OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN

ORANGE WASTE PROJECT

ORANGE CITY COUNCIL

ORANGE CITY COUNCIL

February 2021

VOLUME 2: STANDARD OPERATING PROCEDURES, WORK ACTIVITY PROCEDURES & SAFE WORK METHOD STATEMENT











OEMP VOLUME 2 – TOC

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SWMS 002 LONE WORKER

SWMS ERRRC-001 LEACHATE TANK EXCLUSION ZONE

Standard Operating Procedures

Standard Operating Procedure

Annual Calendar of Activities

File No: **SOP 01**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
10/12/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
22/09/2014	Content updated	Version 2
17/08/2015	Draft approved	Version 2
31/1/2020	Added quarterly surface gas monitoring schedule Version updated to correspond to OEMP	Version 5
2/3/2021	Update signature date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this SOP is to provide a checklist and guidance to the Manager Waste Services and Technical Support to effectively complete all tasks (as a requirement of the PA) within the review calendar year, ending 30th September each year.

WORK PROCEDURE

1) **Form 01 – Calendar of Activities** is to be completed by the Manager Waste Services and Technical Support as tasks are completed. The form is formatted such that the required completion time is highlighted yellow, and the Manager Waste Services and Technical Support is to check the appropriate month when the activity is completed.

2) The calendar year ends 31st October each year, and therefore this SOP needs to be updated annually.

RESPONSIBILITIES

It is the responsibility of the Manager Waste Services and Technical Support to ensure that the **Form 01** is correctly completed and updated accordingly.

RECORDS

Records are to be kept using **Form 01 – Calendar of Activities**.

Action	N	D	J	F	M	A	M	J	J	A	S	O	Reference	Sign-off
Ophir Road Resource Recovery Centre Actions														
Annual Survey & Review and update filling plan													Section 3.4	
Weighbridge Calibration Certificate													Section 3.5	
Monthly Waste Reporting													Section 3.5	
Annual Returns													EPL 5956, Section 6.3	
Annual Environmental Monitoring Report													Section 6.4	
Monthly discharge Sample: SW3 or SW4													EPL 5956, Section 3.7	
Groundwater Monitoring													EPL 5956, Section 3.8	
Surface Gas monitoring													EPL 5956, Section 3.9	
Accumulated Gas Monitoring													EPL 5956, Section 3.9	
Sub-surface gas monitoring													No Longer Required	
Truck wash monitoring													Section 8.3	
Euchareena Road Resource Recovery Centre Actions														
Annual Survey & Review and update filling plan													Section 4.4	
Monthly Waste Reporting*													Section 4.5	
Annual Returns*													EPL 20104, Section 4.5	
Annual Environmental Monitoring Report													Section 6.4	
Leachate sampling - routine monitoring suite													EPL 20104, Section 4.7	
Surface water monitoring - routine monitoring suite													EPL 20104, Section 4.8	
Surface water monitoring - Quarterly during discharge													EPL 20104, Section 4.8	
Groundwater Monitoring													EPL 20104, Section 4.9	
Surface Gas monitoring~													Section 4.10, Section 7.7	
Air Quality Monitoring													EPL 20104, Section 4.12	
Noise Monitoring (upon receival of complaints)													EPL 20104, Section 4.14	
Annual Flora and Aboriginal Heritage Monitoring report													Section 7.8, 8.4, 9.4	
Apiculture Risk Management Plan Annual Meeting of Apiculture													Minutes of meeting OWP Apiculture Committee held 29/10/13	
Staff Beekeeping Equipment Refresher Training held every 3 years														
Overall Orange Waste Project Actions														
Independent Environmental Audit^													Section 6.5	
Review and update all OEMP and SOPs													Section 6.5	
Annual Review													Section 6.5	

*After two years of operation of ERRRC, need to check with EPA if VENM needs to be included in calculations for total waste

~Landfill gas monitoring to commence at ERRRC after completion of first two landfill cells.

^within the first year of commencing operations at the ERRRC, and every 5 years thereafter

	Standard Operating Procedure
	Site Inductions
	File No: **SOP 02**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
28/10/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
5/6/2015	Document updated to incorporate Section 5	Version 2
17/08/2015	Draft approved	Version 2
22/08/2016	Draft approved	Version 3
14/02/2018	Draft approved	Version 4
07/12/2018	Draft approved	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this SOP is to ensure that all staff, contractors, and visitors are adequately inducted to undertake their required work or visit either of the two Resource Recovery Centres in a safe and effective manner.

Work under this project comprises routine activities of the Resource Recovery Centre (RRC) at Ophir Road Orange and Euchareena Road, Molong including:

- Orange City Council staff;
- Wangarang Industries (Contractor);
- J R Richards & Sons (Contractor); and
- And other contractors working on the site(s).

The type of work includes, but is not limited to, receival, recycling, recovering of waste materials and burial of waste, monitoring of environmental conditions, revegetating the site and undertaking weed/pest control.

WORK PROCEDURE FOR STAFF AND CONTRACTORS

1) Staff and contractors working within the Orange Waste Project boundaries are required to undergo the staff induction process in accordance with **Operational Policy 084 – Work Health and Safety Management Policy Statement,** and familiarise themselves with the **Pollution Incident Response Management** protocols – **SOP 13** of the OEMP.

2) Either the Manager Waste Services and Technical Support, or the Resource Recovery Centre Supervisor is required to induct new staff or contractors before they commence work on the site.

3) The inducted staff member or contractor is required to take a hard copy of **SOP 13 – Pollution Incident Response Management** for future reference, and any additional hard copy SOPs for their particular role.

4) Please read this information and ensure you ask questions if there is anything you need clarified concerning safety measures at the Resource Recovery Centre.

5) Upon completion of the induction the inducted staff member or contractor is required to sign and complete the details on the 'Receipt of Induction Package' statement on the final page of the Staff and Contractor Induction package. This statement is to be forwarded to the Manager Waste Services and Technical Support.

6) The Orange City Council Form TDSOHS 001 is used for staff and contractors performing works at the site, records are kept as **Form 02.01**.

Areas to be covered in the induction include sections on:

- Fitness on site
- Contact information
- Standard Operating Procedures and Work Activity Procedures
- Visitors
- Safety Equipment
- Weed Management
- Aboriginal Heritage Management
- Emergency Procedures
- Reporting Accidents/ Incidents
- Working Near Construction Plant
- Hazard Identification
- Quality System

FITNESS ON SITE

All employees and contractors must be in a state such that they are not a risk to their own safety or the safety of others. Anyone suspected of being under the influence of drugs or alcohol, or otherwise posing a threat to safety, will not be permitted to enter the work site. It is your responsibility to ensure that you are fit for work and not under the influence of drugs or alcohol. If you are taking any prescription medication that may affect your ability at work, advise your supervisor.

CONTACT INFORMATION

Please contact the following people in regard to any issues relating to disposal, recycling, recovery and sales; general WHS & site safety; environmental and quality assurance.

- Wayne Davis – Manager Waste Services and Technical Support:
  6393 8113 or 0419 483 381

- RRC Supervisor – Peter Ford:
  AH 6365 9225 or AH Mob 0419 630 891

STANDARD OPERATING PROCEDURES AND WORK ACTIVITY PROCEDURES

A total of 27 Standard Operating Procedures (SOPs) and 14 Work Activity Procedures (WAPs) have been developed to provide clear, detailed and standardised guidance for carrying out operational tasks at the ORRRC and ERRRC. These SOPs and WAPs are available in the site offices, and hard copies are available on request.

Staff will be trained in relevant SOPs and WAPs as listed in Volume 2 of the OEMP.

SAFE WORK METHOD STATEMENT

One Safe Work Method Statement (SWMS) is provided for Asbestos Disposal (SWMS 001). This SWMS is available in the site offices, and hard copies are available upon request.

Staff will be trained in SWMS 001 – Asbestos Disposal.

VISITORS

All persons within the property boundary (other than those visiting the recovery shop storage/display areas, scrap steel storage or green waste area) must be either fully inducted in accordance with this package or accompanied by inducted personnel.

The Resource Recovery Centre Supervisor shall induct visitors to the site in accordance with the work procedures outlined below.

SAFETY EQUIPMENT

The supervisor's vehicle carries a general purpose fire extinguisher. The location of other Fire-fighting equipment is shown in the Emergency Evacuation Plan. A water cart is on site to extinguish minor fires. For major fires, reference is made to the Landfill Environmental Management Plan (**Section 3.15**) and Orange City Council Resource Recovery Centre Emergency Procedures Manual for ERRRC (**Section 7.10**) and ORRRC (**Section 7.9**).

The Supervisors vehicle is equipped with a First Aid Kit. Kits are also located in the Recovery Shop. J R Richards vehicles are also required to carry first aid equipment.

Safety signs are placed for your protection. Please ensure to follow them. Where indicated by signs, or where indicated in Safe Work Method Statements (SWMS) and Work Activity Procedures (WAPs), PPE must be used properly by all personnel and maintained in effective condition.

WEED MANAGEMENT

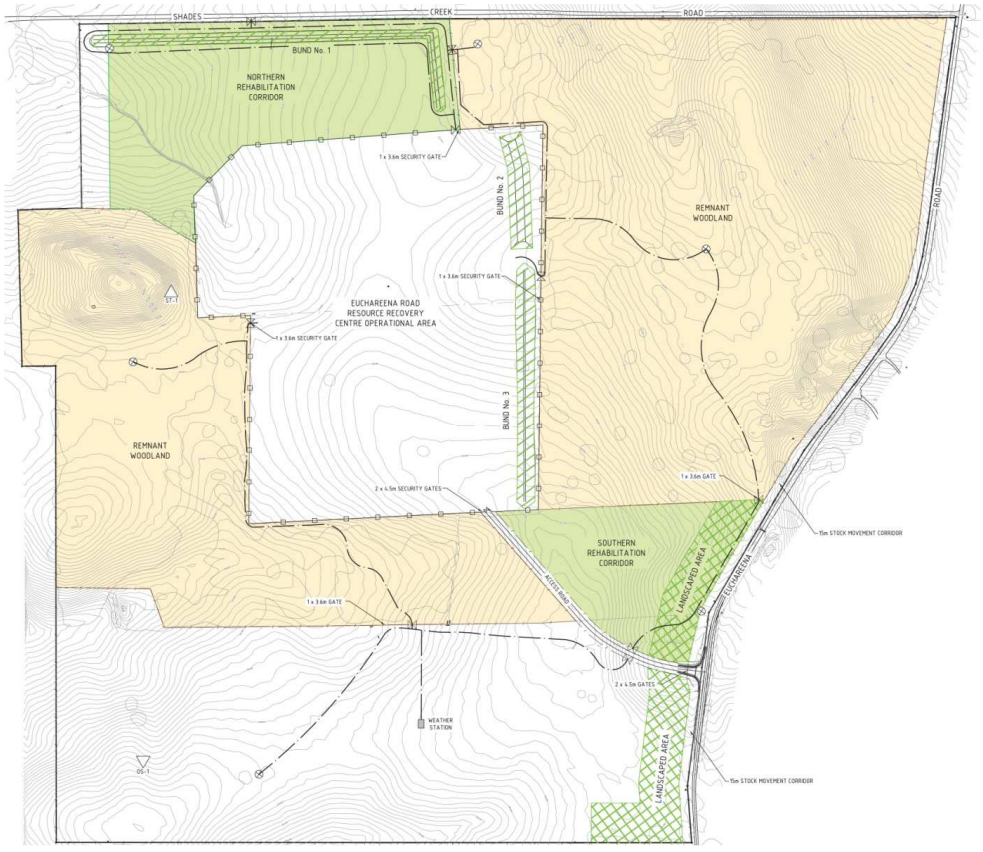
There are a number of requirements that all staff and regular contractors on the site are required to follow in order to prevent the spread of noxious weeds within the Orange Waste Project sites. These include:

- Weed hygiene practices would be adopted to prevent the introduction of weeds. This includes ensuring plant and construction equipment arrive weed free, and vehicles only travel on the existing internal road network;
- Excavated top-soil would be stored separately from subsoil and replaced in a manner that replicates the original soil profile as closely as possible to assist rapid revegetation;
- Site stabilisation would be undertaken progressively during works to ensure that soils are stabilised as soon as practical. This would minimise weed infestation and the potential for sedimentation and erosion;

- Declared noxious weeds would be actively managed consistent with requirements of the *Noxious Weeds Act 1993.* The Act imposes obligations on occupiers of land to control noxious weeds declared for their area.
- Weeds that are declared noxious are those weeds that have the potential to cause harm to the community and individuals, can be controlled by reasonable means and most importantly, have the potential to spread within an area to other areas. A weed is declared noxious because its control will provide a benefit to the community over and above the cost of implementing control programs; and
- OCC staff at the ERRRC are required to follow the procedures outlined in **Section 7.2 - ERRRC Weed Management Plan**, this includes familiarisation with known weeds in the Cabonne Shire Council area, and ongoing visual monitoring to identify the presence or spread of any of these weeds.

ABORIGINAL HERITAGE MANAGEMENT

- All staff to receive training for this SOP must be trained in **Section 5.1.10 – Aboriginal Heritage Management** of the OEMP.
- There are two Aboriginal Heritage sites recorded within the ERRRC site boundary. The location of these sites is recorded on **Figure 1.** The sites include Molong ST1 – a scarred tree, and Molong OS1 – Stone Artefacts. These sites are under no circumstances to be interfered with.



EMERGENCY PROCEDURES

For all emergencies requiring Police, Ambulance or Fire Brigade ring: **000**

If no phones are available, contact Orange City Council Depot Office by two-way radio:

Contact Manager Waste Services and Technical Support on 6393 8113 and WH&S Coordinator on 6393 8022.

In all cases assess the situation and clearly inform the operator of:

- Location of incident – road, distance from nearest town, nearest intersection or other feature;
- Type of incident;
- Number and type of vehicles (if motor vehicle accident);
- Number of people injured and severity of injuries;
- If a spill, type of material and quantity;
- Other details e.g. fire or risk of fire, fallen power lines etc.

This will enable the appropriate emergency services to be dispatched.

While waiting for emergency services:

- Apply first aid if appropriate;
- Control traffic around the incident. Stop traffic if necessary. Be sure to facilitate access for emergency vehicles; and
- Take whatever mitigation measures can be done safely – prevent spread of any spills, extinguish fires etc.

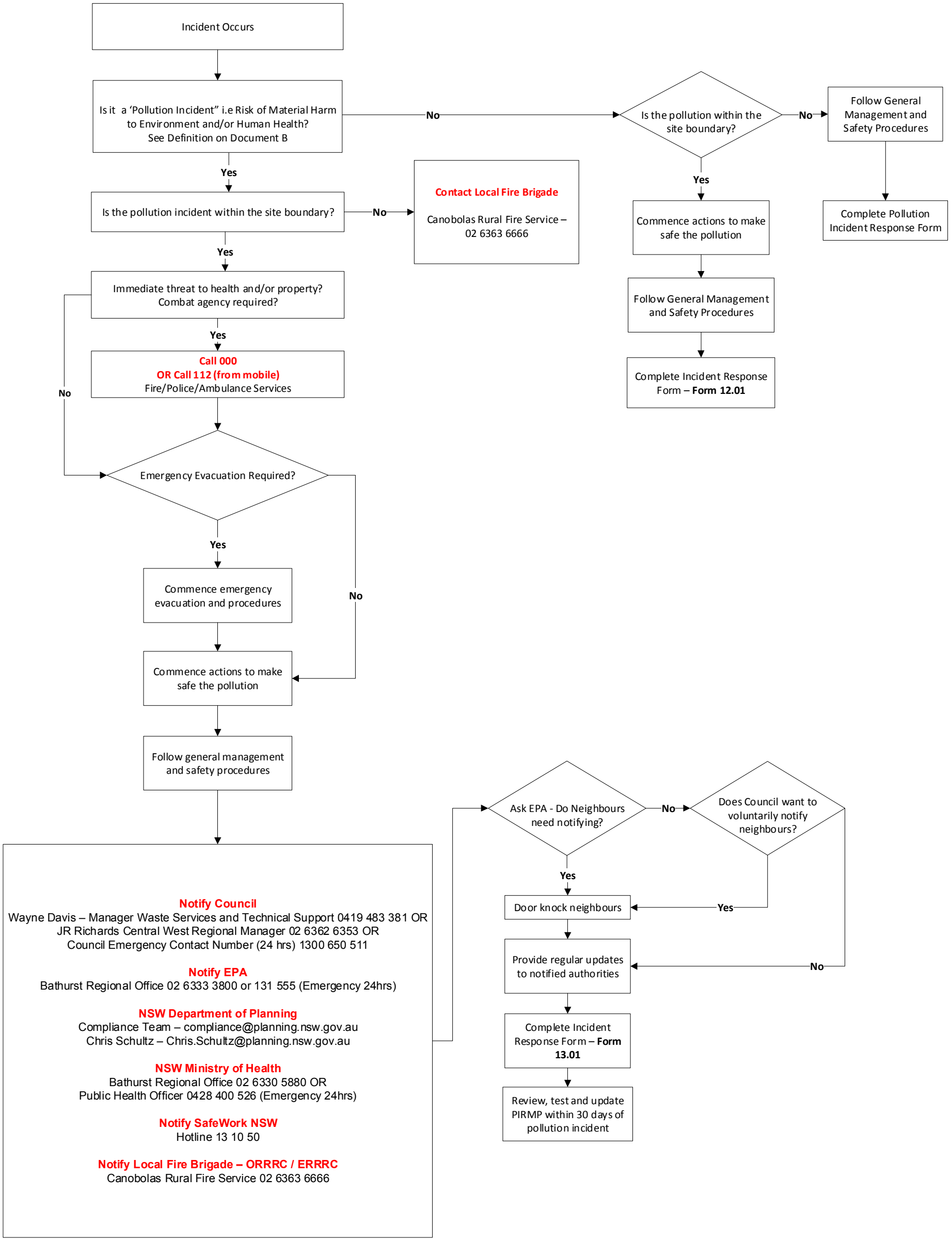
Do not take any actions which will put yourself, other employees or members of the public at greater risk.

When emergency services arrive they will take control of the incident. You will need to:

- Give them details of the incident and any further actions you have taken.
- Assist as directed with traffic control.

In the event of a Pollution Incident please refer to **SOP 13 – Pollution Incident Response Management** and the flowchart on the following page which indicates the reporting procedures in case of an accident or incident. Refer to Site specific Emergency Manual Procedure for further information.

Pollution Incident Decision Flow Chart



REPORTING ACCIDENTS / INCIDENTS

The WHS Team is to be notified of all near misses, incidents and accidents within 24 hours and be involved in all investigations. For Major Incidents Executive Management will be immediately notified by verbal contact. For all other incidents the Supervisor will be notified within 24 hours and also be involved in the investigation.

Details of the incident will be recorded on the Incident / Hazard Notification/ Near Miss Form TSDOHS 004. For incidents which required first aid to be applied, Attachment 1 of TSDOHS 004 is to be completed and forwarded to the WHS Team.

In the event of a notifiable incident WorkCover will be notified by the WHS Team. Should the incident have been a non-disturbance occurrence, the area is to be preserved until a WorkCover Inspector has completed their investigation and an internal investigation has been completed. (Refer WHS Act Part 10 Division 3).

Details of any incidents / accidents will be included in the quarterly performance report. The incident will be discussed at the next Toolbox Meeting.

WORKING NEAR CONSTRUCTION PLANT

- All personnel must wear a safety vest or other approved high visibility garments and safety footwear.
- Hard hats must be worn in designated hard hat zones. Where applicable, these are clearly marked on site. Hard hats are also required near lifting and slewing plant such as cranes, backhoes and excavators.
- Visibility, especially to the rear of some construction plant is quite limited. Be alert to reversing alarms and move away from the path of these vehicles.
- If making or receiving phone calls; or anything else which may distract you from plant and vehicle movement, move well away from the work zone and traffic paths.

HAZARD IDENTIFICATION

A Safe Work Method Statement (SWMS) will be developed for all high risk tasks associated with work undertaken by or for Council utilising the risk management methodology outlined in Section 5.1 of OP 084 Orange City Council Work Health and Safety Management Policy and Procedures.

Input from all personnel to the development and review of SWMS, and indeed for all safety and environmental issues, is encouraged.

The Manager Waste Services and Technical Support or Resource Recovery Centre Supervisor will explain and talk through the relevant WAPs and SWMS, and ensure that all personnel understand, before commencing any new activity.

In order for these controls to be effective, all personnel need to:

- correctly use and maintain all protective and personal protective equipment;
- follow safe work procedures;
- inform the Supervisor of any risks identified for which no controls have been developed.

QUALITY SYSTEM

Orange City Council has documented procedures and specific requirements and staff are required to:

- Follow procedures and specific requirements as per the **SOPs;**
- Complete forms and checklists accurately and promptly;
- Notify RRC Supervisor or Manager Waste Services and Technical Support of anything that may impact on the quality of the work;
- Only use materials specified by the Manager Waste Services and Technical Support;
- Verify that the work conforms with the requirements.

ORANGE CITY COUNCIL – ORANGE WASTE PROJECT

INDUCTION PACKAGE

This page is to be filled out and returned to the RRC Supervisor

RECEIPT OF INDUCTION PACKAGE

By completing the information below, I agree that I have read, or have had read to me, the induction package. I also agree that by signing and returning this page I understand my responsibilities as an employee or contractor on this site.

Print Name: _____

Organisation: _____

Date: _____

Signature: _____

ADDITIONAL TICKETS/LICENCES

Type of licence or ticket	Expiry Date	Sighted
General Construction Induction Card (White)		
CENTROC Induction		
Telescopic Handler		
Motor Vehicle Licence		
Backhoe (if used)		
Skid Steer (if used)		
Excavator (if used)		

STAFF TRAINING REGISTER

Completion and signing of the **Staff Training Register** confirms that:

- The trainees have received the appropriate training and have a full understanding of the training provided (i.e. Induction, OEMP, SOPs, WAPs, SWMS, PIRMP).
- The trainees will commit to incorporating their training into daily work practices.
- The trainer has fully trained the trainees in the appropriate inductions/procedures/plans/documents, and is confident that suitable competency has been demonstrated by the trainees.

Date of Training	Trainee Name	Trainer Name	Details of Training Completed	Trainee Signature	Trainer Signature

WORK PROCEDURE FOR VISITORS

All visitors shall undergo an induction in accordance with ***Operational Policy 084 – Work Health and Safety Management Policy Statement and Procedure.*** Visitors are required to be accompanied by a staff member or contractor who has undergone the staff induction process.

The Resource Recovery Centre Supervisor shall induct the visitor to the site by using the Orange City Council **OCCOHS 016 - Visitor Record of Entry** form and read through the visitor induction checklist. Visitors are required to initial next to each item to acknowledge that they have been provided with the relevant information and sign in and out to the site by using this form. Completed records are to be returned to the Manager of Waste Services and Technical Support at the end of each month to be included in the WHS Monthly Summary.

If you are required to escort a visitor on site, ensure that:

- They are issued with appropriate personal protective equipment (PPE) and know how to use it; and
- They remain with you and well away from potential hazards.

Any difficulties encountered in getting visitors to comply should be reported immediately to the Manager Waste Services and Technical Support or Resource Recovery Centre Supervisor.

RESPONSIBILITIES

It is the responsibility of the Resource Recovery Centre Supervisor to ensure that only inducted personnel are on the site, or visitors are accompanied by staff or contractors who have undergone the induction process.

REFERENCES

Section 7.9 – ORRRC Emergency Procedures Manual

Section 7.10 – ERRRC Emergency Procedures Manual

ORANGE CITY COUNCIL
VISITOR RECORD OF ENTRY
Euchareena Road Resource Recovery Centre

Date	Name	Company	Reason for visit	Responsible OCC Officer	ID No	Time		I have read / been advised of the emergency procedures for this site.	Entry Authorised In/ Out
						In	Out		

EMERGENCY PROCEDURE

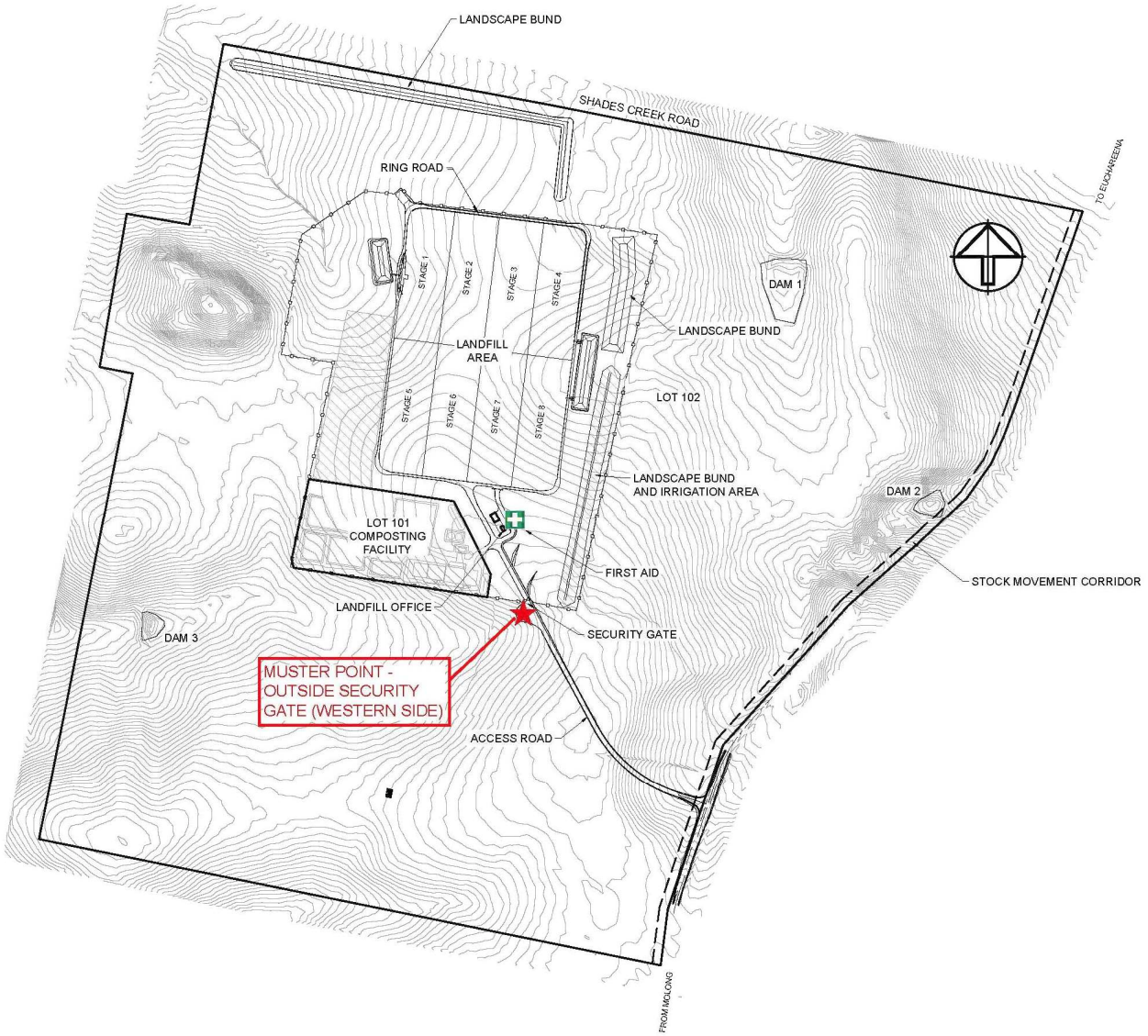
In the event of an evacuation, please proceed to the designated muster point as outlined in the sketch opposite and wait for further instructions.

INCIDENT REPORT

In the event of you having an incident, accident or other concern while you are in Council's facility, please immediately advise the staff member with whom you are dealing/meeting.

Enjoy your visit to Orange City Council

ORANGE
CITY COUNCIL



VISITOR WHS INDUCTION CHECKLIST

GENERAL	COMMENT	INITIAL
Health & Safety within all workplaces is important to us		
Visitors have a responsibility to care for their own and others safety		
Movement around the workplace must be authorised by an OCC representative		
Any identified or perceived hazards or risks must be reported immediately to a staff member		
Faulty or equipment in poor or questionable condition must not be used and should be reported immediately		
You must declare any hazardous equipment, materials or substances which you bring onto the work premises		
PPE must be worn at all times where identified or if instructed to do so		
Blocking or obstructing walkways, or access to emergency exits, switchboards or fire extinguishers is strictly prohibited		
EMERGENCY PROCEDURES		
Emergency Evacuation paths, exits and Evacuation point explained (reminding visitor(s) to look for illuminated green exit signage)		
Explained – in the event of an emergency to make way to an emergency exit and follow your instructions or instructions from a Fire Warden. Explain that a Fire Warden will be wearing a red or yellow hard had and vest identifying them.		
Explain – who will take leadership of the workplace in the event of an emergency		
Explain – all injuries or illness sustained whist in the workplace must be reported to a staff member immediately or as soon as possible		
SMOKING, ALCOHOL & OTHER DRUGS		
Smoking is not permitted within any OCC workplace		
Explain – where designated smoking areas are if applicable		
You must not be under the influence of any alcohol or other illegal drugs whist in any OCC workplace		
If you are taking any prescription medication which may impair your judgement or ability to undertake work/duties or put any other person in the workplace at risk, you must discuss this with a OCC representative prior to commencement of work or activities		
ACCEPTABLE CONDUCT		
OCC workplaces do not tolerate verbal or physical aggression to any staff, clients, patrons or others within the workplace. Serious incidents will be reported to senior management and where necessary, local law enforcement may be notified.		
CONFIDENTIALITY		
You must maintain the confidentiality of any information that you become aware of as a consequence of your visit to this OCC workplace		
ADDITIONAL / OTHER		

ORANGE CITY COUNCIL
VISITOR RECORD OF ENTRY
Ophir Road Resource Recovery Centre

Date	Name	Company	Reason for visit	Responsible OCC Officer	ID No	Time		I have read / been advised of the emergency procedures for this site.	Entry Authorised In/ Out
						In	Out		

EMERGENCY PROCEDURE

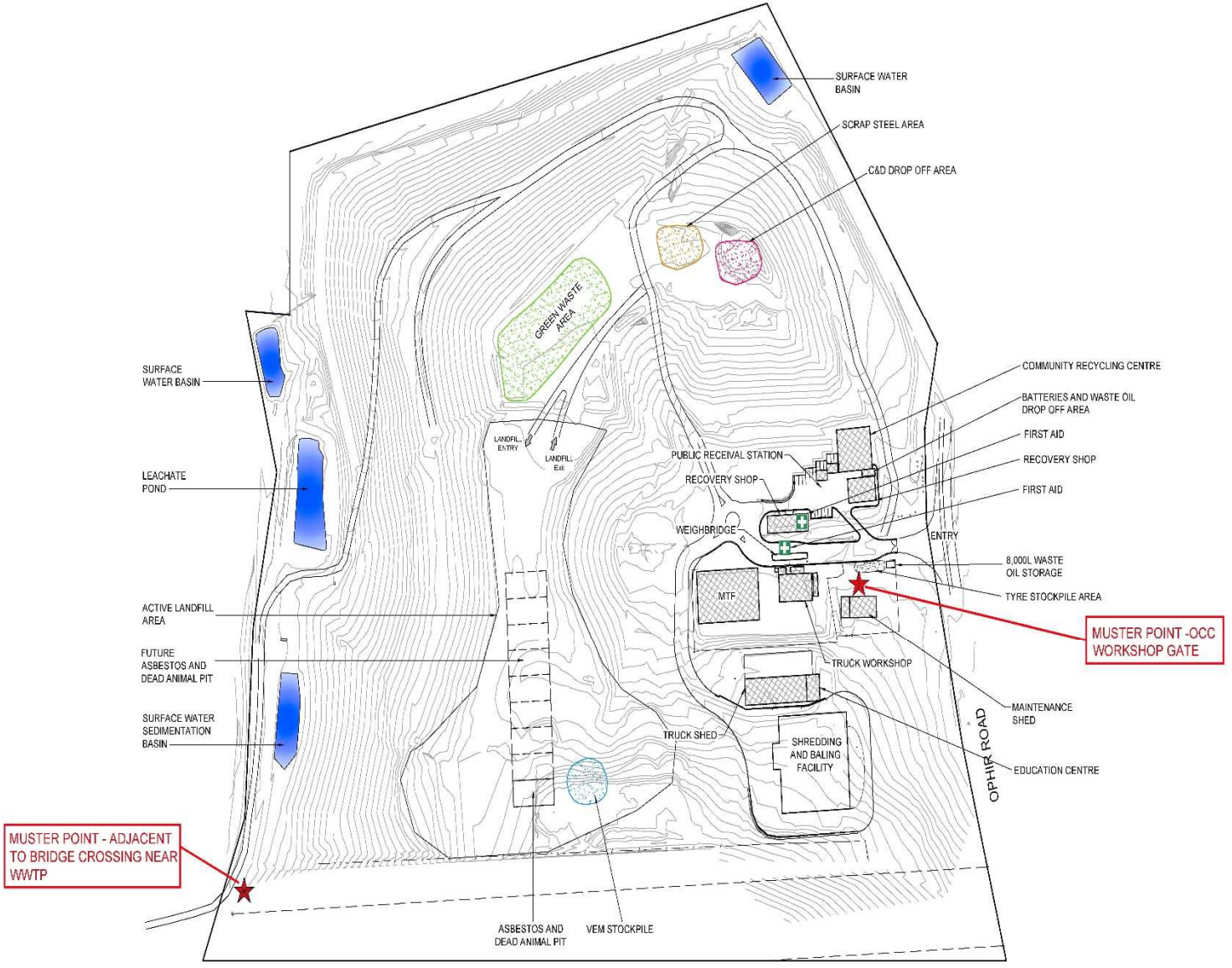
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VISITOR WHS INDUCTION CHECKLIST

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Health & Safety within all workplaces is important to us		
Visitors have a responsibility to care for their own and others safety		
Movement around the workplace must be authorised by an OCC representative		
Any identified or perceived hazards or risks must be reported immediately to a staff member		
Faulty or equipment in poor or questionable condition must not be used and should be reported immediately		
You must declare any hazardous equipment, materials or substances which you bring onto the work premises		
PPE must be worn at all times where identified or if instructed to do so		
Blocking or obstructing walkways, or access to emergency exits, switchboards or fire extinguishers is strictly prohibited		
EMERGENCY PROCEDURES		
Emergency Evacuation paths, exits and Evacuation point explained (reminding visitor(s) to look for illuminated green exit signage)		
Explained – in the event of an emergency to make way to an emergency exit and follow your instructions or instructions from a Fire Warden. Explain that a Fire Warden will be wearing a red or yellow hard had and vest identifying them.		
Explain – who will take leadership of the workplace in the event of an emergency		
Explain – all injuries or illness sustained whist in the workplace must be reported to a staff member immediately or as soon as possible		
SMOKING, ALCOHOL & OTHER DRUGS		
Smoking is not permitted within any OCC workplace		
Explain – where designated smoking areas are if applicable		
You must not be under the influence of any alcohol or other illegal drugs whist in any OCC workplace		
If you are taking any prescription medication which may impair your judgement or ability to undertake work/duties or put any other person in the workplace at risk, you must discuss this with a OCC representative prior to commencement of work or activities		
ACCEPTABLE CONDUCT		
OCC workplaces do not tolerate verbal or physical aggression to any staff, clients, patrons or others within the workplace. Serious incidents will be reported to senior management and where necessary, local law enforcement may be notified.		
CONFIDENTIALITY		
You must maintain the confidentiality of any information that you become aware of as a consequence of your visit to this OCC workplace		
ADDITIONAL / OTHER		

Toolbox Meeting Record

Toolbox meetings will be conducted at the commencement of any site works, daily for a PSMP or at the commencement of any new job, and at least once a week for repetitive maintenance works and Council fixed sites. Toolbox meetings may be carried out by any Council staff member, who has been trained in the toolbox meeting procedure, and has been delegated the responsibility for doing so by their Supervisor or Line Manager. OP 084 section 3.5

Workplace/Job Site

Company

Name of person conducting toolbox meeting

Activity description

Name of Supervisor for Works	**Period Covered by Toolbox Talk** (✓) ☐ today only ☐ if longer than one day (dates) - / / to / /
Time /Date am/pm / /	

Executive Management site visit **Signature:** **Date:** ……/……/20…..

Line Manager site visit **Signature:** **Date:** ……/……/20…..

SWMS/ WAPS/SOPs applicable to work being undertaken

CENTROC Induction Card (Contractors Only)

❑ **Yes - Card Sighted**

❑ **No - Company Name & Contact**

Discussion Items	n/a✓	Issues identified / discussed
All staff inducted to the site		
Work to be undertaken		Discuss work activities covered by this toolbox. Does everyone understand what work is to be undertaken?
Traffic/Pedestrian Access		Approved TCP
Other people & crews on site		Location, activities
Weather hazards & night work		Snow, wind, rain, lighting, heat
Utilities		Dial before you dig
PPE Available/First aid on site		First aider, kits, PPE
Plant condition/log books		Pre start checks, log books
Work at heights		Scaffolding, ladders
Excavation trenches		>1.5m bench, batter and shore
Confined spaces		Entry permit, risk assessment
Electrical works		Lockout / Tag out procedure
Noise/dust/environment in workplace		PPE, water cart
Chemicals/Hazardous materials		Safety Data Sheets, chemical storage, chemical records
Manual handling		Lifting equipment
Material storage/gas cylinders		Procedures for storage
Emergency Procedures		Muster point, equipment, first aid, communication
Amenities		Location
Design Changes		Any changes as a result of a WHS design audit
Environmental Controls		e.g. sediment and erosion controls, trees etc.
Asbestos issues		Could the work area contain asbestos

Health Conditions –Please list any known health conditions in the workplace such as allergies and anaphylaxis reactions:

Fatigue Management –Have you a strategy in place to manage fatigue? Please list any control measures to be implemented to avoid fatigue (includes secondary employment)
Have you notified your supervisor if you are exceeding fatigue management guidelines **Yes** ☐ **No** ☐
Detail on timesheet authorisation received

Additional hazards identified not included in the SWMS- Is fatigue management relevant			
Hazard	**Risk Level**	**Control**	**Residual Risk**

Additional points raised/comments –including any recent incidents relating to this activity, changes or updates to legislation, standards, codes of practice or safety alerts are to be discussed here.

I acknowledge I have been involved in/advised of the above discussions and I am confident the safety issues raised have been addressed to ensure as safe workplace as far as reasonably practicable. **Visitors to the site to indicate with a 'V' next to their name. Card number is for contractors - Centroc induction card number**

Card No	Print Name	Signature	Time

Site Characteristics & Environmental Controls

Sketch the site layout highlighting site works, intended environmental controls (such as sediment and erosion controls) and any significant features (i.e. water course, trees etc.)

Note: Sediment and erosion control used on site – insert reference or symbols from "Divert, Cover, Capture and maintain " "Booklet onto the above sketch e.g.



	Standard Operating Procedure
	ORRRC Entry/Exit Protocols
	File No: **SOP 03**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
28/10/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
23/10/2014	Content updated	Version 2
17/08/2015	Draft approved	Version 2
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this document is to ensure the correct procedures are followed when entering and exiting the Ophir Road Resource Recovery Centre.

WORK PROCEDURE

1) Public access is not permitted outside of the operating hours specified in EPL 5956: **7.00 am to 7.00 pm Monday to Friday** and **7:00 am to 5:00 pm Saturday, Sunday and Public Holidays**. Outside of these hours the main site gate is to be closed.

2) The Resource Recovery Centre Supervisor, or a nominated staff member or contractor is to unlock and open the gate at the site entrance at **8.00 am** each morning to allow public access to the site.

3) The site supervisor, or a nominated staff member or contractor is to monitor the site for any members of public remaining within the site at **5.00 pm** each afternoon. Members of the public are to be asked to exit the premise, and after the last member of the public has left, the site entrance gate is to be closed and locked.

4) OCC staff, and JR Richards contractors working at the site are permitted to enter and exit the site outside of opening hours, however, the site entrance gate is to be closed and locked when not open to the public.

5) Any unusual incidents, for example finding the site entrance gate open outside of opening hours or members of the public on the site outside of opening hours is to be recorded on **Form 15**, detailed in **SOP 15 - ORRRC Daily Checklist**.

RESPONSIBILITIES

It is the responsibility of individual staff and contractors to ensure the correct procedures are followed when entering and exiting the site.

RECORDS

Any unusual incidents are recorded on **Form 15** from **SOP 15 - ORRRC Daily Checklist**.

REFERENCES

SOP 15 – ORRRC Daily Checklist

	Standard Operating Procedure
	ERRRC Entry/Exit Protocols
	File No: **SOP 04**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
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PURPOSE

The purpose of this document is to ensure the correct procedures are followed when entering and exiting the Euchareena Road Resource Recovery Centre.

WORK PROCEDURE

1) Public access is not permitted at the ERRRC. Two gates are passed on the way into the ERRRC: first the gate on Euchareena Road, and second the security gate at the operational site boundary.
2) **Procedures for entering the site**
    a. The Euchareena Road gate is to be opened whenever there is a Resource Recovery Centre Operator on the site. This gate remains open until the Resource Recovery Centre Operator leaves the site.
    b. The electric security gate is to remain closed at all times; the gate will automatically open and close, access is only permitted to those who either:
        i. Are authorised and have undergone the **Staff Training** in **Section 5.1** of the OEMP, and have been issued a 'fob' to open the security gate; or
        ii. Individuals accompanied by an authorised person.
    c. Individuals who are not authorised to access the site with a fob, and are arriving unaccompanied may call the number on the site entrance sign and speak to either the Resource Recovery Centre Supervisor, or the Manager Waste Services and Technical Support.
    d. All staff members and contractors who are authorised to enter the site and have been issued a fob are required to follow the procedures in **SOP 05 – Allocation of keys and Fobs at the ERRRC.**
3) **Procedures for exiting the site**

    The last staff member or contractor leaving the site is required to monitor the site for any other individuals still present. An inspection of the site is made to ensure that:

    a. The site office is to be locked
    b. All machinery is away and sheds are closed
    c. Check all pumps are off
    d. Workshop cage is locked
    e. No dams are overflowing
    f. All gates are closed

RESPONSIBILITIES

It is the responsibility of individual staff and contractors to ensure the correct procedures are followed when entering and exiting the site.

RECORDS

Any unusual incidents are recorded on **Form 16** from **SOP 16 - ERRRC Daily Checklist**.

REFERENCES

Section 5.1 – Staff Training

SOP 05 – Allocation of Keys to the ERRRC

SOP 16 – ERRRC Daily Checklist

	Standard Operating Procedure
	Allocation of Keys and Fobs at the ERRRC
	File No: **SOP 05**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
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PURPOSE

The purpose of this document is to ensure the correct procedures are followed when allocating keys and fobs to the ERRRC, and tracking the whereabouts of each key.

WORK PROCEDURE

1) Authorisation is required from the Manager Waste Services and Technical Support prior to any staff, contractors, or visitors entering the ERRRC site. Resource Recovery Centre Operators and select contractors will be issued a key to unlock the gate off Euchareena Road, and regular staff members and contractors will be issued a 'fob' key to access the internal security gate.

2) Upon issuing a key or 'fob', the **Key and Fob Issue Register – Form 05** is to be completed by the Manager Waste Services and Technical Support.

3) All keys and fobs are held by the Manager Waste Services and Technical support, and issued as required.

RESPONSIBILITIES

It is the responsibility of Manager Waste Services and Technical Support to ensure only personnel who have undergone the appropriate Staff Training are issued keys or fobs to the ERRRC.

The Manager Waste Services and Technical Support is required to complete **Form 05 – Key and Fob Issue Register** and is responsible for controlling who has access to the site and managing the issue of keys and fobs.

RECORDS

Records of who holds, or has held keys to the site are recorded on **Form 05 – Key Issue Register**. This form is kept with the Manager Waste Services and Technical Support.

REFERENCES

Section 5.1 – Staff Training

KEY AND FOB ISSUE REGISTER

Fob Number	Key Number	Date Issued	Name	Organisation	Role	Inducted (Y/N)	Key Returned (signature)	Key Returned (Date)

	Standard Operating Procedure
	Beekeeping Equipment and Honey Containers
	File No: **SOP 06**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
19/11/2013	Document created	draft
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31/1/2020	Apiculture Committee Members Updated Version updated to correspond to OEMP	Version 5
2/3/2021	Apiculture Committee Members Updated Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this document is to describe the procedure to be followed in the identification and management of bee keeping equipment or timber containing evidence of bee activity found within waste streams entering the facility and bee activity within logs prior to processing.

It is noted Beekeeping is also known as "Apiculture".

There are many various items of equipment used in the collection and production of honey which have the potential to enter waste streams. Some of these items can be easily identified while others may take a more detailed examination, refer to **References** for more information on identification.

WORK PROCEDURE

Inspection of waste and removal of beekeeping equipment and used containers

1) All incoming waste loads entering the Ophir Road Site will be inspected at the weighbridge for beekeeping equipment. If any equipment is detected it will be rejected and the person advised to seek alternative means of disposal. A record of all rejections of bee related material is to be taken at the time of rejection as per details requested on record sheet (refer **Form 6.01 – Rejected Apiculture Product Register**). A hand out providing alternative disposal options is to be provided to the driver (refer **Form 6.02 – Disposal of Apiculture Equipment Handout**).

2) Waste being unloaded at the baling facility is to be inspected for beekeeping equipment and containers which had contained honey or bi-products.

3) If beekeeping equipment is identified as waste is being unloaded or sorted in the baling facility, it is to be placed in the designated MGB and taken to the weighbridge for burial onsite ASAP.

4) A record of all bee related material found within the waste stream and actions taken are to be recorded as per details requested on **Form 6.03 – Found Apiculture Product Register**.

5) Used honey containers are to be placed in the designated MGB and taken to the MTF for recycling.

Inspection, segregation and processing of logs greater than 250 mm diameter

1) All logs between 250 mm & 500 mm diameter are to be visually inspected for bee activity prior to processing.

2) Logs over 500 mm diameter are to be split and inspected.

3) All pieces of timber found containing evidence of live or dead bees, larvae and/or colonies must to be placed in a segregated location and processed separately.

4) Infected logs along with any infected processed material must not be transported to the ERRRC it is to be disposed of at the Ophir Road facility or another Council approved site.

Record Keeping and Reporting

1) Records must be kept for:

   a. All feral colonies (alive or dead) found in tree logs, recorded as rejected or found waste on **Form 06.01 - Rejected Apiculture Product Register** or **Form 6.03 – Found Apiculture Product Register** respectively.

   b. Processing, storage and disposal records for all infected material

2) If any bee keeping equipment, containers, or infected timber is found within the waste stream at the ORRRC, this is to be noted on the ORRRC Daily Checklist (refer **SOP 15**) as well as **Form 06.03 – Found Apiculture Product Register**.

3) Each time a beekeeping related product or infected log is identified **Form 06.01 – Rejected Apiculture Product Register** or **Form 6.03 – Found Apiculture Product Register** (as appropriate) is to be sent to the Manager Waste Services and Technical Support.

4) The Manager Waste Services and Technical Support is to notify the members of the OWP Apiculture Committee and additional representatives at DPI when apiculture products are identified within the waste stream. The following people are to be notified:

   Orange Waste Project Apiculture Committee Members:

   - Mr Mal Porter – malp380@hotmail.com
   - Mr Jon Lockwood – jon@goldfieldshoney.com
   - Jane Frances– jane.frances@dpi.nsw.gov.au
   - Mr Byron Taylor – Byron.Taylor@asurequality.com

   Representatives from NSW Department of Primary Industries:

   - Jane Frances– jane.frances@dpi.nsw.gov.au

RESPONSIBILITIES

It is the Resource Recovery Centre Supervisor's and Operator's responsibility to ensure that all incoming waste is screened, and the landfilling operations are monitored to ensure that no beekeeping equipment, containers or infected logs are transported to the ERRRC for disposal.

The Resource Recovery Centre Supervisor is responsible for ensuring the Resource Recovery Centre Operators are adequately trained in this work procedure.

It is also the responsibility of the Resource Recovery Centre Supervisor and Operators to complete the necessary documentation, including:

- **Form 06.01 – Rejected Apiculture Product Register**
- **Form 06.03 – Found Apiculture Product Register**
- **Form 15.01 – ORRRC Daily Checklist**

RECORDS

Records are to be kept using:

- **Form 06.01 – Rejected Apiculture Product Register** for products, containers or infected timber found by RRC operators screening incoming self-haul waste.
- **Form 06.03 – Found Apiculture Product Register** for products, containers or infected timber found by RRC operators found in waste being unloaded at the bailing facility.
- **Form 15.01 – ORRRC Daily Checklist** is to note the incidence of any bee related products rejected from or found at the site.

Each time a beekeeping product or infected log is identified, **Form 06.01** or **Form 06.03** (whichever is appropriate) is to be sent to the Manager Waste Services and Technical Support.

REFERENCES

WAP 010 – Beekeeping Equipment

Used Beekeeping Equipment

Used beekeeping equipment is any fitting, utensil, apparatus or implement that is used, or has been used, for the purposes of, or in connection with beekeeping, or in processing, handling or storing apiary products which include but are not limited to: beeswax, honey, cut comb honey, comb sections, honeydew, bee collected pollen, propolis or royal jelly, supers, frames, hive lids, floorboards, queen excluders, feeders, division boards, honey tins, buckets, drums and IBC's or any other substance considered to be an apiary product including slum gum.

Included in this definition is any cavity which has contained bees. This includes but is not limited to: bird nesting boxes, buckets, tyres and cavities in construction waste (e.g.: in a wall).

Used honey containers are defined as being any receptacle that contains or has contained honey in consumer ready packaging.

It is accepted most used honey containers will be commercial retail packs, although some could be from hobby beekeepers or farmers markets, and may include non-conventional packaging.









Hand operated Extractor (plastic or metal



Motorised Extractor



Extractor Buckets



Beeswax Foundation



Frames



Split Frames



Box Frames



Storage tanks



Boxes



Gloves



Suits



Scraper







Hive Tool



Strainer

Bee Brushes



Excluder Cleaner

Smoker



Steel Excluder (also in plastic)



Honey comb



Pollen



Royal Jelly



Honey Containers



Bees Wax



Slumgum

Beehives in and on timber



Beehive inside timber



Beehive inside timber



Beehive inside timber



External Beehives



External Beehives



External Beehives

OPHIR ROAD RESOURCE RECOVERY CENTRE

REJECTED APICULTURE PRODUCT REGISTER				
Date	**Time**	**Type of Product Rejected, incl. Any markings or registration of apiarist**	**Mode of Transport to ORRRC, incl. Registration No. of vehicle**	**Handout Given (Y/N)**

Certified Correct (signed)

.....

Resource Recovery Centre Supervisor

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at the ORRRC and a copy sent to the Manager Waste Services and Technical Support each time an apiculture product is rejected from the ORRRC.

No dumping of any honey bee equipment, products or remains at Orange City Council Waste Facilities

We apologise for the inconvenience of refusing beekeeping equipment or beekeeping products or waste containing evidence of bee colony remains at waste management facilities in the Orange City Council area.

Why can't beekeeping equipment and or products be disposed at Orange City Council tips?

This is being done to minimise the risk of spreading honey bee diseases, and in particular, American Foulbrood Disease (AFB) to bee colonies, feral or managed, in the flight range of these facilities.

What is American Foulbrood Disease (AFB) and why is it a concern?

AFB is caused by a spore forming bacteria that kills the young developing honey bees. The spores are consumed by the bee larvae via their food (honey and pollen). When many spores are fed to very young bee larva they become infected resulting in their death. With each larvae dying from AFB, a huge number of spores are being produced resulting in high spore levels and therefore high infection rates of the developing larvae within the hive. This results in the death of the hive as fewer young bees develop through to adults. A hive that has died out because of AFB can then be robbed by bees from other hives spreading the disease to other colonies.

Honey bee equipment and products can be infected with AFB spores which if honey bees have access to can potentially spread the disease to other colonies.

AFB is an expensive burden on the apiary industry through lost production, equipment and time in monitoring and eradicating the disease. The only legal way to deal with AFB in NSW is to burn, bury or irradiate infected hive material.

How can I get rid of my beekeeping equipment/products?

The type of beekeeping equipment/products will impact the disposal method chosen.

Burning

Beekeeping equipment and products, logs with cavities containing bee combs etc can be burnt in a pit to prevent any honey and wax flowing away and then cover with a minimum of 30 cm of soil to prevent any bee access to the material.

If burning **all fire restrictions must be followed** and permits obtained if required.

Deep burial

Deep burial is another option available for disposing of equipment.

Recycling

Metal beekeeping equipment can be recycled. These items should be cleaned and free of any honey or wax prior to delivery to scrap metal recyclers including galvanised drums, honey tins, queen excluders etc., to minimise the possible spread of AFB.

Other Waste Management facilities

Waste management facilities in other council areas may still accept bee equipment. You should ring and check prior to delivery. The risk of possible disease spread still needs to be considered. You should inform the tip of the nature of the goods and ask if it can be buried immediately on delivery.

Irradiation as an alternative

Irradiation is available if the equipment is still useable but you think there is an AFB risk involved. Equipment can be irradiated by Steritech (see web page http://www.steritech.com.au/) and then used with confidence that AFB has been killed.

Further Information

For further information, please contact:

Dr Doug Somerville
Technical Specialist Honeybees
NSW Department of Primary Industries
Email: doug.somerville@dpi.nsw.gov.au

Ph: 02 4828 6619
Mob: 0427 311 410

OPHIR ROAD RESOURCE RECOVERY CENTRE

FOUND APICULTURE PRODUCT REGISTER				
Date	**Time**	**Type of Product Found incl. Any markings or apiarist registration number**	**Mode of transport and Registration No. (if known)**	**Action Taken**

Certified Correct (signed)

.....

Resource Recovery Centre Supervisor

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at the ORRRC and a copy sent to the Manager Waste Services and Technical Support each time an apiculture product is found in the waste stream at the ORRRC.

	Standard Operating Procedure
	Weighbridge Procedures
	File No: **SOP 07**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
1/11/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
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14/02/2018	Draft approved	Version 4
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this document is to provide Resource Recovery Centre employees with the correct work procedures to ensure the weighbridge procedures are correctly and efficiently undertaken.

WORK PROCEDURE

Incoming Waste

1) Every vehicle entering into the ORRRC is recorded by the weighbridge operators. Records are recorded electronically and will include:
   a) Date/Time
   b) Vehicle Type (including registration number for heavy vehicles)
   c) Waste Type
   d) Waste Source, and
   e) Weight (or vehicle type where applicable)
2) Asbestos and tyre waste must be recorded by waste transporters using the WasteLocate system at the ORRRC weighbridge by scanning the QR2id plate (refer – **SOP 26 – WasteLocate Tracking**) when waste amounts are:
   a) Asbestos waste that is more than 100 kilograms or more than 10 square metres of asbestos sheeting.
   b) Tyre waste that is greater than 200 kilograms or more than 20 waste tyres (whichever weighs less).
3) The waste load of light vehicles and single axel trailers is calculated using a multiplication factor to estimate the weight.
4) The waste load of heavy vehicles and double axel trailers is calculated using the calibrated weighbridge.
5) The fees and charges applicable to incoming self-haul loads is listed in the OCC 'Delivery Plan', which is located in the site office.
6) The following practices apply to screening of incoming waste:
   a) Public access is only permitted during opening hours
   b) Drivers are asked to describe the type of waste to be deposited on entry to the facility
   c) Inspections of waste loads are to be made as required
7) Screen incoming waste, looking specifically for:
   a) bee keeping equipment, containers, infected timber products
   b) non-approved (excluded wastes), refer to **Section 3.5.1.6** of the OEMP for a complete list of excluded wastes.

8) If bee related products, or excluded wastes are identified, the vehicle is to be refused entry to the site.

9) The correct tipping fee is calculated and requested (for self-haul drivers).

10) Receipt given to all vehicles.

11) Direct traffic to appropriate drop-off zone (refer to **Section 3.5.1.5** of the OEMP for further details).

12) Wastes are monitored and inspected as they are being discharged to ensure excluded non-approved wastes are not being disposed. Drivers are to be asked to uncover their load if required.

Internal Waste Movements

1) Internal waste movements will be recorded over the weighbridge in accordance with **Table 7.1**. Electronic records will include:

   a) Date/time;

   b) Waste type;

   c) Waste source; and

   d) Weight.

Table 7.1 – Internal waste movements

Type	Waste Movement		How measured
	From	To	
Mixed self-haul waste (municipal, C&I and C&D)	Receival station bins	Baling shed	Weighed
Select non-recoverable C&D Waste	Baler/shredding shed	ERRRC	Weighed
Recoverable C&D waste	Baling/shredding shed	Storage areas	Weighed
Garden organics	Green drop off	ERRRC Compost Facility	Weighed
Recycling	Recovered from mixed waste in baling shed	Recovered Material	Weighed
Recycling	Recovered from organics in shredding shed	Recovered Material	Weighed
Mixed waste	Waste from MTF	Baling shed	Weighed
Mixed waste	Contamination from organics	Baling shed	Weighed

Source: Waste and Resource Recovery Monitoring Program

Waste Movements – Leaving ORRRC

1) Every vehicle leaving the ORRRC with any waste will be recorded by the weighbridge operators. Electronic records will include:

   - Date/Time
   - Vehicle type
   - Waste type

- Waste source
- Weight (or vehicle type where applicable)

2) Asbestos and tyre waste must be recorded by waste transporters using the WasteLocate system at the ORRRC weighbridge by scanning the QR2id plate (refer – **SOP 26 – WasteLocate Tracking**) when waste amounts are:

   a) Asbestos waste that is more than 100 kilograms or more than 10 square metres of asbestos sheeting.

   b) Tyre waste that is greater than 200 kilograms or more than 20 waste tyres (whichever weighs less).

Reporting Excluded Waste

1) If during the screening, waste deposition, waste spreading and compacting, or during sorting of waste in the baling shed or during the baling, any excluded waste(s) is identified, the Resource Recovery Centre Operators are required to immediately notify the Resource Recovery Centre Supervisor.

2) Any identified excluded waste is to be transported to the lockup household waste storage facility.

3) The incident is to be recorded on the Daily Checklist (refer to **SOP 15 – ORRRC Daily Checklist** with reference to an Incident Report Number, and an Incident Report is to be prepared as per **SOP 13 – Pollution Incident Response Management**. Including details of the type of waste, the source of the waste and the vehicle and driver identification (if applicable).

RESPONSIBILITIES

It is the Resource Recovery Centre Supervisor's responsibility to ensure that the Recovery Centre Operators are adequately trained in this work procedure, including operating the weighbridge computer and identifying excluded wastes.

It is the responsibility of the Resource Recovery Centre Operators to undertake the correct weighbridge procedures.

RECORDS

Weighbridge records are recorded electronically on the computer within the weighbridge gatehouse. These records are kept for a minimum of four years.

The identification of excluded wastes is to be recorded as per **SOP 13 – Pollution Incident Response Management,** and the incident number recorded on the **ORRRC Daily Checklist** (refer **SOP 15**).

REFERENCES

Section 3.5 – Waste Receival

Section 9.3 – Waste and Resource Recovery Monitoring Program

SOP 13 – Pollution Incident Response Management

SOP 15 – ORRRC Daily Checklist

SOP 23 – ORRRC Traffic Management (including Traffic Management Plan)

SOP 26 – WasteLocate Tracking

WAP 011 – Weighbridge Procedures

	Standard Operating Procedure
	Handling and Disposal of Asbestos
	File No: **SOP 08**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

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PURPOSE

The purpose of this document is to describe the procedure to be followed when asbestos is presented at the weighbridge to Resource Recovery Centre Operators. It is important for the health and safety of Resource Recovery Centre Staff and the general public utilising the facility to ensure asbestos waste is appropriately handled and disposed of, with minimal exposure to the open air.

WORK PROCEDURE

1) All incoming waste is to be screened at the weighbridge, following the procedures identified in **SOP 07 – Weighbridge Procedures**; drivers are obliged to notify weighbridge operators if their load contains asbestos.

2) All transporters of incoming loads of asbestos waste are to be instructed to scan the QR2id plate at the ORRRC weighbridge. If the transporter fails to scan the plate, vehicle registration details must be recorded by the operator on **Form 26.01** (refer – **SOP 26 – WasteLocate Tracking**).

3) If the load is identified as containing asbestos, the waste may only be received (as per the provisions of the Protection of the Environment Operations (Waste) Regulation 2014) if:

    a. Bonded asbestos material is securely packaged (e.g. with heavy duty plastic);

    b. Friable asbestos is in a sealed container; and/or

    c. Asbestos contaminated soils are wetted down

4) If the load does not comply with the conditions noted in Work Procedure 3 above, the waste is to be rejected by weighbridge operators, and drivers issued with the EPA handout ***Safely disposing of asbestos waste from your home***.

5) The following details are to be recorded by weighbridge operators for rejected loads on **Form 08 – Driver/Transport company details for rejected asbestos waste loads**:

    a. Name and contact details of the driver/transport company;

    b. Origin of the asbestos or asbestos containing material;

    c. Amount and type of asbestos or asbestos containing material;

    d. Reasons why the asbestos waste was not properly packaged, disclosed or transported; and

    e. Development consent details (if applicable)

    The Resource Recovery Centre Supervisor is required to follow up with the driver/transport company should the asbestos waste not be returned to the ORRRC for disposal. If evidence of appropriate disposal of the waste cannot be provided, the Resource Recovery Centre supervisor is required to notify the Manager Waste Services and Technical Support who will report the driver/transport company to the EPA.

6) When a driver who has previously been rejected returns with the asbestos waste appropriately packaged, **Form 08** is to check off the date the driver returned.

7) Asbestos waste is to be handled in a manner to minimise the chance of damage to the wrapping, breakage and/or dust generation, and immediately placed in the active landfill cell and covered with a minimum of 300 mm of VEM.

8) Weighbridge operators are required to issue a receipt to drivers for asbestos waste received. The receipt will note the time, date, location of disposal, weight of asbestos containing material disposed, method of disposal, and a receipt number.

RESPONSIBILITIES

It is the Resource Recovery Centre Supervisor's responsibility to ensure that all incoming waste is screened, and the landfilling operations are monitored to ensure that asbestos waste is appropriately handled.

If asbestos waste is not adequately packaged and the load is consequently rejected at the weighbridge, the weighbridge operators are required to complete **Form 08 – Driver/Transport Company details for rejected asbestos waste loads.**

It is the Resource Recovery Centre Supervisors responsibility to follow up all entries listed on **Form 08** to ensure that waste is adequately packaged and returned to the ORRRC for disposal. If evidence of appropriate disposal of the waste is not provided, the Manager Waste Services and Technical Support is to be notified, who is then responsible for notifying the EPA.

The Resource Recovery Centre Supervisor is responsible for ensuring that all Resource Recovery Centre Operators undertaking weighbridge procedures and landfilling of asbestos waste are adequately trained in this work procedure.

RECORDS

Form 08 – Driver/Transport Company details for rejected asbestos waste loads is to be completed each time a load of asbestos is rejected at the weighbridge. When the driver returns with the waste appropriately packaged, the form is to reflect the date the waste is received.

REFERENCES

Section 3.6 – Waste Disposal

SOP 07 – Weighbridge Procedures

SOP 26 – WasteLocate Tracking

SWMS 001 – Asbestos Disposal

Orange Waste Project Asbestos Management Plan

WorkCover NSW *Fact Sheet – Bonded Asbestos* available from:

www.workcover.nsw.gov.au

NSW EPA *Safely disposing of asbestos from your home* available from:
www.epa.nsw.gov.au/waste/asbestos/index

Note: 'Bonded asbestos material' means any material (other than friable asbestos material) that contains asbestos. 'Friable asbestos material' means any material that contains asbestos and is in the form of a powder or can be crumbled, pulverised or reduced to powder by hand pressure when dry.

DRIVER DETAILS FOR REJECTED ASBESTOS WASTE								
Name (1)	**Company (1)**	**Address (1)**	**Phone (1)**	**Origin of Asbestos**	**Amount of Asbestos**	**Reason for Rejection**	**Development Consent Details**	**Waste returned for disposal (date)**

(1) If no contact details are provided please record vehicle registration, vehicle type, make and model (if possible) and vehicle colour

Certified Correct (signed)

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Resource Recovery Centre Supervisor

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at the ORRRC and a copy sent to the Manager Waste Services and Technical Support when the form is full, and/or when driver has not returned waste for disposal and evidence of appropriate disposal of the waste cannot be provided within 28 days.

	Standard Operating Procedure
	Rejected Bales from ERRRC
	File No: **SOP 09**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
4/11/2013	Document created	draft
31/03/2014	Draft approved	Version 1
17/08/2015	Draft approved	Version 2
22/09/2016	Draft approved	Version 3
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this document is to describe the procedure to be followed when a compromised bale is identified during screening of incoming waste at the ERRRC. It is sometimes necessary to return compromised bales to the ORRRC for re-baling for a number of reasons, including: limiting the possibility of beekeeping equipment or containers potentially exposed, and limiting the incidence of odour, litter, and vermin at the site.

WORK PROCEDURE

1) All incoming waste is to be screened when unloaded at the tipping face by the Resource Recovery Centre Operator.

2) Screening involves visually assessing the integrity of the baled waste, and identifying any tears or holes in the wrapping.

3) Broken bales may be placed in landfill but must be covered on the same day they are land applied.

4) Broken bales must be placed in the landfill with the tear/hole firmly abutted against a non-compromised bale.

5) If required, the tear/hole can be re-wrapped using the onsite wrapper.

6) If the tear or hole in the bale is large enough to render the integrity of the bale to be compromised, and the waste is not adequately contained within the bale (such that the bale is not sealed from bee access) it is to be returned to the ORRRC for re-baling.

7) If the compromised bale is returned to the ORRRC for re-baling, this is to be recorded on **Form 09 – Compromised Bales Returned to ORRRC** and noted on **Form 16 – ERRRC Daily Checklist**.

8) A copy of **Form 09 – Compromised Bales Returned to ORRRC** is to be sent to the Manger Waste Services and Technical Support when the form is full.

RESPONSIBILITIES

It is the Resource Recovery Centre Supervisor's responsibility to ensure that all incoming waste is screened, and the landfilling operations are monitored to ensure that no compromised bales are landfilled.

The Resource Recovery Centre Supervisor is responsible for ensuring that all Resource Recovery Centre Operators undertaking the unloading of the bales into the landfill are adequately trained in this work procedure.

It is also the responsibility of the Resource Recovery Centre Supervisor to complete the necessary documentation, including:

- **Form 09 – Compromised Bales Returned To ORRRC**
- **Form 16 – ERRRC Daily Checklist** (if a bale is returned to the ORRRC).

RECORDS

If a compromised bale is returned to the ORRRC for re-baling this is to be recorded on:

- **Form 09 – Compromised Bales Returned To ORRRC**
- **Form 16 – ERRRC Daily Checklist**

REFERENCES

SOP 16 – ERRRC Daily Checklist

EUCHAREENA ROAD RESOURCE RECOVERY CENTRE

COMPROMISED BALES RETURNED TO ORRRC						
Date	Time	Status of bale returned				Number Returned
		Small tear	Large tear	Structural	Other	

Certified Correct (signed)

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Resource Recovery Centre Supervisor

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at the ERRRC and a copy sent to the Manager Waste Services and Technical Support when the form is full.

	Standard Operating Procedure
	Operation of ERRRC Leachate Pumps
	File No: **SOP 10**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
4/11/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
14/04/2015	Content updated	Version 2
17/08/2015	Draft approved	Version 2
31/1/2020	Included reference to Exclusion Zone SWMS Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this document is to provide Resource Recovery Centre employees with the correct work procedures to ensure that the two pumps on site to manage the leachate are safely and efficiently utilised.

WORK PROCEDURE

1) Leachate is to be extracted and disposed of from the landfill on a five day basis (or as required.

2) A minimum of 24 hours notice is to be provided prior to the delivery of leachate to the Orange Waste Water Treatment Plant. Notification is to be phoned to Council's Waste Water Treatment Plant Operators on 6393 8871 in advance. If the Waste Water Treatment Plant cannot be contacted, contact Council's Water Management Officer, Nicole Reid on 0400 415 873.

3) The maximum daily discharge into the Orange Waste Water Treatment Plant is 20,000 litres, and delivery is to be scheduled between the hours of 7 am to 4 pm, Monday to Friday only.

   In the event of a major rainfall event and an accumulation of leachate occurs, provision can be made to receive additional volumes of leachate at the Orange Waste Water Treatment Plant. This leachate will be discharged to the sludge lagoon. To arrange for additional volumes to be received at the Orange Waste Water Treatment Plant contact Council's Waste Water Treatment Plant Operators on 6393 8871 in advance. If the Waste Water Treatment Plant cannot be contacted, contact Council's Water Management Officer, Nicole Reid on 0400 415 873.

4) Each day the Resource Recovery Centre Site Supervisor or Operators are to inspect the leachate extraction area, with particular detail given to:

   a. The presence of any ponding within the bunded tanker loading area:

      i. If there is stormwater ponding in the tanker loading area, check the valve allowing stormwater to leave the area is open (on the opposite side of the tanker loading area to the tank). This valve should be open at all times except when leachate is being extracted.

      ii. If the valve is open, and water is still ponding this indicates the valve is blocked and corrective actions are to be arranged.

   b. The leachate storage tank must be inspected daily to check the level of leachate, there is a float level on the side of the tank to indicate the level.

   c. Listen for any alarms sounding from the control panel. The audible alarm is for high level of the sump in the tanker loading area. This alarm advisors the operator that liquid has entered the sump, probably from a leak, rain or burst hose. This must be investigated immediately. If it is rainwater, the stormwater

valve can be opened to release water. If it is leachate, this must be pumped back into the landfill cell and any residual leachate to be cleaned up. Leachate cannot be released to the environment.

d. Operations in proximity to the Leachate Holding Tank Exclusion Zone are to be conducted in accordance with Safe Work Method Statement (SWMS) ERRRC-001, *Working within the leachate holding tank exclusion zone*.

5) **Procedure for extracting leachate into above ground tank**

a. Turn switch to 'auto' position (the switch should already be in the 'auto position).

b. Press 'Stop' button

c. Press 'Start' button – the green light will illuminate

d. Check the hose leading up from the sump to confirm leachate is moving through the hose. This can be done by listening for flow in the hose or the tank filling. Check hose for leaks or damage.

e. The level gauge on the side of the tank will indicate level. The pump will automatically shut off when the tank reaches capacity. Full and empty labels are indicated on the side of the tank.

f. Leachate is now ready to be pumped into the transport tanker

6) **Procedure for extracting leachate for transport – Pumping leachate into the tanker**

a. Tanker driver is to notify the Resource Recovery Centre Site Supervisor or Operators of their arrival to site. Tanker driver is to sign into the site visitor book at the site office.

b. Turn stormwater valve off to eliminate the possibility of any spilt leachate escaping the tanker loading bund area.

c. Connect tanker hose to the tanker parked up in the tanker loading area.

d. Ensure the air bleed valve within the tank bund area is closed

e. Turn discharge valve on (valve to the left of the control panel) at the base of the tank connected to the extraction hose

f. Record the reading on the flow meter prior to commencing extraction of leachate; this number is to be reported to the Resource Recovery Centre Supervisor or Operator before leaving the site

g. On the control panel:

i. Turn switch to the 'auto' position

ii. Press 'Stop'

iii. Press 'Start' – the green light will illuminate to indicate the pump is active

iv. The tanker pump will run for 15 minutes before automatically shutting down, after each 15 minute interval the pump will need to be restarted by following the 'Stop' and 'Start' button procedure

v. When the tanker reaches capacity, press 'Stop'.

h. Close the discharge valve from the above ground storage tank.

i. Open the air bleed valve and use the trucks vacuum pump to remove any residual leachate from the extraction hose.

j. Close air bleed valve.

k. The hose is to be returned to the hose holding frame within the tank bund area.

l. Tanker operator is to record the reading on the flow meter after extracting leachate and report this figure to the Resource Recovery Centre Supervisor or Operator before leaving the site.

m. The tanker operator is then required to check the tanker loading area for any leachate spills. Any spills are to be immediately reported to the RRC Supervisor or Operators so that the spill can be contained and cleaned up.

n. Tanker driver is to ensure the driver log book regarding the leachate removal is completed and all other required paper work is completed and returned to site office.

o. The stormwater valve is to be reopened prior to the tanker leaving the site.

p. Tanker driver is to ensure they sign out of the site at the site office on departure.

7) Using the flow meter readings before and after extracting leachate for transport to the Orange Waste Water Treatment Plant, Records of each leachate extraction and disposal activity are to be recorded on **Form 10.01 – Leachate Volume Record for Each Truck Movement** by the Resource Recovery Centre Operator**.**

8) **Form 10.01** is to be kept onsite, and a copy of the form to be forwarded to the Manager Waste Services and Technical Support when each line on the Form is completed.

9) At the end of each month the reading on the leachate flow meter is to be recorded on **Form 10.02 – Monthly Leachate Volume** by the Resource Recovery Centre Operator.

10) **Procedure to respond to leachate pump SMS alarm notifications**

a. SMS alarm messages will be sent to the Resource Recovery Centre Supervisor and Manager Waste Services and Technical Supports mobile phones. The following table outlines the possible alarms and the required corrective action:

Alarm Name	SMS message received	Action required
Sump pump internal Fault	Molong Land Fill Sump Pump internal fault [time][date]	SMS alerts operator that there is a fault in the sub-surface landfill pump. OCC electricians to be called to investigate.
Sump pump internal Fault (reset)	Molong Land Fill Reset sump pump internal fault [time][date]	SMS alarm advises the operator that the sub-surface landfill pump fault has been rectified and the alarm has been reset. No action required.
Tanker loading pump internal Fault:	Molong Land Fill Loading Pump Fault [time][date]	SMS alerts operator that there is a fault in the tanker loading pump. OCC electricians to be called to investigate.
Tanker loading pump internal Fault (reset)	Molong Land Fill Loading Pump Fault Reset [time][date]	SMS alarm advises the operator that the tanker loading pump fault has been rectified and the alarm has been reset. No action required.
High Level Storage Tank:	Molong Land Fill High Level Storage Tank 4.2v [time][date]	SMS advises the operator that the above ground storage tank has reached high level (i.e. it is full) and that pumping of leachate from the sub-surface storage area cannot occur until the leachate from the tank is pumped and removed from site. Operator to arrange for leachate to be pumped and tankered off site. Work Procedures 5 – 9 are to be followed as outlined above. If unable to resolve by emptying storage tank, contact OCC Electricians.
High Level Storage Tank (reset):	Molong Land Fill Reset High Level Storage Tank 4.2v [time][date]	SMS alarm advises the operator that the storage tanker level has dropped and the alarm has been reset. No action required.
High Level Leachate Sump:	Molong Land Fill Reset High Level Leachate Sump 0.0v [time][date]	SMS alarm advises the operator that the sub-surface storage area has reached high level (i.e. full). Operator to arrange for leachate to be pumped and transported off site. Work Procedures 5 – 9 are to be followed as outlined above. If unable to resolve by emptying storage tank, contact OCC Electricians.
High Level Leachate Sump (reset):	Molong Land Fill Reset High Level Leachate Sump 0.0v [time][date]	SMS alarm advises the operator that the sub-surface storage area level has dropped and the alarm has been reset. No action required.

b. Resource Recovery Centre staff are to attend to the alarm message no later than the next normal work day and arrange for attendance by electrician or leachate tanker Contractor.

11) Contingency plan in the event of leachate pumping equipment failure

a. In the event that the leachate pumping equipment fails or is damaged and cannot be used to pump leachate from the sub-surface storage area or the above ground storage tank, the Manager Waste Services and Technical Support must be contacted immediately to arrange alternative pumping arrangements. Arrangements to pump directly from the storage areas to the leachate tanker are to be made bypassing the failed leachate pumping equipment.

b. Records of each leachate extraction and disposal activity are to be recorded on **Form 10.01 – Leachate Volume Record** for each truck movement by the Resource Recovery Centre Operator.

c. The leachate equipment failure or damage is to be documented on **Form 16 – ERRRC Daily Checklist**.

RESPONSIBILITIES

It is the Resource Recovery Centre Supervisor's responsibility to ensure that the leachate pump is correctly utilised, and the correct procedures are followed by the Resource Recovery Centre Operators and Contractors transporting leachate to the Orange Waste Water Treatment Plant.

The Resource Recovery Centre Supervisor is responsible for ensuring the Resource Recovery Centre Operators are adequately trained in this work procedure.

It is also the responsibility of the Resource Recovery Centre Supervisor to complete the necessary documentation, including:

- Form 10.01 – Leachate Volume Record for Each Truck Movement
- Form 10.02 – Monthly Leachate Volume

RECORDS

- Each time leachate is extracted and transported to the Orange Waste Water Treatment Plant details are to be recorded on **Form 10.01 - Leachate Volume Recorded for Each Truck Movement.**
- At the end of each month the reading on the leachate flow meter is to be recorded on **Form 10.02 – Monthly Leachate Volume**.
- The ERRRC daily checklist (**SOP 16**) includes signing off on inspecting the tanker loading area.

REFERENCES

SOP 16 – ERRRC Daily Checklist

SWMS ERRRC-001 – Working within the leachate holding tank exclusion zone

EUCHAREENA ROAD RESOURCE RECOVERY CENTRE

LEACHATE RECORDING – LEACHATE VOLUME RECORD FOR EACH TRUCK MOVEMENT

To be completed by the Resource Recovery Centre Supervisor when leachate is extracted and delivered to the WWTP.

Date	Time	Contractor	Meter Reading Before Pumping	Meter Reading After Pumping	Leachate Volume kL

kL = kilolitres

1 kL = 1000 litres

Certified Correct (signed)

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Resource Recovery Centre Supervisor

Note: this form is to be completed by the Resource Recovery Centre Site Supervisor when leachate is extracted and delivered to the Orange Sewerage Treatment Plant. When the Form is full, it is to be sent to the Manager Waste Services and Technical Support.

EUCHAREENA ROAD RESOURCE RECOVERY CENTRE

LEACHATE RECORDING – MONTHLY LEACHATE VOLUME

YEAR:

Month	Meter Reading Previous Month kL	Meter Reading Current Month kL	Leachate Transported to WWTP (kL)
31 January			
28 February			
31 March			
30 April			
31 May			
30 June			
31 July			
31 August			
30 September			
31 October			
30 November			
31 December			

kL = kilolitres

1 kL = 1000 litres

Certified Correct (signed)

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Resource Recovery Centre Supervisor

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at the Euchareena Road Resource Recovery Centre and a copy sent to the Manager Waste Services and Technical Support monthly.

	Standard Operating Procedure
	Management of ERRRC Surface Water Ponds
	File No: **SOP 11**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
4/11/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
17/08/2015	Draft approved	Version 2
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

To ensure that the correct procedures are followed to ensure the correct and efficient management of the two surface water management dams at the ERRRC, ie Dam A on the western side of the landfill operations, and Dam B to the eastern side of the landfill operations.

WORK PROCEDURE

1) ***Maintaining correct water level in Stormwater Management Dam A and B***

- Following a storm event, the marker peg (in the sidewall of the dam approximately 0.6m below the spillway) is to be visually monitored – this marker peg indicates the top of the water storage zone. If the water in the dam is above the marker peg, arrangements are to be made to remove the water in the zone above the marker peg within five days after the end of the storm which gave rise to the runoff to fill the dam.
- Water retained above the water storage zone is to be used for dust suppression, supply to the composting facility or irrigation of the landscaped areas.
- Water below the water storage zone marker peg can be used as required for dust suppression, supply to the composting facility or irrigation and other on-site purposes.
- Dust suppression water is only to be applied at a rate that does not generate surface runoff or cause ponding of water.
- If either dam experiences a discharge over the spillway (i.e. an overflow event) the Resource Recovery Centre Supervisor shall report the event to the Manager Waste Services and Technical Support and record it on **Form 11.01 – Surface Water Dam Overflow**. If required, the monitoring consultants (Geolyse Pty Ltd) shall be contacted to collect samples (refer to Section 6 – Surface Water Monitoring).
- Each time water is removed from either Dam A or Dam B, this event is to be recorded on **Form 11.02 – Removal of Water from Surface Water Management Dams.**

2) ***Pumping Water from Stormwater Management Dam A***

- The mobile pump is to be connected to the fixed discharge line immediately south of the dam.
- Water can be pumped to the composting facility, used to irrigate the stockpile mound or pumped to the water tanker for dust suppression. Valves are used to control the water movement.
- Once the connection is made the valve and mobile pump are to be turned on and the outlet to the discharge pipe is to be checked to ensure the stormwater is being discharged.

- If the discharge line in the western conservation area is moved, the star pickets marking the location of the pipe are also to be moved to ensure the pipe is not damaged by unaware vehicles, slashing or any other operational movements on the site.

3) ***Pumping Water from Stormwater Management Dam B***

- The mobile pump is to be connected to the fixed discharge line immediately southeast of the dam
- There is the option to either irrigate the landscape bund using a series of sprinklers immediately east of the dam, or the t-piece tap can be used to divert the pump to flow to discharge pipe to the eastern conservation area.
- Once the t-piece tap is in the correct position (open to divert flow to the eastern conservation area, or closed to irrigate the landscape bund) the valve and mobile pump are to be turned on and the outlet to the discharge pipe is to be checked to ensure the stormwater is being discharged.
- If the discharge line to the eastern conservation area is moved, the star pickets marking the location of the pipe are also to be moved to ensure the pipe is not damaged by unaware vehicles, slashing or any other operational movements on the site.
- Water from Stormwater Dam B can be pumped to the water tanker for dust suppression.

4) ***Draining and cleaning Stormwater Management Dam A and B***

- In order to maintain effectiveness of Stormwater Management Dams A and B for sediment retention, each dam will be drained down and cleaned at least annually in the first instance. For operational purposes this could be achieved by transferring water into one of the dams while the other is cleaned out or using the water from one dam for operational purposes or irrigation. The frequency of clean-out can be reviewed after the first clean out.

5) ***Surface water management within the composting facility***

- All surface water drains and diversion mounds should be inspected and repaired if necessary after any significant storms that have led to flow in the channels.
- All compost material is to be stored within the compost maturation area, Runoff from the compost maturation area is directed to Liquid Residue Pond C3.
- Water is to be pumped from Liquid Residue Pond C4 to Liquid Residue Pond C3 to maintain a maximum of 10% full condition of Liquid Residue Pond C4 i.e. there is always a spare capacity of 2,480 m^3. The maximum allowable pumping rate from Liquid Residue Pond C4 is 400 kL/day; however this is only allowed to occur when Liquid Residue Pond C3 is less than 90% full.
- Pumping for irrigation will only occur from Liquid Residue Pond C3 whenever water is available in this pond.

- Irrigation shall only occur if soil moisture conditions allow an application of 5mm and if rainfall has not occurred on that day.
- Irrigation water will be applied at a rate that does not generate surface water runoff or cause ponding of water.

6) ***Surface water monitoring***

- Surface water is monitored from the stormwater management dams on a quarterly basis upon discharge.
- Monitoring consultants (Geolyse Pty Ltd) will install sample bottles in the rising stage samplers at the start of each quarter. If a rainfall event causes either of the stormwater management dams to fill and spill, and samples are collected in the bottles, the Resource Recovery Centre Supervisor is to advise Geolyse of the overflow by calling the office on **6393 5000**.
- The sample bottles will be collected by the monitoring consultants and the rising stage samplers left empty until the start of the next quarter.

RESPONSIBILITIES

- It is the responsibility of the Resource Recovery Centre Supervisor to ensure all operating staff are adequately trained in operating the surface water pumps.
- The Resource Recovery Centre Supervisor shall advise the Manager Waste Services and Technical Support if there is an overflow event from either of the stormwater management dams.
- The Resource Recovery Centre Supervisor shall advise the monitoring consultants if sample bottles need to be collected following an overflow event.

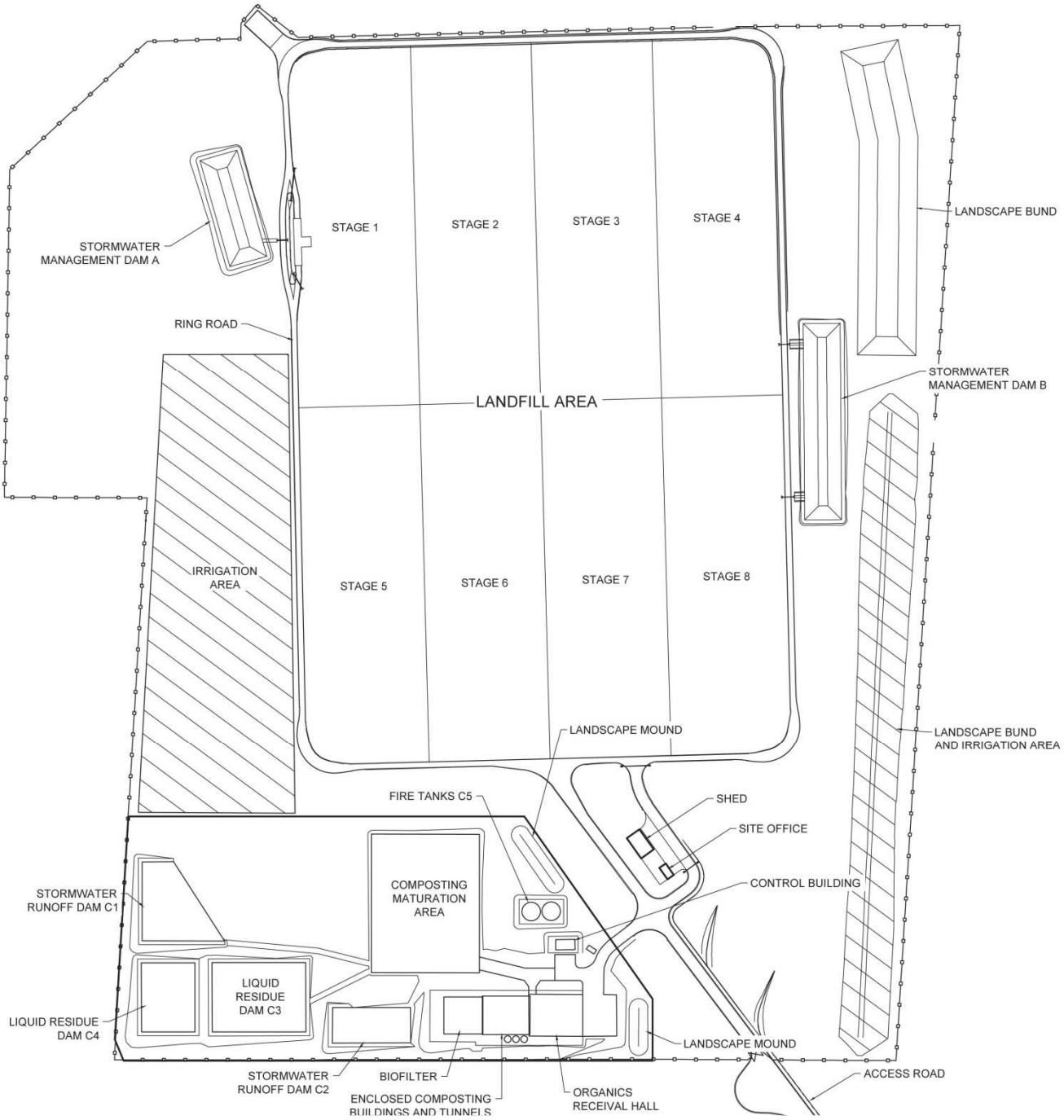
RECORDS

The occurrence of an overflow from either of the surface water dams is to be recorded on **Form 11.01 – Surface Water Dam Overflow**. This form is to be kept on site, with the Manager Waste Services and Technical Support notified should either surface water dam overflow.

Each time water is removed from either of the dams, this is to be noted on **Form 11.02 - Removal of Water from Surface Water Management Dams**.

REFERENCES

Soil and Water Management Plan – **Section 9.2** of the OEMP


STORMWATER MANAGEMENT DAM A
STAGE 1
STAGE 2
STAGE 3
STAGE 4
LANDSCAPE BUND
RING ROAD
LANDFILL AREA
STORMWATER MANAGEMENT DAM B
IRRIGATION AREA
STAGE 5
STAGE 6
STAGE 7
STAGE 8
LANDSCAPE MOUND
LANDSCAPE BUND AND IRRIGATION AREA
FIRE TANKS C5
SHED
SITE OFFICE
CONTROL BUILDING
COMPOSTING MATURATION AREA
STORMWATER RUNOFF DAM C1
LIQUID RESIDUE DAM C3
LIQUID RESIDUE DAM C4
LANDSCAPE MOUND
ACCESS ROAD
STORMWATER RUNOFF DAM C2
BIOFILTER
ENCLOSED COMPOSTING BUILDINGS AND TUNNELS
ORGANICS RECEIVAL HALL

EUCHAREENA ROAD RESOURCE RECOVERY CENTRE

SURFACE WATER DAM OVERFLOW

To be completed by the Resource Recovery Centre Supervisor when water discharges over the spillway from stormwater Dam A or B.

Date	Time	Surface Water Dam		Time discharge commenced	Time discharge ceased	Actions Taken (has Geolyse been notified?)
		Dam A	Dam B			

Certified Correct (signed)

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Resource Recovery Centre Supervisor

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at the Euchareena Road Resource Recovery Centre and a copy sent to the Manager Waste Services and Technical Support when the Form is filled.

EUCHAREENA ROAD RESOURCE RECOVERY CENTRE

REMOVAL OF WATER FROM SURFACE WATER MANAGEMENT DAMS

To be completed by the Resource Recovery Centre Supervisor when water is removed from dams and used for irrigating landscape bunds or discharged into Conservation Area

Date	Time	Surface Water Dam		Time discharge commenced	Time discharge ceased	Area pumped to
		Dam A	Dam B			

Certified Correct (signed)

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Resource Recovery Centre Supervisor

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at the Euchareena Road Resource Recovery Centre and a copy sent to the Manager Waste Services and Technical Support when the Form is filled.

Standard Operating Procedure

ERRRC Cell Surface Water Management

File No: **SOP 12**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
4/11/2013	Document created	Draft
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PURPOSE

To ensure that the correct procedures are followed for correct and efficient management of surface water within the inactive landfill cells.

WORK PROCEDURE

1) Following storm events, water will accumulate within the pre-prepared landfill cells; this water is to be pumped in to stormwater management dam B using the following steps:
   - There is a mobile line leading from the western (lowest) side to the eastern bank of the Stage 2 cell. This line is fixed to the eastern bank where the mobile pump can be placed to remove water from Stage 2. Once the pump is in place, the valve and pump are turned on and pumping will commence to Stormwater Dam B.
   - Water is pumped from the Stage 2 cell underground to an outlet above Stormwater Dam B – the outlet is between two large boulders on the western bank above Dam B. After commencing pumping, the outlet is to be checked to ensure the pipe is discharging correctly.
   - During and after extracting stormwater from the inactive landfill cell, the marker peg in the Stormwater Dam B is to be visually monitored. If the water level is above the marker peg (indicating the top of the water storage zone) then water is to be pumped from the Stormwater Dam B as per **SOP 11 – Management of ERRRC Surface Water Ponds**.
2) Each time stormwater is removed from the inactive landfill cell and pumped to Stormwater Dam B, **Form 12 – Inactive Landfill Cell Surface Water Removal** is to be completed. A copy is to be sent to the Manager Waste Services and Technical Support each time the Form is filled.
3) After storm events, landfill operators are to inspect the integrity of the internal bunding within the landfill area to ensure that the water that has been in contact with the active landfill cell(s) does not contaminate the undeveloped landfill cells.

RESPONSIBILITIES

It is the responsibility of the site supervisor to ensure all operating staff are adequately trained in operating the surface water pump and identifying when the inactive landfill cell and Stormwater Dam B require stormwater to be extracted.

RECORDS

Records are kept using **Form 12 – Inactive Landfill Cell Surface Water Removal**. This form is to be completed each time stormwater is extracted from the inactive landfill cell, and forwarded to the Manager Enterprise Services each time the Form is filled.

REFERENCES

Soil and Water Management Plan – **Section 9.2** of the OEMP.

SOP 11 – Management of ERRRC Surface Water Ponds.

EUCHAREENA ROAD RESOURCE RECOVERY CENTRE

INACTIVE LANDFILL CELL SURFACE WATER REMOVAL

To be completed by the Resource Recovery Centre Supervisor when water is pumped from the inactive landfill cell to Stormwater Dam B.

Date	Time	Time discharge commenced	Time discharge ceased	Actions Taken

Certified Correct (signed)

.....

Resource Recovery Centre Supervisor

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at the Euchareena Road Resource Recovery Centre and a copy sent to the Manager Waste Services and Technical Support when the Form is filled.

	Standard Operating Procedure
	Pollution Incident Response Management
	File No: **SOP 13**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
05/11/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
17/08/2015	Draft approved	Version 2
14/02/2018	Draft approved	Version 3
07/12/2018	Draft approved	Version 4
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

Purpose

To ensure that incidents are correctly responded to, and outcomes recorded correctly. This SOP is to be read in conjunction with the ORRRC and ERRRC Pollution Incident Response Management Plans (PIRMPs) and Supporting Statements, refer **Section 9.6 to Section 9.9** of the OEMP. This SOP is designed for the response to **Environmental** incidents as opposed to **WHS** incidents.

Procedures

1) When an incident occurs the flow chart titled: **Pollution Incident Decision Flow Chart** on the following page is to be followed. This flow chart identifies the correct steps to take that identify the actions required when responding to an incident.

2) If further information is required in regards to defining whether the incident is a 'pollution incident' as per the provisions of the Protection of the Environment and Operations Act 1997, this can be found in **Section 9.6 to Section 9.9** of the OEMP.

3) After working through the flow chart to identify who requires notification (depending on the severity of the incident), the relevant authority is to be notified promptly without delay. All relevant authority contact details can be found in **Table 1**.

4) Each time an incident is identified; this is to be recorded on **Form 13.01 – Incident Register** with particular details recorded on **Form 13.02 – Incident Report Form**. Incidents to be reported may include (but not be limited to):

   - Identification of excluded waste products in the waste stream
   - Surface or subsurface fires at active landfill
   - Surface or subsurface fires at maintenance or inactive areas
   - Mixing of leachate and stormwater or waste and stormwater
   - Identification of any failure of an environmental protection system
   - Identification of a significant difference in groundwater indication parameters
   - Detection of subsurface gas, surface gas and/or accumulated gas in buildings at greater than 1.25% methane
   - Acts of vandalism or target of terrorist activity
   - Any spills (hydrocarbon etc)
   - Damage to the Conservation Area (eg unlawful removal of trees, ground disturbance)
   - Any other incident or observation that could potentially pose an immediate environmental hazard outside of normal operating conditions.

5) **Form 13.01 – Incident Register** is to be completed by the Resource Recovery Centre Supervisor and forwarded to the Manager Waste Services and Technical Support each time the Form is full.

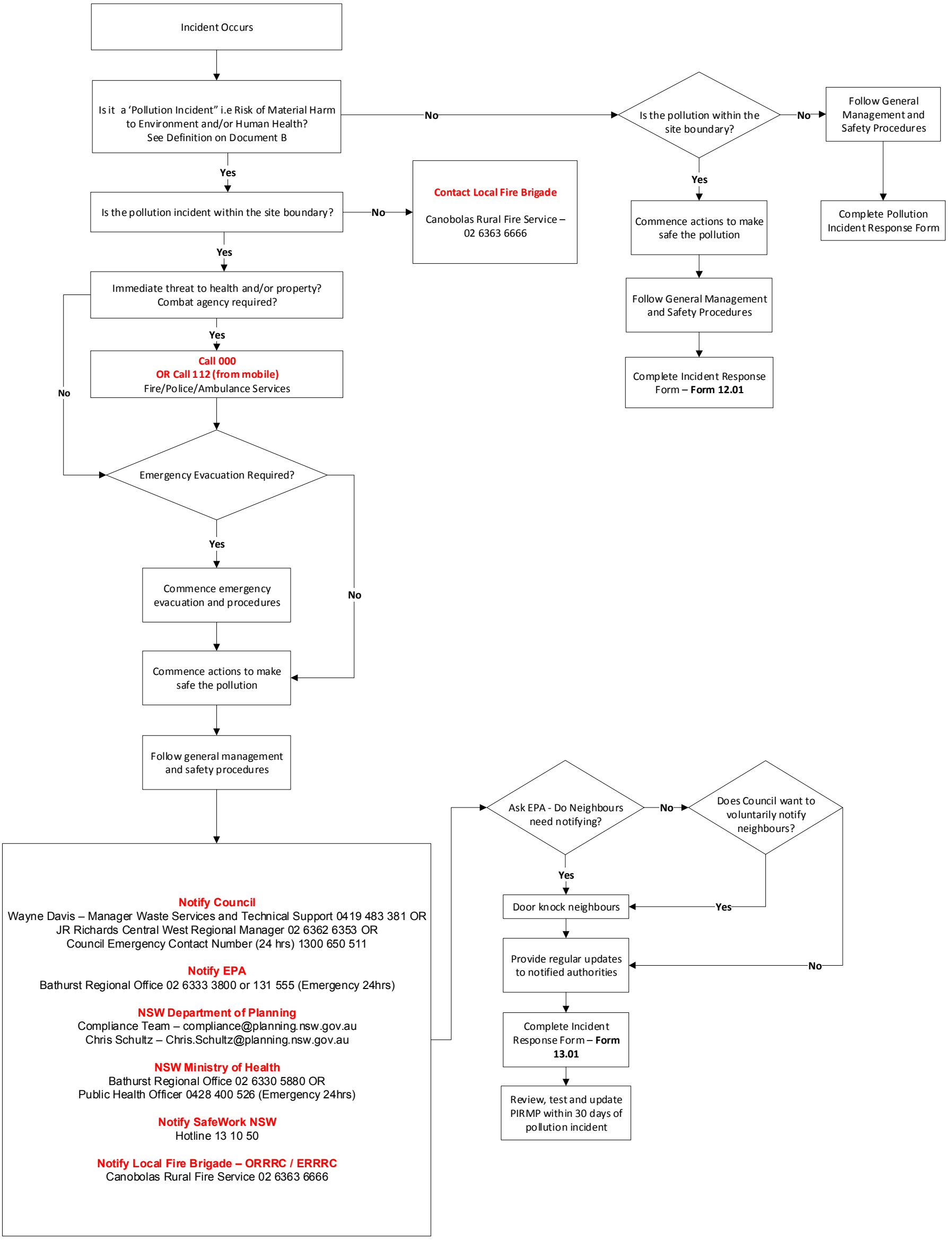
6) **Form 13.02 – Incident Report Form** is to be completed by the staff member or contractor who identified the incident, and signed off by the Resource Recovery Centre Supervisor and forwarded to the Manager Waste Services and Technical Support upon completion.

Table 1– Notification of Relevant Authorities

Authority	Contact Number
1. Emergency Call Services	
• **Emergency Hotline Number (24 hours)** *The Site Supervisor should call 000 if the incident presents an immediate threat to human health and/or property and a combat agency is required (i.e. NSW Fire and Rescue, NSW Ambulance Service, NSW Police Force) and then notify all other parties below including NSW Fire and Rescue via a local telephone number	000*
2. Orange City Council	
• Wayne Davis (Manager Waste Services and Technical Support) • JR Richards Central West Regional Manager • Council Emergency contact number (24 hours)	0419 483 381 6362 6353 1300 650 511
3. The Environment Protection Authority (EPA)	
• Bathurst Regional Office • Emergency Hotline Number (24 hours)	02 6332 7600 131 555
4. NSW Department of Planning	
• Compliance Team • Chris Schultz – Senior Compliance Officer	compliance@planning.nsw.gov.au Chris.Schultz@planning.nsw.gov.au
5. NSW Ministry of Health (via Public Health Units)	
• Bathurst Regional Office • Public Health Officer on Call (24 hours)	02 6330 5880 0428 400 526
6. SafeWork NSW	
• Hotline Number	13 10 50
7. Canobolas Zone Rural Fire Service	
• Orange Rural Fire Service	02 6363 6666

** If there is no immediate threat to human health and/or property i.e. a combat agency is not required, then the Site Supervisor is still required to follow the outline above except for dialling 000.

Pollution Incident Decision Flow Chart



Responsibilities

It is the responsibility of the Manager Waste Services and Technical Support to ensure all staff and contractors are adequately trained in responding to an incident, and completing the correct documentation.

This SOP is to be included in all Staff Inductions (refer **Section 5.1 – Staff Training**).

Records

Every incident, whether it is an incident requiring notification to authorities or not, requires documentation. The forms to be filled out following an incident are:

- Form 13.01 – Incident Register
- Form 13.02 – Incident Report Form

References

OEMP Section 9.6 – ORRRC PIRMP

OEMP Section 9.7 – ORRRC PIRMP Supporting Statement

OEMP Section 9.8 – ERRRC PIRMP

OEMP Section 9.9 – ERRRC PIRMP Supporting Statement

OEMP Section 5.1 – Staff Training

INCIDENT REGISTER

INCIDENT NO.	FACILITY	DATE	NATURE OF INCIDENT

Certified Correct (signed)

.....

Resource Recovery Centre Supervisor

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at both the Euchareena Road Resource Recovery Centre and Ophir Road Resource Recovery Centre and a copy sent to the Manager Waste Services and Technical Support when Form is full.

INCIDENT REPORT FORM

Incident No:	**Time:**
Date:	**Duration of Incident:**

Nature of Incident:

Temperature:	**°C**	**Wind direction & speed:**	**km/hr**
Relative Humidity:	**%**	**Rainfall since 9am:**	**mm**
Fire Danger Rating:			
http://www.bom.gov.au/climate/data/index.shtml '065023 – Molong (Hill St)'			

The Location of the Place Where Pollution is Occurring or is Likely to Occur:

The nature, the estimated quantity or volume, and the concentration of any pollutants involved (if known):

The Circumstances in which the Incident Occurred, Including the Cause of the Incident (if known):

INCIDENT REPORT FORM

The Corrective Action Taken or Proposed to be Taken to Deal with the Incident and Any Resulting Pollution or Threatened Pollution (if known):

Notification:

Stakeholder	Date / Time	Contact
Orange City Council	/ / am/pm	
NSW Environment Protection Authority	/ / am/pm	
NSW Ministry Of Health (Via Public Health Units)	/ / am/pm	
SafeWork NSW	/ / am/pm	
NSW Fire and Rescue	/ / am/pm	

Notification of Neighbours Required by EPA **Yes / No**

If Not, Have Neighbours Been Notified Voluntarily **Yes / No**

Particulars:

Signature: **Date / /**
Council Officer

Signature: **Date / /**
Manager Waste Services and Technical Support, Orange City Council

	Standard Operating Procedure
	Complaints Handling
	File No: **SOP 14**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
05/11/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
17/08/2015	Draft approved	Version 2
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

Any complaint received will be investigated and options for avoiding recurrence will be considered.

WORK PROCEDURE

1) Any complaint received by an outside party must be reported immediately to the Resource Recovery Centre Supervisor.

2) Any complaint received will be followed up by an investigation as to the cause of the complaint, and options for avoiding recurrence will be considered.

3) Appropriate documentation to be completed, including:

   - Form 14.01 – Complaints Register
   - Form 14.02 – Complaint Report Form

4) **Form 14.01 – Complaints register** is to be forwarded to the Manager Waste Services and Technical Support when the form is full, and Form **14.02 – Complaint Report Form** is to be forwarded to the Manager Waste Services and Technical Support upon completion after each complaint is lodged.

Responsibilities

It is the responsibility of all Resource Recovery Centre Staff or contractors to notify the Resource Recovery Centre Supervisor of any complaints received. The Resource Recovery Centre Supervisor is responsible for following up the complaint, including completing **Form 14.01 – Complaints Register** and **Form 14.02 – Complaint Report Form**.

Any complaints are also to be recorded on the Daily Checklist (refer **SOP 15 – ORRRC Daily Checklist** and **SOP 16** – **ERRRC Daily Checklist**).

Records

Upon receiving a complaint from an outside party, the complaint, and any subsequent investigation is to be recorded on **Form 14.02 – Complaint Report Form**. Details of the nature of the complaint, who made the complaint, and any unusual circumstances (such as equipment malfunction, weather conditions) should be noted.

A complaint register – **Form 14.01** documenting a sequential complaint number for each facility will also be maintained.

Records are to be kept for at least four years, and will be included in the Annual Report as detailed in **Section 6.3** of the OEMP.

References

SOP 15 – ORRRC Daily Checklist

SOP 16 – ERRRC Daily Checklist

Section 6.3 – EPL Annual Returns

COMPLAINTS REGISTER

COMPLAINT NO.	FACILITY	DATE	NATURE OF COMPLAINT

Certified Correct (signed)

.....

Resource Recovery Centre Supervisor

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at both the Euchareena Road Resource Recovery Centre and Ophir Road Resource Recovery Centre and a copy sent to the Manager Waste Services and Technical Support when the Form is full.

COMPLAINT REPORT FORM

COMPLAINT NO:	TIME:
DATE:	FACILITY:

HOW COMPLAINT WAS LODGED:

COMPLAINANT DETAILS:

THE NATURE OF THE COMPLAINT:

CAUSE:

CORRECTIVE ACTION?

FOLLOW-UP CONTACT REQUIRED?

Weather Conditions

Wind Speed (circle)	light			medium				strong
Wind Direction (circle)	N	NE	E	SE	S	SW	W	NW
Rainfall (mm)	.....							

Certified Correct (signed)

.....

Resource Recovery Centre Supervisor

Certified as Actioned Appropriately (signed)

.....

Manager Waste Services & Technical Support

Note: This original form is to be kept by the Resource Recovery Centre Supervisor at both the ERRRC and ORRRC and a copy sent to the Manager Waste Services and Technical Support following a complaint.

	Standard Operating Procedure
	ORRRC Daily Checklist
	File No: **SOP 15**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
05/11/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
17/08/2015	Draft approved	Version 2
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

Purpose

The purpose of the daily checklist is to ensure that operational staff and contractors are correctly undertaking daily tasks, resulting in correct and efficient operations at the ORRRC.

In addition to recording daily operational procedures, the checklist also records references to incidents, complaints, or any other unusual activities or occurrences.

Work Procedures

The site supervisor is to complete **Form 15 – ORRRC Daily Checklist** throughout the day as tasks are completed or checked.

Responsibilities

It is the responsibility of the Resource Recovery Centre Supervisor to ensure the Daily Checklist is completed each day, and filed on-site appropriately.

The Manager Waste Services and Technical Support is responsible for undertaking periodic site inspections and audits to determine compliance with the Daily Checklist procedures.

Records

Completed daily checklists, as recorded on **Form 15 – ORRRC Daily Checklist** are to be kept for a minimum of three years and will be made available on request.

References

Section 3.3 – Daily Checklist

ORRRC DAILY CHECKLIST

DAY: **DATE:**

To be completed by the Resource Recovery Centre Supervisor on a daily basis.

		YES	NO
1.	Security gates locked from 7:00pm to 7:00am Monday to Friday, and 5:00pm to 7:00am Saturday, Sunday and Public Holidays.		
2.	Site opened to public on time, from 7:00am to 7:00pm Monday to Friday, and 7:00am to 5:00pm Saturday, Sunday and Public Holidays.		
3.	No additional waste deposited on-site since closing previous day		
4.	At least one (1) Operational staff on-site		
5.	All residual waste ramped in layers of up to 600 mm maximum and compacted to 650 kg/m^3		
6.	Daily cover applied		
7.	Only approved wastes deposited during opening hours		
8.	Any litter collected and disposed of appropriately		
9.	Were there any incidents?		
10.	Were any complaints received?		
11.	Freeboard in surface water and leachate ponds >1 m		
12.	Machinery shut down/stored		
13.	Do site conditions comply with LEMP		
14.	Waste received recorded		

Reasons for Non-Compliance with Checklist

.....

Incident/Complaint Report Prepared Yes/No No.: .....

Action to be taken for Non-Compliance to be rectified

.....

.....

Any other unusual occurrences?

Weather Conditions

Wind Speed (circle) light medium strong

Wind Direction N NE E SE S SW W NW

Rainfall (mm) .....

Certified Correct (signed)

.....

Resource Recovery Centre Supervisor

Note: This original checklist is to be kept by the Resource Recovery Centre Supervisor at the Ophir Road Resource Recovery Centre and filed appropriately onsite upon completion each day.

	Standard Operating Procedure
	ERRRC Daily Checklist
	File No: **SOP 16**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
05/11/2013	Document created	Draft
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31/1/2020	Opening hours updated Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

Purpose

The purpose of the daily checklist is to ensure that operational staff and contractors are correctly undertaking daily tasks, resulting in correct and efficient operations at the ERRRC. In addition to recording daily operational procedures, the checklist also records references to incidents, complaints, or any other unusual daily activities or occurrences.

Work Procedures

1) The Resource Recovery Centre Supervisor is to complete **Form 16 – ERRRC Daily Checklist** throughout the day as tasks are completed or checked.
2) The Resource Recovery Centre Supervisor is required to file the completed form appropriately onsite upon completion each day.

Responsibilities

It is the responsibility of the Resource Recovery Centre Supervisor to ensure the Daily Checklist is completed each day, and filed appropriately.

The Manager Waste Services and Technical Support is responsible for undertaking periodic site inspections and audits to determine compliance with the Daily Checklist procedures.

Records

Completed daily checklists, as recorded on **Form 16 – ERRRC Daily Checklist** are to be kept for a minimum of three years and will be made available on request.

References

Section 4.3 – Daily Checklist

ERRRC DAILY CHECKLIST

DAY: **DATE:**

To be completed by the Resource Recovery Centre Supervisor on a daily basis.

		YES	NO
1.	Security gates locked		
2.	Site opened to waste receival vehicles on time (Mon-Sun, 7 am – 5 pm. Closed Good Friday and Christmas Day)		
3.	No additional waste deposited on-site since closing previous day		
4.	Daily cover applied		
5.	Minimum of one operational staff on-site		
6.	Any litter collected and disposed of appropriately		
7.	Were there any incidents?		
8.	Were any complaints received?		
9.	Leachate sump levels checked and dealt with appropriately		
10.	Machinery shut down/stored		
11.	Do site conditions comply with LEMP		
12.	Were there any compromised bales returned to ORRRC		
13.	Check level in leachate tank		
14.	Check valve in tanker loading area is open and no ponding occurring		
15.	Check levels of Surface Water Dams A & B		

Reasons for Non-Compliance with Checklist

.....

Incident/Complaint Report Prepared Yes/No No.: .....

Action to be taken for Non-Compliance to be rectified

.....

.....

Any other unusual occurrences?.....

Weather Conditions

Wind Speed (circle) light medium strong

Wind Direction N NE E SE S SW W NW

Certified Correct (signed)

.....

Resource Recovery Centre Supervisor

Note: This original checklist is to be kept by the Resource Recovery Centre Supervisor at the Euchareena Road Resource Recovery Centre and filed onsite upon completion.

	Standard Operating Procedure
	Annual OEMP Review
	File No: **SOP 17**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

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22/1/2020	Version updated to correspond to OEMP	Version 5
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Purpose

The purpose of the annual OEMP review is to ensure that the evolving nature of operations throughout all facets of the OWP are recorded and best practice methods are continually employed and updated throughout the life of the project.

The OEMP is a document that consolidates a number of smaller reports and management plans that were developed in order to fulfil the conditions of the PA, it is expected that with time, work place practices will evolve and improve, and the relevant management plans and SOPs need to be updated accordingly.

The annual OEMP review will facilitate a positive outcome from the Independent Environmental Audit, a requirement of the Project Approval (refer **SOP 18**).

Work Procedures

1) Continuously throughout the year the Resource Recovery Site Supervisor and Site Operators are to bring to the attention any inefficiencies in work practices, or ideas to improve best practice methods to the Manager Waste Services and Technical Support.
2) The Manager Waste Services and Technical Support is required to document and compile any ideas and suggestions raised by the Resource Recovery Centre Supervisor, Operational Staff or contractors.
3) Within the month of the anniversary of the commencement of operations of the OWP (5th August 2013), the Manager Waste Services and Technical Support is required to review the entire OEMP, including Volume 1 and Volume 2, and update any changes to the environmental management, or operating procedures. All JR Richards operational procedures and documentation are also to be reviewed annually.
4) **SOP 21 – Document Control** is to be adhered to when updating documents.
5) If the Independent Environmental Audit (refer **SOP 18**) is conducted in the same year, any outcomes from the audit are to be incorporated into the OEMP or other documentation.

Responsibilities

It is the responsibility of the Resource Recovery Centre Supervisor to ensure that any issues, ideas or concerns of the staff or contractors at the Resource Recovery Centres, or transport between the two sites are brought to the attention of the Manager Waste Services and Technical Support.

The Manager Waste Services and Technical Support is responsible for reviewing and updating the OEMP and reviewing and suggesting updates for any JR Richards operational management plans or documentation.

Records

Each year any updated sections of the OEMP will replace the preceding version. Records of the version number and date of update are recorded on the bottom left hand side of every page in the OEMP.

Document control is managed as per **SOP 21**.

References

SOP 21 – Document Control

SOP 18 – Independent Environmental Audit

Section 1 – Environmental Management

	Standard Operating Procedure
	Independent Environmental Audit
	File No: **SOP 18**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
05/11/2013	Document created	Draft
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22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

Purpose

It is a requirement of the PA that an independent environmental audit be conducted: *"within a year of the commencement of operations of the project, and every 5 years thereafter"*. Operations at the ERRRC commenced on 5 August, 2013. This date therefore becomes the anniversary date.

Work Procedures

1) The Audit must:
    a) Be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;
    b) Include consultation with the relevant agencies;
    c) Assess the environmental performance of the project and assess whether it is complying with the relevant requirements in the Project Approval and the relevant EPLs (including JR Richards EPL);
    d) Review the adequacy of any plans or programs required under these approvals; and, if appropriate;
    e) Recommend measures or actions to improve the environmental performance of the project, and/or any plan or program required under these approvals.
2) Within six weeks of completing the audit, a copy of the audit report is to be submitted to the Director-General, together with its response to any recommendations contained in the audit report.

Responsibilities

The Manager Waste Services and Technical Support is responsible for commissioning and submitting the environmental audit, and following through with updating the OEMP or any plans or programs accordingly.

Records

Each year the updated OEMP will be replaced in its entirety with the new version. Document control is managed as per **SOP 21**.

References

SOP 21 – Document Control

Section 8.1 – Project Approvals

SOP 17 – Annual OEMP Review

	Standard Operating Procedure
	ORRRC Environmental Monitoring
	File No: **SOP 19**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
12/12/2013	Document created	Draft
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05/09/2016	Draft approved	Version 3
14/02/2018	Draft approved	Version 4
22/1/2020	Version updated to correspond to OEMP	Version 5
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PURPOSE

To ensure consistent and correct methods are used for all environmental monitoring at the ORRRC, as per the requirements of the Environment Protection Licence (EPL 5956) and the Trade Waste Agreement. Environmental monitoring in this SOP includes groundwater, surface water, leachate, truck wash, surface gas, accumulated gas and sub-surface gas monitoring.

The network, schedule, and parameters to be monitored are detailed in **Section 3.8 – Groundwater Management** from the OEMP- Following the requirements of this section, the following procedures are to be followed.

WORK PROCEDURE

1. GROUNDWATER LEVEL MEASUREMENT

The monitoring frequency will be in accordance with EPL requirements.

Water level measurement will be undertaken using an electronic water level meter tape. The following procedure will be used:

1. Before starting, prepare field notebook and check that the water level meter is working.
2. Decontaminate the water whistle by rinsing with tap water followed by distilled water.
3. Visually check the borehole for damage and record any observed damage in the field sheets.
4. Remove cap(s), measure depth to water below top of 50mm PVC casing for the piezometer.
5. Replace caps, record piezometer number, date, time and depth to water in field sheets.

Conversion of Groundwater Level to Metres AHD

Recorded depths to groundwater should be converted to an elevation in metres AHD.

groundwater	=	elevation top	-	depth to
elevation (m AHD)		PVC pipe (m AHD)		groundwater (m)

2. GROUNDWATER SAMPLING

The monitoring frequency will be in accordance with EPL requirements.

The following procedure will be used to obtain water samples.

1. Measure water level as described above.
2. Prepare sample containers, cross-check sampling requirements with laboratory sample container guide for correct bottle type, preservative and required quantity, note any specific holding times.
3. Label laboratory prepared bottles with project number, monitoring point

identification, sampler initials, date and time using water proof ink (xylene free) on self adhesive labels.

4. Purge the borehole: calculate purge volume (V) using the following formula:

   for 50 mm borehole V (litres) = 3x [(depth of bore - depth to water) x 2.26]

   Sampling should be conducted after the monitoring point has recovered from purging (sampling should not take place more than one day after purging) or alternatively, water can continue to be extracted until field measured parameters stabilise, indicating sample is representative of recharge.

5. Field measure temperature, pH and electrical conductivity; record results in field sheets.

6. Note on field sheets any visual observations relating to volume/flow present, colour, sediment, particulate matter, oil on surface etc as well as any apparent odour.

7. Lower a new plastic unpreserved bottle gently below surface of the water sample, filling bottle to top. Decant into sample bottles containing preservatives directly without rinsing, with zero headspace. Samples for volatile analysis should be obtained first. Samples for metals analysis should be field filtered using 11µm filter paper or equivalent. Replace lids tightly.

8. Place sample bottles into pre-chilled esky with several frozen ice-packs immediately after sample is decanted.

Methods of Purging

Bailing

Rinse the line in distilled water. Remove a new polyethylene bailer (factory decontaminated) from its protective wrapping. Attach the line to the bailer. Lower bailer gently to mid-point of screen, withdraw, decant into distilled water rinsed bucket. Repeat until purge volume and sufficient recharge is achieved or until field measured parameters stabilise, indicating sample is representative of recharge.

Submersible Pump

Ensure pump has been running to tank or waste for at least 100L. Run discharge into bucket and measure field parameters to ensure stabilisation. Obtain sample as described above.

3. SURFACE WATER AND LEACHATE SAMPLING

The monitoring frequency will be in accordance with EPL requirements and Trade Waste Agreement.

The following procedure will be used to obtain surface water and leachate samples.

1. Prepare sample containers, cross-check sampling requirements with laboratory sample container guide for correct bottle type, preservative and required quantity, note any specific holding times.
2. Label laboratory prepared bottles with project number, monitoring point identification, sampler initials, date and time using water proof ink (xylene free) on self adhesive labels.
3. Collect from as close as practicable to point of discharge and upwind if possible to avoid collecting any concentration of surface contaminants. Obtain sample from below surface, being careful not to disturb any bottom sediment.
4. Field measure temperature, pH and electrical conductivity; record results in field sheets.
5. Note on field sheets any visual observations relating to volume/flow present, colour, sediment, particulate matter, oil on surface etc as well as any apparent odour.
6. Lower a new plastic unpreserved bottle gently below surface of the water, filling bottle to top. Decant into sample bottles containing preservatives directly without rinsing, with zero headspace. Samples for volatile analysis should be obtained first. Replace lids tightly.
7. Place sample bottles into pre-chilled esky with several frozen ice-packs immediately after sample is decanted.

4. TRUCK WASH SAMPLING

The monitoring frequency will be in accordance with the Trade Waste Agreement.

The following procedure will be used to obtain truck wash samples.

1. Ensure truck wash is in use during sampling and pump is functioning.
2. Prepare sample containers, cross-check sampling requirements with laboratory sample container guide for correct bottle type, preservative and required quantity, note any specific holding times.
3. Label laboratory prepared bottles with project number, monitoring point identification, sampler initials, date and time using water proof ink (xylene free) on self adhesive labels.
4. Collect from point of discharge to sewer.
5. Note on field sheets any visual observations relating to volume/flow present, colour, sediment, particulate matter, oil on surface etc as well as any apparent odour.
6. Lower a new plastic unpreserved bottle gently below surface of the water, filling bottle to top. Decant into sample bottles containing preservatives directly without rinsing, with zero headspace. Samples for volatile analysis should be obtained first. Replace lids tightly.
7. Place sample bottles into pre-chilled esky with several frozen ice-packs immediately after sample is decanted.

5. TRANSPORT TO LABORATORY

1. Complete chain-of-custody (COC) form for samples, ensuring that details on COC and sample bottle label are identical.
2. On returning to base, repack esky with fresh ice packs. Seal copy of COC in plastic sleeve and place inside esky. Seal esky with packaging tape, security seal and care stickers.
3. Dispatch esky to laboratory by courier on the same day that samples are taken. Retain copy of courier consignment notice. Do no dispatch samples on Fridays unless arranged prior with laboratory.

6. QUALITY CONTROL

For each groundwater sampling round, one duplicate sample and one field blank will be submitted for Quality Control.

1. With each batch of samples submit 1 trip blank comprising a standard set of sample bottles filled with distilled water decanted in the field directly into sample bottles and labelled W9001.
2. With each batch of samples sent to the laboratory, submit 1 set of duplicate samples collected from any groundwater monitoring station and labelled W9003.
3. Carry out sampling, sample handling, sample documentation and sample dispatch as described above, note duplicate origin in field sheets.

7. GAS MONITORING

Accumulated gas monitoring is undertaken at the ORRRC as a requirement of the EPL.

The network, schedule, and parameters to be monitored are further detailed in **Section 3.9** of the OEMP. Following the requirements of this section of the OEMP and the EPL, the following procedures are to be followed.

7.2 ACCUMULATED GAS MONITORING

Accumulated (building) gas methane monitoring will be conducted using a zeroed and calibrated methane, carbon dioxide and oxygen gas detector, currently the GA2000. The threshold level for closer investigation and potential action is 12,500 parts per million (1.25 % v/v) of methane in any building on the facility or within 250 m of landfilled areas. If methane is detected above this limit, daily testing is required until ventilation or other measures have controlled the methane concentration. The monitoring frequency will be in accordance with EPL requirements.

The following procedure will be used to monitor surface gas emissions:

1. Before starting, prepare field notebook and check that gas analyser is working.
2. All enclosed buildings within 200m of active or capped areas of landfill shall be monitored. All rooms shall be investigated, with the gas meter allowed to detect for a period of approximately one minute in each. Ensure larger spaces also have perimeter walks conducted as well as investigation of alcoves and pits.

Notification of Gas Emissions

The EPA is notified as soon as practicable if any of the gas monitoring detects methane concentrations exceeding the threshold level. The methods for notification are identified in **SOP 13 – Pollution Incident Response Management**.

8. REPORTING

All results will be reviewed and forwarded to the Manager Waste Services and Technical Support when they are made available. At the end of each reporting year, all data collected will be compiled in an Annual Environmental Monitoring Report and Annual Return which will be forwarded to Council.

Data will be validated against monitoring program QA objectives, and interpreted with reference to the overall monitoring program objectives.

The monitoring program and annual reporting will be used to establish a record of groundwater, surface water, leachate quality, truck wash and gas accumulation. Data will be reviewed and any trends identified and possible causes investigated.

RESPONSIBILITIES

The Manager Waste Services and Technical Support is responsible for commissioning a contractor to undertake the environmental monitoring, as per the provisions of Environment Protection Licence No. 5956 and the Trade Waste Agreement.

RECORDS

After each round of monitoring, results are to be forwarded to the Manager Waste Services and Technical Support.

The contractor is required to complete the Annual Return and an Annual Environmental Monitoring Report (refer **Section 6.4**), detailing the results and findings of the environmental monitoring after each year of sampling.

REFERENCES

Section 3.7 – Surface Water and Leachate Management

Section 3.8 – Groundwater Management

Section 3.9 – Landfill Gas Management

Section 6.4 – Annual Environmental Monitoring Reports

Section 8.2 – Environment Protection Licences

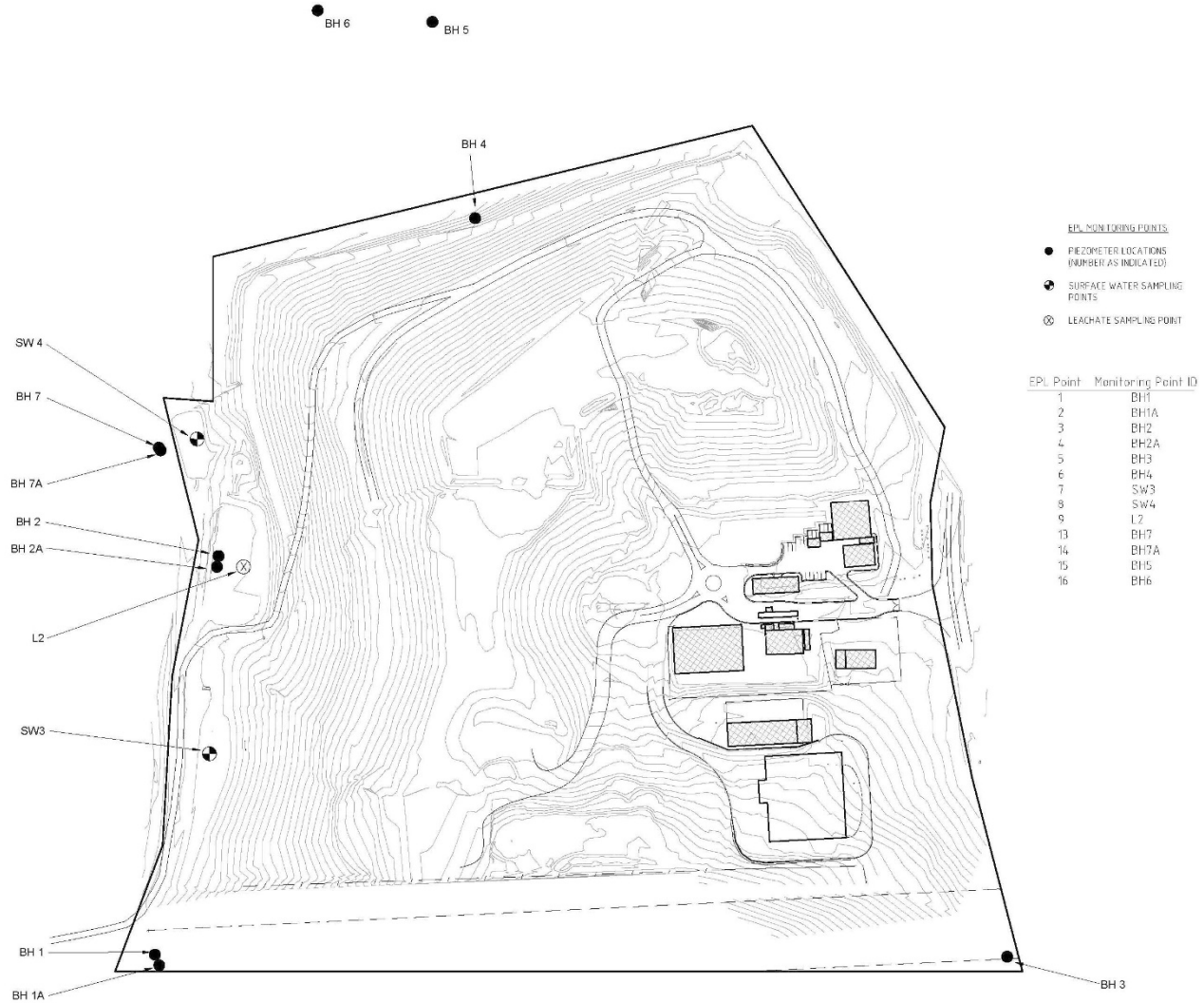


Figure 1: ORRRC Monitoring Points

	Standard Operating Procedure
	ERRRC Environmental Monitoring
	File No: **SOP 20**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature:	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
13/12/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
17/08/2015	Draft approved	Version 2
05/09/2016	Draft approved	Version 3
31/1/2020	Weather Station User Manual version updated (March-2017) Added Surface Gas Monitoring Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

To ensure consistent and correct methods are used for all environmental monitoring at the ERRRC, as per the requirements of the Environment Protection Licence (EPL 20104) and the Soil and Water Management Plan (SWMP). Environmental monitoring in this SOP includes groundwater, surface water, leachate, deposited dust and meteorological monitoring.

The network, schedule, and parameters to be monitored are detailed in **Section 4.9 – Groundwater Management** of the OEMP. Following the requirements of this section, the following procedures are to be followed.

WORK PROCEDURE

1. GROUNDWATER LEVEL MEASUREMENT

The monitoring frequency will be in accordance with EPL requirements.
Water level measurement will be undertaken using an electronic water level meter tape. The following procedure will be used:

1. Before starting, prepare field notebook and check that the water level meter is working.
2. Decontaminate the water whistle by rinsing with tap water followed by distilled water.
3. Visually check the borehole for damage and record any observed damage in the field sheets.
4. Remove cap(s), measure depth to water below top of 50mm PVC casing for the piezometer.
5. Replace caps, record piezometer number, date, time and depth to water in field sheets.

Conversion of Groundwater Level to Metres AHD

Recorded depths to groundwater should be converted to an elevation in metres AHD.

groundwater elevation (m AHD)	-	elevation top PVC pipe (m AHD)	-	depth to groundwater (m)

2. GROUNDWATER SAMPLING

The monitoring frequency will be in accordance with EPL requirements.
The following procedure will be used to obtain water samples.

1. Measure water level as described above.
2. Prepare sample containers, cross-check sampling requirements with laboratory sample container guide for correct bottle type, preservative and required quantity, note any specific holding times.
3. Label laboratory prepared bottles with project number, monitoring point

identification, sampler initials, date and time using water proof ink (xylene free) on self adhesive labels.

4. Purge the borehole: calculate purge volume (V) using the following formula:

   for 50 mm borehole V (litres) = 3x [(depth of bore - depth to water) x 2.26]

   Sampling should be conducted after the monitoring point has recovered from purging (sampling should not take place more than one day after purging) or alternatively, water can continue to be extracted until field measured parameters stabilise, indicating sample is representative of recharge.

5. Field measure temperature, pH and electrical conductivity; record results in field sheets.

6. Note on field sheets any visual observations relating to volume/flow present, colour, sediment, particulate matter, oil on surface etc as well as any apparent odour.

7. Lower a new plastic unpreserved bottle gently below surface of the water sample, filling bottle to top. Decant into sample bottles containing preservatives directly without rinsing, with zero headspace. Samples for volatile analysis should be obtained first. Samples for metals analysis should be field filtered using 11µm filter paper or equivalent. Replace lids tightly.

8. Place sample bottles into pre-chilled esky with several frozen ice-packs immediately after sample is decanted.

Methods of Purging

Bailing

Rinse the line in distilled water. Remove a new polyethylene bailer (factory decontaminated) from its protective wrapping. Attach the line to the bailer. Lower bailer gently to mid-point of screen, withdraw, decant into distilled water rinsed bucket. Repeat until purge volume and sufficient recharge is achieved or until field measured parameters stabilise, indicating sample is representative of recharge.

Submersible Pump

Ensure pump has been running to tank or waste for at least 100L. Run discharge into bucket and measure field parameters to ensure stabilisation. Obtain sample as described above.

3. SURFACE WATER SAMPLING

The monitoring frequency will be in accordance with EPL requirements and the SWMP.

The following procedure will be used to obtain surface water samples:

1. Prepare sample containers, cross-check sampling requirements with laboratory sample container guide for correct bottle type, preservative and required quantity, note any specific holding times.
2. Label laboratory prepared bottles with project number, monitoring point identification, sampler initials, date and time using water proof ink (xylene free) on self adhesive labels.
3. Collect from as close as practicable to point of discharge and upwind if possible to avoid collecting any concentration of surface contaminants. Obtain sample from below surface, being careful not to disturb any bottom sediment.
4. Field measure temperature, pH and electrical conductivity; record results in field sheets.
5. Note on field sheets any visual observations relating to volume/flow present, colour, sediment, particulate matter, oil on surface etc as well as any apparent odour.
6. Lower a new plastic unpreserved bottle gently below surface of the water, filling bottle to top. Decant into sample bottles containing preservatives directly without rinsing, with zero headspace. Samples for volatile analysis should be obtained first. Replace lids tightly.
7. Place sample bottles into pre-chilled esky with several frozen ice-packs immediately after sample is decanted.

4. LEACHATE SAMPLING

The monitoring frequency will be in accordance with the EPL and the SWMP.

The following procedure will be used to obtain leachate samples.

1. Ensure leachate tank contains liquid.
2. Prepare sample containers, cross-check sampling requirements with laboratory sample container guide for correct bottle type, preservative and required quantity, note any specific holding times.
3. Label laboratory prepared bottles with project number, monitoring point identification, sampler initials, date and time using water proof ink (xylene free) on self adhesive labels.
4. Collect from outlet tap of tank.
5. Note on field sheets any visual observations relating to volume/flow present, colour, sediment, particulate matter, oil on surface etc as well as any apparent odour.
6. Lower a new plastic unpreserved bottle gently below surface of the water, filling bottle to top. Decant into sample bottles containing preservatives directly without rinsing, with zero headspace. Samples for volatile analysis should be obtained first. Replace lids tightly.
7. Place sample bottles into pre-chilled esky with several frozen ice-packs immediately after sample is decanted.

5. TRANSPORT TO LABORATORY

1. Complete chain-of-custody (COC) form for samples, ensuring that details on COC and sample bottle label are identical.

2. On returning to base, repack esky with fresh ice packs. Seal copy of COC in plastic sleeve and place inside esky. Seal esky with packaging tape, security seal and care stickers.

3. Dispatch esky to laboratory by courier on the same day that samples are taken. Retain copy of courier consignment notice. Do no dispatch samples on Fridays unless arranged prior with laboratory.

6. QUALITY CONTROL

For each groundwater sampling round, one duplicate sample and one field blank will be submitted for Quality Control.

1. With each batch of samples submit 1 trip blank comprising a standard set of sample bottles filled with distilled water decanted in the field directly into sample bottles and labelled W9001.

2. With each batch of samples sent to the laboratory, submit 1 set of duplicate samples collected from any groundwater monitoring station and labelled W9003.

3. Carry out sampling, sample handling, sample documentation and sample dispatch as described above, note duplicate origin in field sheets.

7. DUST

7.1 QUALITATIVE

Dust will be monitored qualitatively continuously, that is visually, for plumes of windblown dust generated at the site potentially being blown beyond the site boundary. If dust plumes are seen near the site boundary the site supervisor will be notified immediately and mitigation measures implemented (refer **Section 4.12 – Dust Control**).

7.2 QUANTITATIVE- DEPOSITED DUST

Section 4.12 – Dust Monitoring of the OEMP details the dust monitoring frequency and network at the ERRRC. The monitoring frequency will be in accordance with EPL requirements.

The following procedures are to be followed:

1. Dust sampling will be in accordance with **AS/NZS 3580.10.1:2003**.

8. SURFACE GAS MONITORING

Surface gas monitoring is used to demonstrate that cover material is controlling the emission of landfill gas and is undertaken over capped areas of the landfill. Surface gas methane monitoring will be conducted using a zeroed and calibrated methane, carbon

dioxide and oxygen gas detector, currently the GA2000. The threshold concentration for closer investigation and potential action is 500 parts per million (v/v) of methane at any point on the landfill surface. The monitoring frequency will be in accordance with EPL requirements.

The following procedure will be used to monitor surface gas emissions:

1. Before starting, prepare field notebook and check that gas analyser is working.

2. Surface gas will be measured five centimetres above the ground surface in areas with intermediate or final cover where wastes have been placed. A field technician will start at a point 5 m away from the waste perimeter, walking across the waste parallel to the boundary of the landfill until reaching the opposite side. This procedure will be repeated at 25 m intervals inward from the perimeter across the centre of the site to the opposite side of the waste landfill. Due to accessibility constraints, areas consisting of varying gradient will be monitored following contour lines rather than maintaining a rigid grid coverage. Monitoring will be performed on calm days when winds are below 10 km/hr. Depressions in the cover material or surface fissures away from the sampling grid must also be investigated for methane emissions.

9. METEOROLOGICAL MONITORING

Orange City Council owns and maintains a meteorological station on the Euchareena Road Resource Recovery Centre site. This meteorological station utilises web-based software. Data from this meteorological station can be accessed by the following web link: http://www.weathermation.net.au/
Council shares access to this data with Golden Cross Resources. The login details of these two parties are as follows:

User Name	Password
OrangeCityCouncil	OcC437
Golden.Cross	OcC4683

Exporting Data
The step by step procedures detailed in the 'WeatherMation LIVE Web Module' and 'WeatherMation LIVE Reports Module' have been attached. These user manuals are to be followed when viewing, downloading and exporting data. The monitoring frequency will be in accordance with EPL requirements.

10. REPORTING

All results will be reviewed and forwarded to the Manager Waste Services and Technical Support when they are made available. At the end of each reporting year, all data collected will be compiled in an Annual Environmental Monitoring Report and Annual Return which will be forwarded to Council.

Data will be validated against monitoring program QA objectives, and interpreted with

reference to the overall monitoring program objectives.

The monitoring program and annual reporting will be used to establish a record of groundwater, surface water, leachate quality, truck wash and gas accumulation. Data will be reviewed and any trends identified and possible causes investigated.

RESPONSIBILITIES

The Manager Waste Services and Technical Support is responsible for commissioning a contractor to undertake the environmental monitoring, as per the provisions of Environment Protection Licence No. 20104 and the Trade Waste Agreement.

RECORDS

After each round of monitoring, results are to be forwarded to the Manager Waste Services and Technical Support.

The contractor is required to complete the Annual Return and an Annual Environmental Monitoring Report (refer **Section 6.4**), detailing the results and findings of the environmental monitoring after each year of sampling.

REFERENCES

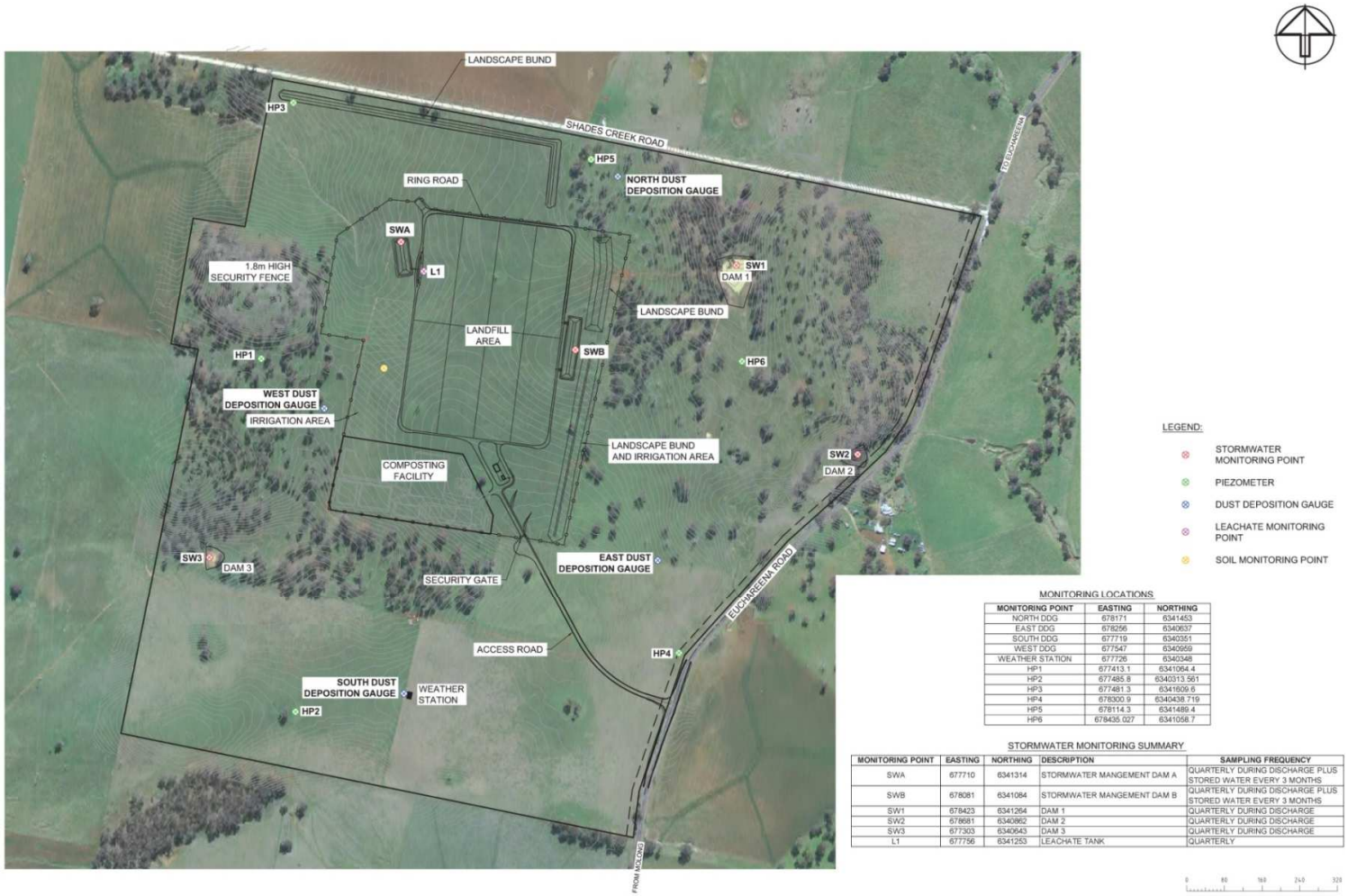
Section 3.7 – Surface Water and Leachate Management

Section 3.8 – Groundwater Management

Section 3.9 – Landfill Gas Management

Section 6.4 – Annual Environmental Monitoring Report

Section 8.2 – Environment Protection Licences



MONITORING LOCATIONS

MONITORING POINT	EASTING	NORTHING
NORTH DDG	678171	6341453
EAST DDG	678256	6340637
SOUTH DDG	677719	6340351
WEST DDG	677547	6340959
WEATHER STATION	677726	6340348
HP1	677413.1	6341064.4
HP2	677485.8	6340313.561
HP3	677481.3	6341609.6
HP4	678300.9	6340438.719
HP5	678114.3	6341489.4
HP6	678435.027	6341056.7

STORMWATER MONITORING SUMMARY

MONITORING POINT	EASTING	NORTHING	DESCRIPTION	SAMPLING FREQUENCY
SWA	677710	6341314	STORMWATER MANGEMENT DAM A	QUARTERLY DURING DISCHARGE PLUS STORED WATER EVERY 3 MONTHS
SWB	678081	6341084	STORMWATER MANGEMENT DAM B	QUARTERLY DURING DISCHARGE PLUS STORED WATER EVERY 3 MONTHS
SW1	678423	6341264	DAM 1	QUARTERLY DURING DISCHARGE
SW2	678681	6340862	DAM 2	QUARTERLY DURING DISCHARGE
SW3	677303	6340643	DAM 3	QUARTERLY DURING DISCHARGE
L1	677756	6341253	LEACHATE TANK	QUARTERLY

Figure 1: ERRRC Monitoring Points

WeatherMation LIVE Report Module

Version 1.6.3
28 March 2017

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Introduction

Environdata's WeatherMation software has been developed to download, display and respond to the weather data from your weather stations, automatically.

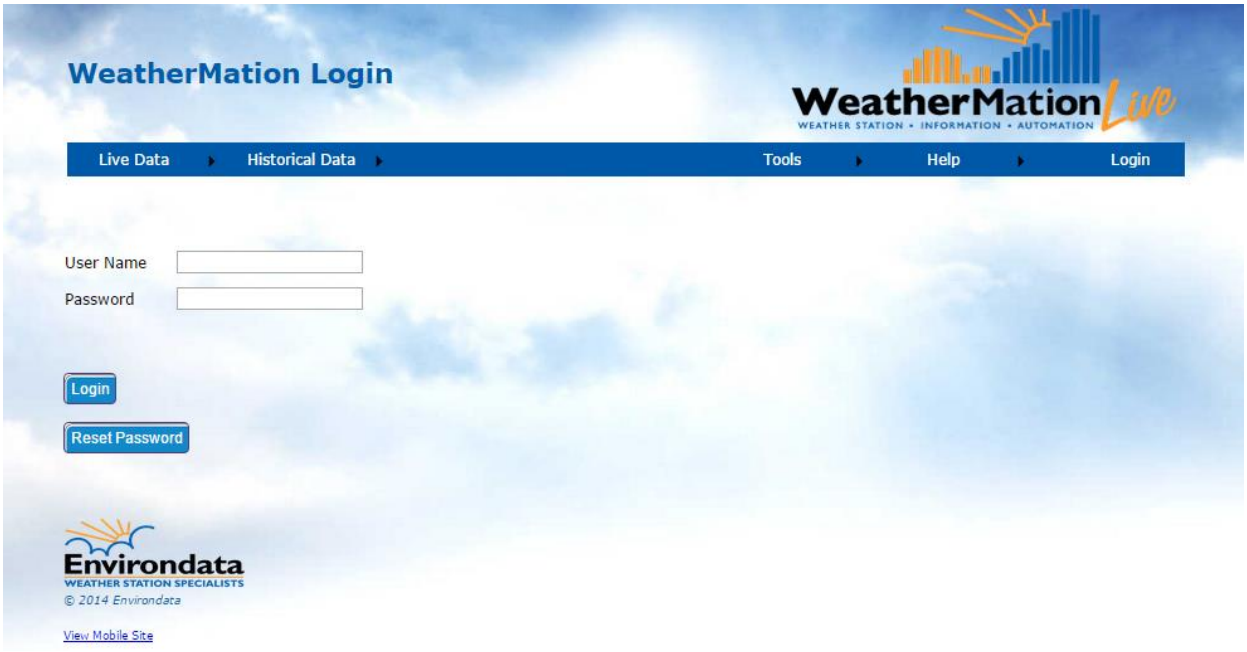
WeatherMation's Reports Module, provides your users with extra tools to analyse all of your weather data from each of your connected weather stations. This data is on a Webpage to be accessed via the internet on any browser from a computer.

Using the System

Go to www.weathermation.net.au
You will see the Login Page – please enter your User Name and Password that were provided to you.

Click on the Login button to access the system

(If you need to change your password, click on the Reset Password button)



1. Reports Specific *Menu Options*

- **Live Data**
    - **Weather Dashboard** - displays a customized report based on Current Readings Graphs, Historical Data Graphs or Current Values from your weather station. You can include multiple weather stations on 1 report. This is ONLY available if you have purchased the Reports Module.
- **Historical Data**
    - **Reports** – This allows you to setup, save and run reports based on your historical data. This is ONLY available if you have bought the Reports Module and if you have Reporting permission.
    - **Wind Rose -** This allows you to set up, save and run Wind Rose reports based on your historical data. This is ONLY available if you have bought the Reports Module and if you have Reporting permission.
- **Tools**
    - **Weather Dashboard Setup**– You can customize your Weather Dashboard Reports page. This is ONLY available if you have bought the Reports Module and if you have configuration permission.

2. Weather Dashboard

Using the Weather Dashboard Page

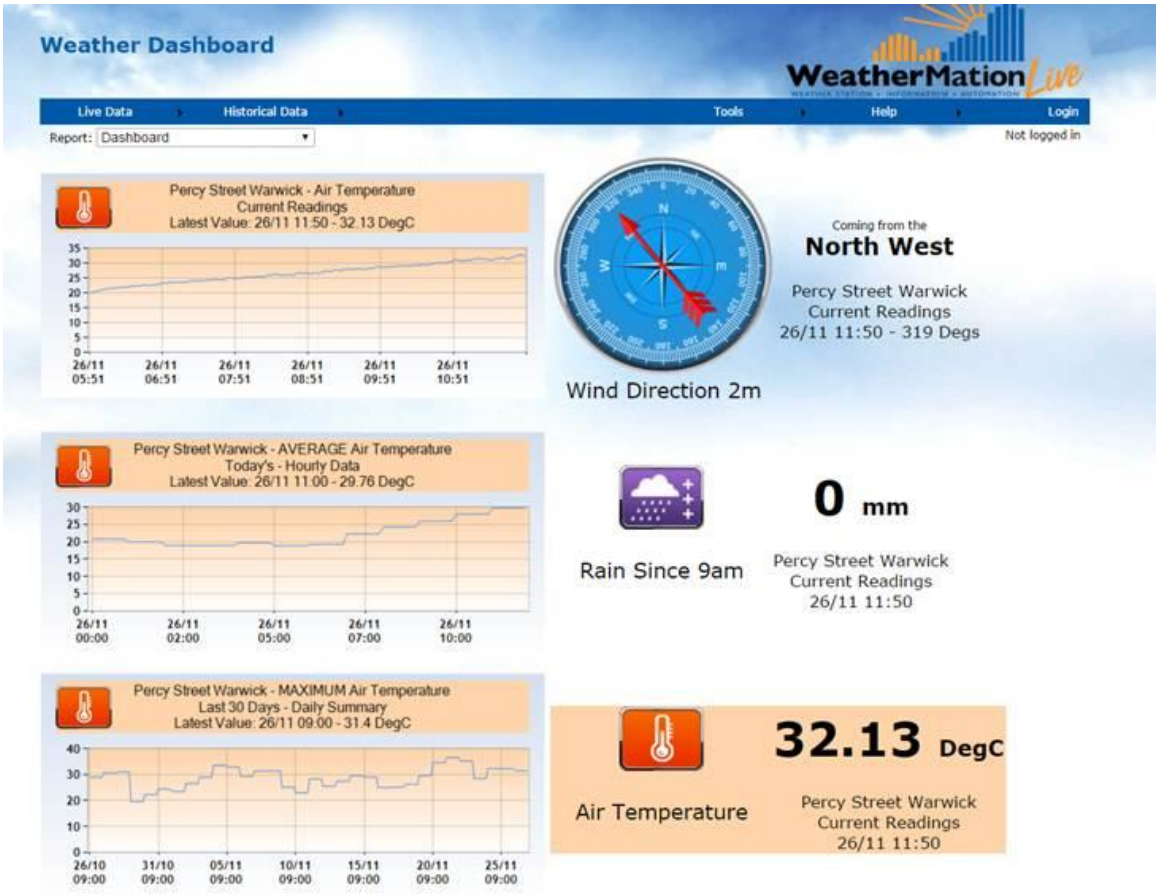
If your user has permission to do configuration, they can setup different Dashboard Reports. Each report can have up to 12 Graphs, Wind Compasses or Latest Values – based on Current or Historical Data.

You can display multiple sensors from multiple weather stations on each Dashboard Report. Please see Section 3 on how to customize and save these reports.

If you have more than one Weather Dashboard Report set up, you can select which Report to display by clicking the arrow on the drop-down box and selecting your chosen Report.

Notes:

You may have the optional Alerts & Notifications Module and have On-Screen Alerts setup. E.g. Air Temperature in the below image has an orange background to indicate the temperature has reached the settings to display a yellow background. 7 settings per sensor are possible.



3. Weather Dashboard Setup

Weather Dashboard Setup Screen

The Weather Dashboard Setup Screen allows you to setup which sensors from which weather station you would like to be displayed on Weather Dashboard Report. You can also select in which order they will appear and what type of graph you'd like for them. Only a user assigned layout setup access will be able to make these changes.

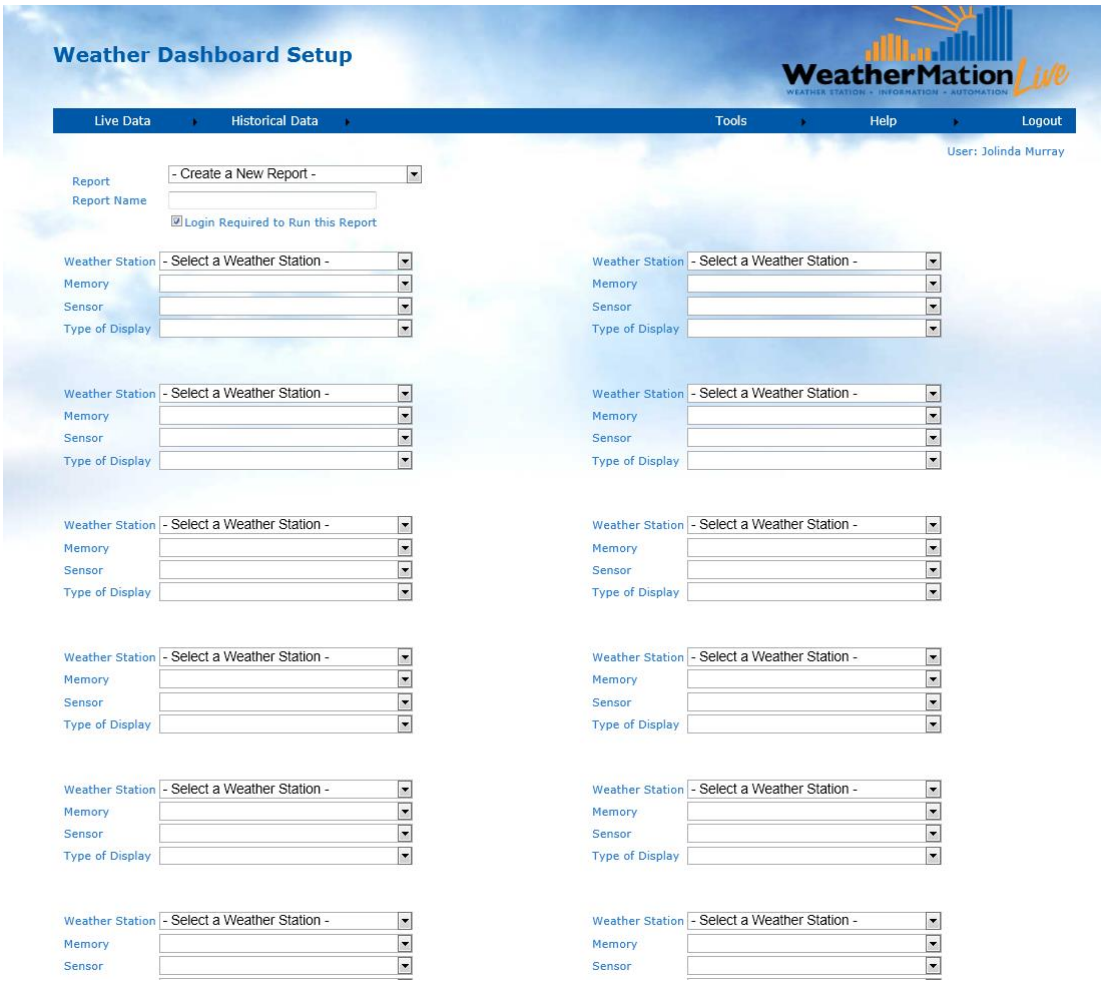
You are able to create and save multiple Dashboard Reports.

Creating a NEW Weather Dashboard Report

Enter a Name for your New Report in the Report Name field.

Login Required to Run this Report:

1. If you have chosen to have your sites secure, and require your users to login to access your weather stations, then this field should be ticked in order to keep your data secure.
2. If you have chosen to NOT have a login for your weather stations and they are publicly viewable, then leave this box un-ticked to make this report publicly viewable or tick this box to make the report secure and require a login to view.



You have the option to display up to 12 item per Dashboard Report, so for each graph:

- If you have more than 1 weather station linked to this software, you can select which weather station's data to display by clicking the arrow on the drop-down box and selecting a different weather station.
- Select which Memory you'd like to display – Current Data of Historical Data like Daily Summary or Hourly Data etc.
- All Sensors that are AVAILABLE to be selected to be displayed on the Sensor Drop-down box, select one by clicking on it.
- Then select what type of Graph you'd like to display – BAR or LINE or LATEST VALUE. For Wind Direction sensors, you will have an added option to display a COMPASS. (Latest Value will display the last value received from the Weather Station)

Click on the Save Report button to save this Dashboard Report.

Deleting a Weather Dashboard Report

N.B. Weather Dashboard reports can be edited or deleted by the original creator, only.

In order to delete a Dashboard Report, select the Dashboard Report clicking the arrow on the drop-down box and selecting the Report.

Then click the Delete Report button.

Editing/Changing a Weather Dashboard Report

N.B. Weather Dashboard reports can be edited or deleted by the original creator, only.

In order to edit a Dashboard Report, select the Dashboard Report clicking the arrow on the drop-down box and selecting the Report.

If you'd like to make changes to the Dashboard Report and save it with a NEW Name, enter a NEW Name in the Report Name field. This will save the NEW Report with a different name AND keep the original report.

Once you have made the changes, click the Save Report Layout button to save the report.

4. Reports

The Reports option gives you multiple ways to view and analyse your weather station's historical data.

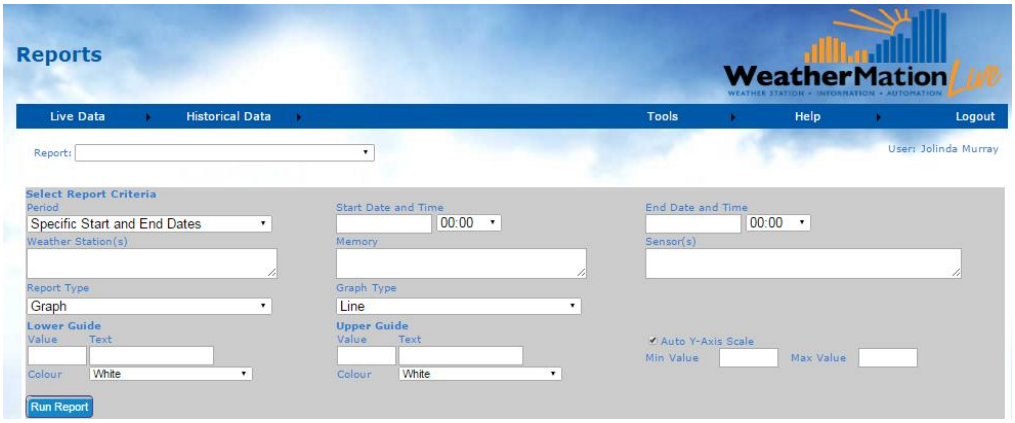
As a user with Reporting permissions, you will be able to view and run Reports, but not be able to save any new or change any existing reports.

As a user with Configuration & Reporting permissions, you will be able to view, run, save, edit and delete reports.

Viewing the Reports Page the First Time (without Configuration permissions)

Viewing the Reports Page for the 1st time or while you don't have any SAVED Reports, you will get the Select Report Criteria section.

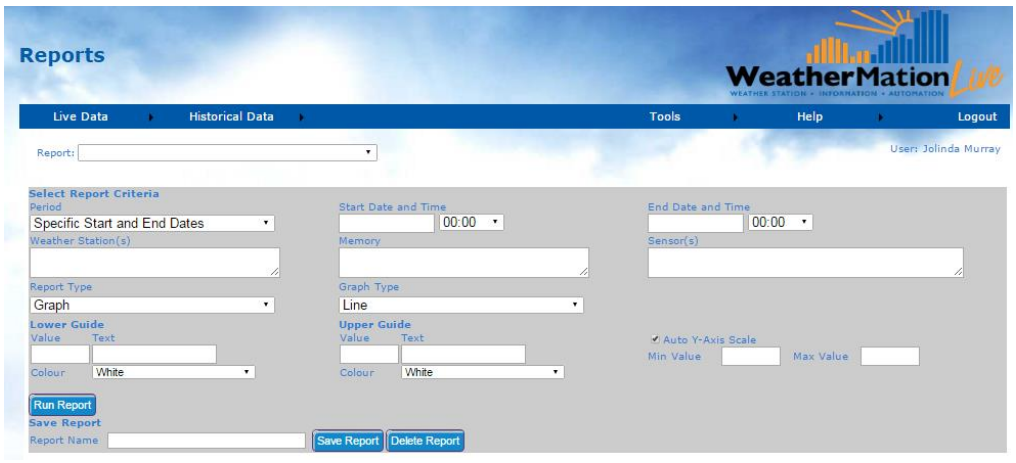
Here you can select what should be displayed on the Report & RUN the report



Viewing the Reports Page the First Time (with Configuration permissions)

Viewing the Reports Page for the 1st time or while you don't have any SAVED Reports, you will get the Select Report Criteria section.

Here you can select what should be displayed on the Report, RUN the report and SAVE the Report for future use.



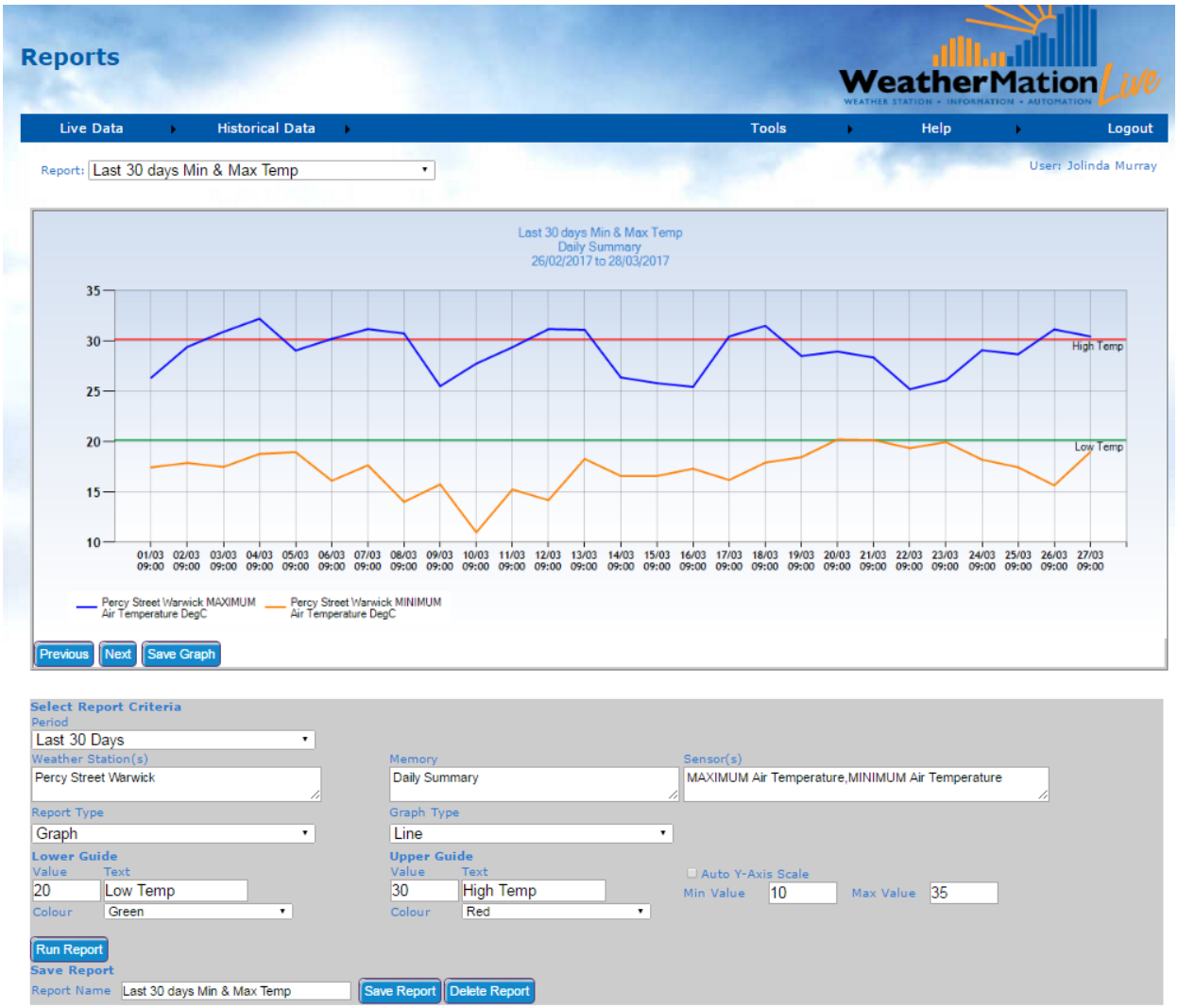
What options do I have for viewing a report?

- Period:
  This is the 'timeframe' for the data you want to report on
  - Specific Start and End Dates
  - Yesterday
  - Last 4 Hours
  - Last 8 Hours
  - Last 12 Hours
  - Last 24 Hours
  - Last 7 Days
  - Last 30 Days
  - Last 90 Days
  - Last 180 Days
  - Last Year
  - Last Full Week
  - Last Full Month
  - Last Full 4 Months
  - Last Full 6 Months
  - Last Full 12 Months
  - Summary To Date
  - Summary By Month
  - Summary By Quarter
- Weather Station(s):
  - You can select one or more of your weather stations
- Memory:
  - You can only select ONE Memory per report.
  - Your selection here is important e.g. selecting 'Last X Hours' in your Period, does not make sense if you select Daily Summary. See the *Note* below.
- Sensor(s):
  - You can select one or more Sensors for the report.
- Report Type:
  - Graph – this will only display a graph with your data
  - Grid Report – this will display only a table with your data
  - Graph and Grid – this will display a graph and a table report with your data
- Graph Type:
  - Line Graph
  - Bar Graph
- Lower and Upper Guides:
  - Value – the value of where the guide will be on the graph
  - Text – A label that will be displayed on the graph
  - Colour – Select a colour for the guide
- Auto Y-Axis Scale:
  - Checked allows you to set a specific Min and Max Value for the Vertical Y-Axis Scale

***Note**: Consider the Memory and Period you selected carefully – e.g. If you select 'Daily Summary' (which normally only has records for 9am every day), then selecting last 4 Hours as the Period will only have 1 data record (if you are running the report before 1pm (4 hours after 9am)) or it might have no data if you run it after 1pm.*

Once you have entered all the Report Parameters, click the Run Report button to display your report.

Running a Graph Report



Select your Report Criteria – make sure Report Type is **Graph**. Then click the Run Report button to display your Graph.

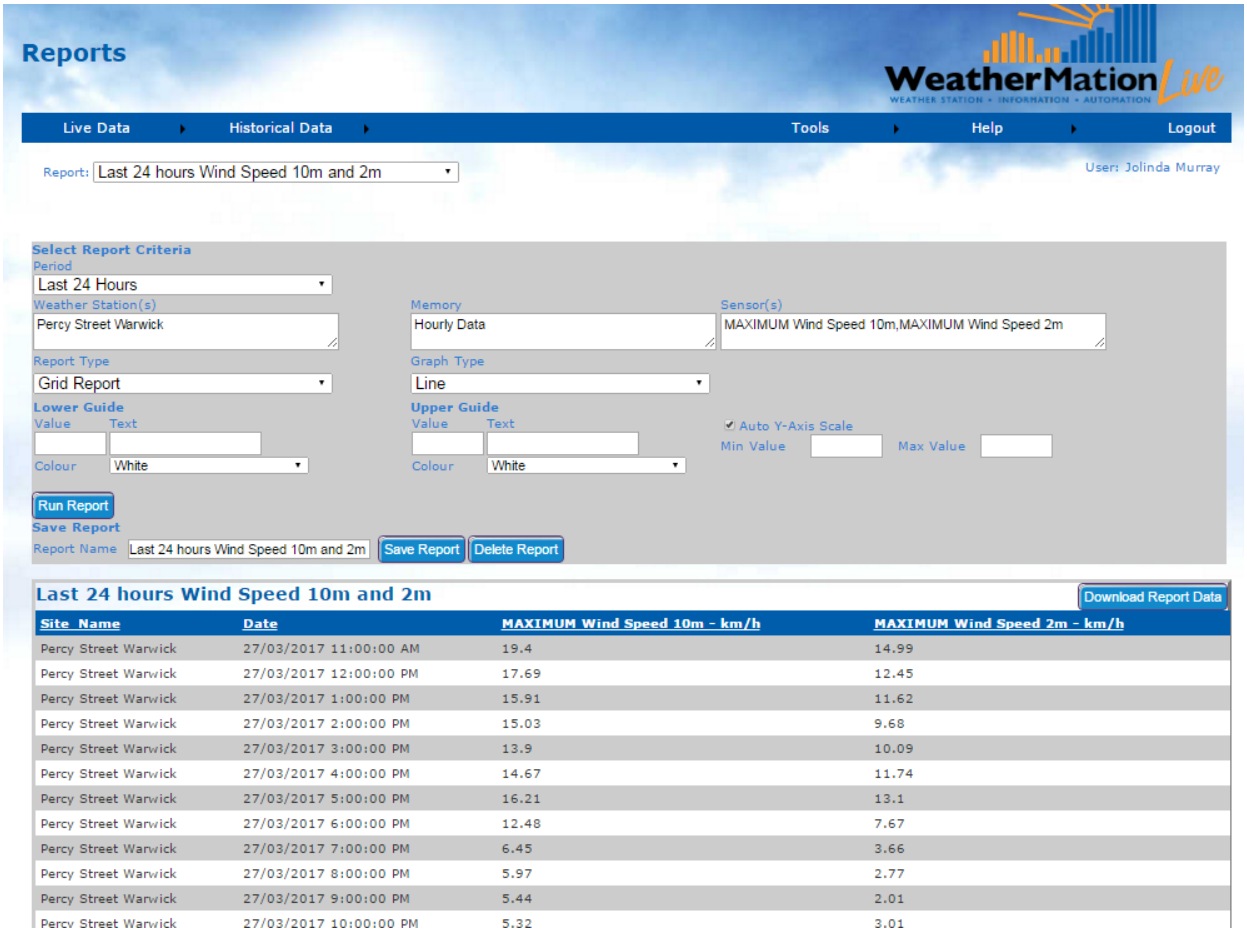
In this example we are displaying a Graph for one Weather Station (Percy Street Warwick) for its Max and Min Air Temperature. Data is based on Daily Summary data over the last 30 Days.

It also uses the Guide Lines with labels and the Y-Axis is from 10-35 Degrees C

Specific Options on a Graph:

- Previous – this will display the Data for the Previous Period e.g. previous 30 days in this case.
- Next - this will display the Data for the Next Period.
- Save Graph – this will save a .png file of the Graph to your PC or device.

Running a Grid Report



Site_Name	Date	MAXIMUM Wind Speed 10m - km/h	MAXIMUM Wind Speed 2m - km/h
Percy Street Warwick	27/03/2017 11:00:00 AM	19.4	14.99
Percy Street Warwick	27/03/2017 12:00:00 PM	17.69	12.45
Percy Street Warwick	27/03/2017 1:00:00 PM	15.91	11.62
Percy Street Warwick	27/03/2017 2:00:00 PM	15.03	9.68
Percy Street Warwick	27/03/2017 3:00:00 PM	13.9	10.09
Percy Street Warwick	27/03/2017 4:00:00 PM	14.67	11.74
Percy Street Warwick	27/03/2017 5:00:00 PM	16.21	13.1
Percy Street Warwick	27/03/2017 6:00:00 PM	12.48	7.67
Percy Street Warwick	27/03/2017 7:00:00 PM	6.45	3.66
Percy Street Warwick	27/03/2017 8:00:00 PM	5.97	2.77
Percy Street Warwick	27/03/2017 9:00:00 PM	5.44	2.01
Percy Street Warwick	27/03/2017 10:00:00 PM	5.32	3.01

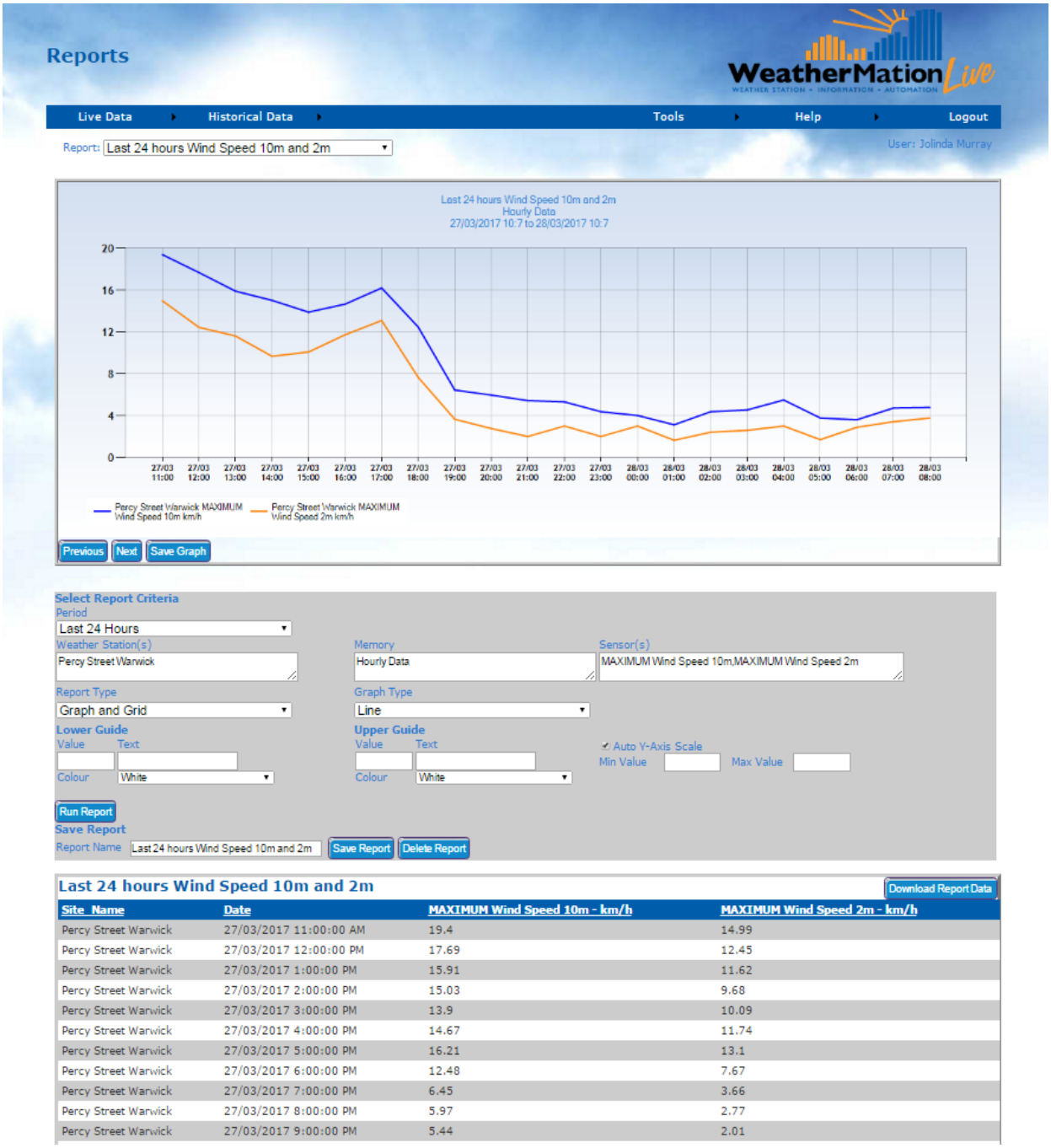
Select your Report Criteria – make sure Report Type is **Grid Report**. Then click the Run Report button to display your data in a Grid/Table format.

In this example we are displaying a Table for One Weather Station (Percy Street Warwick) for its Maximum Wind Speed at 2M and at 10M. Data is based on Hourly data over the last 24 Hours.

Specific Options on a Grid Report:

- Download Report Data – this will save a Comma Separated File (csv) of all the data in this Report to your PC or device. You can then open this file either in Excel or in any other text editor like Word or Notepad.

Running a Graph and Grid Report

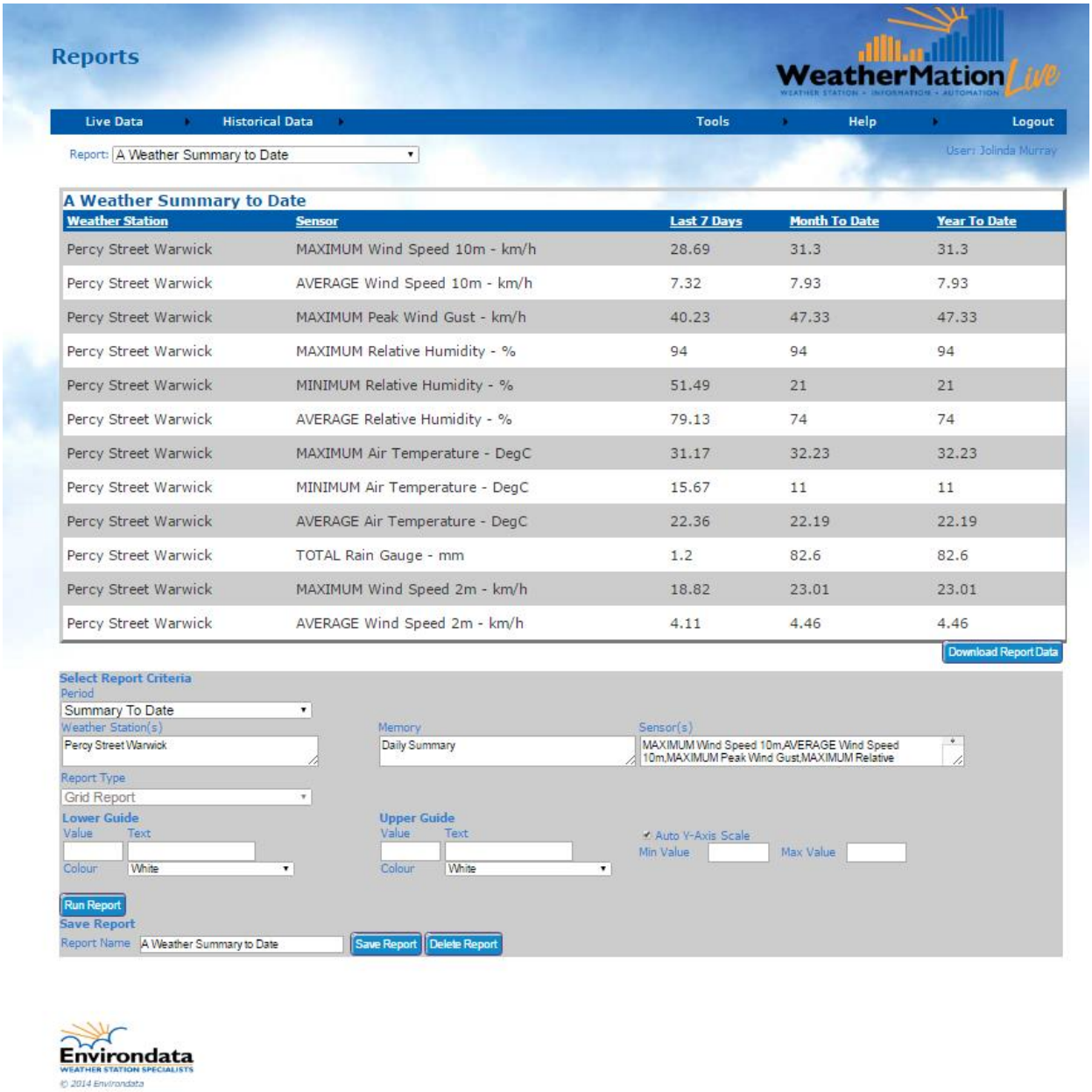


Site_Name	Date	MAXIMUM Wind Speed 10m - km/h	MAXIMUM Wind Speed 2m - km/h
Percy Street Warwick	27/03/2017 11:00:00 AM	19.4	14.99
Percy Street Warwick	27/03/2017 12:00:00 PM	17.69	12.45
Percy Street Warwick	27/03/2017 1:00:00 PM	15.91	11.62
Percy Street Warwick	27/03/2017 2:00:00 PM	15.03	9.68
Percy Street Warwick	27/03/2017 3:00:00 PM	13.9	10.09
Percy Street Warwick	27/03/2017 4:00:00 PM	14.67	11.74
Percy Street Warwick	27/03/2017 5:00:00 PM	16.21	13.1
Percy Street Warwick	27/03/2017 6:00:00 PM	12.48	7.67
Percy Street Warwick	27/03/2017 7:00:00 PM	6.45	3.66
Percy Street Warwick	27/03/2017 8:00:00 PM	5.97	2.77
Percy Street Warwick	27/03/2017 9:00:00 PM	5.44	2.01

Select your Report Criteria – make sure Report Type is **Graph and Grid**. Then click the Run Report button to display your data in a Graph at the top and a Grid/Table format at the bottom.

In this example we are displaying a Graph and a Table for one Weather Station (Percy Street Warwick) for its Max Wind Speed at 2M and at 10M. Data is based on hourly data over the last 24 Hours.

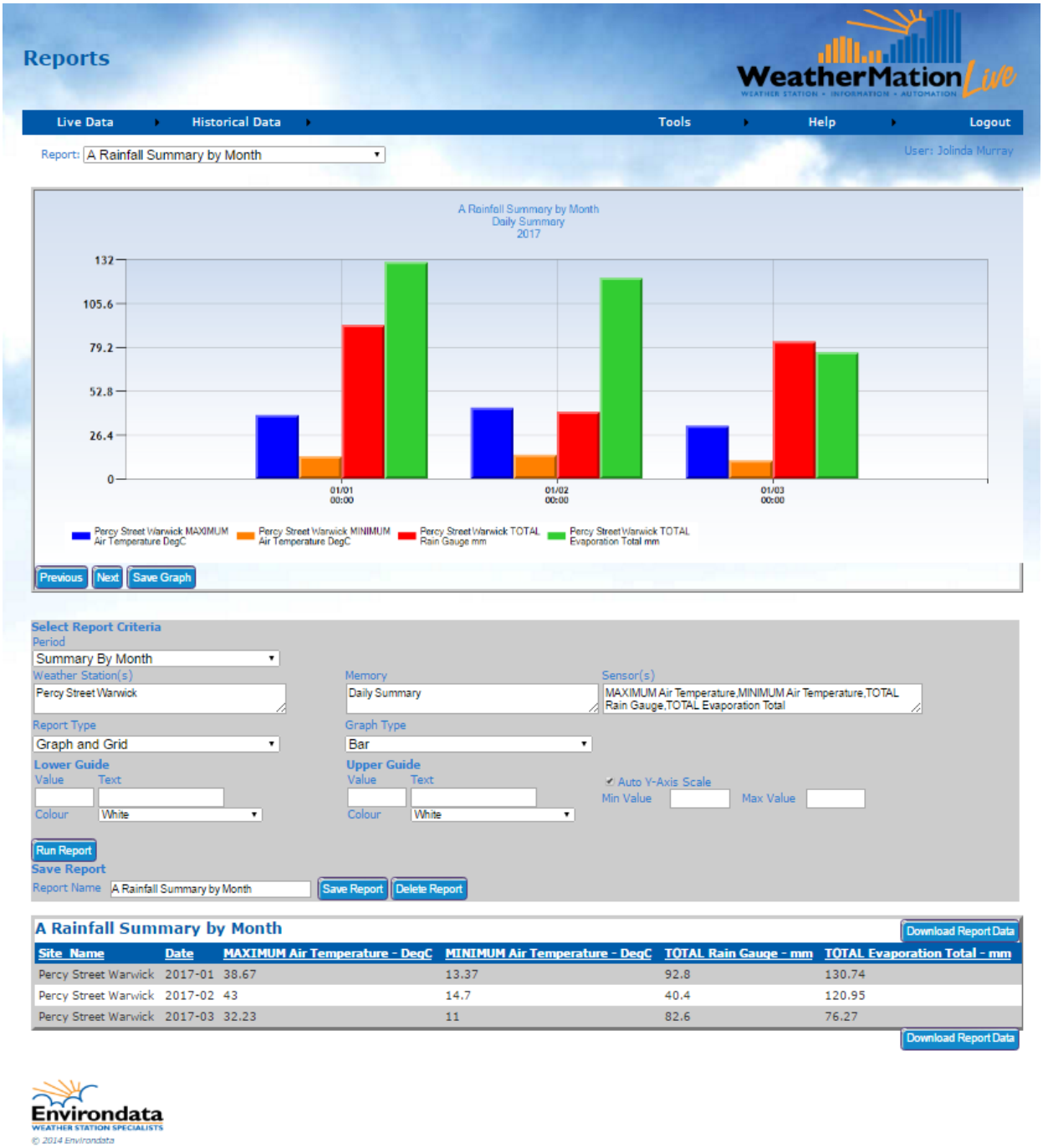
Running a ‘Summary to Date’ Report



Select your Report Criteria – make sure **Period** is ‘**Summary To Date’**. Then click the Run Report button to display your data.

In this example we are displaying a Summary to Date for one Weather Station (Percy Street Warwick) for 7 various selected sensors. Data is retrieved from the Daily Summary data.

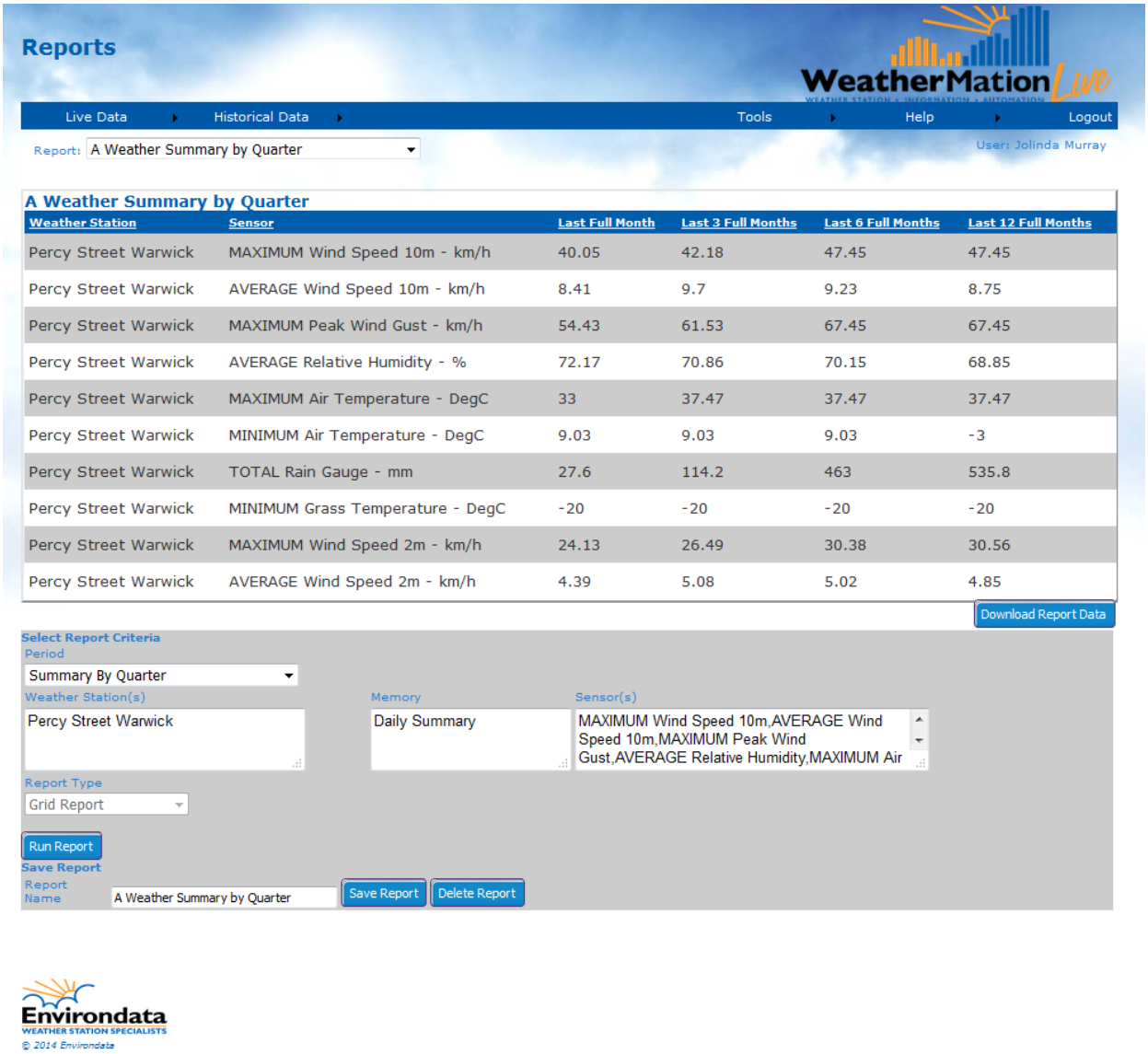
Running a ‘Summary By Month’ Report



Select your Report Criteria – make sure **Period** is ‘**Summary by Month’**. Then click the Run Report button to display your data. Summary by Month will return summary weather data reported per Year. You have an option to display a Graph or a Grid or both.

In this example we are displaying a Summary by Month for one Weather Station (Percy Street) for 4 various selected sensors. Data is retrieved from the Daily Summary data.

Running a ‘Summary By Quarter’ Report



Select your Report Criteria – make sure **Period** is ‘**Summary by Quarter”**. Then click the Run Report button to display your data. Summary by Quarter will return summary weather data reported from full calendar months only, last single full month, last 3 months, 6 months and 12 months.

In this example we are displaying a Summary by Quarter for one Weather Station (Percy Street Warwick) for 7 various selected sensors. Data is retrieved from the Daily Summary data.

Notes on the Summary Reports

Values are based on the Sensor Selected e.g.

- MAXIMUM Wind Speed – will give the MAXIMUM value over the period
- MINIMUM Air Temperature – will give the LOWEST of the MINIMUM Air Temperature values over the period
- MAXIMUM Air Temperature – will give the HIGHEST of the MAXIMUM Air Temperatures value over the period
- AVERAGE Air Temperature – will give the AVERAGE value over the period
- TOTAL Rain Gauge – will give the TOTAL rainfall over the period

Periods on the Summary To Date:

- Week To Date – From midnight on the same day last week till NOW
- Month To Date – From midnight on 1st of the Current Month till NOW
- Year To Date – From midnight on 1st January till NOW

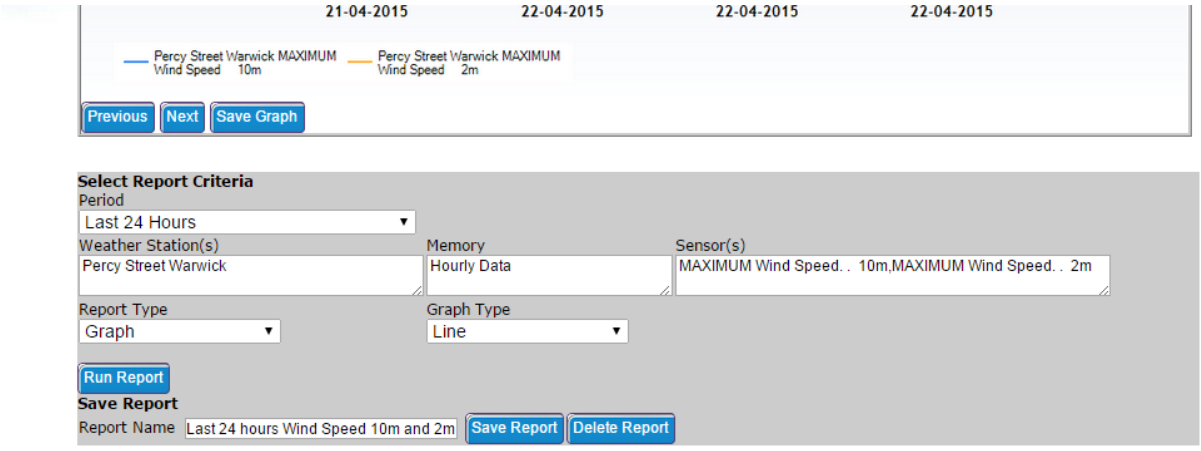
Periods on the Summary by Quarter:

- Last Full Month
  - From midnight on the 1st till midnight on the last day of the previous month.
- Last 3 Full Months
  - From midnight on the 1st till midnight on the last day of the previous 3 months.
- Last 6 Full Months
  - From midnight on the 1st till midnight on the last day of the previous 6 months.
- Last 12 Full Months
  - From midnight on the 1st till midnight on the last day of the previous 12 months.

Saving a Report

***Note**: Only available if you have Configuration Permissions – if you don't see the button to Save a Report, please contact your Administrator User to save the Report for you.*

To save a report , click the Save Report button.

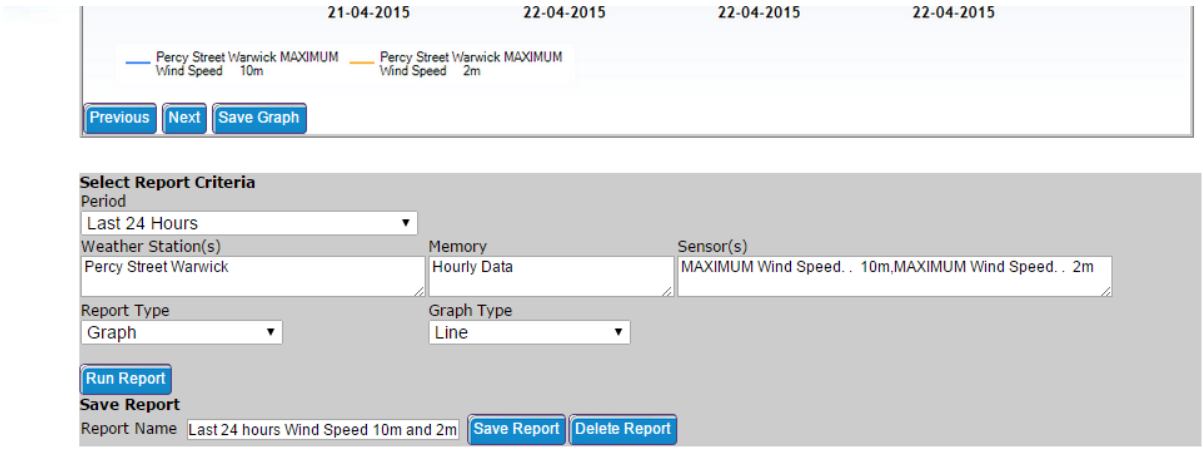


Edit a Report

***Note**: Only available if you have Configuration Permissions, otherwise please contact your Administrator User to edit and save the Report for you.*

To edit a report, select the Report from the Report list. You can make any changes to the Report Selection Criteria and Run the Report.

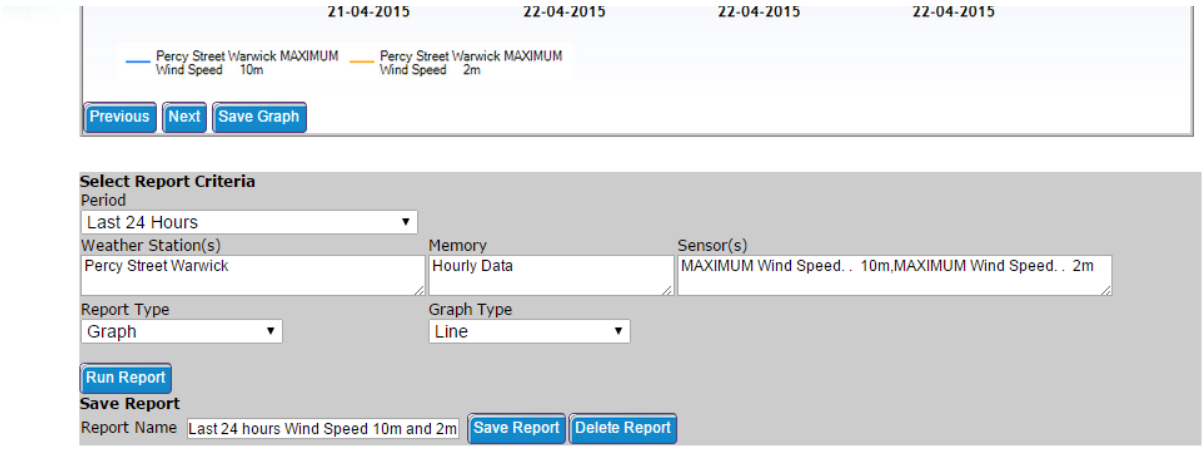
- Save Current Report – Click the Save Report button – edits the current report
- Save NEW Report – Change the Report Name in the Report Name field and click the Save Report button. Both old and new reports are available.



Delete a Report

***Note**: Only available if you have Configuration Permissions – if you don't see the section to Delete a Report, please contact your Administrator User to delete the Report for you.*

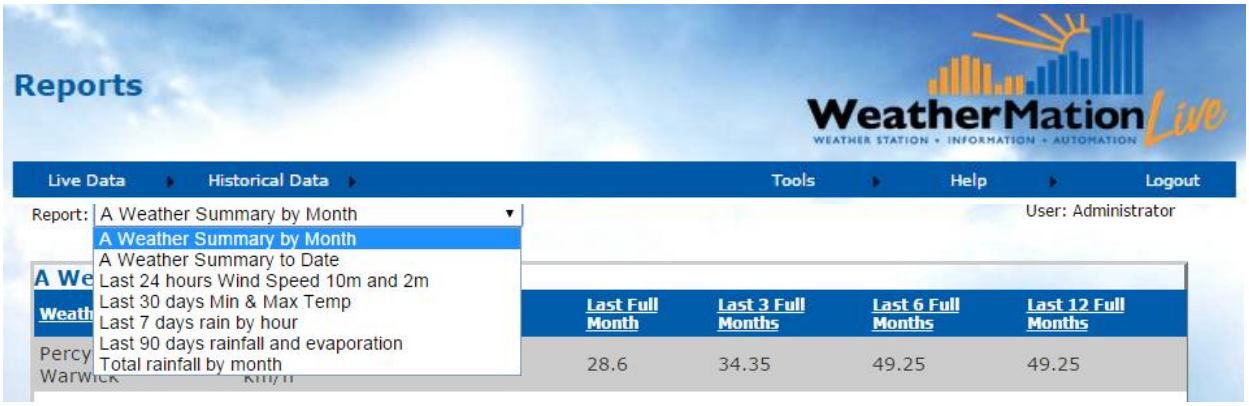
To delete a report, select the Report from the Report list and click the Delete Report button.



Running a SAVED Report

All of your Company's Saved Reports will be displayed for selection in the Report list. You can select any report in order to run it.

You can make changes to the Report Criteria and Run the report again – this will NOT save the report with the new criteria.



5. Wind Rose Reports

The Wind Rose Reports displays a Graph and Data about your Wind Speed and Wind Direction combination.

As a user with Reporting permissions, you will be able to view and run Reports, but not be able to save any new or change any existing reports.

As a user with Configuration & Reporting permissions, you will be able to view, run, save, edit and delete reports.

Viewing the Wind Rose Reports Page the First Time (without Configuration permissions)

Viewing the Wind Rose Reports Page for the 1st time or while you don't have any SAVED Reports, you will get the Select Report Criteria section.

Here you can select what should be displayed on the Report & RUN the report

Viewing the Reports Page the First Time (with Configuration permissions)

Viewing the Wind Rose Reports Page for the 1st time or while you don't have any SAVED Reports, you will get the Select Report Criteria section.

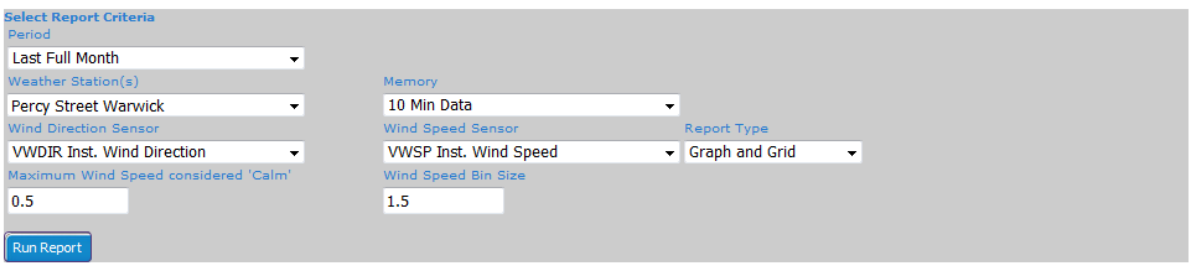
Here you can select what should be displayed on the Report, RUN the report and SAVE the Report for future use.

What options do I have for viewing a Wind Rose report?

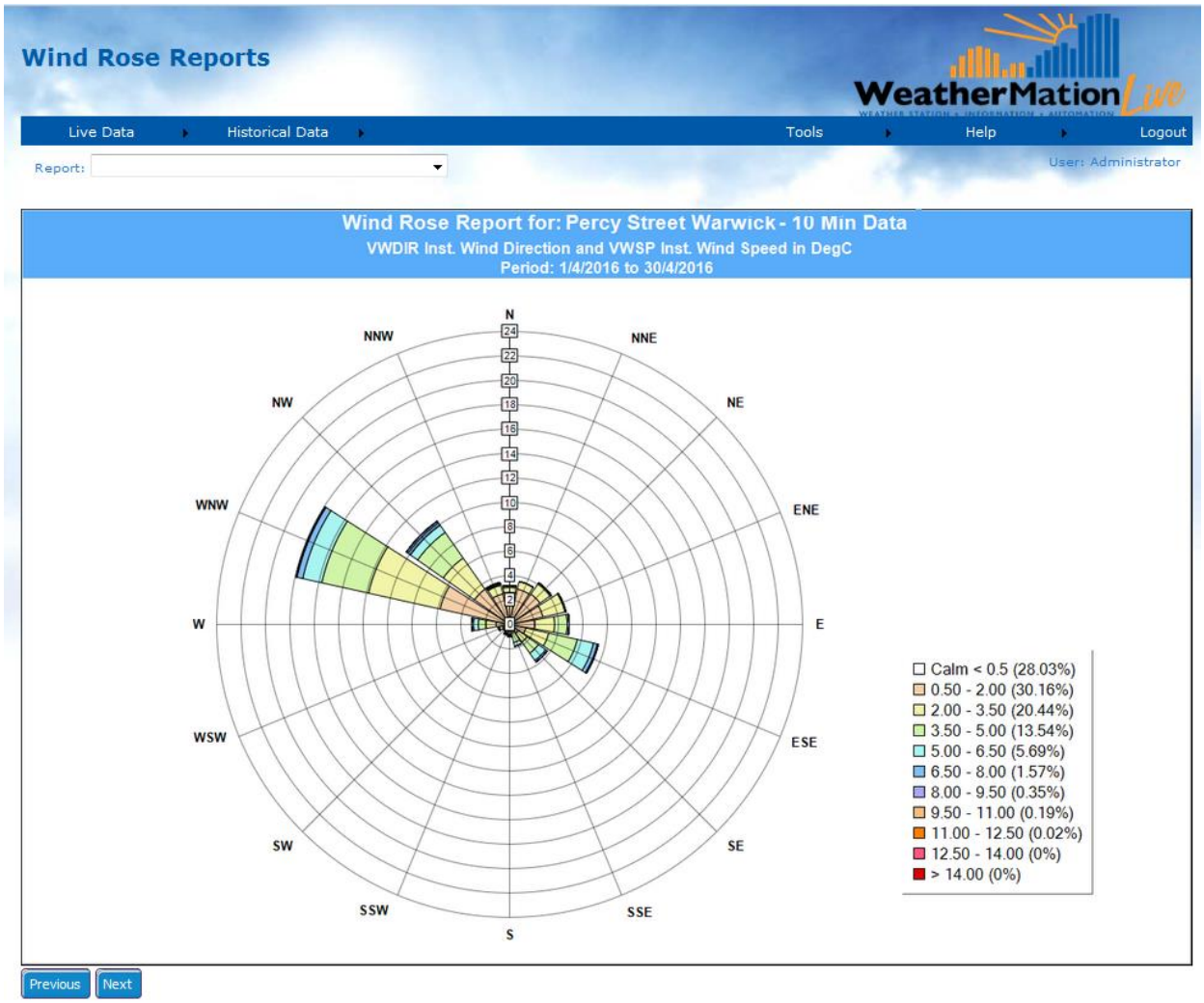
- Period:
  This is the 'timeframe' for the data you want to report on
  - Specific Start and End Dates
  - Yesterday
  - Last 4 Hours
  - Last 8 Hours
  - Last 12 Hours
  - Last 24 Hours
  - Last 7 Days
  - Last 30 Days
  - Last 90 Days
  - Last 180 Days
  - Last Year
  - Last Full Week
  - Last Full Month
  - Last Full 4 Months
  - Last Full 6 Months
  - Last Full 12 Months
- Weather Station:
  - You can select one weather station
- Memory:
  - You can only select ONE Memory per report.
  - Your selection here is important e.g. selecting 'Last X Hours' in your Period, does not make sense if you select Daily Summary. See the *Note* below.
- Wind Direction Sensor:
  - You have to select a Wind Direction Sensor for the report.
- Wind Speed Sensor:
  - You have to select a Wind Speed Sensor for the report.
- Report Type:
  - Graph – this will only display a graph with your data
  - Grid Report – this will display only a table with your data
  - Graph and Grid – this will display a graph and a table report with your data
- Maximum Wind Speed considered "Calm":
  - Enter the Value for which you still consider Wind Speed to be calm. Default is 0.5
- Wind Speed Bin Size:
  - This is the value in which the Wind Speeds will be increased. Default is 1.5

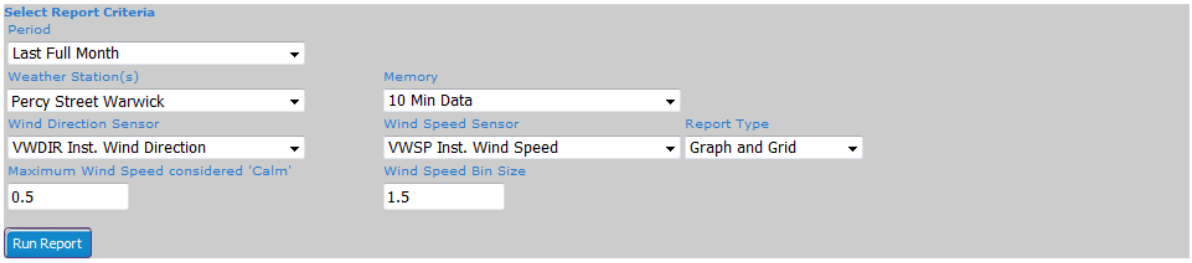
***Note**: Consider the Memory and Period you selected carefully – e.g. If you select 'Daily Summary' (which normally only has records for 9am every day), then selecting last 4 Hours as the Period will only have 1 data record (if you are running the report before 1pm (4 hours after 9am)) or it might have no data if you run it after 1pm.*

Once you have entered all the Parameters, click the Run Report button to display your report.



Running a Wind Rose Report





Wind Rose Report for: Percy Street Warwick 10 Min Data VWDIR Inst. Wind Direction and VWSP Inst. Wind Speed in DegC
Period: 1/4/2016 to 30/4/2016

Download Report Data

Wind Speed Range	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Totals
0.50 - 2.00	2.66	2.96	3.03	2.78	2.06	1.39	0.86	0.23	0.21	0.3	0.21	0.35	1.13	5.86	3.56	2.57	30.16
2.00 - 3.50	0.37	0.62	1.06	1.85	1.64	1.9	0.93	0.46	0.42	0.23	0.21	0.19	0.79	5.97	3.1	0.69	20.44
3.50 - 5.00	0.14		0.05	0.07	1.02	2.38	1.06	0.81	0.19	0.16	0.14	0.3	0.62	3.94	2.55	0.12	13.54
5.00 - 6.50					0.16	1.39	0.74	0.3	0.07		0.05	0.12	0.42	1.62	0.74	0.09	5.69
6.50 - 8.00						0.3	0.14		0.07	0.12		0.02	0.14	0.46	0.23	0.09	1.57
8.00 - 9.50						0.07	0.02			0.05			0.02	0.05	0.14		0.35
9.50 - 11.00									0.05	0.05	0.05			0.02	0.02		0.19
11.00 - 12.50							0.02										0.02
12.50 - 14.00																	0
> 14.00																	0
Totals	3.17	3.59	4.14	4.7	4.88	7.43	3.77	1.81	1	0.9	0.65	0.97	3.12	17.92	10.35	3.56	71.97
Calms	28.03																

Download Report Data

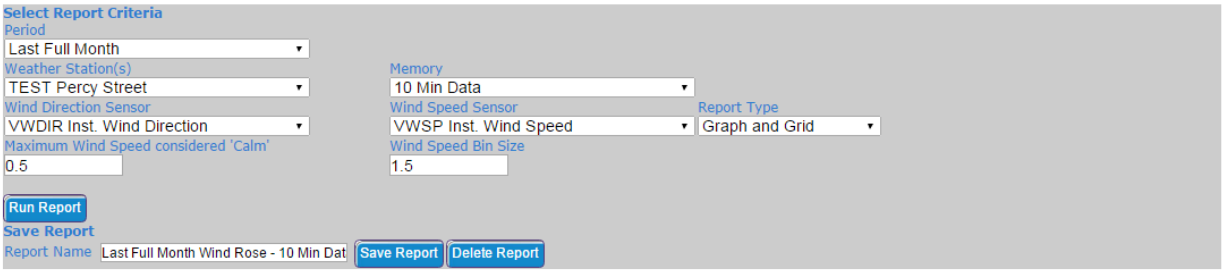
Environdata
WEATHER STATION SPECIALISTS
© 2014 Environdata

Select your Wind Rose Report Criteria – make sure Report Type is **Graph and Grid**. Then click the Run Report button to display your data in a Graph at the top and a Grid/Table format at the bottom.

Saving a Report

***Note**: Only available if you have Configuration Permissions – if you don't see the button to Save a Report, please contact your Administrator User to save the Report for you.*

To save a report, click the Save Report button.

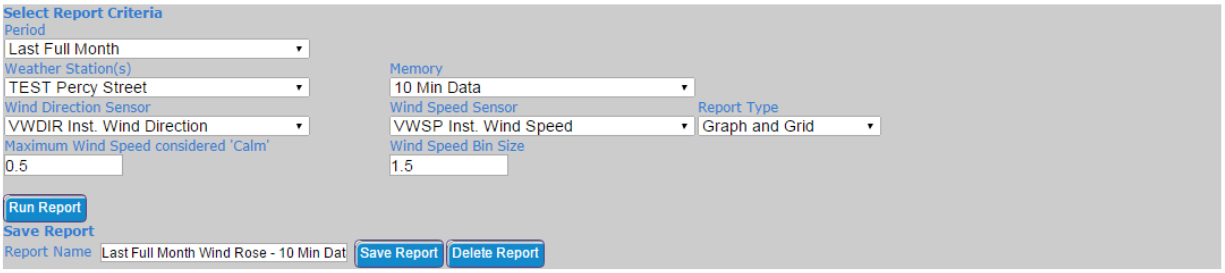


Edit a Report

***Note**: Only available if you have Configuration Permissions, otherwise please contact your Administrator User to edit and save the Report for you.*

To edit a report, select the Report from the Report list. You can make any changes to the Report Selection Criteria and Run the Report.

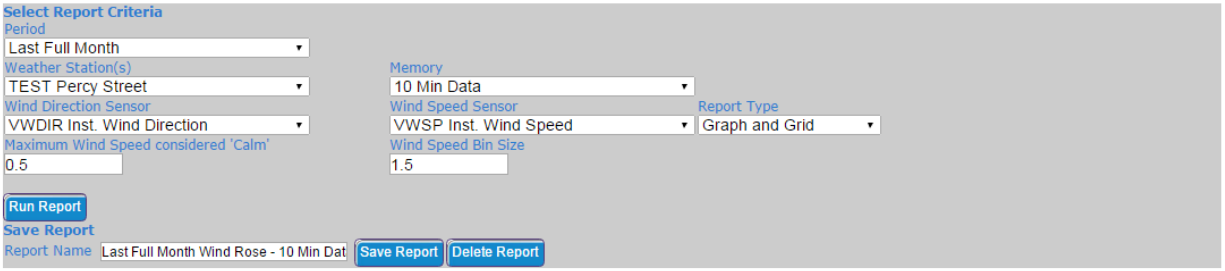
- Save Current Report – Click the Save Report button – edits the current report
- Save NEW Report – Change the Report Name in the Report Name field and click the Save Report button. Both old and new reports are available.



Delete a Report

***Note**: Only available if you have Configuration Permissions – if you don't see the section to Delete a Report, please contact your Administrator User to delete the Report for you.*

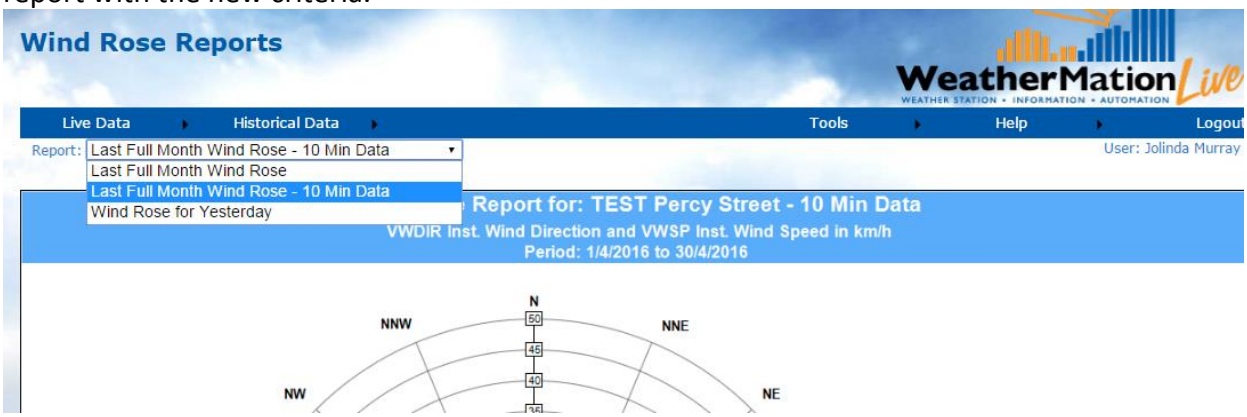
To delete a report, select the Report from the Report list and click the Delete Report button.



Running a SAVED Report

All of your Company's Saved Reports will be displayed for selection in the Report list. You can select any report in order to run it.

You can make changes to the Report Criteria and Run the report again – this will NOT save the report with the new criteria.



WeatherMation LIVE Core Module

Version 1.6.3
28/03/2017

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Introduction

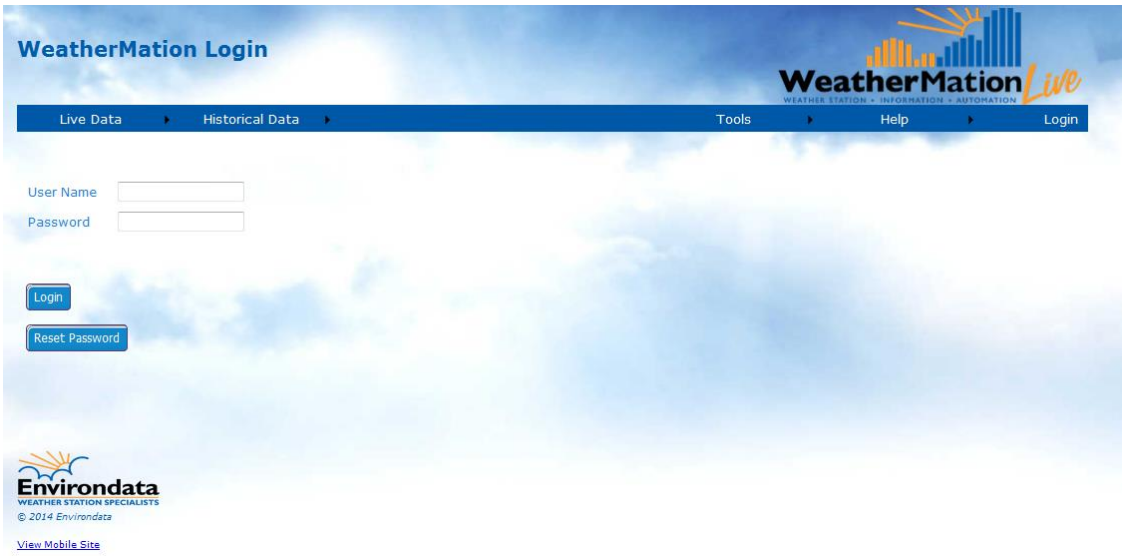
Environdata's WeatherMation software has been developed to download, display and respond to the weather data from your weather stations, automatically.

WeatherMation's Core Module, as you see in the WeatherMation LIVE Service, provides users all of your weather data from each of your connected weather stations. This data is on a Webpage to be accessed via the internet on any browser from a computer or mobile device.

Using the System
Go to www.weathermation.net.au
You will see the Login Page – please enter your User Name and Password that were provided to you.

Click on the Login button to access the system

(If you need to change your password, click on the Reset Password button)



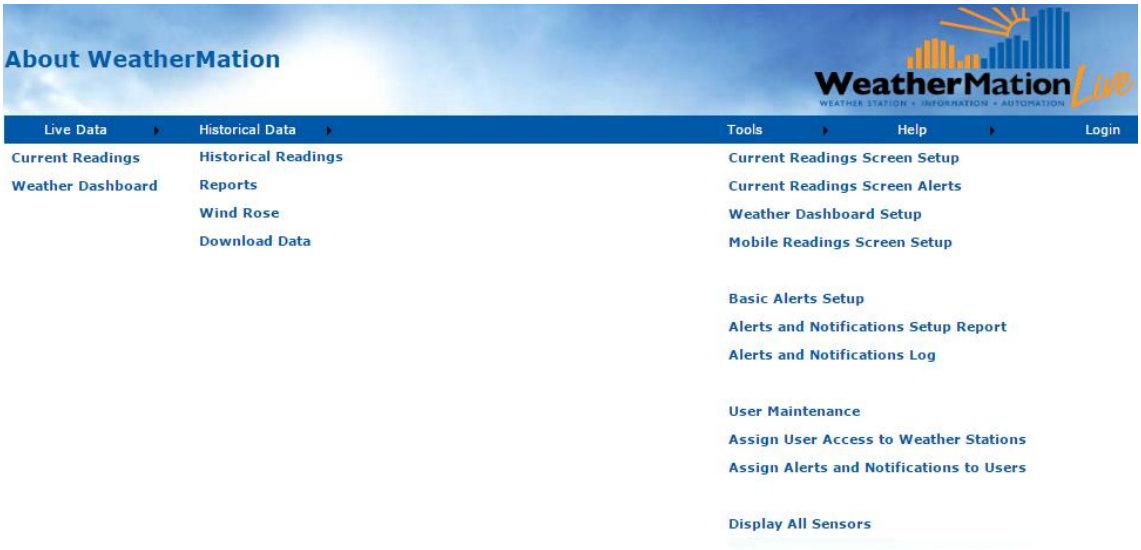
1. Menu Options

- **Live Data**
    - **Current Readings** - displays the customized Current Readings from your weather station.
    - **Weather Dashboard** - displays a customizable Weather Dashboard from your weather station. This is ONLY available if you have purchased the Reports Module.
- **Historical Data**
    - **Historical Readings** - displays historical weather data (memory data) from your weather station.
    - **Reports** – This allows you to setup, save and run reports based on your historical data. This is ONLY available if you have bought the Reports Module and if you have Reporting permission.
    - **Wind Rose -** This allows you to set up, save and run Wind Rose reports based on your historical data. This is ONLY available if you have bought the Reports Module and if you have Reporting permission.
    - **Download Data** – to download your historical weather data as a .csv file.

- **Tools**
    - **Current Readings Screen Setup** – customize your Current Readings Display page. This is ONLY available if you have configuration permission.
    - **Current Readings Screen Alerts** – Setup different coloured Alerts used on the Current Readings Page and the Weather Dashboard. This is ONLY available if you have bought the Alerts Module and if you have configuration permission.
    - **Weather Dashboard Setup** – customize your Weather Dashboard Reports. This is ONLY available if you have bought the Reports Module and if you have configuration permission.
    - **Mobile Readings Screen Setup** – customize your Current Readings Display page specifically for a Mobile Device. This is ONLY available if you have configuration permission.
    - **Basic Alerts Setup –** Setup some basic SMS and E-mail Alerts based on your weather conditions. This is ONLY available if you have bought the Alerts Module and if you have configuration permission.
    - **Alerts and Notifications Setup Report** – displays the Alerts and Notifications as it is setup per User. ONLY available if you have bought the Alerts Module.
    - **Alerts and Notifications Log** – displays a log of all your Alerts. ONLY available if you have bought the Alerts Module.
    - **User Maintenance** – Add or Remove users, update User details like phone number and e-mail address. ONLY available if you have user administration permission.
    - **Assign Users Access to Weather Stations** – You can control which users have access to which stations. ONLY available if you have user administration permission.
    - **Assign Alerts and Notifications to Users Stations** – You can control which users receive which Alerts or Notifications. ONLY available if you have user administration permission.

- **Display All Sensors** - displays the full list of the Current Readings from your weather station.

- **Help**
  - Web, Alerts and Reports Manuals
  - **About** – information about the system.
- **Login/Logout** – if you want to change the user.



2. Current Readings

Once logged in, you will get the Main Page for displaying your weather station's Current Readings

Using the Current Readings Page

If you have more than one weather station linked to this service, you can select which weather stations' data to display by clicking the arrow on the drop-down box and selecting a new weather station or using the < and > arrow buttons to scroll through your stations.

In order to see the graphs at the bottom of each table, you have to click on any sensor. This graph will then display the last 30 records of Current Reading values for the selected sensor.

Note:

You may have the optional Alerts & Notifications Module and have On-Screen Alerts setup. E.g. Air Temperature in the below image has an orange background to indicate the temperature has reached the settings to display an orange background. 7 settings per sensor are possible.

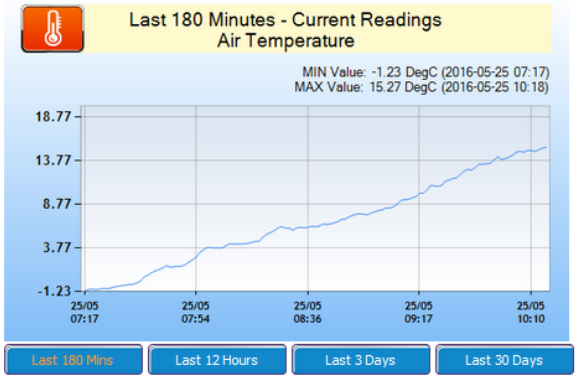
You can customize the display and sequence of the sensors on this page using the Current Readings Screen Layout option under Tools. See Section 7 for more information.



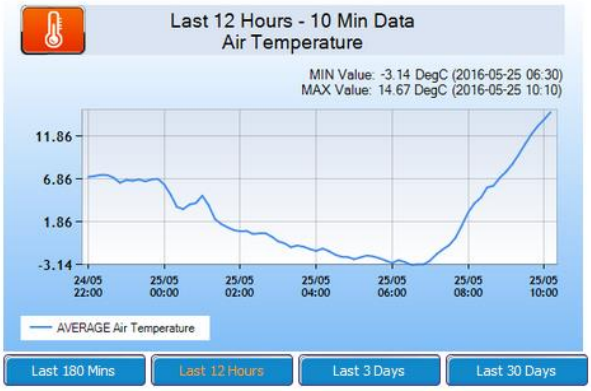
Below each Graph is 4 buttons to select what data is displayed on the Graph:

- **Last 180 Minutes** – this displays data from your Current Readings. The number of minutes is configurable in the Current Readings Screen Layout option under Tools. See Section 7 for more information.
- **Last 12 Hours** – this displays the last 12 hours of your 5/10/15 Minute data depending on your station setup
- **Last 3 Days** - this displays the last 12 hours of your Hourly data
- **Last 30 Days** - this displays the last 30 Days of your Daily data

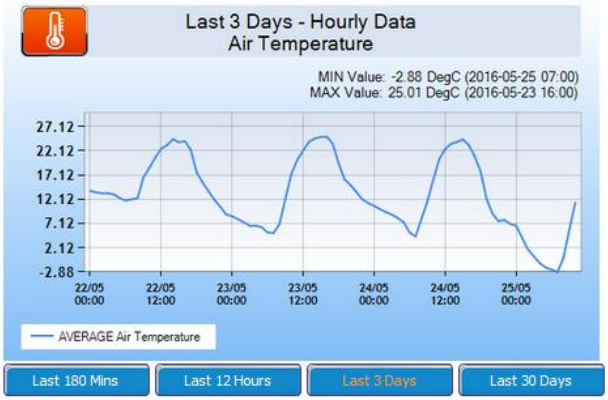
Last 180 Minutes Air Temperature



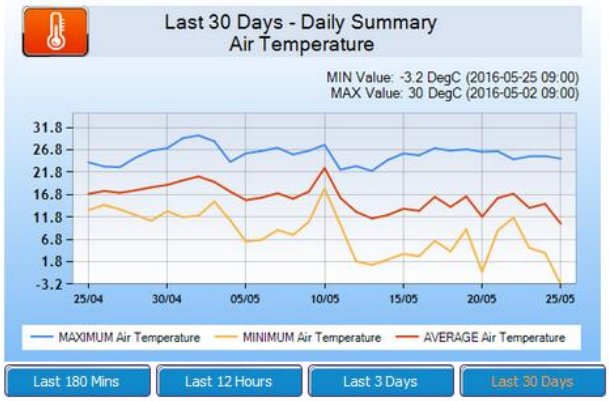
Last 12 Hours Air Temperature



Last 3 Days



Last 30 Days



3. Weather Dashboard

This is part of the WeatherMation LIVE Reports module. Please see the **Report Module Handbook** on how to use this.

4. Historical Readings

'Historical Readings' displays the historical weather data from your chosen weather station that has been downloaded into the WeatherMation Database.
The date & time stamp for each record is for the END of the memory period.
E.g. Hourly Data with the date & time stamp of 20/02/2015 16:00 is data recorded from 15:00 to 16:00 on the 20/02/2015.
Daily data with the date & time stamp of 20/02/2015 09:00 is the 24 hours from 19/02/2015 9:01 to 20/02/2015 09:00, which is a standard meteorological recording period. Hence the minimum Air Temperature value in the 20/02/2015 daily summary is normally for the morning of the date (20/02/2015) and maximum Air Temperature is normally from the afternoon of the day before (19/02/2015 in our example).

Using the Historical Readings Page

If you have more than one weather station linked to this software, you can select which weather station's data to display by clicking the arrow on the drop-down box and selecting a new weather station.

You can select what historical data to display by clicking the arrow on the drop-down box and selecting a different memory. E.g. Daily Summary is the default, but you can select Hourly Data or 10-Minute Data or 5-Minute Data etc (The options available depend on each of your weather stations' programs).

The data displayed is the LATEST record downloaded from the weather station for the particular memory. Please note the date/time on the right side.

In order to see the graphs below the data, you have to click on any sensor. This graph will then display a history of records for the selected Memory values for the selected sensor.

Using the Graph Data

- Previous button - you will get the previous period's historical data displayed on the graph.
- Next button - you will get the next period's historical data displayed on the graph. The Next Period can only be displayed if you have gone and displayed older historical data.
- Download Graph Data – will download into a .csv file only the data displayed on the graph currently.


Historical Hourly Data
WeatherMation Live
Live Data
Historical Data
Tools
Help
Login
Not logged in
Weather Station: Percy Street Warwick
Memory: Hourly Data
25/05/2016 10:00:00 AM
Sensor Name
Values
Units
MAXIMUM Wind Speed 10m 4.85 km/h
AVERAGE Wind Speed 10m 3.04 km/h
STDEV Wind Speed 10m 0.95 km/h
AVERAGE Wind Direction 10m 100.9 E
S-THETA Wind Direction 10m 40.9 Degrees
MAXIMUM Peak Wind Gust 5.91 km/h
AVERAGE Relative Humidity 45.92 %
AVERAGE Air Temperature 11.4 DegC
TOTAL Rain Gauge 0 mm
AVERAGE Solar Radiation 317.36 W/m2
AVERAGE Barometric Pressure 1009.91 hPa
Sensor Name
Values
Units
AVERAGE Grass Temperature 9.91 DegC
MAXIMUM Wind Speed 2m 4.48 km/h
AVERAGE Wind Speed 2m 2.13 km/h
AVERAGE Black Globe Temp 21.53 DegC
AVERAGE Baro Pressure kPa 95.59 kPa
AVERAGE Wet Bulb Temp 6.03 DegC
AVERAGE Thermal Work Limit 369.94 W/m2
AVERAGE Wet Bulb Globe Temp 9.63 DegC
CURRENT Evaporation Rate 0.1626 mm/h
AVERAGE Battery Voltage 14 V
AVERAGE Solar Voltage 20.12 V
Hourly Data
MAXIMUM Wind Speed 10m
25/05/2016
Previous
Next
Download Graph Data
Hourly Data
AVERAGE Grass Temperature
25/05/2016
Previous
Next
Download Graph Data

5. Reports

This is part of the optional WeatherMation LIVE Reports module. Please see the **Report Module Handbook** on how to use this.

6. Download Data

Download Memory Data allows you to download your weather station's saved historical data to your PC or device as a .csv file. You can then open this file in other programs like Notepad or Excel.

Using the Download Historical Memory Data Page

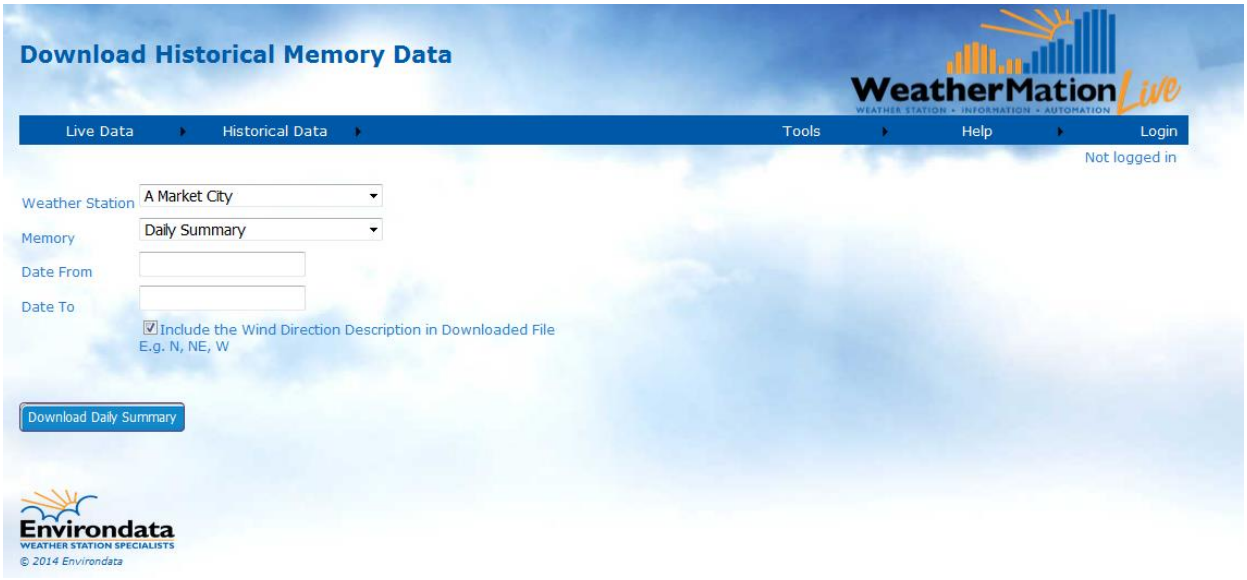
If you have more than one weather station linked to this software, you can select which weather station's data to display by clicking the arrow on the drop-down box and selecting your chosen weather station.

You can select what historical data to download by clicking the arrow on the drop-down box and selecting your chosen data set (memory). E.g. Daily Summary is the default, but you can select Hourly Data or 10-Minute Data or 5-Minute Data (The options available depend on your weather station program).

Enter a "Date From" and "Date To" value. If you click in the box, a calendar will be displayed.

You have the option to include a Wind Direction Description in your download.

Click the "Download 'Daily Summary'" button to download the selected data to your PC as a .csv file. (N.B. This button's name will vary depending on WHAT historical data you are downloading).



7. Current Readings Screen Layout - Customize Current Readings Screen

The Customize Current Readings Screen allows you to setup which sensors from your weather station you would like to be displayed on the Main Current Readings Screen. You can also select in which order they will appear and what type of graph you'd like for them. *Only a user assigned layout setup access will be able to make these changes.*

Using the Customize Current Readings Page
If you have more than 1 weather station linked to this software, you can select which weather station's data to display by clicking the arrow on the drop-down box and selecting your chosen weather station.

- ALL sensors that are AVAILABLE to be displayed are on the LEFT side of the selection screen
- All Sensors and the order in which they are displayed selected for display on the LEFT side of your Current Readings Screen are shown in the MIDDLE Table
- All Sensors and the order in which they are displayed selected for display on the RIGHT side of your Current Readings Screen are shown in the RIGHT Table

To add a Sensor from the custom display:
Click on the sensor's **Left >** button for it to be displayed on the LEFT side or
Click on the sensor's **Right >** button for it to be displayed on the RIGHT side

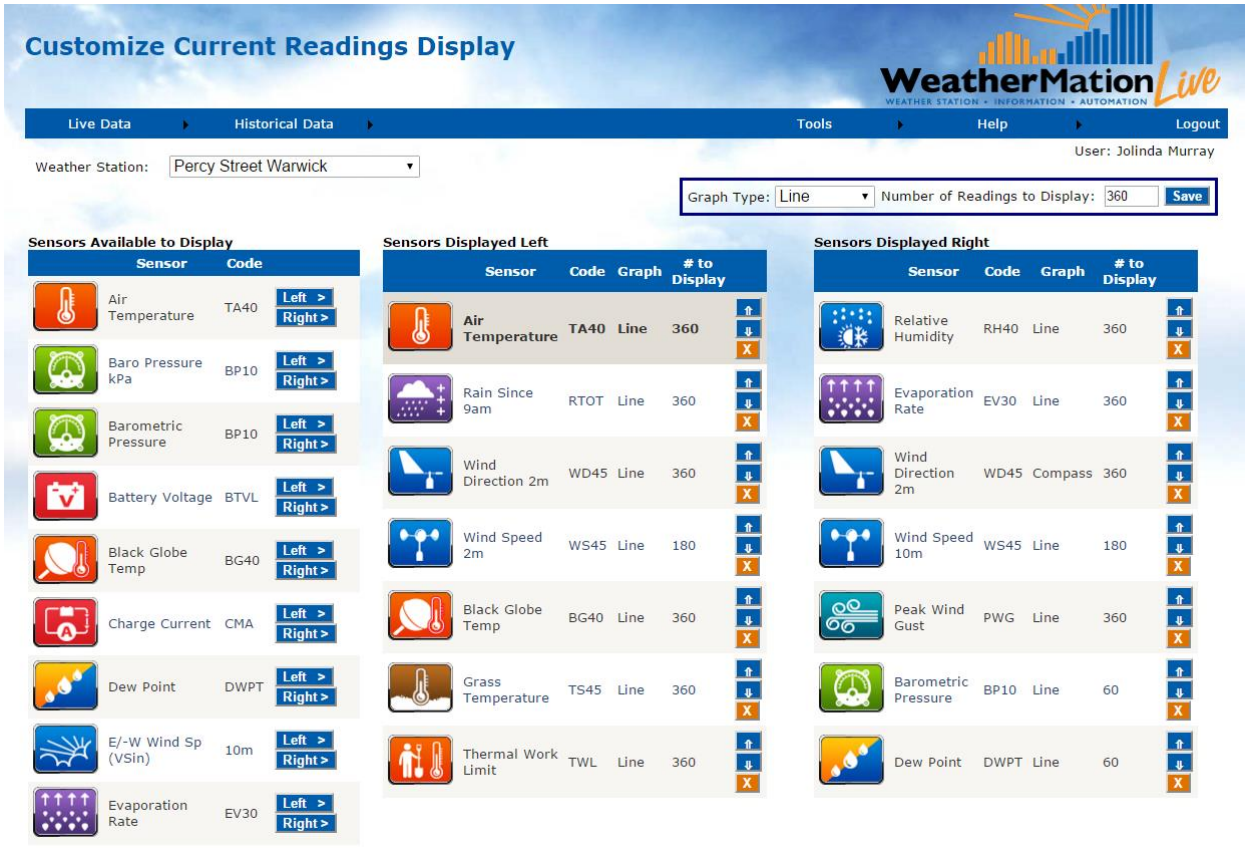
To remove a Sensor from the custom display:
Click on the sensor on the MIDDLE or RIGHT side tables and click on the x button

To change the order in which sensors are displayed
Click on the sensor on the MIDDLE or RIGHT side tables and click on the UP or DOWN arrow buttons

To setup the Type of Graph
Click on the sensor on the MIDDLE or RIGHT side tables and select your preferred graph type from the dropdown box in the top right corner.
Available Types:

- Line or Bar for most sensors.
- Wind Direction has an added option for Compass.

To setup the Number of Current Reading Records to Display on Graphs
Click on the sensor on the MIDDLE or RIGHT side tables and enter the number in the box in the top right corner.
This number of records will be used for your Current Readings page, on the Mobile page and for Current Readings Graph Reports.



8. Weather Dashboards Setup

This is part of the Optional WeatherMation LIVE Reports module. Please see the **Report Module Handbook** if you have purchased the Reports Module for details on how to use this feature.

9. Mobile Readings Screen Layout - Customize Current Readings Screen specifically for a Mobile Device

The Customize Mobile Display Screen allows you to setup which sensors from your weather station you would like to be displayed on a Mobile Device Current Readings Screen. You can also select in which order they will appear and what type of graph you'd like for them. *Only a user assigned layout setup access will be able to make these changes.*

Using the Customize Mobile Display Page

If you have more than 1 weather station linked to this software, you can select which weather station's data to display by clicking the arrow on the drop-down box and selecting your chosen weather station.

- ALL sensors that are AVAILABLE to be displayed are on the LEFT side of the selection screen
- All Sensors and the order in which they are displayed selected for display on the Mobile Current Readings Screen are shown in the RIGHT Table

To add a Sensor from the custom display:
Click on the sensor's **Select >** button for it to be displayed

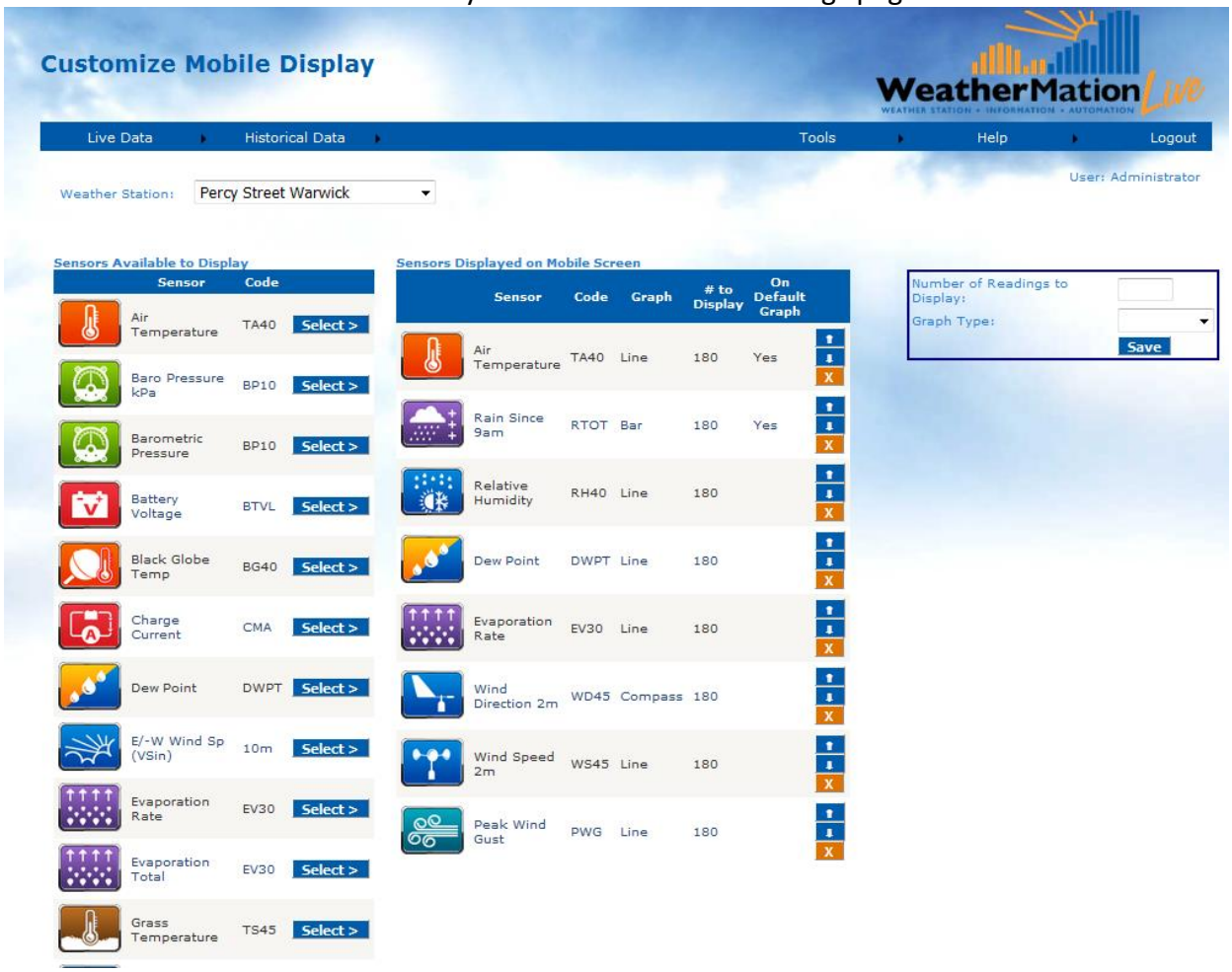
To remove a Sensor from the custom display:
Click on the sensor on the RIGHT side tables and click on the x button

To change the order in which sensors are displayed
Click on the sensor on the RIGHT side tables and click on the UP or DOWN arrow buttons

To setup the Type of Graph
Click on the sensor on the RIGHT side tables and select your preferred graph type from the dropdown box in the top right corner.
Available Types:

- Line or Bar for most sensors.
- Wind Direction has an added option for Compass.

To setup the Number of Current Reading Records to Display on Graphs
Click on the sensor on the RIGHT side tables and enter the number in the box in the top right corner.
This number of records will be used for your Mobile Current Readings page



10. Basic Alerts Setup

This is part of the Optional WeatherMation LIVE Alerts and Notifications module. Please see the **Alerts and Notifications Module Handbook** if you have purchased the alerts module for details on how to use this feature.

11. Alerts and Notifications Setup Report

This is part of the Optional WeatherMation LIVE Alerts and Notifications module. Please see the **Alerts and Notifications Module Handbook** if you have purchased the alerts module for details on how to use this feature.

12. Alerts and Notifications Log

This is part of the Optional WeatherMation LIVE Alerts and Notifications module. Please see the **Alerts and Notifications Module Handbook** if you have purchased the alerts module for details on how to use this feature.

13. User Maintenance

Add, Remove users or Update User details like phone number and e-mail address. Please see the **User Maintenance Handbook** for details on how to use this feature. This is ONLY available if you have user administration permission.

14. Assign Users Access to Weather Stations

You can control which users have access to which stations. Please see the **User Maintenance Handbook** for details on how to use this feature. This is ONLY available if you have user administration permission.

15. Assign Alerts and Notifications to Users Stations

This is part of the Optional WeatherMation LIVE Alerts and Notifications module. You can control which users receive which Alerts or Notifications. Please see the **User Maintenance Handbook** if you have purchased the alerts module for details on how to use this feature.

16. All Sensors

Using the All Sensors Page

This page should mostly be used for Diagnostics. As the Current Readings page can be customised to only display your most important sensors, this page will show you a list of all the sensors from your weather station and the latest Current Reading from each.

This page cannot be customized and just displays the sensors in the order they are programed into your weather station.

This will be useful if you want to check a specific value like Battery Voltage, but don't always want it to be displayed on your main page.

If you have more than one weather station linked to this software, you can select which weather station's data to display by clicking the arrow on the drop-down box and selecting a new weather station or using the < and > arrow buttons to scroll through your stations.

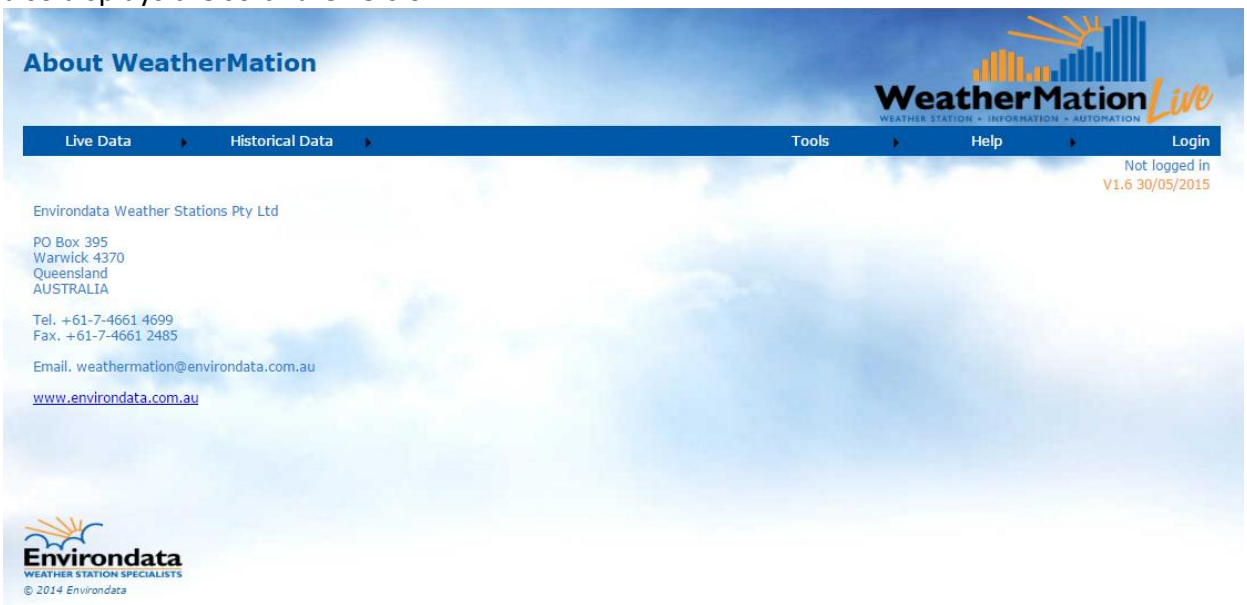
Notes:

You may have the optional Alerts & Notifications Module and have On-Screen Alerts setup. E.g. Air Temperature in the below image has an orange background to indicate the temperature has reached the settings to display a orange background. 7 settings per sensor are possible.



17. About WeatherMation

The About WeatherMation screen will show you some contact information for Environdata. It also displays the software version.



	Standard Operating Procedure
	Document Control
	File No: **SOP 21**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
05/11/2013	Document created	Draft
31/03/2014	Draft approved	Version 1
23/09/2014	Content updated	Version 2
17/08/2015	Draft approved	Version 2
22/02/2018	Content updated / draft approved	Version 3
07/12/2018	Content updated / draft approved	Version 4
22/1/2020	Content updated Version updated to correspond to OEMP	Version 5
2/3/2021	OEMP Updates Register Updated (items 200 – 225) Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this Document Control SOP is to provide clear, detailed and standardised guidance for updating and distributing the OEMP and any of its encompassing reports, management plans, or standard operating procedures to ensure that only controlled copies of the latest version of the document are held by authorised parties, and updates are disseminated in a controlled manner.

WORK PROCEDURES

1) Dissemination and Updates

Both Volume 1 and Volume 2 of the OEMP are living documents and reviews and updates are required to ensure accuracy and effectiveness. For this reason, document control is an important part of the environmental management system.

It is important that the OEMP storage locations are made known to all relevant staff members and that only the latest version is in use.

An OEMP Register – **Form 21.01** must be maintained that records who holds controlled copies (or individual sections) of the OEMP.

2) Updates

Details on the update number, new section of the OEMP, new version number and issue month/year must be recorded and signed off on the OEMP Register – **Form 21.02**.

The footer of all OEMP sections will be updated during annual OEMP review to contain the same issue month/year, irrespective of whether the section content was changed. If a section has not had content updated, the version number will not change. The version number will only change if content has been changed in a section.

The timestamp of all original approval documents, management plans, licences and codes will not be updated during annual OEMP review.

Updated versions of any section of the OEMP must always be issued with a covering memo summarising changes and a new table of contents created if necessary.

3) Dissemination

Copies of any new OEMP, or new sections of the OEMP, will need to be produced and distributed as per **Table 1**.

Table 1 – Distribution List and document Format

Position	Organisation	Document Format
Manager Waste Services and Technical Support	Orange City Council	Hard Copy
Ophir Road Resource Recovery Centre Supervisor	Orange City Council	Hard Copy
Euchareena Road Resource Recovery Centre Supervisor	Orange City Council	Hard Copy
Project and Research Officer (Technical Services)	Orange City Council	PDF Document (CD)
Manager Administration – Governance	Orange City Council	PDF Document (CD)

Table 1 – Distribution List and document Format

Position	Organisation	Document Format
Work Health and Safety (WH&S) Coordinator	Orange City Council	PDF Document (CD)
	Orange City Council	PDF Document (CD) +1 spare copy
	EPA, Bathurst	PDF Document (CD)
	NSW Department of Planning & Environment	PDF Document (CD)
	Geolyse	Word Document (Digital) + PDF Document (Digital)

RESPONSIBILITIES

It is the responsibility of the Manager Waste Services and Technical Support to ensure that updates to the OEMP are communicated to all staff and incorporated into the OEMP.

The Manager Waste Services and Technical Support is required to ensure that updates to the OEMP are issued in a controlled manner.

The Manager Waste Services and Technical Support will ensure that updated versions of the OEMP are made available online on the Orange City Council website.

RECORDS

Records detailing who holds controlled copies of the OEMP are detailed on **Form 21.01 – OEMP Register**, and details of updates are recorded **Form 21.02 – Updates Register**.

Superseded hardcopy sections are to be removed and destroyed from the OEMP and replaced with the new version of the section(s). Digital copies of updated sections of the OEMP are to be retained for reference.

REFERENCES

Section 6.6 – Document Control

SOP 17 – Annual OEMP Review

OEMP REGISTER					
Copy No.	**Date of Issue**	**Document**	**Version**	**Registered Holder**	**Document Format**
1	March 2014	OEMP – Volume 1 & 2	2014	Manager Waste Services and Technical Support, OCC	Hard Copy
2	March 2014	OEMP – Volume 1 & 2	2014	Ophir Road Resource Recovery Centre Supervisor	Hard Copy
3	March 2014	OEMP – Volume 1 & 2	2014	Euchareena Road Resource Recovery Centre Supervisor	Hard Copy
4	March 2014	OEMP – Volume 1 & 2	2014	Project and Research Officer (Technical Services)	PDF Document (CD)
5	March 2014	OEMP – Volume 1 & 2	2014	Manager Administration – Governance	PDF Document (CD)
6	March 2014	OEMP – Volume 1 & 2	2014	1 x spare electronic copies for OCC to distribute	PDF Document (CD)
7	March 2014	OEMP – Volume 1 & 2	2014	EPA, Bathurst	PDF Document (CD)
8-9	March 2014	OEMP – Volume 1 & 2	2014	Geolyse, Orange	Word Document (Digital) PDF Document (Digital)
10	October 2015	OEMP – Volume 1 & 2	2015	Geolyse, Orange	Word Document (Digital) PDF Document (Digital)
11	October 2015	OEMP – Volume 1 & 2	2015	Orange City Council	PDF Document (CD)
12	October 2015	OEMP – Volume 1 & 2	2015	NSW Department of Planning & Environment	PDF Document (CD)
13	September 2016	OEMP – Volume 1 & 2	2016	Geolyse, Orange	Word Document (Digital) PDF Document (Digital)
14	September 2016	OEMP – Volume 1 & 2	2016	Orange City Council	Hard Copy PDF Document (Digital)
15	September 2016	OEMP – Volume 1 & 2	2016	NSW Department of Planning & Environment	PDF Document (CD)
16	February 2018	OEMP – Volume 1 & 2	2017	Geolyse, Orange	Word Document (Digital) PDF Document (Digital)
17	February 2018	OEMP – Volume 1 & 2	2017	Orange City Council	Hard Copy PDF Document (Digital)
18	February 2018	OEMP – Volume 1 & 2	2017	NSW Department of Planning & Environment	PDF Document (CD)
19	January 2019	OEMP – Volume 1 & 2	2018	Geolyse, Orange	Word Document (Digital) PDF Document (Digital)

OEMP REGISTER					
Copy No.	**Date of Issue**	**Document**	**Version**	**Registered Holder**	**Document Format**
20	January 2019	OEMP – Volume 1 & 2	2018	Orange City Council	Hard Copy PDF Document (Digital)
21	January 2019	OEMP – Volume 1 & 2	2018	NSW Department of Planning & Environment	PDF Document (CD)
22	January 2020	OEMP – Volume 1 & 2	2020	Premise Australia, Orange	Word Document (Digital) PDF Document (Digital)
23	January 2020	OEMP – Volume 1 & 2	2020	Orange City Council	Hard Copy PDF Document (Digital)
24	January 2020	OEMP – Volume 1 & 2	2020	NSW Department of Planning & Environment	PDF Document (CD)
22	February 2021	OEMP – Volume 1 & 2	2021 – V6	Premise Australia, Orange	Word Document (Digital) PDF Document (Digital)
23	February 2021	OEMP – Volume 1 & 2	2021 – V6	Orange City Council	Hard Copy PDF Document (Digital)
24	February 2021	OEMP – Volume 1 & 2	2021 – V6	NSW Department of Planning & Environment	PDF Document (CD)

OEMP UPDATES REGISTER

Update No.	Section of OEMP	New Version No	Date Issued	Sign-off
1	Form 06.02	Version 2	8/8/14	MDH
2	Section 3.10	Version 2	27/3/15	CAB
3	Section 4.11	Version 2	27/3/15	CAB
4	Section 3.2	Version 2	27/3/15	CAB
5	Section 3.6	Version 2	27/3/15	CAB
6	Section 4.6	Version 2	27/3/15	CAB
7	Form 15	Version 2	27/3/15	CAB
8	Form 14.02	Version 2	27/3/15	CAB
9	SOP 14	Version 2	27/3/15	CAB
10	SOP 21	Version 2	27/3/15	CAB
11	SOP 1	Version 2	27/3/15	CAB
12	Form 01	Version 2	27/3/15	CAB
13	SOP 13	Version 2	27/3/15	CAB
14	Section 9.2 (SWMP)	Version 2	27/3/15	CAB
15	Table of Contents – Volume 2	Version 2	27/3/15	CAB
16	Section 3.5	Version 2	27/3/15	CAB
17	Section 9.6 (ORRRC PIRMP)	Version 2	27/3/15	CAB
18	Section 9.7 (ERRRC PIRMP)	Version 2	27/3/15	CAB
19	Section 9.8	Version 2	27/3/15	CAB
20	Section 9.9	Version 2	27/3/15	CAB
21	Section 5.1	Version 2	27/3/15	CAB
22	Section 5	Version 2	27/3/15	CAB
23	SOP 23	Version 2	27/3/15	CAB
24	SOP 24	Version 2	27/3/15	CAB
25	Section 2	Version 2	27/3/15	CAB
26	Section 3.13	Version 2	27/3/15	CAB
27	Section 3.16	Version 2	27/3/15	CAB
28	Section 4.17	Version 2	27/3/15	CAB
29	Section 4.8	Version 2	27/3/15	CAB

OEMP UPDATES REGISTER

Update No.	Section of OEMP	New Version No	Date Issued	Sign-off
30	Section 4.12	Version 2	27/3/15	CAB
31	Section 3.11	Version 2	27/3/15	CAB
32	Section 3.12	Version 2	27/3/15	CAB
33	Section 4.13	Version 2	27/3/15	CAB
34	Section 6.3	Version 2	27/3/15	CAB
35	Section 6.4	Version 2	27/3/15	CAB
36	Section 7.6 (Air Quality Monitoring Program)	Version 2	27/3/15	CAB
37	SOP 03	Version 2	27/3/15	CAB
38	SOP 19	Version 2	27/3/15	CAB
39	Section 3.3	Version 2	27/3/15	CAB
40	Section 4.14	Version 2	27/3/15	CAB
41	Section 8.2	Version 2	27/3/15	CAB
42	SOP 22	Version 2	27/3/15	CAB
43	SOP 25	Version 2	27/3/15	MDH
44	Table of Contents – Volume 1	Version 2	27/3/15	CAB
45	Form 08	Version 2	27/3/15	MDH
46	Section 9.3 (Waste and Resource Recovery Monitoring Program)	Version 2	27/3/15	CAB
47	**Entire OEMP document**	**Version 2**	27/8/2015	CAB
48	Volume 1 Table of Contents	Version 3	29/9/2016	CAB
49	Section 1.0	Version 3	29/9/2016	CAB
50	Section 2.0	Version 3	29/9/2016	CAB
51	Section 3.1	Version 3	29/9/2016	CAB
52	Section 3.5	Version 3	29/9/2016	CAB
53	Section 3.6	Version 3	29/9/2016	CAB
54	Section 4.1	Version 3	29/9/2016	CAB
55	Section 4.4	Version 3	29/9/2016	CAB
56	Section 4.5	Version 3	29/9/2016	CAB
57	Section 4.6	Version 3	29/9/2016	CAB
58	Section 5.1	Version 3	29/9/2016	CAB

OEMP UPDATES REGISTER

Update No.	Section of OEMP	New Version No	Date Issued	Sign-off
59	Section 6 Table of Contents	Version 3	29/9/2016	CAB
60	Section 6.2	Version 3	29/9/2016	CAB
61	Section 6.3	Version 3	29/9/2016	CAB
62	Section 6.4	Version 3	29/9/2016	CAB
63	Section 6.5	Version 3	29/9/2016	CAB
64	Section 6.6	Version 3	29/9/2016	CAB
65	Section 8.2 (EPLs)	Version 3	29/9/2016	CAB
66	Section 9.3 (WRRMP)	WRRMP_001G	29/9/2016	CAB
67	Volume 2 Table of Contents	Version 3	29/9/2016	CAB
68	Form 01	Version 3	29/9/2016	CAB
69	SOP 02	Version 3	29/9/2016	CAB
70	Toolbox Meeting Record	OCCWHS 001 V2_16	29/9/2016	CAB
71	SOP 06	Version 3	29/9/2016	CAB
72	SOP 07	Version 3	29/9/2016	CAB
73	SOP 08	Version 3	29/9/2016	CAB
74	SOP 09	Version 3	29/9/2016	CAB
75	SOP 19	Version 3	29/9/2016	CAB
76	SOP 20	Version 3	29/9/2016	CAB
77	Form 21.01	Version 3	29/9/2016	CAB
78	Form 21.02	Version 3	29/9/2016	CAB
79	SOP 22	Version 3	29/9/2016	CAB
80	New SOP 26	Version 1	29/9/2016	CAB
81	WAP 001	OCCWHS 017 V1_16	29/9/2016	CAB
82	WAP 002	OCCWHS 017 V1_16	29/9/2016	CAB
83	WAP 003	OCCWHS 017 V1_16	29/9/2016	CAB
84	WAP 004	OCCWHS 017 V1_16	29/9/2016	CAB
85	WAP 005	OCCWHS 017 V1_16	29/9/2016	CAB
86	WAP 006	OCCWHS 017 V1_16	29/9/2016	CAB

OEMP UPDATES REGISTER

Update No.	Section of OEMP	New Version No	Date Issued	Sign-off
87	WAP 007	OCCWHS 017 V1_16	29/9/2016	CAB
88	WAP 008 Removed (replaced with SWMS 001)	N/A	29/9/2016	CAB
89	WAP 009	OCCWHS 017 V1_16	29/9/2016	CAB
90	WAP 010	OCCWHS 017 V1_16	29/9/2016	CAB
91	WAP 011	OCCWHS 017 V1_16	29/9/2016	CAB
92	WAP 012	OCCWHS 017 V1_16	29/9/2016	CAB
93	WAP 013	OCCWHS 017 V1_16	29/9/2016	CAB
94	WAP 014	OCCWHS 017 V1_16	29/9/2016	CAB
95	New title page – Safe Work Method Statement	Version 1	29/9/2016	CAB
96	New SWMS 001	OCCWHS 015 V1_16	29/9/2016	CAB
97	Form 02.01	OCCWHS 047 V1_16	29/9/2016	CAB
98	Form 02.02	OCCWHS 047 V1_16	29/9/2016	CAB
99	New Form 26.01	Version 1	29/9/2016	CAB
100	New Form 26.02	Version 1	29/9/2016	CAB
101	Volume 1 Abbreviations	Version 3	29/9/2016	CAB
102	Section 7.9 (ORRRC Emergency Procedures Manual)	D15/28972	29/9/2016	CAB
103	Section 7.10 (ERRRC Emergency Procedures Manual)	D15/28984	29/9/2016	CAB
104	Section 5.1 (Staff Training)	Version 4	February 2018	CAB
105	Section 7.9 (ORRRC Emergency Procedures Manual)	D17/63971	February 2018	CAB
106	Section 7.10 (ERRRC Emergency Procedures Manual)	D17/62615	February 2018	CAB
107	Section 7.1 (ORRRC Fire Management Plan)	Version 3	February 2018	CAB
108	Section 7.4 (ERRRC Fire Management Plan)	Version 3	February 2018	CAB
109	ORRRC LEMP Section 3.2 (Site Supervision and Control)	Version 3	February 2018	CAB
110	ORRRC LEMP Section 3.4 (Landfill Staging)	Version 3	February 2018	CAB
111	ORRRC LEMP Section 3.7 (Surface Water and Leachate Management)	Version 3	February 2018	CAB

OEMP UPDATES REGISTER

Update No.	Section of OEMP	New Version No	Date Issued	Sign-off
112	ORRRC LEMP Section 3.16 (Progressive Rehabilitation)	Version 3	February 2018	CAB
113	Section 6.3 (Consultation and Reporting)	Version 4	February 2018	CAB
114	Section 9.3 (WRRMP)	001H	February 2018	CAB
115	Section 2 (Operations Overview)	Version 3	February 2018	CAB
116	ORRRC LEMP Section 3.5 (Waste Receival)	Version 4	February 2018	CAB
117	Section 9.6 (ORRRC PIRMP)	002F_ORRRC	February 2018	CAB
118	Section 9.7 (ORRRC PIRMP Supporting Statement)	001F_ORRRC	February 2018	CAB
119	Section 9.8 (ERRRC PIRMP)	002F_ERRRC	February 2018	CAB
120	Section 9.9 (ERRRC PIRMP Supporting Statement)	001F_ERRRC	February 2018	CAB
121	SOP 02 (Site Inductions)	Version 4	February 2018	CAB
122	SOP 06	Version 4	February 2018	CAB
123	SOP 07	Version 4	February 2018	CAB
124	SOP 13	Version 3	February 2018	CAB
125	SOP 19	Version 4	February 2018	CAB
126	SOP 23	Version 3	February 2018	CAB
127	New SOP 27	Version 1	February 2018	CAB
128	SOP 21 Form 21.01	Version 4	February 2018	CAB
129	SOP 21 Form 21.02	Version 4	February 2018	CAB
130	ERRRC Visitor Record of Entry	OCCWHS 047 V1_17	February 2018	CAB
131	ORRRC Visitor Record of Entry	OCCWHS 047 V1_17	February 2018	CAB
132	WAP 001	OCCWHS 017 V3_17	February 2018	CAB
133	WAP 002	OCCWHS 017 V3_17	February 2018	CAB
134	WAP 003	OCCWHS 017 V3_17	February 2018	CAB
135	WAP 004	OCCWHS 017 V3_17	February 2018	CAB

OEMP UPDATES REGISTER

Update No.	Section of OEMP	New Version No	Date Issued	Sign-off
136	WAP 005	OCCWHS 017 V3_17	February 2018	CAB
137	WAP 006	OCCWHS 017 V3_17	February 2018	CAB
138	WAP 007	OCCWHS 017 V3_17	February 2018	CAB
139	WAP 009	OCCWHS 017 V3_17	February 2018	CAB
140	WAP 010	OCCWHS 017 V3_17	February 2018	CAB
141	WAP 011	OCCWHS 017 V3_17	February 2018	CAB
142	WAP 012	OCCWHS 017 V3_17	February 2018	CAB
143	WAP 013	OCCWHS 017 V3_17	February 2018	CAB
144	WAP 014	OCCWHS 017 V3_17	February 2018	CAB
145	WAP 015	OCCWHS 017 V3_17	February 2018	CAB
146	SWMS 001	OCCWHS 015 V4_17	February 2018	CAB
147	Toolbox Meeting Record	OCCWHS 001 V3-17	February 2018	CAB
148	OEMP Volume 2 TOC	Version 4	February 2018	CAB
149	SOP 21	Version 3	February 2018	CAB
150	Section 9.6 (ORRRC PIRMP)	002G_ORRRC	December 2018	BS
151	Section 9.7 (ORRRC PIRMP Supporting Statement)	001G_ORRRC	December 2018	BS
152	Section 9.8 (ERRRC PIRMP)	002G_ERRRC	December 2018	BS
153	Section 9.9 (ERRRC PIRMP Supporting Statement)	001G_ERRRC	December 2018	BS
154	SOP 02	Version 5	December 2018	BS
155	SOP 13	Version 4	December 2018	BS
156	OEMP Volume 2 TOC	Version 5	December 2018	BS
157	Section 8.1 (Modification of Minister's Approval)	EF18/6769	December 2018	BS
158	Lone Worker SWMS	OCCWHS 015 V1-18	December 2018	BS
159	Section 8.3 (ORRRC Liquid Trade Waste Discharge Approval)	PR25658 – D18/66800	December 2018	BS

OEMP UPDATES REGISTER

Update No.	Section of OEMP	New Version No	Date Issued	Sign-off
160	Section 8.4 (ERRRC Liquid Trade Waste Discharge Approval)	F533 – D18/68114	December 2018	BS
161	Section 2.2 (Operations Overview – Ophir Road Resource Recovery Centre)	Version 5	January 2020	BS
162	Section 3.1 (ORRRC Landfill Management Plan – Introduction)	Version 5	January 2020	BS
163	Section 3.5 (ORRRC Landfill Management Plan – Waste Receival)	Version 5	January 2020	BS
164	Section 3.9 (ORRRC Landfill Management Plan – Landfill Gas Management	Version 5	January 2020	BS
165	Section 4.1 (ERRRC Landfill Management Plan – Introduction)	Version 5	January 2020	BS
166	Section 4.10 (ERRRC Landfill Management Plan – Landfill Gas Management)	Version 5	January 2020	BS
167	Section 5.1 (Training – Staff Training)	Version 5	January 2020	BS
168	Section 6.6 (Document Control)	Version 5	January 2020	BS
169	Section 7.7 (ERRRC Landfill Gas Management Plan)	Version 5	January 2020	BS
170	Section 9.5 (Transport Code of Conduct)	Issue 3.0	April 2019	BS
171	Section 9.6 (ORRRC PIRMP)	002H_ORRRC	January 2020	BS
172	Section 9.7 (ORRRC PIRMP Supporting Statement)	001H_ORRRC	January 2020	BS
173	Section 9.8 (ERRRC PIRMP)	002H_ERRRC	January 2020	BS
174	Section 9.9 (ERRRC PIRMP Supporting Statement)	001H_ERRRC	January 2020	BS
175	SOP 1 (Annual Calendar of Activities)	Version 5	January 2020	BS
176	SOP 6 (Beekeeping Equipment and Honey Containers)	Version 5	January 2020	BS
177	SOP 10 (Operation of ERRRC Leachate Pumps)	Version 5	January 2020	BS
178	SOP 16 (ERRRC Daily Checklist)	Version 5	January 2020	BS
179	SOP 20 (ERRRC Environmental Monitoring)	Version 5	January 2020	BS
180	SOP 23 (ORRRC Traffic Management)	Version 5	January 2020	BS
181	SOP 24 (ERRRC Traffic Management)	Version 5	January 2020	BS
182	WAP 001 (Dust Prevention On Site)	OCCWHS_017_V1-18	March 2019	BS
183	WAP 002 (Bin Closure / Servicing)	OCCWHS_017_V1-18	March 2019	BS

OEMP UPDATES REGISTER

Update No.	Section of OEMP	New Version No	Date Issued	Sign-off
184	WAP 003 (Load Mulch / Compost)	OCCWHS_017_V1-18	March 2019	BS
185	WAP 004 (Transfer Oil)	OCCWHS_017_V1-18	March 2019	BS
186	WAP 006 (Tyre Stockpiling)	OCCWHS_017_V1-18	March 2019	BS
187	WAP 007 (Litter Collection)	OCCWHS_017_V1-18	March 2019	BS
188	WAP 009 (Landfill Waste Disposal)	OCCWHS_017_V1-18	March 2019	BS
189	WAP 010 (Beekeeping Equipment and Honey Containers)	OCCWHS_017_V1-18	March 2019	BS
190	WAP 011 (Weighbridge Procedures)	OCCWHS_017_V1-18	March 2019	BS
191	WAP 012 (ERRRC Traffic Management)	OCCWHS_017_V1-18	March 2019	BS
192	WAP 013 (ORRRC Traffic Management)	OCCWHS_017_V1-18	March 2019	BS
193	WAP 014 (Handling Contaminated Soil at ORRRC)	OCCWHS_017_V1-18	March 2019	BS
194	WAP 015 (Plant – Routine Maintenance)	OCCWHS_017_V1-18	March 2019	BS
195	WAP 016 (Community Recycling Centre Household Hazardous Waste Receipt and Management)	OCCWHS_017_V1-18	March 2019	BS
196	WAP 017 (Manual Handling)	OCCWHS_017_V1-18	March 2019	BS
197	SWMS RRC_001 (Asbestos Disposal)	OCCWHS_015_V1-19	February 2019	BS
198	SWMS RRC_001 (Lone Worker)	OCCWHS_015_V1-19	March 2019	BS
199	SWMS ERRRC_001 (Working Within the Leachate Holding Tank Exclusion Zone)	OCCWHS_015_V1-19	Sept 2019	BS
200	Section 5.1 (Training – Staff Training)	Version 6	February 2021	BS
201	Section 9.6 (ORRRC PIRMP)	002I_ORRRC	February 2021	BS
202	Section 9.7 (ORRRC PIRMP Supporting Statement)	001I_ORRRC	February 2021	BS
203	Section 9.8 (ERRRC PIRMP)	002I_ERRRC	February 2021	BS
204	Section 9.9 (ERRRC PIRMP Supporting Statement)	001I_ERRRC	February 2021	BS
205	SOP 1 (Annual Calendar of Activities)	Version 6	February 2021	BS
206	SOP 6 (Beekeeping Equipment and Honey Containers)	Version 6	February 2021	BS

OEMP UPDATES REGISTER

Update No.	Section of OEMP	New Version No	Date Issued	Sign-off
207	SOP 21 (Document Control) – OEMP Register and Updates Register	Version 6	February 2021	BS
208	WAP 001 (Dust Prevention On Site)	OCCWHS_017_V1-2020	February 2021	BS
209	WAP 002 (Bin Closure / Servicing)	OCCWHS_017_V1-2020	February 2021	BS
210	WAP 003 (Load Mulch / Compost)	OCCWHS_017_V1-2020	February 2021	BS
211	WAP 004 (Transfer Oil)	OCCWHS_017_V1-2020	February 2021	BS
212	WAP 006 (Tyre Stockpiling)	OCCWHS_017_V1-2020	February 2021	BS
213	WAP 007 (Litter Collection)	OCCWHS_017_V1-2020	February 2021	BS
214	WAP 009 (Landfill Waste Disposal)	OCCWHS_017_V1-2020	February 2021	BS
215	WAP 010 (Beekeeping Equipment and Honey Containers)	OCCWHS_017_V1-2020	February 2021	BS
216	WAP 011 (Weighbridge Procedures)	OCCWHS_017_V1-2020	February 2021	BS
217	WAP 012 (ERRRC Traffic Management)	OCCWHS_017_V1-2020	February 2021	BS
218	WAP 013 (ORRRC Traffic Management)	OCCWHS_017_V1-2020	February 2021	BS
219	WAP 014 (Handling Contaminated Soil at ORRRC)	OCCWHS_017_V1-2020	February 2021	BS
220	WAP 015 (Plant – Routine Maintenance)	OCCWHS_017_V1-2020	February 2021	BS
221	WAP 016 (Community Recycling Centre Household Hazardous Waste Receipt and Management)	OCCWHS_017_V1-2020	February 2021	BS
222	WAP 017 (Manual Handling)	OCCWHS_017_V1-2020	February 2021	BS
223	SWMS RRC_001 (Asbestos Disposal)	OCCWHS_015_V1-20	February 2021	BS
224	SWMS RRC_001 (Lone Worker)	OCCWHS_015_V1-20	February 2021	BS
225	SWMS ERRRC_001 (Working Within the Leachate Holding Tank Exclusion Zone)	OCCWHS_015_V1-20	February 2021	BS

Approved: ..... Wayne Darry .....
Manager Waste Services and Technical support

Date: ..... 2 / 03 / 2021 .....

	Standard Operating Procedure
	ORRRC Tyre Management
	File No: **SOP 22**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
23/09/2014	Document created	Draft
28/10/2014	Draft approved	Version 1
15/04/2015	Draft approved	Version 1
17/08/2015	Draft approved	Version 2
22/08/2016	Draft approved	Version 3
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this document is to provide Resource Recovery Centre employees with the correct work procedures to ensure that incoming tyre waste is permitted and is appropriately disposed of at the premises.

WORK PROCEDURE

Incoming Waste

1) All incoming waste is to be screened at the weighbridge, following the procedures identified in **SOP 07 – Weighbridge Procedures**; weighbridge operators will identify whether a load contains tyres.
2) Tyre waste that is greater than 200 kilograms or more than 20 waste tyres (whichever weighs less) must be recorded by waste transporters using the WasteLocate system at the weighbridge by scanning the QR2id plate (refer – **SOP 26 – WasteLocate Tracking**).
3) If a load from a commercial operator contains more than five (5) whole tyres, the weighbridge operator must refuse receival of the waste at the premises.
4) Loads with more than five (5) whole tyres delivered by non-commercial operators (i.e. residents) of the Orange Local Government Area are permitted at the premises.
5) If a load is identified as containing tyres, the waste must not be disposed at the premises unless:
    a. The tyre/s have a diameter of less than 1.2 metres; or
    b. The tyre/s have been shredded so that the pieces measure no more than 250 millimetres in any direction; or
    c. The tyre/s have had their walls removed.
6) The weighbridge operator will charge drivers with the applicable charge(s) for tyre waste.

Tyre Stockpile Management

1) Recovery Centre Operators will ensure that tyres stockpiled on the premises:
    a. Do not exceed fifty (50) tonnes at any one time; and
    b. Are located in a clearly defined area away from the waste disposal areas; and
    c. Are managed to control vermin; and
    d. Are managed to prevent any tyres from catching on fire.
2) Tyres will be stockpiled in the workshop compound (refer to **Figure 3.4.1**) on the designated storage pallets. Stockpiled tyres must be covered with a tarp at all

times to ensure they remain clean. Unclean tyres will not be accepted by the recycler.

3) Once tyre stockpile reaches capacity, the Resource Recovery Centre Supervisor will advise the Resource Recovery Operators to arrange tyre collection with the tyre recycler:

   a. Send an email to the tyre recycler (JLW Services – jamie@jlwservices.com.au) requesting a Waste Tyre Collection Service. The email is to include the following detail:

      - Photographs of the tyre stockpile;
      - Address and contact details for the Ophir Road Resource Recovery Centre;
      - Advice that the pickup service will be required to weigh on before and after the collection of tyres for recording purposes;
      - Advice that the collection service is on a per tyre basis;
      - Request confirmation of collection date to be telephoned to the Weighbridge on 6393 8861.

   b. If confirmation is not received from JWL Services for the collection, contact Jamie Walmsley on 0428 599 471 or alternatively Adam Fuller on 0427 902 963

   c. Once a collection date is confirmed, the Resource Recovery Operators logon to the WasteLocate website (https://wastelocate.epa.nsw.gov.au/login) to register a consignment note for the collection:

      - Login Email Address: occweighbridge@gmail.com Password: Res0urce (Note: the '0' is Zero);
      - Click on "Consignments" in the right hand navigation;
      - Click on "New Consignment" button;
      - Complete consignment details.

RESPONSIBILITIES

It is the Resource Recovery Centre Supervisor's responsibility to ensure that all incoming waste is screened, and the landfilling operations are monitored to ensure that tyre waste is appropriately stockpiled.

The Resource Recovery Centre Supervisor is responsible for ensuring that all Resource Recovery Centre Operators undertaking weighbridge procedures and landfilling of tyre waste are adequately trained in this work procedure.

RECORDS

Weighbridge records are recorded electronically on the computer within the weighbridge gatehouse. These records are kept for a minimum of four years.

REFERENCES

Section 3.5 – Waste Receival

Section 9.3 – Waste and Resource Recovery Monitoring Program

SOP 26 – WasteLocate Tracking

WAP 006 – Tyre Stockpiling

	Standard Operating Procedure
	ORRRC Traffic Management
	File No: **SOP 23**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
14/10/2014	Document created	Draft
28/10/2014	Draft approved	Version 1
17/08/2015	Draft approved	Version 2
14/02/2018	Draft approved	Version 3
31/1/2020	Vehicle wheel inspection and wash-down added Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this document is to ensure the correct procedures are followed by all vehicles and machinery operating at ORRRC.

WORK PROCEDURE

Internal traffic movements at ORRRC will be undertaken in accordance with the ORRRC Traffic Management Plan in **Figure 1**.

1) General public vehicles, heavy vehicles and other equipment that may be operating at ORRRC will comply with site speed limits and any directional signage.

2) Traffic movement will be restricted to established all weather access roads, unless otherwise approved by the Manager Waste Services and Technical Support.

3) Visitors are to park in the designated parking area, ensuring that they do not interfere with the flow of traffic within the depot.

4) The weighbridge staff will direct all patrons of the facility to the appropriate end disposal point subject to the nature of the material presented (refer to **Section 3.5**).

5) Operational staff will coordinate with the weighbridge operator to provide traffic control to incoming patrons of the ORRRC in order to maintain a sufficient space for large trucks to egress off the weighbridge in an easterly direction.

6) JR Richards & Sons Pty Ltd will adhere to their *Transport Code of Conduct* to ensure safe conduct at ORRRC, including appropriate licencing, safe vehicle operation and interactions, and necessary maintenance (refer – **Section 9.5**)

7) Each JR Richards & Sons Pty Ltd new driver is required to sign the *Code of Conduct* during their first visit.

8) Operational staff involved with providing direction and end disposal of incoming waste streams will be provided with appropriate site induction and traffic management training.

9) Before waste transport vehicles leave the ORRRC premises, a wheel inspection for mud and/or other material is to be carried out. A wash down using the water tanker must be performed where there is a risk of mud and/or other material being tracked off-site.

10) Any incidents that occur are to be recorded on **Form 15**, detailed in **SOP 15 - ORRRC Daily Checklist**.

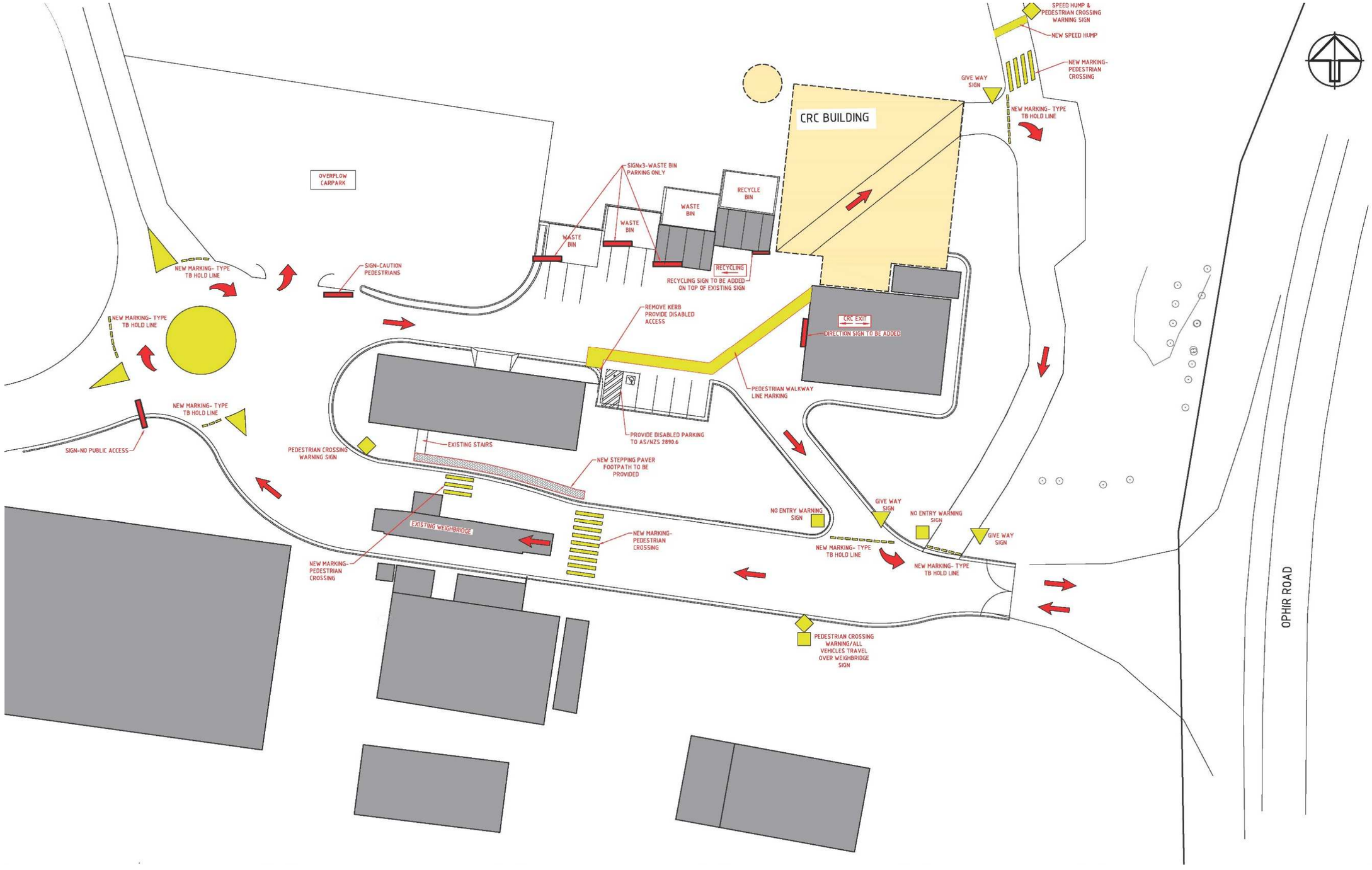


Figure 1: ORRRC Traffic Management Plan

RESPONSIBILITIES

It is the responsibility of individual staff and contractors to ensure the correct procedures are followed by all vehicles and machinery operating at ORRRC.

RECORDS

Any incidents are recorded on **Form 15** from **SOP 15 - ORRRC Daily Checklist**.

REFERENCES

SOP 15 – ORRRC Daily Checklist

WAP 013 – ORRRC Traffic Management

	Standard Operating Procedure
	ERRRC Traffic Management
	File No: **SOP 24**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
14/10/2014	Document created	Draft
28/10/2014	Draft approved	Version 1
17/08/2015	Draft approved	Version 2
22/1/2020	Vehicle wheel inspection and wash-down added Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this document is to ensure the correct procedures are followed by all vehicles and machinery operating at ERRRC, and heavy vehicles transporting waste to ERRRC.

WORK PROCEDURE

1) General public vehicles, heavy vehicles and other equipment that may be operating at ERRRC will comply with site speed limits and any directional signage.

2) Heavy vehicles transporting waste to ERRRC will comply with road speed limits and signs, and any directions given by Police, Roads and Maritime Services (RMS), or other authorities.

3) The operations at ERRRC will not generate more than 40 heavy vehicle movements in any one day, and not more than 30 heavy vehicle movements a day when averaged over a 7 day period.

4) To avoid interaction with school buses, heavy vehicles transporting waste to ERRRC must not travel in the hours specified below:

   - 7.00am – 7.15am Mon to Friday (School Days)
   - 8.28am – 8.37am Mon to Friday (School Days)
   - 3.28pm – 3.40pm Mon to Friday (School Days)
   - 4.40pm – 5.00pm Mon to Friday (School Days)

5) Traffic movement will be restricted to established all weather access roads, unless otherwise approved by the Manager Waste Services and Technical Support.

6) Visitors are to park in the designated parking area, ensuring that they do not interfere with the flow of traffic within the depot.

7) Operational staff involved with providing direction and end disposal of incoming waste streams will be provided with appropriate site induction and traffic management training.

8) JR Richards & Sons Pty Ltd will adhere to their *Transport Code of Conduct* to ensure safe conduct at ERRRC, including appropriate licencing, safe vehicle operation and interactions, and necessary maintenance (refer – **Section 9.5**)

9) Each JR Richards & Sons Pty Ltd new driver is required to sign the *Code of Conduct* during their first visit.

10) All JR Richards & Sons Pty Ltd will be geo-tracked to ensure heavy vehicle restrictions are followed and to ensure JR Richards & Sons Pty Ltd vehicles are not on Euchareena Road during the hours specified in point (4) above. Geo-tracking will record the date and time each vehicle enters Euchareena Road and enters the ERRRC site.

11) Before waste transport vehicles leave the ERRRC premises, a wheel inspection for mud and/or other material is to be carried out. A wash down using the water tanker must be performed where there is a risk of mud and/or other material being tracked off-site.

RESPONSIBILITIES

It is the responsibility of individual staff and contractors to ensure the correct procedures are followed when operating vehicles or machinery at the site, or transporting waste to the site.

RECORDS

Any incidents are recorded on **Form 16** from **SOP 16 - ERRRC Daily Checklist**.

REFERENCES

SOP 16 – ERRRC Daily Checklist
WAP 012 – ERRRC Traffic Management

	Standard Operating Procedure
	Handling Contaminated Soil at ORRRC
	File No: **SOP 25**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 17/08/2015

Revision Status:

Change History

Date	Details of Change	Version No.
24/10/2014	Document created	Draft
28/10/2014	Draft approved	Version 1
17/08/2015	Draft approved	Version 2
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this document describes how hydrocarbon contaminated soil will be managed at ORRRC.

WORK PROCEDURE

1) Condition L5 of EPL No. 5956 states *only soils contaminated with petroleum hydrocarbons can be treated at the premises*.

2) All enquiries regarding delivery of hydrocarbon contaminated soil will be directed to the Manager Waste Services and Technical Support for approval prior to receipt at ORRRC.

3) Receipt of hydrocarbon contaminated soil will be recorded in the waste data records.

4) Contaminated soil will be managed in an area adjacent to the active disposal pits on the top of the Stage 3 landfill cell (refer to **Figure 3.4.1**).

5) Soils contaminated with petroleum hydrocarbons shall be placed in windrows in an area that will not be required for at least two (2) months.

6) The soil windrows will have a maximum height of 1.5m and base width of 4m.

7) The soil windrows will be turned once every two weeks for a minimum of two (2) months or until there is no significant hydrocarbon odour remaining in the soil.

8) When there is no significant hydrocarbon odour remaining in the soil it can be used as cover material.

9) Management of hydrocarbon contaminated soil shall be included in staff training.

RESPONSIBILITIES

Manager Waste Services and Technical Support will be responsible for approving receipt of hydrocarbon contaminated soil.

The Resource Recovery Centre Supervisor is responsible for the receipt and management of hydrocarbon contaminated soil.

RECORDS

Receipt of hydrocarbon contaminated soil will be recorded in the waste data records.

REFERENCES

WAP 014 – Handling Contaminated Soil at ORRRC

	Standard Operating Procedure
	WasteLocate Tracking
	File No: **SOP 26**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
17/08/2016	Document created	Draft
22/08/2016	Draft approved	Version 1
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

The purpose of this document is to describe how the EPA WasteLocate system is to be used for tracking of the following asbestos and tyre waste received at the ORRRC.

- Waste tyres greater than 200 kilograms or more than 20 waste tyres, whichever weighs less.
- More than 100 kilograms of asbestos waste or more than 10 square metres of asbestos sheeting.

WORK PROCEDURE

1) Transporters of asbestos or waste tyres meeting the above descriptions are required to use the WasteLocate system to create or select a consignment at the pick-up location using WasteLocate on a smartphone or tablet, available at www.wastelocate.epa.nsw.gov.au

2) At the receiving waste facility the transporter must scan the QR2id plate and follow the on-screen prompts.

3) Operators must direct the transporters with loads exceeding the above-listed amounts tyre waste to scan the QR2id plate at the ORRRC weighbridge. All transporters of incoming loads of asbestos waste are to be instructed to scan the QR2id plate at the ORRRC weighbridge. If the transporter fails to scan the plate, vehicle registration details must be recorded by the operator on **Form 26.01**.

4) At the end of each calendar month, the Resource Recovery Centre Operator reconciles the recorded details on **Form 26.01** against the weighbridge computer records. Any loads of asbestos that did not scan the QR2id plate or any tyre loads exceeding the above listed thresholds that did not scan the QR2id plate are to be entered onto **Form 26.02**. Once **Form 26.02** is completed, PDF the document. finalised,

5) The Resource Recovery Centre Operator emails completed **Form 26.02** monthly to the NSW Environment Protection Authority Waste Operations Section (waste.operations@epa.nsw.gov.au) and copies the Manager Waste Services and Technical Support to the email.

RESPONSIBILITIES

Manager Waste Services and Technical Support and Resource Recovery Centre Supervisor will be responsible for ensuring that monthly records are sent to the EPA of vehicle registration numbers that fail to scan the QR2id plate when directed by Resource Recovery Centre Operators.

The Resource Recovery Centre Operators are responsible for ensuring drivers scan the QR2id plate when required, and maintaining a record of vehicle registration numbers of those who fail to scan the QR2id plate.

The Resource Recovery Centre Operators are responsible for ensuring that emails of completed **Form 26.02** is sent monthly to the NSW Environment Protection Authority Waste Operations Section, and copied to the Manager Waste Services and Technical Support.

RECORDS

A record of all transporters of incoming loads of asbestos waste who do not scan the QR2id plate at the ORRRC weighbridge will be recorded and kept at ORRRC on **Form 26.01.**

Monthly reconciliation of recorded details on **Form 26.01** against the weighbridge records will identify any loads of asbestos or tyres that exceed the thresholds and did not scan the QR2id plate. These transporters will be recorded and kept at ORRRC on **Form 26.02**.

REFERENCES

Section 3.5 – Waste Receival

Section 3.6 – Waste Disposal

Section 6.2 – Waste Reporting

Section 9.3 – Waste and Resource Recovery Monitoring Program

SOP 7 – Weighbridge Procedures

SOP 8 – Handling and Disposal of Asbestos Waste

SOP 22 – ORRRC Tyre Management

WAP 006 – Stockpiling of Tyres

WAP 011 – Weighbridge Procedures

ASBESTOS AND TYRE WASTE DAILY RECORD

THIS MUST BE FILLED OUT WITH ALL DETAILS LISTED BELOW

Date of Delivery	Time Of Delivery	Vehicle Rego	PLEASE PRINT CLEAR Organisation or Name of Driver	Tick Scanned		Asbestos	Tyres
				Yes	No		

RECORD OF UNSCANNED LOADS

DETAILS OF RECEIVING PREMISE	
Company or agency name	Orange City Council
Contact name	Wayne Davis
Address of premises	261 Ophir Road Orange NSW 2800
Environment Protection Licence Number	5956
Australian Business Number (ABN)	85 985 402 386
Phone number	02 63938861
Email address	wdavis@orange.nsw.gov.au
Fixed Plate Number or Numbers (if more than one on premises)	H9NV-ERD

Month:					
Date of Delivery	**Time of Delivery**	**Waste Tyres or Asbestos Waste**	**Customer Name**	**Vehicle Registration**	**Weight (Tonnes)**
				Total Weighed	

Submitted by:

Name	Position	Signature	Date

	Standard Operating Procedure
	ORRRC Community Recycling Centre
	File No: **SOP 27**

I approve the use of this Standard Operating Procedure:

Name: Wayne Davis	**Position:** Manager Waste Services and Technical Support
Signature: 	**Date:** 2/3/2021

Revision Status:

Change History

Date	Details of Change	Version No.
18/09/2017	Document created	Draft
24/10/2017	Draft approved	Version 1
22/1/2020	Version updated to correspond to OEMP	Version 5
2/3/2021	Update Signature Date Version updated to correspond to OEMP	Version 6

PURPOSE

To ensure consistent and correct methods are used for the operation of the ORRRC Community Recycling Centre (CRC) in accordance with the NSW EPA *Community Recycling Centres: Operations and management handbook 2nd edition* (CRC Handbook).

WORK PROCEDURE

The CRC Handbook outlines minimum standards for infrastructure, risk management, operating procedures, training, record-keeping and reporting.

The CRC Handbook standards require CRC operators to ensure facilities and equipment, processes and documented procedures are 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.

The CRC Handbook is attached to this SOP.

RESPONSIBILITIES

The Manager Waste Services and Technical Support is responsible for commissioning a contractor to operate the CRC in accordance with the CRC Handbook.

The CRC contractor is responsible for operating the CRC in accordance with the CRC Handbook.

RECORDS

The contractor is required to complete all applicable forms contained within the CRC Handbook.

Completed CRC Handbook forms must be forwarded to the Manager Waste Services and Technical Support.

REFERENCES

Section 2 – Operations Overview

NSW EPA
Environment Protection Authority

Community Recycling Centres

Operations and management handbook – 2nd ed.

Waste matters
Drop off your household problem waste for recycling



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Report pollution and environmental incidents

Environment Line: 131 555 (NSW only) or info@environment.nsw.gov.au
See also www.epa.nsw.gov.au

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Disclaimer

This 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. It does not constitute legal or regulatory advice on any issue. It does not dissolve the user or facility from compliance with NSW waste regulations or environmental license conditions. Councils and others should seek and rely on their own advice in relation to issues such as environmental licensing, Work Health and Safety and planning approvals in relation to specific facilities. The NSW Environment Protection Authority (EPA) accepts no responsibility for errors or omissions in the Handbook or for any loss or damage arising from the use of the Handbook.

Community Recycling Centres program

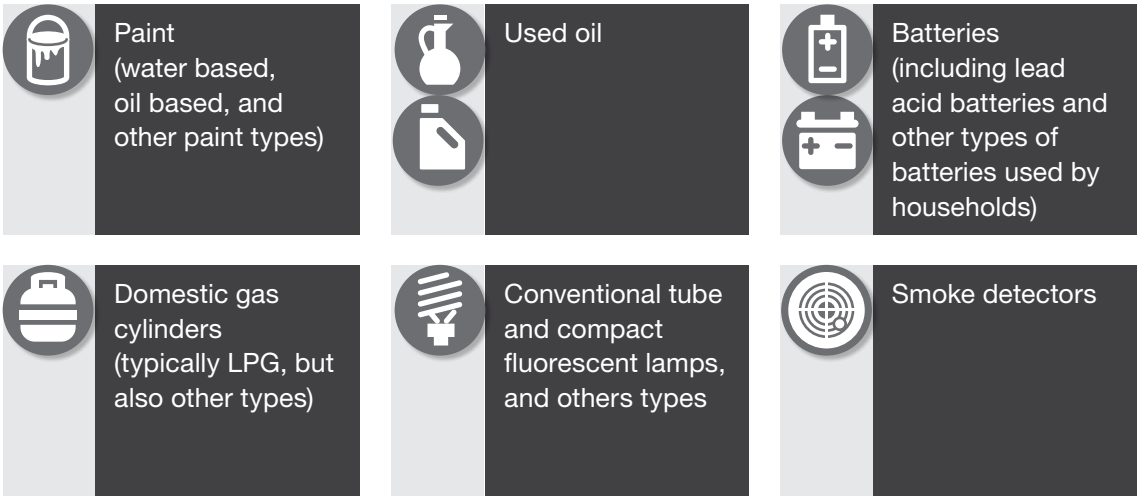
The NSW Environment Protection Authority (EPA) is establishing a network of Community Recycling Centres (CRCs) across NSW. The primary aim of this program is to make it easy for householders in NSW to safely dispose of materials that can be hazardous to the environment or to public health. CRCs are to be designed and operated to temporarily store these materials safely until they can be recycled or disposed of appropriately.

The materials being targeted by the EPA for collection at CRCs are referred to as CRC materials in this Handbook and are listed below.

Facility operators may collect other materials, but are to do so at their own discretion and cost.

The program is aimed at householders, who wherever possible will be able to have their materials accepted at any facility in the network of CRCs. Materials accepted from commercial or business operators will not form part of this program, and their collection and disposal will not be funded by the EPA.

CRC materials



Purpose of this Handbook

The EPA has prepared this Handbook to assist facility owners and operators to establish and operate a CRC. The Handbook outlines minimum standards for infrastructure, risk management, operating procedures, training, record keeping and reporting. These standards require CRC operators to ensure facilities and equipment, processes and documented procedures are 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.

This Handbook must be kept at the CRC for reference by operations staff.

The Handbook contains the following sections:

1.
Establishing a Community Recycling Centre

Outlines the requirements for locating a CRC, standards for infrastructure, buildings, site control measures, and equipment required for handling materials appropriately.

2.
Risk management

Describes the elements of risk management and how they can be applied to the design and operation of CRCs. A worksheet is provided that can be used by CRC operators to undertake a Risk Assessment and prepare a Risk Management Plan for a particular CRC.

3.
Operating a Community Recycling Centre

Provides procedures to protect the health and safety of customers and staff, and for managing the impact of a CRC on the environment. This includes advice on safe handling of materials and emergency response, that can be used by CRC operators as is or to update their own procedures.

4.
Induction and training

Outlines the requirements for induction and training of staff involved in establishing and operating a CRC. An induction checklist and templates are provided for keeping records of induction and training.

5.
Record keeping and reporting

Outlines the requirements for record keeping and reporting in relation to quantities of materials kept on site and collected, risks, induction and training, and performance self-assessments. Guidance is provided in using the online reporting system for CRCs.

6.
Mobile Community Recycling Centre Operations

Outlines requirements for infrastructure and equipment, storage control measures, procedures to protect the health and safety of customers, and manage the impact on the environment for mobile CRC services.

7.
Important references

Provides a list of important references and links relevant to establishing and operating a CRC.

8.
Safety data sheets

Provides safety data sheets for the hazardous materials received at a Community Recycling Centre.

Emergency contact numbers

(Write in contact details for this CRC)

NSWFB / RFS	
Hazmat	
Police	
Local hospital / medical	
Poisons information	
Local EPA	
EPA contractor for CRCs	

REFER TO EMERGENCY RESPONSE PLAN AND NOTE THE PRIORITY CALL LIST HERE:
(i.e. who to call in what order)

Important contacts

(Write in contact details for this CRC)

Collection contractor	Company: **Toxfree** Address: **40 Christie Street, St Marys NSW 2760** Phone: **1300 869 373** **Primary contact:** Name: **Ian Parkes** Title: **Major Contract Manager** Phone: **02 9851 4200** Mobile: **0409 938 553** Email: **i.parkes@toxfree.com.au** **Alternate contact:** Name: Title: Phone: Mobile: Email:
Local EPA contact	Name: Title: Phone: Mobile: Email: Location: Address:

Council contacts	**Site supervisor:** Name: _____ Title: _____ Phone: _____ Mobile: _____ Email: _____ **Education officer:** Name: _____ Title: _____ Phone: _____ Mobile: _____ Email: _____
Communication and education contact	Location address: _____ Name: _____ Title: _____ Phone: _____ Mobile: _____ Email: _____
Data reporting information	Centre ID: _____ Password: _____ **Registered users:** Name: _____ Login: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____

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1.
Establishing a Community Recycling Centre



General requirements



Infrastructure and building requirements



Site control measures



Collection of deposited materials



Equipment and handling procedures

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1.1 General requirements

1.1.1 Preferred locations

Where drop-off centres for waste and recyclables are already in operation, it is preferable, where practical, that these existing facilities are adapted to establish CRCs.

To ensure ready access and maximise participation by the community, new centres should be located in or close to population centres.

Any adjacent facilities or activities should be taken into account to ensure that any impact on or by the CRC is minimised.

1.1.2 Site management

The council or site operator shall manage the site(s) and be responsible for ongoing risk assessment and management, and adherence to operational procedures.

1.1.3 Community involvement

A desired outcome of the program is for the local community to engage with, and feel welcome at, CRC facilities. The community should clearly understand what materials can be dropped off and where they should be placed.

As the CRCs evolve there may be opportunity for expansion to include additional household wastes that have been identified by the community as a problem waste. Facility operators are encouraged to support activities that will achieve better waste and resource recovery outcomes.

1.1.4 Site approvals and consents

Facilities are to be operated so that the volume of materials held on site remains under 'Manifest' quantities in accordance with applicable regulations and standards. Generally the local council will be the consent authority authorised to deal with Development Approvals (DAs) and other applications if required.

An EPA Environment Protection Licence is required for any activity above the scheduled size for waste storage under the *Protection of the Environment Operations Act 1997* Schedule 1 (42), which is more than 5 tonnes of hazardous waste, restricted solid waste, liquid waste, clinical or related waste, or asbestos waste stored on the premises at any time. The CRC will be designed and operated not to exceed the Schedule 1 thresholds for waste storage.

Where a CRC is established at an existing facility that is currently licensed for solid waste only, the EPA will assist in amending as appropriate the licence to accept liquid and hazardous wastes from domestic sources as described. If a licence amendment is required the CRC operator must advise the relevant EPA office.

Waste levy exemption for facility construction

Where a CRC is located at a waste facility in a regulated area where the waste levy applies on materials entering the site, the facility manager can apply to the EPA for a levy exemption for construction materials such as concrete slabs, footings, roofs, floors, posts and collection infrastructure through the Operational Purpose Deduction. The waste levy guidelines are available at: **www.epa.nsw.gov.au/wasteregulation/waste-levy.htm**.

To apply for these waste levy exemptions contact the EPA Waste Strategy and Innovation Unit at **waste.operations@epa.nsw.gov.au**.

1.1.5 Work Health and Safety

Under the *NSW Work Health and Safety Act* (WHS Act), a person conducting a business or undertaking has the primary duty to ensure, so far as is reasonably practicable, that the health and safety of workers and other persons are not put at risk from work carried out as part of the conduct of the business or undertaking.

The NSW Work Health and Safety Regulations (WHS Regulations) include specific duties for a person conducting a business or undertaking to manage the risks to health and safety associated with using, handling, generating and storing hazardous chemicals at a workplace. The duties applicable to CRCs include:

- 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
- ensuring that exposure standards are not exceeded
- provision of health monitoring to workers
- provision of information, training, instruction and supervision to workers
- 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
- 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.

Officers, such as company directors, have a duty to exercise due diligence to ensure that the business or undertaking complies with the WHS Act and Regulations. This includes taking reasonable steps to ensure that the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks that arise from hazardous chemicals at the workplace.

Workers have a duty to take reasonable care for their own health and safety and must not adversely affect the health and safety of other persons. Workers must comply with any reasonable instruction and cooperate with any reasonable policy or procedure relating to the use, handling and storage of hazardous chemicals at the workplace.

1.1.6 Risk management

The quantity of materials held on site (in particular oil based paint) will generally be above the threshold quantities under the NSW Work Health and Safety Regulation. As a result, facility operators must prepare a risk management plan for the drop-off and storage area covering both design and operations, and comply with the placarding signage requirements.

1.1.6.1 Managing the risks of hazardous chemicals

Part 2 of this Handbook provides guidance in identifying, assessing and managing the risks associated with the hazardous materials that are collected at CRCs.

The WHS Act requires CRC operators to consult, as far as reasonably practical, with workers involved in the operation of the CRC in conducting the risk assessments and implementing controls.

The WHS Act also requires that CRC operators consult, co-operate and co-ordinate activities with all other persons who have a work health or safety duty in relation to the same matter, as far as is reasonably practicable. This is particularly relevant where a CRC site has co-located activities undertaken by an external party such as a contractor, or where the CRC is operated by a contractor to the organisation which has established the CRC.

1.1.6.2 Register of hazardous chemicals

CRC operators must ensure that a register of hazardous chemicals is prepared and kept up to date. The register must be readily accessible to workers involved in using, handling or storing hazardous chemicals and to anyone else who is likely to be affected by a hazardous chemical at the workplace. The register is a list of all hazardous chemicals used, handled or stored at the workplace accompanied by the current SDS (one that is not more than five years old) for each hazardous chemical listed. It must be updated as new hazardous chemicals are introduced to the workplace or when the use of a particular hazardous chemical is discontinued.

The online dropoffwaste reporting system is appropriate for use as a register of hazardous materials stored at a CRC.

1.1.6.3 Safety Data Sheets

CRC operators must ensure Safety Data Sheets (SDSs) for the hazardous chemicals being stored at the CRC are obtained as soon as practicable.

CRC operators must also ensure the current SDSs are readily accessible to workers who handle the hazardous chemical at the workplace and emergency service workers, or anyone else, who is likely to be exposed to the hazardous chemical.

The SDSs should be kept in a location near the work area where the substance is stored. All workers likely to be exposed to the hazardous chemical must know how to find the SDS. In some cases it may be practicable to provide workers with access to SDS via an electronic database. However, this should be readily available to workers, workers should know how to use it, and a backup means of providing the SDSs should also be provided, for example as hard copies in a filing system.

The EPA has prepared a set of ten SDSs applicable to the materials that will be received at a CRC. These SDSs are provided at Tab 8 of this Handbook. NSW WHS Regulation 2011 Schedule 7(2) allows SDSs for waste products to be less detailed than those for non-waste products, and this has been taken into account in preparing SDSs for use at CRCs.

The EPA also provides a waterproof box to hold the sheets in a convenient location near the entrance to the CRC building. CRC operators are responsible for installing the box and keeping the SDSs inside it.

The waterproof box is also an appropriate location to hold a copy of emergency response procedures and other associated information.

1.1.6.4 Labels

CRC operators must ensure that containers of hazardous chemicals are correctly labelled. The collection contractor supplies labels for receptacles of CRC materials, and CRC operators must ensure these labels are correctly affixed to the relevant receptacle as soon as it is brought into service. These labels will correctly designate the receptacle both for storage and for transport of the material.

Correct labelling of receptacles as soon as they are brought into service must be included in the Safe Work Method Statements or Safe Operating Procedures for the CRC. Operations staff at the CRC must be trained in correct labelling procedures.

Additional placards as required by Schedule 11 and Schedule 13 of the WHS Regulation must be installed at a CRC. Refer to **Section 1.3.1.2** for more information.

1.1.6.5 Fire and explosion

CRC operators must manage the risk to health and safety associated with a hazardous atmosphere or an ignition source in a hazardous atmosphere at the workplace. This includes preventing ignition sources in the CRC via both design (e.g. intrinsically safe electrical equipment) and procedures (e.g. preventing customers and staff from smoking or using mobile phones in the CRC). Refer to **Part 2** of this Handbook for more detailed information on the fire and explosion risks arising from specific CRC materials.

1.1.6.6 Personal protective equipment (PPE)

PPE includes overalls, aprons, footwear, gloves, chemical resistant glasses, face shields and respirators. CRC operators must ensure that PPE is:

- selected to minimise risk to health and safety
- suitable for the nature of the work and any hazard associated with the work
- a suitable size and fit and reasonably comfortable for the person wearing it
- maintained, repaired or replaced so it continues to minimise the risk
- used or worn by workers, so far as is reasonably practicable.

Staff working in a CRC must, so far as reasonably able, wear the PPE in accordance with any information, training or reasonable instruction.

In most circumstances, PPE should not be relied on to control risk. It should be used only as a last resort when all other reasonably practicable control measures have been used and the risk has not been eliminated, or as interim protection until higher level controls are implemented. There may also be situations when the use of other controls is not practicable.

1.1.6.7 Containing spills

CRC operators must ensure, so far as is reasonably practicable that where there is a risk of a spill or leak of a hazardous chemical in a solid or liquid form, provision is made for a spill containment system. This system must contain within the workplace any spill or leak of a hazardous chemical and any resulting effluent.

When a spill, leak or accidental release of hazardous chemicals occurs, appropriate actions must be taken to contain the hazardous chemicals within the workplace. The spill containment system must describe how to contain, clean up and dispose of the spill or leak and any resulting effluent. The system must not create a hazard by bringing together different hazardous chemicals that would react together to cause a fire, explosion, harmful reaction or evolution of flammable, toxic or corrosive vapour.

1.1.6.8 Maintaining control measures

CRC operators must ensure that the implemented control measures remain effective. This includes checking that the control measures are fit for purpose, suitable for the nature and duration of the work and are installed and used correctly.

They must also ensure that a system used at the workplace for the use, handling or storage of hazardous chemicals is used only for the purpose for which it was designed, manufactured, modified, supplied or installed. It must be operated, tested, maintained, installed, repaired and decommissioned having regard to the safety or workers and other persons at the workplace.

1.1.6.9 Providing information, training, instruction and supervision

CRC operators must ensure that information, training and instruction provided to workers is suitable and adequate to:

- the nature of the work carried out by the workers
- the nature of the risks associated with the work at the time the information, training or instruction is provided, and
- the control measures implemented.

CRC operators must also provide any supervision necessary to protect workers from health and safety risks arising at the workplace, if workers:

- use, handle, generate or store a hazardous chemical
- operate, test, maintain, repair or decommission a storage or handling system for a hazardous chemical, or
- are likely to be exposed to a hazardous chemical.

Information, training, instruction and supervision must be provided not only to workers, but also to other persons at the workplace such as visitors.

Information, training and instruction should include:

- the nature of the hazardous chemicals involved and the risks to workers
- the control measures implemented, how to use and maintain them correctly
- the arrangements in place to deal with emergencies, including evacuation procedures, containing and cleaning up spills and first aid instructions
- the selection, use, maintenance and storage of any personal protective equipment (PPE) required to control risks and the limitations of the PPE
- any health monitoring which may be required and workers' rights and obligations
- the labelling of containers of hazardous chemicals, the information that each part of the label provides and why the information is being provided
- the availability of SDSs for all hazardous chemicals, how to access the SDSs, and the information that each part of an SDS provides
- the work practices and procedures to be followed in the use, handling, processing, storage, transportation, cleaning up and disposal of hazardous chemicals.

Information, training and instruction must be provided in such a way that it is easily understood. The amount of detail and extent of training will depend on the nature of the hazards and the complexity of the work procedures and control measures required to minimise the risks.

Records of training provided to workers should be kept, documenting who was trained, when and on what.

1.1.6.10 Emergency preparedness

CRC operators must prepare an effective emergency plan for the workplace. The purpose of the emergency plan is to plan for, and thus minimise the effects of, any dangerous occurrence or near miss at a workplace resulting from handling of hazardous chemicals.

The emergency plan should have provision for notifying appropriate authorities and any neighbours of the CRC that may be affected.

1.1.7 Insurance

The facility operator is to maintain adequate property, public liability, and workers compensation insurance cover for the facility and its operations.

1.1.8 Site appraisal

Upon acceptance of an Environmental Trust grant the CRC operator must provide a copy of the site plan and designs to the EPA's Community Recycling Unit for approval before construction commences. The EPA will appraise each site and provide comment on design plans and designs for the facility and its operations. Prior to the opening of each facility the EPA will provide training for site staff including guidance in conducting risk assessments.

1.1.9 Site layout and access

The site layout should support the safe and smooth flow of traffic through the facility, minimise customer waiting times, reduce the likelihood of congestion, and provide the minimum possible distances that customers need to carry materials they are delivering to the facility.

The facility should have separate entry and exit points for householder vehicles, and accessible parking immediately adjacent to the storage receptacles for materials.

The facility should provide sufficient space for truck and forklift movements including allowance for turning circles. The facility should have enough room to safely and easily move full receptacles into a storage area and to replace them with empty receptacles. It should also allow sufficient area for the loading of full storage receptacles for transport. The layout of the facility should as far as practicable ensure that truck, forklift, and customer vehicle movements do not intersect when materials are being collected. The separation of these site users may also be achieved by suitable operational procedures that are based on a risk management approach.

If a CRC is established at a works depot or other similar site where it is not desirable to allow householders access, consideration could be given to providing a drop-off area just inside the perimeter of the site that is adjacent to an external roadway. In this situation the facility layout must ensure that material storage areas can be secured out of hours.

All facility operators must obtain concept design advice from the EPA which can assist to ensure the proposed layout is operationally sound and conforms to the relevant Australian Standards. The EPA's Community Recycling Unit must approve the initial concept design and the final design. Funding may be withheld or delayed without these approvals.

1.1.10 Opening times

A considerable degree of latitude will be granted to the site host in regard to opening times. However, as a minimum it is expected that the site is supervised during householder access times which should be a minimum of 2 days during the week and 3 hours on some part of the weekend. Ideally operation 7 days per week is preferred to maximize availability and convenience for residents. Consistent and regular opening times are also preferable to encourage use by residents.

Depending on the site it may be necessary to close during periods where the receptacles are being moved or collected for the safety of members of the public and staff. Opening times for each specific centre will be incorporated into the agreement between the EPA and the facility operator.

1.1.11 No charge to householders

All materials accepted under this program are to be accepted at no charge to the householder whilst the EPA is paying the collection and processing costs. An existing facility that currently accepts the targeted materials at a charge to the householder must cease charging to be eligible for support under the CRC program.



1.2 Infrastructure and building requirements

The materials accepted should be stored out of the weather. As a minimum requirement materials are to be stored in a well-ventilated shed consisting of three sides and a roof, on a concrete or bitumen sealed surface, and with sufficient awning overhang on the open side to prevent rain ingress and provide cover for householders unloading. An appropriately designed building may also be used for storage where it has adequate forklift access and ventilation.

1.2.1 Receiving area and roadway surfaces

All surfaces where target materials are to be unloaded from householder vehicles and deposited in the storage receptacles must be sealed to contain inadvertent spills. Road surfaces should be designed and reinforced to withstand the loads applied by repeated use by heavy vehicles such as trucks collecting materials, and forklift movements, without degradation. Drainage in the immediate area should be designed and managed to prevent any spillages from entering waterways. Drainage should also be provided to minimise flooding from heavy rain within the unloading and storage areas, and within the approaches and exits from these areas.

1.2.2 Rain cover

The facility structure should provide protection from the weather, including a covered area where materials are accepted and moved from customers' vehicles to storage receptacles. Where it is intended or likely that the collection vehicle will pass under this area then it must have a minimum height of 5 metres.

1.2.3 Ventilation

Ventilation is a means of maintaining a safe atmosphere by the introduction or recirculation of air by natural, forced or mechanical means. Maintaining a safe atmosphere in the storage and handling area of hazardous chemicals is an important control measure. A CRC building or structure must be provided with adequate natural or mechanical ventilation. Natural ventilation is preferred and can be achieved by providing:

- at least two external sides completely open to the outside atmosphere
- one external side completely open to the outside atmosphere, with no other vents, provided that the distance to and the length of the opposite wall do not exceed the length of the open side
- one external side open to the atmosphere, and vents in one opposite or adjacent wall
- vents in one external wall, provided that such a wall is at least 6m long and the opposite wall is not more than 5m away from it
- vents in opposing walls.

Open or mesh sides with adequate roof overhang are recommended for natural ventilation. If an enclosed shed is to be used for either drop-off of materials and/or storage of full receptacles, vents are to be included at both the top and bottom of the shed walls and should be louvered to provide weather protection.

For guidance on providing ventilation, refer to *AS/NZS 3833:2007 The storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers*.

The storage of LPG gas cylinders requires unconfined air space, and in most cases locating the receptacle cage external to a building (if used) will be most appropriate.

1.2.4 Arrangement and nominal size of facility

The CRC program targets six material groups (in nine separate storage receptacles).

AS/NZ53833:2007 specifies that incompatible dangerous goods must be segregated. Receptacles used at CRCs should provide adequate segregation. However, as lead acid batteries (corrosive class 5) are usually not placed in a receptacle, they should be segregated from other materials, and in particular from LPG cylinders by a distance of at least 3 metres.

A typical arrangement for the nine storage receptacles is in a straight line including walking space between the receptacles. This would require an unloading length of between 16 and 18 metres. A roofed area of around 70 to 100 square metres is suitable for initial operation of an average size facility. However, the structure or area in which the CRC is located may be larger and may have multiple uses particularly if other materials are accepted.

Nominal dimensions above represent minimum requirements. Centres that serve large population centres may require larger areas than described above.

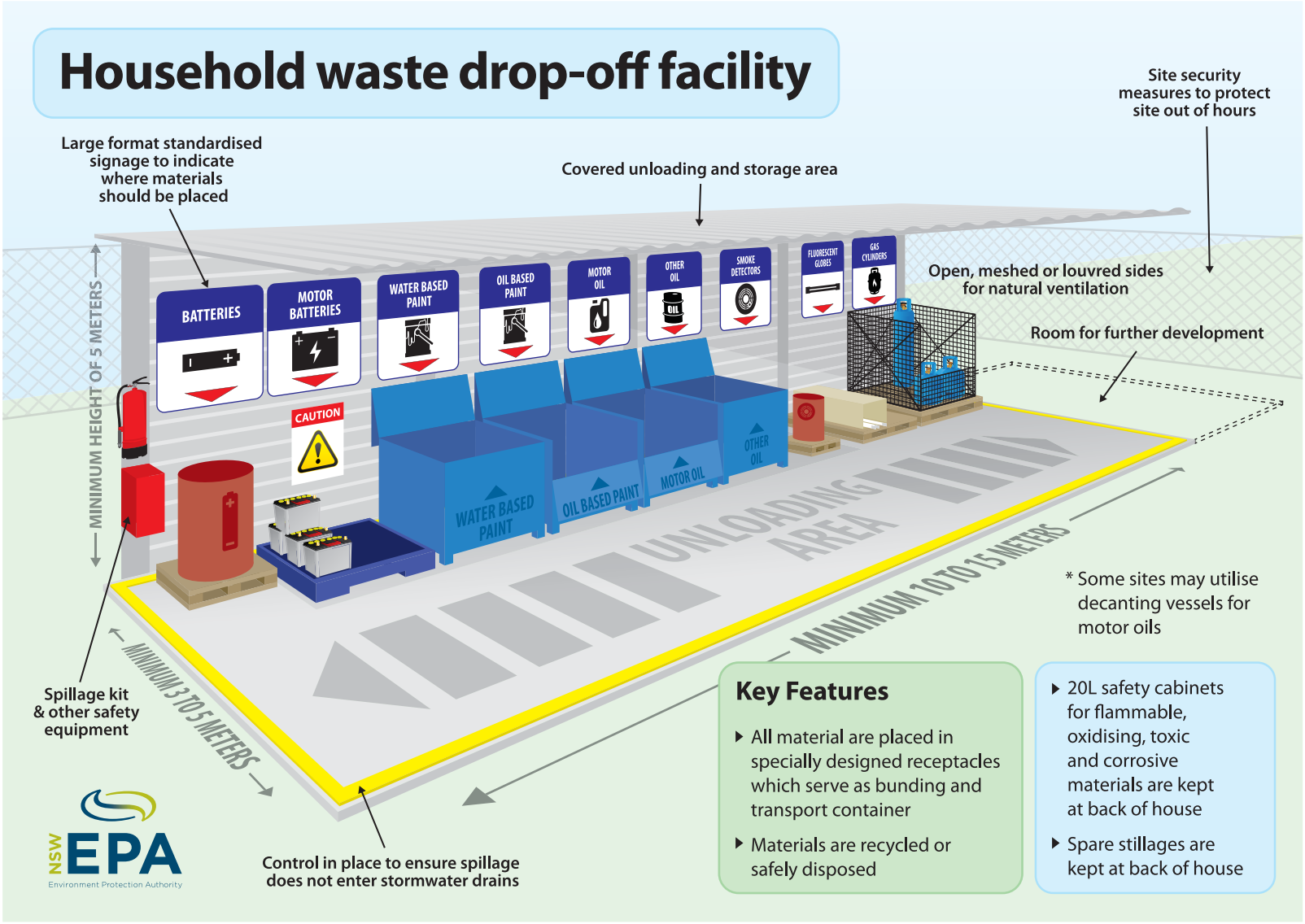
Further guidance on sizing a new CRC is provided in **Appendix 1.1** of this Handbook. An indicative layout of receptacles for the facility is illustrated in **Figure 1.2.4**.

1.2.5 Storage area for full and replacement receptacles

A separate area, or areas, is required for storage of full and replacement storage receptacles as well as safety cabinets for by-catch materials. This area should be secured from the drop-off area by a lockable gate if possible. Storage for the full receptacles requires adequate rain cover whether by roofing or tarpaulin. Storage of full and empty receptacles (also referred to as 'back-of-house') will typically require an area of 6m by 3m, and safety cabinets for by-catch will typically require an area of 6m by 1m.

Sufficient area must be provided to allow for easy movement of storage receptacles by forklift within the unloading and storage areas.

Figure 1.2.4 – Indicative layout for a Community Recycling Centre



1.2.6 Dangerous Goods Safety Cabinets (DGSC)

Irrespective of gate policies and dedicated signage, a small percentage of non-targeted by-catch materials can be expected. Separate dangerous goods safety cabinets compliant with the relevant Australian Standards for flammable, oxidising, toxic and corrosive materials will be provided by the EPA during establishment of the facility.

The DGSC are to be kept in a separate secured area out of sight from the main drop-off area to discourage the delivery of non-target materials, and should not be accessible to members of the public. The cabinets are only to be moved when empty to avoid spills and damage to the cabinet. The cabinets should remain on pallets supplied for ease of movement by forklift if required.

The appropriate primary Australian Standard for Community Recycling Centres – *AS/NZS 3833:2007 The storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers* has specific requirements relating to the use of cabinets for the storage and handling of mixed classes of dangerous goods. These include requirements relating to the types of substances kept, the maximum quantities to be kept, cabinet construction, cabinet location, and cabinet marking.

Where the quantity of dangerous goods being kept in the cabinet(s) is less than minor storage quantities as defined by AS/NZS 3833:2007, these requirements are advisory but should be implemented at CRCs. **Table 1.2.6**, extracted directly from this standard, outlines the maximum quantities for minor storage. Although the preferred approach to the storage of by-catch at CRCs is that minor storage quantities should not be exceeded, there will be circumstances where these will be exceeded, and these requirements must be met.

Box 1 on page 14 shows the requirements of the standard for minor storage, and Box 2 on page 15 shows the requirements of the standard where the quantities for minor storage are exceeded. These requirements should be considered during the design of the CRC. **Note these requirements are summarised for information here – the full standard should be referenced when designing a CRC.**

Table 1.2.6 – Maximum quantities for minor storage

Description	Quantity: kg or L		
	Packing Group I	Packing Group II	Packing Group III
Total quantity of all dangerous goods	25	250	1,000

Notes:

1. It is permissible to store, at the same time and in the same area, the maximum allowance for each of all the Packing Groups. Refer to Box 3 on page 16 for an explanation and examples of packing groups.
2. Where manufactured product is stored, the quantities of manufactured product may be doubled.
3. The maximum quantity of Class 5.2 dangerous goods (organic peroxides) allowable as minor storage is 10kg or L.
4. For the purpose of determining minor storage quantities Class 2 dangerous goods in retail packages, aerosols, and substances and articles of Class 9 are regarded as Packing Group III.

Arrangement of Dangerous Goods Safety Cabinets (DGSC)

In most instances the total capacity of the DGSC will be less than the requirement for minor storage. Where the total capacity of these cabinets is greater than this, the cabinets are to be arranged as two or more minor stores.

These minor stores must be:

- separated by more than 10m from any other dangerous goods store
- located to ensure there is not more than one minor store per 500m^2 of floor or ground area
- at least 10m apart.

Like types of DGSC are to be kept together.

As an example the following arrangement would be appropriate.

Table 1.2.6.2 – Example of arrangement of DGSCs as two minor stores

	Cabinet Capacity	Number of Cabinets	Total Capacity
Minor Store 1			
Flammable Liquid	250L	2	500L
Toxic	250L	1	250L
Total			**750L**
Minor Store 2			
Oxidising Agents	250L	1	250L
Corrosives – Acids	250L	1	250L
Corrosives – Alkalis	250L	1	250L
Total			**750L**

Box 1 – Summary of requirements of AS/NZS 3833:2007 in relation to minor storage

Classification as minor storage

Less than or equal to maximum quantities for minor storage **(Table 1.2.6)**

Separated by more than 10m from any other dangerous goods store.

Not more than one minor store per 500m^2 of floor or ground area.

Minor stores shall be at least 10m apart.

Precautions applying to minor storage

Any materials that are incompatible or might react dangerously, are segregated.

Storage areas shall be away from heating and ignition sources.

Storage areas shall be provided with adequate natural or mechanical ventilation.

Packages shall be kept closed when not in use, and only opened in a well-ventilated area. If their contents are flammable, packages shall be kept away from potential ignition sources.

Appropriate spill control measures shall be provided where packages are opened and their contents transferred.

Any spills or leaks shall be cleaned up immediately and disposed of appropriately in accordance with Section 10 of this handbook. Contaminated, spilled or leaked material shall not be returned to original packaging, except for disposal where it is known that this will not increase the risk.

Dangerous goods shall not be stored or handled where they could hinder escape from a building in the event of fire.

Persons who handle dangerous goods are informed and aware of the hazards involved.

Packages are to be kept in such a manner as to avoid spillage.

Stores are to be kept clear of combustible matter and refuse.

Packages must be kept on surfaces that are resistant to attack by their contents if spilt.

Appropriate personal protective equipment is to be worn by personnel involved in product transfer or clean-up operations.

A fire extinguisher of a suitable type must be installed in each minor store. It should be located so that it is immediately accessible in an emergency, along an exit route.

A supply of water must be available at a nearby location for personal hygiene.

Additional precautions for outdoor minor storage

The ground around the storage area shall be kept clear of combustible vegetation and refuse by at least 3m.

Any potential flow of spillage shall be prevented from reaching any protected place, watercourse or boundary by such means as the use of natural ground slope, or the provision of a diversion channel, kerb or bund.

The store shall be separated from any protected place or property boundary by at least 3m.

Box 2 – Summary of requirements of AS/NZS 3833:2007 in relation to storage in cabinets where minor storage quantities are exceeded

Type of substances kept

Cabinets may be used for the storage of packaged dangerous goods of Classes 3 (Flammable Liquids), 5 (Oxidising Agents), 6.1 (Toxic Materials) and 8 (Corrosive Substances).

Maximum quantities to be kept

Where a storage cabinet is used as a means of segregating a single class within a mixed class store, the maximum quantity of the class kept in the cabinet must not exceed 850kg or L.

Cabinet location

Cabinets must be located so that they do not impede escape in an emergency.

Cabinets having a capacity greater than 250L:

- should only be installed on floors that have direct access from street or ground level;
- shall not be installed in residential or accommodation buildings, commercial buildings, hospitals, aged care buildings or school buildings;
- shall not be placed nearer than 3m to any wall that is common with another room unless that wall is constructed of concrete or masonry to ceiling height or 3m above the top of the cabinet.

The aggregate capacity of cabinets shall be no greater than 850L per 250m^2 of ground floor area, and 250L per 250m^2 on other floors.

Exclusion of ignition sources

There should be no ignition sources within the cabinet. Ignition sources must be excluded from the area outside the cabinet where flammable and dangerous goods are stored. This exclusion area should be to a distance of 3m measured laterally, and from the floor to a height of 1m above any opening in the cabinet, including the door opening.

Cabinet marking

Cabinets must be marked with placards in accordance with Schedule 13 of the NSW Work Health and Safety Regulation 2011, and provided with warning signs as appropriate. **Section 1.3.1.2** provides further information on placarding.

Box 3 – Explanation and examples of Packing Groups (PG)

Substances are assigned to three packing groups in accordance with the degree of danger they present:

- Packing Group I: Substances presenting high danger
- Packing Group II: Substances presenting medium danger
- Packing Group III: Substances presenting low danger.

The Packing Group to which a substance is assigned is indicated in the Dangerous Goods List in Chapter 3.2 of the Australian Dangerous Goods Code.

Note that substances listed in the ADG Code under Classes 1 (Explosives), 2 (Gases) and 7 (Radioactive Materials), Divisions 5.2 (Organic peroxides) and 6.2 (Infectious substances), and other than self-reactive substances of Division 4.1 (Flammable solids, self reactive substances and solid desensitized explosives) are not assigned Packing Groups.

Examples of Packing Group I

Arsenical pesticides (may be PG I or II)	Hydrofluoric acid (> 60% strength)
Hydrogen peroxide (> 60% strength)	Strychnine

Examples of Packing Group II

Acetone (nail polish remover)	Some arsenical pesticides
Methyl ethyl ketone (common solvent)	Hydrofluoric acid (<60% strength)
Hydrogen peroxide (> 60% strength)	Isopropyl alcohol
Lithium batteries	Methanol
Concentrated hydrochloric acid	Petrol

Calcium hypochlorite ('solid pool chlorine'), with > 39% available chlorine

Potassium permanganate crystals or powder

Solid caustic soda (may be a component in drain cleaners)

Some solvent based paints

Sulphuric acid (any concentration except fuming)

Examples of Packing Group III

Some solvent based paints	Lead-acid batteries
Kerosene	Perchloroethylene (dry cleaning liquid)
Ethyl alcohol (<70% strength)	Hydrogen peroxide (8-20% strength)
Metallic mercury	Naphthalene (old-style mothballs)
Dilute hydrochloric acid	Turpentine

Calcium hypochlorite ('solid pool chlorine') with 10-39% available chlorine



1.3 Site control measures

The layout of the facility, signage, storage control measures, and interaction with staff at the facility should work together to ensure that householders are welcomed. 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.

1.3.1 Signage

CRC branded signage must be used at the centre. Artwork for all signage is provided by the EPA and is online at **epa.metrographics.com.au** Contact **recycling.centres@epa.nsw.gov.au** to request an account for access or if you require graphic design support to update and customise your signage.

1.3.1.1 CRC program signage

Entry sign

A CRC branded entry sign which includes opening times and contact details must be installed at the entry gate to the facility. This may be on the roadside or facility gate or both.

Shed sign

A CRC branded sign must be installed on the building. This is a simplified version of the entry sign.

Funding acknowledgement

Signage acknowledging the NSW EPA and Environmental Trust must be installed on the CRC building.

Directional signage

Directional signage has been developed to help users navigate the CRC site and easily locate the CRC. This signage is particularly useful if the CRC is located within a larger waste management site. Please use judgement when selecting which directional signage is appropriate for the site.

If appropriate, arrows showing the direction customer vehicles are to travel to and through the CRC can be painted on the pavement leading to and inside the CRC building.

Material signs

Artwork has been developed for all of the material types that can be collected at the CRC.

Large format icons (1mx1m) are intended to be positioned above each receptacle. The large format signage includes pictorial and text descriptors.

The EPA will provide all artwork in electronic format. Customisable artwork such as the entry sign and any new artwork must be reviewed and approved by the EPA prior to printing and installation. Artwork is also available for many materials that are not targeted by the EPA's household problem wastes program.

1.3.1.2 Hazardous chemicals 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 required at the entrance of the facility, and must remain visible when the entry gate is open or closed. Information placards must also be placed where the chemicals are stored. These placards are included on the labels that must be affixed to each storage receptacle as soon as it is brought into usage. On some receptacles the adhesive label is obscured when the receptacle door is open for use. Additional magnetic labels indicating material type should be placed on a visible portion of these types of receptacles when they are in use. More information on placarding can be found in the SafeWork NSW Fact Sheet available at **www.safework.nsw.gov.au/media/publications/health-and-safety/placarding-for-storage-of-hazardous-chemicals**.

Signs must comply with *AS 1216-2006 Class labels for dangerous goods*.

1.3.1.3 Warning signs

The following signs need to 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 area as appropriate, e.g. **RESTRICTED AREA, AUTHORISED PERSONNEL ONLY.**
- Warning signs to control customer behaviour, e.g. **LEAVE CHILDREN IN VEHICLE, SWITCH OFF ENGINE, SWITCH OFF MOBILE PHONE.**

These signs must have lettering that contrasts with the background, and be clearly legible from any access point to the CRC. Signs must comply with *AS 1319-1994 Safety signs for the occupational environment.*

1.3.1.4 Signs showing location of safety and personal protective equipment

Signs showing the location of safety equipment including first aid, fire extinguishers, safety shower and eyewash, and personal protective equipment must also be installed in accordance with the relevant Australian Standards.

1.3.2 Storage control measures

All CRC materials delivered to the facility shall be contained by placement in specially designed storage receptacles that are provided by the EPA's collection contractor.

Storage receptacles must be appropriate to the class of material being stored and transported. Receptacles are typically collapsible steel-frame containers with plywood sides, fully welded steel boxes for paint and oils, cages for gas bottles, drums for batteries and smoke detectors and various boxes for fluorescent tubes. Storage receptacles must be approved segregation devices in accordance with the Australian Dangerous Goods (ADG) Code.

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

Materials accepted (with the exception of used oil when a decanting operation is used) should be stored in their original packages, as brought in by householders. Packages should then be neatly stacked directly into the storage receptacles, so that these receptacles can be picked up for recycling without the need for repacking.

Leaking containers should be over wrapped in a plastic bag before removing from vehicle. Leave the leaking container in the plastic bag and place in the appropriate receptacle.

The number of storage receptacles will be controlled to limit the total volume of materials held on site. This will minimise risks and may remove any need for licence amendments relating to waste storage limits by keeping the quantity of hazardous materials stored at any one time under 5 tonnes.

Householders are required to separate water based and oil based paints by placing them in separate storage receptacles. If unsure of paint type then place in the oil based paint receptacle.

1.3.3 Safety equipment

The following safety equipment must be provided within the CRC:

- Safety shower and eyewash
- Spill response kit
- Fire extinguishers
- Personal protective equipment (PPE)
- First aid equipment and supplies.

Procedures must be implemented to regularly:

- test the operation of the safety shower and eyewash
- check and replenish the first aid equipment and supplies
- check and replenish the PPE
- check and replenish the spill response equipment.

Spill response equipment should include adequate quantities of suitable absorbent materials. This includes a sufficient quantity of resealable waste recovery containers compatible with the substances being kept, marked for emergency use only, and shovels, brooms and scrubbing brushes. Spill response equipment must be located at both the drop-off area and the storage area.

Dry chemical powder type fire extinguishers are appropriate for all types of CRC materials except for cooking oil, for which a wet chemical type is more appropriate. It is the CRC operator's responsibility to ensure this equipment is on hand. Refer to *AS 2444-2001 Portable fire extinguishers and fire blankets – Selection and location* for guidance on the selection and location of fire extinguishers.

1.3.4 Safety and environmental management procedures

1.3.4.1 Safe Work Method Statements

Established processes and documented procedures such as Safe Work Method Statements (SWMSs) or 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.

These should include procedures and equipment for safe handling of materials (such as Personal Protective Equipment and Safety Data Sheets) and emergency response (such as fire detection and protection, safety shower, spill response kit and first aid equipment).

They should also outline how public and staff safety will be ensured when moving storage receptacles and loading service vehicles.

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

1.3.4.2 Emergency plan and procedures

An emergency plan must be prepared to minimise the effects of any dangerous occurrence or near miss at a CRC resulting from handling of hazardous chemicals.

When preparing an emergency plan consideration should be given to:

- procedures that include:
  - an effective response to an emergency
  - evacuation procedures
  - notification procedures to advise emergency services organisations at the earliest convenience
  - medical treatment and assistance
  - communication between the person coordinating the emergency response and all persons at the workplace
- the testing of procedures, and how often this will be done
- how relevant workers will be provided with information, training and instruction about implementing the emergency procedures

A comprehensive emergency plan should include:

- a site map showing where hazardous chemicals are stored
- responsibilities of key persons 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
- procedures that 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 wardens) in the containment of any spillage
- the requirement for fire-water retention to ensure that contaminated fire-water cannot enter waterways, drains or ground water
- 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
- liaison with any neighbours of the CRC, as appropriate
- maintenance of site security throughout the emergency
- provision for dealing with the public and the press
- site rehabilitation requirements.

The extent of emergency procedures required will depend on the size and complexity of the workplace, types and quantities of hazardous chemicals and the processes involved when the goods are in use. As a minimum, emergency procedures should include instructions on:

- how to raise the alarm, including how to contact the appropriate emergency services organisation
- any actions to be taken by workers to ensure the safety and health of all persons at the workplace to minimise risks, damage to property as well as the environment
- any actions to be taken by prescribed persons such as fire wardens, for example how to evacuate the workplace or use fire extinguishers.

To be effective, workers need to be appropriately trained, and any procedures tested. Workers should be consulted and ideally directly involved in the development of emergency procedures.

An effective emergency procedure could be a simple one-page document of dot points detailing evacuation procedures, assembly areas, identifying first aid officers and emergency wardens at the workplace, contact numbers of emergency services organisations (such as fire brigade, police, ambulance, local hospital and regulatory authorities).

Copies of the Emergency Plan must located near the CRC and near the entrance to the facility.

1.3.4.3 Procedures for handling commercial waste

CRCs must not accept commercial or business waste. CRC operators must prepare and implement procedures to identify and separate commercial and business waste from household waste. If the CRC is located at a facility that accepts business or commercial waste under no circumstances should this waste be accepted at the CRC.

1.3.5 Staffing levels and operator qualifications and training

Dedicated full time supervision of the CRC is not necessary. However, it is expected that the CRCs are located within a site where adequate overall supervision is available by appropriately qualified and trained personnel.

In particular, supervision needs to be sufficient to prevent the acceptance of hazardous materials, or waste, dropped off from commercial or business activity, at the CRC.

1.3.6 Security

The sites must be secured to prevent unauthorised access out of hours. In some cases closed circuit surveillance (CCTV) may be warranted to discourage vandalism or illegal dumping.

1.3.7 Materials register

The facility should have processes and procedures in place to ensure an accurate register of materials stored is maintained and kept up-to-date, and is easily accessible in the event of an emergency.

1.3.8 Data management and reporting

Records of the quantities of each type of material accepted under this program are to be kept and reported to EPA using the online reporting system. Reporting is required at minimum on a weekly basis for an overall site capacity update, and every single occasion an EPA designated or EPA authorised third party organisation contractor collects targeted materials. In the case of lead acid batteries and used motor oil that is not collected by the EPA contractor, the means of recycling (processing and end-use) is also to be reported.

1.3.9 Specialist advice

The EPA will establish and maintain contracts for the provision of specialist advice and support arrangements in the event of unknown materials being deposited, and other unexpected or emergency situations. The CRC operator is to ensure their operating and emergency procedures appropriately reference this specialist advice.

1.3.10 Auditing

The EPA may, at its discretion, audit facilities to verify any aspect of facility design or operations including determining quantities of materials accepted, record keeping, acceptance and storage procedures, staffing and supervision, and charging of customers. Facility operators will be expected to provide full access and cooperate with the EPA in undertaking any audit.



1.4 Collection of deposited materials

1.4.1 Contracts to collect and recycle or dispose

The EPA will establish and maintain 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 for the duration of the program.

The facility is required to have a forklift on site to change over receptacles, move receptacles to and from the storage area, and to load the collection contractor's vehicle. If for some reason the forklift is not available, the collection contractor should be notified well in advance of collection.

The facility operator will be responsible for arranging the storage, collection and recycling (not disposal) of lead acid batteries and used motor oil. The facility operator will be required to record the quantities of lead acid batteries and used motor oil received at the facility, and report these quantities to EPA with reports on other materials.

1.4.2 Collection of other materials (facility operator's discretion)

It is envisaged that over time, many of the CRCs will evolve to become community based recycling centres collecting a wider range of targeted materials for recycling, sale, exchange or distribution as the facility operator deems fit.

Where existing facilities are to be adapted to accept materials targeted by this program, facility operators are encouraged at their own discretion to continue their current resource recovery activities and constantly seek higher order outcomes.



1.5 Equipment and handling procedures

The facility should have procedures in place to ensure that customers deliver only materials that are accepted at the site, and that these materials are handled by customers and staff in a safe and secure manner. Materials should be separated into different areas in a manner appropriate for compliant storage and ease of loading for transport.

Refer to **Section 3** of this Handbook (Operating a Community Recycling Centre) for more information on the specific requirements for acceptance and storage of CRC materials, non-targeted by-catch materials, and unknown materials.

Appendix 1.1: CRC sizing and collection frequency

The requirements of the NSW Workplace Health and Safety Regulation 2011 are applicable to CRCs as they store materials considered by the regulation as hazardous chemicals. The regulation establishes requirements for the safe use, storage and handling of hazardous chemicals as classified under the UN Globally Harmonised System of Classification and Labelling of Chemicals (GHS).

Some of the requirements depend on the quantity of hazardous chemicals stored. If more than placard quantities of hazardous chemicals are stored, outer warning placarding and placarding of the particular hazardous chemicals (349 and 350) is required. If more than manifest quantities are stored, provision of a manifest and site plan (347), and notifying the regulator of this situation (348) is required.

Placard and manifest quantities for materials to be stored at CRCs are shown in **Table A1.1(a)** below. The classifications of these materials under the Australian Dangerous Goods Code (ADG) and the GHS are also shown.

Table A1.1(a): Placard and manifest quantities for materials stored at CRCs

Material	ADG Class	GHS classification	Placard quantity	Manifest quantity
Batteries – household				
Lithium ion	9 Miscellaneous	None	No limit	No limit
Other types	None	None	No limit	No limit
Batteries – lead acid[1]	8 Corrosive: packing group II	Skin corrosion: category 1A	250kg or L	2,500kg or L
Fire extinguishers	2.2 Compressed gases	Compressed gas	1,000L	10,000L
Fluorescent tubes and light fittings[2]	6.1 Toxic: packing group II	Acute toxicity – Category 1	250kg	2,500kg
Gas cylinders LPG or propane	2.1 Flammable gas	Flammable gases category 1	200L	5,000L
Oil – heating	3 Flammable liquid: packing group III	Flammable liquid: category 3	1,000	10,000L
Oil – motor and cooking	None	None	No limit	No limit
Paint – water based	None	None	No limit	No limit
Paint – oil based	3 Flammable liquid:	Flammable liquid:		
	Packing group II	Category 2	250L	2,500L
	Packing group III	Category 3	1,000	10,000L

[1] Although fluorescent tubes and fittings packed for retail distribution are not considered dangerous goods, good practice for waste lamps is to consider them as mercury containing waste, or Mercury Compounds N.O.S. which is classified as 6.1 Toxic under the ADG Code.

To ensure that the requirements for the design and operation of CRCs are manageable, the quantity of materials stored should be kept below manifest quantity.

The quantity stored at a particular CRC will depend on the population served and the frequency with which it is emptied. Data from earlier modelling based on similar programs in Victoria and Western Australia have indicated that for a population of 50,000 a CRC can typically be expected to receive the quantities indicated in **Table A1.1(b)**. The sizing and frequency of collection for a particular centre should take into account these quantities and the manifest quantities in **Table A1.1(a)**.

The material of most concern is oil based paint which, if considered as all Packing Group II, would require a collection frequency of every seven weeks for the quantity stored to remain below manifest quantity. The next most frequent collection is required for lead acid batteries, every 17 weeks to remain under manifest quantity.

Table A1.1(b): Typical quantities of materials anticipated at a CRC serving 50,000 people and calculated collection frequency

Material	Quantity tonnes per year	Quantity kilograms per week	Collection frequency weeks
Batteries – household	0.07	2	NA
Batteries – lead	9	150	17
Fire extinguishers	0.14	3	> 52
Fluorescent tubes and light fittings	0.71	15	> 52
Gas cylinders – LPG and propane	3.6	100	> 52
Oil	8.6	200	NA
Paint – water based	30.0	600	NA
Paint – oil based	19.1	400	7
Total	**71.22**	**1,470**	

In the early stages of the program, the smaller number of CRCs will serve populations larger than 50,000, hence the quantities received may be higher, resulting in the need for more frequent collections. The figures provided in **Table A1.1(b)** are therefore a guide, and actual quantities will need to be monitored to determine the appropriate collection frequency.

Consideration of manifest quantities provides a useful guide for the sizing and design of these facilities.



The collection frequency noted above is presented to highlight which materials may trigger the need for a collection. The collection contractor will remove all full (or near full) receptacles at each pick up.

Appendix 1.2: Site establishment checklist

Aspect	Element
1 Location	
1.1 Adjacent activities	• What is located adjacent to the site that may be impacted on or may impact the CRC? • Have appropriate controls been established to manage these impacts?
1.2 Co-located activities	• What other activities are taking place on the site that may be impacted on or may impact the CRC? • Have appropriate controls been established to manage these impacts?
2 Layout	
2.1 Traffic flow	• Does the site provide for safe and smooth flow of traffic, separate entry and exit points, and space for truck and forklift movements?
2.2 Location of receptacles	• Has double handling of materials been minimised and have the receptacles been placed in the most convenient location for customers?
2.3 Space for collection contractor vehicles	• Is there sufficient space for manoeuvring trucks removing materials?
3 Infrastructure	
3.1 Road and building	• Does the facility comprise hard surfacing, rain cover (minimum 5m high if collection vehicles are required to fit underneath), drainage, buildings, storage areas, and appropriate bunding?
3.2 Ventilation	• Is there adequate ventilation provided in both drop-off area and storage areas?
4 Signage	
4.1 Directional	• Have appropriate entry / directional signs been installed?
4.2 Safety	• Have appropriate HAZCHEM / placarding / safety signs been installed?
4.3 Material designation	• Are signs designating material type included and are they the correct size (1m x 1m)? • Are the signs clearly visible to CRC customers and operators?
4.4 Acknowledgement	• Has EPA and Environmental Trust acknowledgement signage been installed?

Aspect	Element
5 Storage	
5.1 Core materials	• Is there a sufficient quantity of appropriate storage receptacles available? • Are separation distances appropriate e.g. gas cylinders separated from lead-acid batteries? • Is sufficient space allocated for storing empty and full storage receptacles?
5.2 Used oil	• If used oil is decanted on site, have appropriate facilities been installed?
5.3 By catch	• Have by-catch cabinets been installed in a suitable location (i.e. not clearly visible to CRC customers)?
6 Safety and emergency response	
6.1 Equipment	• Is appropriate safety equipment and information in place and operational – safety shower, first aid, SDSs, safety procedures? • Is appropriate emergency response equipment (spill kit, fire extinguishers) and procedures in place?
6.2 Procedures	• Are workplace health and safety procedures in place? • Is there an appropriate emergency response plan?
7 Security	
7.1 Infrastructure	• Has appropriate security been provided (fencing, gates, CCTV, locking procedures and times)? • Has a CCTV system been installed, and if so, is it working and monitored appropriately?
8 Staff and training	
8.1 Staff numbers	• Are staffing levels appropriate? • How many staff are available for the CRC?
8.2 Training	• Have all staff completed a site induction, safe work method procedure training, and training by the collection contractor on safe handling of materials and procedures for material collection?
9 Operations	
9.1 Guidance for customers	• Are appropriate arrangements in place to note and direct customers to the CRC (e.g. weighbridge log)? • Are customers required to place their materials in the appropriate receptacles?
9.2 Labelling of receptacles	• Are appropriate arrangements in place to ensure receptacles are labelled correctly at the time they are brought into service?

Appendix 1.2: Site establishment checklist *(continued)*

Aspect	Element
9.3 Separation of paints	• Are appropriate arrangements in place to ensure separation of water based and oil based paint?
9.4 By-catch	• Are appropriate arrangements in place to ensure by-catch is stored in the appropriate cabinets and does not accumulate to unsafe levels?
9.5 Collection truck loading	• Are appropriate arrangements in place to ensure safety during collection of full receptacles and moving full and empty receptacles?
9.6 Housekeeping	• Are appropriate arrangements in place for housekeeping and to ensure the site is kept tidy and well organised?
9.7 Commercial waste	• Are appropriate arrangements in place to keep household wastes separate from commercial and industrial wastes (if commercial and industrial wastes are accepted at the facility)?
10 Collection of materials	
10.1 Core materials	• Are appropriate procedures in place for initiating pickup and subsequent reporting?
10.2 Lead-acid batteries and motor oil	• Are appropriate arrangements in place for recycling lead-acid batteries and motor oil, so that these materials are being collected regularly?
11 Record keeping	
11.1 Online system	• Are appropriate arrangements in place for online reporting and completing consignor / loader checklists?
11.2 Materials register	• Is a register of materials being kept?
11.3 Other records	• Is any other record keeping planned?
12 Insurance	
	• Is appropriate insurance cover in place and have the relevant insurers been advised of the establishment of the CRC for property, public liability, and workers compensation insurance policies?

Appendix 1.3: Site commissioning checklist

Part A – Design standards	Tick
A1. Standard Community Recycling Centre (CRC) signage	
• CRC Entry sign in place including opening times	☐
• NSW EPA and Environmental Trust acknowledgement (one sign can contain both)	☐
• HAZCHEM sign on the front entrance to the CRC site indicating that this is a Placarded site. *Note the minimum requirement is the HAZCHEM sign at the front entrance. If the CRC is distant from the front entrance then a second HAZCHEM sign is recommended at the CRC facility and at all entrances likely to be used by the emergency services. See WorkCover Placarded Site Guide.* 	☐
Each storage receptacle should have the CRC branded icon signage above it in good view (approx. 2m off the ground) to inform the public on material placement	
• Storage receptacle for paint (water based) with branded icon signage	☐
• Storage receptacle for paint (oil based) with branded icon signage	☐
• Storage receptacle for fluoro tubes and globes with branded icon signage	☐
• Storage receptacle for smoke detectors (usually a 10L plastic bucket) with branded icon signage	☐
• Storage receptacle for household batteries (usually a 10L plastic bucket) with branded icon signage	☐
• Storage cages for gas bottles / fire extinguishers with branded icon signage (located outdoors or in a ventilated area and at least 3m from the vehicle battery storage pallet)	☐
• Vehicle battery bunded storage pallets with branded icon signage (not located next to motor oil storage, gas bottles or Dangerous Goods Safety Cabinets)	☐
• Used oil storage or decanting receptacle (both bunded) with branded icon signage	☐
• Signs clearly visible to the public	☐
*Contact EPA CRC Program Unit on **02 9995 6880** for advice if required*	
A2. Structure / Building	
• Security – there is no public access to the storage receptacles when facility is closed e.g. the CRC is fenced / lockable	☐
• Ventilation – there is adequate ventilation in closed buildings (not applicable to open structures) *Requires high level and low level fixed ventilation at each end. This is usually louvres or grills (nominally – 1sqm for each 50sqm floor area)*	☐

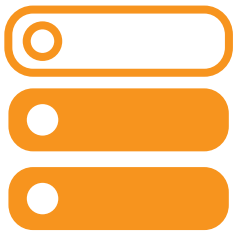
Appendix 1.3: Site commissioning checklist *(continued)*

• Paints, batteries, smoke detectors, fluoro globes and tubes are under cover in specified containers	☐
• The area where public vehicles stop to unload is under cover	☐
A3. Safety equipment – close to the CRC	
• Emergency shower – installed and operational with dedicated uninterrupted water supply	☐
• Eye wash on hand (can be combined with the above)	☐
• Spill kit on hand	☐
• PPE on hand	☐
• Fire extinguisher(s) on hand (at CRC) as well as adequate water supply e.g. mains supply, water tank, water cart	☐

Part B – Operational compliance	Tick
B1. Back of house storage	
• Dangerous Goods Safety Cabinets (DGSC) – five cabinets one for each of the following: Flammable, Toxic, Oxidisers, Corrosives (Acids) and Corrosives (Alkalis) with appropriate signage displayed.	☐
• The capacity of the cabinets: _____ *Note, these should not be accessed by the public. They should be close to the drop off area but discretely placed (possibly simply with their backs to the public area or screened). Their security is important. Four of the cabinets are supplied with keyed alike locks. The Oxidisers cabinet is not lockable.*	
• Number of empty receptacles in reserve: _____	
B2. Operations	
• Roads around the CRC have arrows or directional signage to indicate traffic flow to and from the CRC	☐
• The public are required to unload their materials and place directly into the receptacle	☐
• Forklift on site	☐
• If commercial and industrial problem wastes are accepted at the facility there is a system in place to keep the household and commercial quantities separate.	☐
• CRC database operation – site staff demonstrate how they update the status report using their tablet. *The CRC Status Update is required to be entered every Monday morning and whenever one of the full receptacles is swapped for an empty one.*	☐
• Labels and signs are being placed on all receptacles as they are brought into service. *(This includes both the adhesive transportation signage supplied by the contractor, and the CRC program branded magnetic material signs).*	☐

B3. Safety	
• Directional signage provides clear directions to and from the CRC	☐
• Dangerous Goods Safety Cabinets are located in a secure area away from the drop off area and as far as possible out of public view	☐
• Procedures are in place to ensure public and staff safety when moving storage receptacles and loading service vehicles *e.g. the area is closed to public whilst storage receptacles are moved / replaced, or some sites may be able to draw the receptacles away from the traffic flow or swap over using a pallet jack.*	☐
• Storage cages for gas bottles and fire extinguishers are located outdoors or in a ventilated area and not placed next to the vehicle battery storage pallet.	☐
• Vehicle battery storage pallets are not located next to the motor oil decanter / container or gas bottles or DGSC (minimum 3m separation)	☐
• The CRC area is clean and tidy i.e. all materials are contained in an appropriate storage receptacle or DGSC	☐
• There are no trip hazards or other site safety hazards e.g. drop off to unfenced retaining walls	☐
• Training – Operational staff have received training by the collection contractor Date(s): _____ Number of staff who attended _____	☐
• Safe Work Method Statements (SWMS) are prepared for the operation of the CRC and signed by all staff who will use the procedure	☐
• Risk Management Plan in place	☐

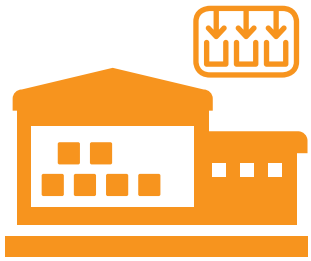
2.
Risk Management



Introduction



Risk management process



Example of risk assessment and controls

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Risk management



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2.1 Introduction

CRCs must be designed and operated to temporarily store household problem waste safely until it can be recycled or disposed of appropriately. In order to support this, CRC operators must prepare a Risk Management Plan for their centre. This section of the Handbook outlines the elements of risk management and how they can be applied to the design and operation of CRCs.

Table 2.1 below provides a summary of the primary hazard events associated with the target materials and the controls that should be implemented to reduce the risk associated with these hazards. A more detailed Risk Assessment Checklist, that can be used to assess whether appropriate controls have been implemented at a CRC, is provided at the end of this document.

Appendix 2.1 provides a worksheet that can be used to undertake a full Risk Assessment and prepare a Risk Management Plan for a CRC.

Table 2.1: Primary hazards and controls for CRCs

Hazard event	Material	Possible controls
Container failure or container dropped causing release of: • compressed gas • flammable substance • corrosive substance • toxic substance	All types of materials	• Use intermediate containers • Spill containment • Procedures and training • Do not stack cylinders • Do not stack lead acid batteries
Vehicle collision that causes release of material, mixing of incompatible substances or ignition source	All types of materials	• Store away from traffic • Procedures to control vehicle movements • Awareness and supervision of vehicle movements
Mixing of incompatible substances causing a reaction that releases heat or toxic gases	Lead acid batteries Nickel cadmium batteries	• Use intermediate containers • Store acids and alkalis separately • Procedures and training
Ignition of atmosphere or adjacent fire	Gas cylinders Solvent based paint	• Store gas cylinders separately outdoors • Isolate from ignition sources • Ensure adequate security • Ventilate store for solvent based paint • Separate from possible fire sources • Fire suppression • Emergency response

2.2 Risk management process

CRCs should be designed and operated to achieve the following objectives:

- protect staff and employees
- protect public health
- protect the environment
- facilitate safe collection and storage of materials collected.

Risk management is a structured way of identifying threats and opportunities in achieving these objectives, and responding to them with appropriate controls or management activities.

Risk, in the context of a CRC, is the combination of the likelihood and severity of any harm that hazards associated with the operation of the centre may cause.

These hazards may include:

- leakage from a container exposing staff, members of the public or the environment to toxic or corrosive agents
- fire or explosion caused by leaking material coming into contact with an ignition source
- unintentional mixing of incompatible or reactive substances causing a chemical reaction, explosion or fire, and exposure to unknown substances thus generated.

The key elements of the risk management process are outlined in **Table 2.2** below. This procedure will help identify issues unique to each site.

Table 2.2: Processes to mitigate risks

Step	Key elements
Step 1 **Identify the hazards**	• Examine all activities, work processes, plant, substances, work environment, layout and condition of the site, and any other factors • Identify all of the dangerous goods and their associated hazards • Identify the hazards in or arising from the storage and handling processes • Identify any neighbouring or external hazards
Step 2 **Assess the risks**	• Identify potentially harmful situations that could arise involving each hazard • Identify the potential consequences of these situations • Assess the severity of the consequences • Assess the likelihood of each incident taking place • Determine initial prioritisation of risk • Record results of assessment
Step 3 **Eliminate or reduce the risks**	• Apply the 'hierarchy of control' measures tackling the most serious risks first • Apply Practicability Test (based on feasibility and cost of mitigating risk) • Determine final risk ranking • Eliminate hazards leading to risk where practicable • Determine risk control measures to reduce the risk as far as practicable • Implement risk control measures • Identify record keeping necessary to ensure controls are maintained
Step 4 **Monitor and review the control measures**	• Repeat Steps 1 and 2 to ensure risks are mitigated, and record results of second assessment • Implement additional risk control measures if necessary • Periodically re-do the risk assessment to ensure that safety is maintained and the risk control measures are working, and to respond to changes in work practices, activities and other conditions

2.2.1 Hazard identification

The CRC site operator must identify all hazards associated with the storage and handling of CRC materials.

When identifying hazards, the following activities should be undertaken:

a) consult with employees

b) consult with the suppliers of the dangerous goods, structures, equipment and supplies, or other persons with specific expertise

c) consult commercially available databases on hazardous properties of chemicals

d) walk through and inspect the premises and the methods of storage and handling

e) thoroughly examine plans of the premises, for all buildings and services, including water, gas, electricity, drains, fire services, roads and access ways and engineering drawings of relevant plant

f) discuss risks with occupiers of nearby premises and the emergency services authority

g) consult injury and illness records.

2.2.1.1 Material characteristics

The starting point for identifying the hazards associated with specific household hazardous waste (HHW) is normally the Safety Data Sheet (SDS). Due to the wide range of materials generally found in a CRC it can be helpful to group materials into several different types, depending primarily on the dangerous goods classification, but also taking into consideration toxicological hazards.

The hazards identified are not restricted to those inherent in the primary dangerous goods classification. Equally important are any secondary dangerous goods hazards as indicated by one or more subsidiary risks in addition to the primary Class.

The physical properties of the CRC materials may represent or contribute to hazards in the particular storage and handling situation. These hazards include:

- **flammability –** the potential to burn or explode in air when ignited
- **toxicity –** the immediate, delayed or long term effect on humans or animals through inhalation, skin absorption or ingestion
- **reactivity or sensitivity –** the potential to react with certain conditions, other chemicals, water or other materials
- **instability –** the potential to undergo a spontaneous violent reaction, such as decomposition or polymerization, under certain conditions
- **ecotoxicity –** the effect on the environment, in particular on aquatic life
- **corrosivity –** the slow destruction or damage to materials, particularly packaging and human skin, caused by a chemical reaction
- **radioactivity –** spontaneously emitting harmful radiation.

The materials accepted at CRCs (lead acid and household batteries, used oil, domestic gas cylinders, fluorescent tubes and lamps, and oil based and water based paint) have a range of hazards as indicated by **Table 2.2.1.1** on the following page.

Table 2.2.1.1: Materials accepted by CRCs and their hazards

Material	Hazard
Batteries – lead acid	Corrosive
Batteries – nickel cadmium / other	Environmental hazard / toxic / corrosive
Fluorescent tubes and light fittings	Toxic
Gas Cylinders – other / propane	Compressed gas / flammable
Low level radioactive substances – e.g. smoke detectors	Radioactive / toxic
Paint – oil based	Flammable
Paint – water based	Low level ecotoxic

Provision is to be made for the safe storage of 'by-catch' – the small volume of higher toxicity materials which may be received as orphan or illegally dumped dangerous or hazardous materials. Hazards for these materials are outlined in **Appendix 2.2**. Consideration of these hazards guides appropriate storage and handling of these materials. More details are provided in **Appendix 2.2**.

2.2.1.2 Storage and handling

In addition to the hazards arising from the nature of the CRC materials, other hazards arise from the structures, equipment, systems of work and activities used in the storage and handling of CRC material. Hazards can be identified by considering the following:

- physical components or characteristics that have the potential to cause harm
- systems of work, including normal operating procedures and the possibility of unusual operating conditions, including the possibilities of operator error
- hazardous chemical and physical effects created in a manufacturing or handling process.

Structures, plant or equipment used in the storage or handling of materials could include, but are not limited to:

- a container (including tank or package)
- shelves or racks used for storage
- a spill containment system
- a vehicle used for the transport or transfer of materials such as a forklift
- firefighting or fire protection system.

Systems of work predominately relate to the activities involved in accepting CRC materials from householders, transferring these materials to the storage area, and the regular clearance of the storage area for treatment, recycling or disposal of the materials.

Chemical reactions are those that result in a chemical change in one or more of the goods when they come into contact. Physical processes include dilution, dissolution, abrasion, phase change, leaching and absorption. Consider the following hazards:

- physical reaction from incompatible substances coming into contact (e.g. rapid heating generated by acid mixing with water causing a steam explosion)
- chemical reaction resulting from contact with other substances (e.g. an oxidising agent such as pool chlorine coming into contact with an oil such as brake fluid).

For example, the separation of lead acid batteries from gas cylinders (to limit potential for acid corrosion of the cylinders) is a reasonable design and operational risk control measure.

2.2.1.3 Hazards within the facility site

Some activities, systems of work, structures and equipment that are not directly involved with the storage and handling of household hazardous waste (HHW) materials, may constitute a hazard for storage and handling. Potential external hazard sources include:

- any adjacent dangerous goods storages
- the proximity of other work areas, including on-site offices
- plant used or moved on the site (e.g. ignition sources from engines)
- vehicle movements on the site
- deliveries of other dangerous goods
- transfer of CRC materials between receptacles on the site
- personnel movements in normal and emergency situations
- visitor access, and unauthorised access to the drop-off or storage areas
- portable sources of ignition, generation of static electricity
- fire hazards including buildings, concentrations of combustible material and uncontrolled vegetation
- weather conditions such as temperature extremes, wind, lightning, or rainfall including the potential for flooding.

Employees are commonly aware of these hazards and operators should consult them during the identification process.

2.2.1.4 Hazards external to the facility site

There may also be hazards that are external to the facility site. For example, an adjacent forest with densely grouped eucalypt trees is an external fire risk, because if the trees catch fire, this hazard could impinge on the dangerous goods.

External hazards include:

- any dangerous goods or incompatible substances stored at other adjacent premises or public places
- activities, facilities or installations on neighbouring premises that could create a hazard (e.g. an ignition source)

- the effects of infrastructure such as a road, rail line, airport, pipeline, power line, radio transmitter or telephone tower
- fire hazards, including concentrations of combustible material or uncontrolled vegetation on neighbouring premises or public areas.

2.2.1.5 Past incidents

Incident information, such as past accidents or spills, contributes to knowledge about the hazards and risk. It is important to obtain and consider information about incidents and near misses that involved storage and handling of CRC materials at the facility and at other facilities. This information should include the nature and cause of the incident, the effectiveness of controls and how they could be improved.

2.2.2 Risk assessment

Once the materials and hazards have been identified, the next step in the risk management process is to assess the risks. It is important to gather information about both the likelihood and the severity of incidents, including the review of historical information at the site or similar sites, and estimate the frequency of various activities.

The risk assessment should include:

- identification of the events with hazard potential that could give rise to the risk
- the extent of the risk to people (workers and members of the public), other dangerous goods, other substances, and plant or buildings both on the site and beyond – in terms of the probability of the event occurring and the nature of the harm that would arise from its occurrence
- the extent and type of controls necessary to reduce the risk to a level that is appropriate
- the priority with which controls should be implemented.

Risk assessment to be documented and reviewed regularly: The risk assessment must be documented and records of the assessment kept. The risk assessment should be reviewed at least every five years, but in the case of a CRC at least every two years.

Employees to be consulted as part of the risk assessment: Facility operators must consult with employees involved with the operation of the CRC during the risk assessment process. Operators must ensure employees aware of the results of the assessment and its implications for design and operation of the facility.

2.2.2.1 Events with hazard potential arising from CRCs

The general hazards that can arise from different events are outlined in **Figure 2.2.2.1**. Location-specific hazards arise from the features of the site in which the CRC is located, and must be identified for each specific CRC.

Figure 2.2.2.1: Identification of potential hazard events

Loss of containment

- Customer or operator drops container when removing from vehicle
- Customer or facility vehicle collides with drop-off area
- Customer or facility vehicle collides with storage area
- Disposal contractor vehicle collides with storage area
- Operator drops container when transferring from drop-off area to storage area
- Container fails in drop-off area (e.g. heat from direct sunlight increases vapour pressure)
- Container fails in storage area due to sensitivity of material to environmental conditions or ageing of container
- Violent storm destroys CRC infrastructure.

Mixing of incompatible or reactive substances

- Operator places incompatible substances in same part of the storage area, with subsequent loss of containment of two or more incompatible materials
- Containers of incompatible or reactive substances fail simultaneously and mix.

Fire or explosion

- Ignition source (e.g. customer smoking, static discharge, vehicle ignition or electrical spark) near drop-off area ignites flammable atmosphere
- Ignition source in drop-off or storage area ignites flammable atmosphere
- Fire in neighbouring property ignites storage area
- Fire within facility ignites storage area.

Location-specific hazards

- Other buildings and work areas including site-offices
- Other dangerous goods storages within the facility or in adjacent premises
- Vehicle movements near the drop-off area or storage area
- Activities, facilities or installations on neighbouring premises
- Other infrastructure such as road, rail, pipeline, powerline, or telephone tower
- Occasional work such as repairs or maintenance on the storage area.

2.2.2.2 Calculating the level of risk

Risk assessments may be qualitative, quantitative, or a combination of both. In the case of a CRC, due to the many different types of materials, it is appropriate to use qualitative assessment. In such an assessment the level of risk can be determined by estimates of the likelihood of an incident that will cause harm occurring and the severity or degree of harm arising from the incident.

Table 2.2.2.2(a): Risk level

The risk level can be estimated from the following table.

Likelihood (L)	Severity (S)				
	5 Catastrophic	4 Major	3 Significant	2 Moderate	1 Minor
5 Imminent	Extreme	Extreme	Extreme	High	Medium
4 Certain	Extreme	Extreme	High	Medium	Medium
3 Likely	Extreme	High	Medium	Medium	Low
2 Unlikely	High	Medium	Medium	Low	Very Low
1 Rare	Medium	Medium	Low	Very Low	Very Low

Table 2.2.2.2(b): Priority for action

The level of risk determines the level of priority for action, which can be determined from the following table.

Risk Level	Priority for action
Extreme	Cease operations until additional controls are implemented
High	Take immediate action to implement additional controls
Medium	Action to implement additional controls is a priority
Low	Action to implement additional controls can be scheduled
Very Low	Low priority for action

Table 2.2.2.2(c): Likelihood

Likelihood (L) can be estimated using the following table.

L	Likelihood of occurrence	Indicative frequency
0	Totally eliminated	Zero
1	Rare	Could happen, but improbable, once in a thousand years
2	Unlikely	Remote, could happen but rarely, once in a hundred years
3	Likely	Could happen occasionally, once in ten years
4	Certain	Could happen frequently, less than once a year
5	Imminent	More than once a year

Table 2.2.2.2(d): Severity

The severity (S) of the incident can be estimated using the following table.

S	Extent of consequence	Harm to persons on or off-site	Community damage and disruption	On-site damage	Off-site environmental damage
1	Minor	No harm to persons	No disruption or damage	No damage or interruption to operations	No off-site environmental impact
2	Moderate	Slight injury requiring first aid treatment	No disruption or damage	Slight damage Interruption to operations < 24 hours	Off-site environmental impact but is not significant
3	Significant	Medical treatment with immediate recovery Hospitalisation < 24 hours Restricted or lost work < 4 days	Disruption to essential utilities, road closures or evacuation required	Localised damage Interruption to operations 1–7 days	Some off site environmental impact and damage is significant
4	Major	Multiple injuries Hospitalisation for more than 24 hours Delayed symptoms	Disruption to essential utilities, road closures or evacuation required for some time Some damage to off-site private property, dwellings still inhabitable	Major damage Interruption to operations 1 to 12 weeks	Environmental damage is significant and recovery will take more than 20 years
5	Catastrophic	Fatality or total permanent disability	Disruption to essential utilities, road closures or evacuation required for extensive period Major damage to off-site private property, dwellings uninhabitable	Extensive damage Long-term interruption to operations > 12 weeks	Off-site environmental impact extends to more than 500m radius around incident site Recovery will take more than 20 years

2.2.2.3 Records

A record of the risk assessment should include:

- date
- name of assessor
- names of people who provided specialist advice
- site, storage location, area
- dangerous goods involved
- identified risks
- controls required to reduce risk to an acceptable level
- existing controls in place
- controls that need to be implemented
- basis for decision-making (MSDSs, Australian Standard etc).

2.2.2.4 Changes triggering a review of the risk assessment

The risk assessment should be reviewed when:

- new dangerous goods are introduced
- quantities of dangerous goods at the site change
- goods are moved to a different location on the site
- a process or plant is modified
- new information on hazards or risks becomes available
- monitoring indicates inadequate controls
- an incident has occurred
- there are changes on a neighbouring property
- there are changes to the site, structure or buildings.

2.2.3 Risk control measures

Risk control is the process of determining and implementing appropriate measures to control the risks identified by the risk assessment. Control measures should, wherever possible, first be applied to the highest priority risks, and then to the others in order of priority. Effective risk control may require the application of more than one control measure, and a hierarchy of control measures should be applied.

2.2.3.1 Hierarchy of controls

The preferred sequence of application of risk control measures is:

- elimination
- substitution
- quantity reduction.

Where the above do not achieve the necessary risk reduction, other measures that should be applied are:

- isolation
- engineering controls
- administrative controls
- personal protective clothing and equipment.

2.2.3.2 Possible controls

Examples of other types of control measures that can be applied are listed below.

Elimination and substitution

Elimination and substitution are generally not feasible in the case of a CRC because its purpose is to deal with the targeted materials.

Quantity reduction

The careful management of the quantity of materials in a CRC can be achieved firstly by design of the facility to contain certain quantities of the materials likely to be received, and by ensuring the store is cleared regularly to keep those quantities below design limits.

Isolation

- Separation from other on-site activities, on-site buildings, property on adjoining premises, other dangerous goods, people and other property
- Enclosing a hazardous activity
- Storing incompatible dangerous goods, such as oxidising agents and flammable materials, in buildings that are sufficiently separated that interaction is impossible and an incident in one will not involve the other
- Separation from ignition sources
- Segregation within the storage area.

Table 2.2.3.2: Hierarchy of control measures

	Hierarchy of control measures	Examples	Applied to Community Recycling Centre
Most effective	Elimination	Use a non-harmful substance	Not feasible – the purpose of a CRC is to accept and store dangerous goods
		Eliminate ignition sources in hazardous areas	Prohibit carriage of matches, lighters and spark producing tools in the CRC
	Substitution	Use a less hazardous substance	Not feasible – purpose of CRC is to accept and store dangerous goods
		Use non-sparking tools in a hazardous area	Ensure operations and maintenance procedures specify use of non-sparking tools in CRC
	Quantity reduction	Reduce the inventory of dangerous goods	Design CRC to contain specific quantities of various types of dangerous goods Ensure the CRC is cleared regularly to keep quantities within design limits
	Isolation	Introduce a restricted work area	Locate drop off area away from storage area and restrict access to storage area by trained operators only Prevent access to drop-off area and storage area when moving or loading full storage receptacles
		Separate goods from other hazards	Locate CRC away from other activities on the site
		Segregate incompatible substances	Design and operate CRC with internal segregation for incompatible substances
	Engineering controls	Total enclosure of dangerous goods	Storage of oxidisers in specific purpose cabinets
		Ventilation to eliminate flammable or toxic atmospheres	Installation of natural and mechanical ventilation in the CRC
		Provide spill control such as bunds or sumps	Construct separate bunds for different types of material within the CRC
		Install detection systems and alarms for fire or hazardous atmospheres	Include an appropriate fire detection system within the CRC
	Administrative controls	Procedures, training, emergency plans, signs, placarding	Implement these for the operation of the CRC as appropriate
Least effective	Personal protective equipment	Gloves, respirators, safety showers, generally required in addition to other control measures	Implement these for the operation of the CRC as appropriate

Engineering controls

Role of engineering controls

- Ensure the effectiveness and integrity of buildings, plant and equipment
- Contain or suppress dangerous goods e.g. vapours or dusts
- Eliminate or confine processes or plant that may impinge on dangerous goods
- Protect dangerous goods from environment e.g. rain and sunshine
- Limit the area of contamination in the event of spills or leaks.

Types of engineering controls

- Total or partial enclosure
- Ventilation
- Control devices, alarms or shutdown devices
- Appropriately rated electrical plant and circuitry to minimise ignition hazards
- Spill control to contain the largest foreseeable spill
- Effective barriers between incompatible goods
- Detection systems and alarms for hazardous atmospheres and fires
- Protection from external hazards e.g. crash barriers
- Fire control and suppression systems.

Administrative controls

Operations

- Safe work procedures
- Scheduling transfers at 'low-traffic' times
- Prevent use of storage area as a thoroughfare
- Transfer of packages by trolley rather than by hand
- Keep lids on receptacles when not in immediate use
- Do not open containers for identification
- Control of access to storage and handling areas
- Prohibition of the carriage of matches, lighters or spark producing tools.

Maintenance

- Maintenance procedures that ensure integrity of plant and structures
- Procedures to ensure adequacy of other controls e.g. monitoring of inventory
- Operation of bunding and fire systems
- Procedures for hot work in or around the storage area
- Procedures that ensure drop-off and storage areas are kept tidy.

Spills and emergencies

- Procedures for spill clean up and decontamination
- Procedures for waste disposal including clean-up and contaminated waste
- Emergency procedures.

Signage and labelling

- Labelling of packages and storage
- Signage in storage area
- Instructions and warnings to operators and visitors
- Placarding.

Personal Protective Equipment (PPE)

- Eye protection
- Gloves, aprons, coats and overalls
- Footwear
- Safety showers, eye washes and hygiene facilities
- Respiratory protection
- Hearing protection.



2.3 Example of risk assessment and controls

Table 2.3 on the following page outlines the hazards arising from materials to be accepted at CRCs and possible risk control measures. This table can be used as a prompt to ensure appropriate risk control measures are in place.

Table 2.3: Risk control measures of materials collected

Material	Hazard	Hazard events	L / S / risk	Possible controls
 Gas cylinders – other / propane	Compressed gas / flammable	Container failure	3 / 2 / Medium	Emergency response Do not stack cylinders
		Container dropped	3 / 2 / Medium	Procedures and training
		Vehicle collision	2 / 4 / Medium	Store away from traffic
		Ignition of atmosphere	2 / 4 / Medium	Store securely and separately outdoors
		Adjacent fire	3 / 4 / High	Separation / fire suppression / emergency response
			1 / 4 / Medium	
 Batteries – lead acid Batteries – nickel cadmium / other	Corrosive	Container failure	3 / 2 / Medium	Use intermediate containers / spill containment
		Container dropped	3 / 2 / Medium	Use intermediate container / procedures and training Do not stack lead acid batteries
		Vehicle collision	2 / 4 / Medium	Store away from traffic
		Mixing of incompatible substances	3 / 4 / High	Use intermediate containers Store acids and alkalis separately / procedures
 Used oils	Flammable	Container failure	3 / 2 / Medium	Use intermediate containers / spill containment
		Vehicle collision	2 / 4 / Medium	Store away from traffic
 Paint – oil based		Ignition of atmosphere	3 / 4 / High	Isolate from ignition / security / ventilate store
		Adjacent fire	1 / 4 / Medium	Separation / fire suppression / emergency response
 Paint – water based	Low level ecotoxic	Container failure	3 / 1 / Low	Use intermediate containers / spill containment
		Container dropped	3 / 1 / Low	Spill containment / emergency response
		Vehicle collision	2 / 2 / Low	Store away from traffic / environment
 Low level radioactive substances	Radioactive – toxic	Container failure	3 / 1 / Low	Use intermediate container
 Fluorescent tubes and light fittings	Toxic	Container failure	3 / 3 / Medium	Use intermediate containers / spill containment
		Container dropped	2 / 3 / Medium	Use intermediate container
		Vehicle collision	2 / 4 / Medium	Store away from traffic

Appendix 2.1: CRC risk assessment worksheet

Overview

Organisation	
Location / facility	
Name of assessor	
Date of assessment	
Date to be reassessed	
Specialist advice	

Site description	

Hazard identification, assessment and control

Hazards	Hazard events	L x S = Risk	Control measures (Existing or required)
Hazards arising from CRC materials • Compressed gas / flammable • Corrosive • Flammable • Low level ecotoxic • Radioactive – toxic • Toxic			

Hazards	Hazard events	L x S = Risk	Control measures (existing or required)
Hazard arising from storage and handling infrastructure ***Structures, plant or equipment*** used in the storage or handling of materials including: • a container (including tank or package) • storage areas, receptacles, or shelves • a spill containment system • a vehicle used for the transport or transfer of materials such as a forklift • firefighting or fire protection system. ***Systems of work*** involved in accepting CRC materials from householders, transferring these materials to the storage area, and the regular clearance of the storage area for treatment, recycling or disposal of the materials. ***Chemical reactions*** that result in a chemical change in one or more of the goods when they come into contact (e.g. an oxidising agent such as pool chlorine coming into contact with an oil such as brake fluid). ***Physical processes*** include dilution, dissolution, abrasion, phase change, leaching and absorption (e.g. rapid heating generated by acid mixing with water, causing a steam explosion).			

Hazards	Hazard events	L x S = Risk	Control measures (existing or required)
Hazards within the site of the facility • Any adjacent dangerous goods storages • The proximity of other work areas, including on-site offices • Plant used or moved on the site (e.g. ignition sources from engines) • Vehicle movements on the site • Deliveries of other dangerous goods • Transfer of CRC materials between containers on the site • Personnel movements in normal and emergency situations • Visitor access, and unauthorised access to the CRC drop-off or storage areas • Portable sources of ignition, generation of static electricity • Fire hazards including buildings, concentrations of combustible material and uncontrolled vegetation • Weather conditions such as temperature extremes, wind, lightning, or rainfall including the potential for flooding.			

Hazards	Hazard events	L x S = Risk	Control measures (existing or required)
Hazards external to the site of the facility • Any dangerous goods or incompatible substances stored at other adjacent premises or public places • Activities, facilities or installations on neighbouring premises that could create a hazard (e.g. an ignition source) • The effects of infrastructure such as a road, rail line, airport, pipeline, power line, radio transmitter or telephone tower • Fire hazards, including concentrations of combustible material or uncontrolled vegetation on neighbouring premises or public areas.			

Hazards	Hazard events	L x S = Risk	Control measures (existing or required)
Hazards indicated by past incidents Accidents, spills, incidents and near misses that involved storage and handling of CRC materials at the facility and at other facilities. Include details of the nature and cause of the incident, and the effectiveness of controls and how they could be improved.			

Implementation of controls

Organisation	Action by	Action due

Appendix 2.2: By-catch hazards and controls

Provision is to be made at CRCs for the safe storage of 'by-catch' – the small volume of higher toxicity materials which may be received as orphan or illegally dumped dangerous or hazardous materials. Hazards for these materials are outlined below in **Table A2.2(a)**. Consideration of these hazards guides appropriate storage and handling of these materials.

Table A2.2(a): By-catch materials and their hazards

Material	Hazard
Acids	Corrosive
Aerosols – CFC based / flammable	Flammable gas / gas under pressure
Aerosols – flammable, pesticide	Flammable gas / toxic
Alkalis	Corrosive
Arsenic based products	Toxic
Cyanide	Toxic
Engine coolants and glycols	Flammable / possibly reactive
Fire extinguishers – non-halon	Compressed gas / low oxygen atmosphere
Flammable liquids – hydrocarbons, fuels and solvents	Flammable
Flammable solids	Flammable
Flares	Explosive
General household chemical	Low level toxic / corrosive
Heavy metal compounds / mercury – elemental	Toxic
Organic peroxides	Reactive / flammable
Oxidising agents e.g. pool chlorine	Reactive
Paint – other, including isocyanates and amines	Flammable / toxic
Paint – metal based	Toxic
PCB materials	Toxic
Pesticides – non schedule X (non-organochlorine)	Toxic / flammable
Pesticides – schedule X (organochlorine)	Toxic / flammable / ecotoxic
Solvents – halogenated	Toxic

Figure A2.2: Properties of materials to be considered in hazard identification

Physical state

Compressed gas
Gas dissolved under pressure
Liquefied gas
Cryogenic liquid
Mobile liquid
Viscous liquid
Volatile liquid
Liquid with solids in solution or suspension
Finely divided solid
Granular / flaked solid
Caked or undivided solid
Physical state as stored / handled if different from above

Flammability

Flashpoint
Sustains flame
Auto ignition temperature
Flammability range LEL – UEL
Evolves / produces hazardous combustion products
Explosion potential

Toxicity

Exposure limits
Toxicity
Irritant
Carcinogen (known / suspected)
Mutagen
Sensitiser
Biologically active

Reactivity

With air
With water
With other materials (details)
Self reactive

Corrosivity

Skin
Metals
Other materials

Physical properties

Solubility in water
Boiling point / range
Melting point / range
Odour
Electrical conductivity / resistance
Relative density
Pressure as packed
Vapour pressure
Polarity
pH as stored and handled
pH of 1% solution

Instability

Decomposition conditions
Hazardous decomposition effects
Hazardous decomposition products
Polymerisation potential
Hazardous polymerisation effects
Inhibitor required
Phlegmatiser required
Blanketing material required
Self accelerating decomposition
Temperature
Control temperature
Other special controls required

Ecotoxicity

Atmospheric pollutant
Ozone depleter
Odorous
Visual pollutant
Marine pollutant
Ground water pollutant
Soil pollutant
Relevant half life information
Special neutralising / absorbent material requirements

Sensitivity

To shock
To heat
To radiation
To moisture
To contamination with other materials

Table A2.2(b): Hazards arising from by-catch and possible controls

The table below outlines the hazards arising from by-catch materials that could be received at CRCs and possible risk control measures.

Hazard	Material	Hazard events	L / S / Risk	Possible controls
Corrosive	Acids Alkalis	Container failure	3 / 2 / Medium	Use intermediate containers / spill containment
		Container dropped	3 / 2 / Medium	Use intermediate container / procedures and training
		Vehicle collision	2 / 4 / Medium	Store away from traffic
		Shelving corrosion	2 / 2 / Low	Use intermediate containers
		Shelving collapse	2 / 4 / Medium	Do not overload shelves
		Mixing of incompatible substances	3 / 4 / High	Store acids and alkalis separately / procedures
Flammable	Engine coolants and glycols Flammable liquids – hydrocarbons, fuels and solvents Flammable solids	Container failure in store	3 / 2 / Medium	Use intermediate containers / spill containment
		Vehicle collision	2 / 4 / Medium	Store away from traffic
		Shelving collapse	2 / 3 / Medium	Ensure adequate shelving design
		Ignition of atmosphere	3 / 4 / High	Isolate from ignition / security / ventilate store
		Adjacent fire	1 / 4 / Medium	Separation / fire suppression / emergency response
Toxic	Arsenic based products Cyanide Heavy metal compounds / Mercury – elemental Paint – metal based PCB materials Solvents – halogenated	Container failure	3 / 3 / Medium	Use intermediate containers / spill containment
		Container dropped	2 / 3 / Medium	Use intermediate container
		Vehicle collision	2 / 4 / Medium	Store away from traffic
		Shelving collapse	2 / 3 / Medium	Ensure adequate shelving design
Compressed gas / Low oxygen atmosphere	Fire extinguishers – non-halon	Container failure	3 / 2 / Medium	Emergency response
		Container dropped	3 / 2/ Medium	Procedures and training
		Vehicle collision	2 / 4 / Medium	Separation from vehicles
		Shelving collapse	2 / 4 / Medium	Do not stack cylinders

Hazard	Material	Hazard events	L / S / Risk	Possible controls
Explosive	Flares	Explosion and fire	2 / 3 / Medium	Store in segregation device
Flammable / toxic	Paint – other, including isocyanates and amines	Container failure in store	3 / 2 / Medium	Use intermediate containers / spill containment
		Vehicle collision	2 / 5 / High	Store away from traffic
		Shelving collapse	2 / 3 / Medium	Ensure adequate shelving design
		Ignition of atmosphere	3 / 4 / High	Isolate from ignition / security / ventilate store
		Adjacent fire	1 / 4 / Medium	Separation / fire suppression / emergency response
Flammable gas	Aerosols – CFC based / flammable	Container failure	3 / 1 / Low	Emergency response
		Ignition of atmosphere	3 / 4 / High	Isolate from ignition / ventilate store
		Adjacent fire	1 / 4 / Medium	Separation / fire suppression / emergency response
Flammable gas / toxic	Aerosols – flammable, pesticide	Container failure	3 / 1 / Low	Emergency response
		Ignition of atmosphere	3 / 4 / High	Isolate from ignition / ventilate store
		Adjacent fire	1 / 4 / Medium	Separation / fire suppression / emergency response
Low level toxic / corrosive	General household chemical	Container failure	3 / 1 / Low	Use intermediate containers / spill containment
		Container dropped	3 / 1 / Low	Spill containment / emergency response
		Vehicle collision	2 / 2 / Low	Store away from traffic / environment
		Shelving collapse	2 / 1 / Very low	Ensure adequate shelving design
		Shelving corrosion	2 / 1 / Very low	Use intermediate containers
		Mixing of incompatible substances	2 / 2 / Low	Store acids and alkalis separately
Reactive	Oxidising agents e.g. pool chlorine	Container failure	3 / 3 / Medium	Use separate cabinet with internal bunding
		Container dropped	3 / 3 / Medium	Use separate cabinet with internal bunding
		Vehicle collision	2 / 4 / Medium	Separate store from traffic
		Mixing of incompatible substances	3 / 4 / High	Use separate cabinet / operating procedures

Hazard	Material	Hazard events	L / S / Risk	Possible controls
Reactive / flammable	Organic peroxides	Container failure	3 / 3 / Medium	Use separate cabinet with internal bunding
		Container dropped	3 / 3 / Medium	Use separate cabinet with internal bunding
		Vehicle collision	2 / 4 / Medium	Separate store from traffic
		Mixing of incompatible substances	3 / 4 / High	Use separate cabinet / operating procedures
		Ignition of materials	2 / 4 / Medium	Isolate from ignition
		Adjacent fire	1 / 4 / Medium	Separation / fire suppression / emergency response
Toxic / flammable	Pesticides – non schedule X (non-organochlorine)	Container failure	3 / 3 / Medium	Use intermediate containers / spill containment
		Container dropped	2 / 3 / Medium	Use intermediate container
		Vehicle collision	2 / 4 / Medium	Store away from traffic
		Shelving collapse	2 / 3 / Medium	Ensure adequate shelving design
		Ignition of atmosphere	2 / 4 / Medium	Isolate from ignition / ventilate store
		Adjacent fire	1 / 4 / Medium	Separation / fire suppression / emergency response
Toxic / flammable / ecotoxic	Pesticides – schedule X (organochlorine)	Container failure	3 / 3 / Medium	Use intermediate containers / spill containment
		Container dropped	2 / 3 / Medium	Use intermediate container
		Vehicle collision	2 / 4 / Medium	Store away from traffic / environment
		Shelving collapse	2 / 3 / Medium	Ensure adequate shelving design
		Ignition of atmosphere	2 / 4 / Medium	Isolate from ignition / ventilate store
		Adjacent fire	1 / 4 / Medium	Separation / fire suppression / emergency response

3.
Operating a Community Recycling Centre


Introduction


Public safety


Workplace health and safety


Acceptance and storage


Transfer and removal


Emergency situations

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Operating a Community Recycling Centre



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3.1 Introduction

CRCs are designed and operated to temporarily store household problem wastes safely until they can be recycled or disposed. To support this, CRC operators are required to ensure processes and documented procedures are 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. This includes having procedures for safe handling of materials, and emergency response.

This section of the Handbook provides core elements of procedures for this purpose that can be used by CRC operators as a resource to update their own existing procedures.

3.1.1 Objectives

The objectives of the procedures are to:

- protect staff and employees
- protect public health
- protect the environment
- facilitate safe disposal or reuse.

Due to the different nature and type of materials that may be received at a CRC, it is important that strict procedures be followed to reduce the risk of substance exposure to employees and members of the public who have access or proximity to the facility.

3.1.2 Scope

The procedure outlined in this section applies to all persons involved in the operation and use of the CRC.

3.1.3 Hazardous properties of CRC materials

Materials received at a CRC may have the following hazardous properties:

- **flammability –** the potential to burn or explode in air when ignited
- **instability –** the potential to undergo a spontaneous violent reaction, such as decomposition or polymerization, under certain conditions
- **reactivity –** the potential to react with certain other chemicals, with water or other materials
- **toxicity –** the immediate, delayed or long term effect on humans or animals through inhalation, skin absorption or ingestion
- **ecotoxicity –** the effect on the environment, in particular on aquatic life
- **corrosivity –** to other materials, in particular packaging, or human skin
- **radioactivity –** spontaneously emitting harmful radiation.

Table 3.1.3: CRC materials have a range of hazardous properties as indicated by the table below.

Material	Hazard
Car batteries	Corrosive
Batteries – nickel cadmium / other	Environmental hazard / toxic / corrosive
Fluorescent tubes and light fittings	Toxic
Gas Cylinders – other / propane	Compressed gas / flammable
Low level radioactive substances – e.g. smoke detectors	Radioactive – toxic
Used oils	Combustible / flammable
Paint – oil based	Flammable
Paint – water based	Low level ecotoxic

Some of the hazards arising from the operation of a CRC therefore include:

- leakage from a container exposing staff, members of the public, or the environment to toxic or corrosive agents
- fire or explosion caused by leaking material coming into contact with an ignition source
- unintentional mixing of incompatible or reactive substances causing a chemical reaction, explosion or fire, and exposure to unknown substances thus generated.



3.2 Public safety

CRCs aim to make it easy for householders to manage their problem waste. A well-managed facility ensures user and operator safety, minimises waste spillage and ensures safe traffic management flow.

The following requirements are to ensure the safety of members of the public, including those who may live near the site, those who are visiting the site for other purposes, and customers who are bringing CRC materials to the site.

Minimum requirements:

- signage at the facility should instruct customers to the drop-off point and advise them where to deposit the respective materials
- signage and the operator should direct customers that children, if present, should remain in the vehicle
- members of the public are not to remove any materials from the drop-off area or any ancillary storage areas
- members of the public are not to enter any ancillary storage area
- members of the public are not to smoke or to use a mobile phone while within the drop-off area (either inside or outside their vehicle), and this should be clearly advised by appropriate signage
- the facility supervisor or manager should be advised of all spills or loss of containment immediately, and appropriate spill and/or emergency response procedures initiated. These should include notification of appropriate authorities and members of the public on and surrounding the site if necessary.



3.3 Workplace health and safety

3.3.1 Risk management

Facility operators need to complete a risk assessment to identify hazards and risks, and implement appropriate controls to ensure the health and safety of workers involved in the operation of CRCs.



Refer to **Section 2** – Risk Management of this Handbook for more guidance on potential hazards, risks and controls associated with the operation of CRCs.

3.3.2 Labelling

Facility operators must ensure that labels appropriate to the material being stored in a particular receptacle are affixed to the receptacle as soon as it is brought into service. These labels will correctly designate the receptacle both for storage and for transport of the material.

The collection contractor supplies both adhesive and magnetic labels for receptacles of CRC materials. CRC operators must ensure these labels are stored safely and available for use as required.

Correct labelling of receptacles as soon as they are brought into service must be included in the SWMSs or SOPs for the CRC. Operations staff at the CRC must be trained in correct labelling procedures.

3.3.3 Safe work method statements

Facility operators need to prepare safe work method statements (SWMSs), also known as safe work procedures or job safety assessments, specifically for the tasks involved in the operation of CRCs. These are to be in addition to any other SWMSs by which the facility operates.

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

3.3.4 Personal protective equipment

3.3.4.1 Acceptance and storage

The following items of Personal Protective Equipment (PPE) must be worn by operators when unloading materials or moving them between storage receptacles in the drop-off area:

- eye protection – safety glasses
- gloves – in chloroprene or nitrile rubber
- heavy-duty, chemical resistant footwear with slip reducing soles and steel caps.



Refer to the procedures provided in the collection contractor's training package for more information on appropriate PPE and its use for handling CRC materials.

3.3.4.2 Spill response

In the event of a leak or spill the following items may be required and should be stored in a location quickly and easily accessible to the drop-off and storage area:

- coverall suit
- chemical resistant face shield
- chemical resistant boots.

3.3.4.3 Maintenance of PPE

PPE should be kept separate from normal clothing. After use, all PPE should be maintained and cleaned in accordance with the manufacturer's instructions and the relevant Australian Standard.

3.4 Acceptance and storage

Householders should deposit target materials directly into appropriate designated receptacles. Householders attempting to drop off non-target items such as hazardous toxic chemicals should be asked to retain them and referred to the next Household Chemical CleanOut event.

Waste from commercial sources must not be accepted at the CRC

Problem wastes and hazardous wastes from commercial and industrial sources must not be accepted at the CRC. If commercial and industrial waste is brought to the CRC, the facility operator must make their own arrangements for the acceptance, storage, transport and disposal of these wastes. If problem and hazardous wastes from commercial and industrial sources are accepted, the facility operator must also make appropriate arrangements to ensure that they are kept completely separate from the CRC materials. These arrangements will be audited.

3.4.1 Notification of arrival of CRC materials

The facility should establish a way in which relevant operators can be made aware that a customer is delivering CRC materials. For example, where staff are present in a gatehouse or weighbridge at the entrance to the facility they should ask customers if they are delivering CRC materials and if so advise the relevant operator.

At the time a customer enters the facility they should be asked what CRC materials they are carrying, if the containers all have lids, and if any of them are leaking. The customer must be informed that containers without lids, or that are leaking, cannot be accepted. If any of the materials they are carrying cannot be accepted, the customer must be informed of where they could be taken (e.g. a mobile collection event or alternative facility).

3.4.2 Unloading

The customer should remove containers from their vehicle and place them directly into the designated storage receptacle (e.g. box, cage, pallet). These receptacles will be identified with large format standard signage with a minimum size of 1m x 1m.

Once the materials are safely unloaded the customer should be directed to leave the drop-off area immediately. Under no circumstances should intermediate storage areas be used with a view for later separation as these areas are uncontrolled and materials are uncontained.

3.4.3 Storage of CRC materials

Refer to the procedures provided in the collection contractor's training package for specific information on handling CRC materials safely. This is provided to all staff who complete on site CRC training.

CRC materials are to be stored in the appropriate receptacle into which they are placed when they are unloaded from customer vehicles. Materials should be placed into the correct receptacle immediately. Materials must not be stored for later sorting. Direct placement will reduce the risk of spills and accidents.

Labels for the storage receptacles are provided by the collection contractor when these receptacles are delivered to the CRC. These labels include information necessary to comply with the *Work Health and Safety Act* and Regulation 2011 for storage and transport of dangerous goods and hazardous materials. A label appropriate to the type of receptacle and material to be stored in it must be affixed to the receptacle as soon as it is brought into service. In addition, a program-branded magnetic sign of the material type can be affixed to the receptacle to help customers sort their materials correctly.

More information on acceptance and storage of each specific CRC material is provided below.



3.4.3.1 Paint

Two streams of paint will be collected as part of this program.

Water based paint

Water based paint will be the highest volume material collected. Storage receptacles must be presented to householders in a manner that ensures separation of oil based from water based paint. Water based and oil based paints are readily identified by manufacturers' labels on the cans. Householders need to place their cans of paint directly into the storage receptacles thus eliminating the need for second handling.

Oil (solvent based) paint

Oil paint, lacquers, epoxies and other miscellaneous paint products (not including metal-containing paint, see below) are to be placed in a similar well-marked storage receptacle by the householder. By separating the water based paint, a large proportion of material collected can be classified and treated as non-flammable.

Other paint

Small quantities of metal based paint (e.g. lead, zinc) may be received at the facility. This material is considered toxic and should be separated into the by-catch stream (see **Section 3.4.4** on the following page).

Aerosol paint

Paint in aerosol cans must be stored in a receptacle that allows appropriate ventilation, but that also fully contains the aerosol cans in case they explode. More guidance is provided in **Section 3.4.3.6**.



3.4.3.2 Used Oils

Two streams of oil will be collected as part of this program – motor oil and other oil.

Motor oil

As used motor oils represent a valuable resource, most facility operators have their own arrangements with recycling contractors for collecting and being reimbursed for it. While used motor oil forms a part of the CRC program and is allocated space at a CRC, it is not collected by the EPA CRC collection contractor.

Motor oil may be decanted by customers into dedicated vessels. This is common practice at many existing sites that become CRCs. In this situation 240 litre bins or similar are provided to deposit the empty delivery containers (if the householder chooses to forfeit them). If a decanting vessel is not provided then the motor oil shall be placed, in the original packaging, into a storage receptacle (provided either by the facility operator or the contractor they engage to collect used motor oil).

Other oil

Other oil such as cooking, heating and transmission oils should be placed into the appropriate storage receptacles in the container in which they are delivered to the facility, and the delivery container forfeited by the householder. Other oils will generally be collected by the collection contractor, unless particular arrangements have been made by the facility operator. Heating oil is actually kerosene and should be stored in the Flammables Dangerous Goods Safety Cabinet.



3.4.3.3 Gas cylinders

The collection contractor will provide transportable cages for gas cylinders. Householders should place their cylinders directly into the cages with no further handling or processing on site. The cylinder valve should be closed when a cylinder is placed in a cage.

SafeWork NSW recommends that CRC operators test gas cylinders for leaks using a simple method like spraying the valve area with a mixture of water and mild detergent and looking for any bubbles. If a leak is detected, the valve can be tightened. If the leak continues the cylinder should be marked, placed in a suitably ventilated area and the collection contractor notified.

Typically two types of cages are used. For standard size bottles a three shelf cage (with door) will be used, and for longer bottles an open top cage will be used. Once the cages are near full the facility operator shall notify the collection contractor to remove the cage and replace it with an empty one.



3.4.3.4 Batteries

Two streams of household batteries will be collected as part of this program.

Lead acid batteries

As the lead inside a lead acid battery represents a valuable, facility operators have their own arrangements with recycling contractors for collecting used lead acid batteries and being reimbursed for them. While lead acid batteries form a part of the CRC program and are allocated space at a CRC, they are not collected by the EPA CRC collection contractor.

Lead acid batteries are to be placed by householders directly onto bunded pallets (provided either by the facility operator or by the contractor they engage to collect them).

Note: as lead acid batteries provide a feasible ignition source it is recommended that the bunded pallet be positioned at the opposite end of the drop-off area to the gas bottle cage, and kept away from oil based paint and used oil.

Household batteries

These are generally single use or rechargeable batteries of several types, such as zinc carbon (the most common), alkaline, nickel cadmium, nickel hydride, mercury and lithium. These are stored at a CRC in purpose-built containers provided by the EPA's collection contractor. It is preferable to separate batteries of different types into individual containers at a CRC, as this removes the need for the contractor to sort through them after they are collected. Special attention must be paid to lithium batteries, which contain certain hazardous properties, as described below.

Lithium ion and lithium metal cells and batteries, and equipment containing these, must be prepared for transport (for disposal and recycling) in accordance with packing instruction P909 of the Australian Dangerous Good Code (Current version is 7.4). Receptacles must be marked 'LITHIUM BATTERIES FOR DISPOSAL' or 'LITHIUM BATTERIES FOR RECYCLING'. The collection contractor will supply labels, receptacles and plastic liners appropriate to this purpose. The CRC operator must line the battery receptacle with the plastic liner prior to its use.

In addition, lithium batteries must be packed to prevent short circuits and the dangerous evolution of heat. This could include, but is not limited to:

- individual protection of the battery terminals, or
- inner packaging to prevent contact between cells and batteries, or
- the use of a non-conductive and non-combustible cushioning material to fill empty space between the cells or batteries in the packaging.

Lithium batteries must also be secured within the outer packaging to prevent excessive movement during transport (e.g. by using a non-combustible and non-conductive cushioning material or through the use of a tightly closed plastic bag).



3.4.3.5 Fluorescent tubes

Fluorescent tubes and globes will be placed in various receptacles designed to minimise breakage and prevent the release of mercury to the environment during storage, handling and transport. The collection contractor will provide these receptacles (e.g. boxes for tubes, bins for globes).

Procedures for the safe handling of fluorescent tubes and globes need to be included in the facility operating procedures and care needs to be exercised at all times to prevent breakage of tubes and globes.



3.4.3.6 Aerosols

Aerosol cans must be stored in a receptacle that allows appropriate ventilation, but that also fully contains the aerosol cans in case they explode. The collection contractor will provide a drum with a ventilated lid for the storage of aerosols.

The lid of the drum must be kept secure, and only opened by a CRC operator when placing aerosols in the drum. Customers are not to open the drum.

Where CRCs are not constantly staffed by a CRC operator, customers can place aerosols in the fire extinguisher cage. They can then be transferred to the drum by a CRC operator. This should take place each day the CRC is open, prior to the end of the day.

3.4.4 Storage of by-catch materials

Irrespective of gate policies and dedicated signage, a small percentage of non-targeted by-catch materials can be expected. Separate dangerous goods safety cabinets (DGSC) compliant with the relevant Australian Standards for flammable, oxidising, toxic and corrosive materials will be provided by the EPA during establishment of the facility.

The procedures for sizing and placement of DGSC are outlined in detail in **Section 1.2.6** of this Handbook.

The facility operator is to 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 facility operator must report the status (percentage full) of each of these cabinets 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.



Refer to the procedure provided in the collection contractor's training package for more information on sorting by-catch materials into the appropriate cabinet.

Where more than one cabinet is used for a particular type of by-catch the facility operator should fill 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%.

The EPA CRC collection contractor shall empty the cabinets at the same time as the target materials.

3.4.5 Handling of unknowns

Wherever possible the facility operator should prevent the deposit of unknown materials at the facility. Containers are not to be opened on site by either facility staff or householders for the purpose of identification.

Where acceptance cannot be prevented, the facility operator is to immediately seek specialist advice from the collection contractor. A photograph of the container should be emailed to the collection contractor with a request for advice as to how the container should be stored. Refer to the collection contractor's contact information at the front of this Handbook for the relevant email address. Once the response is received, the container should be placed in a resealable container suitable as a segregation device (e.g. a bucket or drum) appropriate to the material, labelled (e.g. with the material designation written on an adhesive label affixed to the container) and placed in the appropriate receptacle or DGSC. Where the material cannot be identified either through the provision of specialist advice, it should be placed in the Toxic DGSC.

A supply of overpackings suitable as segregation devices will be provided by the collection contractor.

3.4.6 Handling of containers that are leaking or without lids

Customers must be informed when they arrive at the facility that leaking containers or containers without lids will not be accepted.

If for some reason a container that is leaking or that doesn't have a lid is delivered to the CRC despite best efforts, it must be placed in a resealable container, that is appropriate to the material type and suitable as a segregation device, along with adequate absorbent material. The outer container must then be labelled according to the material type and then placed in the correct storage unit. Target materials should be placed in the appropriate receptacle and by-catch in the appropriate Dangerous Goods Safety Cabinet.



3.5 Transfer and removal

3.5.1 Sorting of materials

The drop-off area should be checked regularly to ensure that materials dropped off by customers visiting the CRC have been placed in the appropriate storage receptacle. The operator should attempt to identify substances in accordance with training. Should any containers need to be moved, the operator should check that containers are intact, not leaking and unlikely to fail, and use appropriate PPE (safety boots, gloves and safety glasses as a minimum) before attempting to do so.

3.5.2 Transfer of full storage receptacles

Full receptacles in the drop-off area must be transferred to the storage area to prevent receptacles from overflowing and causing hazards. The drop-off area should be checked, and cleared if necessary, at least daily. The storage area should remain locked at all times unless an appropriately trained and qualified operator is present. The storage area should only be opened for the purpose of transferring material from drop-off area into the store or for clearance of the material for disposal or recycling.

3.5.3 Removal of materials

The EPA and/or other funding bodies (e.g. product stewardship schemes) will establish and maintain 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.

The facility operator will be responsible for arranging the collection and recycling (not disposal) of lead acid batteries and used motor oil. The facility operator must ensure that materials are removed with sufficient frequency to prevent the accumulation beyond the capacity of the storage area.

Collection of materials will be scheduled by the collection contractor by reviewing the information provided by the facility operator via the online reporting system (dropoffwaste.com). The facility operator may also request a collection by contacting the collection contractor directly.

Refer to the procedure provided in the collection contractor's training package for detailed information on requesting the collection of accumulated materials.

Once a collection has been scheduled the collection contractor will notify the facility operator by email. Facility operators must ensure that the collection contractor has the appropriate email address, so that the facility operator can prepare the site for a collection. An example of the email is provided as **Figure 3.5.3(a)**.

Prior to the day of the collection the facility operator must ensure the following:

1. All receptacles are packed appropriately
2. Site is accessible for the collection truck with no obstructions
3. All receptacles are labelled with labels supplied by collection contractor
4. All by-catch is sorted and segregated
5. All by-catch is placed in by-catch cabinets
6. A forklift and driver is on hand for the collection date
7. The tablet reporting device is charged so a staff member can enter the required 'Drop Off: Add to Truck' update on collection day.

Figure 3.5.3(a)

Sample notification email for CRC collection

SUBJECT: CRC [location] next collection date: 02/08/2016

TO: [location] CRC,

A truck has now been scheduled to collect materials from [location] Community Recycling Centre on Tuesday 02/08/2016.

Please ensure you add this to your CRC staff work schedule to prepare your site for collection. It is a regulatory requirement that you complete the 'Add to Truck' entry on 'Drop Off' at the time of collection.

A site ready for collection has the following tasks completed:

1. All receptacles are packed appropriately
2. Site is accessible for the collection truck with no obstructions
3. All receptacles are labelled with labels supplied by collection contractor
4. All by-catch is sorted and segregated
5. All by-catch is placed in by-catch cabinets
6. A forklift and driver is on hand for the collection date
7. The tablet is charged so a staff member can enter the required 'Drop Off: Add to Truck' update on collection day.

Contact Toxfree directly if you require any further information.

This email has been automatically generated from the Community Recycling Centres Drop Off System. Do not reply to this email.

Toxfree: **9851 4200** – **i.parkes@toxfree.com.au**

If there are any potential problems with the collection date, contact Toxfree directly.

For Drop Off technical problems, contact the Community Recycling Unit of the NSW EPA: **zac.lambert@epa.nsw.gov.au** or **9995 6346**.

On the day of the collection, the facility operator must ensure that materials are loaded and consigned in accordance with basic requirements for the transport of waste and dangerous goods as indicated by the following procedure. See **Figure 3.5.3(b)**.

Figure 3.5.3(b)

Procedure for loading and consignment of waste and dangerous goods

Step 1	When the contractor's truck arrives, ask to see the Waste Transport Certificate (WTC) number and record this number using the Online Reporting System.
Step 2	Unload empty receptacles and load truck with full receptacles using a forklift (the same number of receptacles should be unloaded and loaded). Record the number of receptacles loaded for each type of CRC material using the Online Reporting System.
Step 3	Open the by-catch safety cabinets and observe that the driver collects stored materials. Before the contractor collects the by-catch materials, enter the 'percentage full' individual cabinet amounts into the online database.
Step 4	Check that the truck has placards (hazardous signs) displayed.
Step 5	Check that the driver has completed the Waste Transport and Dangerous Goods Manifest documentation and signed it.
Step 6	Check that driver has secured the load (straps secured over receptacles and cages).
Step 7	Count the total number of the main receptacles held on site and record these using the Online Reporting System.
Step 8	If the site has a weighbridge, record the total weight of materials removed from the site (gross weight of collection vehicle on exit minus gross weight of collection vehicle on entry).



3.6 Emergency situations

3.6.1 Emergency equipment and procedures

3.6.1.1 Emergency equipment

The following safety equipment is to be provided within the CRC:

- Safety shower and eyewash
- Spill response kit
- Fire extinguishers
- Personal Protective Equipment (PPE)
- First aid equipment and supplies

Procedures to be regularly implemented:

- Test the operation of the safety shower and eyewash
- Check and replenish the first aid equipment and supplies
- Check and replenish the PPE
- Check and replenish the spill response equipment.

Spill response equipment should include: adequate quantities of suitable absorbent materials; a sufficient quantity of resealable waste recovery containers compatible with the substances being kept and marked for emergency use only; and shovels brooms and scrubbing brushes. Spill response equipment must be located at both the drop-off area and the storage area.

Dry chemical powder type fire extinguishers are appropriate for all types of CRC materials except for cooking oil, for which a wet chemical type is more appropriate. It is the CRC operator's responsibility to ensure this equipment is on hand. Refer to *AS 2444-2001 Portable fire extinguishers and fire blankets* – Selection and location for guidance on the selection and location of fire extinguishers.

3.6.1.2 Emergency procedures

Procedures must be prepared for emergency incidents involving the CRC such as fire detection and response, spill response, and customer or staff injury or exposure to hazardous chemicals.

All staff involved in the operation of the CRC must be trained in the use of the emergency procedures, sign off as having been trained and agree to undertake the relevant tasks safely in accordance with these procedures.

Refer to **Section 1.3.4.2** for more information on preparing the Emergency Plan and associated procedures.

3.6.2 Specialist advice

The EPA will establish and maintain contracts for the provision of specialist advice and support arrangements in the event of unknown materials being deposited, and other unexpected or emergency situations. The facility operator is to ensure their operating and emergency procedures appropriately reference this specialist advice.

3.6.3 General spill response

In the event of a spill the following initial response should be followed:

- protect yourself by putting on appropriate PPE as required
- protect others, identifying all people in the vicinity including members of the public, and moving them to the designated evacuation point upwind
- stop the leak (e.g. by turning off the tap, righting the drum or container, or placing in an outer container if possible)
- contain the leak by placing appropriate absorbent or bunding material in place (using the spill kits that are available)
- avoid contact with the spilled material
- advise the site supervisor or manager
- if you consider it necessary seek specialist advice and/or spill response, providing details of the chemical if known
- clean up spill
- complete incident response form as soon as possible after the situation has been contained.



Refer to the procedure provided in the collection contractor's training package for more information on general spill response.

3.6.4 Spill clean up procedures

Clean up spills in the following way:

- Contain the spill using the appropriate absorbent material
- Scoop up and recover spilled material and put into a waste container
- Repeat using appropriate absorbent material as many times as necessary in order to remove as much of the spilled material as is practical
- Clean brush and shovel of absorbent material, also placing this into the waste container
- Label waste container with details of contents if known including the absorbent material used
- Place waste container into the appropriate area of the CRC (e.g. applicable to the spilled material)

3.6.5 First aid

If any discomfort is reported, or if a person has inhaled, ingested or been contaminated with a potentially hazardous or toxic substance:

- remove the person to a safe place prior to treatment, if safe to do so. Before doing this, put on PPE appropriate to the nature of the incident
- send for a designated first aid person and, at the same time, obtain the Safety Data Sheet (SDS) for the toxic substance involved. Summon professional medical assistance without delay. If there is any doubt as to the appropriate first aid procedure contact the Poisons Information Centre (see front section of this Handbook for emergency contact numbers)
- if the person has stopped breathing, ensure a clear airway and apply an appropriate method of artificial resuscitation. Note that the appropriate method depends on the substance involved. Oxygen resuscitation or external air resuscitation may be required
- if the eyes are contaminated, wash thoroughly with water from a low-pressure water source for at least 15 minutes
- remove all contaminated clothing and footwear. Wash contaminated area with soap and lukewarm water
- carry out appropriate first aid treatment and if medical assistance has not been summoned, transport the patient to a hospital or doctor
- send the SDS (if available), product label (if available), and all relevant details of the accident, to the hospital or doctor with the patient
- complete incident response form as soon as possible after the incident in accordance with any WHS procedures.

4.
Induction and training





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Induction and training


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4.1 Induction

When commencing work in the CRC, operators must be instructed in the following:

- general layout of the drop-off and storage areas, in particular the location of safety equipment such as the Safety Data Sheets, PPE, safety shower, eyewash, first aid cabinet and evacuation points
- administrative procedures for controlling risks, such as permit to work systems
- hazardous areas and restrictions on ignition sources, especially vehicles and portable items
- security measures, signs and procedures
- record keeping, in particular recording the quantity of materials currently on hand
- general emergency procedures for the facility, including the Fire Plan and Emergency Evacuation Procedures.



4.2 Training

Staff involved in the operation of the CRC should be trained and demonstrate competency in the following skills:

- storage and handling of CRC materials including identification, keeping incompatible materials separate, and appropriate spill response
- appropriate fitting and use of PPE.

The EPA will arrange for site operator training to be provided. Each and every staff member involved in the operation of the CRC must attend this training.



Refer to the collection contractor's training package for more information on the contents of this training.

Records showing who was trained, when they were trained, and by whom, are to be maintained for the following training:

- Site induction
- Site specific risk register
- Training by the collection contractor
- Training in the use of the Safe Work Method Statements (or equivalent).

Appendix 4.1: Induction checklist

Element	Done?
1. Site orientation	
1.1 Drop-off area features and infrastructure	
1.2 Storage area features and infrastructure	
1.3 Location of documentation and procedures	
1.4 Location of records and record keeping equipment	
1.5 Location of safety equipment and PPE	
1.6 Location of key security features	
1.7 Location of emergency response equipment and procedures	
2. Site risk assessment	
3. Material handling (included in collection contractor training package)	
3.1 Material types	
3.2 Hazards	
3.3 Handling	
3.4 Controls including PPE	
4. Operating procedures	
4.1 Opening and closing	
4.1.1 Signage	
4.1.2 Security	
4.1.3 Safety	
4.2 Customer service	
4.2.1 Unloading	
4.2.2 Sorting and transfer	
4.2.3 Record keeping (of basic customer information if required)	
4.3 Record keeping and reporting	
4.3.1 Material inventory	
4.3.2 Incidents	
4.3.3 Annual reporting	
4.4 Storage and changeover (included in collection contractor training package)	
4.4.1 Storage receptacle transfer	
4.4.2 Material removal and storage receptacle replacement	
4.4.3 Loading and consignment of dangerous goods	
4.5 Emergency response	
4.5.1 General spill response	
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4.5.3 Situations requiring specialist advice	



Appendix 4.2: Training register

Induction

Name	Date training completed	Signature

Appendix 4.3: Collection contractor training package (Risk management and safe work procedures)

Name	Date training completed	Signature

5.
Record keeping and reporting



Record keeping



Reporting



Using the online reporting system

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Record keeping and reporting

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5.1 Record keeping

CRC operators must create and ensure the safe keeping of the following records.

5.1.1 On-site materials register

The facility should have processes and procedures in place to ensure an accurate register of stored materials is maintained and kept up-to-date, and is easily accessible in the event of an emergency.

5.1.2 Risk register

The risk register and associated risk management plan should be updated annually.

5.1.3 Training register

A record of all staff that have been provided with induction and training in the operations of the CRC should be kept on-site (and updated as staff are trained).

5.1.4 Performance self-assessment

5.1.4.1 Site establishment

Immediately after the CRC is commissioned, facility operators need to complete the site establishment checklist provided at the end of **Section 1** of this Handbook (Establishing a Community Recycling Centre) and provide a copy of the completed checklist to the EPA within 30 days of the commencement of operations.

5.1.4.2 Site operations

Periodically (at least annually), facility operators are to undertake a performance self-assessment of operations of the facility, note any issues, and implement any actions required to ensure the facility is operating safely and efficiently.

This performance self assessment is to include the following:

1. Condition of infrastructure:
    - 1.1 roofs and awnings
    - 1.2 road surfaces
    - 1.3 bunding
    - 1.4 security measures
    - 1.5 signage
    - 1.6 safety equipment including spill kits, safety shower, eyewash, first aid supplies, and fire extinguishers
2. Encroachment of surrounding activities
3. Licencing – note any changes in operations that may affect licencing

4. Materials storage and handling
    - 4.1 housekeeping
    - 4.2 material accumulation is managed appropriately
    - 4.3 materials are kept in appropriate receptacles and not on the ground around the receptacles
    - 4.4 separation of water based and oil based paint
    - 4.5 storage of by-catch in appropriate cabinets
    - 4.6 appropriate arrangements are in place for recycling of lead acid batteries and motor oils (including evidence that these are not being sent to landfill)
5. Customer supervision
6. Workplace Health and Safety procedures are understood by staff and implemented.



5.2 Reporting

5.2.1 Material quantities and collection reporting

Records of the quantities of each type of material accepted under this program are to be kept, and reported to the EPA on a weekly basis using the EPA's online reporting system. This should include the number and type of storage receptacles that are removed by the collection contractor for each type of material.

Online reporting must be done on a minimum of a weekly basis. This allows the contractor to plan their next collection in a timely manner, and the EPA to track local demand for the centre. Ongoing reporting of accurate data is a critical CRC task and will influence future program adjustments.

Although removal and disposal of motor oil and lead acid batteries is to be arranged by the facility operator, the quantities received at the facility are to be recorded and reported to EPA with reports on other materials (using dropoffwaste). The means of recycling, this includes processing and end-use must also be reported annually.

5.2.2 Annual reporting

An annual report is to be prepared outlining the following:

1. Total quantities of each type of target material received, including by-catch
2. An outline of other materials received at the facility in the year, including quantities if this information is available
3. A brief commentary on the operation of the facility over the year including highlights of promotional campaigns, customer feedback, staffing, and materials handling
4. A progress report on the implementation of recommendations from any CRC audits undertaken for the facility
5. An outline of any changes to infrastructure or operations undertaken during the year, and a summary or progress report of future plans (including design and construction).
6. A copy of the up-to-date training register for the site
7. A copy of the up-to-date risk register, and risk management plan for the site (as relevant to the infrastructure and operations of the CRC)
8. A copy of the performance self-assessments completed during the year
9. If any incidents have occurred, a list comprising the date, a brief description of the nature of each incident, and any action that has been taken to prevent recurrence of each type of incident.

The annual report is to cover the period 1 July to 30 June, and must be submitted to the EPA by 31 August each year. The EPA will provide the reporting template.

5.2.3 Incident reporting

All incidents, including but not limited to spills, injury to staff or members of the public, or events impacting on the environment are to be captured in the facility operator's incident management system. Any incidents are to be summarised in the annual report to the EPA. Significant incidents should be reported immediately to the local EPA office, the EPA Community Recycling Unit, and any other appropriate agencies.

5.3 Using the online reporting system

There are two required entries that must be completed in the CRC online reporting system, known as dropoffwaste. A CRC status update must be entered every Monday morning and each time a full receptacle is replaced with an empty one. An 'Add to Truck' entry must be completed every time an EPA contractor or Paintback truck collects materials from the CRC. For detailed information about how to use dropoffwaste, contact the Community Recycling Unit to request a user guide.

Dropoffwaste has been designed to work on a touch screen tablet. This allows the operator to walk around the centre and directly upload the status of materials stored, spare storage capacity and volumes dispatched.

Each Monday morning and every time a receptacle of core materials is changed over the operator will log on to dropoffwaste with the CRC user name and password. The CRC 'status update' screen allows reporting of number of full receptacles of core materials and an approximate percentage full of each safety by-catch cabinet. The screen also displays the date the status was last updated and the next scheduled collection date.

From the site menu, the 'Add to Truck pickup' screens will lead the operator to record the Transport Certificate Number (TCN) (this confirms that the transporter is licensed to carry dangerous goods and the load is tracked). The number of receptacles loaded on the truck is recorded on the touch screen. The next phase is to confirm the volumes held in the by-catch cabinets and record that they were collected. The operator will also be asked to confirm that the truck is 'placarded' (hazardous goods signs) front and back, that load has been secured (straps over the receptacles) and that the transport certificate has been signed. These steps cover some of the obligations of a consigner / loader in the Dangerous Goods Code. If the site has a weighbridge installed then the total weight removed from site should also be recorded.

The number of receptacles held on site should then be confirmed and the status screens updated.

Once saved, this data will be accessible by the EPA and the collection contractor.

The contractor will perform detailed weighing and online reporting for each material type from their processing facility. This data will be available to the site manager within a fortnight.

When other materials are dispatched (via other contractors) such as motor oil and lead acid batteries, the total weight, volume or number must be recorded.

6. Establishing and operating mobile services for household problem wastes



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Establishing and operating mobile services for household problem wastes

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6.1 Introduction

The CRC program was designed to become a network of facilities across NSW where householders could take their problem wastes to be safely stored temporarily before collection and recycling or disposal. However, the program also provided interested organisations with the opportunity to propose innovative solutions for the collection and disposal of problem waste. An innovative solution proposed by a number of organisations has been a mobile service.

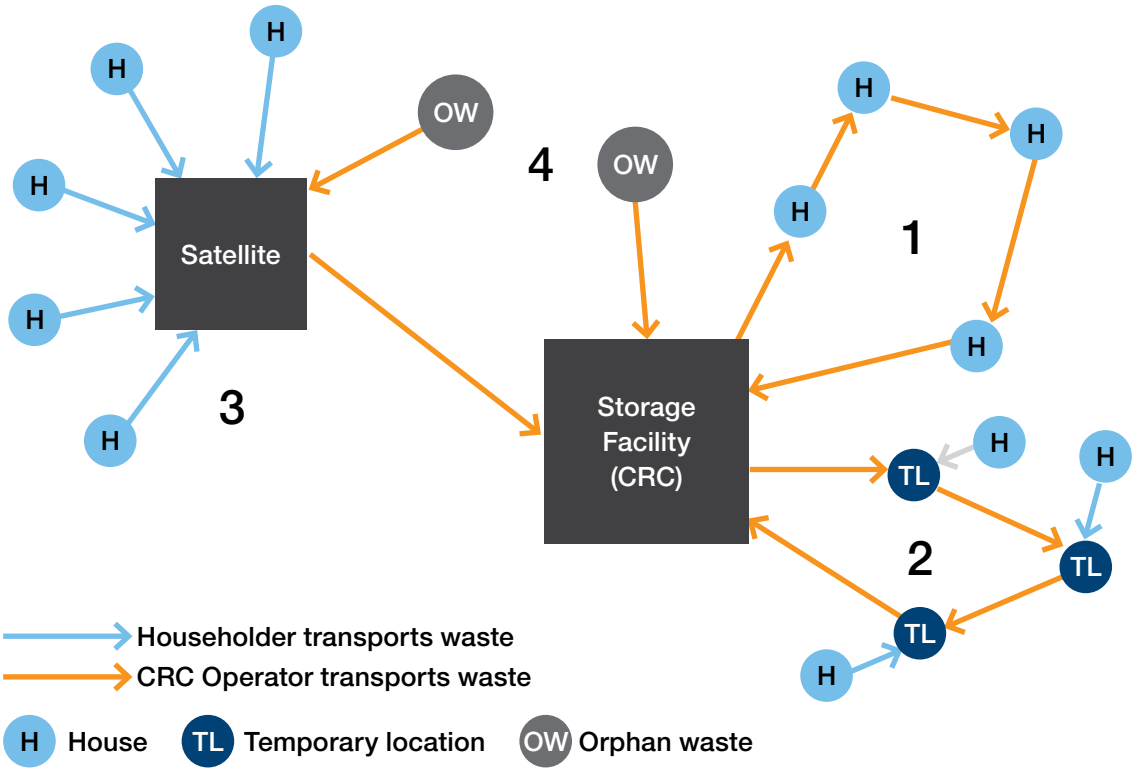
Several variations of mobile services been proposed (see **Figure 6.1** diagram).

1. **Model 1:** The CRC operator collects waste from householders directly. A vehicle or moveable unit (such as a truck or trailer equipped to transport household problem waste) travels to a house where the wastes are accepted from the householder, packed into the vehicle or unit, and then transported to the next house where further problem wastes are collected. The vehicle then travels to a storage facility (usually a standard Community Recycling Centre) where the problem wastes are unloaded from the vehicle and stored until they are collected by the EPA's collection contractor.
2. **Model 2:** The vehicle travels to a location where it remains for a period of time, and is visited by householders. The vehicle may then move to another location where it again remains for a period of time and is visited by householders. After this cycle is repeated any number of times, the vehicle then travels to a storage facility where the problem wastes are unloaded from and stored until they are collected by the EPA's collection contractor.
3. **Model 3:** Householders bring small quantities of problem wastes to one or more small drop-off points or 'satellites'. The CRC operator then packs the problem waste into a vehicle or moveable unit and transports it to a storage facility where the waste is unloaded and stored until it is collected by the EPA's collection contractor.
4. **Model 4:** The CRC operator goes to a location and collects 'orphan waste' – waste that has been left unattended somewhere within the CRC operator's area of operations. The orphan waste is brought back either to a satellite or a storage facility.

Activities that may be involved in providing mobile CRC services include:

1. acceptance of problem waste from householders
2. packing and storage of problem waste into a suitable transport vehicle
3. transport of problem waste to another location
4. intermediate or overnight parking of the transport vehicle
5. unloading of problem waste materials from transport vehicle into a storage facility
6. consolidation into storage receptacles suitable for collection by the collection contractor
7. storage of materials in a facility while they are awaiting collection
8. collection of materials by the EPA's collection contractor.

Figure 6.1 – Different models of mobile CRC services



These activities should be carefully considered to ensure the appropriate design, construction and operation of mobile CRC services. The mobile service and any associated storage facility should protect health of staff and members of the public, and minimise the impact on the environment.

This part of the Handbook outlines important considerations and minimum requirements for providing mobile CRC services. A key feature of providing mobile CRC services is the need to safely transport problem wastes that are dangerous goods, in compliance with legislation, and in accordance with waste tracking requirements.

Sections 6.2 – 6.4 provide guidance on the additional hazards and risks that must be considered in the transport of problem wastes by the CRC Operator, and the appropriate controls and legislative requirements that are generally applicable to these activities. **Sections 6.5** and **6.6** provide specific guidance on establishing and operating mobile CRC services, including the appropriate controls and minimum requirements that should be implemented when providing mobile CRC services as part of the EPA's CRC program.

6.2 Risk management approach

A risk management approach is important in effectively providing mobile CRC services. Organisations considering providing mobile CRC services must prepare an initial functional description of how the service(s) will operate, and then undertake a risk assessment to identify the most appropriate controls to incorporate into its design and operation.

It is recommended that this part of the Handbook be read fully prior to undertaking the risk assessment as it first outlines the legislative requirements applicable to the transport of problem wastes, and then provides specific guidance on the minimum requirements for mobile CRC services. This information will inform and assist in undertaking the risk assessment.

The Worksheet provided as **Appendix 2.1** of this Handbook should be used to complete this risk assessment. An example of a completed risk assessment for a mobile CRC service is provided as **Appendix 6.1**.

6.3 Compliance with dangerous goods transport legislation

In NSW the transport of dangerous goods must comply with the *Dangerous Goods (Road and Rail Transport) Act 2008* and the *Dangerous Goods (Road and Rail Transport) Regulation 2014*. The Regulation extensively references the Australian Dangerous Goods Code (ADG Code), which classifies the substances that are dangerous goods.

In general, a vehicle transporting problem wastes will carry the following substances that are dangerous goods:

- Gas cylinders (Class 2.1 – flammable gas)
- Fire extinguishers (Class 2.2 – compressed gas)
- Lead acid batteries (Class 8 – corrosive substance)
- Smoke detectors (Class 9 – miscellaneous dangerous goods)
- Solvent (oil) based paint (Class 3 – flammable liquid)
- Other by-catch materials as determined by the CRC operator.

Operators of mobile CRC services must therefore comply with the requirements of the Act and Regulation. The NSW EPA regulates the on-road transport of dangerous goods and provides an outline of the requirements at **www.epa.nsw.gov.au/dangerousgoods**. A summary of the requirements relevant to mobile CRC services is provided here.

The Act, Regulation and the ADG Code specify the controls that must be implemented to manage the risks associated with the transport of dangerous goods. Different levels of controls apply to different types of loads, depending on the size of the receptacles (containers in which the dangerous goods are packed) and the total quantity of goods transported. **Table 6.1** outlines the three types of loads defined by the legislation, and the controls applicable to each.

6.3.1 Placard load

A placard load is any load containing an aggregate quantity of dangerous goods of 1,000kg or L or more, or individual receptacles greater than 500L capacity or with a net mass greater than 500kg. Where individual receptacles up to 500L capacity or net mass less than 500kg are transported, a placard load is also any of the following:

- Any quantity of Class 6.2 – infectious substances – Category A
- 10kg or more of Class 6.2 – infectious substances – Category B
- 250L or kg or more where there is any Division 2.1 – flammable gases (not including aerosols) or 2.3 – toxic gases, or any Packing Group I substance.

The legislation requires CRC operators to implement the controls listed in **Table 6.1** that are relevant to the specific design of their mobile CRC service. Many vehicles providing mobile CRC services will be designed to carry more than 250kg or L of gas cylinders, or 1,000kg or L or more of other dangerous goods, in receptacles less than 500L capacity or net mass 500kg. In this case the controls listed in **Table 6.1** for Transport Type 2 would be implemented. However, the CRC program requires CRC operators to implement more stringent controls. Details of what is required are outlined in **Section 6.5** Establishing a mobile CRC service.

Table 6.1: Controls applicable to various types of Dangerous Goods loads

Type of Transport	Controls
1. Less than placard load	Transport documents
2. Placard load (where receptacles have up to 500L capacity or net mass up to 500kg)	Placards (Class Labels) Transport documents Emergency information Emergency information holder Double-sided reflectors 30B Fire extinguisher Driver protective equipment Materials stowed correctly Segregation
3. Placard load (where receptacles have greater than 500L capacity or net mass greater than 500kg)	Placards (EIPs and Class Label) Transport documents Emergency information Emergency information holder Double-sided reflectors Additional fire extinguishers Driver protective equipment Materials stowed correctly Segregation Vehicle and driver to be licensed

6.3.2 Transport documents

Transport documents listing the type and quantity of dangerous goods are required at all times that these goods are transported. The transport document must include the following information in legible English:

1. Consignor's name and telephone number
2. A description of the dangerous goods including:
    - United Nations number (UN number)
    - the proper shipping name, or the name that appears on the packaging or receptacle
    - the dangerous goods Class or Division
    - the subsidiary risk (if applicable)
    - the packing group (if applicable)
    - a description of each receptacle, e.g. 'drum' or 'intermediate bulk container' (IBC).
3. The number of packages or receptacles of each type
4. The 'aggregate quantity' of the goods. This is the total quantity in litres and/or kilograms of each separate type of dangerous good being transported. At all times the aggregate quantities shown must reflect the actual quantities currently on the vehicle. It must be updated as dangerous goods are loaded and unloaded from the vehicle.

The driver of the mobile CRC vehicle must ensure their transport documents are carried in the vehicle's cabin, and make them available to any authorised person and emergency services if requested. If the vehicle is transporting a placard load, transport documents must be carried in the emergency information holder.

A template for a transport document suitable for a mobile CRC vehicle is provided as **Appendix 6.2**.

6.3.3 Placards

Information on placarding requirements is provided in **Section 5.3** of the ADG Code. A mobile CRC vehicle carrying a placard load must be placarded with a Mixed Class Placard as more than one Class or Division will be carried in the load. Placards must be: displayed in a substantially vertical plane and securely fixed to the vehicle; or stencilled onto or printed on to it; or placed securely in a frame that is securely fixed to the mobile CRC vehicle. The placard must be durable and weather resistant, have letters and numerals that are legible, and must not be obscured. The part of the mobile CRC vehicle immediately behind the placard must be of a contrasting colour to the colour of the placard unless the border of the placard is of a contrasting colour and design.

Any placard must be capable of being removed. It is an offence to display a placard if there are no dangerous goods in the load.

As a minimum, placards must be installed on the front and rear of the vehicle.

In the case of a trailer the whole unit becomes a combination vehicle. If the whole combination is carrying a placard load, a dangerous goods placard should be placed at the front and at the rear. If any part of the combination vehicle contains more than a placard load on its own, then it requires additional placards on each side. Again a mixed class placard will be required as more than one Class or Division will be carried in the load. For more details on placard requirements, including the particular locations they must be displayed for other combinations, refer to **Section 5.3.6** of the ADG Code.

Mixed class placard



6.3.4 Emergency information

Emergency information addresses substance hazards, first aid procedures and the protective equipment to use. It explains how to deal with any emergency involving dangerous goods, such as a leak, spill, vehicle rollover or fire. The following are acceptable types of emergency information:

- the Standards Australia HB76 Dangerous Goods – Initial Emergency Response Guide (recommended)
- an individual Standards Australia emergency procedure guide (EPG) plus the emergency guide for vehicle fire
- an emergency procedure guide plus a vehicle fire guide that are both substantially the same as the Standards Australia guides
- any other emergency procedure guide plus a vehicle fire guide, which have both been approved by the EPA before the mobile CRC service becomes operational.

A safety data sheet (SDS) is not the same as emergency information and is not acceptable.

Where an operator of a mobile CRC service prepares their own emergency procedure guide, it should be prepared using specialist advice such as from an appropriately qualified and experienced Dangerous Goods Consultant.

In the case of a placard load, emergency information must be carried in an emergency information holder. If less than a placard load is being transported and an emergency information holder is not fitted, emergency information must be in a prominent position in the cabin if it is a vehicle, or if it is a trailer, at the front of the trailer.

6.3.5 Emergency information holder

An emergency information holder must be fitted to a vehicle transporting a placard load of dangerous goods. The holder must be:

- of a size and shape suitable for carrying emergency information and transport documentation
- marked with the words 'emergency procedure guides' or 'emergency information' in red letters at least 10mm high on a white background
- securely placed on a road vehicle in one of these locations:
  - on the inside of a door of the cabin
  - immediately adjacent to a door of the cabin
  - if either of the above is not possible, in a visible and accessible position in the cabin (provided the position of the holder is identified on a notice affixed to the inside of the driver's door).

6.3.6 Safety equipment

The following safety equipment must be carried on a vehicle transporting a placard load of dangerous goods:

- three double-sided reflector signals that comply with AS 3790 and are clean and in good condition
- one 30B dry powder fire extinguisher located in or directly behind the cabin near the driver's door, or at the front of any trailer
- personal protective and safety equipment including thermal insulated gloves, chemical resistant gloves and chemical resistant boots.

Each fire extinguisher must be mounted securely in a quick-release bracket. In cases of combination vehicles, a fire extinguisher must be provided for every separate trailer transporting a placard load. Refer to *AS 2444-2001 Portable fire extinguishers and fire blankets – Selection and location* for more guidance on the selection and location of fire extinguishers.

Safety equipment requirements depend on the type of dangerous goods being transported. **Table 6.2** (an excerpt from **Table 12.2** in the ADG Code) shows the safety equipment required for transporting each class or division of dangerous goods in a mobile CRC vehicle.

Table 6.2: Personal Protective Equipment required for mobile CRCs

Minimum equipment required	Class of Dangerous Goods (refer to **Section 6.3** for material types relevant to classes)					
	2.1	2.2	3	6.1	8	9
Respiratory protection equipment for escape purposes	No	No	No	***[a]***	***[a]***	No
Face hugging goggles with increased facial seal or full face shield as appropriate	Yes	Yes	No	Yes	Yes	No
Eye wash kit at least 250ml capacity, filled and ready for use	No	No	Yes	Yes	Yes	Yes
Chemical resistant gloves or gauntlets	No	No	Yes	Yes	Yes	Yes
Thermal insulated gloves or gauntlets	Yes	Yes	No	No	No	No
Chemical resistant suit or coveralls	No	No	No	Yes	Yes	No
Chemical resistant boots	No	No	No	Yes	Yes	No
Any electric torch	No	Yes	No	Yes	Yes	Yes
Electric torch complying with AS/NZS 60079.11 or other recognised Code	Yes	No	Yes	No	No	No

[a] The minimum requirement is air supplied short term breathing apparatus suitable for escape purposes, except when, even in an emergency, the dangerous goods will not give rise to harmful vapours, gases or dust. Note that where a driver attends to the loading or transfer of goods, self contained breathing apparatus with a duration of greater than 15 minutes may be required by other (e.g. health and safety) legislation.



Minimum requirements for safety equipment are outlined in **Section 6.5.3** Important design elements of a mobile CRC vehicle.

6.3.7 Stowing materials correctly

The mobile CRC vehicle must be strong enough to withstand the rigours of transport. Packages must be stowed and restrained within the vehicle or trailer as outlined in the National Transport Commission's Load Restraint Guide. This includes any intermediate containers into which the materials are loaded. The design and operation of the mobile CRC service must ensure that materials are stowed correctly, and that manual handling by operators is kept to a minimum. Further guidance on the important design elements of a mobile CRC vehicle is provided in **Section 6.5.3**.

Before loading, the interior and exterior of the mobile CRC vehicle must be inspected to ensure there is no damage that could affect its integrity or that of the packages to be loaded in it. Specific loading instructions such as orientation arrows, 'not to be double stacked' 'keep dry' or temperature control requirements must be met. Liquid dangerous goods must be loaded below dry dangerous goods whenever possible. Packaging fitted with a vented closure must be stowed and restrained with the closure at the top.

If the dangerous goods are of a kind that may lead to the formation of flammable, toxic or other harmful atmospheres, they must be stowed so that no harmful atmosphere will accumulate in the vehicle cabin if there is a leak.

Packages that appear to be leaking or damaged, potentially allowing the contents to escape, must be placed in an appropriate container together with appropriate absorbent material, before they are loaded into the mobile CRC vehicle. The container used must be approved for dangerous goods transport, such as the HAZMAT containers used by Fire and Rescue NSW, or pails, drums or kegs that have been approved and provided by the EPA's collection contractor.

For a vehicle that has open or non-rigid sides:

- materials must be stowed and restrained within rigid sides or gates
- no package containing dangerous goods may protrude above the sides or gates by more than 30 per cent of the height of the article or package, and
- no package may protrude horizontally beyond the sides or gates.

A curtain-sided container or vehicle is not regarded as a closed unit and must be fitted with gates. The requirement for rigid sides or gates does not apply to intermediate containers or segregation devices, as long as they are restrained on the vehicle according to the load restraint guide.

6.3.8 Segregation

Segregation rules help minimise the risk of incompatible substances reacting dangerously if they were to come into contact with each other. Such contact might be caused by a leak, spill or vehicle accident. Section 6 of the ADG Code has considerable information covering segregation rules, the types of segregation devices and their design tests, and how to use such devices.

In general, the target materials carried on a mobile CRC vehicle do not need to be segregated. However by-catch materials, if accepted, do need to be segregated. If these materials are to be accepted, specialist advice must be obtained on the appropriate segregation devices to be used and the design of the mobile CRC vehicle.

The mobile CRC vehicle must be designed such that lead acid batteries are not packed immediately adjacent to either motor oil or gas cylinders.

6.3.9 Dangerous goods training and licensing

Mobile CRC vehicles only need to be licensed for dangerous goods transport if they are designed to carry individual receptacles that have a capacity of more than 500L or contain more than 500kg of dangerous goods. Where this is the case, the vehicle must be covered by a dangerous goods vehicle licence and the driver must hold a dangerous goods driver licence.

A licence can be issued for a vehicle that will be loaded with dangerous goods, such as a trailer, rigid vehicle, B-double trailer or a road-train trailer. Prime movers are not able to be licenced. A single licence is issued for each transport organisation and details of each vehicle are included on that licence. The licence is valid for one year and is nationally recognised. Applicants for a vehicle licence must:

- provide information about the vehicle
- advise the class or classes of dangerous goods to be carried
- hold an insurance policy for the vehicle to cover clean-up and emergency services costs incurred in response to, and recovery of, any vehicle(s) and/or goods involved in a dangerous goods incident
- pay the licence application fee (currently $89)
- provide a rear 3/4 image of the vehicle showing the number plate and vehicle type.

More information on application requirements is available at **www.epa.nsw.gov.au/dangerousgoods/training.htm**.

A current dangerous goods driver licence issued by any state or territory is recognised throughout Australia. Holders of a current interstate dangerous goods driver licence are able to drive a dangerous goods vehicle anywhere in NSW.

Dangerous goods driver training

Before applying for a dangerous goods driver licence, the driver must complete a certified training course in the transport of dangerous goods by road (reference number TLILOC3013A). Information on providers of this training can be found at **www.training.gov.au**. Applicants for a dangerous goods driver licence must:

- complete the required training provided by an appropriate Registered Training Organisation (RTO)
- be certified as medically fit by a general practitioner
- have a satisfactory driving history
- provide identification (passport-sized photographs and a copy of your vehicle driver licence)
- obtain the RTO's certification on the application form
- submit an application within 6 months of undertaking the training or the medical assessment.

More information on application requirements is available at **www.epa.nsw.gov.au/dangerousgoods/training.htm**. The requirements for driving history and medical fitness are given in the licence application form.



6.4 Compliance with legislation regarding transport of wastes

The operation of a mobile CRC service involves the transport of waste and is subject to the requirements of the *Protection of the Environment Operations Act 1997* (the Act), and the *Protection of the Environment Operations (Waste) Regulation 2014* (the Regulation). These requirements are outlined below.

6.4.1 Environment protection licence

An environmental protection licence is required to undertake certain activities (scheduled activities) that are not premises-based (Clause 49 of the Act). The transport of more than 200kg of category 1 trackable waste is a scheduled activity (Clause 48 of Schedule 1 of the Act).

Category 1 trackable waste means waste transported within NSW of a type described in Part 1 of Schedule 1 of the Regulation that exhibits any of the characteristics specified in Part 3 of that Schedule. Not all CRC target materials are specifically listed as Category 1 trackable wastes. Only waste paint, waste oil (waste mineral oil, water/oil mixtures), and lead acid batteries (as these contain acid) are listed. Smoke detectors, gas cylinders, fluorescent tubes and globes, and household batteries are not listed as Category 1 trackable waste. **Table 6.1** below shows which household problem wastes are trackable.

Under Part 9 of the Regulation, waste oil and lead acid batteries are exempt from the tracking requirements outlined in Part 4 of the Regulation (notices 2006-E-4 and 2009-E-1, respectively). However, these exemptions only modify the record keeping requirements, they do not remove them.

An environment protection licence is therefore required where a mobile CRC service will transport more than 200kg of paint, oil, or lead acid batteries at a time.

Table 6.1: Status of household problem wastes as Category 1 trackable wastes

Household Problem Waste	Trackable Waste?
Targeted	
Paint (water based, oil –based, and other paint types)	YES
Used oil (non-hazardous waste hydrocarbon oil)	EXEMPTED BY 2006-E-4
Batteries – lead acid batteries	EXEMPTED BY 2009-E-1
Batteries – other household types	NO
Domestic gas cylinders (typically LPG, but also other types)	NO
Conventional tube type and compact fluorescent lamps, and other types	NO
Smoke detectors	NO
Not targeted but accepted	
By catch (Toxic, Flammable Liquid, Oxidiser, Acid, Alkali)	YES

Waste transporter licence application

Applications for this licence must be made using the application form that is available at:

www.epa.nsw.gov.au/resources/licensing/140543-licence-application-waste-transport.doc.

6.4.2 Waste tracking

Part 4 of the POEO (Waste) Regulation 2014 (the Regulation) places certain obligations on consigners, transporters, and receivers of waste to track and record the movement of waste.

The EPA approved an exemption under Part 9 of the Regulation on 12 August 2016, modifying these obligations and simplifying the requirements for operators of CRCs, in particular operators of mobile CRC services.

Where the waste tracking exemption applies

The exemption applies to household problem waste that is trackable waste and that is being transported to a CRC that has been approved and established under the NSW Government's Waste Less, Recycle More Initiative.

The exemption applies to:

- waste delivered by a householder to a CRC; or
- waste collected from a householder, or a temporary location, or a satellite CRC; or
- orphan household waste collected by a mobile, satellite or central storage facility (CRC) operator.

It exempts a consignor, a transporter, and a receiver of waste to which the exemption applies from Part 4 of the Regulation.

Conditions relating to the exemption of transporters

A transporter is exempt only if the transporter complies with these conditions.

For each load of waste transported, the transporter must make a record of the following:

- the name and address of the transporter
- the transporter's environment protection licence number (if the transporter is required to be licensed under the Act)
- the registration number of the vehicle used to transport the waste
- the type and quantity of the waste transported
- the date on which the waste is delivered to the receiver
- the name and address of the receiver
- the date on which the record was made.

The transporter must:

- retain the record for a period of not less than four years after the date on which the record was made;
- make the record available for inspection by an authorised officer on request; and
- give a copy of the record to the receiver.

Conditions relating to the exemption of receivers

A receiver is exempt only if the receiver complies with the following conditions. The receiver must:

- retain the copy of the record made by the transporter (see above) for a period of not less than 4 years after the time the record was made; and
- make a copy of the record available for inspection by an authorised officer on request.

Dangerous goods requirements

The exemption does not exempt any person or class of person from any requirement under the *Road and Rail Transport (Dangerous Goods) Act 1997* or the Regulations made under that Act.

Definitions

- **Householder –** person who owns, or rents, or lives in a house or tenement, and generates household problem waste.
- **Temporary location –** a location at which a mobile CRC service temporarily collects household problem waste as part of the EPA's Community Recycling Centres Program.
- **Mobile CRC service –** a service in which household problem waste is collected from dispersed locations and transported to either a Satellite CRC or a Central CRC.
- **Satellite CRC –** a location at which small quantities (less than minor quantities as defined by AS3833 The Storage and Handling of Mixed Classes of Dangerous Goods) of household problem waste can be deposited and stored temporarily, prior to transport to a Central CRC.
- **Central CRC –** a Community Recycling Centre that has been approved and established as such by the EPA.
- **Orphan waste –** household problem waste left abandoned on public land.
- **Household problem waste –** waste generated by householders which CRCs are designed to accept and store including:
    - paint (water based, oil based and other paint types)
    - used oil
    - batteries (including lead acid batteries, and other types of batteries used by households)
    - domestic gas cylinders (typically LPG, but also other types)
    - conventional tube type and compact fluorescent lamps, and other types
    - smoke detectors
    - other types of hazardous waste originating from household or domestic sources.



Not all household problem waste is trackable waste.

Householders

As a result of the exemption, householders are now exempt from waste tracking requirements where they transport waste to an approved CRC or mobile CRC service.

Operators of a mobile CRC service

Operators of a mobile CRC service transporting household problem waste from a household, a temporary location, a satellite CRC, or collecting orphan waste, are exempted from waste tracking requirements for movements of waste to a central CRC. However, these operators are required to carry a Transport Document listing the waste carried. The required form of Transport Document is provided as **Appendix 6.2**.

Operators of a mobile CRC service must obtain a Waste Transport Licence for movements where applicable (refer to **Section 6.4.1**).

Central CRC operators

Receivers of waste being transported to a central CRC are exempted from waste tracking requirements. However, they are required to keep copies of the transport documents provided to them by transporters delivering waste to the Central CRC for a minimum of four years.

Transport of waste by the collection contractor

The contractor engaged by the EPA to collect waste from CRCs must generate a new transport certificate number (TCN) under a new consignment authorisation (CA) for movements of waste from the central CRC to the collection contractor's receiving facility. The collection contractor generates a CA for the central CRC that is part of a mobile CRC service. The organisation that operates the central CRC (which is a waste facility as defined by the Act) must confirm consignment of the waste by completing the appropriate part of the transport certificate when the waste is collected by the contractor.

When the EPA's contractor collects the target materials (paint, oil, gas bottles, batteries, smoke detectors and fluorescent lights), the CRC operator must lodge this information on the online Drop Off system. The CRC operator must also use this system to capture the transport certificate number, record the number of receptacles collected, confirm that placards were displayed and the load was secured, and enter the total weight collected (if there is a weighbridge on site). This process will ensure the movement of materials from the CRC to the collection contractor's premises is tracked and meets all ADG requirements.

This activity is not exempted. Only transport of household problem waste to a central CRC is exempt.

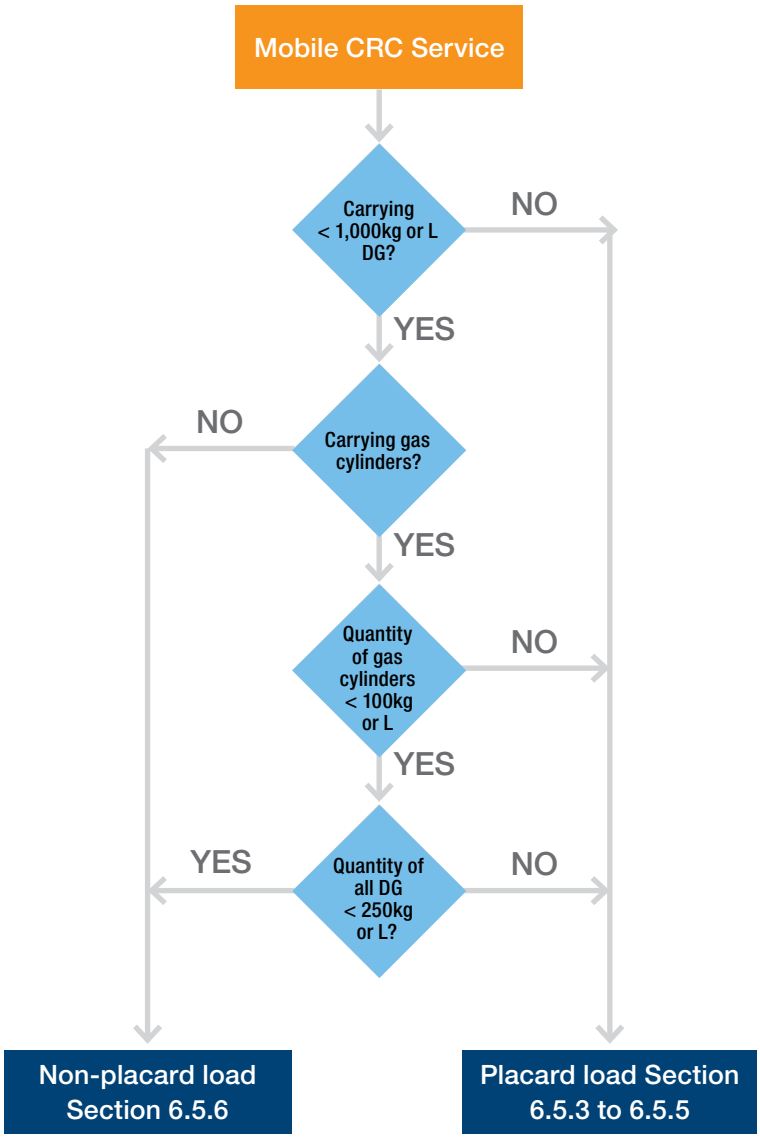
6.5 Establishing a mobile CRC service

6.5.1 Size and capacity of the mobile CRC service

When considering the establishment of a mobile CRC service, the following factors should to be taken into account.

- The distribution of householders and their willingness and ability to travel to the locations proposed for the service
- The number of locations proposed to be served
- The number of households to be served
- The type and quantity of the different materials that are to be accepted
- The required capacity of the mobile CRC vehicle(s) and storage facility.

The flowchart below provides a simple test to determine whether a mobile CRC must meet the requirements of a placard load under the dangerous goods legislation. It also includes references to relevant sections of the Handbook.



6.5.2 Preparing materials for acceptance

When operating a mobile CRC service, the means for providing clear instruction to householders on what materials are accepted (and what materials are not) and how to present them at the drop-off or pick-up point must be considered. This could include signage on a mobile CRC vehicle at a location visited by householders, or information mailed to householders prior to a pick up from their house. Consideration should also be given to the appropriateness of providing bags for certain types of materials for segregation, and to minimise the manual handling and loss of containment risks.

6.5.3 Important design elements of a mobile CRC vehicle

The design of a mobile CRC vehicle must incorporate the following features.

Sizing

When designing the mobile CRC transport vehicle, ensure that the appropriate weight capacity calculations are undertaken. The material carrying capacity of the vehicle will be net of the weight of all the equipment, shelves, compartments and receptacles to be carried. For example a trailer rated for 3T may only be able to carry 2T of materials once the weight of equipment and compartments is taken into consideration.

Transport receptacles

Materials should be transported in receptacles appropriate to their type.
Liquids (e.g. water based and solvent based paint) must be transported in bunded storage receptacles.

Transport receptacles must be fixed or easily secured to prevent movement during transport that could cause damage to the vehicle, receptacle failure, or loss of containment. Transport receptacles and any shelving built into the mobile CRC vehicle to accommodate them must be adequate for the load they will bear. The way in which any shelves are used must minimise overloading.

The transport receptacles must be easily accessible for packing to minimise manual handling difficulty, and prevent operator slips, trips or falls when entering the mobile CRC vehicle that could result in injury or loss of containment.

Transport receptacles should either be able to be unloaded in their entirety by forklift, or be unpacked easily in a way that minimises manual handling difficulty. During packing or unpacking of fixed storage receptacles, the mobile CRC vehicle should allow easy use of intermediate containers such as a box trolley or wheeled receptacle to minimise the risk of loss of containment and impact on public health or environment.

Transport of flammable liquids and gases

Flammable liquids and gases (oil based paint, gas cylinders) must be kept separate from ignition sources (especially lead acid batteries) inside the mobile CRC vehicle.
The vehicle must be adequately ventilated to prevent build-up of flammable gases from gas cylinders and flammable liquids, such as solvent based paint. Flammable liquids must be stored in a bunded transport receptacle.

Transport of aerosols

The transport of aerosols, being flammable gases, presents some difficulties and is not recommended. If aerosols are collected and transported as part of a mobile CRC service, the following considerations apply:

- the aerosols must be transported in a cage receptacle that allows adequate ventilation to prevent the build up of dangerous gases and provide protection, should an aerosol can explode.
- The cage receptacle should be transported in a part of the mobile CRC vehicle that is also adequately ventilated and kept separate from ignition sources.

Transport of gas cylinders – flammable and non-flammable

A mobile CRC service should only collect regular household gas cylinders. Other types of gas cylinders such as acetylene, oxygen and medical oxygen, or vehicle LPG tanks require additional controls and add a level of complexity that is outside the scope of the CRC program.

Gas cylinders must not be stacked, but can be placed in a cage with multiple level racks. Gas cylinders must not be stowed near a source of heat. When transporting gas cylinders the main valve must be closed and any regulator removed prior to loading.

When gas cylinders are transported in standard gas industry cylinder pallets (stillages):

- the cylinders must be secured within the frame of the stillage by a lashing system that meets the load restraint guide
- not more than 45 per cent of the height of the cylinders may protrude above the stillage rail
- the stillages must be stowed and restrained according to the load restraint guide.

Where gas cylinders are collected as part of a mobile CRC service, consideration should be given to transporting them separately to all other types of problem wastes collected by the service.

Transport of lead acid batteries

Lead acid batteries are the primary corrosive material accepted by the CRC Program and must not be stacked. They should be able to be secured when packed in an upright position.

Transport of household batteries

Single use household batteries are to be placed in a purpose built collection receptacle supplied by the collection contractor. Household batteries of all types are to be placed in the same container. Special requirements apply to lithium metal and lithium ion batteries.

Lithium ion and lithium metal cells and batteries, and equipment containing such cells and batteries, must be packaged in accordance with instruction P909 of the Australian Dangerous Goods Code (current version is 7.4), when transported for disposal or recycling. Receptacles must be marked ‘LITHIUM BATTERIES FOR DISPOSAL’ or ‘LITHIUM BATTERIES FOR RECYCLING’. The collection contractor will supply labels and receptacles appropriate to this purpose.

In addition, lithium batteries must be packed to prevent short circuits and the dangerous evolution of heat. This could include, but is not limited to:

- individual protection of the battery terminals, or
- inner packaging to prevent contact between cells and batteries, or
- the use of a non-conductive and non-combustible cushioning material to fill empty space between the cells or batteries in the packaging.

Lithium batteries must be secured within the outer packaging to prevent excessive movement during transport (e.g. by using a non-combustible and non-conductive cushioning material or through the use of a tightly closed plastic bag).

Transport of by-catch

If by-catch is accepted, separate transport receptacles that are appropriate segregation devices must be provided for each of the following types of materials: flammable liquids, toxics, oxidisers, acids, and alkalis. Specialist advice on the appropriate type of segregation devices required for each type of material, and their location within the mobile CRC vehicle, must be obtained if it is intended that by-catch be accepted.

Safety and spill response equipment

The following safety equipment must be carried on a mobile CRC vehicle:

- three double-sided reflector signals that comply with AS 3790 and are clean and in good condition
- one 30B dry powder fire extinguisher located in or directly behind the cabin near the driver's door, or at the front of any trailer
- personal protective and safety equipment including thermal insulated gloves, chemical resistant gloves and chemically resistant boots.

Each fire extinguisher must be mounted securely in a quick-release bracket. In cases of combination vehicles, a fire extinguisher must be provided for every separate trailer transporting a placard load. Refer to *AS 2444-2001 Portable fire extinguishers and fire blankets – Selection and location* for more guidance on the selection and location of fire extinguishers.

As a minimum, a mobile. CRC vehicle must have the following personal protective equipment (PPE):

- gas tight goggles or full face shield as appropriate
- eye-wash kit
- chemically resistant gloves or gauntlets
- thermally insulated gloves or gauntlets
- chemically resistant suit or coveralls
- chemically resistant boots
- electric torch complying with AS/NZS 60079.11
- first aid kit

The CRC operator must carry out its own risk assessment and determine any additional safety equipment appropriate to its particular operation. The risk assessment and determination must be recorded and kept for reference.

The mobile CRC vehicle must also carry spill response equipment appropriate to the materials being carried. This includes adequate quantities of absorbent material, a sufficient quantity of resealable waste-recovery containers made of materials compatible with the substances being kept, and marked for emergency use only, and shovels and brooms. Waste recovery containers should be approved for dangerous goods, such as the Hazmat bins used by Fire and Rescue NSW.

Procedures are to be implemented to regularly:

- check and replenish the first aid equipment and supplies
- check and replenish the personal protective equipment (PPE)
- check and replenish the spill response equipment.

PPE should be kept separate from normal clothing, and cleaned and maintained after use in accordance with the manufacturer's instructions and the relevant Australian Standard.

Security

The mobile CRC vehicle must incorporate security features to prevent theft of the vehicle, access to the storage compartment and theft of material.

Signage and labelling

The mobile CRC vehicle must be provided with placards as outlined in **Section 6.3.3**.

A CRC program branded sign must be installed on the mobile CRC vehicle. Signage acknowledging the NSW EPA and Environmental Trust must also be installed on the vehicle. Please contact the Community Recycling Unit to discuss custom signage. Email **recycling.centres@epa.nsw.gov.au**

Signs with pictorial and text descriptors appropriate to the type of material to be stored must be installed on the receptacles to allow easy sorting and packing by operators. If appropriate, the signage should include how materials are to be packed in the storage receptacles.

The EPA will provide artwork in electronic format to maintain consistent branding across the network and to distinguish CRCs from the Household Chemical CleanOut events. The particular requirements for the mobile CRC service must be discussed with the EPA's Community Recycling Unit, and all artwork for signs must be sent to the Unit for approval prior to purchasing and installing the signs.

6.5.4 Safety and environmental management procedures

Established processes and documented procedures such as Safe Work Method Statements (SWMSs) or Safe Operating Procedures (SOPs) should be in place for both the mobile CRC service and the storage facility to protect the health and safety of customers and staff. These procedures must be based on a risk assessment approach as outlined in **Section 6.2**.

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

6.5.5 Emergency preparedness and response

The equipment and facilities required for emergency situations have already been outlined in previous sections. The mobile CRC vehicle must have reflectors, fire extinguishers, a spill response kit and personal protective equipment on board. The storage facility must have a safety shower and eyewash station, spill response kits, fire extinguishers, personal protective equipment and first aid equipment on site.

An emergency response plan, outlining the initial response in the event of vehicle accident, loss of containment, fire or other incident, must be prepared and carried with the mobile CRC vehicle. Refer to **Section 6.3.4** Emergency Information for details of what is required.

An emergency plan and associated procedures must be prepared for the storage facility, and located near the entrance to the facility. Refer to **Section 1.3.4.2** for more information on preparing the emergency plan and associated procedures. All staff involved in the operation of the mobile CRC service and associated storage facility must be trained to implement the emergency plans and procedures.

The EPA will establish and maintain contracts for the provision of specialist advice and support arrangements in the event of unknown materials being deposited, and other unexpected or emergency situations. The mobile CRC operator is to ensure its operating and emergency procedures appropriately reference this specialist advice.

6.5.6 Specific requirements for transport from a satellite

Whilst the operator of a satellite arrangement will transport dangerous goods and trackable waste from the satellites to the storage facility in a similar way to other models, due to the smaller quantities of materials to be transported, minimum requirements are slightly different.

Dangerous goods quantity limits

If flammable gas cylinders (Class 2.1) are not being transported, loads must be in quantities of less than 1,000kg or L of dangerous goods. If the load contains flammable gas cylinders, then a total quantity of dangerous goods of 250kg or L may be transported, and the quantity of gas cylinders must not exceed 100kg or L. Note that these quantity limits apply to the capacity of the cylinders. No individual transport container must have a capacity of greater than 500kg or L. Note also that water based paint is not a dangerous good and does not need to be included in these quantity limits.

Controls required

Transporting wastes under the dangerous goods quantity limits means that the loads are not placard loads. The only control required by the dangerous goods transport legislation is to carry transport documents. However, operators of a satellite must implement the following controls when transporting any load:

- Carry transport documents showing the quantity of each type of material being transported – refer to **Section 6.3.2** for details on the appropriate information to be provided in the documents
- Keep a copy of Standards Australia HB76 Dangerous Goods – Initial Emergency Response Guide in the cab of the transport vehicle

- Locate a 30B fire extinguisher at the front of vehicle behind the cab or in an easily accessible position
- Carry a small spill kit appropriate to the quantity of materials being carried, in particular the largest package being carried
- Provide the following protective equipment for the driver: safety glasses, eye-wash kit, chemical resistant gloves, thermal insulated gloves, chemical resistant suit or coveralls, chemical resistant boots, and an electric torch complying with AS/NZS 60079.11 or other recognised Code
- Stow materials safely in accordance with the guidance provided in **Sections 6.3.7** and **6.5.2**
- If by-catch is transported, provide separate transport receptacles such as pails or boxes that are appropriate segregation devices for each of the following types of materials: flammable liquids, toxics, oxidisers, acids, and alkalis. Specialist advice on the appropriate type of segregation devices required for each type of material, and their location within the transport vehicle must be obtained if it is intended that by-catch be transported.

In addition, packages in which materials have been delivered must be inspected prior to loading to ensure they are in a sound condition and are not leaking. Intermediate containers should be used if necessary. A sufficient supply of appropriate intermediate containers should be kept on the transport vehicle for this purpose.

In order to limit exposure to ignition sources, smoking must not be permitted in and around the satellite, transport vehicle or in the storage facility at any time. Mobile phones should not be used near any material storage areas.

Flammable liquids such as solvent based paint and flammable gas cylinders should be packed separately from lead acid batteries.

Waste tracking

The waste tracking requirements outlined in **Section 6.4** must be met.

6.5.7 Specific requirements for the design of satellites

In general satellites will be small sites at which only a small quantity of materials are kept. They should be established and operated as a minor store as outlined in Section 2 of *AS/NZS 3833:2007 The storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers*. **Table 6.3** outlines the maximum quantities for minor storage.

Where a satellite is operated with quantities greater than those of a minor store, it should meet all the requirements for a regular CRC as outlined in this Handbook.

Table 6.3: Maximum quantities for minor storage

Description	Quantity, kg or L		
	Packing Group I	Packing Group II	Packing Group III
Total quantity of all dangerous goods	25	250	1,000

Notes:

1. It is permissible to store, at the same time and in the same area, the maximum allowance for each of the Packing Groups. For an explanation and examples of Packing Groups, refer to Box 3 in **Section 1.2.6** of this manual.
2. Where manufactured product is stored, the quantities of manufactured product may be doubled.
3. The maximum quantity of Division 5.2 dangerous goods allowable as minor storage is 10kg or L.
4. For the purpose of determining minor storage quantities, Class 2 dangerous goods in retail packages, aerosols, and substances and articles of Class 9 are regarded as Packing Group III.

The following requirements must be implemented for satellites operating as minor stores.

Location

- Separated by more than 10m from any other dangerous goods store.
- Not more than one minor store per 500sqm of floor or ground area.

Precautions

- Any materials that are incompatible or might react dangerously, are segregated.
- Storage area shall be away from heating and ignition sources.
- Storage area shall be provided with adequate natural or mechanical ventilation.
- Packages shall be kept closed, and there should be no decanting on site.
- Appropriate spill control measures shall be provided where packages are opened and their contents transferred.
- Any spills or leaks shall be cleaned up immediately and disposed of appropriately. Contaminated, spilled or leaked material shall not be returned to original packaging, except for disposal where it is known that this will not increase the risk.
- The transfer of dangerous goods from the store to transport vehicle shall be carried out in a manner that minimises the possibility of spillage or fire.
- Dangerous goods shall not be stored or handled where they could hinder escape from a building in the event of fire.
- Persons who handle dangerous goods shall be informed and aware of the hazards involved.

- Packages shall be kept in such a manner as to avoid spillage.
- Stores shall be kept clear of combustible matter and refuse.
- Packages shall be kept on surfaces that are resistant to attack by their contents if spilt.
- Appropriate personal protective equipment shall be worn by personnel involved in product transfer or clean-up operations.
- A fire extinguisher of a suitable type shall be installed in each minor store. It shall be located so that it is immediately accessible in an emergency, along an exit route.
- A supply of water shall be available at a nearby location for personal hygiene.

Additional precautions for outdoor minor storage

- The ground around the storage area shall be kept clear of combustible vegetation and refuse by at least 3m.
- Any potential flow of spillage shall be prevented from reaching any protected place, watercourse or boundary by such means as the use of natural ground slope, or the provision of a diversion channel, kerb or bund.
- The store shall be separated from any protected place or property boundary by at least 3m.

Signage

Signage must be provided at the satellite to direct customers where to place their materials safely. CRC program branded signage is required.

6.5.8 Storage facility for a mobile CRC service

Whether or not a storage facility established for a mobile CRC service accepts material directly from customers or not, it must meet all the requirements of a regular CRC as outlined in this Handbook. This includes the design, construction and operation of the facility, emergency preparedness and response, induction and training of all staff involved in the provision of the all parts of the mobile CRC service, and record-keeping and reporting.

6.5.9 Insurance

The operator of a mobile CRC service must maintain adequate property, motor vehicle, comprehensive third party, public liability and workers compensation insurance cover for the mobile CRC vehicle(s), for the various locations of the vehicle whilst it will be accepting materials (if necessary), for satellites if part of the service and for the storage facility.



6.6 Operating a mobile CRC service

A mobile CRC service should be operated to make it easy for householders to manage their own problem waste. A well-managed operation protects the health and safety of customers and staff, protects the environment and the community, and facilitates safe disposal and reuse of problem materials. The following elements must be implemented when operating a mobile CRC service.

6.6.1 Acceptance from householders

Containers must be inspected prior to acceptance to ensure they are in a sound condition and not leaking. Intermediate containers should be used if necessary. A sufficient supply of appropriate intermediate containers should be kept on the mobile CRC for this purpose.

Where applicable, material should be moved from the house to the mobile CRC vehicle in small loads, or in a box trolley to minimise the risk of loss of containment and operator injury from manual handling. Care should be taken not to mix incompatible substances when moving them from the house to the mobile CRC vehicle.

A sign (e.g. A-frame size) should be placed on the footpath when material is being moved from the house to the mobile CRC vehicle to advise members of the public that material is being moved, and to minimise the risk of collision with a pedestrian.

In order to limit exposure to ignition sources, smoking must not be permitted in and around the mobile CRC vehicle at any time, or in the storage facility. Mobile phones and cellular tablet devices should not be used within the storage compartment of the mobile CRC vehicle. Flammable liquids such as oil based paint and flammable gas cylinders should be packed separately from lead acid batteries.

6.6.2 Loading for transport

If materials are packed into transport receptacles, these receptacles must be labelled on the outside and inside to indicate their contents. Operations staff must follow any directions provided in the mobile CRC vehicle indicating how materials should be packed.

In addition, adsorbent material should be added to transport receptacles where they are used to minimise vapour production from flammable liquids, and to minimise the potential for loss of containment and environmental damage.

6.6.3 Transfer to storage facility

In order to minimise the risk of operator injury and loss of containment, it is recommended that materials being unloaded from a mobile CRC vehicle with fixed transport receptacles be moved in an intermediate receptacle on a box (bunded) trolley. Materials should not be carried package by package more than a metre from mobile CRC vehicle to storage facility.

It is recommended that wherever possible, materials of a particular type be moved from the mobile CRC vehicle to the storage facility separately. If the mobile CRC vehicle is designed such that each type of material is transported in a separate moveable transport receptacle, this means only moving receptacles of that type of material at one time. If the mobile CRC vehicle is designed such that materials are packed into fixed receptacles, then only materials of one type should be moved at one time.

6.6.4 Collection of materials from storage facility

The EPA and/or other funding bodies (e.g. product stewardship schemes) will establish and maintain contracts for the collection and disposal (or recycling) of paint, used oil (other than motor oil), gas cylinders, household batteries and fluorescent lights, as well as incidental by-catch. The mobile CRC operator will be responsible for arranging the collection and recycling (not disposal) of lead acid batteries and used motor oil.

The mobile CRC operator must ensure that materials are removed from the storage facility with sufficient frequency to prevent the accumulation beyond the capacity of the facility.

The mobile CRC operator must ensure that materials are loaded and consigned in accordance with basic requirements for the transport of waste and dangerous goods. Refer to the procedure in **Section 3.5.3** of this Handbook for the procedure for loading and consignment of materials from CRCs. Monitoring, record-keeping and reporting of material quantities in the storage facility, and reporting of collections is the same as for a regular CRC as outlined in **Part 5** of this Handbook.

6.6.5 Collecting orphan waste

The collection of orphan waste requires pre-planning and care when undertaking the task. However, operators of mobile CRC services are often the best equipped to do so. The following specific requirements must be met when collecting orphan waste.

Providing appropriate segregation devices

As the type of material is generally not known beforehand, and there could be a number of different types of both target problem wastes and by-catch materials, a quantity of approved segregation devices (e.g. buckets, kegs or drums) should be carried on the mobile CRC vehicle.

Handling unknowns

Containers of unknown materials are not to be opened for the purpose of identification. A photograph of the container should be taken prior to packing. The container should then be placed in a resealable container suitable as a segregation device (e.g. a bucket or drum) appropriate to the material and labelled as unknown (e.g. 'Unknown – to be identified' written on to an adhesive label affixed to the container).

The photograph must then be emailed to the collection contractor with a request for advice as to how the material should be stored. Once a response is received, the identification can be written on the label, and the resealable container can be placed in the appropriate receptacle or Dangerous Goods Safety Cabinet. Where the material cannot be identified through the provision of specialist advice, it should be placed in the Toxic Dangerous Goods Safety Cabinet.

Handling of containers that are leaking or without lids

Similarly, if there are leaking containers or containers without lids, these must be placed in a resealable container appropriate to the material type, suitable as a segregation device, with a suitable amount of adsorbent material. The outer container must then be labelled according to the material type and placed in the appropriate receptacle or Dangerous Goods Safety Cabinet.

Appendix 6.1 – Sample mobile CRC risk assessment

Source of risk	Hazards	Risk	Possible Controls
Activities			
Acceptance of problem waste from householder	Manual handling of large containers of problem wastes resulting in operator injury.	3 / 2 Medium	Provide clear instructions to householder prior to acceptance as to how materials should be presented. Use small loads or a box trolley to move the waste. Safe work procedures. Operator training and behaviour.
	Container failure during transfer from house to mobile CRC, resulting in loss of containment and impact on public health or environment.		Use intermediate container such as a bag, bin or box trolley. Take care not to mix incompatible substances.
	Collision with pedestrian at house acceptance point, resulting in operator or pedestrian injury, or loss of containment, and impact on public health or environment.		Set up advisory signs, safe work procedures, and operator awareness.
Packing and storage of problem waste in mobile CRC	Slips, trips and falls when entering the mobile CRC, resulting in operator injury, or loss of containment.	3 / 2 Medium	Design mobile CRC so that storage receptacles are easily accessible for packing.
	Manual handling of containers whilst loading them into storage receptacles, resulting in operator injury.	3 / 2 Medium	Design CRC so that storage receptacles can be packed to minimise manual handling difficulty.
	Mixing of incompatible substances, resulting in reaction causing injury to operator or impact on public health or environment.	2 / 4 Medium	Use approved segregation devices as storage receptacles. Clear signage indicating where materials are to be placed and if appropriate, how they are to be packed. Proper identification of materials, and labelling of storage receptacles. Incident and emergency preparedness, and response procedures.
	Container failure, resulting in loss of containment and impact on public health or environment.	3 / 2 Medium	Inspect container prior to acceptance and use intermediate containers if necessary.
	Shelf or rack failure.	3 / 3 Medium	Design mobile CRC so that shelving and storage receptacles are adequate for the load they will bear, and they will minimise overloading when used. Safe work procedures and operator training to minimise overloading.

Source of risk	Hazards	Risk	Possible Controls
Transport of problem waste to next location in the mobile CRC	Movement of storage receptacles during transport causing damage to vehicle, receptacle failure and loss of containment.	3 / 3 Medium	Design mobile CRC so that storage receptacles are fixed or can be easily secured.
	Vehicle collision, resulting in loss of containment and impact on public health or environment.	1 / 4 Medium	Driver training and behaviour. Dangerous goods transport licensing. Incident and emergency preparedness, and response procedures.
Intermediate or overnight parking of vehicle	Vehicle is stolen, or storage compartment is accessed and material taken, resulting in loss of containment and impact on public health or environment.	1 / 4 Medium	Ensure mobile CRC can be secured to prevent access to the materials.
Unloading of problem waste materials from mobile CRC and consolidation into storage receptacles suitable for collection by the collection contractor.	Manual handling when moving containers from mobile CRC to storage area, resulting in operator injury.	3 / 3 Medium	Design mobile CRC so that storage receptacles can be unloaded in their entirety by forklift, or can be unpacked to minimise manual handling difficulty.
	Container failure, resulting in loss of containment and impact on public health or environment.	3 / 2 Medium	Design mobile CRC so that storage receptacles can be unloaded in their entirety, or use intermediate containers such as a box trolley.
	Storage receptacle is dropped during forklift unloading.	3 / 2 Medium	Provide forklift of adequate design and capacity appropriate to storage receptacles being used. Forklift operator trained and licensed.
	Forklift collision with operator or other vehicle on site where storage area is located.	1 / 4 High	Design layout of storage area and truck loading area to (as far as possible) limit intersection of forklift, vehicle and operator movements. Implement procedures to provide an exclusion zone around truck loading area.

Source of risk	Hazards	Risk	Possible Controls
Storage of materials	Storage area is accessed and material taken, resulting in loss of containment and impact on public health or environment.	1 / 4 Medium	Ensure storage area can be secured to prevent access to the materials.
Collection of materials	Vehicle collision, resulting in fire, loss of containment and impact on public health or environment.	1 / 4 Medium	Design storage area so that it is separate from other operations, or implement procedures (such as ceasing other operations during collection), to minimise intersection of vehicles during collection.
Materials			
Compressed gas – flammable	Failure of compressed gas cylinder.	3 / 2 Medium	Design mobile CRC so that gas cylinders are not stacked.
	Gas cylinder is dropped.	3 / 2 Medium	Safe work procedures, operator training and behaviour.
	Ignition of gas.	2 / 4 High	Design mobile CRC so that it is ventilated to prevent build-up of flammable gases.
Flammable – liquid	Container failure.	3 / 2 Medium	Design mobile CRC so that flammable materials are stored in a receptacle that is bunded and is an appropriate segregation device. Use appropriate PPE when handling materials. Incident and emergency preparedness, and response procedures.
	Ignition of atmosphere.	2 / 4 High	Add adsorbent material to segregation device / storage receptacle to minimise vapour production. Design mobile CRC so that it is ventilated to prevent build-up of flammable gases. Incident and emergency preparedness, and response procedures. Limit exposure to ignition sources: no smoking; separate flammable liquids from lead acid batteries; do not use mobile phone within the storage compartment of the mobile CRC.

Source of risk	Hazards	Risk	Possible Controls
Corrosives	Container failure.	3 / 3 High	Design mobile CRC so that lead acid batteries (primary corrosive material) are not stacked, and can be secured when packed in an upright position. Use appropriate PPE when handling materials. Incident and emergency preparedness, and response procedures.
	Mixing of incompatible substances.	2 / 4 High	Move corrosive materials to mobile CRC separately, or use intermediate container that provides appropriate segregation. Use approved segregation devices as storage receptacles. Proper identification of materials, and labelling of storage receptacles.
Oxidisers	Container failure.	3 / 2 Medium	Do not accept oxidising materials. Design mobile CRC so that oxidisers are not stacked, and can be segregated appropriately. Incident and emergency preparedness, and response procedures.
	Mixing of incompatible substances.	2 / 4 High	Move oxidisers to mobile CRC on their own, or use intermediate container that provides appropriate segregation. Clear signage indicating where materials are to be placed and, if appropriate, how they are to be packed. Proper identification and labelling of materials.
Toxics (fluoro tubes)	Lamp breakage, release of mercury to the atmosphere, operator injury from broken glass.	2 / 2 Low	Move lamps to the mobile CRC in an separate intermediate container. Consider supply of suitable container or bag to householder prior to collection. Pack lamps in an appropriate storage receptacle that minimises lamp breakage during transport.

Appendix 6.2 – Sample transport document

Transporter:	**Receiver:**
Mobile CRC Operator	Central CRC name
Street Address	Street Address
Suburb State Postcode	Suburb NSW Postcode
Contact Number (02) xxxx xxxx	Contact Number (02) xxxx xxxx
Vehicle Registration:	Date waste delivered:
Waste Transport Licence Number:	Date this record was made:

UN Number	Proper Shipping Name	Class / Division	Packing Group	Container Type	Number of Containers	Aggregate Quantity
1263	Paint-related material (solvent based paint)	3	III			
1263	Paint-related material (solvent based paint)	3	II			
2794	Batteries, wet filled with acid (lead acid batteries)	8	–	Battery		
1075	Petroleum gas, liquefied (gas cylinders)	2.1	–	Bottle (9kg) Bottle (3kg)		
1044	Fire extinguishers	2.2	–	Extinguisher (4 kg)		
	Fluorescent tubes and lamps	Non DG		Tube Lamp box		
	Water-based paint	Non DG				
	Other materials					
					TOTAL	

Appendix 6.3 – Checklist for mobile CRC vehicles

This checklist is to be used for vehicles involved in providing a mobile CRC service that are designed to carry placard loads with individual receptacles with a capacity of less than 500kg or L.

Aspect	Element
1 Design of the service	
1.1 Type of mobile service	• What type of mobile CRC service is being provided? • What type of vehicle is being used to transport problem wastes? • What type of materials is the service designed to collect? • Has a risk assessment of the mobile CRC service been undertaken and documented?
1.2 Preparing materials for acceptance	• What information are householders given about what materials are accepted and how they are to be presented? • What supplies, if any (e.g. bags), are householders provided with prior to collection?
2 Dangerous goods transport requirements	
2.1 Transport documents	• Are procedures in place to ensure transport documents, as required for the transport of dangerous goods, are carried on the vehicle? • Are the transport documents carried in the vehicle's cabin in an emergency information holder?
2.2 Emergency information	• Has emergency information required for the transport of dangerous goods been prepared and is this information carried appropriately on the vehicle? • Is the emergency information carried in an appropriately marked and located emergency information holder?
2.3 Placards and signage	• Does the vehicle have the appropriate placards? • Does the vehicle have CRC program branded signage? • Are signs with pictorial and text descriptors provided on the mobile CRC and on receptacles to allow easy sorting and packing? • Do signs include how materials are to be packed in receptacles?
2.4 Safety and spill response equipment	• Does the vehicle have the following safety equipment: – three double-sided reflector signals that comply with AS 3790 that are clean and in good condition – one 30B dry powder fire extinguisher located in or directly behind the cabin, near the driver's door, or at the front of any trailer – first aid kit – spill response kit appropriate to the materials being carried

Aspect	Element
2.5 Personal protective equipment (PPE)	• Does the vehicle carry the following PPE: – gas tight goggles or full face shield – eye-wash kit – chemical resistant gloves or gauntlets – thermal insulated gloves or gauntlets – chemical resistant suit or coveralls – chemical resistant boots – electric torch complying with AS/NZS 60079.11 or other recognised code.
2.6 Other safety equipment	• What other safety equipment is carried on the vehicle, and has this been informed by a documented risk assessment?
2.7 Maintenance of safety equipment	• Are procedures in place to check and replenish the first aid kit, PPE and spill response equipment?
3 Transport receptacles and material stowage	
3.1 General	• Are materials transported in receptacles appropriate to their type (e.g. bunded receptacles for liquids, cages for gases)? • Is the capacity of individual receptacles less than 500kg or L? • Are receptacles fixed or easily secured to prevent movement during transport? • Are receptacles and shelving in the vehicle adequate for the load? • Are shelves used in a way that minimises over-loading? • Are receptacles easily accessible for packing to minimise manual handling difficulty? • Does the access to the vehicle and the arrangement of receptacles minimise manual handling difficulty, and the potential for slips trips and falls? • Can receptacles be removed in their entirety or be unpacked without manual handling difficulty? • Are intermediate storage containers used when packing and unpacking the receptacles in the vehicle? What type?
3.2 Flammable liquids	• Are flammable liquids kept separate from ignition sources? • Is the material storage area of the vehicle adequately ventilated? • Are flammable liquids stored in a bunded receptacle?
3.3 Gas cylinders	• Are gas cylinders stored in a ventilated area, not stacked, away from sources of heat and other ignition sources? • Are procedures in place to ensure the main valve is closed and any regulator is removed prior to loading a gas cylinder? • Has due consideration been given to transporting gas cylinders separately?

Aspect	Element
3.4 Aerosols	• Where aerosols are carried, are they transported in a cage receptacle that is adequately ventilated and is able to contain exploding cans? • Where aerosols are carried, is the receptacle transported in a part of the vehicle that is adequately ventilated and separated from ignition sources?
3.5 Lead acid batteries	• Are lead acid batteries packed in an upright position in a bunded area of the vehicle, secured and not stacked?
3.6 Household batteries	• Are arrangements in place to ensure lithium batteries are packed to prevent short circuits and the dangerous evolution of heat? • Are lithium batteries packed with other household battery types? • Are household battery receptacles containing lithium batteries labelled appropriately?
3.7 By-catch	• Are appropriate receptacles, that are approved segregation devices, available for the transport of by-catch materials? • Are there separate receptacles for flammable liquids, toxics, oxidising agents, acids and alkalis? • Are these receptacles secured appropriately for transport? • Are these receptacles appropriately labelled?
4 Procedures and training	
4.1 Operating procedures	• Are safe operating procedures, based on the risk assessment, in place for the mobile CRC service?
4.2 Training	• Have all staff involved in the operation of the mobile CRC service been trained in the use of the safe operating procedures?
5 Waste tracking	
5.1 Waste transporter licence	• Has a waste transporter licence been obtained?
5.2 Record keeping	• Are arrangements in place to record the locations from which the waste was collected, the waste type and quantity, and date and time of collection?
6 Security and insurance	
6.1 Security	• Does the vehicle incorporate security features to prevent theft of the the vehicle, access to the storage access to the storage compartment and theft of material?
6.2 Insurance	• Has appropriate insurance cover been obtained for the mobile CRC service?

Appendix 6.4 – Checklist for vehicles transporting from a satellite

This checklist is to be used for vehicles involved in transporting small quantities of problem wastes from satellites to a central storage facility, where these vehicles are designed to carry less than placard loads.

Aspect	Element
1 Design of the service	
1.1 Type of mobile service	• What type of vehicle is being used to transport problem wastes? • What type of materials is the service designed to collect? • Has a risk assessment of the mobile CRC service been undertaken and documented?
1.2 Preparing materials for acceptance	• Are procedures in place to only transport less than 1,000kg or L of dangerous goods, where no flammable gases are transported? • Are procedures in place to ensure that where flammable gases (e.g. gas cylinders or aerosols) are transported, the total quantity of dangerous goods is limited to 250kg or L, and the quantity of flammable gases (gas cylinders plus aerosols, measured by capacity rather than contents) does not exceed 100kg or L? • Do all individual transport containers have a capacity of less than 500kg or L?
2 Dangerous goods transport requirements	
2.1 Transport documents	• Are procedures in place to ensure transport documents, as required for the transport of dangerous goods, are carried on the vehicle? • Are the transport documents carried in the vehicle's cabin?
2.2 Emergency information	• Has emergency information required for the transport of dangerous goods been prepared and is this information carried appropriately on the vehicle?
2.3 Placards and signage	• Does the vehicle have CRC program branded signage? • Are signs with pictorial and text descriptors provided in the mobile CRC and on receptacles to allow easy sorting and packing? • Do signs include how materials are to be packed in receptacles?
2.4 Safety and spill response equipment	• Does the vehicle have the following safety equipment: – one 30B dry powder fire extinguisher located in or directly behind the cabin near the driver's door, or at the front of any trailer – first aid kit – spill response kit appropriate to the materials being carried

Aspect	Element
2.5 Personal protective equipment (PPE)	• Does the vehicle carry the following PPE: – safety glasses – eye-wash kit – chemical resistant gloves or gauntlets – thermal insulated gloves or gauntlets – chemical resistant suit or coveralls – chemical resistant boots – electric torch complying with AS/NZS 60079.11 or other recognised code.
2.6 Other safety equipment	• What other safety equipment is carried on the vehicle, and has this been informed by a documented risk assessment?
2.7 Maintenance of safety equipment	• Are procedures in place to check and replenish the first aid kit, PPE and spill response equipment?
3 Transport receptacles and material stowage	
3.1 General	• Are materials transported in receptacles appropriate to their type (e.g. bunded receptacles for liquids, cages for gases)? • Are receptacles fixed or easily secured to prevent movement during transport? • Are receptacles adequate for the load? • Are receptacles easily accessible for packing to minimise manual handling difficulty? • Does the access to the vehicle and the arrangement of receptacles minimise manual handling difficulty and the potential for slips, trips and falls? • Can receptacles be removed in their entirety or be unpacked without manual handling difficulty? • Are intermediate storage containers used when packing and unpacking the receptacles in the vehicle? What type?
3.2 Flammable liquids	• Are flammable liquids kept separate from ignition sources? • Is the material storage area of the vehicle adequately ventilated? • Are flammable liquids stored in a bunded receptacle?
3.3 Gas cylinders	• Are gas cylinders stored in a ventilated area, not stacked, away from sources of heat and other ignition sources? • Are procedures in place to ensure the main valve is closed and any regulator is removed prior to loading a gas cylinder? • Has due consideration been given to transporting gas cylinders separately?
3.4 Aerosols	• Where aerosols are carried, are they transported in a cage receptacle that is adequately ventilated and is able to contain exploding cans? • Where aerosols are carried, is the receptacle transported in a part of the vehicle that is adequately ventilated and separated from ignition sources?

Aspect	Element
3.5 Lead acid batteries	• Are lead acid batteries packed in an upright position in a bunded area of the vehicle, secured, and not stacked?
3.6 Household batteries	• Are arrangements in place to ensure lithium batteries are packed to prevent short circuits and the dangerous evolution of heat? • Are lithium batteries packed with other household battery types? • Are household battery receptacles containing lithium batteries labelled appropriately?
3.7 By-catch	• Are appropriate receptacles, that are approved segregation devices, available for the transport of by-catch materials? • Are there separate receptacles for flammable liquids, toxics, oxidising agents, acids and alkalis? • Are these receptacles secured appropriately for transport? • Are these receptacles appropriately labelled?
4 Procedures and training	
4.1 Operating procedures	• Are safe operating procedures, based on the risk assessment, in place for the transport of problem wastes using the vehicle?
4.2 Training	• Have all staff involved in using the vehicle to transport problem wastes been trained in the use of the safe operating procedures?
5 Waste tracking	
5.1 Waste transporter licence	• Has a waste transporter licence been obtained?
5.2 Record keeping	• Are arrangements in place to record the locations from which the waste was collected, the waste type and and quantity, and date and time of collection?
6 Security and insurance	
6.1 Security	• Does the vehicle incorporate security features to prevent theft of the vehicle, access to the storage compartment and theft of material?
6.2 Insurance	• Has appropriate insurance cover been obtained for the mobile CRC service?

Appendix 6.5 – Checklist for satellites

This checklist is to be used for satellite drop-off points that are operated as a minor store. Refer to **Section 6.5.7** for the definition of a minor store.

Aspect	Element
Location	• Is the storage area separated by more than 10 metres from any other dangerous goods store? • Is there not more than one minor store per 500 square metres of floor or ground area?
Precautions	• Are materials that are are incompatible, or that might react dangerously, segregated? • Is the storage area located away from heating and ignition sources? • Is the storage area provided with adequate natural or mechanical ventilation? • Are all packages kept closed and there is no decanting on site? • Are appropriate spill control measures in place where packages are opened and their contents transferred? • Are procedures in place to ensure spills or leaks shall be cleaned up immediately and disposed of appropriately? Contaminated, spilled or leaked material shall not be returned to original packaging, except for disposal where it is known that this will not increase the risk. • Are procedures in place to ensure that the transfer of dangerous goods from the store to the transport vehicle are carried out in a manner that minimises the possibility of spillage or fire? • Are personnel who handle dangerous goods informed and aware of the hazards involved? • Are packages stored in a way that avoids spillage? • Is the store kept clear of combustible matter and refuse? • Are packages kept on surfaces that are resistant to attack by their contents if spilt? • Is appropriate PPE provided and worn by personnel involved in movement or clean-up of materials? • Is a fire extinguisher of a suitable type installed in the store, located so that it is immediately accessible in an emergency, along an exit route? • Is a supply of water available at a nearby location for personal hygiene?
Additional precautions for outdoor minor storage	• Is the ground around the storage area clear of combustible vegetation and refuse by at least 3m? • Is any potential flow of spillage prevented from reaching any protected place, watercourse or boundary by such means as the use of natural ground slope, or the provision of a diversion channel, kerb or bund? • Is the store separated from any protected place or property boundary by at least 3m?

7.
Important references



NSW Government agencies and legislation



Australian Standards

EPA2016/0557
ISBN 978-1-76039-493-6

Important references

7.1 NSW Government agencies and legislation 2

7.1.1 NSW EPA 2

7.1.2 SafeWork NSW 3

7.2 Australian standards 3

7.2.1 Guide to standards – Dangerous goods 3

7.2.2 Relevant standards 4

7.1 NSW Government agencies and legislation

7.1.1 NSW EPA

7.1.1.1 Contact details

Website: www.epa.nsw.gov.au

Phone: 131 555 (or (02) 9995 5555 from outside NSW)

Email: info@environment.nsw.gov.au

Post: EPA Head Office, PO Box A290, Sydney South NSW 1232

Fax: (02) 9995 5999

7.1.1.2 Local offices: www.epa.nsw.gov.au/contact/Locations.htm

7.1.1.3 Contact details: EPA Community Recycling Unit

Email: recycling.centres@epa.nsw.gov.au

Post: Community Recycling Unit, PO Box 668, Parramatta NSW 2124

7.1.1.4 Relevant legislation

Available from **www.legislation.nsw.gov.au**.

- Protection of the Environment Operations Act 1997
- Waste Avoidance and Resource Recovery Act 2001
- Protection of the Environment Operations (Waste) Regulation 2014
- Protection of the Environment Operations (General) Regulation 2009

7.1.1.5 Guide to licensing

The guide to licensing will help you determine whether you require an environment protection licence and it provides other licensing information about:

- how and where to apply for a licence
- how much a licence costs
- what you may need to do even if you don't need a licence

Available at **www.epa.nsw.gov.au/licensing/licenceguide.htm**.

7.1.1.6 Handbook for rural and regional transfer stations

The handbook for the design and operation of rural and regional transfer stations helps rural councils understand the challenges, opportunities and unique issues associated with rural transfer station operations. It showcases some of the innovative and practical solutions adopted by rural and regional councils and the experiences of numerous councils in responding to waste management needs.

Available at **www.epa.nsw.gov.au/warrlocal/rural-regional.htm**

7.1.2 SafeWork NSW

7.1.2.1 Managing risks of hazardous chemicals in the workplace code of practice

This code provides practical guidance on how to manage health and safety risks associated chemicals and is for persons conducting a business or undertaking that uses chemicals. The code applies to:

- substances, mixtures and articles used, handled, generated or stored at the workplace, which are defined as hazardous chemicals under the WHS Regulations
- the generation of hazardous chemicals from work processes, for example toxic fumes released during welding.

Available from **www.safework.nsw.gov.au/__data/assets/pdf_file/0018/52155/managing-risks-hazardous-chemicals-code-3837.pdf**.

7.1.2.2 Placarding for storage of hazardous chemicals

A fact sheet on placarding for storage of hazardous chemicals is available from **www.safework.nsw.gov.au/media/publications/health-and-safety/placarding-for-storage-of-hazardous-chemicals**

7.1.2.3 Contact details

Website: www.workcover.nsw.gov.au

Phone: 13 10 50

Email: contact@workcover.nsw.gov.au

Obtain publications online or call **1300 799 003**.

7.1.2.4 Relevant legislation

Available from **www.legislation.nsw.gov.au**.

- Work Health and Safety Act 2011
- Work Health and Safety Regulation 2011

7.2 Australian standards

7.2.1 Guide to standards – Dangerous goods

This document provides information on standards and other industry specific information (including the Australian Dangerous Goods Code) that may be of interest to anyone working with different types of dangerous goods, including manufacturers, importers, suppliers, installers and users.

The publications outlined in this guide cover requirements (including storage and handling) for dangerous goods transported by road and rail in relation to the 7th edition of the Australian Dangerous Goods Code (ADG7).

7.2.1.1 HB76:2010, Dangerous Goods – Initial emergency response guide

This handbook provides information on dealing with accidents, spills, leaks, hazards or fires involving dangerous goods, and the protective clothing to be worn in emergency procedures.

Available from Standards Australia at **www.saiglobal.com/store**.

7.2.1.2 Australian Dangerous Goods Code

The Australian Code for the Transport of Dangerous Goods by Road and Rail, also often referred to as the Australian Dangerous Goods Code (ADGC), sets out the requirements for transporting dangerous goods by road or rail. The current version of the code is edition 7.4, amended 30 June 2016.

Available from **www.ntc.gov.au/heavy-vehicles/safety/australian-dangerous-goods-code/**.

7.2.1.3 Load restraint guide

The load restraint guide (published by the National Transport Commission) details the performance standard for securing loads on vehicles.

Available from **www.ntc.gov.au/heavy-vehicles/safety/load-restraint-guide/**.

7.2.2 Relevant standards

The following Australian Standards are of particular interest in establishing and operating Community Recycling Centres.

Available from Standards Australia at **www.saiglobal.com/store**.

General information

- AS/NZS 3833:2007 The storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers

Specific classes of dangerous goods

- AS/NZS 1596:2014 The storage and handling of LP Gas
- AS 1940-2004 The storage and handling of flammable and combustible liquids
- AS 3780-2008 The storage and handling of corrosive substances
- AS 4332-2004 The storage and handling of gases in cylinders
- AS/NZS 4452:1997 The storage and handling of toxic substances

Equipment and facilities

- AS 1216-2006 Class labels for dangerous goods
- AS 1319-1994 Safety signs for the occupational environment
- AS 1603 Automatic fire detection and alarm systems
- AS 1670 Fire detection, warning, control and intercom systems
- AS 2444-2001 Portable fire extinguishers and fire blankets: selection and location
- AS 4775-2007 Emergency eyewash and shower equipment

8.
Safety data sheets



Provides safety data sheets for the hazardous materials received at a Community Recycling Centre

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Community Recycling Centres

Safety data sheet for: ACIDS

1. Material and supplier identification

The most common acid dropped off by householders at Community Recycling Centres (CRCs) is **hydrochloric acid** (also known as muriatic acid).

Less often, **sulphuric acid**, **nitric acid** and / or **phosphoric acid** may be dropped off.

These acids have many properties in common, and this is a combined Safety Data Sheet for the common acids presented at CRCs. Since materials delivered by householders to Community Recycling Centres are discarded ("waste") products and may have originated from a variety of manufacturers, full identification or hazard information is not available for each package. In the absence of full identification or hazard information, a precautionary approach must be taken by persons handling or storing the material.

Original suppliers may have included:

- Orica Ltd (now Ixom Operations Pty Ltd) | 1 Nicholson Street, Melbourne VIC 3000 | Tel: **03 9665 7111** | Emergency Tel: **1800 033 111**
- Ajax Finechem | 17/21 Bay Road, Taren Point NSW 2229 | Emergency Tel: **1800 638 556**
- Chem-Supply Pty Ltd | 38-50 Bedford Street, Gillman SA 5013 | Tel: **08 8440 2000**

and many others.

2. Composition information

Common **acids** dropped off at Community Recycling Centres may contain the following chemicals:

	CHEMICAL ENTITY	CAS No
	Hydrochloric acid	7647-01-0
OR	Nitric acid	7697-37-2
OR	Sulphuric acid	7664-93-9
OR	Phosphoric acid	7664-38-2

3. Hazards identification

Emergency Overview
HAZARDOUS CHEMICAL | DANGEROUS GOODS

Acids typically have the following hazardous classifications:

Hazardous Classification	Hazardous chemicals
Australian Dangerous Goods (ADG) Classification	Class 8 Corrosive Substances 
SUSMP Classification (Standard for the Uniform Scheduling of Medicines and Poisons or "Poisons Schedule")	Schedule 6
UN No	Hydrochloric acid – 1789 Sulphuric acid >51% – 1830 Sulphuric acid <51% – 2796 Sulphuric acid – fuming (unlikely to be brought in) – 1831 Nitric acid – 1796 Phosphoric acid – 1805
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification	
Signal word	Danger
Hazard Classification	Corrosive to Metals – Category 1 Skin Corrosion – Category 1A or 1B Eye damage – Category 1 Specific Target Organ Toxicity – Category 3
Hazard Statements	H290 May be corrosive to metals H314 Causes severe skin burns and eye damage H335 May cause respiratory irritation

Prevention Precautionary Statements	P234	Keep only in the original container
	P260	Do not breathe mist / vapours / spray
	P264	Wash hands thoroughly after handling
	P280	Wear protective gloves / protective clothing / eye protection
Response Precautionary Statements	P304+P340	If inhaled, remove person to fresh air and keep comfortable for breathing
	P303+P361+P353	If on skin, take off immediately all contaminated clothing. Rinse skin with water / shower
	P305+P351+P338	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
	P301+P330+P331	If swallowed, rinse mouth. DO NOT induce vomiting
	P310	Immediately call a poison centre or a doctor / physician
Storage Precautionary Statements	P405	Store locked up
	P403+P233	Store on a well-ventilated place. Keep container tightly closed
	P406	Store in a corrosive resistant container

4. First aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Tel: **13 11 26**).

Inhalation	Remove victim from area of exposure – avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood – cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.
Ingestion	Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.
Skin contact	If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water until advised to stop by the Poisons Information Centre or a doctor.

Eye contact	Hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes. Continue to wash with large amounts of water until medical help is available.
Note to physician	Treat symptomatically.



5. Fire fighting measures

Specific hazards	Non combustible, but decomposes on heating, emitting toxic fumes.
Suitable extinguishing media	Non combustible, but if involved in a fire, use fine water spray, normal foam or a dry agent (carbon dioxide, dry chemical powder).
Hazards from combustion products	Decomposes on heating, emitting toxic fumes.
Precautions for fire fighters and special protective equipment	Decomposes on heating emitting toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire.
Hazchem Code:	**2R**



6. Accidental Release Measures

Wear protective equipment to prevent skin and eye contamination. Alert others in the spill area. Do not touch or walk through the spilled material and avoid breathing vapours. As quickly as possible, dike the spilled liquid to prevent spreading. Use spill pillows, pads or a non-combustible absorbent for this purpose. Do not use sawdust. Neutralise the acid with sodium bicarbonate, lime or soda ash in excess. Add the neutraliser slowly, working from the edges to the centre of the spill. Use caution, as reaction can cause splattering. Sweep up the powder and wash the area gently with water. Use vermiculite to absorb any remaining liquid.

Prevent run-off into waterways or drains. If entry into waterways occurs, inform appropriate authorities.



7. Handling and storage

Handling	Wear appropriate Personal Protective Equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled. Avoid skin or eye contact or inhalation of vapours from any spilled material. Clean up spills immediately (see Section 6 above).
Storage	Follow the storage conditions recommended in the EPA's Operations and Management Handbook for Community Recycling Centres.



8. Acknowledgement

This Safety Data Sheet contains some material from Safety Data Sheets for acids from several manufacturers that are available in the public domain, particularly those by Ixom Operations and Chem-Supply Pty Ltd, whose authorship of that material is acknowledged.

Section 6 on Accidental Release Measures has been adapted from material published by the University of Iowa. Sections 6 and 7 contain material supplied by the current collection contractor for Community Recycling Centres, Toxfree Australia Pty Ltd.

Community Recycling Centres

Safety data sheet for: ALKALIS

1. Material and supplier identification

The most common alkali (base) materials dropped off by householders at Community Recycling Centres (CRCs) include household cleaners such as **bleaches, ammonia solution** and **drain clearing agents** (which may contain **sodium and / or potassium hydroxide**). Alkaline materials dropped off at CRCs may be liquid or solid. They have many properties in common, and this is a combined Safety Data Sheet for the common alkalis presented at CRCs.

Since materials delivered by householders to Community Recycling Centres are discarded ("waste") products and may have originated from a variety of manufacturers, full identification or hazard information is not available for each package. In the absence of full identification or hazard information, a precautionary approach must be taken by persons handling or storing the material.

Original suppliers may have included:

- Orica Ltd (now Ixom Operations Pty Ltd) | 1 Nicholson Street, Melbourne VIC 3000 | Tel: **03 9665 7111** | Emergency Tel: **1800 033 111**
- S C Johnson and Son Pty Ltd | 160 Epping Road, Lane Cove NSW 2066 | Tel: **02 9428 9111**
- Kleenco Australia Pty Ltd | 25 Moxon Road, Punchbowl NSW 2196 | Tel: **02 9707 3333**
- Pental Products Pty Ltd | 390 St Kilda Road, Melbourne VIC 3000 | Tel: **03 9251 2311**

and many others.

2. Composition information

Common **alkalis** dropped off at Community Recycling Centres may contain the following chemicals:

	CHEMICAL ENTITY	CAS No
	Sodium hydroxide	1310-73-2
AND / OR	Potassium hydroxide	1310-58-3
OR	Ammonia, aqueous solution	1336-21-6

3. Hazards identification

Emergency Overview
HAZARDOUS CHEMICAL | DANGEROUS GOODS

Alkalis typically have the following hazardous classifications:

Hazardous Classification	Some of the packages of alkaline materials dropped off at Community Recycling Centres are not classified as Hazardous Substances or Dangerous Goods, some are classified as Hazardous Substances but not Dangerous Goods. Some, particularly **solid drain cleaners**, are classified as both. The precautionary approach is to consider all such materials as Hazardous Substances and Dangerous Goods.
Australian Dangerous Goods (ADG) Classification	Class 8 – Corrosive Substances 
SUSMP Classification (Standard for the Uniform Scheduling of Medicines and Poisons or "Poisons Schedule")	Schedule 6
UN No	Sodium hydroxide – solid – 1823 Sodium hydroxide – solution – 1824 Potassium hydroxide – solid – 1813 Potassium hydroxide – solution – 1814 Ammonia aqueous solution with not more than 35% ammonia – 2672
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification	
Signal word	Danger
Hazard Classification	Corrosive to Metals – Category 1 Skin Corrosion – Category 1A or 1C Eye damage – Category 1 Acute Aquatic Toxicity – Category 1

Hazard Statements	H290	May be corrosive to metals
	H314	Causes severe skin burns and eye damage
	H335	May cause respiratory irritation
	H400	Very toxic to aquatic life
Prevention Precautionary Statements	P234	Keep only in the original container
	P260	Do not breathe dust / fume / mist / vapours / spray
	P264	Wash hands thoroughly after handling
	P280	Wear protective gloves / protective clothing / eye protection, face protection
	P273	Avoid release to the environment
Response Precautionary Statements	P304+P340	If inhaled, remove person to fresh air and keep comfortable for breathing
	P303+P361+P353	If on skin, take off immediately all contaminated clothing. Rinse skin with water / shower
	P305+P351+P338	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
	P301+P330+P331	If swallowed, rinse mouth. DO NOT induce vomiting
	P310	Immediately call a poison centre or a doctor / physician
	P363	Wash contaminated clothing before re-use
	P390	Absorb spillage to prevent material damage
Storage Precautionary Statements	P405	Store locked up
	P403+P233	Store on a well-ventilated place. Keep container tightly closed
	P406	Store in a corrosive resistant container

4. First aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Tel: **13 11 26**).

Inhalation	Remove victim from area of exposure. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood – cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Ingestion	Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.
Skin contact	If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water until advised to stop by the Poisons Information Centre or a doctor.
Eye contact	Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.
Note to physician	Treat symptomatically. Can cause corneal burns.



5. Fire fighting measures

Specific hazards	Non combustible. However, containers of aqueous ammonia, if heated, may rupture and release ammonia vapour. Ammonia may decompose into flammable hydrogen gas, forming flammable mixtures with air.
Suitable extinguishing media	Non combustible, but if involved in a fire, use fine water spray, normal foam or a dry agent (carbon dioxide, dry chemical powder).
Hazards from combustion products	Aqueous ammonia may decompose, forming flammable mixtures with air.
Precautions for fire fighters and special protective equipment	Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire.
Hazchem Code:	**2R**

6. Accidental Release Measures

Wear protective equipment to prevent skin and eye contamination. Alert others in the spill area. Do not touch or walk through the spilled material and avoid breathing vapours. Prevent run-off into waterways or drains. Use absorbent material (soil, sand or other inert material). Neutralise spill with dilute acid. Collect neutralised material into labelled containers for appropriate disposal. If entry into waterways occurs, inform appropriate authorities.

7. Handling and storage

Handling	Wear appropriate Personal Protective Equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled. Avoid skin or eye contact or inhalation of vapours from any spilled material. Clean up spills immediately (see Section 6 above).
Storage	Follow the storage conditions recommended in the EPA's Operations and Management Handbook for Community Recycling Centres.

8. Acknowledgement

This Safety Data Sheet contains some material from Safety Data Sheets for alkaline materials from several manufacturers that are available in the public domain, particularly those by Ixom Operations Pty Ltd, whose authorship of that material is acknowledged.

Section 6 on Accidental Release Measures has been adapted from material published by the University of Iowa.

Community Recycling Centres

Safety data sheet for: FLAMMABLE LIQUIDS (other than solvent based paint)

1. Material and supplier identification

The most common flammable liquids (other than solvent-based paint, for which a separate Safety Data Sheet exists) that are dropped off by householders at Community Recycling Centres (CRCs) include petrol, kerosene, methylated spirits, paint thinners (such as mineral turpentine) and hydrocarbon solvents (such as acetone). These materials have many properties in common, and this is a combined Safety Data Sheet for the common flammable liquids presented at CRCs.

Since materials delivered by householders to Community Recycling Centres are discarded ("waste") products and may have originated from a variety of manufacturers, full identification or hazard information is not available for each package. In the absence of full identification or hazard information, a precautionary approach must be taken by persons handling or storing the material.

Original suppliers may have included:

- Shell Company of Australia Ltd (Now Viva Energy Australia Pty Ltd) | 720 Bourke Street, Docklands VIC 3008 | Tel: **03 882 34444** | Emergency Tel: **1800 651 818**
- Mobil Oil Australia Pty Ltd | 12 Riverside Quay, Southbank VIC 3006 | Tel: **03 8633 8444** | Emergency Tel: **1800 023 005**
- Recochem Inc | 1809 Lytton Road, Lytton QLD 4178 | Tel: **07 3308 5200** | Emergency Tel: **1300 131 001**
- Orica Ltd (now Ixom Operations Pty Ltd) | 1 Nicholson Street, Melbourne VIC 3000 | Tel: **03 9665 7111** | Emergency Tel: **1800 033 111**
- CSR Distilleries Operations Pty Ltd | 265 Whitehall Street, Yarraville VIC 3013 | Tel: **1800 819 618**

and many others.

2. Composition information

Flammable liquids dropped off at Community Recycling Centres may contain the following ingredients:

	CHEMICAL ENTITY	CAS No
	Gasoline	86290-81-5
OR	Kerosene	8008-20-6
OR	Ethanol	64-17-5
OR	Acetone	67-64-1

3. Hazards identification

Emergency Overview
HAZARDOUS CHEMICAL | DANGEROUS GOODS

Flammable liquids dropped off by householders at CRCs typically have the following hazardous classifications:

Hazardous Classification	Hazardous chemicals
Australian Dangerous Goods (ADG) Classification	Class 3 Flammable Liquids 
SUSMP Classification (Standard for the Uniform Scheduling of Medicines and Poisons or "Poisons Schedule")	Schedule 5
UN No	Gasoline – 1203 Kerosene – 1223 Ethanol – 1170 Acetone – 1090
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification	
Signal word	Danger
Hazard Classification	Flammable liquid – Category 1 Skin Irritation – Category 2 Eye Irritation – Category 2A Germ Cell Mutagen – Category 1B Carcinogen – Category 1B Specific Target Organ Toxicant (central nervous system) – Category 3 Aspiration Toxicant – Category 1 Chronic Aquatic Toxicity – Category 2

Hazard Statements	H224	Extremely flammable liquid and vapour
	H304	May be fatal if swallowed and enters airways
	H315	Causes skin irritation
	H319	Causes serious eye irritation
	H336	May cause drowsiness or dizziness
	H340	May cause genetic defects
	H350	May cause cancer
	H361	Suspected of damaging the unborn child
	H411	Toxic to aquatic life with long lasting effects
Prevention Precautionary Statements	P210	Keep away from heat / sparks / open flames / hot surfaces – No smoking
	P233	Keep container tightly closed
	P243	Take precautionary measures against static discharge
	P261	Avoid breathing mist / vapours
	P264	Wash skin thoroughly after handling
	P273	Avoid release to the environment
	P280	Wear protective gloves / protective clothing / eye protection / face protection
Response Precautionary Statements	P304+P340	If inhaled, remove person to fresh air and keep comfortable for breathing
	P302+P352	If on skin – wash with plenty of soap and water
	P303+P361+P353	If on skin, take off immediately all contaminated clothing. Rinse skin with water / shower
	P305+P351+P338	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
	P301+P310	If swallowed – Immediately call a Poisons Centre or doctor / physician
	P308+P313	If exposed or concerned – Get medical advice / attention
	P363	Wash contaminated clothing before re-use
	P312	Call a Poisons Centre or doctor / physician if you feel unwell
	P331	Do NOT induce vomiting

Response Precautionary Statements (continued)	P332+P313	If skin irritation occurs, get medical advice / attention
	P362+P364	Take off contaminated clothing and wash before re-use
	P370+P378	In case of fire, use water fog, foam, dry chemical or carbon dioxide (CO_2) to extinguish
	P391	Collect spillage
Storage Precautionary Statements	P405	Store locked up
	P403+P235	Store on a well-ventilated place. Keep cool



4. First aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Tel: **13 11 26**).

Inhalation	Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device.
Ingestion	Seek immediate medical assistance. Do NOT induce vomiting.
Skin contact	Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.
Eye contact	Hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Centre or a doctor, or at least for 15 minutes. If irritation occurs, get medical assistance.
Note to physician	Treat symptomatically.

5. Fire fighting measures

Specific hazards	Extremely flammable. Vapour is flammable and heavier than air. Vapour may travel across the ground and reach remote ignition sources, causing a flashback.
Suitable extinguishing media	Water fog, foam, dry chemical or carbon dioxide (CO_2). DO NOT USE STRAIGHT STREAMS OF WATER.
Hazards from combustion products	May emit aldehydes, products of incomplete combustion, oxides of carbon, sulphur dioxide, smoke, fumes.
Precautions for fire fighters and special protective equipment	Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapours and to protect personnel attempting to stop a leak. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA).
Hazchem Code:	**3[Y]E**

6. Accidental Release Measures

Warn or evacuate occupants in surrounding and downwind areas if required, due to toxicity or flammability of the material. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. Vapour-suppressing foam may be used to reduce vapour. Absorb or cover with dry earth, sand or other non-combustible material and transfer to labelled containers. Use clean non-sparking tools to collect absorbed material. If entry into waterways occurs, inform appropriate authorities.



7. Handling and storage

Handling	Avoid all personal contact. Wash skin thoroughly after handling. Do not eat, drink or smoke in the area. Prevent exposure to ignition sources. Electrostatic charges may be generated during transfer and cause fire. Do not use electronic devices (mobile telephones, pagers, calculators) when handling the material, unless the devices are certified as intrinsically safe.
Storage	Follow the storage conditions recommended in the EPA's Operations and Management Handbook for Community Recycling Centres.



8. Acknowledgement

This Safety Data Sheet contains some material from Safety Data Sheets for flammable liquids from several manufacturers that are available in the public domain, particularly those by Mobil Oil Australia Pty Ltd (petrol), Recochem Inc (kerosene and methylated spirits) and Ixom Operations Pty Ltd (acetone). Their authorship of that material is acknowledged.

Community Recycling Centres

Safety data sheet for: FLUORESCENT LAMPS (tubular and compact)

1. Material and supplier identification

Since materials delivered by householders to Community Recycling Centres are discarded ("waste") products and may have originated from a variety of manufacturers, full identification or hazard information is not available for each item. In the absence of full identification or hazard information, a precautionary approach must be taken by persons handling or storing the material.

Original suppliers may have included:

- GE Lighting Australia Ltd | 32 Phillip Street, Parramatta NSW 2150 | Tel: **1300 762 852**
- Philips Lighting | Locked Bag 30, North Ryde NSW 2113 | Tel: **1300 304404**

and many others.

2. Composition information

Tubular and compact-type fluorescent lamps typically contain very small quantities (20 milligrams per lamp or less) of the following materials:

CHEMICAL ENTITY	CAS No
Mercury	7439-97-6
"Phosphor" (e.g. calcium chloro-fluoro-phosphate, the mineral apatite)	–

3. Hazards identification

Emergency Overview
HAZARDOUS CHEMICAL | DANGEROUS GOODS

Hazardous Classification	Intact tubular and compact-type fluorescent lamps are NOT classified as Hazardous Substances or Dangerous Goods under applicable Australian standards or regulations. However, when broken, they are classified as **Mercury Compounds N.O.S., Class 6 Division 6.1 Toxic Substances.**
Australian Dangerous Goods (ADG) Classification	Division 6.1 
SUSMP Classification (Standard for the Uniform Scheduling of Medicines and Poisons or "Poisons Schedule")	Schedule 7
UN No	2025
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification	The information below is taken from the GHS Hazardous Chemical Information List for **inorganic compounds of mercury**. It must be emphasised that, since most fluorescent lamps delivered to and / or stored at Community Recycling Centres are intact (and even if broken, the amounts of mercury compounds present are very small), these statements must be considered as being **extremely conservative**. 
Signal word	Danger

Hazard Classification	Acute Toxicity – Category 1 Acute Toxicity – Category 2 Specific Target Organ Toxicity (repeated exposure) – Category 2 Hazardous to the Aquatic Environment (acute) – Category 1 Hazardous to the Aquatic Environment (chronic) – Category 1	
Hazard Statements	H310 H330 H373 H410	Fatal in contact with skin Fatal if inhaled May cause damage to organs through prolonged or repeated exposure Very toxic to aquatic life with long-lasting effects
Prevention Precautionary Statements	P262 P264 P280 P260 P284 P273	Do not get in eyes, on skin or on clothing Wash hands thoroughly after handling Wear protective gloves / protective clothing Do not breathe dust In case of inadequate ventilation, wear respiratory protection Avoid release to the environment
Response Precautionary Statements	P302+P352 P304+P340 P314 P391	If on skin, wash with plenty of water If inhaled, remove person to fresh air and keep comfortable for breathing Get medical advice if you feel unwell Collect spillage
Storage Precautionary Statements	P405 P403	Store locked up Store on a well-ventilated place

4. First aid measures

The measures below are for **broken or damaged** fluorescent lamps, not for intact ones.
If poisoning occurs, contact a doctor or Poisons Information Centre (Tel: **13 11 26**).

Inhalation	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.
Ingestion	This is considered unlikely.

Skin contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes. Apply normal first aid for glass cuts if such should occur through lamp breakage.
Eye contact	Get medical aid. Do NOT allow victim to rub eyes or keep eyes closed. Irrigate extensively with water (at least 30 minutes).
Note to physician	The concentration of mercury in whole blood is a reasonable measure of the body-burden of mercury and thus is used for monitoring purposes. Treat symptomatically. Persons with kidney disease, chronic respiratory disease, liver disease, or skin disease may be at increased risk from exposure to this substance.



5. Fire fighting measures

Specific hazards	Intact fluorescent tubes and compact lamps are non-combustible. If subjected to extreme heat, the glass, and plastic (if present), components of the lamp may crack or melt and may emit toxic fumes.
Suitable extinguishing media	Use extinguishing media appropriate for combustibles in the area.
Hazards from combustion products	If caught in a surrounding fire, lamps may crack and emit toxic fumes, including minor quantities of mercury compounds.
Precautions for fire fighters and special protective equipment	Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if there is a risk of exposure to vapours.
Hazchem Code:	**2X**



6. Accidental Release Measures

Clean up spills immediately. Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable labelled container for appropriate disposal. Avoid runoff into storm sewers and ditches which lead to waterways.

7. Handling and storage

Handling	Wear protective equipment to prevent skin and eye contamination. Wash hands thoroughly after handling. If any lamps are broken, remove contaminated clothing and wash it before reuse. Minimize dust generation and accumulation. Do not get on skin or in eyes. Do not ingest or inhale.
Storage	Follow the storage conditions recommended in the EPA's Operations and Management Handbook for Community Recycling Centres.

8. Acknowledgement

This Safety Data Sheet contains some material published by GE Consumer and Industrial Lighting (USA) and Philips Lighting Co (USA) available in the public domain, and their authorship of that material is acknowledged.

Community Recycling Centres

Safety data sheet for: LEAD-ACID BATTERIES

1. Material and supplier identification

Other names: Batteries wet filled with acid, Car batteries, Automotive batteries

Since materials delivered by householders to Community Recycling Centres are discarded ("waste") products and may have originated from a variety of manufacturers, full identification or hazard information is not available for each item. In the absence of full identification or hazard information, a precautionary approach must be taken by persons handling or storing the material.

Original suppliers may have included:

- Century Yuasa Batteries | 49–65 Cobalt Street, Carole Park QLD 4300 | Tel: **07 3361 6161** | Emergency | Tel: **07 3361 6707**
- Marshall Power Australia Pty Ltd | 1–5 Winterton Road, Clayton VIC 3168 | Tel: **1300 695 717** | Emergency Tel: **1800 039 008**

and many others.

2. Composition information

Lead-acid batteries typically contain the following materials:

CHEMICAL ENTITY	CAS No
Lead	7439-92-1
Lead oxide	1317-36-8
Sulphuric acid	7664-93-9
Non-hazardous components	–

3. Hazards identification

Emergency Overview
HAZARDOUS CHEMICAL | DANGEROUS GOODS

Hazardous Classification	Lead-acid batteries are classified as a Hazardous Chemical in the NSW WHS Regulation 2011 by virtue of being listed in Part 7.1 Clause 328 as "Any dangerous goods other than those listed above".	
Australian Dangerous Goods (ADG) Classification	Class 8 Corrosive Substances	
SUSMP Classification (Standard for the Uniform Scheduling of Medicines and Poisons or "Poisons Schedule")	Lead-acid batteries *per se* are exempted in SUSMP, but sulphuric acid is a Schedule 6 poison and "lead compounds" are also Schedule 6.	
UN No	2794	
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification	Lead-acid batteries *per se* are not listed in the GHS Hazardous Chemical Information List. The information below is for sulphuric acid. 	
Signal word	Danger	
Hazard Classification	Skin Corrosion – Category 1A	
Hazard Statements	H314	Causes severe skin burns and eye damage
Prevention Precautionary Statements	P260 P264 P280	Do not breathe mist / vapours / spray Wash hands thoroughly after handling Wear protective gloves / protective clothing / eye protection

Response Precautionary Statements	P304+P340	If inhaled, remove person to fresh air and keep comfortable for breathing
	P303+P361+P353	If on skin, take off immediately all contaminated clothing. Rinse skin with water / shower
	P305+P351+P338	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing,
	P301+P330+P331	If swallowed, rinse mouth. DO NOT induce vomiting
	P310	Immediately call a poison centre or a doctor / physician
	P363	Wash contaminated clothing before reuse
Storage Precautionary Statements	P405	Store locked up



4. First aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Tel: **13 11 26**).

Inhalation	If fumes of combustion products are inhaled, lay the patient down, keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing. Transport to hospital, or doctor without delay.
Ingestion	Urgent hospital treatment is likely to be needed. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Give water to rinse out mouth, then provide liquid slowly and as much as the patient can comfortably drink. Transport to hospital or doctor without delay.
Skin contact	Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.

Eye contact	Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Note to physician	Treat symptomatically for acute or short term exposure to strong acids.



5. Fire fighting measures

Specific hazards	Lead-acid batteries are non-combustible and are not considered to be a significant fire risk. However, heating may cause expansion or decomposition leading to violent rupture of containers. Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.
Suitable extinguishing media	Water spray or fog, Foam, Dry chemical powder, Carbon dioxide.
Hazards from combustion products	Heating may cause expansion or decomposition leading to violent rupture of containers. Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.
Precautions for fire fighters and special protective equipment	Fire fighters to wear breathing apparatus and protective gloves. Prevent spillage or run-off from entering drains or water courses. DO NOT approach batteries suspected to be hot. Cool fire-exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.
Hazchem Code:	**2R**



6. Accidental Release Measures

Wear protective equipment to prevent skin and eye contamination. Alert others in the spill area. Do not touch or walk through the spilled material and avoid breathing vapours. Shut off ignition sources. As quickly as possible, dike the spilled liquid to prevent spreading. Use spill pillows, pads or a non-combustible absorbent for this purpose. Neutralise the acid with sodium bicarbonate in excess. Add the neutraliser slowly, working from the edges to the centre of the spill. Use caution, as reaction can cause splattering. Sweep up the powder and wash the area gently with water. Use vermiculite to absorb any remaining liquid.

Environmental precautions	Contain the spill to prevent entry into drains or waterways. If entry into waterways occurs, inform appropriate authorities.



7. Handling and storage

Handling	Wear appropriate Personal Protective Equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled. Avoid skin or eye contact or inhalation of vapours from any spilled material. Clean up spills immediately (see Section 6 above). Lead acid batteries should always be handled and stacked in an upright position. Stacking should be no more than two-high, with a sheet of cardboard placed between the first and second layers. Avoid dropping. As some batteries may be “live”, there is potential for sparking if dropped or if conducting material is placed across the terminals.
Storage	Follow the storage conditions recommended in the EPA’s Operations and Management Handbook for Community Recycling Centres.



8. Acknowledgement

This Safety Data Sheet contains some material from Safety Data Sheets for lead acid batteries from several manufacturers that are available in the public domain, particularly those by Century Yuasa Batteries and Marshall Power Australia Pty Ltd, whose authorship of that material is acknowledged.

Section 6 on Accidental Release Measures has been adapted from material published by the University of Iowa. Sections 6 and 7 contain material supplied by the current collection contractor for Community Recycling Centres, Toxfree Australia Pty Ltd.

Community Recycling Centres

Safety data sheet for: DOMESTIC LPG CYLINDERS

1. Material and supplier identification

Other names: Propane cylinders, Propane / butane cylinders, Domestic gas bottles, BBQ gas cylinders.

Since materials delivered by householders to Community Recycling Centres are discarded ("waste") products and may have originated from a variety of manufacturers, full identification or hazard information is not available for each cylinder. In the absence of full identification or hazard information, a precautionary approach must be taken by persons handling or storing the material. LPG cylinders delivered by householders to Community Recycling Centres are usually empty; however, as part of the precautionary approach, they are treated as still containing LPG.

Original suppliers may have included:

- Elgas Ltd | 10 Julius Avenue, North Ryde NSW 2113 | Tel: **02 8094 3200** | Emergency Tel: **1800 819 783**
- Origin Energy | 264–278 George Street, Sydney NSW 2000 | Tel: **02 8345 5000** | Emergency Tel: **1800 808 526**
- Supagas NSW | 5 Benson Road, Ingleburn NSW 2565 | Tel: **02 8788 4444** | Emergency Tel: **1300 651 106**

and many others.

2. Composition information

Domestic LPG cylinders may typically contain one or more of the following chemical compounds in varying proportions:

CHEMICAL ENTITY	CAS No
Propane	74-98-6
Propene	115-07-1
n-Butane	106-97-8
Iso-Butane	75-28-5
Ethane	74-84-0
Odorant: Ethyl Mercaptan	75-08-1

3. Hazards identification

Emergency Overview
HAZARDOUS CHEMICAL | DANGEROUS GOODS

Hazardous Classification	Hazardous Chemical (NSW WHS Regulation 2011 Part 7.1 Clause 328)	
Australian Dangerous Goods (ADG) Classification	Class 2 Division 2.1 – Flammable Gases	
SUSMP Classification (Standard for the Uniform Scheduling of Medicines and Poisons or "Poisons Schedule")	Not classified	
UN No	1075	
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification		
Signal word	Danger	
Hazard Classification	Flammable Gases – Category 1 Gases Under Pressure – Liquefied Gas	
Hazard Statements	Extremely flammable gas Contains gas under pressure – may explode if heated	
Prevention Precautionary Statements	P210	Keep away from heat / sparks / open flames / hot surfaces. No smoking
Response Precautionary Statements	P377 P381	Leaking gas fire. Do not extinguish, unless leak can be stopped safely Eliminate all ignition sources if safe to do so

Storage Precautionary Statements	P410+P403	Protect from sunlight. Store in a well-ventilated place
Other hazards	In high concentrations may cause asphyxiation. Contact with liquid may cause cold burns / frostbite	



4. First aid measures

Inhalation	LPG is an asphyxiant. Remove victim to fresh air. Be aware of possible explosive atmospheres. Keep person warm and at rest. If not breathing, or breathing is irregular, provide artificial respiration or oxygen by a trained person.
Ingestion	Due to the volatile nature of the product, this is considered unlikely.
Skin contact	Cold burns: remove contaminated clothing and gently wash affected areas with warm (30°C) water for 15 minutes. Apply non-adhesive sterile dressing and treat as for a thermal burn. For large burns, immerse in warm water for 15 minutes. Seek medical attention.
Eye contact	Cold burns: immediately flush with tepid water or with sterile saline solution. Seek medical advice.
Note to physician	Treat symptomatically.



5. Fire fighting measures

Specific hazards	Extremely flammable gas. May form flammable mixtures with air. Gas may travel considerable distance to a source of ignition. If ignition has occurred, this may weaken cylinder metal from the heat, resulting in an explosion.
Suitable extinguishing media	Evacuate the area, remove all ignition sources. Stop flow of gas if safe to do so, by closing the cylinder valve. DO NOT EXTINGUISH THE FLAME, as this may lead to re-ignition and explosion. If extinguishing the flame is absolutely necessary, use only a dry powder extinguisher. Keep cylinders cool by spraying with fine water spray from a safe distance. Do not move cylinders for at least 24 hours after the fire and avoid shocks to cylinders that have been in a fire.

Hazards from combustion products	On burning, may emit toxic fumes, including oxides of carbon and nitrogen, smoke, and products of incomplete combustion.
Precautions for fire fighters and special protective equipment	Do not approach cylinders suspected of being hot.
Hazchem Code:	**2YE**



6. Accidental Release Measures

Any leak or spill is a fire and / or explosion hazard. If a leak has not ignited, stop gas flow if safe to do so, remove sources of ignition and evacuate personnel. Liquid leaks generate heavier-than-air flammable vapour, which may travel a considerable distance (e.g. through drains) to find a source of ignition. Vapour may collect in confined spaces. Where appropriate, use water spray to disperse the gas or vapour.



7. Handling and storage

Handling	Avoid inhalation of vapour. Avoid contact with liquid and cold storage containers. When handling cylinders wear protective footwear and suitable gloves.
Storage	Follow the storage conditions recommended in the EPA's Operations and Management Handbook for Community Recycling Centres.



8. Acknowledgement

This Safety Data Sheet contains some material from Safety Data Sheets for LPG cylinders from several suppliers that are available in the public domain, particularly those by Elgas Ltd, Origin Energy and Supagas NSW, whose authorship of that material is acknowledged.

Community Recycling Centres

Safety data sheet for: OXIDISING MATERIALS

1. Material and supplier identification

The most common oxidising material dropped off by householders at Community Recycling Centres (CRCs) is the swimming pool chemical **calcium hypochlorite**, which is a granular solid[1]. Other, less common, oxidising materials occasionally presented at CRCs are **potassium permanganate** ("Condy's crystals") and **hydrogen peroxide** (which is only available in solution of varying strengths). These materials have some properties in common, and this is a combined Safety Data Sheet for oxidising materials, which are occasionally presented at CRCs.

Since materials delivered by householders to Community Recycling Centres are discarded ("waste") products and may have originated from a variety of manufacturers, full identification or hazard information is not available for each package. In the absence of full identification or hazard information, a precautionary approach must be taken by persons handling or storing the material.

Original suppliers may have included:

- Kleenco Australia Pty Ltd | 25 Moxon Road, Punchbowl NSW 2196 | Tel: **02 9707 3333** (for calcium hypochlorite)
- Pool Pro Products | 10-12 Cairns Street, Loganholme QLD 4129 | Tel: **07 3209 7884** | Emergency Tel: **1800 033 111** (for calcium hypochlorite)
- Biotech Pharmaceuticals Pty Ltd | 83 Cherry Lane, Laverton North VIC 3026 | Tel: **03 9278 7555** (for potassium permanganate)
- Orica Ltd (now Ixom Operations Pty Ltd) | 1 Nicholson Street, Melbourne VIC 3000 | Tel: **03 9665 7111** | Emergency Tel: **1800 033 111** (for hydrogen peroxide)

and many others.

2. Composition information

Oxidising materials dropped off at Community Recycling Centres may contain the following chemicals:

	CHEMICAL ENTITY	CAS No
	Calcium hypochlorite	7778-54-3
OR	Potassium permanganate	7722-64-7
OR	Hydrogen peroxide	7722-84-1

[1] Another common swimming pool chemical, sodium hypochlorite, (which is only available in solution and is often colloquially, but incorrectly, referred to as "liquid chlorine") is not classified as an oxidising material, but as a corrosive material.

3. Hazards identification

Emergency Overview
HAZARDOUS CHEMICAL | DANGEROUS GOODS

Oxidising materials dropped off by householders at CRCs typically have the following hazardous characteristics:

Hazardous Classification	Hazardous chemicals
Australian Dangerous Goods (ADG) Classification	Class 5 Division 5.1 Oxidising Substances 
SUSMP Classification (Standard for the Uniform Scheduling of Medicines and Poisons or "Poisons Schedule")	Schedule 6
UN No	Calcium hypochlorite – 1748 Potassium permanganate – 1490 Hydrogen peroxide – 8 to 20% – 2984 Hydrogen peroxide – 20 to 60% – 2014 Hydrogen peroxide – above 60% – unlikely to be delivered
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification	
Signal word	Danger
Hazard Classification	Oxidising solid – Category 2 (for calcium hypochlorite and solid potassium permanganate) OR Oxidising liquid – Category 2 (for hydrogen peroxide) Skin corrosion – Category 1B Acute toxicity – Category 4 Aquatic Toxicity – Category 1

Hazard Statements	H272	May intensify fire: oxidiser
	H302	Harmful if swallowed
	H314	Causes severe skin burns and eye damage
	H335	May cause respiratory irritation
	H400	Very toxic to aquatic life
Prevention Precautionary Statements	P221	Take any precaution to avoid mixing with combustibles
	P210	Keep away from heat / sparks / open flames / hot surfaces. No smoking
	P220	Keep / store away from clothing / combustible materials
	P273	Avoid release to the environment
	P260	Do not breathe dust / fume / gas / mist / vapours / spray
	P280	Wear protective gloves / protective clothing / eye protection / face protection
Response Precautionary Statements	P304+P340	If inhaled, remove person to fresh air and keep comfortable for breathing
	P303+P361+P353	If on skin, take off immediately all contaminated clothing. Rinse skin with water / shower
	P305+P351+P338	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
	P301+P310	If swallowed – Immediately call a Poisons Centre or doctor / physician
	P363	Wash contaminated clothing before re-use
	P312	Call a Poisons Centre or doctor / physician if you feel unwell
	P331	Do NOT induce vomiting
	P332+P313	If skin irritation occurs, get medical advice / attention
	P370+P378	In case of fire, use water fog, foam, dry chemical or carbon dioxide (CO_2) to extinguish
	P391	Collect spillage
Storage Precautionary Statements	P405	Store locked up
	P403+P233	Store on a well-ventilated place Keep container tightly closed

4. First aid measures

Inhalation	Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical attention.
Ingestion	Do NOT induce vomiting. Immediately rinse mouth with water. Give a glass of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.
Skin contact	Remove contaminated clothing and wash affected areas with soap and water. Seek immediate medical attention. Launder clothing before reuse. Skin burns: cover with a clean, dry dressing until medical help is available.
Eye contact	Check for and remove any contact lenses. Immediately irrigate eyes with plenty of running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
Note to physician	Treat symptomatically. Can cause corneal burns. Delayed effects from exposure to chlorine can include shortness of breath, headache, oedema and pneumonia.

5. Fire fighting measures

Specific hazards	Non combustible, but will support combustion of other materials. Calcium hypochlorite is a powerful oxidising agent and decomposes violently upon heating, liberating oxygen and toxic chlorine gas.
Suitable extinguishing media	Water spray (large quantities), foam, dry chemical or carbon dioxide (CO_2).
Hazards from combustion products	Calcium hypochlorite may emit toxic chlorine gas.
Precautions for fire fighters and special protective equipment	Fire-fighters should wear, self-contained breathing apparatus (SCBA) and protective clothing.
Hazchem Code:	**1W**



6. Accidental Release Measures

Wear self-contained breathing apparatus and full protective clothing. Evacuate all non-essential personnel from affected area. Ensure adequate ventilation. Do not breathe dust or fumes. Prevent spillage from entering drains or water courses. For solid oxidisers (calcium hypochlorite and crystalline potassium permanganate) - sweep up the spill, avoiding generation of dust. Immediately spread as a thin layer in uncontaminated, dry, open area to reduce the possibility of forming local hot spots. Do not return spilled material to original container. Do not add small amounts of water to calcium hypochlorite. Where a spill has occurred in a confined space or an inadequately ventilated enclosure and the material is damp and evolving chlorine, the rate of chlorine evolution can be reduced by covering the thinly spread solid with soda ash (sodium carbonate).

For liquid oxidisers – dilute / flood area with water, taking care to prevent entry of contaminated water into stormwater drains or water courses. Contain the spill using non-flammable inorganic materials until decomposition is completed naturally. If entry into drains or watercourses has occurred, inform appropriate authorities.



7. Handling and storage

Handling	Avoid skin and eye contact and breathing in vapour, mists and aerosols. Do not return unused product to original container. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.
Storage	Follow the storage conditions recommended in the EPA's Operations and Management Handbook for Community Recycling Centres.



8. Acknowledgement

This Safety Data Sheet contains some material from Safety Data Sheets for oxidising materials from several suppliers that are available in the public domain, particularly those by POPS Group Pty Ltd (suppliers of Pool Pro brand of granular calcium hypochlorite) and Ixom Operations Pty Ltd (hydrogen peroxide). Their authorship of that material is acknowledged.

Community Recycling Centres

Safety data sheet for: SOLVENT-BASED PAINT (Oil-based paint)

1. Material and supplier identification



Containers of this paint can generally be identified by having the Flammable Liquids Dangerous Goods sign on them and / or by the text: “Wash brushes and equipment in mineral turpentine” (or similar).

Since materials delivered by householders to Community Recycling Centres are discarded (“waste”) products and may have originated from a variety of manufacturers, full identification or hazard information is not available for each package. In the absence of full identification or hazard information, a precautionary approach must be taken by persons handling or storing the material.

Original suppliers may have included:

- Dulux Australia | 1956 Dandenong Road, Clayton VIC 3168 | Tel: **13 25 25** | Emergency Tel: **1800 033 111**
- Taubmans Paints (now PPG Architectural Coatings) | 9 Birmingham Avenue, Villawood NSW 2163 | Tel: **02 9794 1200** | Emergency Tel: **1800 883 254**
- Wattyl (now Valspar Australia Pty Ltd) | Level 4, 2 Burbank Place, Baulkham Hills NSW 2153 | Tel: **02 8867 3333** | Emergency Tel: **1800 039 008**

and many others.

2. Composition information

Solvent-based (“oil-based”) paint may typically contain one or more of the following solvents in total concentrations of up to 90% by mass, the balance consisting of non-hazardous materials:

CHEMICAL ENTITY	CAS No
White spirit	8052-41-3
Mineral turpentine	–
Kerosene	64742-81-0
Xylene, mixture of isomers	1330-20-7
Toluene	108-88-3
1,2,4-trimethyl benzene	95-63-6
Naphtha (petroleum) light aromatic	64742-95-6
Naphtha (petroleum) medium aliphatic	64742-88-7

3. Hazards identification

Emergency Overview
HAZARDOUS CHEMICAL | DANGEROUS GOODS

Hazardous Classification	Hazardous (Safe Work Australia)
Australian Dangerous Goods (ADG) Classification	Class 3 – Flammable Liquids **Note 1:** Some solvent-based paints presented at a CRC may be Packaging Group II and some may be Packaging Group III  **Note 2:** Some solvent-based paints presented at a CRC may contain toxic metals, such as lead; these paints should be stored separately with Class 6 Division 6.1 Toxic Substances
SUSMP Classification (Standard for the Uniform Scheduling of Medicines and Poisons or "Poisons Schedule")	Schedule 5
UN No	1263
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification	
Signal word	Warning
Hazard Classification	Flammable Liquid – Category 3 Aspiration Hazard – Category 2 Sensitisation – Skin – Category 1A Specific Target Organ Toxicity (Single Exposure) – Category 1A
Hazard Statements	H226 Flammable liquid and vapour H305 May be harmful if swallowed and enters airways H317 May cause an allergic skin reaction H336 May cause drowsiness or dizziness

Prevention Precautionary Statements	P102	Keep out of reach of children
	P210	Keep away from all sources of ignition – No smoking
	P233	Keep container tightly closed
	P243	Take precautionary measures against static discharge
	P261	Avoid breathing in mist / vapours
	P272	Contaminated clothing should not be allowed
	P280	Wear protective clothing, gloves, eye / face protection and suitable respirator as required
Response Precautionary Statements	P101	If medical advice is needed, have product container or label at hand
	P304+P340	If inhaled, remove person to fresh air and keep comfortable for breathing
	P303+P361+P353	If on skin, take off immediately all contaminated clothing. Rinse skin with water / shower
	P301+P310	If swallowed – Immediately call a Poisons Centre or doctor / physician
	P331	Do NOT induce vomiting
	P312	Call a Poisons centre or a doctor / physician if you feel unwell
	P363	Wash contaminated clothing before reuse
	P333+P313	If skin irritation or a rash occurs, get medical advice / attention
	P370+P378	In case of fire, use alcohol-resistant foam for extinction
Storage Precautionary Statements	P405	Store locked up
	P403+P235	Store on a well-ventilated place. Keep cool

4. First aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Tel: **13 11 26**).

Inhalation	Remove victim to fresh air. Remove contaminated clothing and loosen remaining clothing. Keep person warm and at rest. If not breathing, or breathing is irregular, provide artificial respiration or oxygen by a trained person.
Ingestion	Seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting. Rinse mouth with water and give a glass of water to drink. If vomiting occurs, give further water.
Skin contact	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
Eye contact	Remove contact lenses, irrigate eyes copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
Note to physician	Treat symptomatically.

5. Fire fighting measures

Specific hazards	Flammable liquid. May form flammable vapour mixtures with air. Vapour may travel considerable distance to a source of ignition. Heating can cause expansion or decomposition, leading to violent rupture of containers.
Suitable extinguishing media	Dry chemical, CO_2 or foam. Water fog may be used to keep fire-exposed containers cool. DO NOT USE WATER JET.
Hazards from combustion products	On burning, may emit toxic fumes, including oxides of carbon, nitrogen and metals, and products of incomplete combustion.
Precautions for fire fighters and special protective equipment	Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if there is a risk of exposure to vapours or combustion products.
Hazchem Code:	**3Y or 3YE**



6. Accidental Release Measures

Small spills	Wear protective equipment to prevent skin and eye contamination. Soak up with absorbent. Allow absorbent to dry before collecting it for appropriate disposal.
Larger spills	Wear protective equipment to prevent skin and eye contamination. Wear appropriate respirator if ventilation is inadequate. Shut off all possible sources of ignition. Clear area of all unprotected personnel. Prevent further leakage or spillage if able to do so safely. Contain the spill to prevent its spread or entry into drains or waterways. Soak up using absorbent and allow absorbent to dry before collecting it into labelled containers for appropriate disposal.
Environmental precautions	Contain the spill to prevent entry into drains or waterways. If entry into waterways occurs, inform appropriate authorities.



7. Handling and storage

Handling	Wear appropriate Personal Protective Equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled. Avoid skin or eye contact or inhalation of vapours from any spilled material. Clean up spills immediately (see Section 6 above).
Storage	Follow the storage conditions recommended in the EPA's Operations and Management Handbook for Community Recycling Centres.



8. Acknowledgement

This Safety Data Sheet contains some material from Safety Data Sheets for solvent based paints from several manufacturers that are available in the public domain, particularly those by Dulux Australia and PPG Architectural Coatings, whose authorship of that material is acknowledged.

Community Recycling Centres

Safety data sheet for: TOXIC SUBSTANCES

1. Material and supplier identification

Toxic substances (Class 6 Division 6.1 in the Australian Code for the Transport of Goods by Road and Rail) are not included among the materials targeted by the CRC Program. However, small quantities of such materials may be occasionally dropped off at CRCs by householders, despite not being targeted (so-called "by-catch"), and all CRCs have provisions for storing them safely until they are collected for disposal. By far the most common such toxic substances are **garden chemicals** – a wide variety of insecticides, weed killers, **rat and mice poisons**, and other pesticides, current or outdated. These vary widely in their toxicity, and may be solid or in solution or suspension in water or a hydrocarbon. Very occasionally they may include strong poisons (such as cyanides or arsenic), or so-called "Schedule X" chemicals, which are persistent organochlorine compounds that are no longer permitted to be used in Australia. Very occasionally, other "historic" poisons, such as strychnine, may be brought in.

Since materials delivered by householders to Community Recycling Centres are discarded ("waste") products and may have originated from a variety of manufacturers, full identification or hazard information is not available for each package. In the absence of full identification or hazard information, a precautionary approach must be taken by persons handling or storing the material.

Given the wide variety of possible toxic substances that may be dropped off by householders at CRCs, the difficulty of producing a single Safety Data Sheet for them, and as part of the precautionary approach required by the NSW WHS Regulation, this Safety Data Sheet has been prepared for some of the most toxic materials that may be encountered at a CRC.

Original suppliers of toxic substances are too numerous to mention.

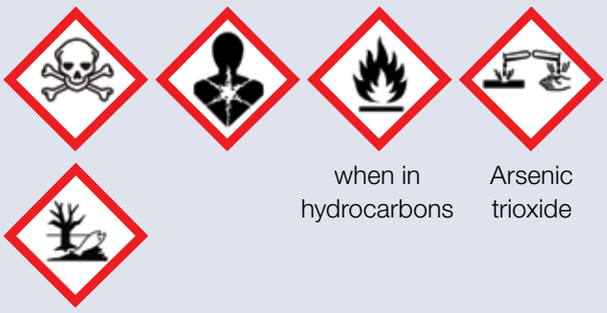
2. Composition information

Some examples of constituents that may be present in **toxic substances** dropped off at Community Recycling Centres are:

	CHEMICAL ENTITY	CAS No
	Sodium cyanide	143-33-9
OR	Potassium cyanide	151-50-8
OR	Arsenic trioxide	1327-53-3
OR	Dimethoate (an organophosphate), active ingredient in "Rogor" pesticide	60-51-5
OR	DDT (1,1,1-trichloro-2,2-bis (4-chlorophenyl) ethane)	50-29-3
OR	Strychnine	57-24-9

3. Hazards identification

Emergency Overview
HAZARDOUS CHEMICAL | DANGEROUS GOODS

Hazardous Classification	Hazardous chemicals
Australian Dangerous Goods (ADG) Classification	Generally – **Class 6 Division 6.1 Toxic Substances** Some pesticides, which are in solution or suspension in a hydrocarbon liquid, are **Class 3 Flammable Liquids**, with Class 6 Division 6.1 being given as a Subsidiary Risk. 
SUSMP Classification (Standard for the Uniform Scheduling of Medicines and Poisons or "Poisons Schedule")	Schedule 7 (cyanides, arsenic, DDT, strychnine) Schedule 6 (dimethoate and some other organophosphate pesticides)
UN No	Sodium cyanide – 1689 Arsenic trioxide – 1562 Organophosphorus pesticides – liquid, flammable, toxic – 2784 Organophosphate pesticide – liquid, toxic, flammable – 3017 Organochlorine pesticide – solid, toxic – 2761 Strychnine – 1692
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification	Some of the more toxic substances that may occasionally be dropped off at a CRC have the following GHS classification:  when in hydrocarbons Arsenic trioxide
Signal word	Danger

Hazard Classification	Acute toxicity	– Category 1 or 2 (cyanides, strychnine) – Category 2 or 3 (arsenic trioxide) – Category 2, 3 or 4 (organophosphates) – Category 3 (DDT)
	Carcinogenicity	– Category 1A (arsenic trioxide) – Category 2 (DDT)
	Germ cell mutagenicity	– Category 2 (arsenic trioxide)
	Skin corrosion	– Category 1 (arsenic trioxide)
	Specific target organ toxicity (repeated exposure)	– Category 1 (arsenic trioxide, organophosphates)
	Skin sensitizer	– Category 1 (organophosphates)
	Flammable liquid	– Category 3 (pesticides, when in hydrocarbons)
	Hazardous to the aquatic environment (acute)	– Category 1
	Hazardous to the aquatic environment (chronic)	– Category 1

Hazard Statements	H330	Fatal if inhaled (cyanides)
	H331	Toxic if inhaled (arsenic trioxide)
	H332	Harmful if inhaled (organophosphates)
	H310	Fatal in contact with skin (cyanides, strychnine)
	H311	Toxic in contact with skin (organophosphates)
	H300	Fatal if swallowed (cyanides, arsenic trioxide, some organophosphates, strychnine)
	H301	Toxic if swallowed (DDT)
	H350	May cause cancer (arsenic trioxide)
	H351	Suspected of causing cancer (DDT)
	H341	Suspected of causing genetic defects (arsenic trioxide)
	H314	Causes severe skin burns and eye damage (arsenic trioxide)
	H372	Causes damage to organs through prolonged or repeated exposure (arsenic trioxide, organophosphates, DDT)
	H317	May cause an allergic skin reaction (organophosphates)
	H226	Flammable liquid and vapour (pesticides in solution / suspension in hydrocarbons)
	H410	Very toxic to aquatic life with long lasting effects

Prevention Precautionary Statements	P260	Do not breathe dust / fume / gas / mist / vapours / spray
	P264	Wash hands thoroughly after handling
	P280	Wear protective gloves / protective clothing / eye protection / face protection
	P210 (for pesticides dissolved or suspended in hydrocarbons – generally, but not always, labelled with the Flammable Liquids sign):  	Keep away from heat / sparks / open flames / hot surfaces – No smoking
	P233	Keep container tightly closed
	P243	Take precautionary measures against static discharge
Response Precautionary Statements	P301+P310	If swallowed, immediately call a Poisons Centre or a doctor / physician
	P330	Rinse mouth
	P304+P310	If inhaled, immediately call a Poisons Centre or a doctor / physician
	P304+P340	If inhaled, remove person to fresh air and keep comfortable for breathing
	P302+P352	If on skin, wash with plenty of water
	P305+P351+P338	If in eyes, rinse copiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
	P308+P353 (DDT, arsenic trioxide)	If exposed or concerned, get medical advice / attention
	P363	Wash contaminated clothing before reuse
	P332+P313 (organophosphates)	If skin irritation occurs, get medical advice / attention
Storage Precautionary Statements	P405	Store locked up
	P403+P233	Store on a well-ventilated place. Keep container tightly closed

4. First aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Tel: **13 11 26**).

First aid measures for toxic substances other than cyanide:

Inhalation	Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen may be beneficial, if administered by a trained person, preferably on a doctor's advice. Do not allow the person to move about unnecessarily. In some cases, symptoms of pulmonary oedema may be delayed up to 48 hours after exposure. Seek immediate medical attention.
Ingestion	Do NOT induce vomiting. Immediately rinse mouth with water. Never give anything by mouth to an unconscious person. Seek immediate medical attention. Make every effort to prevent vomit from entering the lungs by careful placement of the patient.
Skin contact	Remove contaminated clothing and wash affected areas with soap and water. Seek immediate medical attention. Launder clothing before reuse.
Eye contact	Check for and remove any contact lenses. Immediately irrigate eyes with plenty of running water for at least 20 minutes, keeping eyelids open. Take care not to rinse contaminated water into unaffected eye or on face. Seek immediate medical attention.

First aid measures for cyanide are provided on the following page.

FIRST AID MEASURES FOR CYANIDE POISONING

This is a special section on cyanide poisoning, since it is extremely serious and requires a somewhat different approach from other forms of poisoning.

T**o be effective, first aid must be prompt.** Sodium and potassium cyanide are poisonous by ingestion and by inhalation of their dust. Contact with skin and eyes may cause irritation of the skin and eyes and poisoning symptoms similar to those for ingestion.

Of prime importance is the protection of the rescuer. No attempt at rescue should be performed until an appropriate hazard assessment of the exposure site is made and appropriate personal protection equipment and personnel are in place.

First aid procedures, equipment, medication and training should be in place BEFORE there is any possibility of exposure. First aid personnel should be aware of the nearest hospitals, which are familiar with the treatment of cyanide exposure.

Equipment and medication in place should be:

- Safety shower and eyewash station immediately accessible
- Fresh, clean, cool drinking water
- Resuscitation bag and mask (or Oxy-Viva)
- Cyanide emergency kit containing amyl nitrite pearls; hydroxycobalamine and sodium thiosulphate
- “Space” or thermal blankets for treating patients for shock

First aid personnel should observe the following precautions:

- Wear protective gloves
- Wear protective goggles
- Wear suitable respiratory protection

IF SWALLOWED

- Remove patient from the source of contamination
- If the patient is not breathing, DO NOT use mouth-to-mouth or mouth-to-nose ventilation, instead use resuscitation bag and mask (Oxy-Viva)
- If pulse is absent, start external cardiac massage and follow standard Advanced Cardiovascular Support guidelines
- Give 100% oxygen by mask (Oxy-Viva) if available
- Remove all contaminated clothing and footwear into a sealable collection bag – launder contaminated clothing thoroughly and wash the affected areas with soap and copious amounts of water
- Arrange for urgent transfer of the patient, accompanied by an attendant with the Cyanide Emergency Kit, to medical professionals
- Persons designated as competent may open the Cyanide Emergency Kit and commence use of amyl nitrite pearls

IF IN EYES

- Immediately irrigate eyes with copious amounts of water, while holding eyelids open, for at least 15 minutes. Seek medical assistance immediately.

IF ON SKIN

- Wash affected area with copious amounts of water for at least 15 minutes. Remove contaminated clothing and launder before reuse. Seek medical assistance.

IF INHALED

- Proceed as in “IF SWALLOWED” above

5. Fire fighting measures

Specific hazards	Toxic substances that may be encountered at a CRC vary widely in their combustion characteristics and behaviour in a fire. Some (e.g. cyanides, arsenic trioxide) are not combustible, while others, particularly pesticides suspended or dissolved in hydrocarbons, are flammable liquids. The precautionary approach would be to treat all toxic substances as flammable.
Suitable extinguishing media	Water fog, foam or dry chemical. Carbon dioxide (CO_2) is not recommended if cyanides are involved in a fire. DO NOT USE STRAIGHT STREAMS OF WATER
Hazards from combustion products	Sodium cyanide, when heated, may emit highly toxic hydrogen cyanide gas. Other toxic substances may also emit toxic decomposition products when involved in a fire.
Precautions for fire fighters and special protective equipment	Fire-fighters should wear self-contained breathing apparatus (SCBA) and protective clothing.
Hazchem Codes:	**2X** Cyanides, solid organophosphorus pesticides, organochlorine pesticides, strychnine **2Z** Arsenic trioxide **3WE** Liquid flammable organophosphorus pesticides **3W** Liquid toxic organophosphorus pesticides

6. Accidental Release Measures

Observe the following general principles in containing and cleaning up a spill

- Evacuate all non-essential and unprotected personnel
- Wear appropriate personal protective equipment, including respiratory protection
- Eliminate all ignition sources (as some of the spilled materials may be flammable)
- Contain the spill by bunding it with sand, soil or vermiculite to prevent it from spreading and / or entering into drains and / or waterways. If entry into a waterway has occurred, ensure that appropriate authorities are notified
- Absorb the spill in an appropriate material that does not interact with the spilt material.
- Collect the spill and contaminated absorbent into appropriately labelled containers for subsequent disposal. Use non-sparking tools.
- Clean the surface(s) that have been affected by the spill.

ADDITIONAL STEPS FOR A CYANIDE SPILL

Because of their extremely high toxicity, cyanide spills require some additional steps. After the spill and the absorbent material have been scooped up, the remaining material should be covered with lime or soda ash, then ferrous sulphate added on top, and mixed in well. After standing for about 30 minutes, the remaining material may be scooped up and placed into labelled containers. The surface should finally be cleaned with a dilute solution of calcium or sodium hypochlorite, to remove the last traces of free cyanide.



7. Handling and storage

Handling	Wear appropriate Personal Protective Equipment. Eating, drinking and smoking should be prohibited in areas where these materials are handled. Avoid skin or eye contact or inhalation of vapours from any spilled material. Clean up spills immediately (see Section 6 above).
Storage	Follow the storage conditions recommended in the EPA's Operations and Management Handbook for Community Recycling Centres.



8. Acknowledgement

This Safety Data Sheet contains some material from Safety Data Sheets for a number of toxic substances from several suppliers that are available in the public domain, particularly those by CSBP Limited (sodium cyanide), ALDI GC Pty Ltd (arsenic trioxide) and FMC Australasia Pty Ltd, Nufarm Australia Ltd and Sipcam Pacific Australia Pty Ltd (organophosphate pesticides). Their authorship of that material is acknowledged.

Community Recycling Centres

Safety data sheet for: WATER-BASED PAINT

1. Material and supplier identification

Other names: Aqueous paint, acrylic paint, latex paint.

Containers of water-based paint can generally be identified by the text “Wash brushes and equipment in water”.

Since materials delivered by householders to Community Recycling Centres are discarded (“waste”) products and may have originated from a variety of manufacturers, full identification or hazard information is not available for each package. In the absence of full identification or hazard information, a precautionary approach must be taken by persons handling or storing the material.

Original suppliers may have included:

- Dulux Australia | 1956 Dandenong Road, Clayton VIC 3168 | Tel: **13 25 25** | Emergency Tel: **1800 033 111**
- Taubmans Paints (now PPG Architectural Coatings) | 9 Birmingham Avenue, Villawood NSW 2163 | Tel: **02 9794 1200** | Emergency Tel: **1800 883 254**
- Wattyl (now Valspar Australia Pty Ltd) | Level 4, 2 Burbank Place, Baulkham Hills NSW 2153 | Tel: **02 8867 3333** | Emergency Tel: **1800 039 008**

and many others.

2. Composition information

CHEMICAL ENTITY	CAS No	Proportion
Ingredients determined to be non-hazardous	–	100%

3. Hazards identification

Emergency Overview
NON-HAZARDOUS SUBSTANCE | NON-DANGEROUS GOODS

Hazardous Classification	Based on available information, water-based paints are not classified as hazardous according to criteria of Safe Work Australia.
Australian Dangerous Goods (ADG) Classification	Non-Dangerous Goods (i.e. not classified)
SUSMP Classification (Standard for the Uniform Scheduling of Medicines and Poisons or "Poisons Schedule")	Not classified
UN No	Not classified
Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification	Not classified

4. First aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Tel: **13 11 26**).

Inhalation	Remove victim to fresh air. Remove contaminated clothing and loosen remaining clothing. Keep person warm and at rest. If not breathing, or breathing is irregular, provide artificial respiration or oxygen by a trained person.
Ingestion	Seek medical advice and show the container or label. Keep person warm and at rest. Do NOT induce vomiting. Rinse mouth with water and give a glass of water to drink. If vomiting occurs, give further water.
Skin contact	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
Eye contact	Remove contact lenses, irrigate eyes copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek medical advice.
Note to physician	Treat symptomatically.

5. Fire fighting measures

Specific hazards	Non-combustible material. However, if the product is caught in a surrounding fire, residual materials may ignite following evaporation of aqueous components.
Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire. Use water fog to keep containers cool.
Hazards from combustion products	If residual materials are ignited after evaporation of the aqueous component, fumes may include smoke, oxides of carbon and metals and products of incomplete combustion.
Precautions for fire fighters and special protective equipment	Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if there is a risk of exposure to vapours or decomposition products.
Hazchem Code:	**Not applicable**

6. Accidental Release Measures

Small spills	Wear protective equipment to prevent skin and eye contamination. Soak up with absorbent. Place contaminated absorbent in an appropriate waste disposal container and dispose of appropriately.
Larger spills	Wear protective equipment to prevent skin and eye contamination. Slippery when spilt. Move containers from spill area. Clear area of all unprotected personnel. Prevent further leakage or spillage if able to do so safely. Contain the spill to prevent its spread or entry into drains or waterways. Soak up using absorbent and place contaminated absorbent it into labelled containers for appropriate disposal.
Environmental precautions	Contain the spill to prevent entry into drains or waterways. If entry into waterways occurs, inform appropriate authorities.



7. Handling and storage

Handling	Wear appropriate personal protection equipment to prevent skin or eye contact or inhalation of vapours from any spilled material.
Storage	Follow the storage conditions recommended in the EPA's Operations and Management Handbook for Community Recycling Centres.



8. Acknowledgement

This Safety Data Sheet contains some material from Safety Data Sheets for water based paints from several manufacturers that are available in the public domain, particularly those by Dulux Australia and PPG Architectural Coatings, whose authorship of that material is acknowledged.

Work Activity Procedures

ORANGE CITY COUNCIL

FINAL

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Dust Prevention on site		**Area:** Ophir Road Resource Recovery Centre and Euchareena Road Resource Recovery Centre	**WAP:**	WAP 001
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	18.9.2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	Peter Ford	**DATE**	16/9/2020

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Equipment / additional PPE: Utility / telescopic handler / water truck

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities Follow Council's Fatigue Management Procedure Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	If required monitor air quality and follow any health messages Ensure temperature appropriate PPE clothing is worn Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). Access to appropriate shelter Take regular rest breaks Rotation of tasks Access to food and water, (warm drinks in cold temperatures, cool drinks and

			electrolytes in hot temperatures) Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Hook tanker/ trailer onto ute (ORRRC) Unlock & start water truck (ERRRC)	Hazardous manual tasks	Safe manual handling practices; competent and qualified operator
		Crush injury	Trailer brakes on, no standing between vehicle and trailer when vehicle reversing
		Slip off step	Visual awareness of surroundings
3	Drive to site	Motor vehicle accident	Licenced driver, observe vehicle & pedestrian activity. Drive to road conditions
4	Start motor on tanker	Hazardous manual tasks	Safe manual handling practices; regular servicing
5	Spray water onto area	Unauthorised access (ORRRC)	Isolate the area from the public. Ensure task is only carried out when no one is in the vicinity
6	Fill up tank from stand pipe or hose	Slip, trips & falls	Trained and competent operator
7	Park truck/ trailer and unhook trailer	Hazardous manual tasks	Safe manual handling practices; competent and qualified operator
		Crush injury	Trailer brakes on, no standing between vehicle and trailer when vehicle reversing
		Slip off step	Visual awareness of surroundings

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
Wayne Davis	Manager Waste Services & Mechanical Support	Wayne Davis	19/9/2020
Vic Biancie.	OPERATOR		11.9.2020
Peter Ford	Resource Recovery centre supervisor	P Ford.	16-9-2020
Glenn Thomas	Contractor		16.9.20
Jason Rees	operator		16 9 20
CLEM JACKSON	operator		16.9.20

ORANGE CITY COUNCIL

FINAL

OCCWHS 017 V1-2020

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Bin Closure and Servicing		**Area:** Ophir Road Resource Recovery Centre	**WAP:**	WAP 002
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23/9/2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Foord	**DATE**	16/9/2020

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Equipment / additional PPE:

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures)

			• Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Communicate bin closure/ servicing to Wangarang & JR Richards staff	No answer	Radio back up for communication or phone call to JR Richards Supervisor
3	OCC staff or Wangarang staff to close the gate	The gate is not closed	Staff at bin to close gate & reopen at all times when bin is returned
4		Fall into lower level	Visual awareness of surroundings
5	Advise JR driver safe to go	The bin is being used by another person	Radio driver. Staff at gate to ensure patrons do not access the area
	Driver to take bin out of the bay and dispose waste/ recyclables to appropriate destination & then return bin to the station	Collision with another vehicle	Traffic control plan – observe for traffic/ pedestrian activity
		Public – injury falling to lower level	Barricades closed and staff directing public. First Aid available
6	Open gate	Bin not in place	Communicate with JR Richards's driver.
		Public injury	Ensure bin is returned to station before opening gate.

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
Wayne Davis	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020.
Vic Binnie.	OPERATOR		11.9.2020
Peter Ford	Resource Recovery centre supervisor	P Ford.	16-9-2020
Glenn Thomas	Contractor		16.9.20
Jason Rees	operator		16 9 20
Glen Jack Soul	Operator		16.9.20

ORANGE CITY COUNCIL

FINAL

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Load Mulch / Compost		**Area:** Ophir Road Resource Recovery Centre	**WAP:**	WAP 003
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	17/9/2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Ford.	**DATE**	16-9-2020

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Equipment / additional PPE: Telescopic handler / Loader

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures)

			• Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Weighbridge calls Resource Recovery Centre staff via radio communication	Unclear communication	Acknowledge request to Weighbridge
3	Proceed to mulch pile / compost pile	Injury to public	Isolate the area and install signage / observe patron activity and ensure no one is downwind of mulch / compost when loading
4	Instruct the customer where to park to have the mulch / compost loaded	Damage to vehicles	Advise the customer of the safety procedures and movement of vehicles. Customer is advised to act as a spotter. Customer is advised to signal stop if any damage or harm is about to happen. Customer is advised to act as a spotter
		Overloading the vehicle	Train operators on correct loading procedures
		Load spilling onto the road	Cover the load & don't overload vehicles

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
WAYNE DAVIS	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
VIC · BIANIC.	PLANT OPERATOR		11·9·2020
Peter Ford	Resource Recovery centre supervisor	P Ford	16-9-2020
Glenn Thomas	Contractor		16·9·20
Jason Rees	Plant operator		16·9·20
GLEN JACKSON	PLANT operator		16·9·20

ORANGE CITY COUNCIL

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Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Transfer Oil (oil container to be no larger than 20 litres and inspected at weighbridge)		**Area:** Ophir Road Resource Recovery Centre	**WAP:**	WAP 004
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23/9/2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Ford.	**DATE**	16/9/2020

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Equipment / additional PPE: Telescopic handler / Loader

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot

			temperatures) • Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Lifting oil container up onto platform	Hazardous manual tasks	Use appropriate lifting technique & observe weight of container. Use mechanical means to lift container if necessary.
		Spillage	Ensure cap is on container
		Accepting too large amount	No more than 20 litres. Weighbridge not to accept > 20L containers.
3	Emptying container	Hazardous manual tasks	Use appropriate lifting techniques & observe weight of container. Use mechanical means to lift container if necessary.
		Spillage	Ensure staff wear appropriate PPE, e.g. gloves, long sleeve clothing.
4	Dispose container into recycling bin	Spillage	Check that container is empty before disposing into the bin
5	MGB (Material garbage bin) – for plastic container disposal	MGB is full	Check that there are empty and available MGB's before disposing container into bin.
6	Steel stockpile for steel container disposal. Travel container to stockpile via telescopic handler or utility	Spillage	Check that container is empty before disposing into the steel stockpile.
		Traffic/ pedestrian accident	Check that container is empty before disposing into the steel stockpile. Observe for public safety.

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
Wayne Davis	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020.
Vic Birnie	PLANT OPERATOR		16 9 2020
Peter Ford	Resource Recovery centre supervisor	P Ford.	16-9-2020
[redacted] Glenn Thomas	Contractor		16.9.20
Jason Rees	Plant operator		16 9 20
GLEN JACKSON	Plant operator		16.9.20

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Tyre stockpiling		**Area:** Ophir Road Resource Recovery Centre	**WAP:**	WAP 006
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23/9/2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Ford.	**DATE**	16/9/2020

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Equipment / additional PPE: Telescopic handler / Loader

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures)

			• Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Screen all incoming waste at the weighbridge	Hazardous waste Non-conforming waste	• Follow the procedures identified in **SOP 07- Weighbridge Procedures** to identify whether a load contains tyres.
3	Load from a commercial operator	Habitat for insects/vermin Fire Hazard Environmental impact	• The weighbridge operator must refuse receival of the waste if the load contains more than five whole tyres.
4	Load from a non-commercial operator (residents)	Habitat for insects/vermin Fire Hazard Environmental impact	• Loads with more than five whole tyres delivered by non-commercial operators (i.e. residents) of the Orange Local Government Area are permitted at the premises.
5	Load identified as containing tyres	Poor compaction and taking up valuable airspace in landfill operations	The waste must not be disposed at the premises unless: • The tyre/s have a diameter of less than 1.2 metres; or • The tyre/s have been shredded so that the pieces measure no more than 250 millimetres in any direction; or • The tyre/s have had their walls removed
6	Charges	Load not properly declared	• Charge drivers with the applicable fee and charges schedule for the tyre waste.
7	Stockpiling tyres on the premises	Habitat for insects/vermin Fire Hazard Environmental impact	Resource Centre Operators will ensure that tyres stockpiled on the premises: • Do not exceed five tonnes or 500 tyres at any one time; and • Are located in a clearly defined area away from the waste disposal areas; and • Are managed to control vermin • Are managed to prevent any tyres from catching on fire
8	Storage	Adequate separation between site boundaries, buildings and tyre storages	• Stockpile tyres in the workshop compound or other designated drop off point on the designated storage pallets. Then transfer to recycling cage using appropriate manual handling techniques or load with plant item. • When cage is full ring contractor to swap for an empty cage.

RESPONSIBILITIES:

It is the Resource Recovery Centre Supervisor's responsibility to ensure that all incoming waste is screened, and the landfilling operations are monitored to ensure that tyre waste is appropriately stockpiled. The Resource Recovery Centre Supervisor is responsible for ensuring that all Resource Recovery Centre Operators undertaking weighbridge procedures and landfilling of tyre waste are adequately trained in this work procedure.

RECORDS:

Weighbridge records are recorded electronically on the computer within the weighbridge gatehouse. These records are kept for a minimum of four years.

REFERENCES:

Section 3.5 – Waste Receival

Section 9.3 – Waste and Resource Recovery Monitoring Program

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
WAYNE DAVIS	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
VIC BIRNIE	PLANT OPERATOR		11 9 2020
Peter Ford	Resource Recovery centre supervisor	P Ford	16-9-2020
Glenn Thomas	Contractor		16.9.20
Jason Rees	Plant op		16 9 20
GLEN JACKSON	Plant operator		16.9.20

ORANGE CITY COUNCIL

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Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Litter Collection		**Area:** Ophir Road and Euchareena Road Resource Recovery Centre	**WAP:**	WAP 007
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23.9.2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Ford.	**DATE**	16/9/2020

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Equipment / additional PPE: Litter Collection Tongs

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot

			temperatures) • Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Obtain collection utensils/ bags and proceed to specific area outside compound, boundary or within the landfill for litter collection	Struck by moving plant/ vehicles Slip, trip & fall Snake bite	• Wear PPE High visibility or reflective clothing • Install appropriate signage • Traffic control plan • Physical barriers, exclusion zones • Site specific training • Supervision • First Aid/ Call 000
3	Waste pickup	Hazardous manual tasks i.e. static posture and repetition	• Provide appropriate training • Job rotation/ team lifting • Wear PPE, non-slip footwear
		Cuts & personal Injury	• Wear appropriate PPE such as sharp resistant gloves; eye protection, protective clothing; • Adequate first aid equipment, facilities and training.
		Hazardous substances/ dangerous goods	• Use appropriate equipment for the task such as litter picking tongs, sharp collection, containers, etc. • Wear appropriate PPE • Training and education
		Working in hot/cold environment	• Adequate facilities onsite e.g. toilet, drinking water, personal storage and shelter
4	Handling/ storage	Cuts and personal injury Hazardous substances/ dangerous goods	• Use appropriate equipment for the task • Wear PPE • Litter should be stored and handled in such a way as to prevent exposure • Training, education and instruction
5	Return to compound/ landfill	Struck by moving plant/ vehicles	• Wear PPE- High visibility or reflective clothing • Signage • Traffic control plan • Physical barriers, exclusion zones • Site specific training • Supervision • Dispose of collected material to appropriate disposal point

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
WAYNE DAVIS	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
VIC. BIRNIE.	PLANT OPERATOR	[illegible]	11.9.2020
Peter Ford	Resource Recovery centre supervisor	P Ford	16-9-2020
Glenn Thomas	Contractor	[illegible]	16.9.20
Jason Rees	Plant operator	[illegible]	16 9 20
GLEN JACKSON	Plant operator	[illegible]	16.9.20

ORANGE CITY COUNCIL

FINAL

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Landfill Waste Disposal		**Area:** Ophir Road and Euchareena Road Resource Recovery Centre	**WAP:**	WAP 009
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23.9.2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Ford.	**DATE**	16/9/2020

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Equipment / additional PPE: Telescopic Handler / Loader / TANA Landfill Compactor / Truck

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot

			temperatures) • Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Check plant prior to operation	Mechanical Failure	Pre start checks & daily/scheduled maintenance of plant items
3	Unload semi-trailer with waste bales and deposit bales to current cell	Collapse of bale/ Fall from trailer	Ensure no one is near truck or telehandler whilst unloading and conveying bales to the landfill
4	Compact loose waste	Roll over of plant	Operate plant on safe grades and in layers of 150mm
5	Provide cover to waste	Reversing over other nearby operators Roll over of plant	Use mirrors or reversing camera effectively Operate plant on safe grades
6	Load out cover material from soil stockpile and deliver to landfill cell	Roll over of plant	Operate plant on safe grades

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
WAYNE JAVIS	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
VIC BIRNIE	PLANT OPERATOR		11.9.2020
Peter Ford	Resource Recovery Centre Supervisor	P Ford	16-9-2020
Glenn Thomas	Contractor		16.9.20
Jason Rees	Plant operator		16920
GLEN JACKSON	Plant operator		16.9.20

ORANGE CITY COUNCIL

FINAL

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Beekeeping Equipment and Honey Containers		**Area:** Ophir Road Resource Recovery Centre	**WAP:**	WAP 010
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23.9.2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Fozzard	**DATE**	16/9/2020

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Equipment / additional PPE:

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
	It is noted Beekeeping is also known as "Apiculture". There are many various items of equipment used in the collection and production of honey which have the potential to enter waste streams. Some of these items can be easily identified while others may take a more detailed examination, refer to **References** for more information on identification		
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter

			• Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures) • Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Inspect all incoming waste loads entering Ophir Road Site at the weighbridge for beekeeping equipment	Bacteria / Disease	Reject any equipment detected and advise the person to seek alternative means of disposal. Record all rejections of bee related material on record sheet Form 6.01- Rejected Apiculture Product Register. Provide a hand out outlining alternative means of disposal options to the driver- Form 6.02 Disposal of Apiculture Equipment Handout.
3	Inspect waste being unloaded at the baling facility for beekeeping equipment and containers which had contained honey or bi-products.	Bacteria / Disease	If beekeeping equipment is identified, place it in the designated MGB (mobile garbage bin) and take to the weighbridge for burial onsite as soon as possible. Place used honey containers in the designated MGB (mobile garbage bins) and take to the MTF (material transfer facility) for recycling
4	Inspect the waste stream	Bacteria / Disease	If any bee keeping equipment, containers or infected timber is found, record all bee related material and actions taken on Form 6.03- Found Apiculture product Register.
5	Inspect logs greater than 250mm diameter	Bacteria / Disease	Visually inspect all logs between 250mm and 500mm diameter for bee activity prior to processing.
			Split and inspect logs over 500mm diameter
			All pieces of timber found containing evidence of live or dead bees, larvae and/or colonies must be placed in a segregated location and processed separately.
			Infected logs along with any infected processed material must not be transported to the ERRRC but disposed of at the Ophir Road facility or another Council approved site.
6	Record Keeping and Reporting		Keep a record for all feral colonies (alive or dead) found in tree logs,

			recorded as rejected or found waste on Form 6.01- Rejected Apiculture Project Register or Form 6.03 – Found Apiculture Project Register. Processing, storage and disposal records for all infected material.
			If any bee keeping equipment, containers, or infected timber is found within the waste stream at the ORRRC, this is to be noted on the ORRRC Daily Checklist (refer SOP 15) as well as Form 6.03 – Found Apiculture Product Register.
			Each time a beekeeping related product or infected log is identified Form 6.01 Rejected Apiculture Product Register or Form 6.03- Found Apiculture Product Register is to be sent to the Manager Waste Services and Technical Support.
7	Notification		The Manager Waste Services and Technical Support is to notify the members of the OWP (Orange Waste Project) Apiculture Committee and additional representatives at Department of Primary Industries when apiculture products are identified within the waste stream. The following people are to be notified: Orange Waste Project Apiculture Committee Member: • Ms Jane Frances – jane.frances@dpi.nsw.gov.au • Mr Mal Porter – malp380@hotmail.com • Mr Jon Lockwood – jon@goldfieldshoney.com

RESPONSIBILITIES:

It is the Resource Recovery Centre Supervisor's and Operator's responsibility to ensure that all incoming waste is screened, and the landfilling operations are monitored to ensure that no beekeeping equipment, containers or infected logs are transported to the ERRRC for disposal.

The Resource Recovery Centre Supervisor is responsible for ensuring the Resource Recovery Centre Operators are adequately trained in this work procedure.

It is also the responsibility of the Resource Recovery Centre Supervisor and Operators to complete the necessary documentation, including:

- **Form 06.01 – Rejected Apiculture Product Register**
- **Form 06.03 – Found Apiculture Product Register**
- **Form 15.01 – ORRRC Daily Checklist**

RECORDS:

Records are to be kept using:

- **Form 06.01 – Rejected Apiculture Product Register** for products, containers or infected timber found by RRC operators screening incoming self-haul waste.
- **Form 06.03 – Found Apiculture Product Register** for products, containers or infected timber found by RRC operators found in waste being unloaded at the bailing facility.
- **Form 15.01 – ORRRC Daily Checklist** is to note the incidence of any bee related products rejected from or found at the site.

Each time a beekeeping product or infected log is identified, **Form 06.01** or **Form 06.03** (whichever is appropriate) is to be sent to the Manager Waste Services and Technical Support.

REFERENCES:

Used Beekeeping Equipment

Used beekeeping equipment is any fitting, utensil, apparatus or implement that is used, or has been used, for the purposes of, or in connection with beekeeping, or in processing, handling or storing apiary products which include but are not limited to: beeswax, honey, cut comb honey, comb sections, honeydew, bee collected pollen, propolis or royal jelly, supers, frames, hive lids, floorboards, queen excluders, feeders, division boards, honey tins, buckets, drums and IBC's or any other substance considered to be an apiary product including slum gum.

Included in this definition is any cavity which has contained bees. This includes but is not limited to: bird nesting boxes, buckets, tyres and cavities in construction waste (e.g. in a wall).

Used honey containers are defined as being any receptacle that contains or has contained honey in consumer ready packaging.

It is accepted most used honey containers will be commercial retail packs, although some could be from hobby beekeepers or farmers markets, and may include non-conventional packaging.









Hand operated Extractor (plastic or metal)



Motorised Extractor



Extractor Buckets



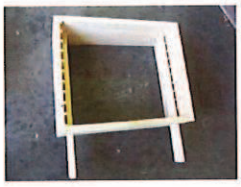
Beeswax Foundation



Frames



Split Frames



Box Frames



Storage tanks



Boxes



Gloves



Suits



Scraper



Hive Tool



Bee Brushes



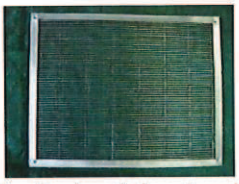
Smoker



Strainer



Excluder Cleaner



Steel Excluder (also in plastic)



Honey comb



Pollen



Royal Jelly



Honey Containers



Bees Wax



Slumgum

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
Wayne Davis	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
Vic Birnie.	PLANT OPERATOR		11.9.2020
Peter Ford	Resource Recovery centre supervisor	P Ford	16-9-2020
Glenn Thomas	Contractor		16.9.20
Jason Rees	Plant operator		16 9 20
GLEN JACKSON	Plant operator		16.9.20

ORANGE CITY COUNCIL

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OCCWHS 017 V1-2020

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Weighbridge Procedures		**Area:** Ophir Road Resource Recovery Centre	**WAP:**	WAP 011
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23.9.2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Foord	**DATE**	16/9/2020

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Equipment / additional PPE:

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures)

			• Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Vehicle entering ORRRC	Vehicle/ Pedestrian accident	Every vehicle entering into the ORRRC is recorded by the weighbridge operators. Records are electronically recorded and include: a. Date/ Time b. Vehicle Type (including registration number for heavy vehicles) c. Waste type d. Waste source e. Weight (or vehicle type where applicable) Signage directs patrons Adherence to ORRRC Traffic Management Plan.
3	Waste load is viewed & recorded	Patron abuse to RRC operator	Explain Council's charging protocols, i.e. The waste load of light vehicles and single axled trailers is calculated using a multiplication factor to estimate the weight.
			The waste load of heavy vehicles and double axled trailers is calculated using the calibrated weighbridge.
4	Fees and charges	Inappropriate application of disposal fee to patron	Fees and charges applicable to incoming self-haul loads are listed in the OCC Delivery Plan, located in the site office. The correct tipping fee is calculated and requested (for self-haul drivers). A receipt is given to all vehicles.
5	Screening of incoming waste	Excluded wastes or bee keeping equipment is presented at the weighbridge	The following practices apply to the screening of incoming waste: a. Public access is only permitted during opening hours b. Drivers are asked to describe the type of waste to be deposited on entry to the facility c. Inspections of waste loads are to be made as required. d. Look specifically for bee keeping equipment, containers, infected timber products when screening e. Non approved (excluded wastes) refer to Section 3.5.1.6 of the OEMP for a complete list of excluded wastes.
			If bee related products, or excluded wastes are identified, the vehicle is to be refused entry to the site.

		Hazardous substances – Asbestos	If the load contains asbestos – follow procedures outlined in SWMS RRC 001 'Asbestos Disposal'.
6	Reporting Excluded Waste		If any excluded waste is detected during the screening, waste deposition, waste spreading and compacting, during sorting of waste in the baling shed or during the baling, the Resource Recovery Centre Operators are required to immediately notify the Resource Recovery Centre Supervisor.
			Any identified excluded waste is to be transported to the lockup household hazardous waste storage facility.
			Record the incident on the Daily Checklist (refer to **SOP 15- ORRRC Daily Checklist** with reference to an Incident Report Number, and an Incident Report is to be prepared as per **SOP 13- Pollution Incident Response Management.** Including details of the type of waste, the source of the waste and the vehicle and driver identification (if applicable). Also refer to SOP 7 for detailed procedures.
7	Direct traffic	Inappropriate disposal of waste to wrong area	Direct traffic to the appropriate drop off zone & refer to on site signage
8	Monitoring / Inspection	Hidden waste in delivered loads	Wastes are monitored and inspected as they are being discharged to ensure excluded non approved wastes are not being disposed. Drivers are asked to uncover their load if required & viewed at the weighbridge.
9	Internal waste movements		Internal waste movements will be recorded over the weighbridge in accordance with **Table 3.3**. Electronic records will include: a. Date/time b. Waste type c. Waste source, and d. Weight
10	Vehicle leaving ORRRC	Load spillage	Every vehicle leaving the ORRRC with any waste will be recorded by the weighbridge operators. Electronic records will include: a. Date/ Time b. Vehicle Type c. Waste type d. Waste source e. Weight Patrons loaded with mulch/ compost must have loads covered. Other loads to be secured.

Table 3.3 – Internal waste movements

Type	Waste Movement		How measured
	From	To	
Mixed self-haul waste (municipal, C&I and C&D)	Receival station bins	Baling shed	Weighed
Select non-recoverable C&D Waste	Baler/shredding shed	ERRRC	Weighed
Recoverable C&D waste	Baling/shredding shed	Storage areas	Weighed
Garden organics	Green drop off	ERRRC AWT	Weighed
Recycling	Recovered from mixed waste in baling shed	Recovered Material	Weighed
Recycling	Recovered from organics in shredding shed	Recovered Material	Weighed
Mixed waste	Waste from MTF	Baling shed	Weighed
Mixed waste	Contamination from organics	Baling shed	Weighed

RESPONSIBILITIES:

It is the Resource Recovery Centre Supervisor's responsibility to ensure that the Recovery Centre Operators are adequately trained in this work procedure, including operating the weighbridge computer and identifying excluded wastes.

It is the responsibility of the Resource Recovery Centre Operators to undertake the correct weighbridge procedures.

RECORDS:

Weighbridge records are recorded electronically on the computer within the weighbridge gatehouse. These records are kept for a minimum of four years.

The identification of excluded wastes is to be recorded as per **SOP 13 – Pollution Incident Response Management,** and the incident number recorded on the **ORRRC Daily Checklist** (refer **SOP 15**).

REFERENCES:

Section 3.5 – Waste Receival

Section 9.3 – Waste and Resource Recovery Monitoring Program

SOP 13 – Pollution Incident Response Management

SOP 15 – ORRRC Daily Checklist

Traffic Management Plan

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
WAYNE DAVIS	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
VIC BIANIC.	PLANT OPERATOR		11.9.2020
Peter Ford	Recovery centre supervisor	P Ford	16-9-2020
Glenn Thomas	Contractor		16.9.20
Jason Rees	Plant operator		16 9 20
GLEN JACKSON	Plant operator		16.9.20

ORANGE CITY COUNCIL

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OCCWHS 017 V1-2020

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: ERRRC Traffic Management		**Area:** Euchareena Road Resource Recovery Centre	**WAP:**	WAP 012
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23.9.2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Ford.	**DATE**	11/9/2020

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Equipment / additional PPE:

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot

			temperatures) • Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Operating at ERRRC	Disruption to public	• General public vehicles, heavy vehicles and other equipment to comply with site speed limits and any directional signage. • Traffic movement will be restricted to established all weather access roads unless otherwise approved by the Manager Waste Services and Technical Support.
3	Heavy vehicles transporting waste to ERRRC	Motor vehicle accidents	• Heavy vehicles to comply with road speed limits and signs, and any directions given by Police, Roads and Maritime Services (RMS), or other authorities. • Heavy vehicles must not travel in the hours specified below: 7.00am – 7.15am Mon to Friday (School Days) 8.28am – 8.37am Mon to Friday (School Days) 3.28pm – 3.40pm Mon to Friday (School Days) 4.40pm – 5.00pm Mon to Friday (School Days)
4	Heavy vehicle movements at ERRRC	Disruption to public	• Not generate more than 40 heavy vehicle movements in any one day, and not more than 30 heavy vehicle movements a day when averaged over a 7 day period.
5	Visitors to ERRRC	Interfere with the flow of traffic	• Park in the designated parking area
6	Operational staff		• Provided with appropriate site induction and traffic management training
7	JR Richards & Sons Pty Ltd	Disruption to public	• Adhere to their *Transport Code of Conduct* to ensure safe conduct at ERRRC, including appropriate licensing, safe vehicle operation and interactions and necessary maintenance (refer – **Section 9.5**) • New drivers are required to sign the *Code of Conduct* during their first visit. • Geo-tracked to ensure heavy vehicle restrictions are followed and to ensure JR Richards & Sons Pty Ltd

			vehicles are not on Euchareena Road during the hours specified in point (3) above. Geo- tracking will record the date and time each vehicle enters Euchareena Road and enters the ERRRC site.

RESPONSIBILTIES:

It is the responsibility of individual staff and contractors to ensure the correct procedures are followed when operating vehicles or machinery at the site, or transporting waste to the site.

RECORDS:

Any incidents are recorded on **Form 16** from **SOP 16 - ERRRC Daily Checklist**.

REFERENCES:

SOP 16 – ERRRC Daily Checklist

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
WAYNE DAVIS	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
VIC BIANIC	PLANT OPERATOR		11 9 202
Peter Ford	Resource Recovery Centre supervisor	P Ford.	16-9-2020
Glenn Thomas	Contractor		16.9.20
Jason Rees	Plant op		16.9.20
GLEN JACKSON	Plant operator		16.9.20

ORANGE CITY COUNCIL

FINAL

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: ORRRC Traffic Management		**Area:** Ophir Road Resource Recovery Centre	**WAP:**	WAP 013
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23/9/2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Ford.	**DATE**	16/9/2020

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Equipment / additional PPE:

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures)

			• Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Operating at ORRRC	Disruption to public	• All traffic to adhere to ORRRC Traffic Management Plan • General public vehicles, heavy vehicles and other equipment to comply with site speed limits and any directional signage. • Traffic movement will be restricted to established all weather access roads, unless otherwise approved by the Manager Waste Services and Technical Support.
3	Visitors to site	Interfere with the flow of traffic	• Park in the designated parking areas
4	Weighbridge staff		• Direct all patrons of the facility to the appropriate end disposal point subject to the nature of the material presented (refer to **Section 3.5**).
5	Incoming patrons of ORRRC	Conflict with exiting heavy vehicles being weighed off the weighbridge	• Operational staff will coordinate with the weighbridge operator to provide traffic control, in order to maintain sufficient space for large trucks to egress off the weighbridge in an easterly direction.
6	JR Richards & Sons Pty Ltd	Disruption to public	• Adhere to *Transport Code of Conduct* to ensure safe conduct at ORRRC, including appropriate licensing, safe vehicle operation and interactions, and necessary maintenance (refer – **Section 9.5**) • New drivers are required to sign the Code of Conduct during their first visit
7	Operational staff		• Site induction and traffic management training
8	Incident Reporting		• Recorded on **Form 15,** detailed in **SOP 15 - ORRRC Daily Checklist.**

RESPONSIBILITIES:

It is the responsibility of individual staff and contractors to ensure the correct procedures are followed by all vehicles and machinery operating at ORRRC.

RECORDS:

Any incidents are recorded on **Form 15** from **SOP 15 - ORRRC Daily Checklist.**

REFERENCES:

SOP 15 – ORRRC Daily Checklist

Traffic Management Plan

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
WAYNE DAVIS	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
Vic BIRNIE	PLANT OPERATOR		11.9.2020
Peter Ford	Resource Recovery centre supervisor	P Ford.	16-9-2020
Glenn Thomas	Contractor		16.9.20
Jason Rees	Plant operator		16 9 20
GLEN JACKSON	PLANT OPERATOR		16.9.20

ORANGE CITY COUNCIL

FINAL

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Handling Contaminated Soil at ORRRC		**Area:** Ophir Road Resource Recovery Centre	**WAP:**	WAP 014
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23.9.2020
	Line Manager	Wayne Harris	**DATE**	10/9/2020.
	Supervisor	P Ford	**DATE**	16-9-2020

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Equipment / additional PPE: Telescopic Handler / Loader

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures)

			• Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Treating soils contaminated with petroleum hydrocarbons	Hazardous Waste	As per condition L5 of EPL No. 5956 only soils contaminated with petroleum hydrocarbons can be treated at the premises.
3	Delivery of hydrocarbon contaminated soil	Hazardous Waste	Direct all enquires to the Manager Waste Services and Technical Support for approval prior to receipt at ORRRC. Lab analysis result assists with acceptance deliberation
4	Receipt of hydrocarbon contaminated soil	Hazardous Waste	Record in the waste data records and direct transporter to nominated disposal point.
5	Managing contaminated soil	Hazardous Waste	Contaminated soil will be managed in an area adjacent to the active disposal pits on the top of the Stage 3 landfill cell (refer to **Figure 3.4.1 in Operational Environmental Management Plan**).
6	Soils contaminated with petroleum hydrocarbons	Hazardous Waste	Place in windrows in an area that will not be required for at least two (2) months. The soil windrows will have a maximum height of 1.5m and base width of 4m. The soil windrows will be turned once every two weeks for a minimum of two (2) months or until there is no significant hydrocarbon odour remaining in the soil. The soil stockpile is sign posted "contaminated soil".
7	Management of hydrocarbon contaminated soil	Hazardous Waste	When there is no significant hydrocarbon odour remaining in the soil it can be used as cover material. Management of hydrocarbon contaminated soil shall be included in staff training.

RESPONSIBILITIES:

Manager Waste Services and Technical Support will be responsible for approving receipt of hydrocarbon contaminated soil.

The Resource Recovery Centre Supervisor is responsible for the receipt and management of hydrocarbon contaminated soil.

RECORDS:

Receipt of hydrocarbon contaminated soil will be recorded in the waste data records.

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
WAYNE DAVIS	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020.
VIC BIANIC.	PLANT OPERATOR		11.9.2020
Peter Ford	Resource Recovery Centre Supervisor	P Ford	16-9-2020
Glenn Thomas	Contractor		16.9.20
Jason Rees	Plant operator		16.9.20
GLEN JACKSON	Plant operator		16.9.20

ORANGE CITY COUNCIL

FINAL

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Plant – Routine Maintenance		**Area:** Ophir Road Resource Recovery Centre	**WAP:**	WAP 015
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23.9.2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Ford	**DATE**	16/9/2020

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Equipment / additional PPE:

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures)

			• Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Secure machine	Uncontrolled movement	Shut down engine
		Run over	Isolate power
		Crushed/hit by machine	Apply handbrake Drive control in neutral All attachments lowered to the ground
3	Walk around inspection and engine bay	Pinch points	Signage, awareness
		Hot items if previously operated	Signage, awareness, do not work on hot components until cooled. Ensure PPE is used
		Slips & trips	3 points of contact, housekeeping – keep areas free of clutter
4	Greasing machine	Crush	Ensure boom is supported, use Ram Lock
		Fall from machine	3 point contact, avoid accessing area when wet, do not access parts of machine that do not have hand rails
		Shearing hazard	Support boom

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
Wayne Davis	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
Vic Birnie.	PLANT OPERATOR		11 9 2020
Peter Ford	Resource Recovery centre supervisor	P Ford.	16-9-2020
Glenn Thomas	Contractor		16.9.20
Jason Rees	Plant operator		16 9 20
GLEN JACKSON	Plant operator		16.9.20

ORANGE CITY COUNCIL

FINAL

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Community Recycling Centre Household Hazardous Waste Receipt and Management		**Area:** Ophir Road Resource Recovery Centre	**WAP:**	WAP 016
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23/9/2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Ford	**DATE**	16-9-2020

 Hi Vis							 Night Work			
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Equipment / additional PPE: Telescopic Handler / Forklift to move storage stillages

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot

			temperatures) • Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Communicate with public to identify materials to be deposited at Community Recycling Centre	Public deliver waste to wrong location – public contact	Provide clear instruction at weighbridge to deliver to designated drop off point within the CRC
		Incorrectly Labelled or Unidentified Substances	Substance to be treated as Hazardous and clear instruction given at weighbridge to deliver to appropriate receptacle Weighbridge to contact RRC Staff. If substance is not labelled ask customer if they know what the substance is, if not put in toxic stillage
3	Drop off items to appropriate receptacle	Spillage, slips, trips & fumes	Lock up ASAP, safe lifting techniques, PPE. Spill kits.
4	Staff transfer items into appropriate receptacles or storage bins, i.e. gas bottles, lead / water based paints, household and car batteries, light bulbs / fluorescent tubes, non-motor oil, toxic and nontoxic chemicals	Hazardous manual tasks	Do not exceed 20 kilogram lifting capacity. Ensure PPE is worn and appropriate lifting techniques applied.
		Cuts & personal injury	Ensure appropriate PPE is worn e.g. gloves, long sleeve clothing. Ensure clear & tidy area – good housekeeping practices. First Aid kit
		Damaged or Leaking Containers	Transfer to suitable alternate container before placing in appropriate receptacle, Spill kit
		Skin / Eye Contact, inhalation of Chemicals	Ensure appropriate PPE is worn e.g. gloves, masks, long sleeve clothing.
		Ignition of items / fire	No Smoking, Fire Extinguisher, Hose. Careful placement of items – not tossed, Segregation of items into appropriate receptacles
5	Lock up cage & ensure items in storage bins are appropriately stored & not overflowing	Cage unlocked	Check cage security & bins daily at beginning and end of shift.
		Bins overloaded/ stacked	Secure products and ensure sufficient capacity/ appropriate servicing. Replace bins when ¾ full. Arrange Toxfree to undertake bin collection
6	Staff undertake weekly (Monday morning) inventory stocktake of	Pedestrian / traffic conflict while undertaking stocktake	Visual and audible check of traffic flow prior and during stocktake – awareness of surroundings

	collected materials and upload onto iPad which is linked to Toxfree administration centre.		Use appropriate PPE
7	Locating / moving storage stillages within CRC and to and from service truck via telescopic handler / forklift	Pedestrian / Traffic conflict whilst servicing storage bins / receptacles	Visual and audible check of traffic flow prior and during service of bins / receptacles – awareness of surroundings Ensure operator has appropriate training and qualifications

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
WAYNE DAVIS	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
VIC BIANCO	PLANT OPERATOR		11.9.2020
Peter Ford	Resource Recovery Centre Supervisor	P Ford	16-9-2020
Glen Thomas	Contractor		16.9.20
Jarson Rees	Plant operator		16-9-20
GLEN JACKSON	Plant operator		16.9.20

ORANGE CITY COUNCIL

FINAL

Work Activity Procedure

This procedure will be reviewed following a major incident, when the activity changes or annually.

Task: Manual Handling		**Area:** Ophir Road Resource Recovery Centre and Euchareena Road Resource Recovery Centre	**WAP:**	WAP 017
Endorsed by:	Work Health and safety Coordinator or delegate		**DATE**	23.9.2020
	Line Manager	Wayne Davis	**DATE**	10/9/2020
	Supervisor	P Ford	**DATE**	16/9/2020

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Equipment / additional PPE:

Step No.	Job Step The activity must be broken up into a sequence of steps/tasks to complete the work activity	Potential Hazard What harm can it do? For each step /task associated with the overall activity the individual hazard must be identified	Controls What can you do to reduce the risk of this hazard? Appropriate controls must be established for all identified hazards in accordance with the hierarchy of controls
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool

			drinks and electrolytes in hot temperatures) • Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions
2	Assess Job Manual Handling requirement	Manual handling injuries	Undertake Manual Handling Training. Examine work and work location, note all hazards. Identify the safest path of travel. Observe other people or workers at the location. If required communicate with other people the work to be undertaken. If required establish an exclusion zone around work area. Wear appropriate PPE, i.e. gloves for hand protection etc. Follow the following procedures outlined below:
3	Lifting Loads Unloading Truck	Bending	Bend at the knees, whilst keeping back straight. Use lifting aids such as straps if necessary. Get into a comfortable position before lifting.
		Position	Get as close as possible to load before lifting. Do not lift from a cramped position, move obstacles if required. Ensure shoulders are over knees when lifting loads off the ground.
		Sudden movement	Avoid sudden movement during lifting. Ensure loads are lifted in one smooth direction to minimise shock loading.
		Uneven and awkward loads	Before lifting ensure load is centred. Use two people if the load is too awkward for one person to lift on their own.
		Heavy Loads	As a guide add a person to assist for every 10kg per load over 20kg. Use mechanical assistance where possible, i.e. cranes, forklifts or specialised lifting devices such as pit lid handles. Only qualified operators to use mechanical plant.
4	Carrying Loads Moving Materials to work area	Slips, trips and falls	Ensure the path of travel is the most suitable; assess this route for uneven ground, pot holes or dips in ground level. If the surface is wet take extra caution.
		Falls	Stay out of areas where possible hazards exist. Erect danger tape or fence off any potential areas for falls.
		Heavy Loads	Ensure the distance of travel is achievable. Take a rest if required. As a guide add a

			person to assist for every 10kg per load over 20kg. Use mechanical assistance where possible, i.e. wheel barrow, cranes, forklifts
5	Set-up and Clean-up work area	Injury to others	Ensure clear communication between workers and general public is maintained. Establish an exclusion zone where required.
		Cuts, abrasions and impact injuries	Wear appropriate PPE for tasks, i.e. gloves for hand protection whilst in contact with sharp objects and safety glasses for eye protection. Ensure clear communication between workers during movement of plant, equipment and materials
		Slips, trips and falls	Keep awareness of conditions on the ground or floor surface. Maintain good housekeeping, ensure equipment and materials are in designated areas. If the ground or floor surface is wet take extra care.
6	Undertake Works	Refer to other WAP and SWMS documents	

I acknowledge that I have been trained in this Work Activity Procedure

Name	Position	Signature	Date
WAYNE DAVIS	Manager Waste Services & Technical Support	Wayne Davis	10/9/2020
VIC BIRNIE	PLANT OPERATOR		11.9.2020
Peter Ford	Resource Recovery centre supervisor	P Ford	16-9-2020
G-Thomas	Contractor		16.9.2020
Jason Rees	Plant operator		16 9 2020
GLEN JACKSON	Plant operator		16.9.2020

Safe Work Method Statement

ORANGE CITY COUNCIL

FINAL

Company	Orange City Council	**Address**	P O Box 35, Orange NSW 2800	**ABN**	85 985 402 386
Work activity description	Working within the leachate holding tank exclusion zone at ERRC			**SWMS No.**	**ERRRC 001**
This is a generic SWMS and any site specific hazards must be assessed and added to this SWMS prior to commencement of the activity, dated and signed off at the end of the SWMS.					
Work area	Euchareena Road Resource Recovery Centre			**Revision No.**	*V1* - 20
Prepared by (names/positions)	Mitchell Beasley – Cadet Engineer Greg Breach Andrew Wright			**Date**	August 2020
Endorsed by	Work Health and Safety Coordinator or delegate			**Date**	17-9-2020
	Line Manager Waste Services and Technical Support – Wayne Davis		Wayne Davis	**Date**	10/9/2020
	Supervisor Peter Ford Greg Breach Andrew Wright		P Ford.	**Date**	16/9/2020

SWMS will be reviewed:

- When the task/ activity relates to a site specific project; When a significant change to the task/ activity is identified; if an incident occurs or a hazard is identified relating to the activity; periodically as per Council's policies and procedures

Mandatory PPE				**Site and Task Specific Personal Protective Equipment Required** ***(Check boxes below for required PPE)***							
 Hi Vis							 Night Work				**Additional site specific PPE:**
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Safety Data Sheets relating to this activity **PPE & first aid as per SDS**	Location of SDS sheets As per recommendations in the report undertaken by Gary Foster	**Qualifications/competencies/licences required for this task.** (Available from the Work Health & Safety Team)	
Plant / equipment required	Charged Mobile Phone, Stocked First Aid Kit, Water Cart	**Plant / equipment inspection and maintenance checks**	As per manufacturers specifications As per the report and study undertaken by Gary Foster Hygienist
Emergency Response (Please select one)	☒As per Council's site emergency evacuation plans ☐Projects OCCWHS 008 Site Specific Emergency Management Plan ☐As specified for non-council worksites as per OP 084 Section 9		

Legislation & Standards	**Codes of Practice**	**Other**
Work Health and Safety Act 2011 Work Health and Safety Regulation 2017 Workers Compensation Act 1987 Local Government Act 1993 Workplace Injury Management and Workers Compensation Act 1998 AS 1885.1.1990 National Standard for Workplace Injury and Disease Recording AS/NZS 4801: 2001 Occupational Health and Safety Management	Code of Practice – Work health and Safety Consultation Cooperation and Coordination Code of Practice – How to Manage Work Health and Safety Risks Code of Practice – First Aid in the Workplace Code of Practice – Managing the Work Environment and Facilities Code of Practice – Construction Work	Site Specific Induction All required processes outlined in the site specific Gas Management Plan OCC Sun Safe Policy OCC Fatigue Management Policy

No	Task (Basic steps in logical sequence – what is to be done – not how)	Potential Hazard	Initial Risk	Controls Controls must be established using the Hierarchy of Controls Eliminate (E), Isolate (I), Substitute (S), Engineering (EC), PPE, Administration (A)	Residual Risk	Responsibility
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	2	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist	5	All staff Supervisors and Managers,
2		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	3	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures) • Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions	5	All Staff Supervisor
3	Arrive at Site	Unauthorised Entry	1	Site specific induction Contact site supervisor, sign in and conduct toolbox meeting with all staff	5	All Staff

No	Task (Basic steps in logical sequence – what is to be done – not how)	Potential Hazard	Initial Risk	Controls Controls must be established using the Hierarchy of Controls Eliminate (E), Isolate (I), Substitute (S), Engineering (EC), PPE, Administration (A)	Residual Risk	Responsibility
		Snakes	2	Awareness and visual inspection of surroundings	4	All Staff
4	Work within exclusion zone at leachate holding tank site (tasks involve maintenance, inspections of power board, transferring of any leachate and all general works conducted within the exclusion zone)	Ammonia Gas Inhalation Any smell odour	4	Use the required respirator and PPE as outlined in the report undertaken by Gary Foster (Hygienist) Mech Elec team will work 2x2 at all times Follow SWMS for specific tasks undertaken within the exclusion zone Report any issues immediately	5	All Staff
5	Pack up equipment Ensure work site is left in a safe condition	Manual handling Slips trips falls	4	Safe lifting techniques Inspection of site when leaving	5	All staff

I agree, understand and accept my responsibilities as a worker or contractor on this site including hazards, risks, controls and legislative compliance requirements outlined in this SWMS.

Generic SWMS					
Name	Signature	Date	Name	Signature	Date
WAYNE DAVIS	Wayne Davis	10/9/2020			
VIC BIANIE.		11 9 2020			
Peter Ford	P Ford.	16-9-2020			
Glenn Thomas		16.9.20			
Jason Rees		16 9 20			
DEAN MYSTOWN		16.9.20			
GLEN JACKSON		16.9.20			

The induction into this SWMS was undertaken by:		
Name	Position	Date

Project Site Specific SWMS		
Site		
Developed by **Names/positions**		**Date**
Approved by		**Date**

Name	Signature	Date	Name	Signature	Date
I agree, understand and accept my responsibilities as a worker or contractor on this site including hazards, risks, controls and legislative compliance requirements outlined in this SWMS.					

The induction into this SWMS was undertaken by:		
Name	Position	Date

Risk Matrix

Likely hood	Description
Almost certain	Will happen: imminent or will occur within 1 to 6 months
Likely	Expected to happen: Expected to occur at least once in a 6 to 12 month period
Possible	Could happen: will probably occur between 1 to 5 years
Unlikely	Not expected to happen: may occur only once every 5 - 10 years
Rare	uncommon, unusual: not likely to occur within a 10 year period

Consequence	Description
Severe	Death or serious disability
Major	Serious injury – long term hospital
Moderate	Significant injury – short term hospital
Minor	Injury may require first aid
Negligible	No injuries

RISK RATING TABLE

Likelihood	Negligible	Minor	Moderate	Major	Severe
Almost certain	5	4	2	1	1
Likely	5	4	2	1	1
Possible	5	5	3	1	1
Unlikely	5	5	4	2	2
Rare	5	5	4	3	3
	Consequences				

RISK ACTION TABLE

Risk Level	Description
1	**Severe risk** - this task **MUST NOT** proceed until the supervisor reviews the task or process and risks adequately controlled.. Firstly eliminate the risk, and if not possible introduce measures to control the risk by reducing the level to the lowest level achievable. Actions must be recorded in the SMWS (if required) and monitor / review controls
2	**Major risk** – Urgent action to reduce/eliminate the risk. Supervisor may give permission for staff to undertake some high risk activities, provided the system of work is clearly documented, specific training given and adequate review of the task / controls undertaken. Record actions in SMWS (if required) and monitor / review controls
3	**Moderate risk** – action to eliminate/reduce the risk within a specified period. Record actions in SMWS (if required) and monitor / review controls
4	**Minor risk** - assess the risk, determine whether current controls are adequate or if further action is needed. Monitor and review as required
5	Negligible risk – manage by routine procedures. Monitor and review as required

Copy of completed SWMS held on site for the duration of the works
All staff is to be trained in this SWMS, training is to be recorded on the Toolbox Meeting Record
All SWMS are endorsed by the WHS Coordinator and retained by the WHS team electronically

ORANGE CITY COUNCIL

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Company	Orange City Council	**Address**	P O Box 35, Orange NSW 2800	**ABN**	85 985 402 386
Work activity description	Lone Worker			**SWMS No.**	**RRC 002**

This is a generic SWMS and any site specific hazards must be assessed and added to this SWMS prior to commencement of the activity, dated and signed off at the end of the SWMS.

Work area	ORRRC & ERRRC		**Revision No.**	*V1* - 20
Prepared by (names/positions)	Wayne Davis - Manager Waste Services and Technical Support, Peter Ford – Resource Recovery Centre Supervisor, Vic Birnie and Glen Jackson – Resource Recovery Centre Operators		**Date**	August 2020
Endorsed by	Work Health and Safety Coordinator or delegate		**Date**	18.9.2020
	Line Manager	Wayne Davis	**Date**	10/9/2020
	Supervisor	P Ford.	**Date**	16/9/2020

SWMS will be reviewed:

- When the task/ activity relates to a site specific project; When a significant change to the task/ activity is identified; if an incident occurs or a hazard is identified relating to the activity; periodically as per Council's policies and procedures

Mandatory PPE				**Site and Task Specific Personal Protective Equipment Required** ***(Check boxes below for required PPE)***							
 Hi Vis							 Night Work				**Additional site specific PPE:** Sunscreen, CRC Respiratory device @ ORRRC
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Safety Data Sheets relating to this activity **PPE & first aid as per SDS**	Location of SDS sheets N/A	**Qualifications/competencies/licences required for this task.** (Available from the Work Health & Safety Team)	Drivers Licence, Construction Induction (white card)

Plant / equipment required	Charged mobile phone / two way radio, Stocked first aid kit	**Plant / equipment inspection and maintenance checks**	As per manufacturers specifications
Emergency Response (Please select one)	☒As per Council's site emergency evacuation plans ☐Projects OCCWHS 008 Site Specific Emergency Management Plan ☐As specified for non-council worksites as per OP 084 Section 9		

Legislation & Standards	**Codes of Practice**	**Other**
Work Health and Safety Act 2011 Work Health and Safety Regulation 2017 Workers Compensation Act 1987 Local Government Act 1993 Workplace Injury Management and Workers Compensation Act 1998 AS 1885.1.1990 National Standard for Workplace Injury and Disease Recording AS/NZS 4801: 2001 Occupational Health and Safety Management AS/NZS 4602.1:2011 High visibility safety garments – Garments for high risk applications AS/NZS 1337.1:2010 Personal eye protection – Eye and face protectors for occupational applications AS/NZS 2210.1:2010 Safety, protective and occupational footwear – Guide to selection, care and use AS/NZS 4399:1996 Sun protective clothing – Evaluation and classification	Code of Practice – Work health and Safety Consultation Cooperation and Coordination Code of Practice – How to Manage Work Health and Safety Risks Code of Practice – Hazardous Manual Tasks Code of Practice – First Aid in the Workplace	Site Specific Induction. Tool box, daily site inspection, SSSMP

No	Task (Basic steps in logical sequence – what is to be done – not how)	Potential Hazard	Initial Risk	Controls Controls must be established using the Hierarchy of Controls Eliminate (E), Isolate (I), Substitute (S), Engineering (EC), PPE, Administration (A)	Residual Risk	Responsibility
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	2	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist	5	All staff Supervisors and Managers,
		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	3	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures) • Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions	5	All Staff Supervisor
2	Working Alone	Selection of tasks/jobs		• Assess task – does it need to be done when alone • Avoid use of excavator		Worker

No	Task (Basic steps in logical sequence – what is to be done – not how)	Potential Hazard	Initial Risk	Controls Controls must be established using the Hierarchy of Controls Eliminate (E), Isolate (I), Substitute (S), Engineering (EC), PPE, Administration (A)	Residual Risk	Responsibility
				• Avoid use of ladders • Avoid use of chainsaw • Check with supervisor first if unsure of tasks • Ensure operator has appropriate training and qualifications to undertake task • List of high risk activities Chapter 6.1 in the WHS Regulations 2017 • Follow SWMS for the work task		
		Risk of Traffic, pedestrians	2	• Awareness of surroundings, public and traffic	4	Worker
		Risk of being left alone if injured	1	• Access to mobile phone; GPS unit or satellite phone; two way radios – relevant training in communications system • First aid kit • Develop procedure for regular contact between lone worker and Supervisor • Vehicle availability	4	Worker
		Lack of communication / information	1	• Determine exact whereabouts, expected arrival times and expected timeframe to complete tasks • Develop procedure for regular contact between lone worker and Supervisor • Determine once on site if coverage is available. If not return to an area where coverage is available and discuss with supervisor • Notify Supervisor upon arrival / departure	4	Worker

No	Task (Basic steps in logical sequence – what is to be done – not how)	Potential Hazard	Initial Risk	Controls Controls must be established using the Hierarchy of Controls Eliminate (E), Isolate (I), Substitute (S), Engineering (EC), PPE, Administration (A)	Residual Risk	Responsibility
		Verbal abuse/threats and assault from members of the public	2	• Immediately notify police and supervisor of situation • Access to mobile phone • Lock yourself in vehicle or site office • Remove yourself from the scene	4	Worker
		Operation of machinery – personal injury, injury to others	1	• Ensure appropriate PPE is worn • Staff signed off on relevant SWMS/WAPs/SOPs • Access to first aid kit • Competent and qualified operator • Awareness of surroundings	4	Worker
		Working outside normal hours of work	3	• Discuss with supervisor prior commencing • Take regular rest breaks • Follow Fatigue Management Policy • Access to food and water	5	Worker
		Attack by animal, insects	3	• Use of mobile phone to contact ranger / police and or supervisor • Lock yourself in vehicle • 1st Aid Kit • Awareness of surroundings	5	Worker
		Access to emergency equipment	4	• Tool Box meeting • Ensure 1st Aid kit / fire extinguishers are in date and in vehicles • Portable 1st Aid kits • Ensure PPE is in good working order	5	Worker
		Access and Egress to buildings	4	• Ensure you are familiar with Emergency Evacuation plan for the site and muster points	5	Worker

No	Task (Basic steps in logical sequence – what is to be done – not how)	Potential Hazard	Initial Risk	Controls Controls must be established using the Hierarchy of Controls Eliminate (E), Isolate (I), Substitute (S), Engineering (EC), PPE, Administration (A)	Residual Risk	Responsibility
				• Participate in emergency drills • Sign in / out of buildings		
		Working in the dark	4	• Vehicle lights / hire of lights • Torches • Building Lights • Ask for assistance	5	Worker
		Vehicle Breakdown	4	• Use of mobile phone • Contact Supervisor	5	Worker
3	Departure from the site	Vehicle bogged	4	• Awareness of surrounding and conditions - Avoid going off road • Use of mobile phone	5	Worker
		Workers or pedestrians not visible being struck by a vehicle Vehicle collision	2	• Competent and qualified operator • Awareness of surroundings • Obey Road Rules	4	Worker

I agree, understand and accept my responsibilities as a worker or contractor on this site including hazards, risks, controls and legislative compliance requirements outlined in this SWMS.

Generic SWMS					
Name	Signature	Date	Name	Signature	Date
WAYNE DAVIS	Wayne Davis	10/9/2020.			
VIC BIANCO		11.9.2020			
Peter Ford	P Ford.	16-9-2020			
Glenn Thomas		16.9.20			
Jason Rees		16 9 20			
GLEN JACKSON		16.9.20			

The induction into this SWMS was undertaken by:		
Name	Position	Date

Project Site Specific SWMS		
Site		
Developed by **Names/positions**		**Date**
Approved by		**Date**

Name	Signature	Date	Name	Signature	Date
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Risk Matrix

Likely hood	Description
Almost certain	Will happen: imminent or will occur within 1 to 6 months
Likely	Expected to happen: Expected to occur at least once in a 6 to 12 month period
Possible	Could happen: will probably occur between 1 to 5 years
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Consequence	Description
Severe	Death or serious disability
Major	Serious injury – long term hospital
Moderate	Significant injury – short term hospital
Minor	Injury may require first aid
Negligible	No injuries

RISK RATING TABLE

Likelihood					
Almost certain	5	4	2	1	1
Likely	5	4	2	1	1
Possible	5	5	3	1	1
Unlikely	5	5	4	2	2
Rare	5	5	4	3	3
	Negligible	Minor	Moderate	Major	Severe
	Consequences				

RISK ACTION TABLE

Risk Level	Description
1	**Severe risk** - this task **MUST NOT** proceed until the supervisor reviews the task or process and risks adequately controlled.. Firstly eliminate the risk, and if not possible introduce measures to control the risk by reducing the level to the lowest level achievable. Actions must be recorded in the SMWS (if required) and monitor / review controls
2	**Major risk** – Urgent action to reduce/eliminate the risk. Supervisor may give permission for staff to undertake some high risk activities, provided the system of work is clearly documented, specific training given and adequate review of the task / controls undertaken. Record actions in SMWS (if required) and monitor / review controls
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5	Negligible risk – manage by routine procedures. Monitor and review as required

Copy of completed SWMS held on site for the duration of the works
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All SWMS are endorsed by the WHS Coordinator and retained by the WHS team electronically

ORANGE CITY COUNCIL

FINAL

Company	Orange City Council	**Address**	P O Box 35, Orange NSW 2800	**ABN**	85 985 402 386
Work activity description	Asbestos Disposal			**SWMS No.**	**RRC 001**

This is a generic SWMS and any site specific hazards must be assessed and added to this SWMS prior to commencement of the activity, dated and signed off at the end of the SWMS.

Work area	Ophir Road Resource Recovery Centre		**Revision No.**	*V1-20*
Prepared by (names/positions)	Wayne Davis - Manager Waste Services and Technical Support, Peter Ford – Resource Recovery Centre Supervisor, Vic Birnie and Glen Jackson – Resource Recovery Centre Operators,		**Date**	August 2020
Endorsed by	Work Health and Safety Coordinator or delegate		**Date**	18.9.2020
	Line Manager	Wayne Davis	**Date**	10/9/2020
	Supervisor	P Ford	**Date**	16/9/2020

SWMS will be reviewed:

- When the task/ activity relates to a site specific project; When a significant change to the task/ activity is identified; if an incident occurs or a hazard is identified relating to the activity; periodically as per Council's policies and procedures

Mandatory PPE				**Site and Task Specific Personal Protective Equipment Required** ***(Check boxes below for required PPE)***							
 Hi Vis											☐
☒	☒	☒	☒	☒	☐	☐	☒	☒	☒	☒	

Safety Data Sheets relating to this activity **PPE & first aid as per SDS**	Location of SDS sheets	**Qualifications/competencies/licences required for this task.** (Available from the Work Health & Safety Team)	Asbestos Awareness Training, Loader and Telescopic Handler Competency

Plant / equipment required	Heavy duty plastic, duct tape, Loader to cover delivered asbestos, telescopic handler	**Plant / equipment inspection and maintenance checks**	As per manufacturers specifications
Emergency Response (Please select one)	☒As per Council's site emergency evacuation plans ☐Projects OCCWHS 008 Site Specific Emergency Management Plan ☐As specified for non-council worksites as per OP 084 Section 9		

Legislation & Standards	**Codes of Practice**	**Other**
Work Health and Safety Act 2011 Work Health and Safety Regulation 2017 Workers Compensation Act 1987 Local Government Act 1993 Workplace Injury Management and Workers Compensation Act 1998 AS 1885.1:1990 National Standard for workplace Injury and Disease Recording AS/NZS 4801:2001 Occupational Health and Safety Management AS1716;2009 use and maintenance of respirators AS 4964 – 2004 Method for the qualitative identification of asbestos in bulk samples	Code of Practice – How to Manage Work Health and Safety Risks Code of Practice – Work Health and Safety Consultation, Cooperation and Coordination Code of Practice – How to Safely Remove Asbestos Code of Practice – How to Manage and Control Asbestos in the Workplace (Feb 2016) Asbestos Related Work – Roads & Maritime Services (PN 066P25)	Asbestos Management Plan – Orange City Council

No	Task (Basic steps in logical sequence – what is to be done – not how)	Potential Hazard	Initial Risk	Controls Controls must be established using the Hierarchy of Controls Eliminate (E), Isolate (I), Substitute (S), Engineering (EC), PPE, Administration (A)	Residual Risk	Responsibility
1	Toolbox meeting: Workers need to consider the following when presenting to the worksite	Potential Sickness or Fatigue risks - Worker is not in a fit state (physical, mental and emotional) to perform the duties of the job competently	2	• Workers should stay away from the workplace if they are unwell – Follow any Advice and information from relevant Health Authorities • Follow Council's Fatigue Management Procedure • Supervisors to regularly communicate with staff. Supervisors / Managers to monitor fatigue levels using the Fatigue Hazard Identification Checklist	5	All staff Supervisors and Managers,
2		Working in Extreme Weather Conditions – Air Quality, Heat and cold related illness	3	• If required monitor air quality and follow any health messages • Ensure temperature appropriate PPE clothing is worn • Use of additional PPE (such as Ice vests / bands under standard PPE in extreme heat where appropriate). • Access to appropriate shelter • Take regular rest breaks • Rotation of tasks • Access to food and water, (warm drinks in cold temperatures, cool drinks and electrolytes in hot temperatures) • Review the Scheduling of tasks Monitor temperature and workers' physical responses to environmental conditions	5	All Staff Supervisor
3	Screen all incoming waste at the weighbridge	Hazardous Substance Airborne debris	2	Drivers are obliged to notify weighbridge operators if their load contains asbestos.	5	RRC Weighbridge & Plant Operator

No	Task (Basic steps in logical sequence – what is to be done – not how)	Potential Hazard	Initial Risk	Controls Controls must be established using the Hierarchy of Controls Eliminate (E), Isolate (I), Substitute (S), Engineering (EC), PPE, Administration (A)	Residual Risk	Responsibility
				If the load is identified as containing asbestos, the waste may only be received (as per the provisions of the Protection of the Environment Operations (Waste) Regulation 2014) if: • Bonded asbestos material is securely packaged (e.g. with heavy duty plastic); • Friable asbestos is in a sealed container; and/or • Asbestos contaminated soils are wetted down		
			2	If the load does not comply with the conditions noted above, the waste is to be rejected by weighbridge operators and drivers issued with the EPA handout ***Safely disposing of asbestos waste from your home.***	5	
4	Rejected loads	Hazardous Substance Airborne debris	2	If asbestos waste is rejected at the weighbridge, the following details need to be recorded by weighbridge operators on **Form 08** within SOP 8- **Driver/ Transport company details for rejected asbestos waste loads:** a. Name and contact details of the driver/ transport company; b. Origin of the asbestos or asbestos containing material; c. Amount and type of asbestos or asbestos containing material d. Reasons why the asbestos waste was not properly packaged, disclosed or transported; and	4	Weighbridge Operators

No	Task (Basic steps in logical sequence – what is to be done – not how)	Potential Hazard	Initial Risk	Controls Controls must be established using the Hierarchy of Controls Eliminate (E), Isolate (I), Substitute (S), Engineering (EC), PPE, Administration (A)	Residual Risk	Responsibility
				e. Development consent details (if applicable)		
5	Asbestos waste not returned to the ORRRC for disposal		5	If evidence of appropriate disposal of the waste cannot be provided, the Resource Recovery Centre Supervisor is required to notify the Manager Waste Services and Technical Support who will report the driver/ transport company to the EPA.	5	Weighbridge Operators
6	Previously rejected asbestos waste		5	When a driver who has previously been rejected returns with the asbestos waste appropriately packaged, **Form 08** within SOP 8 is used to check off the date the driver returned and waste received.	5	Weighbridge Operators
7	Receipt of asbestos waste		5	Weighbridge operators are required to issue a receipt to drivers for asbestos waste received. The receipt will note the time, date, location of disposal, weight of asbestos containing material disposed, and a receipt number.	5	Weighbridge Operators
8	Handling asbestos waste	Hazardous Substance Airborne debris	2	Handle asbestos waste in a manner to minimise the chance of damage to the wrapping, breakage and or dust/generation. Immediately place in the active asbestos landfill cell and cover with a minimum of 500mm of VEM (Virgin Excavated Material) using Councils loader plant. Ensure PPE is worn including disposable face masks, gloves and overalls – use plastic to wrap any asbestos with duct tape.	5	RRC Plant Operators
9	Disposal of contaminated PPE	Hazardous Substance Airborne debris	2	Seal, label and dispose of contaminated PPE upon completion of the asbestos work	5	RRC Plant Operators

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10	Incident reporting	Failure to report	4	Notify supervisor immediately and use council incident reporting form for found asbestos at the site.	5	RRC Plant Operators

Responsibilities
It is the Resource Recovery Centre Supervisor's responsibility to ensure that all incoming waste is screened, and the landfilling operations are monitored to ensure that asbestos waste is appropriately handled.

If asbestos waste is not adequately packaged and the load is consequently rejected at the weighbridge, the weighbridge operators are required to complete **Form 08 – Driver/Transport Company details for rejected asbestos waste loads.**

It is the Resource Recovery Centre Supervisors responsibility to follow up all entries listed on **Form 08** to ensure that waste is adequately packaged and returned to the ORRRC for disposal. If evidence of appropriate disposal of the waste is not provided, the Manager Waste Services and Technical Support is to be notified, who is then responsible for notifying the EPA.

The Resource Recovery Centre Supervisor is responsible for ensuring that all Resource Recovery Centre Operators undertaking weighbridge procedures and landfilling of asbestos waste are adequately trained in this work procedure.

Records
Form 08 – Driver/Transport Company details for rejected asbestos waste loads is to be completed each time a load of asbestos is rejected at the weighbridge. When the driver returns with the waste appropriately packaged, the form is to reflect the date the waste is received.

Note: 'Bonded asbestos material' means any material (other than friable asbestos material) that contains asbestos. 'Friable asbestos material' means any material that contains asbestos and is in the form of a powder or can be crumbled, pulverised or reduced to powder by hand pressure when dry.

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