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APPENDIX - D

Operational Plan of Management

Proposed Waste Management Facility – Community Recycle Centre (CRC)

4 Chilvers Road and 31 Sefton Road (Alternative address), Thornleigh

Prepared for: Hornsby Shire Council
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1 Introduction

1.1 Commission

DFP has been commissioned by the Community & Environment Department of Hornsby Shire Council to prepare an Operational Plan of Management (OPM) for the proposed Waste or Resource Transfer Station – the Hornsby Community Recycle Centre (CRC) at 4 Chilvers Road and 31 Sefton Road (Alternative address), Thornleigh (the Site). The OPM is to accompany a Development Application (DA) to Hornsby Shire Council.

1.2 Purpose of this Operational Plan of Management

The OPM outlines the management framework for the proposed CRC development at 4 Chilvers Road and 31 Sefton Road, Thornleigh.

The purpose of this OPM is to:

- Detail the operational specifics of the Site which are referenced within the Environmental Impact Statement (EIS) and other relevant documentation that has been submitted to Council to support the proposal;
- Provide guidelines and management practices for the day-to-day operation of the Site;
- Ensure that the ongoing operation of the subject Site will not adversely affect the amenity, safety and wellbeing of staff, residents, surrounding neighbours, or the wider community; and
- Communicate the proposed use of the development, and to ensure that its operation:
  - Is well managed.
  - Is undertaken with regard to the surrounding area; and
  - Takes a proactive role in being a responsible neighbour within the local area.

Note: The OPM must be read in conjunction with the Operations and Management Handbook – 2nd ed. issued by NSW EPA.

1.3 Matters addressed by the OPM

The following matters will be discussed in this OPM:

- Emergency contact details
- Details of business operating hours
- Number of Staff onsite during operating hours
- Waste Management Plan
- Hazardous material handling process
- Noise management
- Air quality management
- Stormwater and drainage protection plan
- Emergency management plan
- A complaint management procedure
- Fire Risk safety
- Clear identification of responsibility so that the source of any breaches of the Management Plan can be readily identified
- Detail how the requirements of the PoM will be communicated with staff and visitors
- Plans and specification of the facility

2 Background

2.1 Background

On 22 February 2016, development consent was granted (DA/1535/2015) for a change of use of the existing industrial buildings to a waste depot, inclusive of minor alterations to Building A 4 Chilvers Road and 31 Sefton Road (alternative address), Thornleigh formally known as Lot 1 in DP 513555. On 27 June 2016, DA/1535/2015/A was approved to modify the approved development by completing minor design changes.

Activities on the Site have evolved into a Community Resource Facility (CRC) which has experienced significant growth in community usage since commencing, and it is now proposed to formalise the use and scale as a waste transfer station.

2.2 Proposed Development

The proposal seeks to establish a Waste Transfer Station - CRC for the management of residents' problem waste at the Site in the Warehouse component of 'Building A.' The types of material proposed to be accepted at the Site and then transferred to other recycling facilities include:

- Aerosol cans
- Blister packs
- Car and motorcycle batteries
- Clothing and accessories
- Electronic Waste
- Fire extinguishers
- Flattened cardboard
- Fluorescent light globes and tubes
- Gas bottles
- Hard and soft plastics
- Household batteries
- Mobile phones
- Motor oils
- Other Oils
- Paint
- Polystyrene
- Printer Cartridges
- Smoke Detectors
- X-rays
- Other problem waste able to be recycled

3 Site Context

3.1 Site and Surrounding Development

The Site is located in the Hornsby Local Government Area (LGA) within the Thornleigh Industrial area on the western side of the Main Northern Railway, approximately 1.5 kilometres west of Normanhurst station, approximately 1 kilometre north of Thornleigh Station and approximately 700 metres to the north-west of Pennant Hills Road via Chilvers Road and Duffy Avenue.

The Site is legally described as Lot 1 in Deposited Plan (DP) 513555 and is known as 4 Chilvers Road and 31 Sefton Road (Alternative address), Thornleigh (see **Figure 1**).

Figure 1 Site Location

The Site is occupied by two brick industrial style buildings with one oriented to the Chilvers Road frontage 'Building B' (not part of this application) and the other, oriented to Sefton Road 'Building A' containing a two (2) storey office at the front with a large open warehouse to the rear.

The warehouse component of Buidling A to be used for the CRC comprises an open floor plan with roller door exits on the western side of the façade to Sefton Road, with another located on the eastern side of the rear elevation of the building. A third roller door is located in the middle of the eastern elevation of the building, at a level slightly higher than the adjacent accessway to allow it to be used for raised loading if required.

3.2 Site Description

The Site slopes down from Chilvers Road to the west, levels out towards the hardstand area in the south-western corner and then gently slopes down to the north of Sefton Road. Accordingly, the Site drains to Sefton Road.

The Site is not subject to any rights of way, rights of access or rights of carriageway, but is burdened by a 1.8m wide drainage easement, that traverses north-south through the eastern side of the site behind the building facing Chilvers Road and continues into the adjoining Lot 2 to the north-east. The easement has no implications for the proposed development.

The site:

- is not affected by any road widening;
- is not subject to any known risk of landslip;

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- does not contain any listed items of European heritage under Schedule 5 of the LEP or State Heritage Register;
- does not contain any Aboriginal sites and no such sites are located in the vicinity of the Site;
- is not mapped as containing any acid sulfate soils;
- is not subject to flooding; and
- does not contain any bushfire prone land.

The Site is occupied by two brick industrial style buildings with one oriented to Sefton Road and the other containing a two (2) storey office at the front with a large open warehouse to the rear oriented to the Chilvers Road frontage (Building B). The warehouse component within Building A and the rear of the site behind Building A are to be used for the CRC operations.

Figure 2 is an aerial photograph of the Site.

Figure 2 Aerial Photograph

3.3 Surrounding development

The property is bounded by:

- Hornsby Council's Works Depot to the west;
- the Northbridge Vineyard Church (located at 8 Chilvers Road) to the south, with industrial land uses located further south;
- vacant industrial land to the east; and
- Sefton Road to the north with development north of Sefton Road being low density residential development fronting Gilgandra Avenue.

3 Site Context

Figure 3 Surrounding Development

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4.1 Details of Business Operating Hours

The CRC will operate six (6) days a week as follows:

Open to the public

Tuesday to Friday: 8:30am to 4:00pm

Saturday: 8:30am to12:00pm

Monday, Sunday, and Public Holidays: Closed

Site operational hours (staff)

Monday to Friday 6:00am to 6:00pm

Saturday: 7:00am to 4:30pm

Sunday and Public Holidays: Closed

4.2 Number of Staff onsite during operating hours

CRC Operational staff : 2-3 staff

Cleansing Operations: 13 staff **(Building B - not part of this application)**

Waste Depot and Office: 24 staff

4.3 Contact Details

Table 1 - Emergency Contact number

Entity	Contact Details
All Emergencies	000
NSWFB/RFS	Hornsby Fire Station Tel: 9493 1050
Hazmat	Central Coast – Berkley Vale Tel: 4389 2194
Local Hospital/medical	Hornsby Kuring-Gai Hospital Hope Building Palmerston Road, Hornsby Tel: 9477 9530
Poisons information	Westmead Hospital Hawkesbury Road & Hainsworth Street, Westmead Tel: 13 11 26
Local EPA	10 Darcy Street Parramatta Tel: 131 555
EPA contractor for CRCs	Cleanaway – Toxfree Refer attached CRC Contractor Spreadsheet

Table 2 – Important Contacts

Entity	Contact Details
Collection Contractor/s	Refer to **Appendix 3** - Spreadsheet CRC Operations Contractors – Collection by material type.

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Table 2 – Important Contacts		
Local EPA contact	Name: Megan Webb Title: Unit Head. Community Recycling Phone: (02) 9995 6889 Email: Megan.Webb@epa.nsw.gov.au	Mobile:0418 460 955
Council contacts:	**Waste Branch** Name: Chris Horsey Title: Branch Manager Phone: 9847 4816 Email: chorsey@hornsby.nsw.gov.au **Operations Coordinator** Name :Benn Judkins Title: Operational Coordinator Phone: 9847 4854 Email: bjudkins@hornsby.nsw.gov.au **CRC Supervisor** Name :Nathan Chen Title: CRC Supervisor Phone: 9847 4871 Email: bjudkins@hornsby.nsw.gov.au	Mobile: 0438 777 500 Mobile: 0438 103 127 Mobile: 0466 510 037

4.4 Site control measures

To ensure ease of way finding for households, the layout of the facility, signage, storage control measures and interaction with staff at the facility should work together. Site visitors should clearly understand what materials they can drop-off at the facility and where they should do so, and clearly understand where they can take materials that are not accepted by the facility.

Member of the public and all Site visitors must follow CRC staff directions at all times.

CRC operational staff are to actively screen materials being unloaded; ensure distances between receptacles/stillages are maintained to comply with the Dangerous Goods (DG) requirements; ensure waste is removed from the Site at frequencies to ensure on-site waste is under the 12-tonne threshold above which a license is required and complies with the DG threshold as per AS/NZS 3833.2007.

Table 3 below provides maximum quantities for minor storage of DG items.

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Table 3 – Maximum quantities for minor storage			
	Quantity: kg or L		
Description	**Packing Group I – Substances presenting high danger**	**Packing Group II – substances presenting medium danger**	**Packing Group III – Substances presenting low danger**
Total Quantity of all dangerous goods	25	250	1,000

4.4.1 General

Ventilation

The first CRC staff member to arrive on-site in the morning is required to open all three (3) the roller doors to ensure emergency evacuation travel paths are accessible on staff and public arrival at the Site.

Boom Gates

The boom gates are linked to the fire system emergency evacuation alarm and the manual boom gate button is to be pressed if any emergency evacuation is carried out in the absence of the fire alarm being activated.

Dust Control and Odour management

- Working areas are to be kept clean of dirt and debris;
- Operational equipment and machinery are to be maintained on a regular basis;
- Incoming/outgoing trucks are to be inspected to avoid tracking dust onto local roads;

Hazard and Risk

- All chemicals and hazardous substances are to be labelled and stored in accordance with UN Globally Harmonised System of Classification and Labelling of Chemicals (GHS) compliant containers and in accordance with WHS Regulations and the Code of Practice;
- Transport of hazardous materials is in accordance with the requirements in the Australian Code for the *Transport of Dangerous Goods by Road & Rail* and tracking requirements of the NEPM and the NSW EPA;
- Dangerous goods are to be stored in appropriate containers in accordance with the requirements in the Australian Code for the *Transport of Dangerous Goods by Road & Rail* and tracking requirements of the NEPM and the NSW EPA;
- Operational procedures are to be clearly defined;
- Liquid storage of dangerous goods utilises bunding;
- Emergency plans and procedures have been adopted to ensure staff and visitors know what to do in an emergency;
- Emergency equipment is supplied such as a safety shower and spill kits;
- Material locations are matched to fire risk, and incompatible materials are stored apart; and
- Frequent removal of materials by collection companies to limit amount of dangerous goods storage.

Pollution and litter reduction and illegal dumping

- Open and common site areas are maintained by visual audit;
- Small particles deposited on paved areas are collected by utilising a walk behind vacuum unit;
- All stormwater drains are covered in mesh to prevent entry of small polystyrene particles;
- Contractors are required to clean up any spillage that my occur during waste servicing or other work;
- Ensure all waste is properly contained within receptacles;
- Contain polluted water from the site and divert it from stormwater drains/stormwater systems.

Prevention of illegal dumping

- Maintain and keep all public access areas clean;
- Secure waste management areas from vandalism by restricting access to storage areas;
- Utilise CCTV to monitor the Site to prevent illegal dumping;
- Utilise illegal dumping and CCTV Surveillance signage at multiple locations on the front/entry gates;
- Investigate incidents of illegal dumping after hours and where possible take enforcement action.

Waste Storage Area Specifications

- Utilise signage for safety and waste identification;
- Provide training for staff and signage for plant;
- Utilise noise attenuation that limits noise effects to residents from operations and collection vehicle noise;
- Provide an adequate supply of water with hose cocks as close as practicable;
- Provide ventilation in accordance with Australian Standards;
- Provide adequate security and lighting;

Work Health and Safety

- Ensure correct labelling of containers and use of warning placards, outer warning placards and safety signs;
- Maintain a register of hazardous chemicals and provide notification to the regulator of manifest quantities if required;
- Identify risk of physical or chemical reaction of hazardous chemicals and ensure the stability of hazardous chemicals;
- All CRC workers are required to undertake the NSW EPA/Cleanaway Toxfree training prior to being on the Approved Staff Register;
- Spill containment system for hazardous chemicals is to be provided if required;
- Ensure safety data sheets appropriate to the materials being stored are available;
- Control ignition sources and accumulation of flammable and combustible substances;
- Ensure fire protection, firefighting equipment and emergency and safety equipment is provided.

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4.4.2 Signage

CRC branded signage must be used with artwork supplied by the EPA.

Entry sign

A CRC branded entry sign which includes operating times and contact details is installed at the entry gate to the facility. The entry signage also details items accepted at the CRC in both words and pictorial form for ease of understanding. Emergency after hour contact person and mobile number to be listed on the entry sign.

Site Entry Conditions

A Site Entry Conditions sign is displayed as vehicles enter the CRC building around the back.

Building sign

A CRC branded sign must be installed on the building.

Directional and Speed signage

Directional signage should be provided to assist users to navigate the Site, especially by using arrows which can be painted on the pavement to direct customer vehicles to travel through the Site. Speed signage to indicate the speed limit permitted for users of the Site.

Materials signage

Large format signage is intended to be positioned above each receptacle for easy identification and to assist residents unloading and separating materials correctly.

Hazardous chemical placarding

Placarding compliant with the NSW Work Health and Safety Regulation 2011 is to be installed at the facility. An outer warning placard or HAZCHEM sign is installed at the entrance of the facility and must be visible at all times.

Warning signs

The following warning signs must be displayed:

- A warning sign to prohibit smoking and to exclude other ignition sources, e.g., **DANGER: NO SMOKING, NO IGNITION SOURCES.**
- A warning sign to restrict entry to the storage area and the dangerous goods storage areas as appropriate, e.g., **RESTRICTED AREA, AUTHORISED PERSONNEL ONLY.**
- Warning signs to control customer behaviour, e.g., **LEAVE CHILDREN IN VEHICLE, SWITCH OFF ENGINE, SWITH OFF MOBILE PHONE**.

The signs must be clearly legible from any access point to the CRC and must comply with *AS 1319-1994 Safety signs for the occupational environment.*

4.4.3 Storage control measures

All CRC materials that are delivered to the facility are to be contained in specially designed receptacles and must be appropriate to the class of material being stored and transported. Storage receptacles for paint and oils, cages for gas bottles, drums for household batteries, pallets for car and motor bike batteries and smoke detectors and boxes for fluorescent tubes must be approved segregation devices in accordance with Australian Dangerous Goods (ADG) Code.

Products containing liquids such as oil and lead acid batteries must be stored in purpose-built storage receptacles that provide bunding to an acceptable Australian Standard.

Materials accepted should be kept in their original packages and neatly stacked directly into the storage receptacles to be picked up for recycling without the need for repacking.

Leaking containers should be overwrapped in a plastic bag before removing from vehicle and placed in the appropriate receptacle.

Water and oil-based paint should be placed in separate storage receptacles.

The number of storage receptacles shall be controlled to limit the total volume of materials held onsite to comply with the 12-tonne facility limit listed in Schedule 1 of the POEO Act.

4.4.4 Safety equipment

The following safety equipment must be provided within the CRC:

- Safety shower and eyewash, with separate wastewater holding capacity;
- Spill response kits;
- Special purpose bags and containers for leaking original containers;
- Special purpose clean-up kit for broken Fluro tubes and lights;
- Material specific Fire extinguishers directly located adjacent to receptacle;
- Personal protective equipment (PPE);
- First aid equipment and supplies.

Procedures that must be implemented regularly:

- Emergency evacuation drills;
- Fire response training and drills;
- Test the operation of the safety shower and eyewash;
- Check and replenish the first aid equipment and supplies;
- Check and replenish PPE;
- Check and replenish the spill response equipment.

Spill response equipment must be located at both the drop-off area and the storage area.

There are various types of fire extinguisher contents that should be used for the relevant types of CRC materials. The fire extinguishers should be kept in accordance with *AS 2444-2001*

The photos below depict the different types of fire extinguishers used for the different materials by the CRC. The relevant fire extinguishers are located in close proximity to the materials they are used to extinguish, in the event of fire and are sometimes co-located.

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Figure 4 Co-location of A:B (E) Powder Fire Extinguisher used for Paper, Wood, Textiles, Oil, Liquid and Electrical Fires; and CO2 Fire Extinguisher used for Paint, Oil Electrical and Other Liquid Fires

Figure 5 CO2 Fire Extinguisher used for Paint, Oil, Electrical and other Liquid Fires

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Figure 6 Wet Chemical Fire Extinguisher for Animal Fats and Vegetable Oil

Figure 7 Foam Fire Extinguisher for Oil and Flammable Liquid Fires

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Figure 8 *Co-location of A:B (E) Fire Extinguisher used for Paper, Wood, Textile, Oil, Liquid, and electrical Fires; and CO2 Fire Extinguisher for Paint, Oil, Electrical and other Liquids*

Figure 9 *Co-location of Foam Fire Extinguishers for Oil and Flammable Liquids; and A:B (E) Fire Extinguisher for Paper, Wood, Textile, Oil, Liquid and Electrical Fires*

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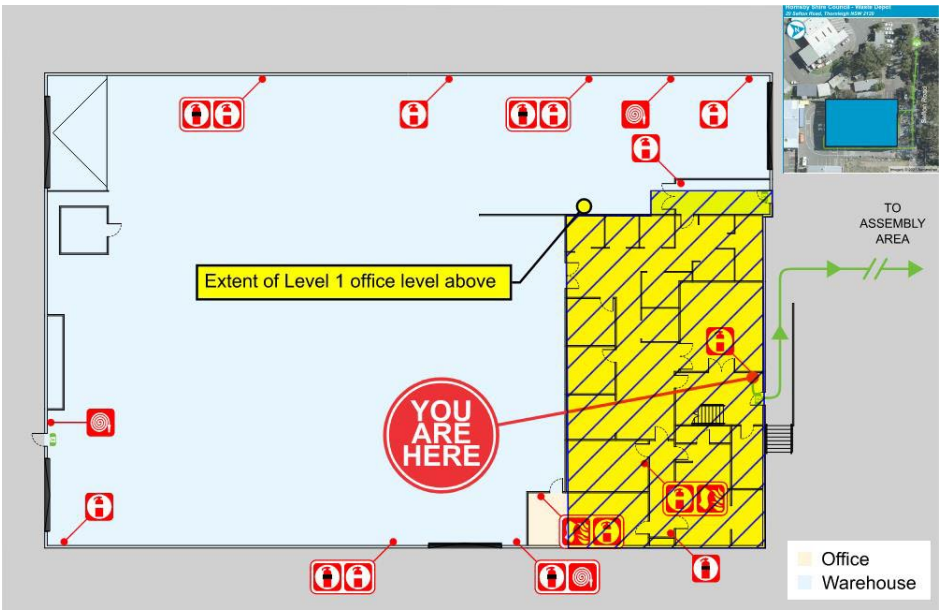

Figure 10 Location of Fire Extinguishers and hose reels on ground Level of the CRC building
Source: Fire Management Plan prepared by ARUP

4.4.5 Safety and environmental management procedures

Safe Work Method Statements

Safe Work Method Statements (SWMSs) and Safe Operating Procedures (SOPs) should be in place to protect the health and safety of customers and staff at the facility and for managing the impact of the facility on the environment.

All staff involved in the operation of the CRC must be trained in the use of SWMSs and SOPs and must sign off as having been trained and agreeing to undertake the relevant tasks safely and in accordance with the SWMSs and SOPs.

These SWMSs include forklift operations, loading trucks, hazardous waste by-catch and unidentified materials, cleanup procedures for broken CFCs (fluorescent-tubes), leaking gas bottles, leaking car/motors bike batteries, managing lithium batteries, managing household batteries.

Emergency Management Plan

To minimise the effects of any dangerous occurrences or near misses at the CRC resulting from handling of hazardous chemicals, a separate Emergency Management Plan has been developed that outlines roles and responsibilities (Fire Warden, etc.), identification of high-risk areas and appropriate responses, clear identification of safe areas during an emergency, an evacuation plan for vulnerable persons, and an emergency training and maintenance schedule.

The Emergency Management Plan considers:

- Procedures that include:
  - an effective response to emergency;
  - evacuation procedures;
  - notification procedures to advise emergency services organisations at the earliest convenience;
  - first aid treatment assistance;

  - communication between the person coordinating the emergency response and all persons at the workplace.

- emergency contact list
- evacuation plan and site/floor plans/diagrams
- checklists
- the testing of procedures, and how often this will be done
- a site map showing where hazardous chemicals are stored
- responsibilities of key person in managing emergencies
- circumstances to activate the plan
- systems for raising the alarm
- estimating the extent of the emergency
- alerting emergency services organisations to the emergency, or a situation with the potential to become a dangerous occurrence
- procedure to account for all people at the workplace
- isolation of the emergency area to prevent entry by non-essential personnel
- roles of on-site emergency response teams (including first aid officers, emergency spill coordinator), in the containment of any spillage
- disconnection of power supplies and other energy sources except when required to maintain safety of a critical operation or to run emergency equipment such as fire booster pumps
- prevention of hazardous chemicals or contaminated material of any kind from entering drains or waterways
- provision of relevant information and assistance to the emergency services authority, both in anticipation of emergencies and when they occur
- notification of regulatory authorities, as required by law
- maintenance of a surrounding property register and liaison with any neighbours of the CRC, as appropriate
- maintenance of site security throughout the emergency
- provision for dealing with public and the press
- site rehabilitation requirements

The Emergency Management Plan for the CRC is regularly updated as it is a working document. Copies of the Emergency Plan is located near the entrance to the facility.

4.5 Waste Management

4.5.1 Commercial waste management

CRCs must not accept commercial or business waste with the exception of paint under the Paint Back National Product Stewardship Scheme.

4.5.2 Waste and Recycling Generation

The CRC component is located in **Building A** and comprises:

- 1080 m^2 GFA

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It is proposed to receive up to 2,500 tonnes per annum of materials comprising items listed in **Section 2.2** of this OMP. The hours of operation are listed in **Section 4.1** of this OMP.

Thornleigh CRC is a drive-through only facility and residents must arrive by vehicle to drop off waste.

The Waste Management Plan is located at **Appendix 4** and forms part of the OPM.

In summary the operational process is as follows:

- Stage 1 – Arrival

  Customers arrive at the facility gate and are greeted by CRC operational staff upon entry to the CRC floor and asked what material they wish to dispose of. Customers are informed of what cannot be accepted and information is provided where these items can be taken. If their items can be accepted, they will proceed to unloading the items.

- Stage 2 – Unloading and Screening

  Once the vehicle is parked and secured, CRC staff inform the customer to remove items or containers from their vehicle and place them directly into the designated storage receptacle which is done under supervision and assistance of CRC operational staff to ensure that wastes are deposited in the correct location/receptacle.

  Large format standard signage with a minimum size of 1m x 1m is used to identify receptacles. During the unloading process, staff may inspect the materials to ensure that they meet the CRCs acceptance criteria.

  Once the materials are safely unloaded customers are directed to leave the drop-off area.

- Stage 3 – Storage of Material

  All acceptable streams of problem household waste are immediately placed into the correct receptacle for temporary storage within designated areas of the CRC. During high visitations material are screened and unloaded directly in mobile carts to be sorted when traffic volumes slow down. At the time of delivery of the receptacles the collection contractor provides labels for the storage receptors which comply with the *Work Health and Safety Act 2011 and Work Health and Safety Regulation 2011* for storage and transport of dangerous and hazardous materials. A label appropriate to the type of receptacle and waste material is affixed to the receptacle as soon as it is brought into service.

  Large hanging overhead signage is installed at the facility clearly detailing where each material receptacle is located. Program-branded magnetic signs advising of the material type are attached to the receptacle in order to help customers sort their materials correctly.

- Stage 4 Transfer and Removal

  CRC operational staff regularly check the drop-off area to ensure that materials dropped off by customers are placed in the correct receptacles. Operational staff have been trained to identify substances and if any containers need moving staff check to ensure that they are intact, not leaking and not likely to fail. PPE is used at all times before moving any containers.

  Once receptacles in the drop-off area are full or at capacity, they are moved to their designated storage area within the CRC warehouse. The storage area is not accessible to customers and is only accessible for transferring materials from drop-off areas for storage or for collection and clearance of material for disposal or recycling by appropriately qualified and licenced contractors.

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The various waste streams are collected by a variety of partnering recycling organisations and appropriately licenced waste contractors for offtake to their facilities for further reprocessing, resource recovery, recycling, and disposal.

The EPA and other funding bodies have established contracts for the collection and recycling or disposal of paint, used oil (other than motor oil) gas cylinders, household batteries, smoke detectors and fluorescent lights as well as incidental by-catch.

CRC operational staff arrange for collection and recycling (not disposal) of lead acid batteries and used motor oil with sufficient frequency to prevent exceedance of the capacity of the storage area.

By-catch products are not accepted by the CRC however do occasionally slip through. These products are stored in a sperate dangerous goods safety cabinet (DGSC) compliant with the relevant Australian Standard. CRC staff regularly inspect the drop-off area and place any by-catch substances in the relevant cabinets. The status of the cabinets is reported to the EPA via the online reporting system. The cabinets are emptied by the EPA collection contractor.

4.6 Noise Mitigation

4.6.1 Operational Noise Management

The CRC activities are mainly carried out within the building. Traffic is considered the largest operational noise generator.

The following operational noise management measures are to be applied to minimise the impact of the CRC:

- The hours of operation for staff shall be 6:00am to 6:00pm Monday to Friday and 7:00am to 4:30pm Saturday.
- Vehicles are to limit idling as much as feasibly possible.
- Heavy vehicles are to have non-tonal broadband reversing beacons (“squawk” type).

4.7 Air Quality Management

4.7.1 Potential Sources of Air and Odour Emissions

Potential sources of air emissions associated with the operation of the CRC has been identified to be as follows:

- Products of fuel combustion (including particulates) from onsite vehicle movements.
- Odour and Volatile Organic Compound (VOC) emissions for dropped off items (gas bottles, paints, motor oils and the like).
- Wheel-generated particulate emissions for onsite vehicle movements.
- Particulate emissions from the handling of material.

4.7.2 Operational protocols to ensure emissions/operations comply with relevant standards

- Plant and equipment to be maintained and operated in a proper and efficient manner.
- Emissions of dust and odour from the premises are to minimised/prevented.

4.7.3 Recommended mitigation measures

Appropriate signage and training are to be provided to ensure when customers are parked in the designated area, drivers turn off engines and secure their vehicles to off-load their items to mitigate potential impacts from emissions of vehicles.

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4.8 Stormwater and drainage management and protection

The CRC mainly operates within the roofed area of Building A and as a result the proposed storage location and proposed material handling procedure implemented, would prevent any potential contamination from entering the stormwater system. Polystyrene is identified as the only material potentially impacting the onsite stormwater drainage system.

Polystyrene is to be deposited directly into a designated plastic lined stillage within the warehouse and processed internally by a processing truck with a polystyrene shredder unit to reduce its volume before being transported to other facilities. Once processed CRC staff are to utilise a mobile vacuum unit to collect any small particles of polystyrene that have potentially escaped during the process both inside and outside the facility.

The on-site drainage network discharges to Council underground pit and pipe system in Sefton Road.

To improve the Sites' stormwater management system and prevent potential contaminants from entering the stormwater system the following measures are to be undertaken:

- Replace the existing drainage system with heelproof grates to reduce the possibility of gross pollutants such as polystyrene from entering the pit and pipe network.
- Ensure spill kits are located adjacent to pit PO1 and grated trenches GO1 and GO2 to ensure that a should a liquid spill occur the stormwater drainage network is protected.
- Regularly maintain and inspect the stormwater infrastructure.
- Regularly use walk behind vacuum system.
- Review the maintenance plan annually.

4.9 Complaint Management procedure

A complaints procedure and register must be kept by the Manager, Waste Management and must include the following information:

- Full details of any disturbance complaints in respect to the manner in which the business is conducted or the behaviour of persons entering and leaving the premises;
- The time, date, nature of the complaint and any complainant details if provided;
- A requirement that the complaints be responded to in a timely and effective manner;
- Whether or not the incident is of a serious nature (involves violence causing injury or requires the intervention of the NSW Police or any emergency service) and if so, when the matter was reported to the NSW Police;
- Council is to report an issue on its website and has a Customer Service Centre where all complaints or feedback is logged into a primary Complaints Resolution Management (CRM) System for action and resolution by the relevant officer;
- Council has a Complaints Handling Policy in place.

4.10 Fire Safety

The premises will comply with essential fire safety measures outlined in the *Environmental Planning and Assessment Regulation 2021*, including but not limited to the following:

- A copy of the annual fire safety statement and current fire safety schedule for the premises will be prominently displayed in the entry area of the building;
- A floor plan will be permanently displayed in the entry areas to indicate the available emergency egress routes from the building;

- The relevant staff will be trained in relation to the operation of the Emergency Management and Evacuation Plan;
- The Premises will provide annual certifications for Essential fire safety measures to comply with the *Environmental Planning and Assessment Regulation 2021;*
- Emergency numbers will be provided on the building notice boards;
- All fire safety systems are listed as essential safety measures on the fire safety schedule and the facility maintains a valid Annual Fire Safety Statement;
- All dangerous goods and hazardous materials are stored and handled in accordance with the Dangerous Goods Management Plan;
- All waste materials are stored and handled in accordance with the Waste Management Plan;
- A 'no parking' zone be implemented around the street hydrant located on the road on Sefton Street - it is currently within a parking zone and vehicles routinely park over the fire hydrant.
- The Site already has a Fire and Evacuation Management Plan in accordance with AS3745-2010;
- It is recommended that this is periodically reviewed to make sure information is kept up to date;
- The Site prepares an Emergency Services Information Package (ESIP) in collaboration with the local fire brigade;
- A street hydrant location plan should be provided at the Fire Indicator Panel (FIP) and within the ESIP;
- After hours fire brigade site access procedures to be documented in the Fire and Evacuation Management Plan and within the ESIP.

4.11 Identification of responsibility for breaches of the Management Plan

4.12 Communication of the PoM with staff and visitors

CRC operational staff are required to be accredited by attending a mandatory EPA, CRC Training Course. All CRC operational staff are required to attend a staff induction process. During induction staff should be provided with a copy of the PoM. Regular Toolbox talks are to be held with staff informing them of any changes to the PoM or to obtain feedback regarding any suggested changes to improve the operations of the CRC.

CRC operational staff are to communicate the relevant aspects of the PoM to visitors. The CRC has site rules that are to be complied with by visitors to the Site and is available on the Council website. These rules include:

- Visitors must follow the instructions of staff members in the CRC;
- The CRC is a drive-through facility only, walk-ins are prohibited;
- Vehicles must park in a designated bay and turn their engine off before unloading items;
- Visitors must stay inside their vehicle until it is parked in a designated bay;
- Children and pets must remain inside the vehicle;
- Footwear must be worn in the facility;
- Items should not be placed on eth CRC floor when avoidable;

- Do not throw items into containers in the CRC.

4.13 Plans and specifications of the facility

A Floor Plan is to be kept at the entry points showing evacuation routes, location of receptacles, fire extinguishers, safety shower and eye wash, and other critical information related to the CRC operations.

5 Conclusion

The Operational Management Plan prepared for the proposed Waste Management Facility - CRC has assessed all the potential impacts of the operational phase of the development and it is considered to satisfactorily respond to the opportunities and constraints of the Site and the relevant legislation, is unlikely to result in adverse impacts in the locality and is worthy of Council approval.

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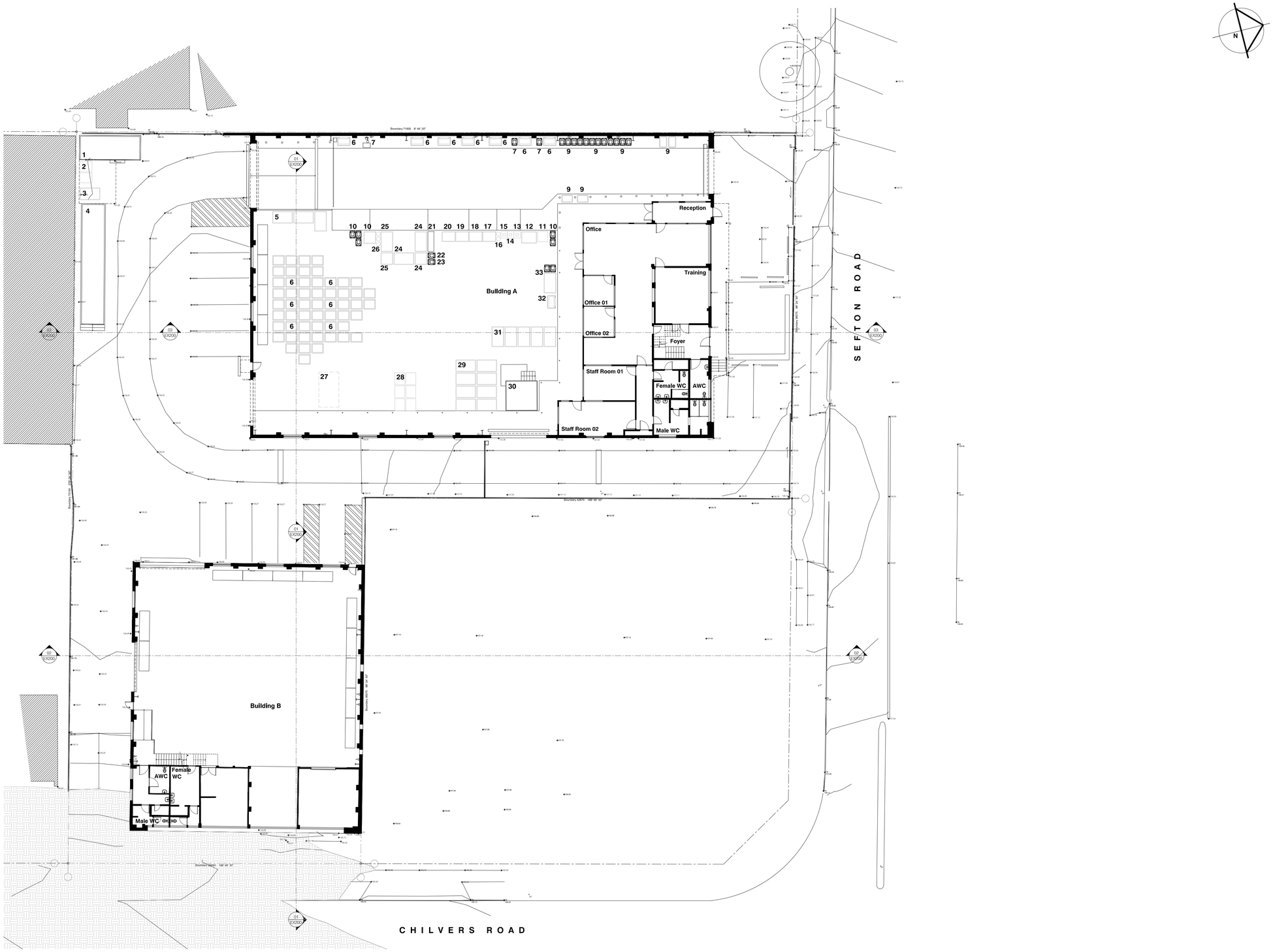
APPENDIX I

Notes

All dimensions are in millimetres unless noted otherwise.
Check all dimensions on site prior to commencement of the work shown on the drawing. Work to figured dimensions where given.
Report any discrepancies or omissions to the architect for resolution before proceeding with the work.
All work to comply with the Australian Standards;The National Construction Code of Australia & the relevant Authorities.

Collection / Storage Legend

1 Bunded container / Bi catch
2 Forklift gas bottle storage
3 Bulk gas bottle storage
4 Bulk polystyrene storage
5 Polystyrene
6 Cardboard
7 Safety shower / Isolation pit
8 Spill kits
9 Clothing
10 Soft plastics
11 Car batteries
12 Fluro globes / tubes
13 Mobile phones
14 Smoke detectors
15 Printer cartridges
16 Household batteries
17 Water-based paint
18 Oil-based paint
19 Motor oils
20 Non-motor oils
21 Work bench
22 Waste (General)
23 Waste (Recycling)
24 Electronic waste
25 Hard plastics
26 Aerosol cans
27 Forklift parking
28 B12 stillages
29 E-waste storage
30 Demountable
31 Soft plastic storage
32 Toner (BW)
33 Scrap metal



0 1 2 5 10 20
Scale (Metres)

4d Architecture & Design
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Sydney NSW Australia 2060
T + 61 2 9959 3452 / E contact@4darchitecture.net
Nominated Architect Christian Farrell
NSWARB Registration #6308 / ARBV Registration #10463
www.4darchitecture.net

Issue		
A	Development Application	10/10/2023

Project Title **Community Recycling Centre**
31 Sefton Road / 4 Chilvers Road Thornleigh NSW 2120

Drawing Title **Existing Ground Floor Plan (Building A/B)**

Scale 1:200 (A1)
Project # 2023-10
Drawing # **EX031**

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APPENDIX 2

Appendix 2

LIST OF OPERATIONAL MANAGEMENT PLAN DOCUMENTS

REFERENCE DOCUMENTS
EPA Community Recycle Centres Operations and Management Handbook – 2nd Ed.
Schedule 1(42) PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997
Work Health and Safety Act 2011
Work Health and Safety Regulation 2011
Waste Avoidance and Resource Recovery Act 2001
AS/NZS 2161.10.3.2005 – Occupation Protective Gloves against Chemicals and Micro-organisms – Determination of Resistance to Permeation by Chemicals
AS/NZ 2161.2.1998 – Occupational Protective Gloves General Requirements
Code of Practice Hazardous Manual Tasks 2019
Safety Data Sheets for materials stored on site
List of hazardous materials that will be handled and stored in the CRC
PROCEDURES
Customer Services - procedures
Customer Service Script Sheet (List Of Items Accepted) - CRC
Plant and Equipment - procedures
Fork Lift - Starting Up And General Operation
Fork Lift – Log Book And Maintenance Schedule
PLANT AND EQUIPMENT TO SUPPORT CRC OPERATIONS
Forklift, drum and pallet lift
Waste ‘receptacles’ (bunded stillages, cages, bins, buckets, boxes, and drum)
Timber, plastic and bunded pallets
Bin liner bags
Spare buckets, stickers, plastic bags, cable ties
Blower, assorted tools, Fans
Spil kit and plastic shovel
Safety shower and eye wash
Extra absorbent material for oil spills
Specialised CFL Spill/Clean-up Kit
Plastic Dust Pan and Broom
PROTECTIVE EQUIPMENT
Hi Visibility Shirt or Vest
Long Pants
Steel-Capped footwear with non-slip soles and chemical/acid resistant outer layer
Gloves – Heavy duty chemical resistant - AS/NZS 2161.10.3.2005
Gloves – Tactile general requirement – AS/NZS2161.2.1998
Gloves – Chemical resistant rubber nitrite disposable
Safety Glasses
Respirator and face shield suitable for fumes and dust and COVID face mask
Coverall suit for major spills
Note: All CRC operators and relief staff to have access to this PPE
MISCELLANEOUS DOCUMENTS
Thornleigh CRC Internal Layout (Including Separation Distances)
Emergency Response Folder
Fire Warden Checklist
Signage Plan
Traffic Plan and Site Map
CCTV Camera Plan
Car Parking Plan

Building Maintenance Contact List
Daily Checklist for CRC Operators
Induction for CRC Operators and Relief Staff
General Operational Procedures
WHS
Safe Work Method Statement – CRC Operations
Safe Work Method Statement – Forklift Use
CRC Risk Assessment Statement
EXISTING SITE PROCDURES AND STRATEGIES
Thornleigh CRC Operating Procedures
Thornleigh CRC Site Induction
Thornleigh CRC Emergency Door Release Instructions
Thornleigh CRC Risk Assessment Statement
Thornleigh CRC EPA Status Reporting Process
Thornleigh CRC EPA Minor Storage of DGs Process
Thornleigh CRC Emergency Procedure
Annual EPA – CRC Facility Compliance Audit for Compliance with EPA CRC Operations Handbook
POLICIES
Pollution Incident Response Management Plan – To be developed
SAFE OPERATING PROCEDURES (SOPS)
Clean-up of Fluro Tubes
Leaking Gas Bottle
Lithium Battery Fire
Leaking Car/Motor Bike Battery
Unidentified Liquid Chemicals
TOOLBOX TALKS
CRC Toolbox Meetings and Record of Attendance

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APPENDIX 3

CRC Waste Contacts

Waste type	Collection contractor - Business name	Collection contractor - Contact name	Collection contractor - Contact title / position	Collection contractor - Contact number	Collection contractor - Contact email	Frequency of collection	Day/s of collection	Agreement type	Revenue or expence	Stillages / container required
E-waste	Tech Collect	Kerry Owen	Programs Coordinator	1300 229 837	pickup@techcollect.com.au ; kerry.owen@techcollect.com.au	On demand. Typically, every 8 or 9 days.	As we request. Best on Mondays.	None.	Expense. Tech collect weigh the cages, send us data.	06.05.21 we hired 10 flat folding cages. Benn J is arranging purchase of new cages. Collection arranged thru pickup@techcollect.com.au, or thru portal https://techcollect.com.au/booking-form/
Toner cartridges	Close the Loop	Peter Tamblyn	Sales & Marketing Manager, Asia Pacific	03 9994 1321 ; +61 418 346 160	Peter@closetheloop.com.au. csteam@closetheloop.com.au	On demand. Typically wait to the end of each month (about 14 bags).	After we request. Courier arrives any working day.	None.	Expence: We pay them to transport and process the "cloned" cartridges, about $5,000 per year.	Black thick plastic bags supplied by them, with sticker that is specific to our site. Order collection and order new bags throught their portal https://members.closetheloop.com.au. Our site ID 175160.
Lead acid batteries (current)	NSW Copper Recycling	Asif Ali	Company Director	02 8772 0486; 0411 585 545	info@nswcopper.com.au	On demand. Best if we have 2 pallets of stacked batteries (takes about 3 weeks), although they prefer if we have 4 pallets.	After we request. They usually arrive within a couple of working days.	None.	They weigh our pallets on site. They pay us into BSB: 032-084. Acc 123-900. Price varies, say $0.45 to $0.50 per kilo. Pallet weighs about 989 kilos yields about $445.00.	They supply spare pallets to us. Beware, they can give us weak pine pallets, should be strong Chep 40 kg pallets. Wraps pallet with stretchy plastic wrap, not so good.
Cardboard	Cleanaway	Tasman Clark	Manager	0499 303 628	tasman.clark@cleanaway.com.au	3 times per week. Co-ordinated by Earl Warren in our Waste Branch	Mon, Wedn, Fri	Contract	Ask Earl Warren	1100 L wheelie bins provided by Cleanaway. Damaged ones removed a& replaced by Cleanaway, at our expense. Complain if too many are broken by Cleanaway's truck operators.
Polystyrene	WastePro 3BL P/L	Christian McLean	Managing Director	0487 387 458; 02 4385 3414	christian@waste-pro.com.au; sales@waste-pro.com.au; accounts@waste-pro.com.au	Once per week	Monday	None.	Expense: 1 bag = 2m3 costs $27.75 +GST. ~up to 77 bags per busy January. Normal is 13 bags/week = 52 bags/month.	4 large yellow wheeled cages. Purchase clear plastic liners from Surepak item BLC3.0m3; 3.0m3 Front End Lift Bin Liners - clear 1900/1800mmx3000mm 70um, 25 roll; $168 + freight $100 +GST . Store in blue 40' container.
Paint	Cleanaway	Dustan Hansen	Ops Manager	9851 4200; 0402 791 231	Dustan.Hansen@cleanaway.com.au. TESNSWbookings@cleanaway.com.au Gill.Morris@cleanaway.com.au	Once per week in normal conditions. Christmas/New Year more frequently. Book thru portal on i-pad, & send confirming e-mail	Monday.	Under EPA	Neutral. Paid by EPA	They supply stillages for paint
Motoroil	Cleanaway	Dustan Hansen	Ops Manager	9851 4200; 0402 791 231	Dustan.Hansen@cleanaway.com.au. TESNSWbookings@cleanaway.com.au Gill.Morris@cleanaway.com.au	Once per week in normal conditions. Christmas/New Year more frequently. Book thru portal on i-pad, & send confirming e-mail	Monday	Under EPA	We pay for removal of motor oil. $0.31 + GST, typically about 765 KG costs $260.87. We rent 2 stillages from EPA, Cleanaway sends us a invoice	They supply green stillages (called "B12") for motor oil. Must be in green stillage, not other colour.
Gas cylinders	Cleanaway	Dustan Hansen	Ops Manager	9851 4200; 0402 791 231	Dustan.Hansen@cleanaway.com.au. TESNSWbookings@cleanaway.com.au Gill.Morris@cleanaway.com.au	Once per week in normal conditions. Christmas/New Year more frequently. Book thru portal on i-pad, & send confirming e-mail	Monday	Under EPA	Paid by EPA	They supply tall green cage for sml LPG bottles, and open silver age for tall gas bottles. Attach sticker to cage door.
Light bulbs	Cleanaway	Dustan Hansen	Ops Manager	9851 4200; 0402 791 231	Dustan.Hansen@cleanaway.com.au. TESNSWbookings@cleanaway.com.au Gill.Morris@cleanaway.com.au	Once per week in normal conditions. Christmas/New Year more frequently. Book thru portal on i-pad, & send confirming e-mail	Monday	Under EPA	Paid by EPA	They supply 2 big grey boxes, called a Dalton box.
Smoke detectors	Cleanaway	Dustan Hansen	Ops Manager	9851 4200; 0402 791 231	Dustan.Hansen@cleanaway.com.au. TESNSWbookings@cleanaway.com.au Gill.Morris@cleanaway.com.au	Once per week in normal conditions. Christmas/New Year more frequently. Book thru portal on i-pad, & send confirming e-mail	Monday	Under EPA	Paid by EPA	They supply white plastic buckets and lids. Need to attached sticker.
Aerosol cans	Cleanaway	Dustan Hansen	Ops Manager	9851 4200; 0402 791 231	Dustan.Hansen@cleanaway.com.au. TESNSWbookings@cleanaway.com.au Gill.Morris@cleanaway.com.au	Once per week in normal conditions. Christmas/New Year more frequently. Book thru portal on i-pad, & send confirming e-mail	Monday	Under EPA	Paid by EPA	They supply aerosol drums; usually a plastic bag for lining the drum; and sticker. Attach sticker.
Fire extinguishers	Cleanaway	Dustan Hansen	Ops Manager	9851 4200; 0402 791 231	Dustan.Hansen@cleanaway.com.au. TESNSWbookings@cleanaway.com.au Gill.Morris@cleanaway.com.au	Once per week in normal conditions. Christmas/New Year more frequently. Book thru portal on i-pad, & send confirming e-mail	Monday	Under EPA	Paid by EPA	They supply grey steel open cage and stickers.
Scrap metal	Gauslaa	Steve Gauslaa	Manager	9851 4200; 0402 791 231	sgauslaa@bigpond.com	On demand, about 1 per month. Send him an SMS text message. Collect only small volumes, otherwise send customer to Hornsby Scrap Metal	After we request.	None.	Neutral	We fill an old 660L wheelie bin.
Mobile phones	Mobile Muster	Joel Murray	Head of Mobile Muster	0404 015 533; 1800 249 113	Joel.Murray@amta.org. Joel.Murray@amta.org.au<mailto:Joel.Murray@amta.org.au. Www.mobilemuster.com.au	On demand. End of the month to assist in stats collection. Book collection thru their website, our ID 12203	After we request. Slow in collecting, often have to write to Spyro to chase.	None.	Neutral	Keep little boxes, such as shoe boxes, totally enclosed and taped up so the contents to not spill out.
Clothing	King Cotton	John	Driver	0403 007 339	Tony@kingcotton.com.au. Boss: Tony Rallis 0417 245 945. 2nd driver Simon 0400 558 811	Twice a week, unless we advise by text for fewer, or more.	Tuesdays and Fridays	Written document	Neutral	We supply about x19 240L wheelie bins, most with a purple lid, lined with plastic bag we purchase from Surepak.
Soft and Hard plastics	Plasmar Post	Rose Smither	Manager	407991129	admin@plasmar.com.au	Twice a week, unless we advise by text for fewer, or more.	Tuesdays and Fridays	Contract	We pay for removal by Gate fee + per bags	
X-ray	Ecocycle	Rhiannon Hilburn	Manager	0456 209893	hiannon.hilburn@ecocycle.com.au valeria.cohen@ecocycle.com.au	As per requested	After we request	None.	Nutral	Wheely bins provided by Ecocycle
Blister Pack	Activegroup	Amy Herrett	Manager	0405 251196	amy.herrett@activgroup.io	ON demand, book a collection online	Afer we request	Pre purchase	$175 + GST per box	Box provide by Activgroup

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APPENDIX 4

Thornleigh CRC – Waste Management Plan

A Submission to DFP Planning on behalf of Hornsby Shire Council

17 October 2023

MRA Consulting Group

Prepared by

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Version History

Ver	Date	Status	Author	Approver	Signature
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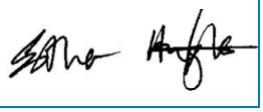
0.2	18/09/2023	Review	Esther Hughes	Jake Stanaway-Dowse	-
0.3	5/10/2023	Draft Revision	Jake Stanaway-Dowse/Louisa McMullan	Esther Hughes	-
1	17/10/2023	Final	Jake Stanaway-Dowse	Esther Hughes	

Disclaimer

In the spirit of reconciliation MRA Consulting Group acknowledges the Traditional Custodians of country throughout Australia and their connection to land, sea and community. We pay our respects to Aboriginal and Torres Strait Islander peoples and to Elders past, present and emerging.

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Glossary

Terminology	Definition
AS	Australian Standard
C&D	Construction and Demolition
C&I	Commercial and Industrial
CRC	Community Recycling Centre
DA	Development Application
DCP	Development Control Plan
EIS	Environmental Impact Statement
EPA	Environment Protection Authority (NSW)
EPL	Environment Protection Licence
FOGO	Food Organics and Garden Organics
GHS	Globally Harmonised System
HDCP	Hornsby Development Control Plan 2013
HLEP	Hornsby Local Environmental Plan 2013
HSC or Council	Hornsby Shire Council
LGA	Local Government Area
MGB	Mobile Garbage Bin
MRA	MRA Consulting Group
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
tpa	Tonnes per annum
WHS	Work Health and Safety
WMP	Waste Management Plan
WSP	Waste Service Provider

1 Executive Summary

DFP Planning on behalf of Hornsby Shire Council is seeking development consent for the operation of Community Recycling Centre (CRC) at 31 Sefton Road and 4 Chilvers Road, Thornleigh. The site was granted consent in 2016 for use as a Council depot (DA 1535/2015) and the site has been operating for a number of years. The application seeks to formalise its use as a *waste or resource transfer station* as defined in the *Hornsby Local Environmental Plan 2013* (the HLEP).

Description of Proposal

The proposed development seeks consent for use as a *waste or resource transfer station* for the receipt, handling and transfer off-site of waste materials for up to 2,500 tonnes per annum (tpa). Incoming materials are from households within the Hornsby Shire Council Local Government Area (LGA) and surrounding LGAs as per the EPA and CRC Operator Agreement. The CRC operation currently handles approximately 600-900 tonnes per annum of recyclable household materials. Accepted materials include gas bottles, oils, car and motor bike batteries, mobile phone and computer batteries containing lithium. Unacceptable materials that may inadvertently slip through inbound material screening processes are referred to as by-catch, and include pesticides, petrol, bleach, acids. No building works are proposed and parking arrangements will be maintained as current at the site.

The proposed use meets the definition of a *waste management facility* pursuant to Schedule 3 Part 2 Section 45(6) of the *Environmental Planning and Assessment Regulation 2021* (the Regulation) and the planning application is Designated Development due to the proposed storage and handling of materials classified in the Australian Dangerous Goods (ADG) Code.

The activity is not subject to a licence as the quantity of hazardous, restricted solid, liquid or special waste stored onsite would not exceed 12 tonnes at any one time.

The Site

The site is legally described as Lot 1 in Deposited Plan (DP) 513555. The site also has a frontage to Chilvers Road to the south of Sefton Road and and is known as 4 Chilvers Road and 31 Sefton Road, Thornleigh.

The site is located in the Hornsby Local LGA on the southern side of Sefton Road Thornleigh, to the west of the intersection with Chilvers Road. The site is located within the Thornleigh Industrial area on the western side of the Main Northern Railway, approximately 1.5 kilometres west of Normanhurst station, approximately 1 kilometre north of Thornleigh Station and approximately 700 metres to the north-west of Pennant Hills Road via Chilvers Road and Duffy Avenue.

Waste Management

Incoming materials at the site would be managed safely and in a way that complies with the relevant legislation, codes and WH&S standards.

Proper handling, compliant storage and safe offsite transfer of these waste materials reduces adverse outcomes and risk to the environment, and facilitates improved resource recovery. Materials are sent to suitably licenced facilities for reprocessing (or safely disposed of where required) through partnering organisations.

The proposed development to operate a CRC at the abovementioned address is deemed to meet the requirements of the relevant planning instruments and legislation as it relates to the management of waste, in accordance with this Waste Management Plan.

2 Introduction

MRA Consulting Group was engaged by DFP Planning to prepare a Waste Management Plan (WMP) to support a development application for the operation of Community Recycling Centre (CRC) at 31 Sefton Road and 4 Chilvers Road Thornleigh, Thornleigh in NSW. The site was granted consent in 2016 for use as a Council depot (DA 1535/2015) and the site has been operating for a number of years. The application seeks to formalise its use as a *waste or resource transfer station* as defined by Hornsby Local Environmental Plan 2013 (the LEP).

The site is located in the North-Western Sydney Region and the Hornsby Shire Council Local Government Area (LGA).

This WMP addresses the requirements of the Consent Authority (Council) and conforms to the waste management requirements of the following documents:

- Hornsby Local Environmental Plan (HLEP) 2013.
- Hornsby Development Control Plan (HDCP) 2013.
- NSW EPA's Better Practice Guide for Waste Management and Recycling in Commercial and Industrial Facilities (2012).
- NSW EPA's Community Recycling Centres Operations and management handbook – 2nd ed (2017).

This WMP is used to deliver best practice waste management and promote sustainable outcomes. The WMP is consistent with the desired outcomes of Section 1C.2.3 of the HDCP, which include:

- Development that maximises re-use and recycling of building materials.
- Waste storage and collection facilities that are designed to encourage recycling, located and designed to be compatible with the streetscape, accessible, clean and safe for users and collectors.

This WMP has been prepared to inform the development design and assist in the delivery of better practice waste management, promoting sustainable outcomes at the demolition, construction, and operational phases for the development. The WMP addresses waste generation and storage associated to the excavation, construction and ongoing occupation of the proposed development.

2.1 SEARS Requirements

This WMP has been prepared in response to the Secretary's Environmental Assessment Requirements (the SEARs) Designated Development-1764 (received on 3 March 2023) with regard to waste management.

Table 1 summarises the SEARs items to be addressed and outlines where in this report the waste management requirements have been met.

Table 1: Waste Management SEARs

Waste Management SEARs	
SEARS requirement	**Section addressed**
DPE	
Waste management – including: • details of the type, quantity and classification of waste to be received at the site	Section 5.4
• details of the resource outputs and any additional processes for residual waste	Section 5.4
• details of waste handling including, transport, identification, receipt, stockpiling and quality control	Section 5.1

Waste Management SEARs	
• the measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Sustainable Materials Strategy 2041.	Section 4.1.4
NSW EPA	
• Provide details of the quantity and type of both liquid waste and non-liquid waste generated, handled, processed or disposed of at the premises. Waste must be classified according to the EPA's Waste Classification Guidelines 2014 (as amended from time to time).	Section 5.4
• Provide details of liquid waste and non-liquid waste management at the facility, including:	Section 5.4
a) the transportation, assessment and handling of waste arriving at or generated at the site	Section 5.1
b) any stockpiling of wastes or recovered materials at the site	Section 5.4
c) any waste processing related to the facility, including reuse, recycling, reprocessing (including composting) or treatment both on- and off-site	Section 5.4
d) the method for disposing of all wastes or recovered materials at the facility	Section 5.4
e) the emissions arising from the handling, storage, processing and reprocessing of waste at the facility	Section 7.7
f) the proposed controls for managing the environmental impacts of these activities.	Section 7.7
• Provide details of spoil disposal with particular attention to:	Not relevant as no spoil would be received on site.
a) the quantity of spoil material likely to be generated	N/A
b) proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil	N/A
c) the need to maximise reuse of spoil material in the construction industry	N/A
d) identification of the history of spoil material and whether there is any likelihood of contaminated material, and if so, measures for the management of any contaminated material	N/A
e) designation of transportation routes for transport of spoil.	N/A
• Provide details of procedures for the assessment, handling, storage, transport and disposal of all hazardous and dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes.	Section 5.3.5

Waste Management SEARs	
• Provide details of the type and quantity of any chemical substances to be used or stored and describe arrangements for their safe use and storage.	Section 5.4.1
• Reference should be made to the guidelines: EPA's Waste Classification Guidelines 2014 (as amended from time to time)	Section 5.4.1 Throughout

3 Background

3.1 Description of Proposed Development

This Waste Management Plan accompanies the submission of an Environmental Impact Statement (EIS) for a Designated Development Application to Hornsby Shire Council, to formalise the use of the premises as a *waste or resource transfer station* as defined by Hornsby Local Environmental Plan 2013 (the HLEP). Thornleigh CRC accepts problem wastes that are not accepted in council waste collections.

The proposed use meets the definition of a waste management facility pursuant to Schedule 3 Part 2 Section 45(6) of the *Environmental Planning and Assessment Regulation 2021* and is Designated Development due to the proposed storage and handling of materials classified in the *Australian Dangerous Goods Code* (ADGC), such as gas bottles, pesticides, petrol, oils, bleaches, acids, car and motorcycle batteries, mobile phone and computer batteries containing lithium.

3.2 Location

The Site is located in the Hornsby Local Government Area on the southern side of Sefton Road Thornleigh, to the west of the intersection with Chilvers Road. The site also has a frontage to Chilvers Road to the south of Sefton Road and has its official address to Chilvers Road. The site is located within the Thornleigh Industrial area on the western side of the Main Northern Railway, approximately 1.5 kilometres west of Normanhurst station, approximately 1 kilometre north of Thornleigh Station and approximately 700 metres to the north-west of Pennant Hills Road via Chilvers Road and Duffy Avenue.

The site is legally described as Lot 1 in Deposited Plan (DP) 513555 and is known as 31 Sefton Road and 4 Chilvers Road Thornleigh, Thornleigh.

The site is occupied by two brick industrial style buildings with one oriented to the Chilvers Road frontage and the other, oriented to Sefton Road containing a two (2) storey office at the front with a large open warehouse to the rear. A roller door exists on the western side of the façade to Sefton Road, with another located on the eastern side of the rear elevation of the building. A third roller door is located in the middle of the eastern elevation of the building, at a level slightly higher than the adjacent accessway to allow it to be used for raised loading if required.

Figure 1: Eastern entrance to the site

Figure 2: Western exit of the building to Sefton Rd

3.3 Site Description

The site is “L-shaped” with the larger rectangular portion of the property fronting Sefton Road and a narrower, smaller section fronting Chilvers Road. An aerial photograph is shown in Figure 3.

The site slopes down from Chilvers Road to the west, levels out towards the hardstand area in the south-western corner and then gently slopes down to the north of Sefton Road. Accordingly, the site drains to Sefton Road.

Figure 3: Site Location

Source: Nearmaps, 2023

3.4 Zoning and Land Use

The site is zoned **E4 – General Industrial** in the Hornsby LEP 2013 (See Figure 4)**.** Objectives of this zone include:

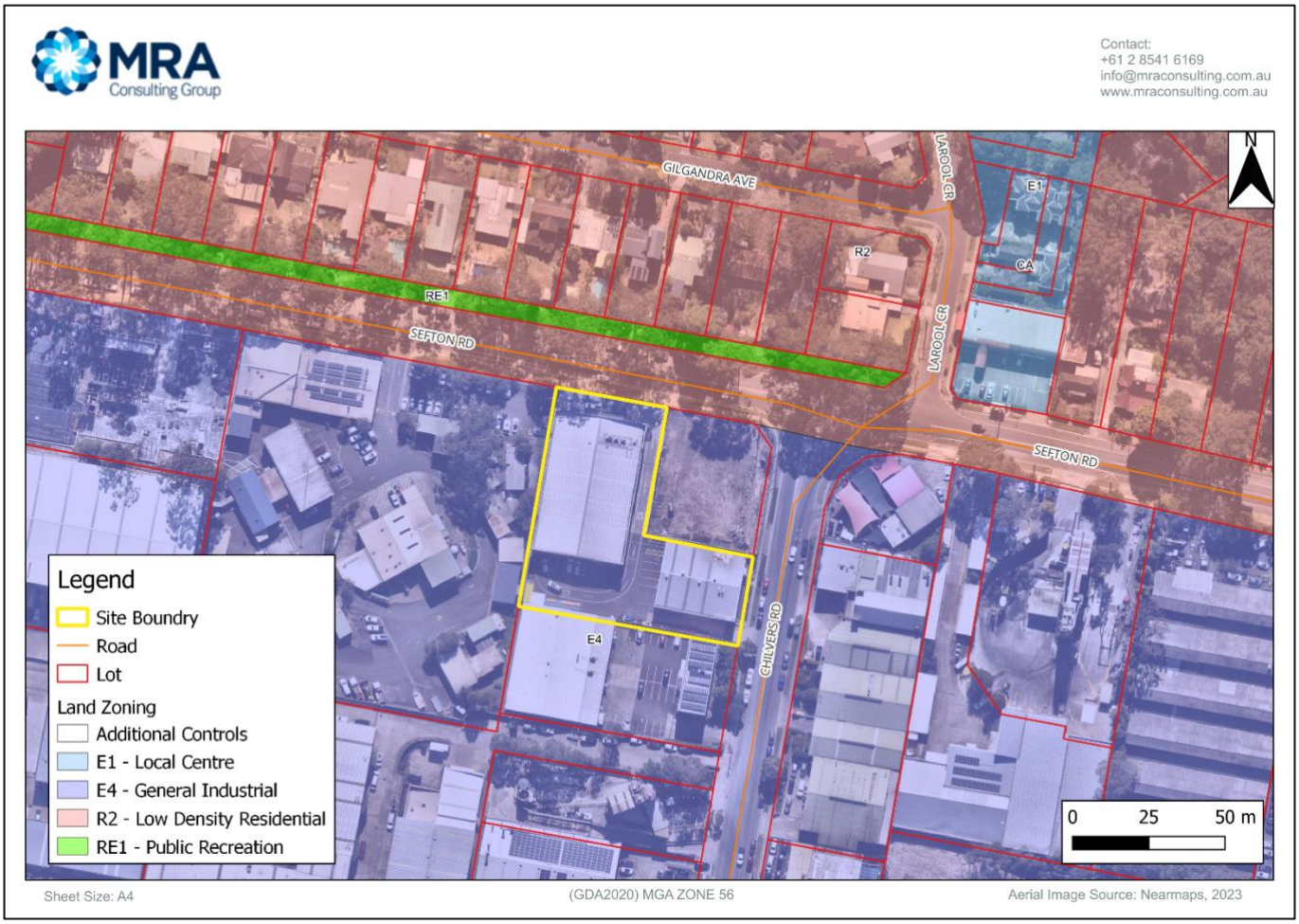
- To provide a range of industrial, warehouse, logistics and related land uses.
- To ensure the efficient and viable use of land for industrial uses.
- To minimise any adverse effect of industry on other land uses.
- To encourage employment opportunities.
- To enable limited non-industrial land uses that provide facilities and services to meet the needs of businesses and workers.

Under the HLEP a waste or resource transfer station is permissible with development consent in this zone.

Nearby zoning includes R2 – Low Density Residential, E1 – Local Center and RE1 – Public Recreation.

Land use to the east, south and west are a range of land uses generally comprising light industrial activities, a place of public worship, a centre-based childcare facility and a Council depot. Residential housing is located to the north of Sefton Road.

Figure 4: Zoning and land use



Source: Department of Planning and Environment, Environment Planning Instrument – Land Zoning, 2023.

3.5 Assumptions

This report is a Waste Management Plan (WMP), forming part of the development documentation and assumes:

- Drawings and information that have been used in waste management planning for this WMP are the final reference/indicative development plan from the project architect, 4D Architects and Design, dated 31/08/2023;
- The NSW EPA's *Better Practice Guide for Waste Management and Recycling in Commercial and Industrial Facilities* (2012) outlines waste generation rates and services available for new developments which have been considered in the preparation of this report alongside other empirical data; and
- Waste streams and quantities are sourced from 2022-2023 Financial year Thornleigh CRC data provided to MRA by Thornleigh CRC operational management.

4 Legislation and Policy Context

The application and operation of the facility will be consistent with the following legislative and strategic policy context:

- Protection of the Environment Operations Act 1997 (POEO Act).
- Protection of the Environment Operations (Waste) Regulation 2014.
- Environmental Planning & Assessment Regulation (EP&A) 2021
- Waste Avoidance and Resource Recovery Act 2001.
- NSW EPA Waste Classification Guidelines 2014
- NSW Waste and Sustainable Materials Strategy 2041.

4.1.1 Environmental Planning & Assessment Regulation 2021

The proposal was reviewed with reference to Schedule 3 of the *EP&A Regulation 2021* to determine if the application would be considered to be Designated Development.

The site activities fit into the definition of **Waste Management Facility or Works** (Schedule 3, Cl 45(6)) meaning a facility or works that:

(a) stores, treats, purifies or disposes of waste, or

(b) sorts, processes, recycles, recovers, uses or reuses material from waste.

Further, provisions of this section describe development of this nature that is Designated Development:

45 Waste management facilities or works

(1) Development for the purposes of a waste management facility or works is designated development if—

(a) the facility or works dispose of solid or liquid waste by landfilling, thermal treatment, storing, placing or other means, and

(b) the waste —

(i) includes a substance classified in the ADG Code or medical, cytotoxic or quarantine waste

The CRC temporarily stores waste materials classified in the ADG code and is Designated Development.

4.1.2 Protection of the Environment Operations (POEO) Act 1997 and Regulation 2014

An Environment Protection Licence (EPL) is required for any scheduled activity listed under Schedule 1 of the *Protection of the Environment Operations* (POEO) *Act*. The Act provides for waste storage:

42 Waste Storage

(1) This clause applies to waste storage, meaning the receiving from off site and storing (including storage for transfer) of waste

…

(3) The activity to which this clause applies is declared to be a scheduled activity if—

(a) more than the following amount of hazardous waste, restricted solid waste, liquid waste or special waste, other than waste tyres, is stored on the premises at any time—

(i) for a community recycling centre—12 tonnes

(ii) for premises to which an environment protection licence does not otherwise apply, if the waste has been collected as part of a household chemical clean-out event—80 tonnes

(4) For the purposes of this clause, 1 litre of waste is taken to weigh 1 kilogram.

Other definitions that apply to the site include:

household problem waste means waste ordinarily generated in a household that is not able to be collected through council kerbside waste or recycling services.

The proposal **does not** seek to store over 12 tonnes of hazardous waste, restricted solid waste, liquid waste or special waste on the premises at any one time. The application does not therefore require a licence and is not Integrated Development.

4.1.3 Waste Avoidance Resource Recovery (WARR) Act 2001

The WARR Act aims to encourage the efficient use of resources and reduce environmental harm in accordance with the principles of ecologically sustainable development. The WARR Act serves the following functions:

- Promotes waste avoidance and resource recovery;
- Provides for the development of the WARR Strategy;
- Defines the functions of the EPA;
- Establishes a scheme to promote extended producer responsibility in place of industry waste reduction plans; and
- Establishes a Container Deposit Scheme to promote reuse and recovery within the beverage industry.

The proposed development would assist in the promotion of waste avoidance and responsible management of problem wastes.

4.1.4 NSW Waste and Sustainable Materials Strategy 2041

The SEARs require a description of any measures that would be implemented to minimise, manage or dispose of these waste streams, in accordance with the NSW Waste Avoidance and Resource Recovery Strategy 2014-21. It is noted that the NSW Waste Avoidance and Resource Recovery Strategy 2014-21 has now been superseded by NSW Waste and Sustainable Materials Strategy 2041. The Proposal has been assessed in line with this strategy.

The proposed on-site management of waste support the following key focus areas of the NSW Waste and Sustainable Materials Strategy 2041:

- Meeting our future infrastructure and service needs.
- Reducing carbon emissions through better waste and materials management.
- Building on our work to protect the environment and human health from waste pollution.

The development will assist the transition to a circular economy by facilitating the recovery of hard to recycle items for appropriate management.

The NSW Government has already invested in 95 Community Recycling Centres on publication of the Strategy. This development application supports the focus area entitled: *Building on our work to protect the environment and human health from waste pollution* as it directly assists the community to deal with problematic and hazardous wastes. The Strategy aims to avoid problematic wastes from being illegally dumped or sent to landfill and states that the NSW Government will continue to support endeavours such as CRCs as community resources.

The facility aligns with the Strategy in that it will continue to contribute to a network of waste and resource recovery facilities that responsibly manage problematic wastes in the community.

4.1.5 NSW EPA Waste Classification Guidelines 2014

Materials to be managed at the site are classified in accordance with the NSW EPA 'Waste Classification Guidelines (2014)'. According to the guidelines, the materials proposed to be stored on site would be classified as:

- General solid waste (non-putrescible) and
- Hazardous waste.

Refer to Section 5.4 for a breakdown of incoming waste materials and their classification.

5 Operational Waste Management

5.1 Overview

Operational waste management requirements for the site arise from the daily operating activities of the CRC, and from staff and visitors.

Thornleigh CRC accepts problem wastes from residents of the Hornsby Shire Council and other surrounding LGAs that are unable to be disposed of in household garbage bins or via kerbside collection. Waste from commercial sources are not accepted at Thornleigh CRC, with the exception of paint from trade businesses under a Commonwealth Product Stewardship Scheme. It is noted Thornleigh CRC is a drive-through only facility and residents must arrive by vehicle to drop off waste items.

Proposed site operations are described in the following sections, as outlined in Figure 5 and supported by the proposed site layout identified on site plans (see Appendix A).

All waste management strategies related to site operations have been established according to the NSW EPA *CRC Operations and Management Handbook*. The handbook is intended to assist in the design of Community Recycling Centres (CRCs) to maximise the efficient operation of the centre or service and maximize resource recovery. Council requirements and controls within *Hornsby Development Control Plan 2013* have also been considered.

5.1.1 Hours of Operation

The CRC is open to the public as follows:

- Tuesday to Friday: 8:30am – 4:00pm
- Saturday: 8:30am – 12:00 pm
- Sunday & Public Holidays: Closed

The CRC's operational hours are as follows:

- Monday to Friday: 6:00am – 6:00pm
- Saturday: 7:00am – 4:00 pm
- Sunday & Public Holidays: Closed

The CRC is open 5.5 days per week or equivalent to 287 days per year.

5.1.2 Site Equipment

The CRC maintains a range of equipment related to the sorting and storage of household problem waste materials prior to their bulk removal from the site for further processing as shown in Table 2.

Table 2: Equipment list

Equipment
• Forklift
• Pavement Scrubber Machine
• Drum lifter
• Pallet lift
• Waste Receptacles - Bunded stillages, cages, bins, buckets, boxes and drums

Equipment
• Timber, plastic and bunded pallets
• Bin liner bags
• Buckets, stickers, plastic bags, cable ties
• Industrial walk-behind vacuum (Glutton)
• Assorted tools
• Spill kit and plastic shovel
• Safety shower and eye wash
• Extra absorbent material for oil spills
• Specialised CFL Spill/Clean-up Kit
• Plastic dustpan and broom
• Fire extinguishers for each specific waste type

5.2 List of Accepted Materials

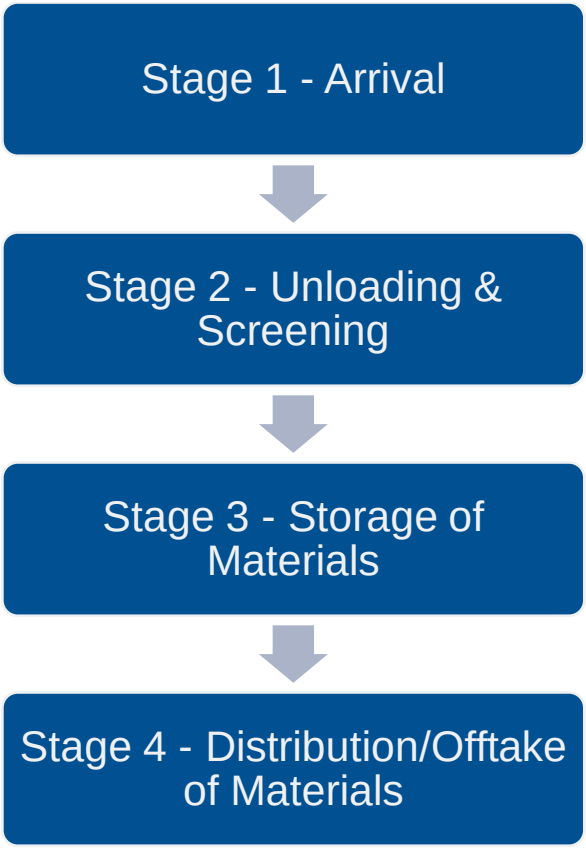
The following materials are accepted at the site:

- Empty blister/tablet packaging
- Soft and hard plastics
- Car and motorcycle batteries
- Clothing, accessories and linen (other household textiles including rugs, curtains, pillows, doonas and stuffed toys are NOT accepted)
- Electronic waste:
    - Televisions, desktop computers, laptops, tablets, PC monitors, loose hard drives, keyboards, plastic computer speakers, motherboards, video and sound cards, printers (with toners removed), scanners, network devices, set top boxes, mice, other computer parts, cables, IT accessories, gaming equipment, web cameras, stereo equipment, DVD and VCR players, CD and DVD discs (discs only not the covers).
    - Electronic appliances such as toasters and kettles are NOT accepted.
- Fire extinguishers used in the home
- Flattened cardboard (paper and books also accepted)
- Fluorescent light globes and tubes (fittings are NOT accepted)
- Gas Bottles (any type used for BBQ, camping or caravan. Oxygen, butane, helium etc canisters are also accepted)
- Household batteries
- Mobile phones
- Motor oils (including sump oil, engine oil, two and four stroke oil, lubricating oil)
- Other oils (cooking oils, auto transmission fluid, brake fluid, hydraulic fluid, power steering fluid, engine coolant etc)

- Paint – Oil based and water based tins of paint in liquid form. Solvent based paint, metallic enamel paint and epoxy paint are also accepted
- Polystyrene:
    - Clean, white rigid Polystyrene from packaging without sticky tape from small and large appliances, white fruit and vegetable boxes, bean bags. Number 6 only
    - No coloured, waxy or flexible foam, packaging beans, meat trays or takeaway food containers.
- Printer cartridges – All sizes and types. Liquid and powder toners.
- Smoke detectors
- Spray cans/aerosols
- X-rays

5.3 Process

Figure 5: Operational process flow



5.3.1 Stage 1 – Arrival procedure

Hornsby City Council residents bring their problem wastes to Thornleigh CRC via vehicle. Once residents are on site, the arrival procedure is as follows:

1. As customers arrive at the facility gate, they are greeted by CRC operational staff and asked what waste materials they are carrying and wish to dispose.
2. If they possess any containers containing liquids, the customer is informed that any containers without lids, or that are leaking, cannot be accepted.

3. If any of the materials customers are carrying cannot be accepted, the customer is informed that the material cannot be accepted and provided with information as to where the item/s could be taken (e.g. a mobile collection event or an alternative facility).

5.3.2 Stage 2 – Unloading & Screening

The CRC unloading procedure is as follows:

1. CRC staff direct customers to remove items or containers from their vehicle and place them directly into the designated storage receptacle (e.g. box, cage, pallet). This takes place under the supervision and assistance of CRC operational staff to ensure wastes are deposited in the correct location/stockpile.
2. Receptacles are identified with large format standard signage with a minimum size of 1m x 1m.
3. Once the materials are safely unloaded the customer is directed to leave the drop-off area immediately.

During the unloading process, staff may inspect the materials to ensure they meet the CRC's acceptance criteria. Hazardous materials and items classified as by-catch are handled as described in Section 5.3.5.

5.3.3 Stage 3 – Storage of CRC Materials

All accepted streams of problem household waste are temporarily stored within designated areas of the CRC. Materials are immediately placed into the correct receptacle for storage when unloaded from customer vehicles. At times when the facility experiences abnormal visitation/vehicles - materials may be screened and unloaded directly into mobile carts and sorted at a later time as traffic volumes slow down.

Labels for the storage receptacles are provided by the collection contractor at the time receptacles are delivered to the CRC. All labels include information necessary to comply with the *Work Health and Safety Act 2011* and *WHS Regulation 2011* for storage and transport of dangerous goods and hazardous materials.

Large hanging overhead signage is installed at the facility clearly detailing where each material receptacle is located. A label appropriate to the type of receptacle and waste material is affixed to the receptacle as soon as it is brought into service. In addition, program-branded magnetic signs of the material type are attached to the receptacle in order to help customers sort their materials correctly.

5.3.4 Stage 4 – Transfer and Removal

5.3.4.1 Sorting of Materials

The drop-off area is checked regularly to ensure that materials dropped off by customers visiting the CRC have been placed in the appropriate storage receptacle.

CRC operational staff attempt to identify substances in accordance with training. Should any containers need to be moved, CRC operational staff check that containers are intact, not leaking and unlikely to fail. CRC staff utilise appropriate PPE (safety boots, gloves and safety glasses as a minimum) during inspection and manual sorting.

5.3.4.1.1 Transfer of full receptacles

Once receptacles located in the drop-off area are full or at capacity, they are transferred to their designated storage area within the CRC warehouse in order to prevent any receptacles from overflowing or creating hazards. The drop-off area is checked, and cleared, if necessary, on a daily basis by a licenced forklift operator.

The storage area is only accessible for the purpose of transferring materials from drop-off area into the store or for collection and clearance of the material for disposal or recycling by appropriately qualified staff and contractors.

5.3.4.1.2 Removal of materials

Waste streams are collected by variety of partnering recycling organisations and appropriately licenced waste contractors for offtake to their facilities for further reprocessing, resource recovery, recycling and disposal.

The EPA and/or other funding bodies (e.g. product stewardship schemes) have established contracts for the collection and recycling (or disposal) of paint, used oil (other than motor oil), gas cylinders, household batteries, smoke detectors and fluorescent lights, as well as incidental by-catch.

CRC operations are responsible for arranging collection and recycling of lead acid batteries and used motor oil. Materials are removed with sufficient frequency to prevent the accumulation beyond the capacity of the storage area.

Collection contractors review the information provided by the CRC operational staff via the online reporting system (dropoffwaste.com) to schedule collection services. The CRC may also request an on-call collection or additional collections by directly contacting the collection contractor. Collection contractor ensure that quantities of materials stored do not exceed planned limits.

5.3.5 By-Catch procedures

Irrespective of gate policies, CRC staff screening processes and dedicated signage, a small percentage of non-targeted by-catch materials are received on site. Examples of By-catch materials received at the CRC are listed below:

- Acids
- Alkalis
- Arsenic based compounds
- Automotive products other than oil
- Cyanide
- Gas Cylinders over size limit
- General Household Chemicals
- Halogenated solvents
- Heavy metal compounds including metallic mercury
- Hydrocarbons and Fuels
- Inert liquids other than general household chemicals
- Inert solids
- Organic peroxides
- Other - not otherwise categorised
- Oxidising agents
- PCB material
- Pesticides
- Pharmaceuticals
- Photographic chemicals
- Reactives, e.g. Flammable solids
- Toxic Substances - Not otherwise categorised

Multiple dangerous goods safety cabinets (DGSC) are utilised for the various DG classes received by the CRC. DGSCs are stored within a shipping container to secure and isolate them, compliant with the relevant Australian Standards for dangerous goods (see Appendix A).

CRC operational staff ensure that the drop-off area is inspected regularly, and that any containers of by-catch materials are placed in relevant cabinets based on the safety symbol on the container's label.

The status (percentage full) of each of these cabinets must be reported to the EPA using the online reporting system. This is reported on the status screens when a change of status has occurred, for example, when a receptacle of core material is changed over or when a large volume of by-catch is received.

Where more than one cabinet is used for a particular type of by-catch the facility operator fills one cabinet first, then the others in succession, and report the percentage full status considering the capacity of all the cabinets. For example, where two 250L cabinets are used for flammable liquids, if one cabinet is half full, and the other cabinet empty, the percentage full status should be reported as 25%.

DGSC's are emptied by the EPA CRC collection contractor.

5.4 CRC Waste Streams

5.4.1 Waste Streams Classification and Storage

Thornleigh CRC accepts household problem wastes from residents of the Hornsby Shire Council and surrounding LGAs that cannot go into household garbage bins or kerbside collection. See Section 5.2 for a list of accepted materials.

Table 3 details material waste streams, collection contractors, storage, management methods and collection frequencies.

The Waste Classification Guidelines – Part 1: Classifying Waste (NSW EPA, 2014) identifies six waste categories which include:

1. Special Waste;
2. Liquid waste;

3. Hazardous waste;
4. Restricted solid waste;
5. General solid waste (putrescible); and
6. General solid waste (non-putrescible).

Wastes collected at the CRC have been classified according to these waste categories in Table 3. It should be noted that processing of materials is indicative and may change with technological innovation, pricing variability and availability of services.

Table 3: Waste Streams

Waste Type	Description	EPA Waste Classification	Kilograms (Kg) received per annum *	Collected by / Offtake	Collection Frequency	Recycling Destination	Storage	Re-use/Disposal
Problem Waste	• Paint, • Oils • Engine Oils • Fluro-globes and tubes • Aerosols • Smoke Detectors • Fire extinguishers	Liquid waste Hazardous waste	264,877.5	Cleanaway	Weekly or as required, on Mondays. More frequently during Christmas/New Year Holiday period.	-	**Paint**: Separate stillages for oil based or water-based paint storage. **Oils:** Stored in green stillages. Green stillages are 'B12' for motor oil. **Gas cylinders**: Cylinders are sorted by small LPG bottles into a green cage, and tall Gas bottles into a silver cage, both provided by NSW EPA. Stickers are applied to cage doors for identification.	**Processing and reuse:** • **Paints:** Packaging and waste liquid separated, containers are recycled, waste paint is treated. Water is separated from acyclic paint. Bi products are used in a variety of industrial applications. • **Motor oils:** Treated and re-refined to produce base oil for new lubrication products. Processed to become a lubricant or used for waste to energy. • **Fluro globes and tubes:** Recyclers crush the tubes to separate the phosphor powder from the glass. They feed the powder through receiving containers, where it is filtered to capture fugitive mercury emissions. The mercury is then separated by distillation and sold for a range of industrial uses. The metals are also recycled. • **Gas Bottles:** Residual gas captured for reuse. Undamaged bottles are retested, restamped, and entered the hire industry. Damaged bottles are punctured and recycled as scrap metal • **Fire extinguishers:** Fire extinguishers are safely disassembled. The steel shell and valve are recycled. Any residual inert powder within the units is taken to a licenced waste facility for safe disposal. • **Smoke detectors:** Processed and disposed in discrete quantities in accordance with Waste Classification and Radiation guidelines. **End products:** • **Paints:** Fuel • **Motor and other oils:** New lubricating oil and fuel • **Fluro globes and tubes:** New metal items. • **Aerosols**: Used as fuel for Cement Kiln
Soft Plastic	• Consumer plastic bags • Plastic packaging	General solid waste (non-putrescible)	37,187.9	Plasmar Plastic	Weekly or as required	Revesby	Stored in 240L MGBs (Mobile Garbage Bins).	**Processing and reuse:** Shredded, pelletised, and remoulded **End products:** Bollards, fencing etc
Scrap Metal		General solid waste (non-putrescible)	Small quantities	Local metal merchant (currently NSW Copper Recycling)	On demand, around once a month.	Various depending on merchant sales	Stored in 660L MGBs	Metal merchant sells scrap metals on open market,

Waste Type	Description	EPA Waste Classification	Kilograms (Kg) received per annum *	Collected by / Offtake	Collection Frequency	Recycling Destination	Storage	Re-use/Disposal
E-Waste	• Televisions • Desktop computers • Laptops • Tablets • PC monitors • Loose hard drives • Keyboards • Plastic computer speakers • Motherboards • Video and sound cards • Printers (with toners removed) • Scanners • Network devices • Set top boxes • Computer mouses • Other computer parts • Cables • IT accessories • Gaming equipment • Web cameras • Stereo Equipment • DVD and VCR players • CD and DVD discs (discs only)	General solid waste (non-putrescible)	205,685	Tech Collect	On demand. Typically, every 8 or 9 days.	Smithfield	Stored in 10 cages, stacked.	**Processing and reuse:** At least 90% e-waste materials are recovered. Sorted, shredded, and processed to recover components for recycling. Some are recycled in Australia (including glass from TV screens, batteries used in laptops), some offshore. **End products:** Glass from TV screens – used as aggregate in concrete building products. Plastic from computers – used as aggregate in new asphalt.
Cardboard & Paper	• Sheets of clean cardboard; • Excess flattened boxes • Paper • Books	General solid waste (non-putrescible)	257,760	Cleanaway	Collected Monday to Saturday as required. Collected 3 times per week – Monday, Wednesday and Friday.	Visy Smithfield	Stored in 1100L MGBs.	**Processing and reuse:** Paper mill, pulp, screen, dry and reform **End products:** Cardboard, paper materials
Household, Car and Motorcycle Batteries	Lead Acid Batteries	Hazardous waste	43,780	NSW Copper Recycling / Cleanaway	Household batteries collected weekly. Car and Motorcycle Batteries collected weekly.	CMA/Eco-cycle Melbourne	Stored on bunded pallets.	**Processing and reuse:** The lead, acid and plastic are recovered and recycled. Your used batteries get processed back to their foundational elements, including plastic, nickel, steel, and lithium. **End products:** Metal tools, computer parts or brand-new batteries.
Ink Cartridges	• Printer Cartridges • Toner Cartridges	Hazardous waste	2,930.5	Close the Loop	Weekly	Somerton Vic	Black thick plastic bags supplied by them, with sticker that is specific to our site. Order collection and order new bags through their portal	**Processing and reuse:** Separated (QC) – some resold, some sent offshore (mostly South Pacific) **End products:** Outdoor furniture, pens.
Mobile Phones		General solid waste (non-putrescible)	792	Mobile Muster / TES	Weekly or on demand.	Sydney	Stored and secured in small boxes	**Processing and reuse:** 95% materials are recovered. Sorted and disassembled into components which are processed separately.

Waste Type	Description	EPA Waste Classification	Kilograms (Kg) received per annum *	Collected by / Offtake	Collection Frequency	Recycling Destination	Storage	Re-use/Disposal
								End products: Screen glass – road base and construction materials. Aluminium – new al products. Gold, platinum group metals – reused. Batteries – new batteries. Plastic – new pallets.
Clothing, Accessories and Textiles	Only wearable and reusable clothing, accessories and linen are accepted, including: • Hats • Belts • Shoes • Bags • Linen • Towels	General solid waste (non-putrescible)	35,410	King Cotton	Twice weekly or on demand, Tuesdays or Fridays.	Sydney	Stored in 19 x 240L lined purple top bins.	**Processing and reuse:** Sorting, toner, and plastics are separated. Plastic is recovered. **End products:** Reused as clothing and accessories
Polystyrene / Styrofoam	Packaging, containers, insulation, disposable cutlery, and various consumer goods.	General solid waste (non-putrescible)	13,980.6	WastePro 3BL P/L	Weekly	WastePro sell "lums" (heat extruded portions) material to various downstream plastics manufacturers	Collected in 4 large yellow wheeled cages, lined. Materials stored in blue 40 ft shipping container.	**Processing and reuse:** Shredded on site and heat extruded at site and during transport to next collection site within the mobile Foam Muncher processing unit. A full process description is included in Section 5.4.2. **End products:** Shredded Polystyrene is then taken off site where is heat remoulded into moulding and picture frame products.
Hard Plastic		General solid waste (non-putrescible)	45,964.5	Plasmar Plastic	Weekly	Revesby	Mesh Cages	**Processing and reuse:** Shredded, pelletised, and remoulded **End products:** Bollards, fencing
VHS Tapes	• Floppy Disks • Video Tapes • Audio Tapes	General solid waste (non-putrescible)	4,250	Ace Recycling	Weekly	Smithfield	Stored in 660L MGBs.	**Processing and reuse:** Material granulated, metals separated for sale, plastics pelletised and sold to downstream plastics manufacturers.
X-Rays	• X-Ray Film	General solid waste (non-putrescible)	5,130	Eco-cycle	On demand.	Victoria	Stored in 140L MGBs	**Processing and reuse:** Extract silver and recycling plastic.
Blister Pack	Tablet trays such as paracetamol, throat lozenges.	General solid waste (non-putrescible)	12.9	Phamarcycle	On demand.	Silverwater	Stored in 240L MGBs.	**Processing and reuse:** Aluminium and plastic are separated/removed by mechanical processing **End products:** Aluminium is into thermal blocks that store renewable energy. Plastic is turned into building and construction products.
By-Catch	Includes general unaccepted materials and those which appear on the ADG code, including: • Pool Acids • Automotive Products other than oil	Hazardous waste	8,601.5	NSW EPA / Cleanaway / Toxfree	As determined by EPA Collection Contractors	N/A	**By-Catch Chemicals:** All by catch chemicals are stored in a dangerous goods safety cabinets (DGSC) compliant with the relevant Australian Standards for flammable, oxidising, toxic and corrosive materials. These are housed	Removed offsite by suitably licenced contractor for disposal.

Waste Type	Description	EPA Waste Classification	Kilograms (Kg) received per annum *	Collected by / Offtake	Collection Frequency	Recycling Destination	Storage	Re-use/Disposal
	• General Household Chemicals • Peroxides • Pesticides • Pharmaceuticals						within a shipping container away from the CRC warehouse (see Appendix A).	

**Kilogram values are sourced from 2022-2023 financial year Thornleigh CRC data provided to MRA by Thornleigh CRC operational management.*

5.4.2 Non-recyclable material

Non-recyclable general waste will be disposed at a facility that is legally able to accept it. All material to landfill is collected by domestic/commercial rear or side loader. All General Waste, contained in 240/1100L MGBs is collected by Cleanaway and transported to Veolia's Clyde Transfer Bulking Station, where it is the placed in shipping container and transported to Woodlawn Landfill.

5.4.3 Recyclable materials

After being stored by material type, recyclable materials would be collected by waste processors and recyclers as indicated in Table 3, where they would be processed and reused. The waste type and destination of each load is documented, with collection contractors providing monthly data reporting of various waste or recycling types received.

5.4.4 Construction Waste Management

The proposed development is not expected to require any construction works and therefore, no waste material is expected to be generated as a result of construction works.

5.4.5 On-site Waste Processing

The facility accepts materials for storage only. No processing occurs as part of the CRC's operation. Notwithstanding, space is provided to the rear of the site for the collection of Styrofoam by Foam Muncher which is a polystyrene and Styrofoam mobile processing unit. The mobile foam muncher unit is a specialised machine designed to shred and process Styrofoam or polystyrene foam materials, which are typically used in packaging and insulation. These machines are commonly used for recycling purposes to reduce the volume of foam waste and make it more manageable for transportation and subsequent offsite processing. The unit is stored in a self-contained shipping container (see Appendix A).

The process is as follows:

1. **Material Collection:** Styrofoam or polystyrene foam waste material is collected at the CRC from residential customers. This includes items such as packaging materials, cups, trays, and other foam products. The waste materials are initially collected in the drop-off area before being transferred for processing to the Foam Muncher Mobile processing machine on site.
2. **Material Feeding:** The foam waste is loaded into the hopper of the foam muncher unit. Depending on the design, the foam may be manually fed or automatically fed using a conveyor belt system.
3. **Size Reduction:** Inside the machine, sharp cutting blades or shredding mechanisms are designed to break down the foam material into smaller pieces. The foam is fed through these blades, which shred it into small, uniform particles.
4. **Air Assisted Transportation:** Foam muncher units use a combination of cutting blades and an air assist system. The air helps transport the shredded foam particles through the machine, ensuring they don't get clogged or stuck in the cutting area.
5. **Collection and Separation:** After the foam is shredded, it is typically collected in a bin or bag.
6. **Heat Extrusion:** At this stage, the shredded foam undergoes heat extrusion within the Foam Muncher processing unit. This process involves melting the foam particles to reduce their volume significantly, facilitating easier transport and further processing. The extrusion process not only compacts the material but also purifies it by separating impurities, which can be easily removed after cooling and solidification.
7. **Bagging or Packaging:** The heat-extruded foam is packaged in bags or containers for ease of transportation to recycling facilities or for further processing. It is stored within the self-contained shipping container until off-take by Foam Muncher.
8. **Recycling:** Once the heat-extruded foam is collected and prepared, it is sent to recycling facilities where it is reprocessed, melted down, and reformed into new moulding and picture frame products.

The entire process is self-contained within a mobile shipping container to ensure no leakage of foam particles occur to the surrounding environment. Additionally, CRC operational staff regular inspect the area to ensure that the space surrounding the foam Muncher unit is regularly maintained and cleaned with a hand vacuum to

ensure no shredded foam particles are dispersed via wind-blown transportation or collected in the site's stormwater drains during weather events.

6 Site Waste Management (Staff Generated Waste)

6.1.1 Overview and Waste Generation

The following space calculations are based on bin dimensions sourced from the NSW EPA's *Better Practice Guide for resource recovery in residential developments* (2019).

Table 4: Standard bin sizes and dimensions

Bin Capacity (L)	Height (mm)	Depth (mm)	Width (mm)	Footprint (Approx. m^2)
1,100L	1,470	1,245	1,370	1.74
660L	1,250	850	1,370	1.16
240L	1,080	735	580	0.43
120L	940	530	485	0.33

As Thornleigh CRC is currently operating, this WMP predominately relies on waste generation data provided by CRC management. Additionally, the NSW EPA's *Better Practice Guide for Waste Management and Recycling in Commercial and Industrial Facilities* (2012) and NSW EPA's *Better Practice Guide for Resource Recovery in Residential Developments* (2019) have been relied upon in instances where the existing data is not available.

Waste generation for the proposed development is determined based on the known waste generated by the general day-to-day administrative and office activities of the proposed facility. The waste generation summary for the proposed development is outlined in Table 5.

Table 5: Staff waste generation and infrastructure

Waste Stream	Weekly Waste Generation (L)	Bins Required / Collection Frequency	Floorspace Required (m^2)
General Waste	240	1 x 240L / Collected Weekly	0.5
Recycling	240	1 x 240L / Collected Fortnightly	0.5
Garden Waste	240	1 x 240L / Collected Fortnightly	0.5

6.1.2 Waste Storage Requirements

Total bin requirements for the development are as follows:

- General Waste: 1 x 240L MGB.
- Recycling: 1 x 240L MGB.
- Garden Waste: 1 x 240L MGB.

Considering the scale of the proposed development and the number of bins required to manage waste, a weekly collection is proposed as a minimum for servicing the above waste streams. The site operator will be able to regularly observe bin fullness to ensure that bins are maintained and serviced frequently and organise additional collections as needed. This will also prevent overspill into waste management areas and ensure the area is kept tidy.

Temporary Waste Storage

Assorted general waste and recycling bins will be distributed in the work areas and office/management areas for the temporary collection of waste, and consolidated within the waste management areas as required by staff and cleaners.

Bulk Waste

Bulk waste items such as broken furniture and office chairs resulting from the use of the site by staff are able to be accommodated and can be stored in a small area prior to being collected.

Garden Organic Waste

The site produces a small quantity of garden waste from a small garden at located in front of the administrative entrance to the CRC. This waste is collected in a 240L MGB and collected through Council's kerbside collection service.

7 Facility Operation and Maintenance

7.1 Site Waste Collection Method and Loading Areas

Collections of waste include:

- Specialised collection of CRC materials and
- General Solid Waste from operations at the site.

Collection is coordinated between site management and partnering collection contractors as described in Table 3, through a scheduled collection or on demand.

Contractors enter the site from the eastern entrance on Sefton Road and proceed through the boom gate to the rear of the facility for collection of the relevant waste stream.

Key objectives for safe and efficient collection at the site is as follows:

- Collection and loading will occur in designated loading areas within the site;
- Where possible, collection times for offtake materials will occur on Mondays when the facility is closed to the public or off-peak to minimise disturbance to visitors;
- Clear, safe, accessible and convenient space for handling of bins and equipment and loading of collection vehicles is provided; and
- Identifiable areas where pedestrians, visitors and site staff can recognise and avoid any risk associated with moving vehicles, and bin moving and handling.

Table 6 below outlines relevant requirements and specifications related to the use of collection points and loading areas.

Table 6: Collection points and loading areas requirements and specifications

Component	Requirement	Specification
Collection point	Allow safe waste collection and loading operations	- Sufficient clearance for the safe collection and handling of materials and equipment;
Vehicle manoeuvring and loading space	Adequate space for Truck manoeuvring and operation for a contractor collection vehicle	- Adequate clearance and manoeuvring for forward facing entry and exit from the site; - Reversing manoeuvres under staff supervision and traffic control where required; - Adequate loading bay dimensions to not impede lift clearance; - Space for receival and loading of full or empty stillages/material receptacles by forklift where required; - The provision of space clear of vehicle parking spaces.
Operating times	Appropriate collection times to limit noise and traffic disturbance	- Collection times will be arranged on Mondays when the facility is closed, or during off-peak times to ensure minimal disturbance to staff and visitors.

7.2 Waste Management System and Responsibilities

Management engage site cleaning staff to enact and monitor day to day waste management operations from the site office. Cleaners empty general waste, paper, mixed recycling and food organics receptacles daily from

Monday to Friday. Should there be any issues that impact on the operational efficiency, safety and suitability of waste management, the CRC operational staff will inform management.

The site has a dedicated CRC Supervisor (reporting to Waste and Cleansing Coordinator) and two CRC Attendants. Where relief or additional staff resources are required, the facility has an Approved (Relief) Staff Register to draw upon.

The CRC management and operational staff are responsible for:

- Using this waste management plan to inform waste management operations, design and infrastructure;
- Providing educational materials and information to residents and staff on sorting methods for recycled waste, awareness of waste management procedures for minimisation and recovery;
- Making information available to visitors and workers about waste management procedures;
- Appropriate signage in waste service areas and all waste management areas;
- Holding a valid and current contract with licensed collector(s) for waste and recycling collection and disposal outside of the EPA's NSW CRC Collection Contract services;
- Encouraging waste avoidance and achievement of resource recovery targets;
- Providing operational management for delivery of waste objectives;
- Ensuring regular reinforcement of source separation and effective use of waste facilities;
- Organising waste, recycling and bulky pick-ups by elected contractor for the building.
- Organising, maintaining and cleaning waste and service areas;
- Arranging access to site on collection days and to liaise with the collection contractors on any operational issues;
- Cleaning of all bins;
- Monitoring any vermin and pest issues and arranging appropriate controls (traps or fumigating) and maintenance of doors or other points of potential entry;

The CRC management and operational staff are also responsible for ensuring that workplace safety requirements according to WorkCover NSW Occupational Health and Safety are upheld.

7.3 Waste Storage Areas Specifications

CRC waste management areas will provide storage that has adequate capacity to receive and store the maximum likely received quantities of waste streams between collection times. CRC waste management areas are constructed to improve amenity, minimise odour, protect surrounding areas and promote user safety. CRC waste area specifications include:

- Signage for safety and waste identification;
- Safety precautions, staff training and signage for plant;
- Noise attenuation that limits effects to residents from operations and collection vehicle noise;
- Sealed floors constructed of concrete or other approved solid, impervious material that can be cleaned easily;
- Doorway ramp (if not level);
- Adequate supply of water with hose cock as close as practicable;
- Suitable construction including limited entry paths to prevent vermin;
- Ventilation in accordance with Australian Standards;
- Security and lighting.

7.4 Work Health and Safety

The NSW *Work Health and Safety Regulations* (WHS Regulations) contain duties for specific persons conducting a business to manage risks to health and safety associated with using, handling, generating and storing hazardous chemicals at a workplace. CRC duties include the following:

- Correct labelling of containers using warning placards, outer warning placards and displaying of safety signs;
- Maintaining a register of hazardous chemicals and providing notification to the regulator of manifest quantities if required;
- Identifying risk of physical or chemical reaction of hazardous chemicals and ensuring the stability of hazardous chemicals;

- Provision of information, training, instruction and supervision to workers - All CRC workers are required to undertake the NSW EPA/Cleanaway Toxfree training prior to being placed on the Approved Staff Register;
- Provision of spill containment system for hazardous chemicals if necessary;
- Ensuring safety data sheets appropriate to the materials being stored are available;
- Controlling ignition sources and accumulation of flammable and combustible substances; and
- Provision and availability of fire protection, firefighting equipment and emergency and safety equipment preparing an emergency plan if the quantity of a class of hazardous chemical at a workplace exceeds the manifest quantity for that hazardous chemical.

7.5 Signage

Signage that promotes resource recovery, waste minimisation, safety and amenity follows the Australian Standard for safety signs for the occupational environment (Standards Australia, 1994).

Signage will be designed to consider language and non-English speaking backgrounds, vision impairment and accessibility. Illustrative graphics must form a minimum 50% of the area of the signage. Signage is to be prominently posted in the waste room indicating:

- Details regarding acceptable recyclables;
- Recyclables are to be decanted loose (not bagged)
- *No standing* and *danger* warnings apply to the area surrounding the waste storage area;
- Contact details for arranging the disposal of bulky items; and
- The area is to be kept tidy.

7.6 Prevention of Pollution, Litter Reduction and Illegal Dumping

7.6.1 Prevention of litter and pollution

To reduce pollution to water and land via contamination of runoff, dust and hazardous materials, CRC management and site operations staff will also be responsible for ensuring:

- Maintenance of open and common site areas by visual audit;
- Immediate collection of small particles deposited on paved area (from polystyrene processing) utilizing a walk behind vacuum unit;
- All storm water drains covered in mesh to prevent entry of small polystyrene particles;
- Requiring contractors to clean up any spillage that may occur during waste servicing or other work;
- Minimising the escape of litter by ensuring all waste is properly contained within receptacles; and
- Containment of polluted water from the site and diversion from stormwater drains/stormwater system.

7.6.2 Prevention of Illegal Dumping

To minimise illegal dumping at the site, CRC staff will ensure that:

- Public access areas are well maintained and kept clean;
- Waste management areas are secure from vandalism and access to storage areas is unavailable;
- Action is being to prevent illegal dumping, such as site CCTV Surveillance;
- CCTV and signage are at multiple locations on the front fence/entry gates; and
- Incidents of illegal dumping after hours is investigated and, where possible, enforcement action taken.

7.7 Potential Environmental Impacts and Mitigation

Site personnel will be trained in the use of equipment, machinery and waste management protocols required to effectively operate the CRC.

7.7.1 Air Quality and Odour

7.7.1.1 Dust

The proposed development has minimal potential to release particulate emissions in the form of dust as only inert materials will be stored at the site. Materials proposed to be handled at the site are not typical of high dust generation and therefore, physical measures to control dust at the site are not expected to be necessary.

7.7.1.2 Mitigation measures

- Working areas kept clean of dirt and debris;
- Maintain operational equipment and machinery on a regular basis; and
- Incoming/outgoing trucks inspected to avoid tracking dust onto local roads.

7.7.1.3 Odour

All loads would comprise non-putrescible material and therefore the potential for offensive odours is considered to be low. Any loads identified as malodourous would be rejected at the inspection stage.

7.7.1.4 Mitigation measures

- Working areas kept clean of dirt and debris;
- Maintain operational equipment and machinery on a regular basis; and
- Incoming/outgoing trucks inspected to avoid acceptance of potentially odorous materials.

7.7.2 Hazards and Risk

Risk of hazards at the site may occur from the handling and storage of hazardous materials. Risk of adverse impacts is minimised by the design of the facility and appropriate procedures for the handling and storage of materials.

7.7.2.1 Mitigation measures

- All chemicals and hazardous substances are labelled and stored in accordance with GHS compliant containers and in accordance with WHS Regulations and the Code of Practice;
- Transport of hazardous materials is in accordance with the requirements in the The Australian Code for the *Transport of Dangerous Goods by Road & Rail* and tracking requirements of the NEPM and the NSW EPA;
- Dangerous goods are stored in appropriate containers in accordance with the requirements in the The Australian Code for the *Transport of Dangerous Goods by Road & Rail* and tracking requirements of the NEPM and the NSW EPA;
- Operational procedures are clearly defined;
- Liquid storage of dangerous goods utilises bunding;
- Emergency plans and procedures have been adopted to ensure staff and visitors know what to do in an emergency;
- Emergency equipment is supplied such as a safety shower and spill kits;
- Material locations are matched to fire risk, and incompatible materials are stored apart; and
- Frequent removal of materials by collection companies to limit dangerous goods storage.

7.8 Summary

Operations at the site would utilise the NSW EPA *Community Recycling Centres Operations and management handbook* as guidance for risk management, operations, induction and training, record keeping and reporting and establishment of services.

This Waste Management Plan provides guidance for the appropriate management and the destination of waste materials at the site. The measures proposed for receival storage, handling and offtake of materials are appropriate for the type and quantity of waste received.

8 References

National Transport Commission (2020) Australian Code for the Transport of Dangerous Goods by Road & Rail

Hornsby Local Environmental Plan 2013.

Hornsby Development Control Plan 2013.

NSW Work Health and Safety Act

NSW Work Health and Safety Regulations

NSW EPA. (2017) Community Recycling Centres Operations and management handbook – 2nd ed.

NSW EPA. (2012). *Better practice guidelines for waste management and recycling in commercial and industrial facilities*. Retrieved from https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/managewaste/120960-comm-ind.pdf

NSW EPA. (2016). *Recycling signs, posters and symbols*. Retrieved from http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm.

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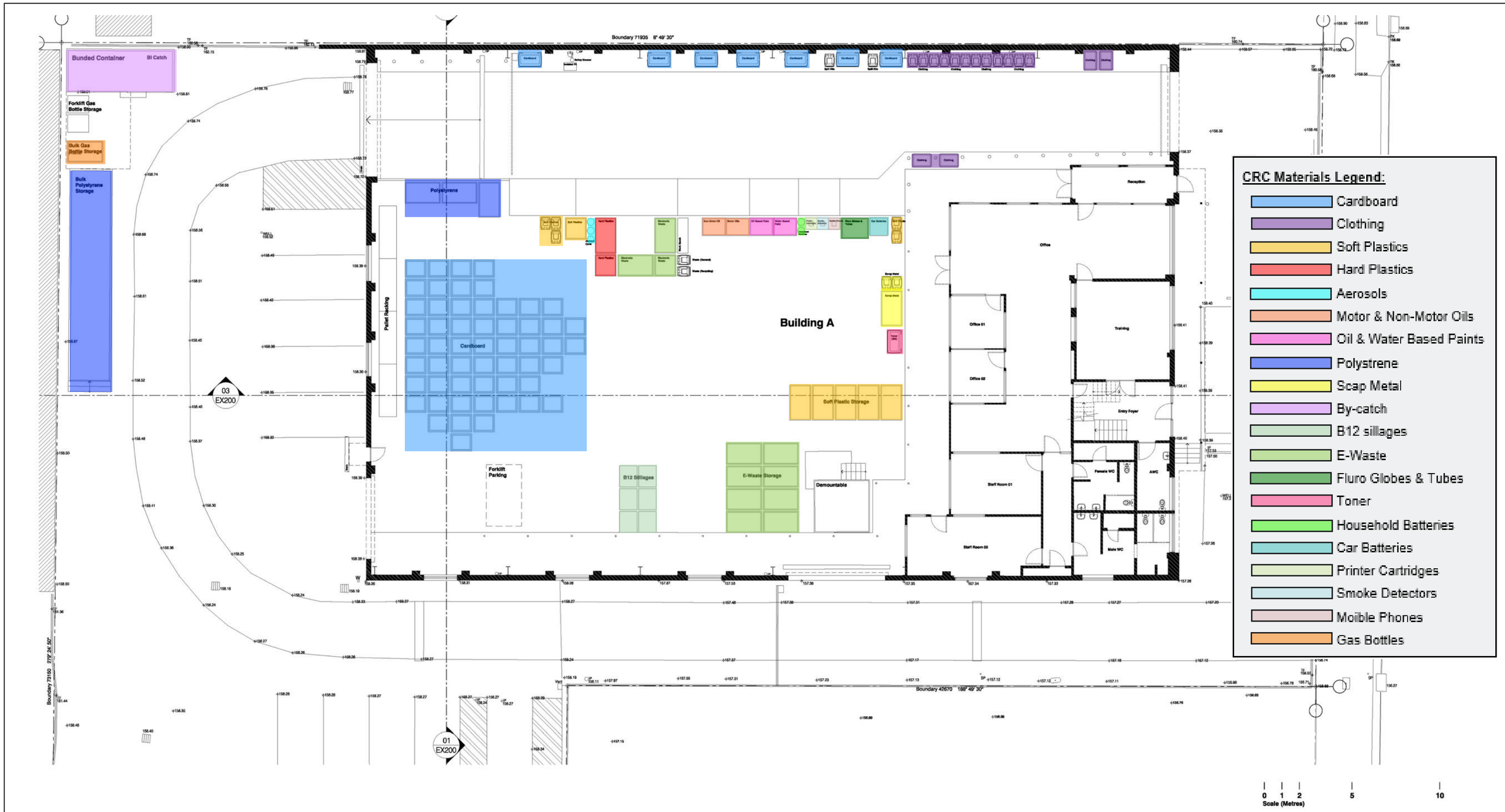
Standards Australia. (1994). *AS 1319: Safety signs for the occupational environment, Homebush, NSW: Standards Australia.*

Standards Australia. (2008). *AS 4123: Mobile waste containers.*

Appendix A Site Plan



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