, excluding waxed cardboard



- White Bin/Any Colour (Container Deposit Scheme/Plastic Recycling Bins):
- Return & Earn Plastic Bottles (ONLY containers with the 10c refund label)
  - Soft Plastic (Plastic bags, bread bags, bubble wrap, plastic warppers etc.)

Photos, Bin Measurements and Bin Weights from  
Source Document: "Better Practise Guidelines for WasteManagement in Commercial and Industrial Facilities", December 2012)





Source: Waste Handbook - A practical guide to introducing waste separation into schools, October 2023

## APPENDIX E – EXAMPLES OF APPROPRIATE WASTE SIGNAGE

