Fire and Emergency Management Plan

Patons Lane Resource Recovery Centre

123-179 Patons Lane, Orchard Hills NSW 2748

Rev L, June 2019

DOCUMENT REVISION HISTORY

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19/06/19	L	Sean Fishwick	David Taylor	Update to align with operational phase of project and issued to DPE for review

DISTRIBUTION LIST

Company	Position	Name	Location
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	Communication and Development	Lee Smith	Smartsheet
DP&E	Senior Planning Officer	Emma Barnet	GPO Box 39 Sydney NSW 2001
	Principal Planner	Nicholas Hall	

All updates of this Emergency Plan must be authorised by the PLRRC General Manager - Operations before inclusion.

Major revisions require re-issuing.

EMERGENCY PATONS LANE RRC CONTACTS

Contact Name	Position	Mobile Number
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Kalin Ivanov	Operations Manager	0429 221 521
Jim Sarkis	Chief SEQ Officer	0401 227 590
Arvind Kumar	Safety & Quality Manager - NSW	0415 792 525

SECURITY PROVIDER

Contact Name	Position	Mobile Number
To be advised		

POLICE, FIRE, AMBULANCE – 000

Company	Name	Phone Number	Alternate Number
Fire and Rescue NSW (FRNSW)	Head office Amarina Ave, Greenacre 2190	02 9265 2999	
	Hazardous Materials (Hazmat) Response Unit 50 Lancaster St, Ingleburn 2565	02 9605 5702	
	Penrith Fire Station	02 4721 5575	
	St Marys Fire Station	02 9623 3897	
	Zone Commander Metropolitan West 1 – Cumberland	02 9561 7600 Zone Office	
NSW Rural Fire Service (RFS)	Plumpton RFS Station	02 9832 7620	
State Emergency Service (SES)	SES Operations Centre	13 25 00	
	SES Penrith Unit	13 25 00	
NSW Police Force (Police)	General	1300 138 118	
	Assistance Line	131 444	
	Penrith Police Station 14.0km/22min	02 4721 9444	
	St Marys Police Station 7.4km/13min	02 9677 7499	
Other emergency agencies	Australian Federal Police (Sydney)	02 9286 4000	
	Australian Federal Police Bomb Data Centre	02 6203 6750	
Health and medical aid	Ministry of Health – Public Health Unit, Nepean	02 4734 2022	
	Nepean Hospital 15.2km/18min	02 4734 2000	
	Westmead Hospital 27.2km/28min	8890 5555	

GOVERNMENT/ LOCAL COUNCIL CONTACTS

Company	Name	Phone Number	Alternate Number

Bureau of Meteorology	General enquiries	02 9669 4000
Department of Planning and Environment	Head office	1300 305 695
EPA	Pollution incidents 24 hour reporting	131 555
	Parramatta office	02 9995 5000
Penrith City Council	Council office	02 4732 7777
	After hours Council Officer	
SafeWork NSW	Reporting Line	131 050

Other Contacts / Contacts for Adjoining Properties

Company	Name	Phone Number	Alternate Number
Coolamon Park, Luddenham Road Orchard Hills	Bob Springfield (Site Mgr.) Paul Nakhle (Owner)	0421 875 929 0407 770 377	
Defence Establishment Orchard Hills, The Northern Road Mulgoa	Wayne Palejs (DEOH) Jeff Magick (MSS)	0403 904 4880459 839 670	02 4728 0672 02 4728 0956
Sammut Turf Supplies	Daniel Sammut	0414 423 680	02 4579 6900
Roughwood Park	Vic Bates	0408 027 898	
Transgrid	Sarah Hafez Community Liaison Officer/Community Liaison Team	1800 222 537	02 9284 3000
Sydney West Constructions	Ash Chauhan	0411 800 343	02 4721 5104
The Vines Estate, Cabernet Circuit Orchard Hills	Mark George	02 4736 1722	0418 219 347
202 Luddenham Road, Orchard Hills	Joe Mifsud	02 9834 1823	0408 273 667

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DEFINITIONS AND ABBREVIATIONS

CCTV	Closed-Circuit Television
C&D waste	(Construction and Demolition waste) Waste materials generated from construction and demolition activities. Includes excavated material such as rock and soil, waste asphalt, bricks, concrete, plasterboard, timber and vegetation.[1]
C&I waste	(Commercial and Industrial waste) Waste generated by businesses and industries (including shopping centres, restaurants and offices) and institutions (such as schools, hospitals and government offices), excluding construction and demolition waste and municipal waste.[2]
CLC	Community Liaison Committee.
Coronial inquest/inquiry	Coronial inquests are public hearings held to examine the cause and circumstances surrounding the death of a person in unusual or unnatural circumstances.
DEOH	Defence Establishment Orchard Hills.
DEOTS	Defence Explosive Ordnance Training School
DG	Dangerous Goods
Disposal	Proper disposition of a discarded or discharged material in accordance with local environmental regulations and laws.3 Final placement or riddance of wastes, excess, scrap etc. with (unlike in storage) no intention to retrieve.
DP&E	Department of Planning and Environment
Emergency	A serious unexpected and often dangerous situation requiring immediate action.
EMR	Environmental Management Representative
EPA	NSW Environment Protection Authority
ERT	Emergency Response Team
ESIP	Emergency Services Information Package
FECC	Facility Emergency Control Centre
FRNSW	Fire and Rescue New South Wales
General waste	Waste other than waste which is classified as Special Waste, Liquid Waste, Restricted Solid Waste or General Solid Waste (Putrescible)[4]
Hazard	Any source of potential damage, harm or adverse health effects on something or someone.[5]

[1] http://www.epa.nsw.gov.au/waste/construction-demolition.htm

[2] Glossary Waste Reporting and Levies : www.environment.nsw.gov.au

[3] http://www.businessdictionary.com/definition/waste-disposal.html

[4] NSW Environment Protection Authority: Waste Classification Guidelines November 2014

[5] Canadian Centre for Occupational Health & Safety:http://www.ccohs.ca/oshanswers/hsprograms/hazard_risk.html

Hazardous Materials	Hazardous Materials is a term frequently used to cover one or more of: Hazardous chemicals; Hazardous substances; Dangerous goods; Hazardous or controlled waste materials; Radioactive materials.[6]
Hazmat	HAZMAT is an abbreviation for "hazardous materials"— substances in quantities or forms that may pose a reasonable risk to health, property, or the environment.[7]
Hazardous Substances	Hazardous substances are those that, following worker exposure, can have an adverse effect on health. Examples of hazardous substances include poisons, substances that cause burns or skin and eye irritation, and substances that may cause cancer. Many hazardous substances are also classified as dangerous goods. WHS Regulations cover workplace hazardous substances and dangerous goods under a single framework for hazardous chemicals and introduce a new hazard classification and hazard communication system based on the United Nations' Globally Harmonised System of Classification and Labelling of Chemicals (GHS)[8]
HCl	Hydrochloric acid
Incident	Defined in Schedule 2 of the consent conditions as *"an event causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this approval".*
Incident Response	Notification and response procedures set out in Schedule 5 Conditions 7 & 8 of the project approval.
Pollution Incident	The EPA Environmental Guidelines: Preparation of pollution incident response management plans state that "a pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise."
Pollution Incident Response	Section 148 of the POEO Act requires that a pollution incident is required to be notified where "material harm to the environment is caused or threatened". The response and notification procedures are set out in the Pollution Incident Response Management Plan (PRIMP) as required by Part 5.7A of the POEO Act and the Protection of the Environment Operations (General) Regulation 2009 (POEO(G) Regulation). See Section 5 and Appendix C of this Plan.
Landfill gas	Gaseous emissions from the anaerobic decomposition of organic waste materials placed in a landfill. Above 90% of landfill gas is methane and carbon dioxide, typically in roughly equal amounts depending on the phase of the waste decomposition and other factors, such as oxygen levels[9].
Leachate	Liquid that passes through, or is released by, waste. It arises from the inherent moisture content of the waste and from rainwater (and sometimes groundwater) percolating through or contacting the waste mass. Leachate may contain high levels

[6] Australian Government: Hazardous Materials Management - Leading Practice Sustainable Development Program for the Mining Industry. Sept 2016

[7] US Department of Commerce National Oceanic & Atmospheric Administration: http://oceanservice.noaa.gov/facts/hazmat.html

[8] http://www.safeworkaustralia.gov.au/sites/swa/whs-information/hazardous-chemicals/dangerous-goods/pages/hazardous- substances

[9] NSW EPA Draft Environmental Guidelines – Solid Waste Landfills; Second Edition 2015

	of dissolved solids, ammonia, organic matter, and sometimes metals and other pollutants depending on the type of waste.[10]
LFG	Landfill gas
Material Harm to the Environment	EP&A Act definition from consent: Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Material Harm to the Environment	POEO Act Definition EP&A Act S147 defines material harm as being where (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations), and (b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.
MSS	MSS Security. An Australian provider of security and response services including to Australian Defence Force installations.
PIRMP	Pollution Incident Response Management Plan
PLRRC	Patons Lane Resource Recovery Centre
POEO Act	Protection of the Environment Operations Act 1997
Putrescible waste	A type of waste that is characterised by materials that readily decay under standard conditions, emit offensive odours, and attract vermin or other vectors (such as flies, birds and rodents). It includes household waste containing putrescible organics, and food and animal waste.[11]
Recovery/ Resource recovery	The selective extraction of disposed materials for a specific next use, such as recycling and reprocessing in order to extract the maximum benefits from products, delay the consumption of virgin resources, and reduce the amount of waste generated.[12]
Recycling	The activity or process of extracting and reusing useful substances found in waste.[13]
RFS	NSW Rural Fire Service
RRC	Resource Recovery Centre
Resource Recovery Centre	Waste drop-off or collection facility which includes some segregation or separation of recoverable materials. May also include actual reprocessing of materials.
SafeWork NSW	NSW Government Authority performing the WH&S functions previously undertaken by WorkCover NSW.

[10] NSW EPA Draft Environmental Guidelines – Solid Waste Landfills; Second Edition 2015

[11] NSW EPA Draft Environmental Guidelines – Solid Waste Landfills; Second Edition 2015

[12] https://en.wikipedia.org/wiki/Resource_recovery

[13] American Heritage® Dictionary of the English Language, Fifth Edition. Copyright © 2016

SDS	Safety Data Sheet. A document that contains information on the potential health effects of exposure to chemicals, or other potentially dangerous substances, and on safe working procedures when handling chemical products.
SES	NSW State Emergency Service
Stormwater	Stormwater is the water that flows on surfaces after rain.[14] Rainfall runoff from the overall area of the landfill which has been prevented from coming into contact with waste.[15]
Special waste	A class of waste that has unique regulatory requirements. The potential environmental impacts of special waste need to be managed to minimise the risk of harm to the environment and human health. Special waste means any of the following: Clinical and related waste; asbestos waste; waste tyres; anything classified as special waste under an EPA gazettal notice. [16]
Spill	Leak, spill or escape of a substance. An accident in which a harmful substance flows into the environment.[17]
WHS	Work Health & Safety – also referred to as Occupational Health & Safety
WHS&E	Work Health Safety & Environment

[14] https://www.sydneywater.com.au/SW/water-the-environment/how-we-manage-sydney-s-water/stormwater-network/index.htm

[15] NSW EPA Draft Environmental Guidelines – Solid Waste Landfills; Second Edition 2015

[16] NSW Environment Protection Authority: Waste Classification Guidelines November 2014

[17] Cambridge Business English Dictionary Nov 2011

1. INTRODUCTION

1.1 OVERVIEW

The Patons Lane Resource Recovery Centre ('the Project'), located in Orchard Hills, NSW is a resource management facility comprising Lot 40, DP 738126, within the former Erskine Park Quarry owned by SRC Properties Pty Ltd ('the Principal'). Project Approval MP09_0074 was granted by the Land and Environment Court for the establishment and operation of the resource recovery centre in August 2012 and approved for the landfilling of commercial and industrial (C&I) and construction and demolition (C&D) waste types (general solid (non-putrescible) waste). The objectives of the Patons Lane Resource Recovery Centre (RRC) are to:

- Provide a facility to assist the NSW Government to meet the recycling targets for C&I and C&D waste
- Recover a high proportion of clay/shale resources for the brick and construction industry
- Receive and emplace wastes and residuals from the on-site recycling
- Progressively rehabilitate a disused quarry to re-instate the agriculturally productive land consistent with the surrounding lands.

1.2 MANAGEMENT PLAN FRAMEWORK

Approval was obtained from the Department of Planning and Environment (DP&E) pursuant to Condition 32 of Schedule 3 of the Project Approval to submit all but two plans (the Ste Establishment Noise Management Plan and the Construction Traffic Management Plan) in stages. Stage 1 is defined as being works and activities up to the completion of the extraction of Cell 1 and is estimated to take five to seven years. Stage 1 plans, apart from those outlined above, will need to be updated prior to undertaking subsequent Stages 2 and 3.

In accordance with the requirements of the Project Approval, this plan and other plans of management relevant to Site Establishment for the Project were approved by the DP&E and verified via a Pre-Site Establishment Audit process, prior to the commencement of the Site Establishment works and activities (i.e. construction works). Prior to the commencement of operations (i.e. the receipt of any waste materials) additional plans must be prepared and approved by DP&E (in accordance with the Project Approval) and verified via a separate Pre-Operational Compliance Audit.

All site establishment and operations management plans are designed to work in conjunction with the Landfill Environmental Management Plan (LEMP) which provides the overarching environmental management framework for the Project. An outline of the management plan framework is shown in Figure 1.

The management plan approval process is outlined in Figure 2.

Figure 1 Plan framework

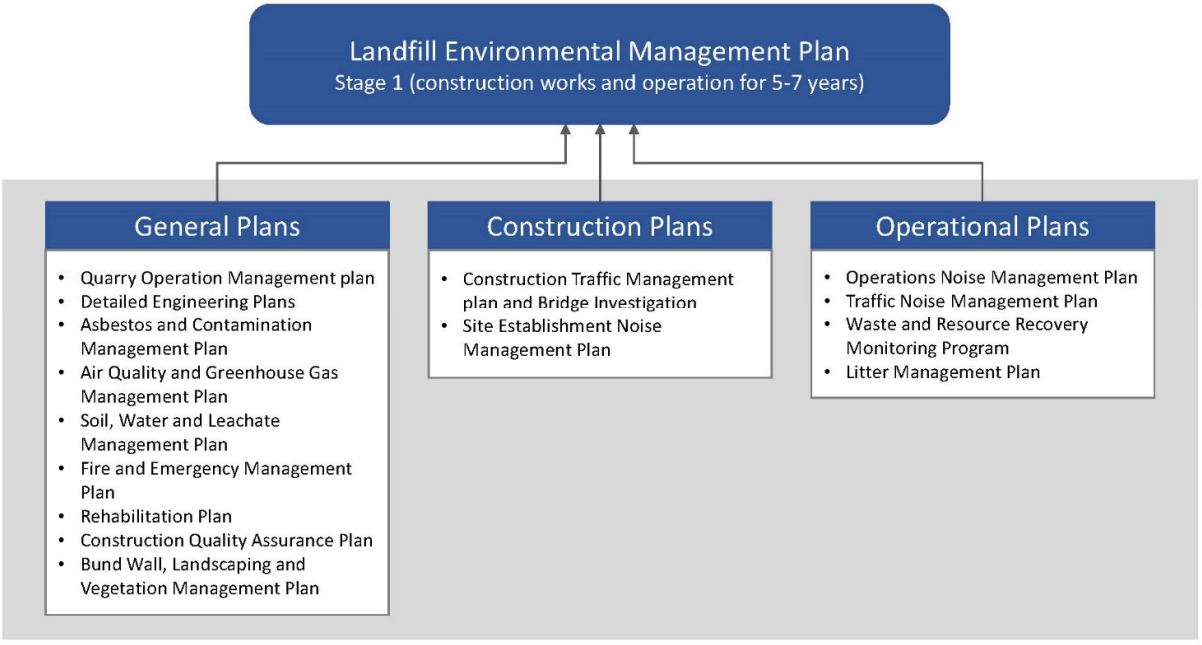
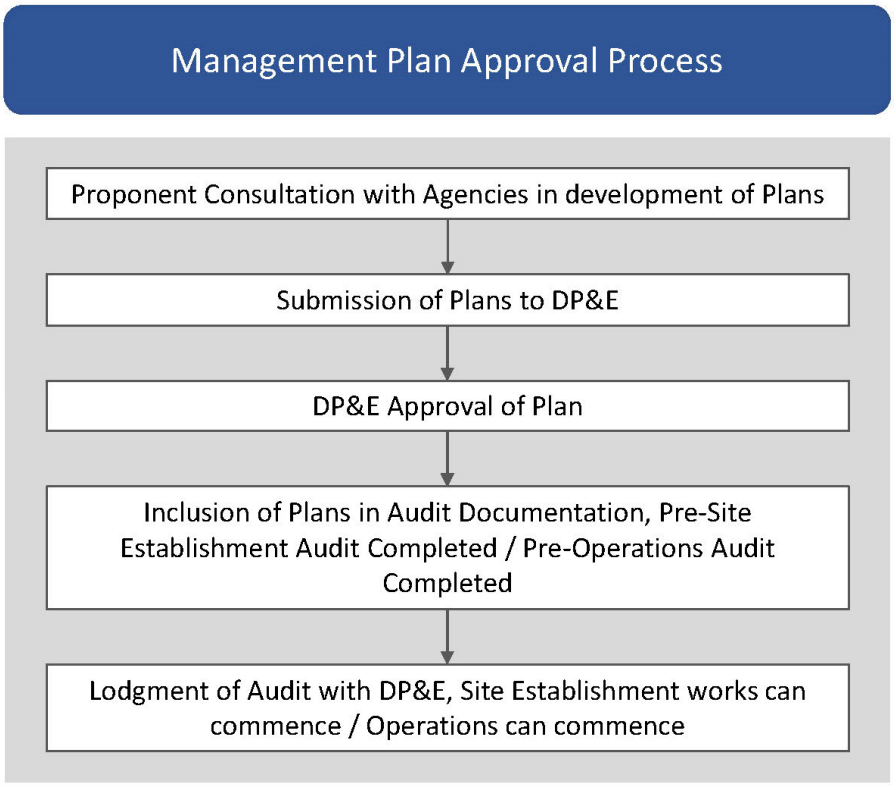


Figure 2 Management Plan Approval Process



1.3 PURPOSE

The purpose of this Fire and Emergency Management Plan is to provide an appropriate management framework for these matters for the works and activities associated with Stage 1 of the project.

In addition, this Plan specifically addresses Schedule 4 Condition 43 of Project Approval MP09-0074. The specific conditions of consent relating to this Plan are set out in Table 1 below which also identifies where these particular conditions have been addressed in this Plan.

1.4 SCOPE OF WORKS OF THE MANAGEMENT PLAN

This Fire and Emergency Management Plan covers Stage 1 of the Project and addresses the following:

- Identifies all threats to the environment and public health that could arise from the operation of the Project;
- Details a communication strategy for notifying the relevant government agencies and potentially affected community in the event of an emergency; and
- Identifies strategies to contain and minimise the effects of any threats to the environment and public health such as (but not limited to) measures to:
    - Minimise the risk of fire on-site, including in the landfill area;
    - Promptly extinguish any fires on-site; and
    - Ensure adequate fire-fighting capacity on-site, including a fire-fighting tanker.

1.5 DESCRIPTION OF OPERATIONS AND WORKS

1.5.1 STAGING

The Project will operate in accordance with three key stages. Stage 1 is defined as being up to the completion of excavation of Cell 1 which includes all site establishment works and Cells 1A, 1B and 1C. Management plans will be updated in future prior to additional works being commenced (such as Cells 2 and 3) as part of Stages 2 and 3.

Stage 1 works and activities are made up of the following components:

- Site establishment works and activities
- Construction of the recycling and reprocessing area (RRA)
- Operation of the landfill and the RRA and cell construction up to the completion of the excavation of Cell 1 (made up of Cells 1A, 1B and 1C).

Stage 1 is expected to take 5-7 years to complete.

Plans for Stage 1 have been prepared based on the impacts of the above activities being carried out at full operational level i.e. up to the maximum permitted tonnages and vehicle movements as permitted by the Project Approval. General construction and operating parameters are summarised in the following sections.

- Hours of construction:
    1. Monday to Friday, 7am to 6pm
    2. Saturday, 8am to 2pm

3. Sunday, no work

- Total input: up to 450,000 tonnes per annum (tpa)
- Waste recycled: up to 350,000 tpa
- Waste landfilled: up to 205,000 tpa
- Heavy vehicles: up to 250 heavy vehicle movements per day
- Maximum resource export rate: 160,000 tpa
- Maximum stockpile height: RL 54 m AHD
- Construction: 10 to 15 people
- Operation: 20 people full time, plus up to 10 part-time contractors
- Hours of operation:
  1. Monday to Friday 7am to 5pm
  2. Saturday 8am to 2pm.

1.5.2 SITE ESTABLISHMENT AND CONSTRUCTION OF THE RRA

The details of these works and activities which have been included in the assessment undertaken to develop the Construction Traffic Management Plan and the Site Establishment Noise Management Plan (SENMP) are set out below.

These construction activities are expected to take 18 months to complete and will be carried out within the following parameters:

- Hours of Construction:
  1. Monday to Friday 7am to 6pm
  2. Saturday 8am to 2pm
  3. Sunday, no work
- Personnel:
  1. Construction: 10 to 15 people.

1.5.2.1 Site Establishment

The site establishment works and activities are as follows:

- Construction/shaping of the northern face and much of the eastern face to their final rehabilitated landform and landscaping of those faces. Construction of the northern face will be achieved through the following:
  1. Reshaping the existing north eastern and north western bund walls, by reducing its height in some areas, raising its height in other areas to create an even northern face with a maximum elevation of 53 m AHD, and a more gentle northerly slope than currently exists. The new northern face and acoustic mound will provide acoustic protection for earthmoving and landfilling equipment/vehicles operating within Cells 1 and 2. The acoustic mound will be removed at the conclusion of capping in Cell 2 when it is no longer needed for acoustic protection
  2. Areas to the north of the acoustic mound will be regraded to their final rehabilitated landform with slopes of approximately 5%. Final landscaping of these areas will occur during site establishment.
- Partial rehabilitation of the existing southern and southwestern bund walls through the reduction in the elevation to an approximate elevation of between 57 m AHD and 58 m AHD such that they will not be visible from any residence within The Vines Estate. Once re-shaped, the surface and adjoining batter slopes will be revegetated

- Upgrading and sealing of Patons Lane and upgrading the entrance to the site (from Patons Lane) together with the installation of three weighbridges and upgrade of associated office building
- Site preparatory works within the recycling and re-processing area to create the required landform and create a suitable pad for the materials recycling facility warehouse and mobile recycling equipment
- Construction and commissioning of the on-site wheel wash facility
- Upgrading and sealing the internal road network beyond the proposed wheel wash facility to the exit point from the recycling and re-processing area
- Building and construction works and infrastructure works as shown in Figure 3.

Figure 3 - Site Establishment Works

These works and activities will be undertaken generally in the order set out below (and referenced on Figure 3) noting that the scheduling of specific works will be dependent on factors such as weather, commercial factors including contractor availability, specific logistical requirements and many other issues and will vary accordingly. In addition, many of the works and activities will need to be undertaken simultaneously. The works and activities associated with site establishment are as follows:

1. Construct surface water controls (integrate dams as required)
2. Excavation of stockpiled clay/shale and construct northern face (external and Internal slopes)
3. Regrading/shaping areas north of the northern face
4. Dewatering of quarry void
5. Landscaping northern face
6. Construct track for Transgrid access
7. Construct raw material stockpiles
8. Excavate recycling and re-processing area to 48 m AHD to 49 m AHD. Extraction of clay to form required landform
9. Clay/shale extraction in Cell 1A, then 1B and 1C
10. Install leachate riser and drainage layer in Cell 1A and then 1B
11. Construct Initial Leachate Evaporation Pond
12. Construction of recycling and re-processing area infrastructure (see Figure 4 for details)
13. Maintain height of the eastern face of 57 m to 58 m AHD (outer slope reduced for landscaping)
14. Construct/re-establish Dam 3 (3A&B)
15. Construct/re-establish Dam 4 (4A)
16. Construct/re-establish Dam 5(5A)
17. Construct Dam 6
18. Establish contingency stockpile area
19. Upgrade internal road network [sealed]
20. Upgrade internal road network [unsealed]
21. Construct wheel wash facility Pro
22. Upgrade site entrance
23. Install weighbridges
24. Construct car park
25. Construct site office
26. Reduction in height from southwestern face
27. Establish workshop area
28. Construct acoustic mound.

1.5.2.2 Construction of the RRA

The management plans have been based on the impacts of the construction of the entire RRA. The layout of the RRA is set out below. These items are largely buildings and structures that will be subject to Construction Certificates, BCA regulations and Occupation Certificates certified by an approved certifying authority.

LEGEND

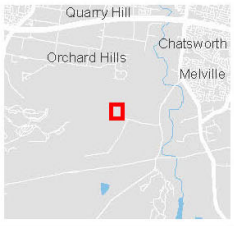
- Project site boundary
- Drainage
- Bund footprint
- Earthworks/ construction
- Clay/ Shale extraction
- Pavement
- Dams

ARCADIS AUSTRALIA PACIFIC PTY LTD
ABN 76 104 485 289
Level 16, 580 George Street, Sydney| NSW 2000
P: +61 (0) 2 8907 9000 | F: +61 (0) 2 8907 9001
Coordinate System: GDA 1994 MGA Zone 56
Aerial imagery supplied by nearmap (Dec, 2018)

Date issued: March 15, 2019

1:2,400 at A4

ARCADIS



LAYOUT OF RECYCLING AND REPROCESSING AREA

Date: 15/03/2019 Path: \\HC-AUS-NS-FS-01\Jobs\10027296\IL-GIS\A_Current\B_Maps\ProjectDescription\G10027296_PD_002_RecyclingReprocessing_A4P_v2.mxd
Created by: NS
QA by: RB

Figure 4 - Layout of Recycling and Reprocessing Area

The infrastructure permitted to be constructed as part of the RRA will be undertaken generally in the order set out below (and referenced on Figure 4) noting that the scheduling of specific works will be dependent on factors such as weather, commercial factors including contractor availability, specific logistical requirements and other issues and will vary accordingly. In addition, many of the following works and activities will need to be undertaken simultaneously:

1. Drainage works
2. C&D / C&I Recycling Building
3. Product Bays
4. Delivery Area
5. Road network
6. Crushing and Screening Area
7. Recycling Facility Warehouse
8. Amenities building
9. Carpark.

1.5.3 OPERATION

The specific works and activities associated with Stage 1 operations are the:

- Emplacement of wastes into Cell 1A
- Construction of Cell 1B and 1C including the selective extractive operations to extract the clay/shale resource and related stockpiling activities
- Receipt and processing of wastes in the RRA with residuals being compacted, baled, and emplaced in Cell 1A and 1B.

Figure 5 shows the general arrangement of Cell 1.

Compacted and baled residual waste will be transported form the RRA to the landfill cell via a dedicated on-site heavy vehicle fitted with a walking floor trailer.

Mobile plant and equipment to be used for the placement of waste into the cells include an excavator with a detachable grab attachment for handling the baled waste, and a bucket attachment for movement of daily cover. A compactor will also be used to provide further compaction of residual waste.

Bulldozers, dump trucks and excavators will be used for the excavation of cells 1B and 1C.

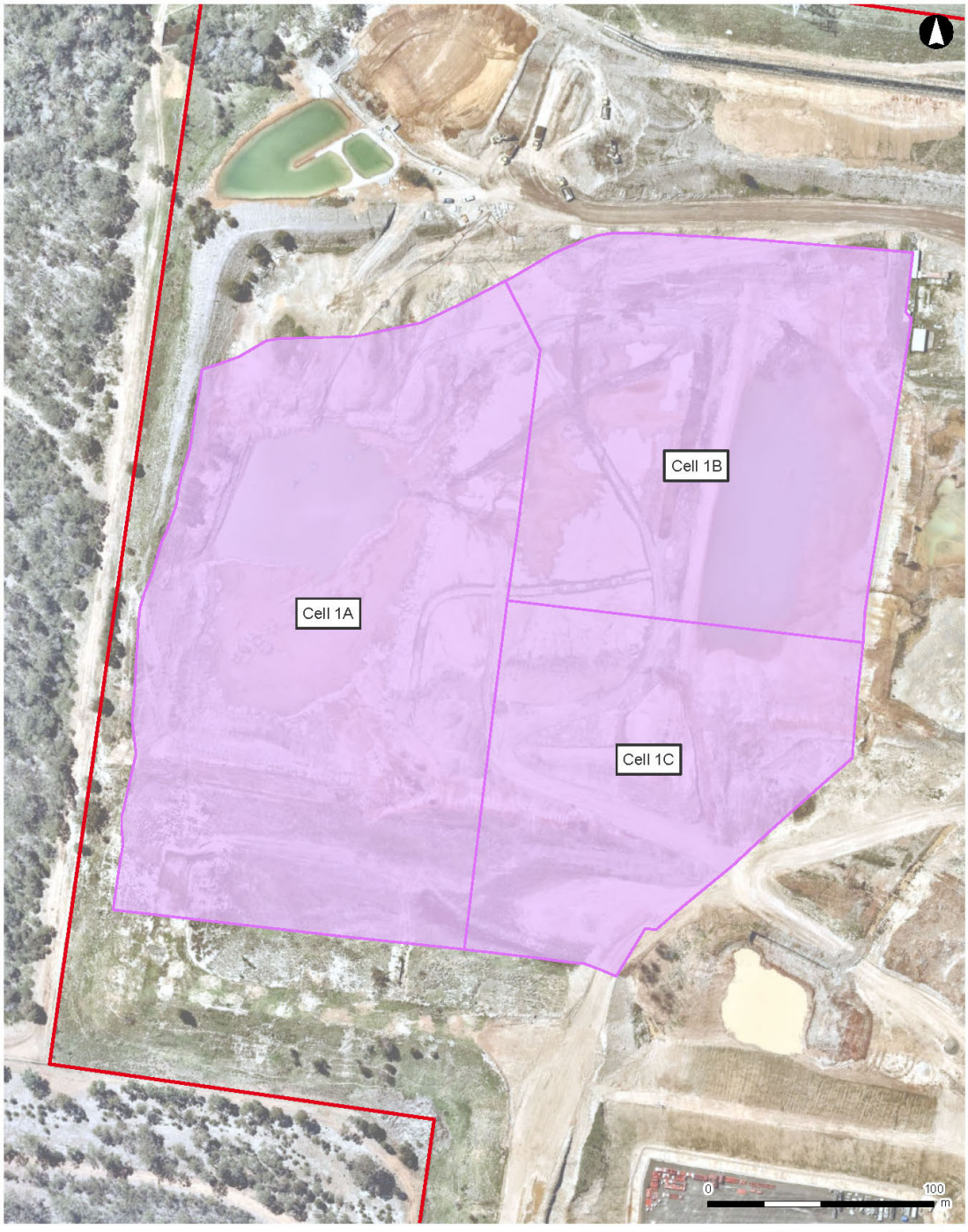


Figure 5 - Cell 1 General Arrangement [taken from GHD Construction Drawing 21-25736-C003]

Table 1 - Compliance with conditions of consent

Fire and Emergency Management Plan – Schedule 4 Condition 43	**Fire and Emergency Management Plan Reference**	**Comment**
The proponent shall prepare and implement a Fire and Emergency Management Plan for the site. The plan must:		
a) be prepared by a suitably qualified expert whose appointment has been endorsed by the Director-General;		Fire and Emergency Management Plan prepared by Karin Nilsson and Anne Lewis of Planager, endorsed by DP&E (31 August 2015).
b) be approved by the Director-General prior to the commencement of any work;		Submitted to DP&E for Approval Note the implementation of the approved FEMP will commence upon commencement of Site Establishment works. The FEMP and related documents will be initially located in the principal contractor's site office. Following construction of the Weighbridge Site Office, the FEMP and related documents will be relocated to this location.
c) identify all threats to the environment and public health that could arise from the operation of the Project (e.g. fire, overflow or dam failure)	Section 2.2– Hazard Identification (Table 3) Section 2.3 – Summary of Environmental Risks Section 3 – Levels and Types of Emergency	Table 3 and Table 4 (Section 2) identify threats to the environment and public health that could occur from the operation of the RRC.
d) detail a communication strategy for notifying the relevant government agencies and potentially affected community in the event of an emergency; and	Emergency notification protocols and contact details for notifying the relevant government agencies, local government and key community stakeholders and neighbours are listed at the beginning of the FEMP. Further communication protocols are set out in the following sections: Appendix C – PIRMP Section 7.2 – Communicating with Local Community Section 7.4 - Reporting to Government Agencies	The strategy is based on the requirements for communicating with neighbours and the local community as described in Protection of the Environment (General) Amendment Regulation 2012 clause 98C(1)(i).

e) identify strategies to contain and minimise the effects of any threats to the environment and public health such as (but not limited to) measures to:	Section 2.4 – Management of Risks and Prevention Strategies Section 4 – Activation of the Emergency Plan Section 5 – Emergency functions and organisational structure, Section 6 – Emergency resources Section 1.3 – This identifies other Plans of Management which are incorporated under the overarching Landfill Environmental Management Plan.	Table 3, Table 4 and Table 5 deal with these issues in detail.
i) minimise the risk of fire on-site, including in the landfill area;	Section 2.4 –Management of Risks and Prevention Strategies.	Minimisation of the risk of fire on site will be achieved through management of potential risks associated with the activities listed in Table 4 though the preventative actions set out in Table 5.
ii) promptly extinguish any fires on-site; and	Section 4.1 – Activating the Plan Section 6.3 – Emergency detection and alarm system. 6.4 – Emergency Equipment Emergency Procedures are set out in Appendix B particularly E1 - ON THE DISCOVERY OF A FIRE OR EXPLOSION.	Plan activation is clearly set out in Section 4.1 and is reinforced by the Emergency Procedures set out in Appendix B. From the commencement of site establishment there will be a water cart (min size : 20,000 litre) to be used for dust suppression on site which will be fitted with firefighting pumps and hose reels (as well as a first aid hose reel) which can be used to suppress small to medium fires.). This unit will be kept full when not in use. Additionally, a fire-fighting system comprising fire water tank, fire water pump and hose reels will be incorporated into the materials recycling facilities

		which can be used for first attack firefighting by the emergency response team and emergency services. Details of automated alarms will be included in section 6.3 once buildings and structure have been constructed.
iii) ensure adequate fire-fighting capacity on- site, including a fire-fighting tanker.	Section 6.4 – Emergency Equipment Appendix A – Emergency Services Information Package Emergency Procedures set out in Appendix B particularly E1 - ON THE DISCOVERY OF A FIRE OR EXPLOSION.	From the commencement of site establishment there will be a water cart (min size: 20,000 litre) to be used for dust suppression on site which will be fitted with firefighting pumps and hose reels (as well as a first aid hose reel) which can be used to suppress small to medium fires.). This unit will be kept full when not in use. As additional emergency equipment is installed in buildings and structures during construction, these locations will be added to the site plan in the ESIP (Appendix B) site plan.

1.6 DEFINITION OF AN EMERGENCY SITUATION

An emergency at Patons Lane RRC is a situation which activates the emergency plan and is defined as:

"a hazardous situation (or threat of a hazardous situation) which requires action to control, correct and return the site to a safe condition and also requires timely action to protect people, property and the environment from harm."

Not all hazardous situations constitute an emergency. If in doubt, the situation should be regarded as an emergency.

1.7 OTHER PLRRC MANAGEMENT PLANS

Other Management Plans may include mention of procedures required to address risks and emergencies.

- Hibbs & Associates Patons Lanes RRC Contamination & Asbestos Management Plan Ref.S9171 considers a number of scenarios which could escalate into emergency events if not properly managed.
- Hibbs 11.13 - Unexpected Finds Protocol and Appendix B: Unexpected Finds Protocol provides a methodology for the management of the discovery of potentially hazardous materials.
- Hibbs 11.14 - Contingency Risk Management and Table 7. Risk Management Actions present a summary of the conditions that might reasonably be encountered, the resulting problems they may cause, and how these problems may be resolved within the context of the upgrade works on site.

These procedures will be incorporated in detailed emergency procedures which will be finalised as an appendix to the FEMP prior to commencement of operations when buildings and other infrastructure are established on site.

1.8 NEIGHBOURS

Patons Lane RRC consulted with immediate neighbours regarding the FEMP. In particular Defence Establishment Orchard Hills (DEOH) was consulted given the importance and sensitivity of this Federal government Defence explosives ordnance training school.

Transgrid was also consulted given the presence of the high voltage transmission towers along the northern boundary of the Project.

1.9 SITE LOCATION AND SURROUNDS

The Project site covers 60ha and is located adjacent to Patons Lane in Orchard Hills at Lot 40 DP 738126. Access to the Project site is from Luddenham Road via Patons Lane. The Project site is shown in Figure 6.

The surrounding land-uses are given in Table 2.

Table 2 - Neighbouring land uses

Direction from site	Occupied by:	Type of land use
North	Transgrid	Electricity transmission corridor currently being used for livestock agistment.
	The Vines housing estate – closest residences located approximately 0.5 km from the Project boundary	Residential
	Sammut Turf Supplies	Grazing
	Roughwood Park	Grazing
East	Roughwood Park Glenholme	Farming
	Farm (Transgrid)	Grazing. Horse & cattle agistment. Homestead occasionally tenanted.
	Luddenham Rd	Public road
South east	Coolamon Park	Horse agistment & training
South	Patons Lane	Closed public road
South and west	Department of Defence: Defence Establishment Orchard Hills	Government land: Defence explosives ordinance training school

Figure 6 - Project site

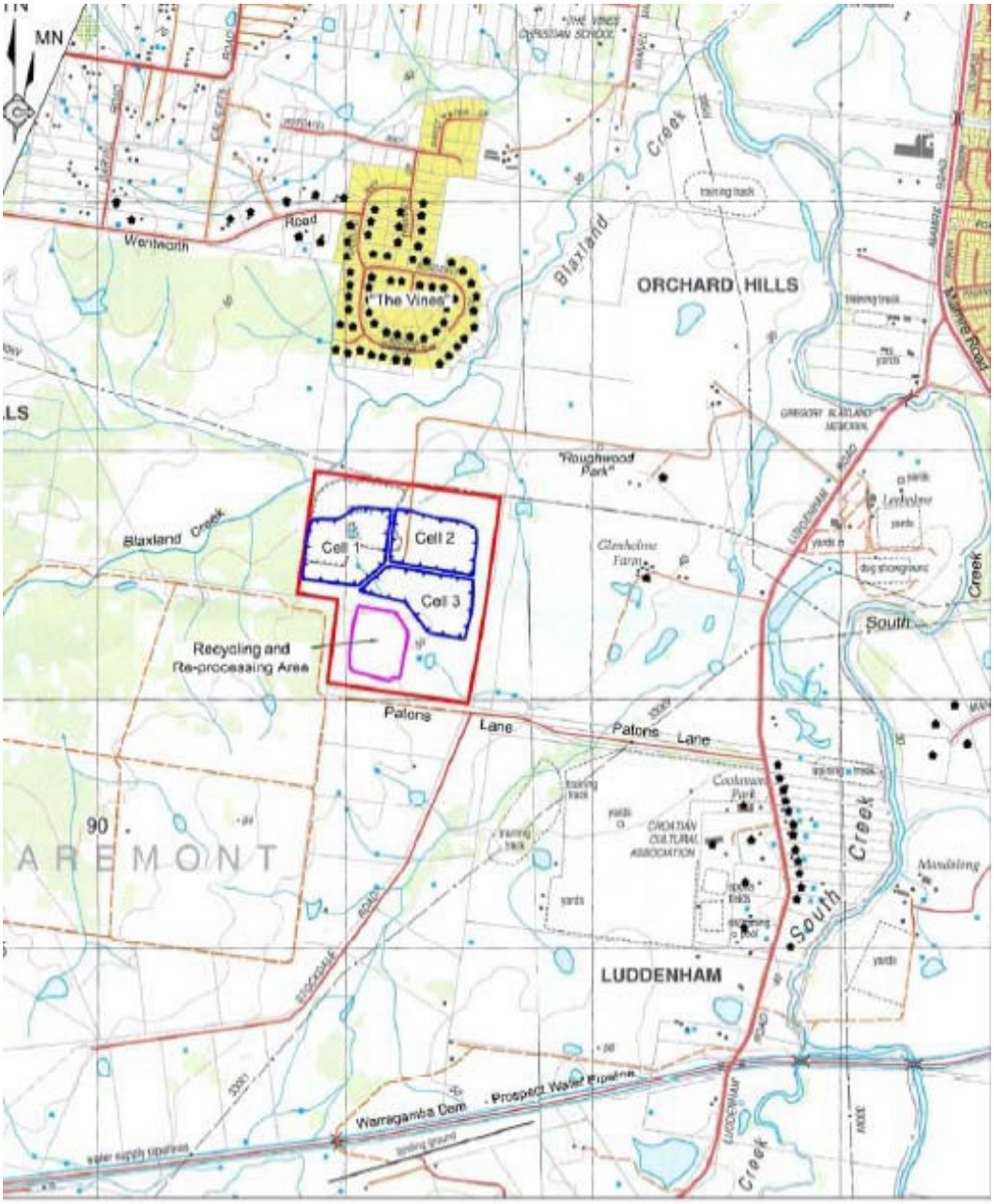


Figure 2.2
PROJECT SITE SETTING
(AMENDED)

1.10 SITE LAYOUT – GENERAL COMMENTS

Patons Lane Resource Recovery Centre is an integrated clay/shale quarry, waste recycling facility and general waste (non-putrescible) landfill.

The Project site was formerly a clay/shale quarry. Several large quarry voids suitable for landfilling exist on the Project. Roads and site infrastructure have been reinstated and quarrying resumed to make use of the remaining resource and to prepare the quarry voids for the approved landfilling activity.

A materials recycling facility located inside a large shed is used for the sorting of Commercial and Industrial (C&I) non-putrescible waste. Recovered materials are stored and exported from the Project for sale. Residual waste material is collected and landfilled on-site.

Another Materials Recycling Facility is located on hardstand in the open for the sorting and reprocessing of Construction and Demolition (C&D) waste. Recovered materials are stored and exported from the Project for sale. Residual waste material is collected and landfilled on- site.

Staged waste emplacement cells (landfill cells) are developed as each quarry void is completed and operated to contain all residual wastes from the recycling and re-processing facility, other imported wastes (unable to be re-processed) and selected construction and demolition wastes recovered from the existing on-site perimeter bund walls.

Entry and exit to and from the Project is only possible via Patons Lane, the main site gate at the south-eastern corner of the Project and the Project site weighbridges. The entire site is fenced with 1.8m galvanised chain-wire topped with three-strand barbed wire except boundaries shared with DEOH (3.0m galvanised chain-wire topped with three-strand barbed wire).

Most of the Project boundary is enclosed by landscaped earth bunds which provide visual and acoustic barriers for neighbouring land-users. Stormwater collection and discharge is managed within the Project via a stormwater management system and a number of dams and rainwater collection tanks.

The Project layout is shown in Figure 7.

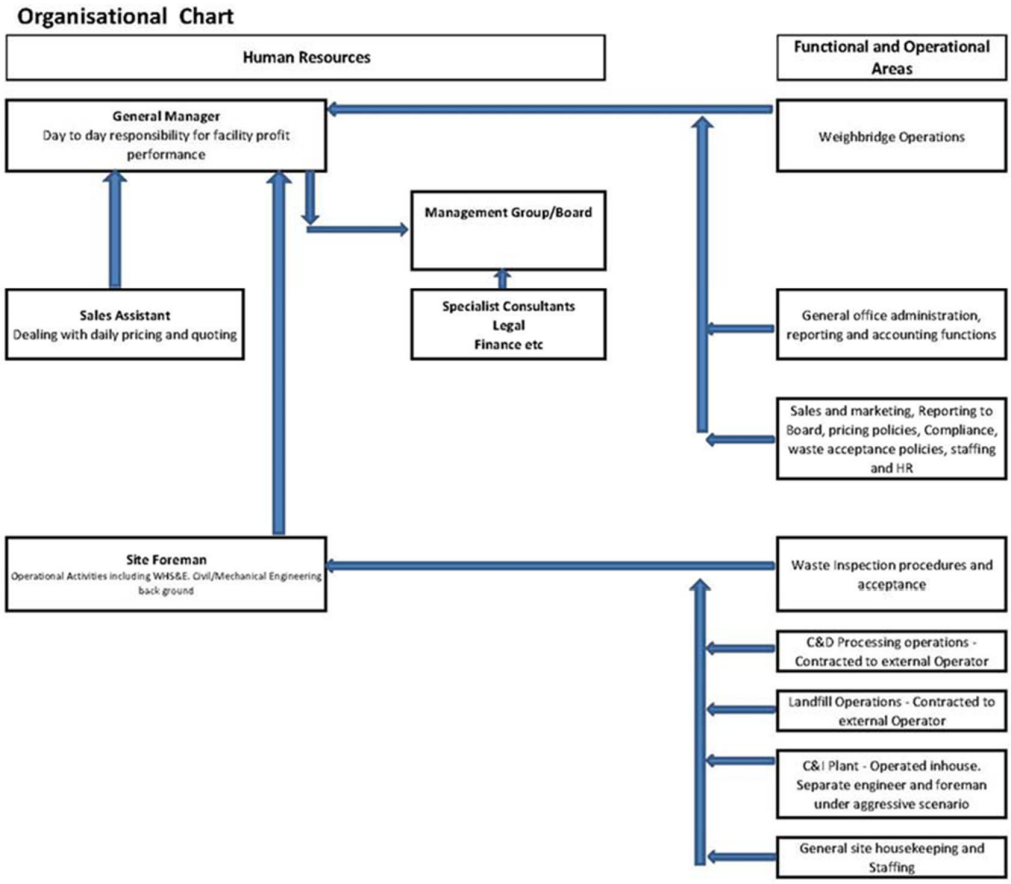
Figure 7 - Site layout

1.11 OPERATIONAL PERSONNEL AND OPERATING HOURS

The Project employs 20 people full time and up to ten contractors part time.

The organisational chart shown below shows the human resources and functional and operational areas that they relate to.

Figure 8 - Organisational chart



Operations Manager - This position is responsible for day-to-day management of the entire facility and reporting to the management group and board. Primary responsibilities include implementation and monitoring of site safety, environmental and quality compliance; the management of the weighbridge operations; accounting functions including invoices, debt collection, as well as all sales and marketing; staffing and HR issues. A sales assistant, whose role it would be to deal with daily pricing and quoting of jobs and sourcing of waste feedstock, reports to the General Manager.

Site Supervisor- This position is the Operations Manager second-in- command on the Project. The person undertaking this role will have relevant operational and WHS&E experience.

The hours of operation are:

- Monday to Friday 7am to 6pm during site establishment
- Monday to Friday 7am to 5pm during operation
- Saturday 8am to 2pm

1.12 UTILITIES AND SERVICES

Electricity: The Project is not connected to the electricity grid. Power to the Project is provided by 1 x 400kVA and 1 x 50kVA on-site diesel generators located in the Recycling and Reprocessing Area and near the main office.

Water: The Project is not connected to the town water system. Water for dust control and fire-fighting at the landfill sites is available from water storage dams. A groundwater bore is used to provide makeup water for dust suppression.

Potable water is supplied from rain water tanks containing water collected from the roofs of the buildings in the recycling area. Water filter purifier dispensers (bottled water) are located in all buildings on site to provide staff drinking water. 2 x Fire Hydrant Storage Tanks with effective capacity of 144,000 litres each complete with Suction & Booster Points to comply with AS2419 requirements provide water for the fire-fighting equipment in the recycling area.

Sewage: The Project is not connected to the sewage system. An on-site sewerage treatment system will be installed.

Stormwater: The Project is not connected to the stormwater system. Stormwater run-off is collected in the storage dams and ponds and kept separate from leachate (water which has had contact with waste). Clean storm-water is discharged from the Project at an approved discharge point.

Communications: The Project uses cellular telecommunications to operate phones, faxes and internet facilities. Mobile phones and two-way radios are used for on-site communications.

1.13 SITE SECURITY

The entire perimeter of the Project is fenced with 1.8m galvanised chain-wire fencing topped with three-strand barbed wire. There is a gate across Patons Lane near the intersection with Luddenham Road (Patons Lane East) and an additional gate at the PLRRC Site Entry on Patons Lane. A third gate and fence (Patons Lane West) is located across Patons Lane approximately 10.0m west of the PLRRC Site Entry. Locks on all site entry gates are operated via PLRRC Master Key system.

The Project will be supervised during operational hours. After hours, the two entrance gates will be locked and surveillance is carried out by the security contractor via CCTV. Regular security patrols of the Luddenham Road entry gate to Patons Lane (Patons Lane East gate) and Patons Lane West gate are also carried out by DEOH staff.

A number of security cameras will provide CCTV footage of the following areas:

- The gate at the entrance to Patons Lane at Luddenham Rd
- The Project entrance and exit
- The weighbridge
- Various other points of the Project site

The video feed from the security cameras will be recorded and monitored by staff at the weighbridge during operational hours. Motion sensors are in place at various points of the Project which can activate flood lights and commencement of video recording and remote monitoring by the security contractor outside of operating hours.

2. HAZARD IDENTIFICATION AND RISK MANAGEMENT

2.1 INTRODUCTION

Stage 1 works and activities have been considered and a structured system designed to help reduce the impacts from these works and activities through targeted continuous improvement in emergency and environmental management. As such, to effectively implement this FEMP, potential hazards and impacts associated with each aspect of an activity have been identified through the following environmental risk assessment process. The process is on-going and aims to determine past, present and potential impacts.

An environmental risk assessment rating system adapted from Environment Australia (2007), which is outlined in Table 3, has been adopted for the assessment of risks associated with identified hazards with the operation.

Table 3 - Environmental risk significance rating table*

Risk of Occurrence						
May be as a result of a continuously operated process, activity or occurrence.	**Continuous**	1	4	4	4	4
May be a result of a frequently used process, activity or occurrence.	**Frequent**	1	2	3	4	4
May be a result of a little used process, activity or occurrence.	**Occasional**	1	2	3	4	4
May be as a result of a chain of unusual events leading to an environmental incident	**Remote**	1	2	3	3	4
May be a result of a chain of extraordinary events leading to an environmental accident/disaster.	**Improbable**	1	2	3	3	4
		Positive	**Minor**	**Critical**	**Major**	**Catastrophic**
	Significance (Degree of Impact)	Positive impact on environment thus positive impact on business	Limited and/or localised impact on the environment and/or business	Medium scale impacts, wider implications to environment and/or business	Serious long term implications for environment and/or business	Serious permanent damage to business and/or environment (e.g. loss of licence, restriction of activity)

*From: Environment Australia, 2007. Model Environmental Management System for Commonwealth Agencies.

Key to Risk Significance Rating		
	1	**Positive**
	2	**Low Risk**
	3	**Medium Risk**
	4	**High Risk**

2.2 HAZARD IDENTIFICATION

A review of potential environmental impacts as well as identified potential hazards that may lead to an emergency at the Patons Lane RRC are summarised in Table 4.

Table 4 - Environmental risk significance rating table

Potential Incident	**Affected area**	**Potential causes**	**Potential consequences**
Bush/grass fire	Landfill	Spread from neighbouring properties	(3 – Remote/Major) Death/injury to site personnel and/or visitors; damage to equipment/infrastructure
Waste fire	Recycling/ re-processing facility Landfill	Smouldering waste; chemical reaction within waste; equipment failure; smoking materials (e.g. match, cigarette butt)	(3 – Frequent/Critical) Death/injury to site personnel and/or visitors; damage to equipment/infrastructure. Spread to neighbouring properties. Irritating smoke.
Structure fire	Recycling/ re-processing facility	Escalating waste fire inside building; equipment fire; electrical fault; arson	(3 – Remote/Major) Death/injury to site personnel and/or visitors; damage to equipment/infrastructure
Security breach	Site	Malevolent illegal access; casual illegal access	(2 – Remote/Minor) Damage to equipment/ facilities; injury to intruders; injury/death for children accessing site out of hours
Structural collapse	Landfill Dams/ponds	Adverse weather (storm), inherent structural weakness	(3 – Occasional/Critical) Damage to equipment/infrastructure; environmental pollution
Traffic incident	Site roadways Landfill	Collision (pedestrian, other vehicle, livestock/ wildlife, equipment, infrastructure); road surface or ground failure leading to truck or earth moving equipment overturn; waste material	(2 – Frequent/Minor) Injury/death of site personnel; injury/death of visitors; damage to equipment, damage to visitor's vehicle(s); damage to infrastructure (buildings, fences,

Potential Incident	Affected area	Potential causes	Potential consequences
		falling from unsecured loads	overhead wires etc.)
Dust	Dust emissions to air and	Derived from placement activities. Internal roadways and	(3 – Remote/Critical) Workers and community
Noise	Recycling and reprocessing area. Landfill.	Generation of noise impacting on amenity or surrounding areas due to plant operation, mobile plant and vehicle movement.	(3 – Frequent/Critical) Workers and community exposed to excessive or undue noise. Exceedance of licence requirements.
Overflow	Drainage swale, sump, ponds and dams on site	Large volumes of heavy rain, stormwater entering the waste water network.	(2 – Remote/Minor) Waste water into stormwater – risks to public health.
Dam Failure	Dams on site	Flooding. Excessive rain or adverse weather conditions. Poor design.	(2 – Remote/Minor) Dam wall failure, erosion.
Emissions to water	Drainage Swale, Sump, Ponds and Dams on site.	Sediment and nutrient discharges from rain events. Dam failure. Impact on groundwater.	(2 – Remote/Minor) Sediment and nutrient discharges from rain events into local water or water ways/site materials or stockpiles
Environmental Spill	Site	Environmental spill (chemicals, HS&DG) from vehicles or machines on site. Storage container failure. Maintenance or servicing practices.	(2 – Frequent/Minor) Contamination. Potential fire hazard.
Contamination	Recycling and Reprocessing facility. Landfill.	Contaminated wastes. Asbestos. Combustible chemicals in containers. Explosion	(3 – Frequent/Critical) Fire, explosion, exposure to asbestos.

Potential Incident	Affected area	Potential causes	Potential consequences
Visual	Site	Short-term visual landscape change. Long-term visual impact change.	(2 – Frequent/Minor) visual impact only. (1 – Continuous/Positive) Visual impact improvement due to rehabilitation and vegetation.
Social	Site	Employment. Supply of recycled materials for the local community...	(1 – Continuous/Positive) Provision of employment. Supply of local landfill and materials for the local community. Provision of local source, reducing traffic on local roads (and on local community) – reducing product importation over greater distances.

2.3 SUMMARY OF ENVIRONMENTAL RISKS

Based on Table 4, activities with the greatest degree of environmental risk are listed below in an approximate order of priority:

High Risk Activities (Category 4)

- Nil

Medium Risk Activities (Category 3)

- Bush/grass fire spreading from local properties
- Waste fire from importation and processing of waste products
- Structure fire from escalating waste product fire, electrical or arson
- Structural Collapse from structural weakness or adverse weather conditions
- Dust from exposed soil areas, processing operations, plant, machinery and traffic movements
- Noise from processing activity, traffic, plant and machinery movements
- Contamination from unacceptable waste stream products

Low Risk Activities (Category 2)

- Security breach from illegal access
- Traffic Incident from collision or unsecured loads
- Emissions to water from sediment, extraction areas and internal roads
- Overflow due to adverse weather conditions
- Dam Failure due to poor design or adverse weather conditions

- Impact on groundwater
- Environmental Spill due to leaks, spills, storage and maintenance
- Short-term visual due to construction and operational activities

Positive impact activities (Category 1)

- Long-term visual impacts as a result of rehabilitation works and Landscape Management
- Positive social impacts by:
- The provision of employment
- Provision of recycled products for the local market

2.4 MANAGEMENT OF RISKS AND PREVENTION STRATEGIES

Table 5 outlines the potential environmental risks and emergencies identified and Risk Assessed in Table 4 during the environmental and emergency review process to date, the proposed preventative actions and response action required to be undertaken. Other potential environmental and emergency hazards may be identified after the operation commences, these should be updated as they are identified. Emergency equipment used on site consists of; spill kits, fire extinguishers and fire hose reals, eye wash stations and first aid equipment. These are to be clearly sign posted and locations also on the Project emergency map.

Table 5 - Summary of potential emergency incidents, preventative actions and proposed response actions

Potential Incident	**Potential Risk**	**Preventative actions**	**Response actions to incident**
Bush/grass fire	3 - Remote / Major	• General housekeeping to keep litter, rubbish and long grass tidy. • Communication with neighbours. • Water cart and fire emergency sprinkler installation. • Maintaining access tracks around the perimeter of the facility	• Shut down any plant and equipment. • Report to Emergency Assembly area. • Account for all personnel on site. • Contact emergency services (fire department) triple zero. • Cooperate with emergency services.

Potential Incident	Potential Risk	Preventative actions	Response actions to incident
Waste fire	3 – Frequent / Critical	• Personnel Training. • Controlling entry of vehicles • Adherence to Landfill and RRC Operational Procedures. • Emergency Drills conducted twice annually. • Inspection of incoming material and segregation. • Consultation with customers regarding acceptable and unacceptable materials. • Reloading of contaminated or unacceptable materials. • Isolated areas for storage of various products. • Use of daily cover and compaction to restrict oxygen availability • Fire extinguishers at designated locations, accessible to personnel. • Availability of trained personnel in fire-fighting and equipment. • Installation of sprinkler systems and fire alarms. • Electrical protection installation.	• Isolate plant and equipment. • Contain fire. • Activate sprinkler system. • Use fire extinguishers if trained and safe to do so, never put yourself or others in danger. • Sound alarm. • Notify emergency services.
Structure fire	3 – Remote / Major	• Use of fire retardant during construction. • Design and installation structural approved by engineer.	• Evacuate to emergency assembly area. • Call Emergency Services.

Potential Incident	Potential Risk	Preventative actions	Response actions to incident
		• Regular service and maintenance of plant, equipment and warehouse to reduce dust build up and fire hazards.	• Follow emergency services instructions. • Ensure personnel are accounted for, evacuation of building or structure. • Engineer to confirm safe to return and structural integrity not compromised.
Security breach	2 – Remote / Minor	• Site fencing installation. • Signage warning installed – no unauthorised access. • Install bunding. • Install surveillance cameras.	• Inspect surveillance footage. • Inspect site for damage or missing items. • Conduct investigation and check for areas of breach and repair if required.
Structural collapse	3 - Occasional / Critical	• Use of fire retardant materials during construction / installation. • Design and installation structures approved by engineer.	• Call emergency services. • Follow instructions from emergency services. • Account for personnel on site. • Do not access area. • Investigate and document. • Report to governing authorities. • Access only once structure cleared by structural

Potential Incident	Potential Risk	Preventative actions	Response actions to incident
			engineer for entry.
Traffic incident	2 – Frequent / Minor	• Traffic Management to be undertaken by respective contractor in designated work zones. • Tipping and loading procedures to be followed. • Designated areas for loading and unloading – i.e. level ground, power line clearance • Enforcing speed limits. • Report all near misses and non- compliances – investigate and disciplinary action to occur. • Site supervision.	• Isolate area. • Ensure safety of those involved. Call Ambulance if required (triple zero) • Inspect area, plant, machine or vehicle. • Check for leaks, damage. • Report to relevant governing agencies. • Risk assess situation for required actions.
Excessive Dust	3 – Remote / Critical	• Traffic Management and reduced speed limits. • Operate water trucks/irrigators. • Bunding and vegetation to reduce dust omission off site. • Cease or limit operations based on risk assessment particularly in extreme weather conditions. • Installation of weighbridge wheel wash / cattle grid. • Air quality monitoring as per EPA licence and consent conditions. • Sealing of roads on the egress side of the wheel wash	• Contact EMR. • Water down areas identified as the source of dust immediately; and • Cease works if weather conditions are adverse. • Reduced speed limit on site. • All vehicles exiting the Project must exit via the wheel wash.

Potential Incident	Potential Risk	Preventative actions	Response actions to incident
Noise	3 – Frequent / Critical	• Initial noise monitoring LA10 (15 minutes) at each sensitive receptor outlined. Noise reduction bunding on site. Enclosed plant operation. • Noise reduction guarding to be purchase, used or installed where practical to reduce noise. • Site procedures for vehicles to reduce breaking, speed on site. • Equipment on site maintained in good order. • Installation of exhaust mufflers on all trucks and equipment and build infrastructure to shield the noisiest part of the operation from neighbouring properties. • Operate within site working hours	• PPM's for employees. • Regular hearing checks. • PPE must be worn in areas above exposure standards. • Investigate all complaints. • Report complaints to relevant governing agencies.
Overflow	2 – Remote / Minor	• Check site water sources are not draining into the wastewater network. • Replace faulty or damaged pipes.	• Identify source of overflow. • Report to relevant governing authorities. • Repair sources of overflow.
Dam Failure	2 – Remote / Minor	• Construct dams as per Blue Book WMSCP. • Regular inspections for signs of fatigue or failure.	• Cease all operations. • Isolate the area. • If safe to do so, relocate all portable machinery. • Pump water and

Potential Incident	Potential Risk	Preventative actions	Response actions to incident
			repair dam.
Emissions to water	2 – Remote / Minor	• Maintain Erosion & Sediment Controls on site	• Contact EMR • Where relevant, repair sediment controls; and • Cease works if weather conditions are adverse. • If discharge enters waterway and criteria outlined in Appendix C, ring EPA Pollution Line 131 555.
Environmental Spills Fuel / Chemical spills / fire	2 – Frequent / Minor	• Personnel training. • Emergency drills. • All chemicals to be store in accordance with the COP for safe use and storage in Agriculture. • All diesel storage tanks to be bunded to contain spills and regularly emptied and disposed of by qualified contractors. • HS&DG audits and registers with quantities and SDS for each. • Regular plant maintenance and servicing. Pre-starts and regular inspections.	• Contact EMR • All re-fuelling vehicles are to contain a spill kit • Use spill kit to contain the spill at the mixing and storage sites. • Dispose of contaminated materials appropriately; and clean and decontaminate this site. • If discharge enters waterway and criteria outlined in Appendix C, ring EPA Pollution line 131 555. • Emergency Evacuation plan implemented, contain fire if safe to do so, follow first aid plan and account for all on • site at EEA.

Potential Incident	Potential Risk	Preventative actions	Response actions to incident
Stored pollutants spills, escape, unknown quantities	2 – Frequent / Minor	• All bunded as per COP • Maximum Storage Quantities to be followed. • Avoid rainwater being contaminated with diesel (cover over storage bunding tank) • Maintain bunded free from soil and dirt • Conduct Audits and update SDS register and SDS's	• All re-fuelling vehicles are to contain a spill kit • Spill kits to be located via signage throughout the facility and site. • Use spill kit to contain the spill. • Pump into a waste fuel tank • Dispose of contaminated materials appropriately in a lawful manner; and clean and decontaminate • If discharge enters • waterway and criteria outlined in Appendix C
Contamination	3 – Frequent / Critical	• Trained personnel. • Identification of potential site contamination sources. • Isolation or non-disturbance of the affected areas. • Procedures to be developed to control the contamination hazard. • Customers' awareness of acceptable and non-acceptable products. • Rejected materials procedures. • Inspection of incoming loads. • Rejected contaminated segregated areas.	• Follow administrative procedures for non- conforming products. • Follow specific management plans (e.g. Asbestos Management Plan) • Re-loading of contaminated materials. • Isolation of contaminated materials.

Potential Incident	Potential Risk	Preventative actions	Response actions to incident
		• Re-loading of contaminated products procedures. • Segregation of products.	
Visual	2 – Frequent / Minor 1- Continuous / Positive	• Bare soil areas are to be monitored daily and wet down as required. • Regular site housekeeping, keep tidy and mowed. • Cease activities if weather conditions are adverse. • Fencing, shrubs, bunding installed short –term. • Re-vegetation and landscape management as soon as practical after completion – long -term	• Bare soil areas are to be monitored daily and wet down as required. • Cease activities if weather conditions are adverse. • Fencing and bunding installed short –term. • Re-vegetation and landscape management as soon as practical after completion – long -term

2.5 HAZARDOUS MATERIALS

Currently no hazardous materials are stored on site. From the commencement of construction for approximately 18 months, all equipment will be fuelled by mobile tankers with no fuel oils or other similar materials being stored on site. The plan will be updated to reflect any storage of these materials that will occur on site following to completion of construction activities.

The details of these storages are shown in Table 6 below.

Table 6 - Storage of hazardous materials

Chemical / Product	Storage details	DG Class	HAZCHEM code	UN Code	Maximum storage quantity
Diesel	Not stored on site – mobile tankers used	3 or Combustible liquid (depending on supplier)	3Y (if DG Class 3) N/A (if C2)	1202	Not applicable To be revised annually
Hydrochloric Acid	1000 litre IBC	8	2R	1789	1000L

It is anticipated that Hydrochloric acid (HCl) will be used in the pH adjustment of stormwater water which has accumulated on site in the quarry void. Typically, this will be stored in 1000 litre intermediate bulk containers (IBCs) within the catchment of the quarry void itself for the dewatering process. Any spillages would drain to the quarry void. Any HCl remaining at the conclusion of a dewatering campaign is removed from the Project site and returned to the supplier in the container(s) in which it was delivered.

No other hazardous waste materials or contaminated materials are imported onto the Project. No hazardous materials are required to be stored on site for the operation of the RRC.

The waste accepted for recycling and disposal at the Project is limited to clean, non-putrescible C&D and C&I material. The PLRRC load inspection procedure and protocol is followed to prevent transporters including hazardous materials (such as asbestos contaminated material, waste chemicals, etc.) or putrescible waste (which may produce methane during the decomposition process) in loads of waste delivered to the Project.

3. LEVELS AND TYPES OF EMERGENCY

3.1 TYPES OF EMERGENCY

Typical emergency events which could affect the facility are:

- Injury to personnel
- Fires, including bush/grass fires, waste fires, building fires
- Spills
- Adverse weather events
- Traffic incidents
- Intentional acts (security breach, bomb threat)

3.2 LEVELS OF EMERGENCY

The following three levels of emergency have been defined for the facility:

Table 7 - Levels of emergency

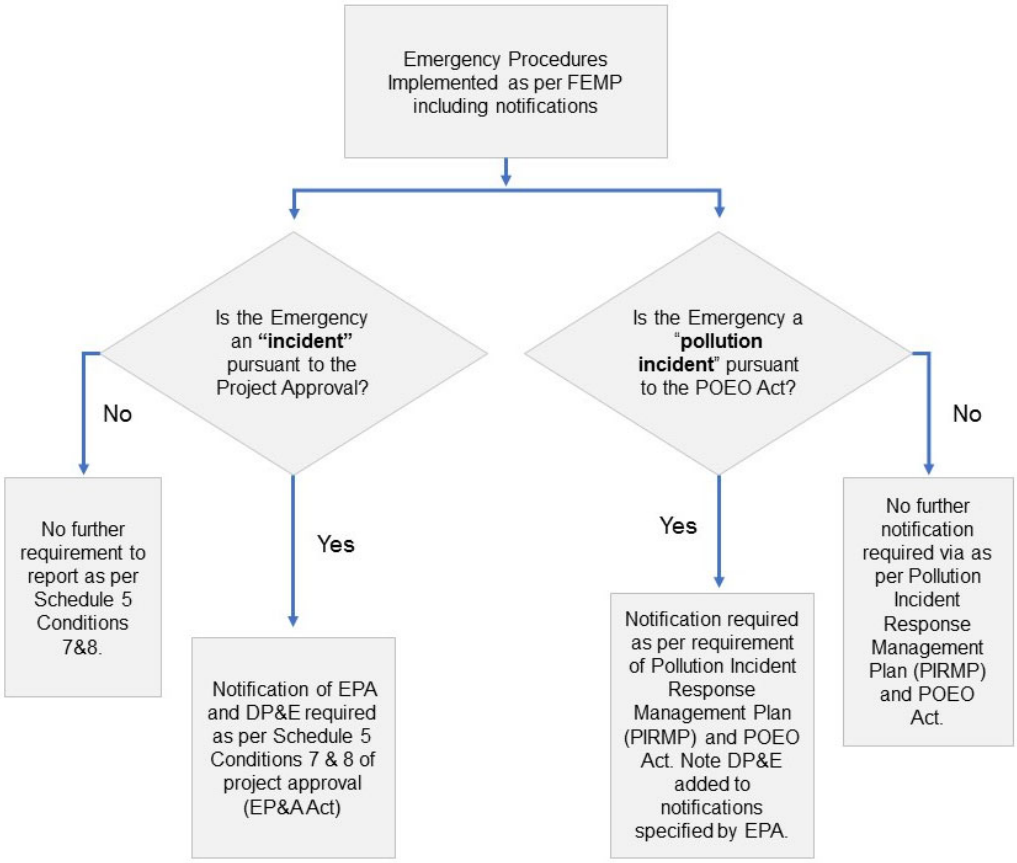
LOCAL	**SITE**	**EXTERNAL**
An emergency where the impacts on people, property and the environment is expected to:		
be confined to a specific location within the facility. A LOCAL EMERGENCY MAY ESCALATE TO A SITE EMERGENCY	spread to or affect other parts of the facility, but not offsite A SITE EMERGENCY MAY ESCALATE TO AN EXTERNAL EMERGENCY	impact both within the facility and beyond the boundary of the facility
Emergency Services MAY BE REQUIRED	Emergency Services SHOULD BE REQUIRED	Emergency Services WILL BE REQUIRED
Examples: Minor fire with negligible escalation potential Injury not related to a major incident Threatening behaviour Electrical failure	Examples: Structure fire Major equipment (e.g. conveyor, earth moving equipment) fire Waste fire with limited escalation potential Major traffic incident Security breach	Examples: Bushfire/grass fire around the property approaching the Project Waste fire with significant escalation potential Major traffic incident with persons trapped Structural collapse Extreme weather conditions Release of pollutant or contaminant to the environment
RELEVANT PROCEDURES		
Medical emergencies Fire emergencies Internal incident emergencies	Evacuation Medical emergencies Fire emergencies Traffic incident emergencies Security emergencies PIRMP Emergency Response Planning	Evacuation Medical emergencies Fire emergencies Structural collapse Bomb and substance threat emergencies Environmental spill

4. ACTIVATION OF THE FIRE AND EMERGENCY MANAGEMENT PLAN

4.1 PLAN ACTIVATION PROCEDURES

If an alarm is raised, the process below will be followed:

Figure 9 - Additional notification procedures



The formal notification requirements under the EP&A Act and the POEO Act are discussed in Section 8.4. Refer also to PRIMP in Appendix C.

4.2 RECORD KEEPING DURING AN EMERGENCY

In the event of an emergency, it is mandatory to keep a chronological record; this record will be required by investigating authorities when investigating the emergency.

A record of any emergency event will be made using an Incident Record Sheet which will be kept in the weighbridge office. The Emergency Controller has responsibility for ensuring the chronological record is made but may delegate to another member of the Emergency Response Team.

Should an Incident Record Sheet not be available in an emergency event, notes can be made in the Site Log Book or Site Diary as long as the following information is captured:

- Date and time
- Nature of the emergency
- When it was identified and by whom
- When the Emergency Plan was activated

- Which Emergency Services were notified and when
- Whether a decision was made to evacuate the site and when
- Any other steps taken by the Emergency Controller
- Activation and management of the Emergency Response Team
- Identification and management of injuries
- Communicating with the local community and other government agencies
- Whether the Project was handed over to Emergency Services and when
- When the Project was handed back to PLRRC
- When normal operations recommenced

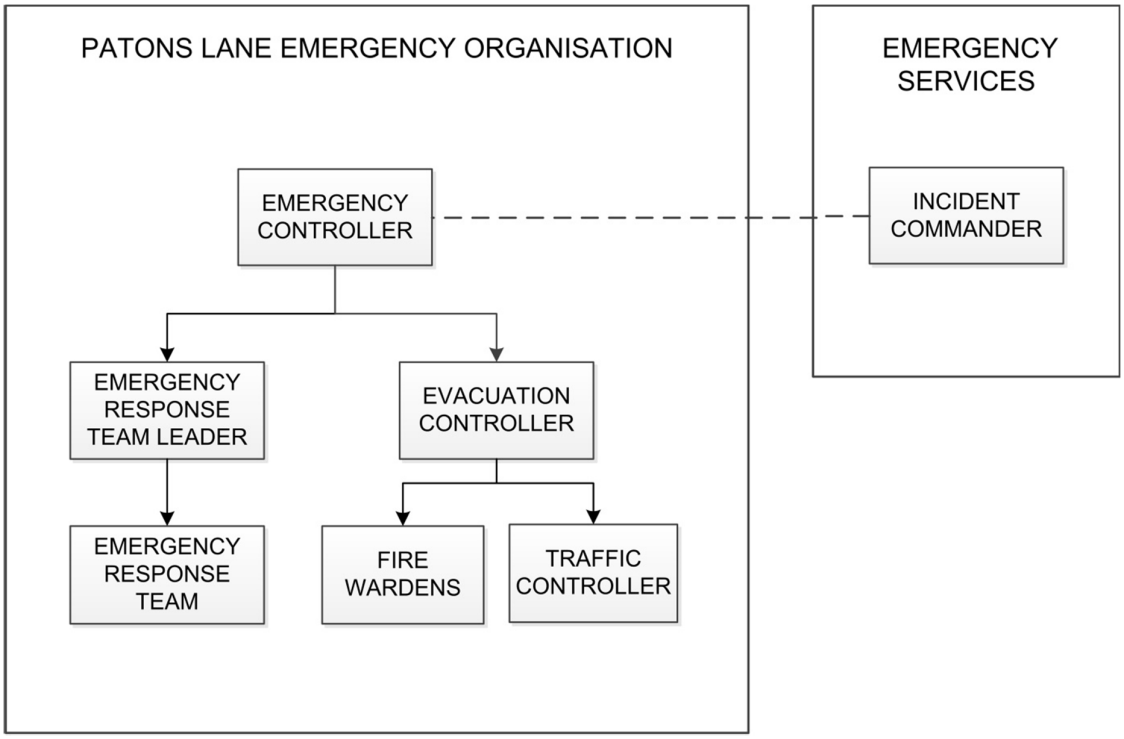
5. EMERGENCY FUNCTIONS AND ORGANISATIONAL STRUCTURE

5.1 EMERGENCY ORGANISATIONAL STRUCTURE

During any emergency situation, it is most important that the responsibilities of personnel are clearly defined. At any time one person will have overall control of the situation. Prior to the arrival of the Emergency Services, this is the EMERGENCY CONTROLLER. Once the Emergency Services arrive, the Emergency Controller will hand over control to the Emergency Services INCIDENT COMMANDER.

Emergency personnel will be recognisable during an emergency by wearing specifically coloured hard hats and tabards/vests which will be stored in the Emergency Cabinet in the Weighbridge Office. The emergency command structure is shown below.

Figure 10 – Emergency command structure



The duties of personnel in the Patons Lane RRC emergency organisational structure are as follows:

Title	Filled by:	Duties in an emergency
Emergency Controller	Operations Manager In the absence of the Emergency Controller, the Emergency Response Team Leader will assume the role	Assess emergency situation and communicate the Level of Emergency to Emergency Response Team Responsible for: • Coordinating all firefighting • All Emergency Communications and liaison with Emergency Services • Ensuring that roll call is carried out, that all personnel are accounted for and injuries treated • Handover to Emergency Services. • The Emergency Controller will control the site until: • Arrival of the Emergency Services Incident Commander; • The order to evacuate is given; or • The end of the emergency is declared.
Emergency Response Team (ERT)	Site Foreman is team leader and reports directly to the Emergency Controller	Assist the Emergency Controller; Assist with firefighting and other emergency response under the leadership of the Emergency Controller Response Team Leader to act as Emergency Controller if required; and be prepared to provide a formal handover of the incident site to Emergency Services
Evacuation Controller	to be determined and reports directly the Emergency Controller	Manage evacuation and the care of injured people under the leadership of the Emergency Controller
Fire Wardens	to be determined	Assist the Evacuation Controller
Traffic Controller	to be determined and reports to the Evacuation Controller	Manage site access

5.2 INTERACTION WITH EMERGENCY SERVICES

The Emergency Controller is responsible for the control of the site and emergency situation until the Emergency Services arrive on site. The duties of the Emergency Controller include:

- Cooperating with Incident Commander (FRNSW) in the event of an on-site fire
- Cooperating with the Incident Commander (RFS or FRNSW) in the event of a bushfire
- Cooperating with the Incident Commander (NSW Police) in the event of an emergency where there is no designated combat agency

- Ensuring that emergency services have access to the site
- Directing the fire services to the area where assistance is required
- Directing medical staff to the location of any injured personnel
- Ensuring that Police keep external roadways clear for emergency vehicles
- Ensuring that all internal roadways are clear for emergency vehicles.

If the decision to evacuate the site is made, the control of all emergency resources will be undertaken by the Incident Commander of the relevant emergency authority.

5.3 EMERGENCY INSTRUCTIONS AND PROCEDURES

Emergency Procedures are attached as Appendix B and will be further developed prior to commencement of operations, when buildings and other infrastructure are established on site.

6. EMERGENCY RESOURCES

6.1 FACILITY EMERGENCY CONTROL CENTRE

The permanent Facility Emergency Control Centre (FECC) is the Weighbridge building located in the entrance roadway. If the Weighbridge building cannot be accessed, the alternative FECC is the Luddenham Rd gate. Whilst construction is in progress, the temporary site office shall be the FECC.

6.2 COMMUNICATIONS

During any emergency, the primary form of communications with emergency services and other off-site groups will be a dedicated mobile phone located in the weighbridge office. This phone will be kept in a fully charged state. All incoming calls relating to an emergency will be directed to the dedicated emergency mobile number:

TBC

This phone will be reserved for communications in the event of an emergency - therefore, this line must be kept open.

Onsite communications will be mobile phones and two way radios. A dedicated UHF channel will be nominated for site communications for all staff and contractors. If outside emergency services are involved, then use may be made of their radio facilities.

6.3 EMERGENCY DETECTION AND ALARM SYSTEMS

The weigh bridge and buildings housing waste storage and processing operations will be fitted with fire alarm systems. Locations will be confirmed prior to commencement of operations when buildings and other infrastructure are established on site.

6.4 EMERGENCY EQUIPMENT

Fire extinguishers will be located at fixed locations around the site and on vehicles and earth-moving equipment. Buildings housing waste storage and processing operations will be fitted with automatic sprinkler and fire alarm systems. Locations will be confirmed prior to commencement of operations when buildings and other infrastructure are established on site.

From the commencement of site establishment there will be a water cart (min size: 20,000 litre) to be used for dust suppression on site which will be fitted with firefighting pumps and hose reels (as well as a first aid hose reel) which can be used to suppress small to medium fires.). This unit will be kept full when not in use near the temporary site office.

Additionally, a fire-fighting system comprising fire water tank, fire water pump and hose reels will be incorporated into the materials recycling facilities which can be used for first attack firefighting by the emergency response team and emergency services.

6.5 FIRST AID

First aid stations will be located at the following locations:

- Temporary Site Office initially, and as other facilities are constructed,
- Weighbridge
- Materials recycling buildings
- Office
- Workshop

- Supervisors' vehicles

The first aid stations will be equipped with first aid kits suitably stocked to deal with potential emergencies outlined in this plan based on recommendations from a recognised expert.

7. REPORTING OF THE EMERGENCY

7.1 IMMEDIATE REPORTING

7.1.1 MANUAL NOTIFICATION

Call **000** if the incident presents an immediate threat to human health or property.

7.1.2 AUTOMATIC NOTIFICATION

To be confirmed in consultation with Fire Engineer's recommendations prior to commencement of operations - when buildings and other infrastructure are established on site.

7.2 COMMUNICATING WITH THE LOCAL COMMUNITY

7.2.1 CONTACTING ADJOINING NEIGHBOURING PROPERTIES

All adjoining landowners will be notified immediately of a fire or emergency event which may present a risk to their health or safety or has the potential to result in loss or damage to their property. Contact details for all adjoining landowners are listed in Emergency Contacts: Other Contacts/Adjoining Properties within the front section of the FEMP immediately before the Table of Contents.

7.2.2 CONTACTING THE BROADER LOCAL COMMUNITY

Key stakeholders being residents within the Vines Estate and on Luddenham Road near the Patons Lane entry to the site have been identified and will be notified immediately of a fire or emergency event which may present a risk to their health or safety or has the potential to result in loss or damage to their property. Contact details for key stakeholders in the Vines Estate and on Luddenham Road are listed in Emergency Contacts: Other Contacts/Adjoining Properties within the front section of the FEMP immediately before the Table of Contents.

7.2.3 COMMUNITY LIAISON COMMITTEE

The Proponent (PLRRC) has established and will operate a Community Liaison Committee (CLC) comprising representatives of the Proponent, local community and Council. A key function of the CLC is to communicate community concerns to the Proponent and communicate information about the operation of the PLRRC to the community. Members of the CLC will be informed without delay of all relevant information regarding any fire, emergency or pollution event on the site.

7.2.4 HOTLINE NUMBER

A hotline number available 24 hours per day for urgent information has been promoted on the website and in social media with a commitment to respond within specified times. In the case of an emergency event, the hotline operators will be provided with updated information relevant to community concerns.

7.2.5 WEBSITE

PLRRC has brought forward the implementation of the website to provide regularly updated information on the status of the project and a means of making general enquiries. In the case of an emergency event, updated information relevant to community concerns will be posted on the website.

7.2.6 NEWSLETTER

A newsletter is published in both electronic and hard copy available to all interested parties. In the case of an emergency event, information relevant to community concerns will be included in the newsletter.

7.2.7 SOCIAL MEDIA

In the case of an emergency event, users of Bingo's social media pages (Facebook, Instagram, Twitter) will be directed to updated information relevant to community concerns posted on the website.

7.3 INTERNAL REPORTING

All incidents will require the generation of an incident report coordinated by the Emergency Controller to be reviewed by the Management Team in an incident debrief. Responsibility for actions flowing from the Incident Debrief will be allocated by the Management Team.

7.4 REPORTING TO GOVERNMENT AGENCIES

7.4.1 SAFEWORK NSW

For incidents involving a fatality, serious injury, serious illness or dangerous incident, SafeWork NSW will be called immediately as an urgent investigation may be needed (refer Emergency Contacts for phone number).

In addition, where there is an injury to an employee, the facility's Scheme Agent or insurer will be notified within 48 hours.

7.4.2 EPA NOTIFICATION REQUIREMENTS AND PIRMPS (POEO ACT)

7.4.2.1 Emergency Event may trigger a Pollution Incident

If a pollution incident causing or threatening material harm to the environment occurs in the course of an Emergency Event, it will trigger the implementation of the pollution incident management response as set out in the PIRMP (See Appendix C). Some actions within the response will be those also defined by the FEMP. All necessary action must be taken to minimise the size and any adverse effects of the release.[18]

7.4.2.2 Requirement for a PIRMP

Prior to the commencement of operations, holders of EPLs are required to prepare, keep on the premises and regularly test a PIRMP. Any pollution incident must be reported immediately to NSW EPA, NSW Health, Fire and Rescue NSW, SafeWork NSW and Penrith City Council and will also be

[18] Emergency Response http://www.epa.nsw.gov.au/licensing/dutytonotify.htm#12

self-reported to DP&E. The PIRMP is set out in Appendix C and will be subject to regular review, testing and update.

7.4.2.3 NSW EPA Definition of "Pollution Incident"[19]

For the purposes of the PIRMP and this plan a Pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

Additionally, the Protection of the Environment Operations Act 1997 (POEO Act) specifies that a pollution incident that causes or threatens material harm to the environment, must be reported IMMEDIATELY.

See Appendix C. Pollution Incident Response Management Plan

S147 of the POEO Act defines material harm to the environment as follows:

Harm to the environment is material if:

(i) It involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or

(ii) It results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations), and

(iii) Loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

It does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.

If the incident does not require an initial combat agency or once the '000' call has been made, the relevant pollution authorities will be notified in the following order (refer Emergency Contacts located at the front of this document):

- Environment Protection Agency (EPA);
- Ministry of Health via the local Public Health Unit – Nepean Office;
- SafeWork NSW;
- Penrith City Council;
- Fire and Rescue NSW.

The Department of Planning and Environment (DP&E) is also to be notified of any pollution incident in accordance with this FEMP.

7.4.3 INCIDENT REPORTING REQUIRED BY CONSENT (EP&A ACT)

Schedule 2 of the project approval defines an incident as:

[19] Definition of 'pollution incident' http://www.epa.nsw.gov.au/licensing/dutytonotify.htm#12

"An event causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this approval."

Schedule 5 Conditions 7 & 8 of the project approval requires the following responses to an incident.

INCIDENT REPORTING

7 *Upon detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) material harm to the environment, the Proponent shall immediately notify EPA and notify the Department as soon as practicable thereafter of the exceedance/incident.*

8. *Within six days of notifying the Department and EPA of an exceedance/incident, the Proponent shall provide the Department and these agencies with a written report that:*

(a) describes the date, time, and nature of the exceedance/incident;
(b) identifies the cause (or likely cause) of the exceedance/incident;
(c) describes what action has been taken to date; and
(d) describes the proposed measures to address the exceedance/incident.

Accordingly, any fire or emergency incident which causes an exceedance of the limits/performance criteria in the approval or which causes (or may cause) material harm to the environment, shall be immediately reported by PLRRC to the EPA and the Department as soon as practicable after the incident.

8. TERMINATION OF THE EMERGENCY

When the Emergency Services Incident Controller in consultation with the Emergency Controller, has specified that the emergency has been controlled, and after handover by the Emergency Services Incident Controller, the Emergency Controller will again assume full control and will ensure the following procedures are observed:

- The site shall be made safe. This includes the removal of fire damaged material and the safe disposal or drainage of hazardous materials.
- Firewater used to cool plant and equipment and contained within bunded areas is tested for contamination before disposal
- All emergency alarms and firefighting equipment must be returned to full active status as defined in this Plan. This will include recharging fire extinguishers used and replacing any damaged firefighting equipment and alarms
- Assessment and repair, replacement or disposal of all damaged equipment must be made in conjunction with the Site Foreman
- The requirements for proper public relations and debriefing, and any necessary statutory investigations are to be fully observed.

8.1 PUBLIC RELATIONS AND DEBRIEFING

No representative of Patons Lane RRC is to speak to the media. All media enquiries are to be directed to the General Manager, Corporate Affairs & Stakeholder Relations Communication with the media will always be undertaken in consultation with the Incident Controller (Emergency Controller or Incident Commander).

8.2 STATUTORY INVESTIGATION

In the event of a fatality, the Police must be informed and a Coronial Inquiry may be required.

In the event of any incident involving FRNSW, the Operations Manager shall contact SafeWork NSW to explain the incident and to enquire whether SafeWork NSW wishes to conduct an inquiry.

The Operations Manager in conjunction with the Emergency Controller (where this is the Site Foreman) must ensure that there is no interference with evidence and that any cleaning up, movement of bodies, repairs etc., apart from that necessary to bring the emergency under control, does not occur without approval of investigating officers from the above authorities.

9. MANAGEMENT OF THE PLAN

9.1 INTRODUCTION

This Fire and Emergency Management Plan is an integral part of the facility's approach to managing safety and plays a key role in ensuring that the facility has a formal procedure in place to respond appropriately to a major incident. The Fire and Emergency Management Plan is integrated, implemented and maintained through a number of activities, as detailed in the following sections.

9.2 TRAINING AND EDUCATION

Signs at the gatehouse and other prominent locations notify visitors of appropriate PPE; emergency warning processes; emergency assembly points, and other safety information.

An emergency evacuation drill is conducted every 12 months. Third party providers train relevant staff in

- Evacuation and assembly principles and procedures
- First attack fire fighting
- First aid

9.3 REVIEWING THE EMERGENCY PLAN

The Emergency Plan is reviewed annually by the Safety & Quality Manager – NSW and authorised by General Manager – Recycling. The plan is also reviewed on completion of emergency exercises and subsequent debriefs, this includes combined exercises with emergency services. Importantly the Plan will be supported by staff first aid training and the maintenance of an appropriately stocked first aid kit to deal with possible emergencies.

In addition, the plan may need to be revised for the following reasons:

- Legislation changes
- Staff changes
- Changes in emergency contacts and numbers
- Shortcomings or inadequacies identified after testing of the plan
- Plant modifications
- Significant changes to the type and quantities of dangerous goods or hazardous materials kept onsite
- Outcomes from incidents/hazards on site
- Changes to surrounding land use that have an impact upon the emergency plan
- Changes in circumstances in any adjacent properties
- Changes in plant/equipment operating & safety procedures.

9.4 CONTINUOUS IMPROVEMENT

The results of the emergency evacuation drill are used to review and improve the site's evacuation procedure.

Following an emergency at the site, the effectiveness of the emergency response will be reviewed to ensure that, where required, inadequacies are addressed and improvements are made to the fire and emergency management plan and procedures.

9.5 SAFETY MANAGEMENT SYSTEM

The Fire and Emergency Management Plan and associated procedures are an integral part of the site's Safety Management System.

10. SUPPORTING INFORMATION

10.1 EMERGENCY SERVICES INFORMATION PACKAGE

In NSW, there is a formal requirement for provision of an Emergency Services Information Package (ESIP). The ESIP will be a removable inclusion physically located within the Emergency Plan that contains concise relevant information to allow emergency services to commence initial combat operations. The ESIP must have all pages laminated so that it is durable in harsh environments.

The Emergency Services Information Package (ESIP) is attached as Appendix A and will be further developed as the location of firefighting services and other facilities are finalised and constructed.

The FRNSW Guidelines list the following inclusions for an ESIP:

(a) A company letter head as a title page displaying business address, PO Box, Head Office address, two emergency contacts (names, corporate positions, business and after hours contact numbers), date prepared and the location of any manifests, emergency plans and Safety Data Sheets (SDS) held on site.

(b) Two (2) copies of a scaled site plan (A3 minimum size); FRNSW Guideline for Tactical Plans and WorkCover Code of Practice - Storage and Handling of Dangerous Goods should be used as a guide. In addition to the information required by those documents, the site plan should also include assembly points, any hazardous chemical ventilation points and details of containment (e.g. bunding), drain isolation and discharge points.

(c) A copy of the sites hydrant system block plan (if applicable).

(d) A current copy of the Acknowledgement of Notification of hazardous chemicals on premises' received from SafeWork (where applicable) or similar concise list detailing location, quantity, class, and name of materials.

(e) Details of any hazardous chemicals manufactured or blended on site for which the emergency services may not have access to a SDS (if applicable).

(f) Highlight details of any Class 4.2 or 4.3 hazardous chemicals, or any other substances that are reactive to water, on site (if applicable).

10.2 SAFETY, HEALTH AND ENVIRONMENT INFORMATION

The locations of relevant safety, health and environmental information that may assist with managing an emergency are as follows:

Table 8 - locations of relevant safety, health and environmental information

Safety, Health and Environment information package Particulars	**Location**
Emergency Services Information Package	main site entry gate and weighbridge
Safety reports	main site entry gate and weighbridge
Manifests of Dangerous Goods (DGs)	main site entry gate and weighbridge as required
Safety Data Sheets	main site entry gate and weighbridge as required

10.3 LOCATION MAPS AND SITE LAYOUT PLANS

Location maps and site layout plans are included in the ESIP (included in this document as Appendix A)

10.4 FIRE SERVICES INFORMATION

The locations of assembly points, firefighting tanker, evacuation routes as well as first aid and discharge points are included on the site layout plans in the ESIP. Other fire services equipment will be included on these plans as it is installed and becomes operational.

10.5 EMERGENCY CONTACT NUMBERS

A listing of emergency contacts is provided at the start of this document.